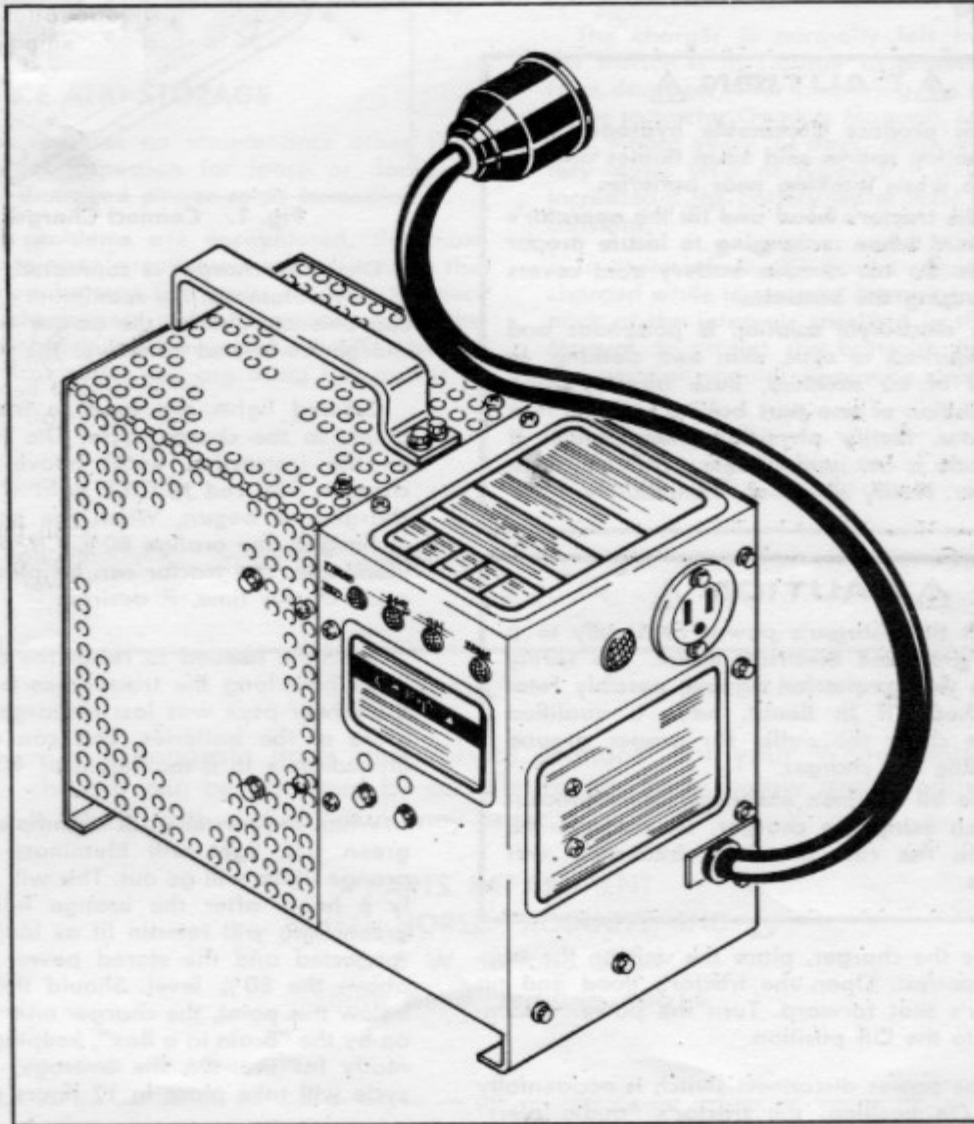


OPERATING AND MAINTENANCE INSTRUCTIONS



CHARGER UNIT



WHEEL HORSE
lawn & garden tractors

8-1570

DESCRIPTION

The 8-1570 charger unit is used to recharge the power pack in Wheel Horse battery powered tractors, beginning with 1978 models.

The charger is powered by 120 VAC house current, and draws approximately 12 amps. Charging current (36 VDC) is automatically controlled. Special circuits inside the tractor's "Brain in a Box" distribute the charger's output to the batteries and measure the charge level of the power pack. Signals sent from the Brain in a Box "instruct" the charger to turn on or off and deliver the correct level of charging current.

OPERATION

⚠ CAUTION ⚠

Batteries produce flammable hydrogen gas. Avoid creating sparks and open flames and do not smoke when working near batteries.

Open the tractor's hood and tilt the operator's seat forward when recharging to insure proper ventilation. Do not remove battery vent covers while charging the batteries.

Battery electrolyte solution is poisonous and can be injurious to eyes, skin and clothing. In the event of an accident, flush affected area with a solution of one part baking soda to four parts water. Notify physician immediately. If baking soda is not immediately available, flush with water. Notify physician immediately.

⚠ CAUTION ⚠

Connect the charger's power cord only to a properly grounded electrical outlet. The safety ground is your protection against possibly fatal electric shock. If in doubt, have a qualified electrician check the outlet for proper ground before using the charger.

Observe all common electrical safety precautions when using the charger. Do not use the charger in the rain or under extremely wet conditions.

To operate the charger, place the unit on the tractor's right footrest. Open the tractor's hood and tilt the operator's seat forward. Turn the power disconnect switch to the Off position.

Note: If the power disconnect switch is accidentally left in the On position, the tractor's "audio alert" system will operate. If a high pitched horn sound is heard when the charger is connected, turn the power disconnect switch Off.

Connect the charger output cord to the tractor's charger/accessory receptacle, turning the ring on the plug clockwise to secure in position.

Plug the power supply cord into the receptacle on the charger and then into a standard 120 VAC grounded electrical outlet. The power cord supplied is 10 ft. (3.1 m) long. A longer or shorter cord may be used as long as it meets or exceeds the specifications shown on the charger identification label.

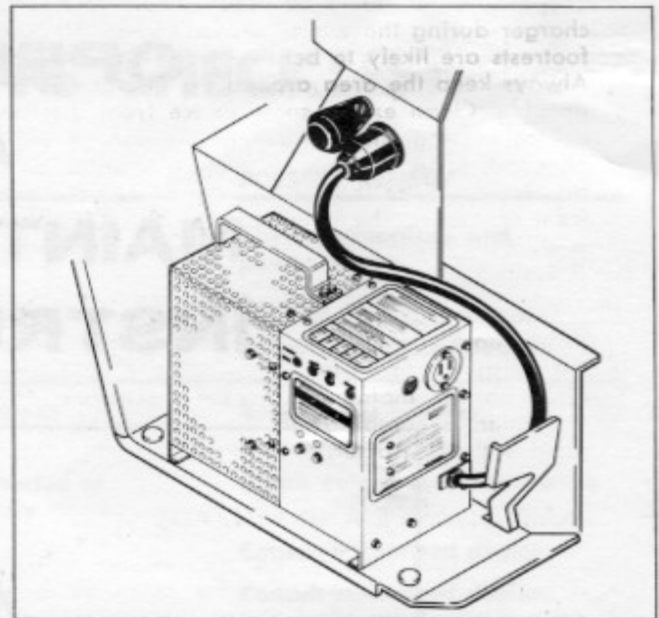


Fig. 1. Connect Charger to Tractor

Once the charger is connected, recharging is completely automatic. For maximum operating range and convenience, charge the power pack and leave the charger connected whenever the vehicle is not in use.

Colored lights are used to indicate the different points in the charge cycle. The lights are identified on the instruction decal above the lights on the charger. The red NOTICE light will illuminate when charging is begun. When the power pack is 80% recharged, the orange 80% CHARGED light will also illuminate. The tractor can be placed back into operation at this time, if desired.

The time needed to reach the 80% level depends upon how long the tractor has been operated since the power pack was last recharged, and the temperature of the batteries. This can range from almost immediately to a maximum of 10 hours.

When the power pack is completely recharged, the green USE light will illuminate and the red and orange lights will go out. This will occur approximately 6 hours after the orange light illuminates. The green light will remain lit as long as the charger is connected and the stored power in the batteries is above the 80% level. Should the power pack drop below this point, the charger unit will be turned back on by the "Brain in a Box", keeping the tractor always ready for use. On the average, a complete charge cycle will take place in 12 hours or less.

The remaining red light is a fault indicator, which illuminates if the charger does not go through a normal charge cycle. Depending upon when the fault occurs, it can be up to 10 hours before the light will illuminate. Possible causes of a fault indication are listed in the Troubleshooting Checklist at the end of this manual.

When returning the tractor back in operation, disconnect the charger from the A. C. outlet, then from the tractor's charger/accessory receptacle. The charger will automatically reset itself to start a new charge cycle when it is operated.

Special care should be taken when operating the charger during the winter season, when the tractor's footrests are likely to become wet from snow or ice. Always keep the area around the charger as dry as possible. Clean excess snow or ice from the footrest before placing the charger in position. A piece of plywood, large enough to put the charger on, may be placed on the footrest to help protect the charger from corrosion. The charger may also be placed on a sturdy platform next to the tractor for charging, if desired.

Good charger performance is assured when the power pack is properly maintained. Check and adjust the battery water level periodically and perform other battery maintenance when necessary. This information is contained in the Owner's Manual supplied with the tractor.

MAINTENANCE AND STORAGE

The charger requires no maintenance other than a periodic visual inspection for loose or damaged parts. **Replace damaged power cords immediately.**

If charging problems are encountered, the most likely causes are open circuit breakers or fuses on the tractor, corroded battery terminals, or loose connections. Always check these items before suspecting the charger, power pack, or "Brain in a Box". Also be sure the electrical outlet you are using has power to it.

The charger has a 15 amp T/MN fuse for circuit protection. The fuse is contained in an externally accessible fuse holder next to the A. C. power cord connector, for easy inspection and replacement. If the charger stops operating completely, check for an open fuse. **Do not check or replace fuse with power cord connected.**

⚠ CAUTION ⚠

All service work on the charger other than fuse replacement should be performed by your authorized dealer or other competent repair service. Repairs made or attempted by someone not trained in electrical work may create a hazard.

The charger is normally left in operation while the tractor is in storage to protect the power pack from damage. After preparing the tractor for storage (refer to tractor Owner's Manual), connect the charger unit. About every 30 days, check and adjust the battery water level as necessary. This interval may be increased if the battery water level is remaining fairly constant.

In cases where the tractor cannot be continuously charged while in storage, be sure to charge the power pack at the intervals specified in the tractor Owner's Manual to protect the batteries from damage. The charger unit should always be stored in a clean, dry place.

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A separate Parts and Service Manual* for your Wheel Horse charger can be obtained by completing the form below and sending it, along with a check or money order, to:

PARTS DEPARTMENT
WHEEL HORSE PRODUCTS, INC.
515 W. Ireland Road
South Bend, Indiana 46614

*Available after August, 1978

8-1570 CHARGER PARTS and SERVICE MANUAL ORDER

I have enclosed a check or money order for \$2.00 for each manual requested.

MAILING LABEL — PLEASE PRINT CLEARLY

To:

Name

Address

City

State

Zip

TROUBLESHOOTING CHECKLIST

<u>SYMPTOM</u>	<u>POSSIBLE CAUSE</u>	<u>POSSIBLE REMEDY</u>
Charger does not operate.	No power.	Check connections and power source.
	Blown fuse.	Replace fuse.
	Faulty charger.	Consult authorized dealer.
Charger FAULT indicator lit.	Charger/accessory circuit breaker open.	Reset circuit breaker.
	Output cord not connected or not connected properly.	Check output cord connection.
	Faulty charger.	Consult authorized dealer.
	Faulty Brain in a Box.	Consult authorized dealer.
Charger USE indicator lights as soon as charger is connected.	Brain in a Box fuse blown.	Replace fuse.
	Faulty Brain in a Box.	Consult authorized dealer.
	Faulty charger.	Consult authorized dealer.
Power pack not being completely charged (Reduced range).	Tractor main fuse(s) blown.	Replace fuse(s).
	Corroded/loose battery connections.	Clean and tighten connections.
	Faulty Brain in a Box.	Consult authorized dealer.
	Faulty charger.	Consult authorized dealer.

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Product information and specifications are shown herein as of the time of printing. Wheel Horse Products, Inc. reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligation.

