

TORO[®]

Count on it.

Operator's Manual

Flex-Force Power System™ 60V MAX Battery Packs and Chargers

Model No. 68810—Serial No. 323000101 and Up

Model No. 81802—Serial No. 323000001 and Up

Model No. 81805—Serial No. 323000001 and Up

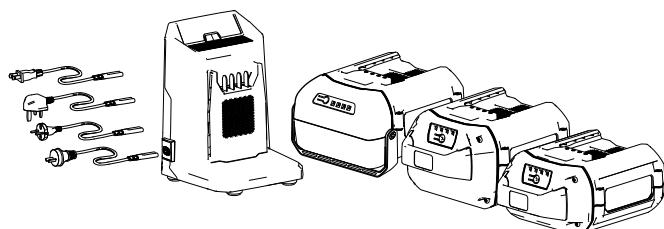
Model No. 81820—Serial No. 323000001 and Up

Model No. 81825—Serial No. 323000001 and Up

Model No. 81850—Serial No. 323000001 and Up

Model No. 81860—Serial No. 323000001 and Up

Model No. 81875—Serial No. 323000001 and Up



Introduction

These chargers and battery packs are intended to be used by homeowners and professional operators. These battery packs are designed to be charged only by Toro 60V lithium-ion battery chargers. These chargers are designed to charge only Toro 60V lithium-ion battery packs. They are not designed to charge any other batteries. Using these products for purposes other than their intended use could prove dangerous to you and bystanders.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

Visit www.Toro.com for more information, including safety tips, training materials, accessory information, help finding a dealer, or to register your product.

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Company
8111 Lyndale Avenue
South
Bloomington, MN
55420

Register at
www.Toro.com.


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Important: With your mobile device, you can scan the QR code on the serial number decal (if equipped) to access warranty, parts, and other product information.

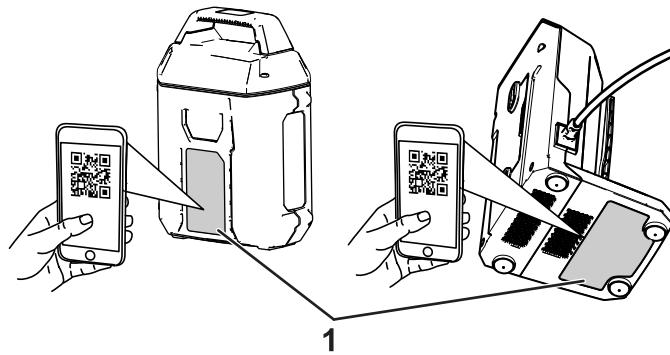


Figure 1

g397296

1. Model and serial number location.

Model No. _____
Serial No. _____

Safety-Alert Symbol

The safety-alert symbol ([Figure 2](#)) shown in this manual and on the machine identifies important safety messages that you must follow to prevent accidents.



g000502

Figure 2
Safety-alert symbol

The safety-alert symbol appears above information that alerts you to unsafe actions or situations and is followed by the word **DANGER**, **WARNING**, or **CAUTION**.

DANGER indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.

WARNING indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

CAUTION indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury.

This manual uses two other words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

Safety

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS**—This manual contains important safety and operating instructions for Toro 60V lithium-ion battery packs and Toro 60V lithium-ion battery chargers.
2. Before using the battery charger, read all the instructions and cautionary markings on the battery charger, battery pack, and product using the battery pack.
3. **CAUTION**—To reduce risk of injury, charge Toro 60V lithium-ion battery packs with Toro 60V lithium-ion battery chargers only. Other brands of battery packs may burst, causing personal injury and damage.
4. **WARNING**—Plugging the battery charger into an outlet that is not 100 to 240 V can cause a fire or electric shock. Do not plug the battery charger into an outlet other than 100 to 240 V. For a different style of connection, use an attachment plug adapter of the proper configuration for the power outlet if needed.

I. Training

1. Do not allow children or untrained people to operate or service this device. Allow only people who are responsible, trained, familiar with the instructions, and physically capable to operate or service the device.
2. Do not allow children to use or play with the battery pack or battery charger; local regulations may restrict the age of the operator.

II. Preparation

1. Use appliances only with specifically designated battery packs. Using other types of battery packs may create a risk of injury and/or fire.
2. Do not use a damaged or modified battery pack or battery charger. It may exhibit unpredictable behavior, resulting in fire, explosion, or risk of injury.
3. If the supply cord to the battery charger is damaged, contact an Authorized Service Dealer to replace it.

III. Operation

1. Charge the battery pack with only the battery charger specified by Toro. A charger suitable for 1 type of battery pack may create a risk of fire when used with another battery pack.

2. Charge the battery pack in a well-ventilated area only.
3. Follow all charging instructions and do not charge the battery pack outside of the temperature range specified in the instructions. Otherwise, you may damage the battery pack and increase the risk of fire.
4. Under abusive conditions, the battery pack may eject liquid; avoid contact. If you accidentally come into contact with the liquid, flush with water. If the liquid contacts your eyes, seek medical help. Liquid ejected from the battery pack may cause irritation or burns.
5. Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130°C (265°F) may cause explosion.
6. CAUTION—A mistreated battery pack may present a risk of fire, explosion, or chemical burn.
 - Do not disassemble the battery pack.
 - Replace the battery pack with a genuine Toro battery pack only; using another type of battery pack may cause a fire or risk of injury.
 - Keep battery packs out of the reach of children and in the original packaging until you are ready to use them.

IV. Maintenance and Storage

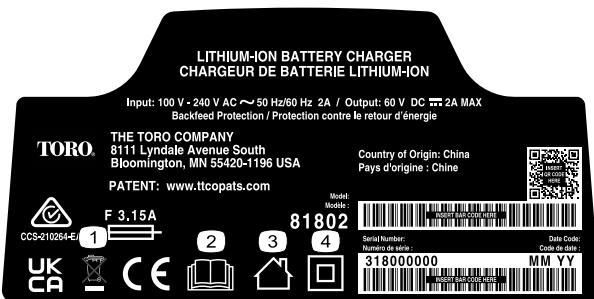
1. Do not allow children to clean or maintain the battery charger.
2. When the battery pack is not in use, keep it away from metal objects such as paper clips, coins, keys, nails, and screws that can make a connection from 1 terminal to another. Shorting the battery terminals may cause burns or a fire.
3. Do not attempt to repair the battery pack or battery charger. Have an Authorized Service Dealer perform service on the battery pack or battery charger using identical replacement parts to ensure that the product is safely maintained.
4. Check with local codes for possible special battery disposal instructions.

SAVE THESE INSTRUCTIONS

Safety and Instructional Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



decal144-6028

144-6028

1. Do not dispose improperly
2. Read the *Operator's Manual*.
3. For indoor use
4. Double insulated



decal144-6035

144-6035

1. Do not dispose improperly
2. Read the *Operator's Manual*.
3. For indoor use
4. Double insulated



137-9496

decal137-9496

1. The battery pack is charging.
2. The battery pack is fully charged.
3. The battery pack is over or under the appropriate temperature range.
4. Battery pack charging fault



decal144-6019

decal140-8486

1. Keep away from open fire or flames.
2. Do not expose to rain.
3. Read the *Operator's Manual*.
4. Recycle the battery properly.
5. Contains lithium ions; do not dispose improperly.

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THE TORO COMPANY
8111 Lyndale Avenue South
Bloomington, MN 55420-1196 USA

TORO

RECHARGEABLE LITHIUM ION BATTERY PACK/
BATTERIE RECHARGEABLE AU LITHIUM-ION
60V MAX* DC  4.0Ah, 216 Wh

*60VDC MAXIMUM / 54VDC NOMINAL
*60 VDC MAXIMUM / 54 VDC NOMINALE

PATENT: www.ttcopats.com

Country of Origin: China
/ Pays d'origine : Chine



Model: **81850** • 15INR19/66-2



INSERT BAR CODE HERE

Serial Number: / Numéro de série :

3180000000

Date Code: / Code de date :

MM YY

INSERT BAR CODE HERE

decal140-8488

140-8488

1. Keep away from open fire or flames.
2. Do not expose to rain.
3. Read the *Operator's Manual*.
4. Recycle the battery properly.
5. Contains lithium ions; do not dispose improperly.

THE TORO COMPANY
8111 Lyndale Avenue South
Bloomington, MN 55420-1196 USA

TORO

RECHARGEABLE LITHIUM ION BATTERY PACK/
BATTERIE RECHARGEABLE AU LITHIUM-ION
60V MAX* DC  6.0Ah, 324 Wh

*60VDC MAXIMUM / 54VDC NOMINAL
*60 VDC MAXIMUM / 54 VDC NOMINALE

PATENT: www.ttcopats.com

Country of Origin: China
/ Pays d'origine : Chine



Model: **81860** • 15INR19/66-3



INSERT BAR CODE HERE

Serial Number: / Numéro de série :

3180000000

Date Code: / Code de date :

MM YY

INSERT BAR CODE HERE

decal140-8490

140-8490

1. Keep away from open fire or flames.
2. Do not expose to rain.
3. Read the *Operator's Manual*.
4. Recycle the battery properly.
5. Contains lithium ions; do not dispose improperly.

THE TORO COMPANY
8111 Lyndale Avenue South
Bloomington, MN 55420-1196 USA

TORO

RECHARGEABLE LITHIUM ION BATTERY PACK/
BATTERIE RECHARGEABLE AU LITHIUM-ION
60V MAX* DC 7.5Ah, 405 Wh

*60VDC MAXIMUM / 54VDC NOMINAL
*60 VDC MAXIMUM / 54 VDC NOMINALE

PATENT: www.ttcopats.com

Country of Origin: China

/ Pays d'origine : Chine



140-8492

decal140-8492

1. Keep away from open fire or flames.
2. Do not expose to rain.
3. Read the *Operator's Manual*.
4. Recycle the battery properly.
5. Contains lithium ions; do not dispose improperly.



145-8265

decal145-8265

1. Battery charge status

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8111 Lyndale Avenue South
Bloomington, MN 55420-1196 USA

TORO

RECHARGEABLE LITHIUM ION BATTERY PACK/
BATTERIE RECHARGEABLE AU LITHIUM-ION
60V MAX* DC 10.0Ah, 540 Wh

*60VDC MAXIMUM / 54VDC NOMINAL
*60 VDC MAXIMUM / 54 VDC NOMINALE

PATENT: www.ttcopats.com

Country of Origin: CHINA

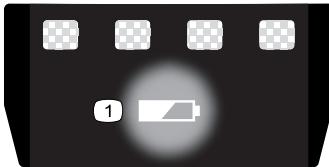
Pays d'origine : CHINE



145-8263

decal145-8263

1. Read the *Operator's Manual*.
2. Recycle the battery
3. Do not dispose improperly
4. Keep away from open fire or flames
5. Do not expose to rain



137-9461

decal137-9461

1. Battery charge status



decal145-3129

145-3129

1. The battery pack is charging.
2. The battery pack is fully charged.
3. The battery pack is over or under the appropriate temperature range.
4. Battery pack charging fault

Setup

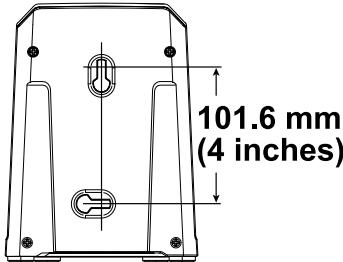
Mounting the Battery Charger (Optional)

If desired, mount the battery charger securely on a wall using the wall-mount key holes on the back of the charger.

Mount it indoors (such as a garage or other dry place), near a power outlet, and out of the reach of children.

Refer to [Figure 3](#) for assistance in mounting the charger.

Slide the charger over the appropriately positioned hardware to secure the charger in place (hardware not included).



g290534

Figure 3

Product Overview

Specifications

Battery Charger

Model	81802	81805
Type	60V MAX Lithium-Ion Battery Charger	60V MAX Lithium-Ion Battery Rapid Charger
Input	100 to 240V AC ~2.0A 50/60Hz,	100 to 240V AC ~5.0A, 50/60Hz
Output	60V DC 2.0A MAX	60V DC ■■■ 5.5A MAX

Battery Pack

Model	81820	81825	81850	81860	81875	68810
Battery pack capacity	2.0 Ah 108 Wh	2.5 Ah 135 Wh	4.0 Ah 216 Wh	6.0 Ah 324 Wh	7.5 Ah 405 Wh	10.0 Ah 540 Wh
Battery pack weight	1.43 kg (3.15 lb)	1.43 kg (3.15 lb)	2.11 kg (4.65 lb)	2.95 kg (6.50 lb)	2.95 kg (6.50 lb)	3.75 kg (8.27 lb)

Battery manufacturer rating = 60V maximum and 54V nominal. Actual voltage varies with load.

Appropriate Temperature Ranges

Charge battery pack at	5°C (41°F) to 40°C (104°F)*
Use battery pack at	-30°C (-22°F) to 49°C (120°F)
Store battery pack/charger at	5°C (41°F) to 40°C (104°F)*

*Charging time will increase if you do not charge the battery within this range.

Store the tool, battery pack, and battery charger in an enclosed clean, dry area.

Attachments/Accessories

A selection of Toro approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or authorized Toro distributor or go to www.Toro.com for a list of all approved attachments and accessories.

To ensure optimum performance and continued safety certification of the machine, use only genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous.

Operation

Charging the Battery Pack

Important: The battery pack is not fully charged when you purchase it. Before using the tool for the first time, place the battery pack in the charger and charge it until the LED display indicates the battery pack is fully charged. Read all safety precautions.

Important: Charge the battery pack only in temperatures that are within the appropriate range; refer to [Charging the Battery Pack \(page 14\)](#).

Note: At any time, press the battery-charge-indicator button on the battery pack to display the current charge (LED indicators).

1. Ensure that the vents on the battery and charger are clear of any dust and debris.

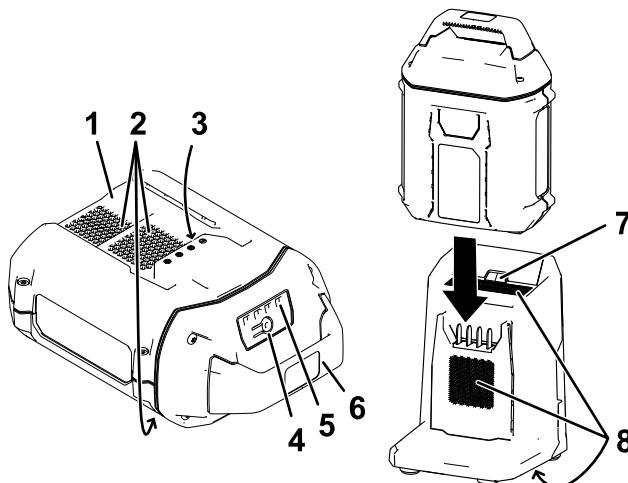


Figure 4

g290533

1. Battery pack cavity
2. Battery pack venting areas
3. Battery pack terminals
4. Battery-charge-indicator button
5. LED indicators (current charge)
6. Handle
7. Charger LED indicator light
8. Charger venting areas

2. Line up the cavity in the battery pack ([Figure 4](#)) with the tongue on the charger.
3. Slide the battery pack into the charger until it is fully seated ([Figure 4](#)).

4. To remove the battery pack, slide the battery backward out of the charger.
5. Refer to the following table to interpret the LED indicator light on the battery charger.

Indicator light	Indicates
Off	No battery pack inserted
Green blinking	Battery pack is charging
Green	Battery pack is charged
Red	Battery pack and/or battery charger is over or under the appropriate temperature range
Red blinking	Battery pack charging fault*

*Refer to [Troubleshooting \(page 17\)](#) for more information.

Important: The battery can be left on the charger for short periods between uses.

If the battery will not be used for longer periods, remove the battery from the charger; refer to [Storage \(page 16\)](#).

Maintenance

Maintenance and servicing are not required under normal conditions.

When you clean the surface of the equipment, wipe it only with a dry cloth.

Do not disassemble the equipment; if it is damaged, contact your Authorized Service Dealer.

Storage

Important: Store the tool, battery pack, and charger only in temperatures that are within the appropriate range; refer to [Specifications \(page 12\)](#).

Important: If you are storing the tool for a year or longer, remove the battery pack from the tool and charge the battery pack until 2 or 3 LED indicators turn green on the battery. Do not store a fully charged or fully depleted battery. When you are ready to use the tool again, charge the battery pack until the left indicator light turns green on the charger or all 4 LED indicators turn green on the battery.

- Disconnect the product from the power supply (i.e., remove the battery pack) and check for damage after use.
- Clean all foreign material from the product.
- Do not store any machine with the battery pack installed.
- When not in use, store the tool, battery pack, and battery charger out of the reach of children.
- Keep the tool, battery pack, and battery charger away from corrosive agents, such as garden chemicals and de-icing salts.
- To reduce the risk of serious personal injury, do not store the battery pack outside or in vehicles.
- Store the tool, battery pack, and battery charger in an enclosed clean, dry area.

Preparing the Battery Pack for Recycling

Important: Upon removal, cover the terminals of the battery pack with heavy-duty adhesive tape. Do not attempt to destroy or disassemble the battery pack or remove any of its components.

Contact your local municipality or your authorized Toro distributor for more information on how to responsibly recycle the battery.

Troubleshooting

Perform only the steps described in these instructions. All further inspection, maintenance, and repair work must be performed by an authorized service center or a similarly qualified specialist if you cannot solve the problem yourself.

Problem	Possible Cause	Corrective Action
The battery pack loses charge quickly.	1. The battery pack is over or under the appropriate temperature range.	1. Move the battery pack to a place where it is dry and the temperature is between 5°C (41°F) and 40°C (104°F).
The battery charger is not working.	1. The battery charger is over or under the appropriate temperature range. 2. The outlet that the battery charger is plugged into does not have power.	1. Unplug the battery charger and move it to a place where it is dry and the temperature is between 5°C (41°F) and 40°C (104°F). 2. Contact your licensed electrician to repair the outlet.
The LED indicator light on the battery charger is red.	1. The battery charger and/or battery pack is over or under the appropriate temperature range.	1. Unplug the battery charger and move the battery charger and battery pack to a place where it is dry and the temperature is between 5°C (41°F) and 40°C (104°F).

Problem	Possible Cause	Corrective Action
The LED indicator light on the battery charger is blinking red.	<ol style="list-style-type: none"> 1. There is an error in the communication between the battery pack and the charger. 2. The battery pack is weak. 	<ol style="list-style-type: none"> 1. Remove the battery pack from the battery charger, unplug the battery charger from the outlet, and wait 10 seconds. Plug the battery charger into the outlet again and place the battery pack on the battery charger. If the LED indicator light on the battery charger is still blinking red, repeat this procedure again. If the LED indicator light on the battery charger is still blinking red after 2 attempts, properly dispose of the battery pack at a battery recycling facility. 2. Properly dispose of the battery pack at a battery recycling facility.
The tool does not run or does not run continuously.	<ol style="list-style-type: none"> 1. There is moisture on the leads of the battery pack. 2. The battery is not fully installed into the tool. 	<ol style="list-style-type: none"> 1. Allow the battery pack to dry or wipe it dry. 2. Remove and then replace the battery into the tool making sure that it is fully installed and latched.

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The Toro Company ("Toro") respects your privacy. When you purchase our products, we may collect certain personal information about you, either directly from you or through your local Toro company or dealer. Toro uses this information to fulfil contractual obligations - such as to register your warranty, process your warranty claim or to contact you in the event of a product recall - and for legitimate business purposes - such as to gauge customer satisfaction, improve our products or provide you with product information which may be of interest. Toro may share your information with our subsidiaries, affiliates, dealers or other business partners in connection with these activities. We may also disclose personal information when required by law or in connection with the sale, purchase or merger of a business. We will never sell your personal information to any other company for marketing purposes.

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