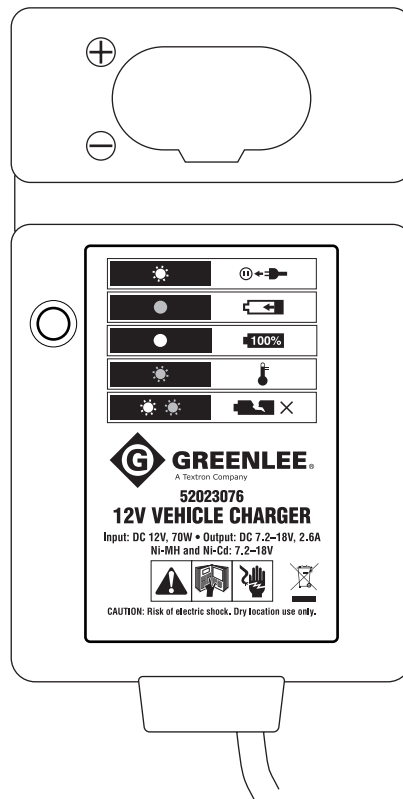


# INSTRUCTION MANUAL



## 52023076 12V Vehicle Charger



**Read and understand** all of the instructions and safety information in this manual before operating or servicing this tool.

## Table of Contents

Description .....	2
Safety .....	2
Purpose of this Manual .....	2
Important Safety Information .....	2-3
Operation .....	4
Operating Tips .....	4
Specifications .....	4
Maintenance .....	4

## Description

The Greenlee 12V Vehicle Charger is a high capacity battery charger that plugs into a 12V power outlet to charge the battery cartridges of the following Greenlee tools: EK210, EK410, EK425, and ES32.

## Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

## Purpose of this Manual

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following Greenlee tool:

52023076 12V Vehicle Charger

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.



**Do not discard this product or throw away!**  
For recycling information, go to [www.greenlee.com](http://www.greenlee.com).

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

# KEEP THIS MANUAL

## IMPORTANT SAFETY INFORMATION



### SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

#### **⚠ DANGER**

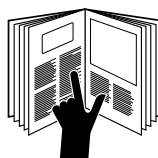
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

#### **⚠ WARNING**

Hazards which, if not avoided, **COULD** result in severe injury or death.

#### **⚠ CAUTION**

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.



#### **⚠ WARNING**

**Read and understand** this material before operating or servicing this equipment. Failure to understand how to safely operate this tool could result in an accident causing serious injury or death.

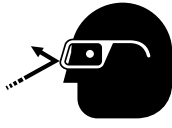
#### **⚠ WARNING**


Explosion and fire hazard:

- Do not dispose of the battery in a fire. The battery will vent fumes and it could explode.
- Charge only in a well vented area and never in an area where gasoline fumes or other combustible materials are present.

Failure to observe these warnings could result in severe injury from harmful fumes or burns from flying debris.

## IMPORTANT SAFETY INFORMATION

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p>Wear eye protection when operating this tool.</p> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>
---	---

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p>Electric shock hazard:</p> <p>Contact with live circuits could result in severe injury or death.</p>
---	---

<p style="text-align: center;"><b>⚠ WARNING</b></p> <p>Electric shock and fire hazard:</p> <ul style="list-style-type: none"> <li>• Do not expose this unit to rain or moisture.</li> <li>• Do not use the unit if it is wet or damaged.</li> <li>• Do not cover the charger.</li> <li>• Inspect accessories before use. They must be clean and dry, and the insulation must be in good condition.</li> <li>• Use of an attachment not recommended or sold by the vehicle charger manufacturer may result in a risk of fire, electric shock, or injury to persons.</li> <li>• Charge only Greenlee battery cartridges for tools listed under "Description." Other types of batteries may burst.</li> <li>• Use this unit for the manufacturer's intended purpose only, as described in this manual. Any other use can impair the protection provided by the unit.</li> </ul> <p>Failure to observe these warnings could result in severe injury or death.</p>
---

<p style="text-align: center;"><b>⚠ WARNING</b></p> <p>A battery short can cause a large current flow, overheating, possible burns, or a breakdown.</p> <ul style="list-style-type: none"> <li>• Do not touch the terminals with any conductive material.</li> <li>• Avoid storing battery cartridge in a container with other metal objects such as nails or coins.</li> <li>• Do not expose battery cartridge to rain or moisture.</li> </ul> <p>Failure to observe these warnings could result in severe injury or death.</p>
--

<p style="text-align: center;"><b>⚠ CAUTION</b></p> <ul style="list-style-type: none"> <li>• To reduce risk of damage to 12V power outlet connector and cord, pull by connector rather than cord when disconnecting charger.</li> <li>• Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.</li> <li>• Do not operate charger with damaged cord or 12V power outlet connector. Replace it immediately.</li> <li>• Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to a qualified service center.</li> </ul> <p>Failure to observe these precautions may result in injury and may damage the unit.</p>
---

<p style="text-align: center;"><b>⚠ CAUTION</b></p> <p>This charger can be used in any vehicle that has a 12V power outlet operated by a 12 volt negative ground battery. If battery capacity has dropped, start the engine of the vehicle. Charge the battery cartridge using this charger while the engine is idling. Do not leave the vehicle while the engine is running.</p> <p>Failure to observe this precaution may result in injury and may damage the unit.</p>
---

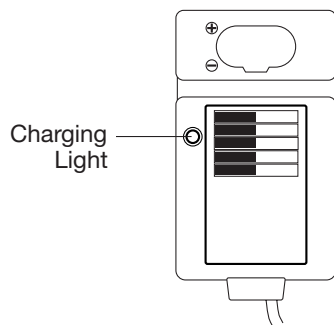
<p style="text-align: center;"><b>⚠ CAUTION</b></p> <ul style="list-style-type: none"> <li>• Do not disassemble or attempt to repair this unit.</li> <li>• Unplug charger and remove battery cartridge before attempting any maintenance or cleaning.</li> <li>• Do not expose the unit to extremes in temperature or high humidity. Refer to "Specifications."</li> </ul> <p>Failure to observe these precautions may result in injury and may damage the unit.</p>
--

*Note: Keep all decals clean and legible, and replace when necessary.*

## Operation

Your new Greenlee battery cartridge needs to be charged before use. Follow this procedure to charge it with the 12V vehicle charger:

1. Plug the charger into a 12V power outlet. The charging light will flash in green color.
2. Insert the battery cartridge so that the plus and minus terminals on the battery cartridge are on the same sides as their respective markings on the charger. Insert the cartridge fully into the port so that it rests on the charger port floor.
  - The charging light color will change from green to red and charging will begin. The charging light will remain lit steadily during charging.
  - When the charging light color changes from red to green, charging is complete.
3. After charging, unplug the charger from the power source.



## Operating Tips

- A new battery cartridge or one that has not been used for a long time may not accept a full charge. This is a normal condition and does not indicate a problem. You can recharge the battery cartridge fully after discharging it completely and recharging several more times.
- If you charge a battery cartridge from a recently operated tool or a battery cartridge which has been left in a location exposed to direct sunlight or heat for a long time, or use a hot charger, the charging light may flash in red color. If this occurs, wait for a while. Charging will begin after the battery cartridge and charger cool. The battery cartridge will cool faster if you remove it from the charger.
- If the charging light flashes alternately in green and red color, or flashes in green color when the battery cartridge is inserted, a problem exists and charging is not possible. The terminals on the charger are clogged with dust or the battery cartridge is worn out.

## Specifications

Input .....	DC 12 V
Output .....	DC 7.2 V to 18 V
Charging Time .....	45 minutes
Operating Temperature .....	10 °C to 40 °C (50 °F to 104 °F)
Storage Temperature .....	Below 50 °C (122 °F)
Dimensions (L x W x H) .....	189 mm x 105 mm x 78 mm (7-7/16" x 4-1/8" x 3-1/16")
Net weight .....	600 g (1.3 lb)

## Maintenance

### ⚠ CAUTION

- Do not disassemble or attempt to repair this unit.
  - Unplug charger and remove battery cartridge before attempting any maintenance or cleaning.
- Failure to observe these precautions may result in injury and may damage the unit.

## Cleaning

Periodically wipe the case with a damp cloth and mild detergent; do not use abrasives or solvents.



**GREENLEE®**  
A Textron Company

USA	800-435-0786	Fax: 800-451-2632
	815-397-7070	Fax: 815-397-1865
Canada	800-435-0786	Fax: 800-524-2853
International	+1-815-397-7070	Fax: +1-815-397-9247

4455 Boeing Drive • Rockford, IL 61109-2988 • USA • 815-397-7070  
An ISO 9001 Company • Greenlee Textron Inc. is a subsidiary of Textron Inc.

[www.greenlee.com](http://www.greenlee.com)

Printed in USA