



**Count on It.**

**Form No. 3478-451 Rev A**

**Operator's Manual**

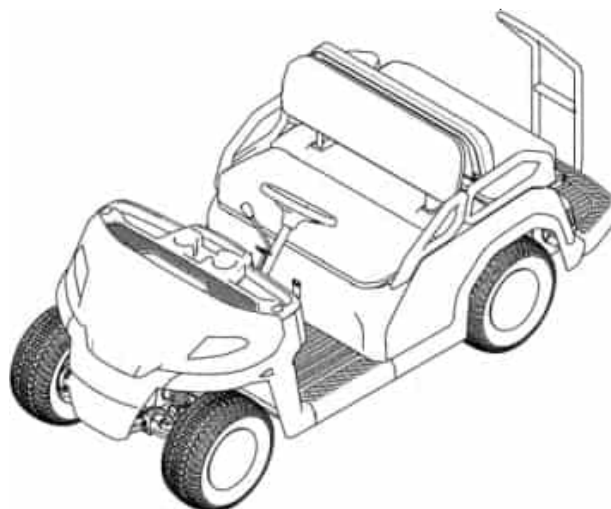
## **Vista® Lithium Shuttle Vehicle**

Model No. 08924—Serial No. 418000000 and Up

Model No. 08924TC—Serial No. 418000000 and Up

Model No. 08926—Serial No. 418000000 and Up

Model No. 08928—Serial No. 418000000 and Up



Register at [www.Toro.com](http://www.Toro.com).  
Original Instructions (CN)

CEK



This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

**▲ WARNING**

**CALIFORNIA  
Proposition 65 Warning**

**The power cord on this product contains lead, a chemical known to the State of California to cause birth defects or other reproductive harm. Wash hands after handling.**

**Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.**

**Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.**

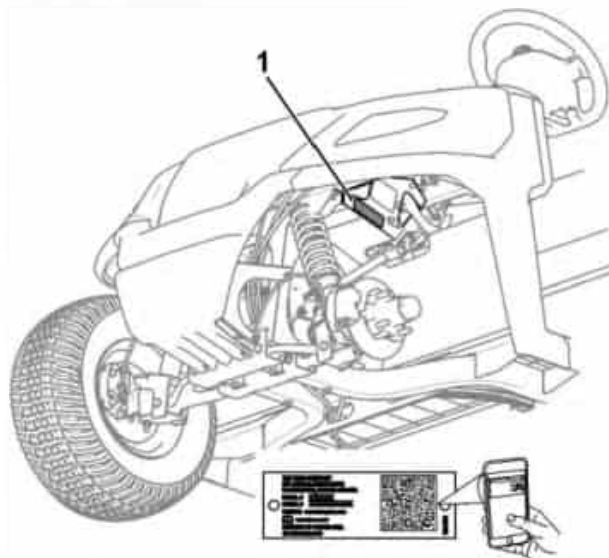


Figure 1

1. Model and serial number location

|            |       |
|------------|-------|
| Model No.  | _____ |
| Serial No. | _____ |

## Introduction

This vehicle is intended to be primarily used off-highway to transport people. Using this product for purposes other than its intended use could prove dangerous to you, your passengers, 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](http://www.Toro.com) for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Distributor or Toro Customer Service and have the model and serial numbers of your product ready.

Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

**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.

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

The safety-alert symbol (Figure 2) appears both in this manual and on the machine to identify important safety messages that you must follow to avoid accidents. This symbol will appear with 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.



Figure 2  
Safety-alert symbol

g000562

# Safety

## General Safety

- This product is capable of causing personal injury or death. Always follow all safety instructions to avoid serious personal injury.
- Improper operation, maintenance, or poor housekeeping of the machine may cause it to become unstable; other factors include terrain conditions, slope, speed, and poor operator judgment.
- Read and understand the contents of this *Operator's Manual* before you start the machine. Ensure that everyone using this product knows how to use it and understands the warnings.
- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Do not put your hands or feet near moving components of the machine.
- Do not operate the machine without all guards and other safety protective devices in place and in good working order.
- Keep bystanders and children out of the operating area. Never allow children to operate the machine.
- Stop and shut off the machine and remove the key before servicing.

## 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.



120-9570

decalf120-9570

1. Warning—stay away from moving parts, keep all guards and shields in place.

For Model 08926 and 08928 only:



140-0920

decalf40-0920

1. Warning—do not operate the machine while under the influence of alcohol or drugs.
2. Falling hazard; dismemberment hazard—passengers should sit in the designated seating positions only; keep all limbs inside the vehicle.



140-0924

decalf40-0924

1. Eco mode
2. Performance mode



140-4590

decalf40-4590

1. Read the *Operator's Manual* for battery information.



144-0275

decalf44-0275

1. Batteries are flammable.



144-0277

decalf44-0277

1. Positive terminal
2. Read the *Operator's Manual*.
3. Recycle the battery.
4. Do not dispose improperly.
5. Do not expose to fire.

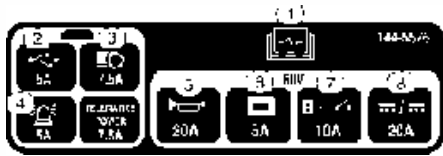
For Model 08924 and 08924TC only:



144-5574

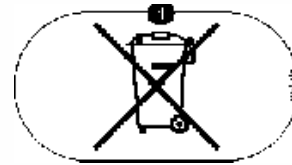
decalf44-5574

1. Warning—do not operate the machine while under the influence of alcohol or drugs.
2. Falling hazard; dismemberment hazard—do not carry more than 4 occupants; occupants should sit in the designated seating positions only; keep all limbs inside the vehicle.



144-5576

decal144-5576



145-5364

decal145-5364

1. Read the *Operator's Manual* for fuse information.
2. USB (5 A)
3. Headlights (10 A)
4. Alarm (5 A)
5. Horn (20 A)
6. Display (10 A)
7. Main system B+ (10 A)
8. DC to DC (20 A)

1. Do not dispose improperly.



144-5580

decal144-5580

1. Read the *Operator's Manual* before performing maintenance.
2. Transmission fluid
3. Brake fluid
4. Tire pressure



145-7345

decal145-7345

1. Electrical shock hazard



144-5571

decal144-5571

1. Warning—read the *Operator's Manual*.
2. Warning—receive proper training before operating the machine.
3. Warning—never allow children to operate the machine; only operate the machine while sitting in the operator's position.
4. Collision hazard—do not operate the machine on public roads.
5. Tipping hazard—drive slowly across or up slopes; take turns slowly; do not exceed speeds of 25 kph (16 mph); drive slowly when carrying passengers; drive slowly on uneven terrain
6. Warning—Engage the parking brake, turn the key to the Off position, and remove the key before leaving the operator's position.



decal144-5573

144-5573

1. Off
2. On
3. Parking brake—Disengage (hold for 5 seconds)
4. To start the machine—1) Sit in the operator's position and have all passengers sit in the designated seating positions; 2) Turn the key to the ON position; 3) Press the direction selector button to the desired direction of travel; 4) Press down on the pedal.
5. To shut off the machine—1) Release the pedal; 2) Engage the parking brake; Turn the key to the OFF position; 4) Remove the key.



decal145-5301

145-5301

1. Negative battery terminal



decal145-5338

145-5338

1. Warning—read the *Operator's Manual*.
2. Warning—do not open the battery; do not use a damaged battery.
3. Explosion hazard—do not expose to sparks or open flame.
4. Electric shock hazard—do not perform maintenance on the battery.
5. Electric shock hazard

# Setup

## Loose Parts

Use the chart below to verify that all parts have been shipped.

| Procedure | Description       | Qty. | Use   |
|-----------|-------------------|------|---|
| <b>1</b>  | Steering wheel    | 1    | Install the steering wheel (4-passenger crated model only). |
|           | Screw             | 5    |   |
|           | Spring            | 2    |   |
|           | Wheel cover       | 1    |   |
|           | Wheel clip        | 1    |   |
| <b>2</b>  | No parts required | -    | Charge the machine.   |
| <b>3</b>  | No parts required | -    | Check the fluid levels and tire pressure.                   |
| <b>4</b>  | No parts required | -    | Burnish (break-in) the brakes.                              |

# 1

## Installing the Steering Wheel

### 4-Passenger Crated Model Only

Parts needed for this procedure:

|   |                |
|---|----------------|
| 1 | Steering wheel |
| 5 | Screw          |
| 2 | Spring         |
| 1 | Wheel cover    |
| 1 | Wheel clip     |

## Procedure

Refer to [Figure 3](#) for this procedure.

- Place the steering wheel on the steering shaft.  
Ensure that the steering wheel is centered (i.e., the flat bottom should be parallel with the ground).
- Use the locknut to secure the steering wheel to the steering shaft.
- Torque the locknut to 27 N·m (20 ft-lb).
- Use 2 screws and 2 springs to secure the wheel clip to the wheel cover.
- Use 3 screws to secure the wheel cover to the steering wheel.
- Torque the 5 screws to 0.6 N·m (5 in-lb).

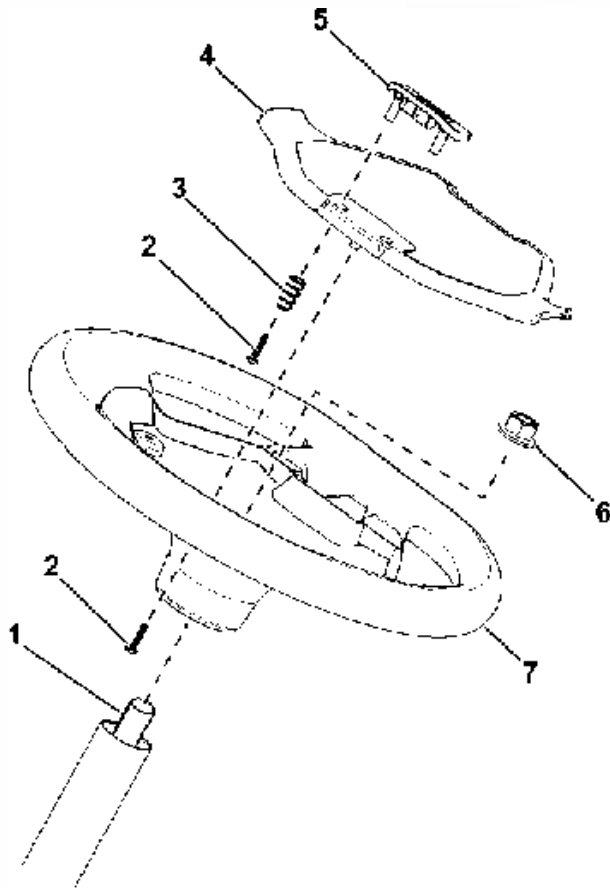


Figure 3

yf 0798

- |                   |                   |
|-------------------|-------------------|
| 1. Steering shaft | 5. Wheel clip     |
| 2. Screw          | 6. Locknut        |
| 3. Spring         | 7. Steering wheel |
| 4. Wheel cover    |                   |

## 2

### Charging the Machine

No Parts Required

#### Procedure

Charge the machine; refer to [Understanding the Lithium-Ion Battery Charger](#) (page 23).

## 3

### Checking the Fluid Levels and Tire Pressure

No Parts Required

#### Procedure

1. Check the brake-fluid level before you first start the machine; refer to [Checking the Brake-Fluid Level](#) (page 38).
2. Check the transaxle-fluid level before you first start the machine; refer to [Checking the Transaxle-Fluid Level](#) (page 37).
3. Check the air pressure in the tires; refer to [Checking the Tire Pressure](#) (page 17).

## 4

### Burnishing the Brakes

No Parts Required

#### Procedure

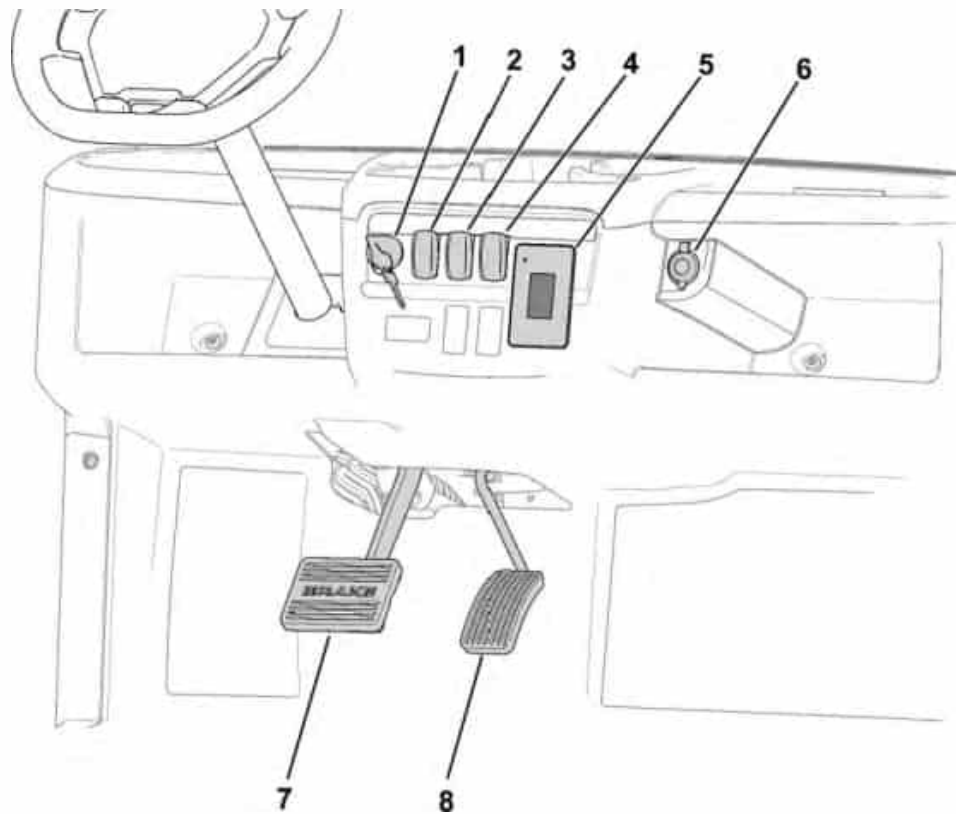
To ensure optimum performance of the brake system, burnish (break-in) the brakes before use.

1. Bring the machine up to full speed, apply the brakes to rapidly stop the machine without locking up the tires.
2. Repeat this procedure 10 times, waiting 1 minute between stops, to avoid overheating the brakes.

# Product Overview

## Controls

### Control Panel



**Figure 4**

g408206

- 1. Key switch
- 2. Direction selector
- 3. Light switch
- 4. Horn switch

- 5. Display
- 6. USB port
- 7. Brake pedal
- 8. Accelerator pedal

## Accelerator Pedal

Use the accelerator pedal to vary ground speed of the machine. Pressing down the accelerator pedal starts the machine. Pressing the pedal farther increases ground speed. Releasing the pedal slows the machine, and the machine shuts off.

The forward speed in performance mode is 26 km/h (16 mph).

The forward speed in economy mode is 18 km/h (11 mph).

## Brake Pedal

Use the brake pedal to stop or slow the machine.

### **⚠ WARNING**

**Operating a machine with worn or incorrectly adjusted brakes can result in personal injury.**

**If the brake pedal travels within 25 mm (1 inch) of the machine floor board, adjust or repair the brakes.**

## Direction Selector

The direction selector (Figure 4) has 2 positions: FORWARD and REVERSE.

**Note:** The machine can be on in any of the 2 positions, but only moves in the FORWARD and REVERSE positions.

## Horn Switch

Press the horn switch (Figure 4) to sound the horn.

## Light Switch

Use the light switch (Figure 4) to illuminate the headlights. Push the light switch up to turn on the headlights. Push the light switch down to turn off the lights.

## USB Port

Use the USB port (Figure 4) to power mobile devices.

**Important:** When you are not using the USB port, insert the rubber plug to prevent damage to the port.

## Key Switch

Use the key switch (Figure 4) to run and shut off the machine or put the machine into TRANSPORT mode.

The key switch has 3 positions: ON, OFF, and TRANSPORT.

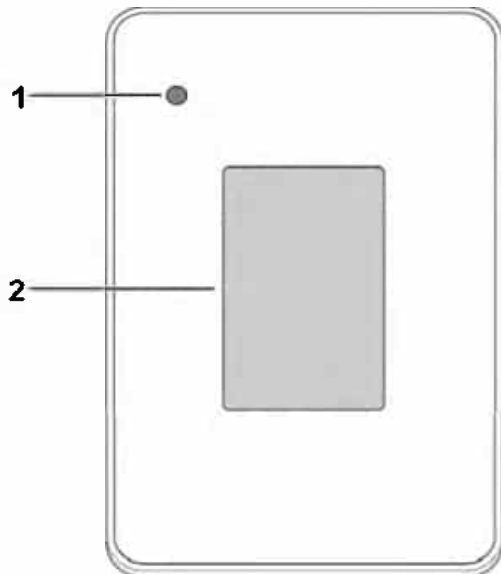
Rotate the key clockwise to the ON position to operate the machine.

When you stop the machine, rotate the key counterclockwise to the OFF position to shut off the machine. Remove the key whenever you leave the machine.

To disengage the parking brake, rotate and hold the key switch in place for 5 seconds to enter the TRANSPORT position.

## Display

The display shows information about your machine, such as the operating status, various diagnostics, and other information about the machine (Figure 5).



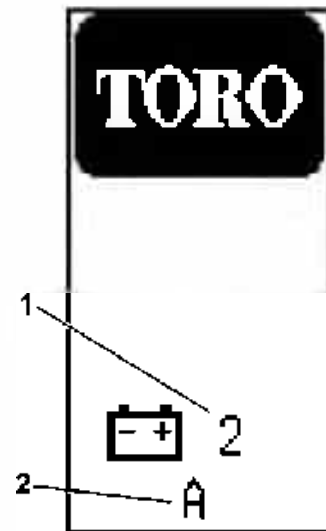
**Figure 5**

1. Indicator light                      2. Display

There is a startup screen, run screen, and charging screen on the display (Figure 6, Figure 7, and Figure 8).

Figure 7 shows what you may see on the display when you run the machine. The startup screen displays for a few seconds after you turn the key to the ON position, then the run screen displays.

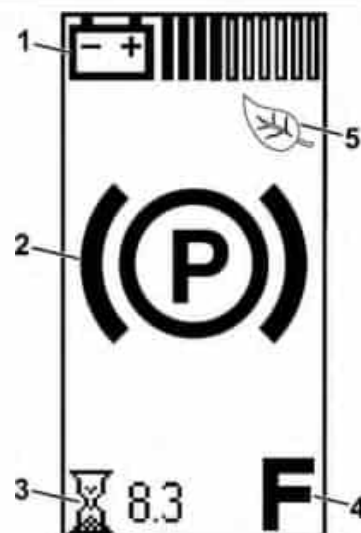
The LED indicator light is lit solid green when there are no faults active. If there are faults active on the machine, the LED flashes red. If there is an advisory present, the LED is lit solid red (no blinking).



**Figure 6**

Startup screen

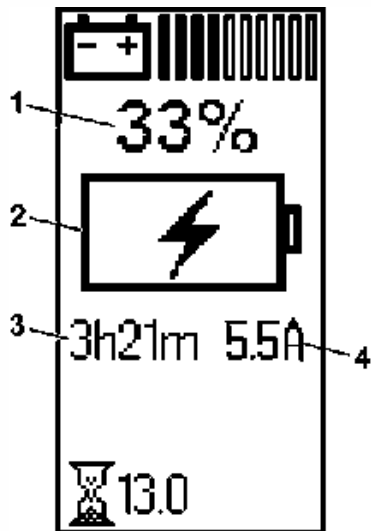
1. Software revision                      2. Number of equipped batteries on the machine



**Figure 7**

Run screen

1. Battery charge                      4. Direction  
2. Parking brake is engaged.      5. Eco mode  
3. Hours operated

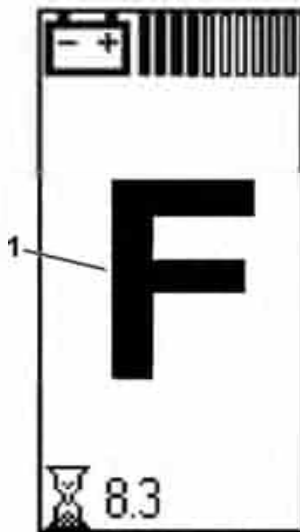


**Figure 8**  
Charging screen

g413689

- |   |   |
|---|---|
| 1. Battery life                         | 3. Estimated time to fully charge the machine |
| 2. Battery currently charging indicator | 4. Charging current (Amps)                    |

The run screen with the direction position (Figure 9) appears when you change directions.

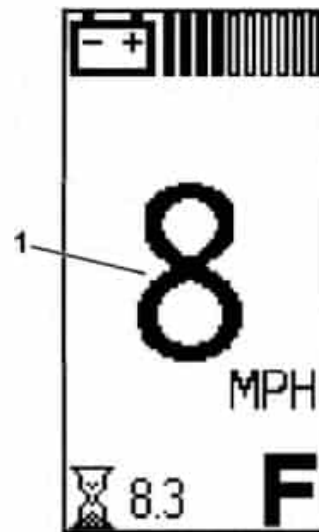


**Figure 9**

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1. FORWARD position

The run screen with the current machine speed (Figure 10) appears when you are driving the machine.

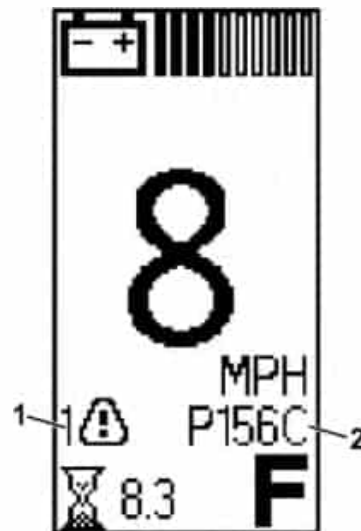


**Figure 10**

g415320

1. Current machine speed

An active fault code (Figure 11) appears on the display if there is an issue with the machine.



**Figure 11**

g415319

- |                           |               |
|---------------------------|---------------|
| 1. Active fault indicator | 2. Fault code |
|---------------------------|---------------|

When the cold battery indicator (Figure 12) flashes on the run screen during operation, the machine performance changes until the battery temperature is above 0°C (32°F).

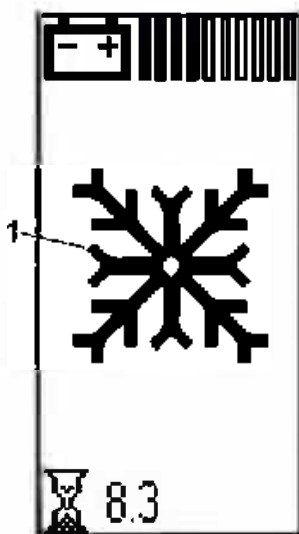


Figure 12

g439606

1. Cold battery indicator

The cold battery indicator also appears in the charging screen (Figure 13) when the batteries are too cold to be charged.

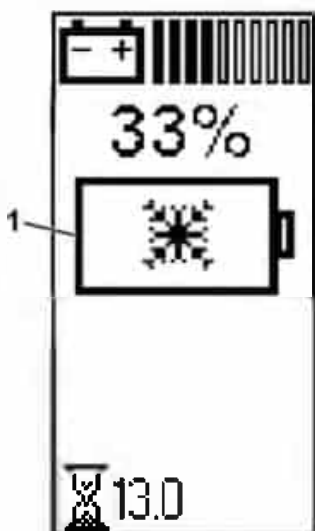


Figure 13

g439783

1. Cold battery indicator

### Icon Descriptions

|            |  |
|------------|--|
| <b>F</b>   | Direction—FORWARD position   |
| <b>N</b>   | Transport—NEUTRAL position   |
| <b>R</b>   | Direction—REVERSE position   |
| <b>(P)</b> | Parking brake is engaged.  |
|            | Hour meter   |
|            | Battery voltage  |
|            | Battery charge level   |
|            | Battery currently charging   |
|            | Low-battery advisory   |
|            | Eco Mode is on.  |
|            | Active fault   |
|            | Hot battery indicator—battery temperature is greater than 67°C (152°F) |
|            | Cold battery indicator—battery temperature is less than 0°C (32°F)     |
|            | Batteries are too cold to be charged.                                  |



## Specifications

**Note:** Specifications and design are subject to change without notice.

|  |   |
|--|---|
| Base weight                                | 4-passenger model: 403 kg (890 lb), including the Canopy Kit  |
|  | 6-passenger model: 422 kg (930 lb)  |
|  | 8-passenger model: 487 kg (1,075 lb)  |
| Rated capacity (on level ground)           | 4-passenger model: 458 kg (1,010 lb) total, including 90.7 kg (200 lb) operator and 91 kg (200 lb) for each passenger, load, accessories, and attachments |
|  | 6-passenger model: 689 kg (1,520 lb) total, including 90.7 kg (200 lb) operator and 91 kg (200 lb) for each passenger, load, accessories, and attachments |
|  | 8-passenger model: 873 kg (1,925 lb) total, including 90.7 kg (200 lb) operator and 91 kg (200 lb) for each passenger, load, accessories, and attachments |
| Gross vehicle weight (GVW)—on level ground | 861 kg (1,900 lb)   |
|  | 1,111 kg (2,450 lb)   |
|  | 1,360 kg (3,000 lb)   |
| Overall width                              | 112 cm (44 inches)  |
| Overall length                             | 4-passenger model: 277 cm (109 inches)  |
|  | 6-passenger model: 357 cm (140.5 inches)  |
|  | 8-passenger model: 437 cm (172 inches)  |
| Overall height                             | Top of steering wheel: 121 cm (47.5 inches)   |
|  | Top of canopy: 188 cm (73.9 inches)   |
| Ground clearance                           | 21.6 cm (8.5 inches) at the front with no operator  |
|  | 15.7 cm (6.2 inches) at the rear with no operator   |
| Wheel base                                 | 4-passenger model: 166 cm (65.5 inches)   |
|  | 6-passenger model: 246 cm (97 inches)   |
|  | 8-passenger model: 326 cm (128.5 inches)  |
| Wheel tread (center line to center line)   | Front: 90 cm (35.4 inches)  |
|  | Rear: 90 cm (35.4 inches)   |

## 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](http://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, and such use could void the product warranty.

# Operation

## Before Operation

### Before Operation Safety

#### General Safety

- Never allow children or untrained people to operate or service the charger. Local regulations may restrict the age of the operator. The owner is responsible for training all operators and mechanics.
- The owner is responsible for training all operators and mechanics. Operators of the machine should complete an operator's training program regardless of previous experience operating vehicles.
- The operator's training program should include the *Operator's Manual* and emphasize the safety of the operator, passengers, and bystanders; general safety rules; an overview of the equipment, controls, and functions, and how they work when used properly and improperly; surface conditions, slope, and other conditions that could affect the operation of the machine; and an evaluation of operator competency.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- Shut off the machine, wait for the parking brake to engage, remove the key, and wait for all movement to stop before you leave the operator's position.
- Allow the machine to cool before adjusting, servicing, cleaning, or storing it.
- Know how to stop and shut off the machine quickly.
- Check that all safety devices and decals are in place. Repair or replace all safety devices and replace all illegible or missing decals. Do not operate the machine unless they are present and functioning properly.
- Inspect the machine periodically to ensure that the safety-interlock system (if equipped) is operating properly.
- Assess the area where you will use the machine and identify areas where you should not operate it and any hazards to avoid. Train operators to comply with any additional safety practices.
- Use care when operating the machine where there are pedestrians, bicycles, or motor vehicles, whenever possible. When operating the machine with other vehicles or pedestrians around, you may use mirrors, barriers, lighting, or other measures in these areas.

- It is the owner's responsibility to survey the environment and operating conditions to determine whether the machine requires lights, and if so, to equip the machine with appropriate lights.
- The owner is responsible for determining if the operating conditions require the machine to have additional sound-producing and/or visual devices and for providing and maintaining such devices according to the manufacturer's recommendations.
- At the beginning of each shift using the machine, check the condition of the machine, inspecting the tires, warning devices, lights, battery, speed and directional controllers, brakes, safety interlocks, and steering mechanism. If the machine needs repair or is unsafe in any way, report it immediately to the owner and do not operate the machine until it is in a safe operating condition.

## Checking the Tire Pressure

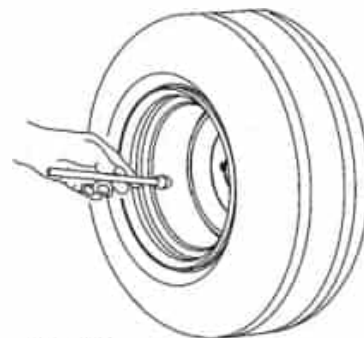
**Service Interval:** Before each use or daily

**Front and rear tires air pressure specification:** 138 to 165 kPa (20 to 24 psi)

**Important:** Do not exceed the maximum air pressure indicated on the sidewall of the tire.

**Note:** The air pressure needed in the tires is determined by the payload that you intend to carry.

1. Check the air pressure in the tires.
  - Use lower air pressure in the tires for lighter payloads, for less soil compaction, for a smoother ride, and to minimize tire marks on the ground.
  - Use higher air pressure in the tires for carrying heavier payloads at higher speeds.
2. If necessary, adjust the air pressure in the tires by adding or removing air in the tires.



G001055

Figure 16

G001055

## Breaking in a New Machine

**Service Interval:** After the first 100 hours—Perform the breaking in a new machine guidelines.

Perform the breaking in a new machine guidelines to provide proper performance and long life for the machine.

- Ensure that the brakes are burnished; refer to the burnishing section in Setup.
- Check the brake fluid; refer to [Checking the Brake-Fluid Level \(page 38\)](#).
- Refer to [Maintenance \(page 25\)](#) for any special low hour checks.
- Check the front and rear suspension positioning and adjust it, if necessary; refer to [Adjusting the Wheel Alignment \(page 36\)](#).
- For optimal battery performance and battery life, charge the batteries to 100% when you receive your machine.

## During Operation

### During Operation Safety

#### General Safety

- The owner/operator can prevent and is responsible for accidents that may cause personal injury or property damage.
- Report all accidents with the machine to the owner.
- Keep bystanders and children out of the operating area.
- Passengers should sit in the designated seating positions only. Keep arms and legs within the machine body at all times. Do not carry passengers in the cargo bed.
- The operator should wear substantial, slip-resistant footwear.
- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- You and your passengers should remain seated whenever the machine is moving. Keep your hands on the steering wheel; your passengers should use the handholds provided.
- Do not exceed the maximum gross vehicle weight (GVW) of the machine.
- Use extra caution when operating, braking, or turning the machine with a heavy load in the cargo bed.
- Carrying oversized loads in the cargo bed reduces the stability of the machine. Do not exceed the carrying capacity of the bed.
- Operate the machine only in good visibility. Watch for holes, ruts, bumps, rocks, and loose or hidden objects. Reduce the ground speed of the machine when operating on rough, uneven terrain, and near curbs, holes, and other sudden changes in terrain that could overturn the machine. Tall grass can hide obstacles. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.
- Identify sharp turns, blind spots, bridge approaches, and other potentially hazardous areas, and post a warning to the operator of the nature of the hazard(s) and the proper precautions to take to avoid the hazard(s).
- Do not drive the machine near drop-offs, ditches, or embankments. The machine could suddenly roll over if a wheel goes over the edge or if the edge gives way.

- Keep away from potential hazards, such as edges of ramps and platforms.
- Always watch out for and avoid low overhangs such as tree limbs, door jambs, overhead walkways, etc.
- Look behind you before reversing the machine to be sure of a clear path.
- When using the machine on public roads, follow all traffic regulations and use any additional accessories that may be required by law, such as lights, turn signals, slow-moving vehicle (SMV) signs, and others as required.
- It can take longer to stop the machine on wet surfaces than on dry surfaces. To dry out wet brakes, drive slowly on a level surface while putting light pressure on the brake pedal.
- Use extreme caution and slow down when driving the machine in wet or icy areas or on loose terrain could result in reduced traction, steering, stability, and braking. Repair areas of loose terrain, if possible, or close off the area and post a warning to prevent others from operating the machine on those areas.
- Operating the machine at high speed and then quickly stopping may cause the rear wheels to lock up, which impairs your control of the machine.
- Do not leave a running machine unattended. The machine is considered unattended when you are 7.6 m (25 ft) or more from it, which remains in view, or whenever you leave the machine and it is not within view. Whenever you leave the machine and are within 7.6 m (25 ft) of the machine and it is still in view, ensure that the parking brake is engaged to prevent the machine from moving.
- Before you leave the operating position, do the following:
  - Park the machine on a level surface.
  - Ensure that the parking brake is engaged.
  - Shut off the machine and remove the key.
  - Wait for all movement to stop.
- If the machine ever vibrates abnormally, stop and shut off the machine immediately, wait for all movement to stop, and inspect for damage. Repair all damage to the machine before resuming operation.
- Do not park the machine or leave it unattended where it obstructs fire aisles, access to stairways, or fire equipment.
- Operate the machine only while in the operating position. You and your passengers should remain seated whenever the machine is in motion.
- Do not allow passengers to distract you either physically or verbally while you are driving the machine.
- Make starts, stops, turns, or direction reversals smoothly so as not to endanger passengers or lose control of the machine.
- Always be aware of and watch out for pedestrians. Do not drive the machine in a manner that endangers others.
- Under all travel conditions, operate the machine at a speed that allows you stop it safely.
- Yield the right of way to pedestrians, ambulances, fire trucks, vehicles, or other machines in emergency situations.
- Do not pass another machine traveling in the same direction at intersections, blind spots, or at other dangerous locations.
- Keep a clear view of the path of travel, observe other traffic and personnel, and maintain a safe clearance.
- Slow down or stop, as conditions dictate, and activate the sound-producing warning device at cross aisles and when visibility is obstructed at other locations.
- Do not drive the machine onto any elevator unless specifically authorized to do so. Approach elevators slowly, and then enter squarely after the elevator car is properly leveled. Once on the elevator, ensure that the parking brake is engaged and shut off the machine. Have all others leave the elevator before you enter or exit in the machine.
- Do not operate the machine when there is the risk of lightning.
- Do not add to or modify the machine.
- Use accessories and attachments approved by The Toro® Company only.

## Slope Safety

- Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death.
- Survey the site to determine which slopes are safe for operating the machine and establish your own procedures and rules for operating on those slopes. Always use common sense and good judgment when performing this survey.
- If you feel uneasy operating the machine on a slope, do not do it.
- Keep all movement on slopes slow and gradual. Do not suddenly change the speed or direction of the machine.
- Avoid operating the machine on wet terrain. Tires may lose traction. A rollover can occur before the tires lose traction.

- If possible, avoid turning the machine and use extreme caution on slopes, ramps, or inclines. Travel straight up and down a slope.
- If you begin to lose momentum while climbing a slope, gradually engage the brakes and slowly reverse the machine straight down the slope.
- Turning while going up or down a slope can be dangerous. If you must turn on a slope, do it slowly and cautiously. Avoid driving/turning on improperly banked curves.
- Heavy loads affect stability on a slope. Carry a reduced load and reduce your ground speed when operating on a slope or if the load has a high center of gravity. Secure the load to the cargo bed of the machine to prevent the load from shifting. Take extra care when hauling loads that shift easily (e.g., liquids, rock, sand, etc.).
- Avoid starting and stopping the machine on a slope. Stopping while going down a slope takes longer than stopping on a level surface. If you must stop the machine, avoid sudden speed changes, which can cause the machine to tip or roll over. Do not engage the brakes suddenly when rolling rearward, as this may cause the machine to overturn.
- Whenever you operate the machine on steep grades, stay on the designated vehicle paths, which should be marked with a warning of a steep grade.
- Operating the machine at an excessive speed down a slope will adversely affect its stability. Identify hazardous slopes with a warning in places preceding the beginning of the slope. Use care when approaching a slope, especially when you turn the machine downhill or the downhill slope exceeds 10% (6 degrees) on an unpaved surface or 20% (11 degrees) on a paved surface. Avoid parking on steep hills.

## Loading Safety

- Do not exceed the gross vehicle weight (GVW) of the machine when operating it with a load in the cargo bed; refer to [Specifications \(page 16\)](#).
- Distribute the load in the cargo bed evenly to improve the stability and control of the machine.

## Driving the Machine

1. Ensure that the key switch is in the OFF position.
2. Shut off the following 12V electrical devices:
  - Headlights
  - Turn signals
  - Hazard flashers
  - Optional beacon light
  - Shut off or unplug all devices connected to the USB charge port
3. Sit in the operator's position and have all passengers sit in the designated seating positions.
4. Turn the key to the ON position.
5. Press the direction selector button to the desired direction of travel.
6. Press down on the accelerator pedal.

## Monitoring the Battery-System Charge Level

Refer to the display to determine the battery-system charge level; refer to [Display \(page 12\)](#).

## Understanding the Low Battery-Level Advisories

If the battery level becomes too low (i.e., below 10%), a low-battery icon appears on the display. When you are operating at this battery percentage, drive the machine to a designated battery-charging area and charge the batteries; refer to [Understanding the Lithium-Ion Battery Charger \(page 23\)](#).

If you operate the machine while the battery charge level is blank, the machine operates at a reduced speed (i.e., 5 km/h or 3 mph).

## Stopping the Machine

**Important:** When stopping the machine on an incline, use the service brakes to stop the machine to hold the machine in place. Using the accelerator to stall the machine on the hill can overheat the motor or drain the batteries.

1. Remove your foot from the accelerator pedal.
2. Slowly press the brake pedal to apply the service brakes until the machine comes to a complete stop. The parking brake engages when the machine comes to a complete stop.

**Note:** The stopping distance may vary depending on the machine load and speed.

## After Operation

### After Operation Safety

#### General Safety

- Before you leave the operating position, do the following:
  - Park the machine on a level surface.
  - Ensure that the parking brake is engaged.
  - Shut off the machine and remove the key.
  - Wait for all movement to stop.
- If, during operation, you find that the machine is unsafe in any way, report it immediately to the owner and do not operate the machine until it is in safe operating condition.
- Allow the machine to cool before adjusting, servicing, cleaning, or storing it.

### Battery and Charger Safety

#### General

- **WARNING:** Risk of fire and electric shock—The batteries have no user-serviceable parts.
- Confirm the voltage that is available in your country before using the charger.
- Do not get the charger wet; keep it protected from rain and snow.
- A risk of fire, electric shock, or injury may result from using an accessory not recommended or sold by Toro.
- To reduce risk of a battery explosion, follow these instructions and the instructions for any equipment that you intend to use near the charger.
- Batteries could emit explosive gasses if they are significantly overcharged.
- Refer to an authorized Toro distributor to service or replace a battery.

#### Training

- Never allow children or untrained people to operate or service the charger. Local regulations may restrict the age of the operator. The owner is responsible for training all operators and mechanics.
- Read, understand, and follow all instructions on the charger and in the manual before operating the charger. Be familiar with the proper use of the charger.

#### Preparation

- Keep bystanders and children away while charging.
- Wear appropriate clothing while charging, including eye protection; long pants; and substantial, slip-resistant footwear.
- Shut off the machine and wait until the machine has completely powered down before charging. Failure to do this may cause arcing.
- Ensure that the area is well ventilated while charging.
- The charger is for use on only nominal 120 to 240 VAC operation. For use with 240 V circuits, contact your authorized Toro distributor for the correct power cord.
- Use only a power cord approved by Toro.

#### Operation

- Do not charge a frozen battery.
- Do not abuse the cord. Do not carry the charger by the cord or yank on the power supply cord to disconnect the charger from the receptacle. Keep the cord from heat, oil, and sharp edges.
- Connect the charger directly to a grounding receptacle. Do not use the charger on an ungrounded outlet, even with a grounding adapter.
- Do not alter the provided power cord or plug.
- Remove metal items such as rings, bracelets, necklaces, and watches when working with a lithium-ion battery. A lithium-ion battery can produce enough current to cause a severe burn.
- Never operate the charger without good visibility or light.
- Use an extension cord capable of handling 15 A or more. If you are charging outdoors, use an extension cord rated for outdoor use.
- If the power supply cord is damaged while it is plugged in, disconnect the cord from the wall receptacle and contact an authorized Toro distributor for a replacement.
- Unplug the charger from the electrical outlet when not in use, before moving it to another location, or prior to servicing it.

#### Maintenance and Storage

- Do not disassemble the charger. Take the charger to an authorized Toro distributor when service or repair is required.
- Unplug the power cord from the outlet before starting any maintenance or cleaning to reduce risk of electric shock.
- Maintain or replace safety and instruction labels as needed.

- Do not operate the charger with a damaged cord or plug. Contact an authorized Toro distributor to obtain a replacement cord.
- If the charger has received an impact, been dropped, or otherwise damaged, do not use it; take it to an authorized Toro distributor.

## Moving an Inoperable Machine

### Towing the Machine

#### **⚠ WARNING**

Towing at excessive speeds could cause a loss of steering control, resulting in personal injury.

Never tow the machine at faster than 8 km/h (5 mph).

In case of an emergency, you can tow the machine for a short distance; however, this should not be a standard operating procedure.

Towing the machine is a 2-person job. If you must move the machine a considerable distance, transport it on a truck or trailer.

1. Affix a tow line to the tongue at the front of the machine's frame.
2. To disengage the parking brake, rotate and hold the key switch in place for 5 seconds to enter the TRANSPORT position.

**Note:** The "N" symbol (i.e., the NEUTRAL position) should appear on the display.

## Disengaging the Brake without Power

#### **⚠ WARNING**

While the brake is disengaged, the machine could unintentionally move, and injure you or bystanders.

When you are not pushing or towing the machine, ensure that the parking brake is functional and engaged.

If the battery is fully discharged, or another issue is preventing the brakes from receiving power, the brake can be disengaged with screws.

1. Chock the wheels and ensure that the vehicle cannot roll once the brake is disengaged.
2. Remove the access cover from the rear of the machine (Figure 17).

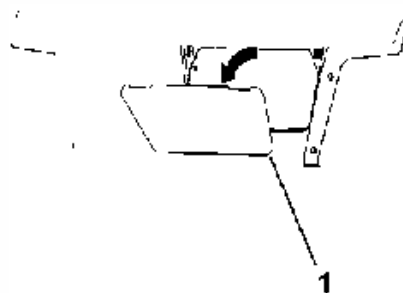


Figure 17

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1. Rear access cover

3. Disconnect the brake connector from the main harness (Figure 18).

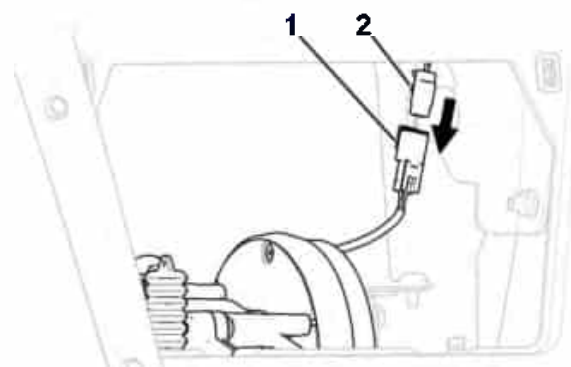
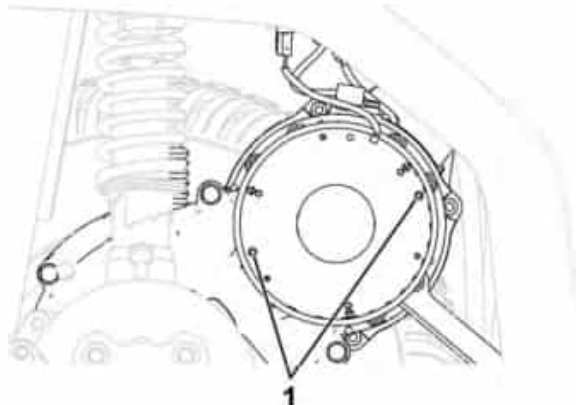


Figure 18

g472910

1. Brake connector
2. Main harness connector

4. To release the parking brake, insert 2 screws (M5-0.8 x 45 mm) in the holes shown in **Figure 19** and slowly tighten them.



**Figure 19**

Some parts not shown for clarity

g472930

1. Insert screws here and slowly tighten to release the brake.
- 
5. Move the machine to a service location as needed and chock the wheels.
  6. To engage the parking brake, connect the brake harness to the main harness and slowly remove the screws.
  7. Install the access cover to the rear of the machine.

## Transporting the Lithium-Ion Batteries

The US Department of Transportation and international transportation authorities require that lithium-ion batteries be transported using special packaging and only be transported by carriers certified to haul them. In the US, you are allowed to transport a battery when it is installed on the machine as battery powered equipment, with some regulatory requirements. Contact the US Department of Transportation or the appropriate government body in your country for detailed regulations on transportation of your batteries or the machine with the batteries equipped.

For detailed information on shipping a battery, contact your authorized Toro distributor.

## Understanding the Lithium-Ion Battery Charger

### Connecting to a Power Source

#### **⚠ DANGER**

Contact with water while charging the machine could cause electric shock, causing injury or death.

- Do not handle the plug or the charger with wet hands or while standing in water.
- Do not charge the batteries in the rain or in wet conditions.

To reduce the risk of electric shock, this charger has a 3-prong grounded plug (type B). If the plug does not fit into the wall receptacle, other grounded plug types are available; contact an authorized Toro distributor.

Do not change the charger or the power-supply-cord plug in any way.

**Important:** Check the power supply cord periodically for holes or cracks in the insulation. Do not use a damaged cord. Do not run the cord through standing water or wet grass.

See **Figure 20** for power source requirements.



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**Figure 20**

1. Plug the power-supply cord into the machine charger outlet (Figure 21).

### **▲ WARNING**

A damaged charger cord can cause an electrical shock or a fire.

Thoroughly inspect the power supply cord before using the charger. If the cord is damaged, do not operate the charger until you obtain a replacement.

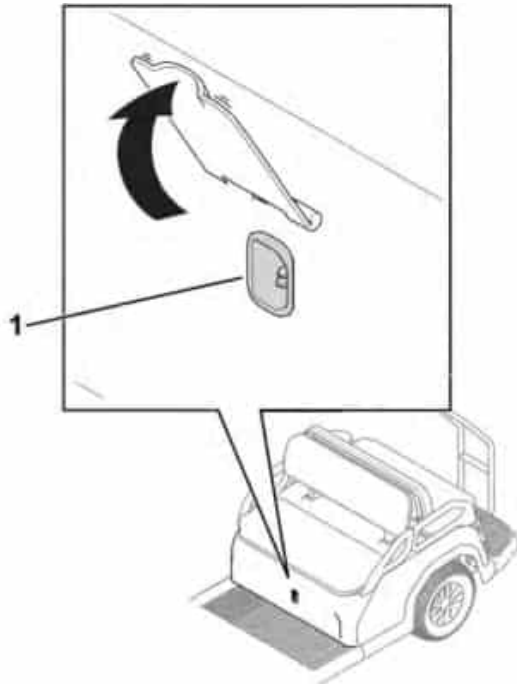


Figure 21

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1. Charger outlet

2. Insert the wall plug end of the power-supply cord into a grounded electrical outlet.

## Charging the Lithium-Ion Batteries

### **▲ CAUTION**

Attempting to charge the batteries with a charger not provided by Toro can result in excessive heat and other related product malfunctions, which can lead to property damage and/or injury.

Use the Toro-provided chargers to charge the batteries.

**Recommended temperature range for charging:**  
0° to 45°C (32° to 113°F)

**Important:** Charge the batteries only in temperatures that are within the recommended range.

**Note:** The charger will not function in temperatures exceeding the minimum or maximum temperatures. The hot or cold battery indicators will appear on the display.

The charging status is shown on the display.

If there is a fault, an error message will appear in the display. To correct an error, refer to the machine *Service Manual*.

## Completing the Charging Process

1. Remove the power-supply cord from the machine charger outlet.
2. Place the cord in a storage position that avoids damage.
3. Turn on the machine.
4. Verify the charge level; refer to [Display \(page 12\)](#).