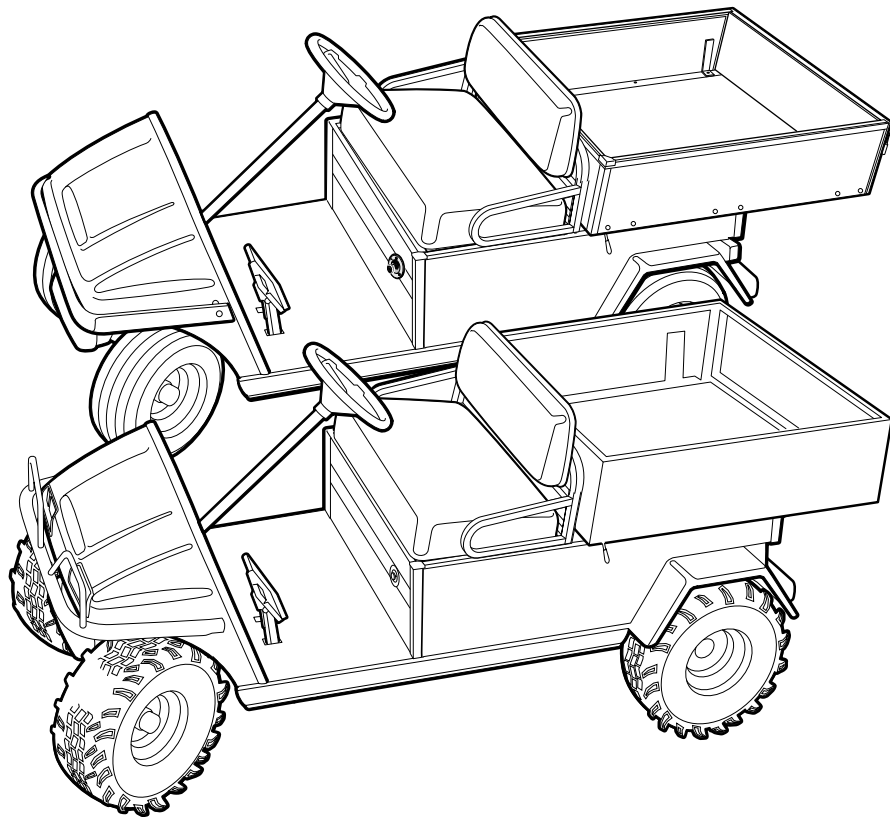


# 2009-2010 Turf 252, Carryall 252 and XRT 900 Vehicle Owner's Manual

**Electric and Gasoline**

[Refer to back cover for applicable build code range]





## NOTICE

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This manual is valid for vehicles manufactured in the build code range provided on the back cover of this manual. If the vehicle build code is different from that shown on the back cover of this manual, please contact your nearest dealer or go to [www.clubcar.com](http://www.clubcar.com) to retrieve the proper owner's manual for the vehicle. See also Model Identification in this manual.

Warranty information appears at the end of this manual. No other warranties, express or implied, are contained herein. Your authorized representative checked the vehicle before it was delivered to you and will provide you a copy of the completed vehicle warranty registration form.

Club Car is not liable for errors in this manual or for incidental or consequential damages that result from the use of the material in this manual.

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The information contained in this document is subject to change without notice.

Club Car reserves the right to make design changes to vehicles without obligation to make these changes on units previously sold.

These vehicles do not conform to Federal Motor Vehicle Safety Standards for automobiles or to FMVSS 500 for low-speed vehicles, and are not equipped for operation on public streets, roads, or highways.

If in English, this manual is the Original Instructions provided by the manufacturer. If in any language other than English, this manual is a translation of the Original Instructions.



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This manual effective August 1, 2008

## FOREWORD

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Thank you for choosing Club Car, the name most widely recognized as the industry leader in vehicle efficiency and long-lasting value. You have chosen the finest utility vehicle on the market. Please protect your investment and ensure that your Club Car vehicle(s) provides years of reliable, superior performance by reading and following the maintenance instructions in this manual.

Your comfort and safety are important to us, so we urge you to read and follow the step-by-step operating instructions and safety procedures in this manual. These instructions must be followed in order to avoid the risk of severe personal injury. If you rent or loan your vehicle to others, we recommend that you ask them to read this manual before they operate the vehicle.

Club Car products are backed by a customer support system designed to offer you fast, courteous service. In the event your Club Car vehicle needs repairs or service, please contact your local authorized Club Car dealer or distributor; he will be able to provide technical advice, perform warranty work, and sell parts and service manuals.

For the name and address of the authorized Club Car dealer or distributor nearest you, logon to our web site at [www.clubcar.com](http://www.clubcar.com) or call 1-800-ClubCar (258-2227). If you would prefer to write to us, direct your letter to: Club Car, Attention: Marketing Services, P.O. Box 204658, Augusta, Georgia 30917-4658 USA.

We hope you will consider this owner's manual a permanent part of your Club Car vehicle. If you sell the vehicle, please include the manual so that the next owner will have the important operating, safety, and maintenance information it contains.

<b>REGULAR MAINTENANCE ITEMS</b>	<b>PERIODIC MAINTENANCE ITEMS</b>
<b>Engine Oil Filter (286 and 351 cc)</b> CC P/N 1016467	<b>Spark Plug O.H.V. (286 cc and 351 cc)</b> CC P/N 101881101
<b>Engine Air Filter (286 cc and 351 cc)</b> CC P/N 1015426	<b>Spring Tune-Up Kit</b> CC P/N 101611003
<b>Engine Fuel Filter (286 cc and 351cc)</b> CC P/N 102003201	
<b>Battery Terminal Protector Spray</b> CC P/N 1014305	
<b>Dry Moly Lube</b> CC P/N 1012151	

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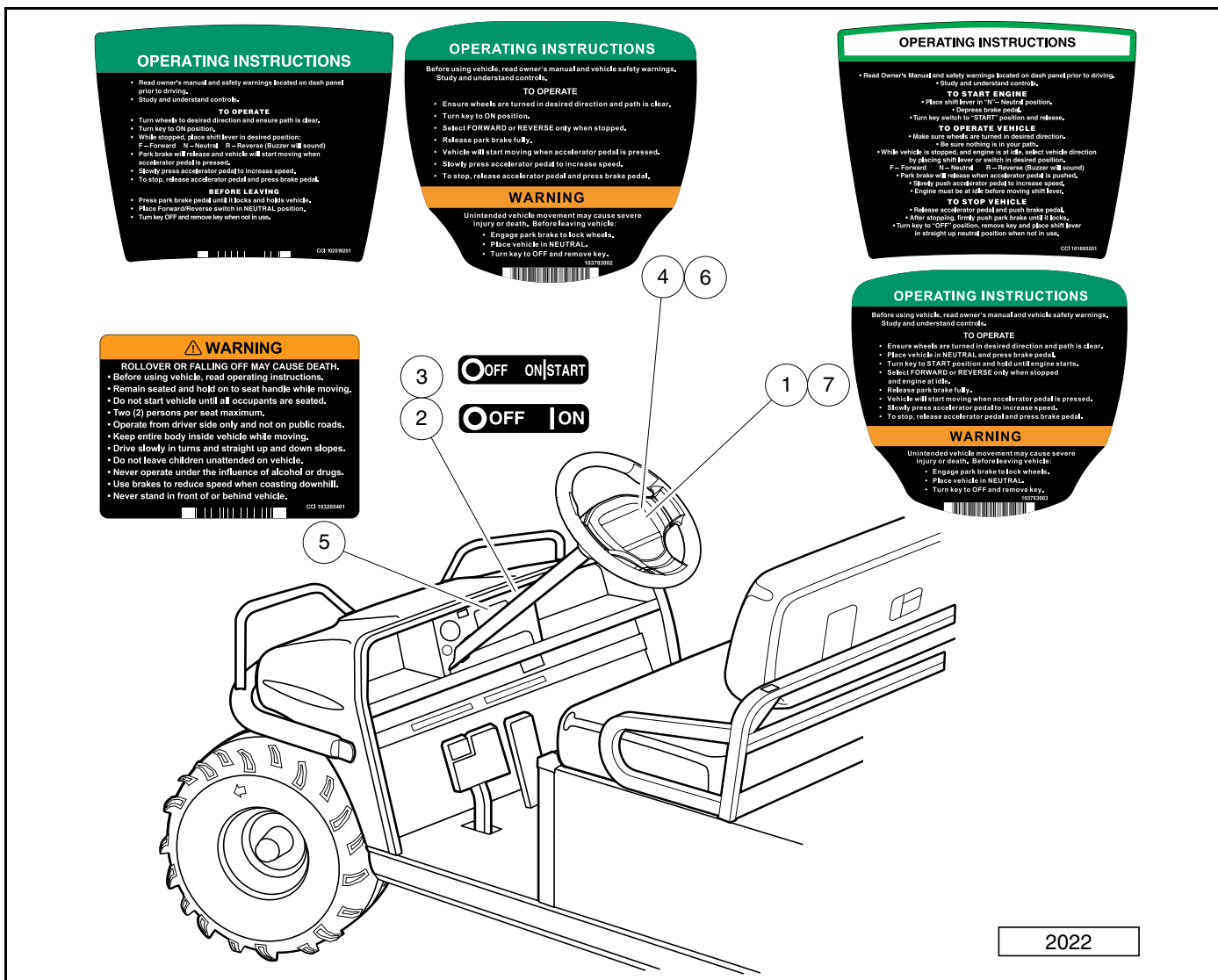
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## **SAFETY DECAL AND FEATURE IDENTIFICATION**

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The following pages contain safety decal and feature identification information. For detailed information on specific features, read the appropriate section in this manual.

# GASOLINE TURF 252/CARRYALL 252/XRT 900



2022

1	101693201	Decal, Operating Instructions (on steering wheel) XRT 900	5	103205401	Decal, Rollover Warning (on instrument panel)
2	101825101	Decal, On/Off Key Switch (above key switch) T/CA 252	6	103783002	Decal, Operating Instructions (on steering wheel) T/CA 252
3	101825102	Decal, On/Off/Start Key Switch (above key switch) XRT 900	7	103783003	Decal, Operating Instructions (on steering wheel) XRT 900
4	102519201	Decal, Operating Instructions (on steering wheel) T/CA 252			



**GASOLINE TURF 252/CARRYALL 252/XRT 900**

**WARNING**  
Riding in cargo bed can cause severe injury or death. Do not ride in cargo bed.  
CCI 101553901

**WARNING**  
**CRUSH AREA**  
  
**STAY CLEAR**  
CCI 101609401

**LATCH**  
**OPEN**  
  
**WARNING**  
Crush area. Can cause severe injury. Stay clear when closing bed.  
CCI 102459301

**WARNING**  
**YOUNG DRIVERS INCREASE CHANCE OF DEATH**  
• Young drivers may not be able to control vehicle. • No drivers younger than 16 years old.  
CCI 102075801

**VEHICLE LOADING**  
Read owner's manual and warnings on dash.

- Vehicle rated capacity - 900 lbs. on level surface only. Weight to include passengers, cargo bed load, and gross trailer weight. See Owner's Manual.
- Maximum cargo load - 500 lbs. Weight to include cargo bed load and gross trailer weight.
- Maximum trailer hitch tongue weight - 150 lbs.

- Cargo should be evenly spread over the floor of the cargo bed as far forward as possible and secured.
- For vehicle stability, when fully loaded, drive slowly and avoid stopping on or backing down steep hills.
- Avoid top heavy loads. See Owner's Manual.
- When driving on uneven terrain or down steep hills, reduce speed and load.

CCI 102006701

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1	101553901	Decal, Bed Loading Warning (on cargo bed or seat back)	8	Park Brake Pedal
2	101609401	Decal, Crush Area Warning (behind seat, near cargo bed)	9	Directional Arrow
3	102006701	Decal, Vehicle Loading Instructions (below instrument panel)	10	Light Switch
4	102075801	Decal, Young Driver Warning (below instrument panel)	11	Fuel Gauge
5	102459301	Decal, Bed Latch Warning (on vehicle body, below bed latch)	12	Low Oil Warning Light
6		Accelerator Pedal	13	Serial Number
7		Brake Pedal		

# GASOLINE TURF 252/CARRYALL 252/XRT 900

**⚠ WARNING**

**GASOLINE EXPLOSION / FIRE.**

- Can cause severe injury or death.
- No smoking, sparks, or open flame.
- Stop engine, allow to cool before refueling.
- Turn fuel valve (←) on during operation.
- (→) off during storage or transport.

CCI 101547601

Maintenance      Operate

**⚠ WARNING**

**VEHICLE MOVEMENT MAY CAUSE SERIOUS INJURY**

When switch is in Maintenance position, chock wheels and firmly set park brake.

CCI 103205501

**⚠ WARNING**

**Rotating Parts**

CCI 102224001

**NOTICE**

**MAXIMUM TONGUE WEIGHT - 150 lbs.**

CCI 1011553

**⚠ WARNING**

**CAN CAUSE SEVERE INJURY**

**Rotating parts**

**HOT manifold & muffler**

**KEEP CLEAR**

CCI 101960501

**⚠ WARNING**

**INCORRECT WIRING COULD RESULT IN SEVERE INJURY OR DEATH.**

- Diode and solenoid connections must have correct polarity.
- Keep all persons clear of engine belts when making final connections.

CCI 102345901

**⚠ WARNING**

**WINCH CABLE FRACTURE COULD RESULT IN SERIOUS INJURY OR DEATH.**

- Do not use winch while persons are seated on the vehicle.
- Use remote operation switch for winch control.
- Stand to the side and away from the vehicle to operate winch.
- Read winch operator manual before operating winch.

102231601

**⚠ WARNING**

Negative frame ground. Can cause severe injury. Do not contact positive (+) battery post or cable to frame. Disconnect negative battery cable first.

**⚠ WARNING**

Excessive speed can cause severe injury or death. Do not tamper with engine governor adjustment.

CCI 101915201

309

1	1011553	Decal, Trailer Hitch Tongue Weight Notice (on trailer/receiver hitch)	7	102345901	Decal, Diode Safety Warning (on vehicle frame, near diode) XRT 900
2	101547601	Decal, Gasoline Fuel Warning (at fuel fill or on frame, near fuel tank)	8	103205501	Decal, Maintenance/Operate Warning (on Maintenance/Operate switch plate, under seat) T/CA 252
3	101915201	Decal, Frame Ground/Governor Warning (on vehicle frame near battery)	9	103210201	Decal, Forward/Reverse (on instrument panel)
4	101960501	Decal, Rotating Parts/Hot Manifold Warning (on engine, starter/generator, and transaxle)	10		Fuel Shut-Off Valve
5	102224001	Decal, Rotating Parts Warning (on frame)	11		Bed Latch
6	102231601	Decal, Winch Safety Warning (on vehicle body, below seat)	12		Choke

# ELECTRIC TURF 252/CARRYALL 252/XRT 900

**⚠ WARNING**

**ROLLOVER OR FALLING OFF MAY CAUSE DEATH.**

- Before using vehicle, read operating instructions.
- Remain seated and hold on to seat handle while moving.
- Do not start vehicle until all occupants are seated.
- Two (2) persons per seat maximum.
- Operate from driver side only and not on public roads.
- Keep entire body inside vehicle while moving.
- Drive slowly in turns and straight up and down slopes.
- Do not leave children unattended on vehicle.
- Never operate under the influence of alcohol or drugs.
- Use brakes to reduce speed when coasting downhill.
- Never stand in front of or behind vehicle.

CCI 103205401

OPERATING INSTRUCTIONS

• Read owner's manual and dash-mounted safety warnings prior to driving. Study and understand controls.

TO OPERATE

- Turn wheels to desired direction and ensure path is clear.
- Turn key ON position.
- While stopped, place Forward/Reverse switch in desired position: F-Forward, R-Reverse, N-Neutral, Br-Reverse (Brake) will sound.
- Park brake will release and vehicle will start moving when accelerator pedal is pressed.
- Slowly press accelerator pedal to increase speed.
- To stop, release accelerator pedal and press brake pedal.

BEFORE LEAVING

- Press park brake pedal until it locks and holds vehicle.
- Place Forward/Reverse switch in NEUTRAL position.
- Turn key OFF and remove key whenever not in use.

BEFORE BRAKING

- Electric motor braking provides speed regulation functions.
- For parked vehicle, beeping alarm indicates vehicle roll away.
- In operation, beeping alarm indicates reduction in motor braking.
- Apply brakes to further reduce vehicle speed as required.
- Systems are activated only when tow switch is in the RUN position.
- When towing this vehicle, tow switch must be in the TOV position.

CCI 103783001

OPERATING INSTRUCTIONS

Before using vehicle, read owner's manual and vehicle safety warnings. Study and understand controls.

TO OPERATE

- Ensure wheels are turned in desired direction and path is clear.
- Turn key to ON position.
- Select FORWARD or REVERSE only when stopped.
- Release park brake fully.
- Vehicle will start moving when accelerator pedal is pressed.
- Slowly press accelerator pedal to increase speed.
- During operation, beeping alarm indicates reduction in motor braking.
- To stop, release accelerator pedal and press brake pedal.

WARNING

Unintended vehicle movement may cause severe injury or death. Before leaving vehicle:

- Engage park brake to lock wheels.
- Place vehicle in NEUTRAL.
- Turn key to OFF and remove key.

CCI 103783001

**⚠ WARNING**

**Riding in cargo bed can cause severe injury or death. Do not ride in cargo bed.**

CCI 101553901

**⚠ WARNING**

**CRUSH AREA**

↓

STAY CLEAR

CCI 101609401

**⚠ WARNING**

**YOUNG DRIVERS INCREASE CHANCE OF DEATH**

• Young drivers may not be able to control vehicle. • No drivers younger than 16 years old.

CCI 102075801

**⚠ WARNING**

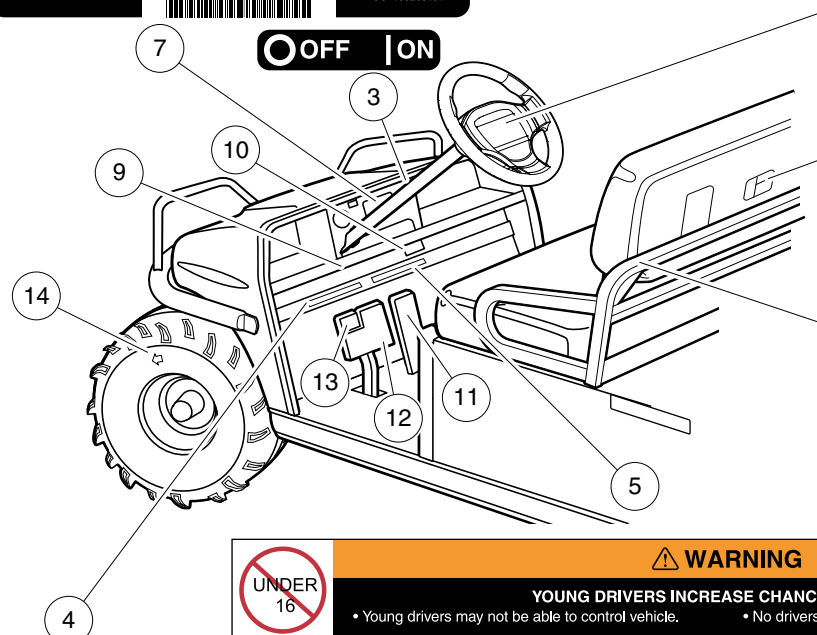
**VEHICLE LOADING**

Read owner's manual and warnings on dash.

- Vehicle rated capacity - 900 lbs. on level surface only. Weight to include passengers, cargo bed load, and gross trailer weight. See Owner's Manual.
- Maximum cargo load - 500 lbs. Weight to include cargo bed load and gross trailer weight.
- Maximum trailer hitch tongue weight - 150 lbs.

CCI 102006701

2023



1	101553901	Decal, Bed Loading Warning (on cargo bed or seat back)	8	103783001	Decal, Operating Instructions (on steering wheel)
2	101609401	Decal, Crush Area Warning (behind seat, near cargo bed)	9		IQDM Diagnostic Port (under instrument panel)
3	101825101	Decal, On/Off Key Switch (above key switch)	10		Serial Number
4	102006701	Decal, Vehicle Loading Instructions (below instrument panel)	11		Accelerator Pedal
5	102075801	Decal, Young Driver Warning (below instrument panel)	12		Brake Pedal
6	102518001	Decal, Operating Instructions (on steering wheel)	13		Park Brake Pedal
7	103205401	Decal, Rollover Warning (on instrument panel)	14		Directional Arrow

2009-2010 Turf 252, Carryall 252 and XRT 900 Vehicle Owner's Manual

Page 9

# ELECTRIC TURF 252/CARRYALL 252/XRT 900

**WARNING**  
**BATTERY EXPLOSION COULD RESULT IN SEVERE PERSONAL INJURY.**  
 • Do not store items in battery compartment.  
 • Place Run/Tow switch in TOW position before:  
 - Disconnecting or connecting battery cables  
 - Towing this vehicle  
 - Extended storage  
 - Servicing the vehicle

NORMAL    TRIPPED  
 TOW    RUN  
CCI 102845101

**WARNING**  
**AVOID FIRE HAZARD**  
 • Replacement battery wires must be 4-gauge (AWG) with low-resistance terminals equivalent to factory-installed wires.  
 • Ensure that battery connections are clean and properly tightened. See owner's manual.  
CCI 102967601

**DANGER / POISON**  
 SHIELD EYES  
 EXPLOSIVE GASES CAN CAUSE BLINDNESS OR INJURY  
 NO SPARKS, FLAMES, SMOKING  
 SULFURIC ACID  
 CAN CAUSE BLINDNESS OR SEVERE BURNS  
 FLUSH EYES IMMEDIATELY WITH WATER  
 GET MEDICAL HELP FAST  
KEEP OUT OF THE REACH OF CHILDREN – DO NOT TIP – KEEP VENT CAPS TIGHT AND LEVEL.

**CAUTION**  
**EXPOSURE TO WATER MAY DAMAGE ELECTRONIC COMPONENTS**  
 • Do not operate vehicle without this cover properly installed.  
 • Do not direct water stream in the area of the cover without cover securely in place.  
 • See vehicle maintenance and service manual before servicing.  
CCI 102518301

**WARNING**  
**WINCH CABLE FRACTURE COULD RESULT IN SERIOUS INJURY OR DEATH.**  
 • Do not use winch while persons are seated on the vehicle.  
 • Use remote operation switch for winch control.  
 • Stand to the side and away from the vehicle to operate winch.  
 • Read winch operator manual before operating winch.  
102231601

**NOTICE**  
**MAXIMUM TONGUE WEIGHT - 150 lbs.**  
CCI 1011553

**LATCH OPEN**  
**WARNING**  
**Crush area. Can cause severe injury. Stay clear when closing bed.**  
CCI 102459301

313

1	1011553	Decal, Trailer Hitch Tongue Weight Notice (on trailer/receiver hitch)	6	102845101	Decal, Tow/Run Switch Warning (on Tow/Run switch plate, under seat)
2	1013677	Decal, Battery Danger (on battery caps or on body under seat)	7	102967601	Decal, 4 Gauge Wire Warning (on frame in battery compartment)
3	102231601	Decal, Winch Safety Warning (on vehicle body, below seat)	8	103210301	Decal, Forward/Reverse (on instrument panel)
4	102459301	Decal, Bed Latch Warning (on vehicle body, below bed latch)	9		Bed Latch
5	102518301	Decal, Component Cover Caution (on electrical component cover)	10		Battery Charger Receptacle

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**PRACTICE SAFETY**

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399  
Figure 1 Practice Safety

Safety signs like you see above may at first seem shocking, but their impact is mild compared with the reality of severe personal injury.

Your safety and satisfaction are of the utmost importance to us. That is why before operating the vehicle, we urge you to review the information in this manual. Understand and become familiar with the DANGER, WARNING, and CAUTION statements and procedures it contains, along with the safety decals that are affixed to your vehicle.

Prior to operating the vehicle, all operators should go to the Club Car web site and view the vehicle safety video. To locate the video, go to [www.clubcar.com](http://www.clubcar.com), and search for "safety video."

Take time to understand the language of safety. It is a language that can save your life.

---

**PROPOSITION 65 – STATE OF CALIFORNIA**

---

**▲ WARNING**

- This product contains or emits chemicals or substances that have been determined by the state of California to cause cancer and birth defects or other reproductive harm.

## SAFETY DETAILS

---

### **WARNING**

- This owner's manual should be read completely before attempting to drive or service the vehicle. Failure to follow the instructions in this manual could result in property damage, severe personal injury, or death.

It is important to note that some vital statements throughout this manual and on the decals affixed to the vehicle are preceded by the words DANGER, WARNING, or CAUTION. For your protection, we recommend that you take special notice of these safety precautions. Safety precautions are essential and must be followed.

If any of the operation or safety decals on the vehicle become damaged, have been removed, or cannot be easily read, they should be replaced immediately to avoid possible property damage, personal injury, or death. Contact your distributor/dealer.

### **DANGER**

- A DANGER indicates an immediate hazard that will result in severe personal injury or death.

### **WARNING**

- A WARNING indicates an immediate hazard that could result in severe personal injury or death.

### **CAUTION**

- A CAUTION with the safety alert symbol indicates a hazard or unsafe practice that could result in minor personal injury.

### **CAUTION**

- A CAUTION without the safety alert symbol indicates a potentially hazardous situation that could result in property damage.

## GENERAL WARNINGS

---

The following safety statements must be heeded whenever the vehicle is being operated, repaired, or serviced. **See Safety Decal and Feature Identification on page 5.** Other specific safety statements appear throughout this manual and on the vehicle.

### **DANGER**

- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed area. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Gasoline – Flammable! Explosive! Do not smoke. Keep sparks and flames away from the vehicle and service area. Service only in a well-ventilated area.**
- **Do not operate engine in an enclosed area without proper ventilation. The engine produces carbon monoxide, which is an odorless, deadly poison.**
- **The vehicle will not provide protection from lightning, flying objects, or other storm-related hazards. If caught in a storm while driving a Club Car vehicle, exit the vehicle and seek shelter in accordance with applicable safety guidelines for your location.**

---

**▲ WARNING**

---

- Follow the procedures exactly as stated in this manual, and heed all DANGER, WARNING, and CAUTION statements in this manual as well as those on the vehicle and battery charger.
- Do not leave children unattended on vehicle.
- Prior to leaving the vehicle unattended or servicing the vehicle, set the park brake, place the Forward/Reverse handle or switch in the NEUTRAL position, turn the key switch to the OFF position, and remove the key. Chock the wheels when servicing the vehicle.
- Improper use of the vehicle or failure to properly maintain it could result in decreased vehicle performance, severe personal injury, or death.
- Any modification or change to the vehicle that affects the stability or handling of the vehicle, or increases maximum vehicle speed beyond factory specifications, could result in severe personal injury or death.
- Check the vehicle for proper location of all vehicle safety and operation decals and make sure they are in place and are easy to read.
- For vehicles with cargo beds, remove all cargo before raising the bed or servicing the vehicle. If the vehicle is equipped with a prop rod, ensure that it is securely engaged while bed is raised. Do not close bed until all persons are clear of cargo bed area. Keep hands clear of all crush areas. Do not drop cargo bed; lower gently and keep entire body clear. Failure to heed this warning could result in severe personal injury or death.
- Only trained technicians should service or repair the vehicle or battery charger. Anyone doing even simple repairs or service should have knowledge and experience in electrical and mechanical repair. The appropriate instructions must be used when performing maintenance, service, or accessory installation.

**Electric vehicles only:**

- Place Tow/Run switch in the TOW position before disconnecting or connecting the batteries. Failure to heed this warning could result in a battery explosion or severe personal injury.
- To avoid unintentionally starting an electric vehicle, disconnect the batteries and discharge the controller. See Disconnecting the Batteries – Electric Vehicles on page 15.
- Use only 4-gauge (AWG) wires with low-resistance terminals to replace battery wires on IQ Plus models.
- Ensure battery connections are clean and properly tightened. See Battery Care on page 45.

**Gasoline vehicles only:**

- To avoid unintentionally starting a gasoline vehicle, disconnect the battery and spark plug wire. See Disconnecting the Battery – Gasoline Vehicles on page 14.
- Frame ground – Do not allow tools or other metal objects to contact frame when disconnecting battery cables or other electrical wiring. Do not allow a positive wire to touch the vehicle frame, engine, or any other metal component.

**All vehicles:**

- Wear safety glasses or approved eye protection when servicing the vehicle or battery charger. Wear a full face shield and rubber gloves when working on or near batteries.
- Do not wear loose clothing or jewelry such as rings, watches, chains, etc., when servicing the vehicle or battery charger.
- Use insulated tools when working near batteries or electrical connections. Use extreme caution to avoid shorting of components or wiring.

## DISABLING THE VEHICLE

1. Set the park brake.
2. Turn the key switch OFF and remove the key.
3. Place the Forward/Reverse control in the NEUTRAL position.
4. In addition, chock the wheels if servicing or repairing the vehicle.

## DISCONNECTING THE BATTERY – GASOLINE VEHICLES

1. Disable the vehicle. **See Disabling the Vehicle on page 14.**
2. Disconnect the battery cables, negative (-) cable first, as shown (**Figure 2**).
3. Disconnect the spark plug wire(s) from the spark plug(s).

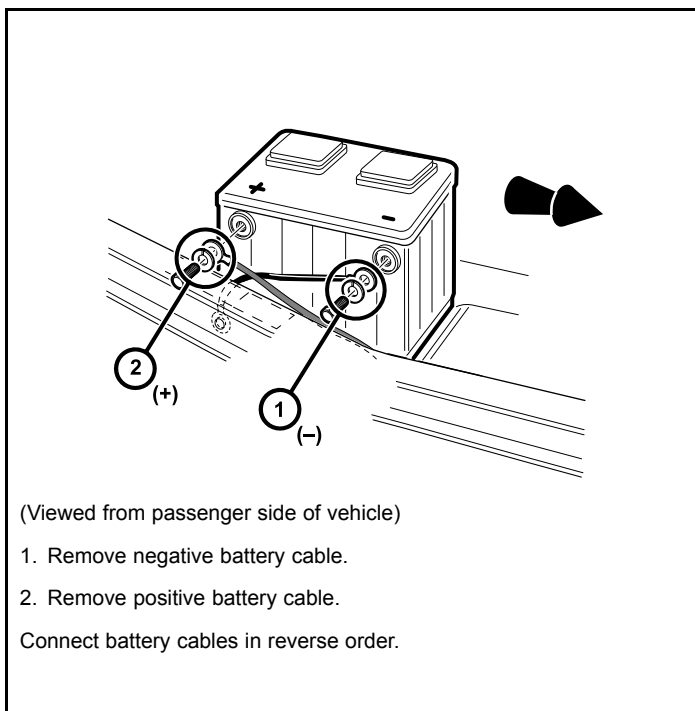
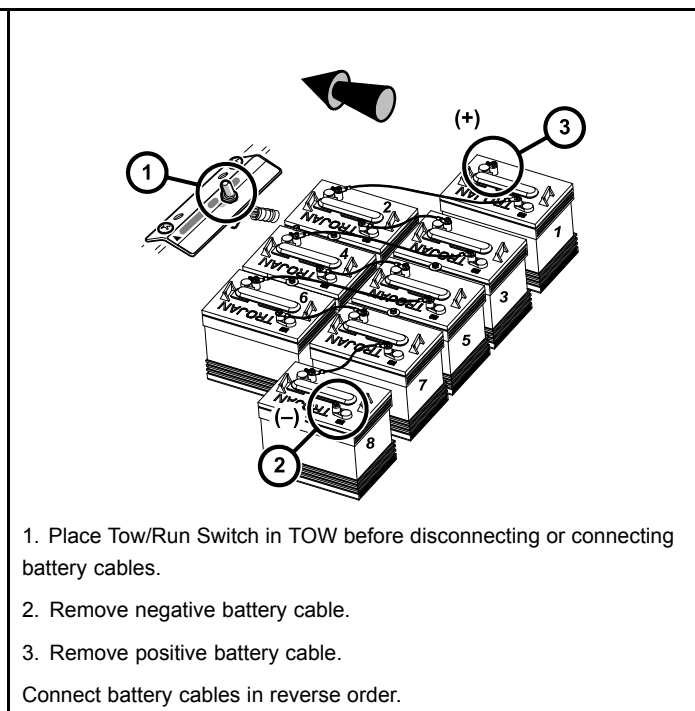


Figure 2 Gasoline Vehicle



73

Figure 3 IQ Plus Electric Vehicle

## CONNECTING THE BATTERY – GASOLINE VEHICLES

1. Connect the battery cables, positive (+) cable first.
2. Tighten battery terminals to 80 in-lb (9 N·m).
3. Coat terminals with Battery Terminal Protector Spray (CC P/N 1014305) to minimize corrosion.
4. Connect the spark plug wire(s) to the spark plug(s).



## DISCONNECTING THE BATTERIES – ELECTRIC VEHICLES

1. Disable the vehicle. **See Disabling the Vehicle on page 14.**
2. Place Tow/Run switch in the TOW position before disconnecting or connecting the batteries. Failure to heed this warning could result in a battery explosion or severe personal injury.
3. Disconnect the batteries, negative (–) cable first, as shown (**Figure 3**).
4. After disconnecting the batteries, wait 90 seconds for the controller capacitors to discharge.

## CONNECTING THE BATTERIES – ELECTRIC VEHICLES

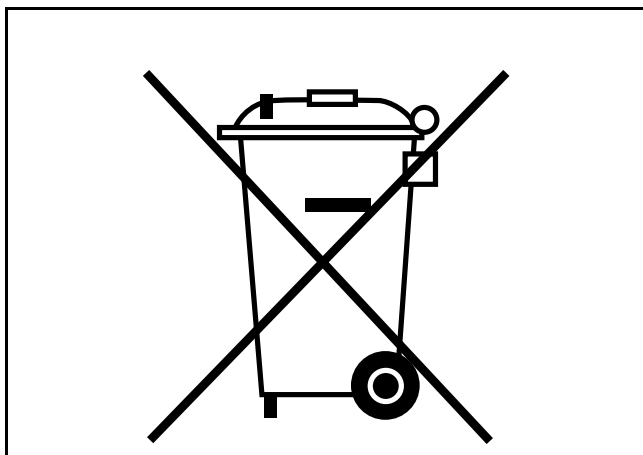
1. Ensure the Tow/Run switch is in the TOW position.
2. Connect the battery cables, positive (+) cable first.
3. Tighten battery terminals to 110 in-lb (12.4 N·m).
4. Coat terminals with Battery Terminal Protector Spray (CC P/N 1014305) to minimize corrosion.

## RECYCLING LEAD-ACID BATTERIES

### **⚠ WARNING**

- **Lead-acid batteries contain lead (Pb), other metals, acids and other compounds. If improperly handled, they can contaminate both water and soil, causing environmental damage and personal injury.**

Lead-acid batteries are identified by the symbol shown below and should be properly recycled (**Figure 4**). They cannot be disposed as municipal waste and must be collected separately. Responsibility for environmental protection must be shared, not only by the manufacturers of the batteries, but by people who use the batteries as well. Please contact your nearest Club Car dealer or distributor for information on how to properly recycle your batteries.

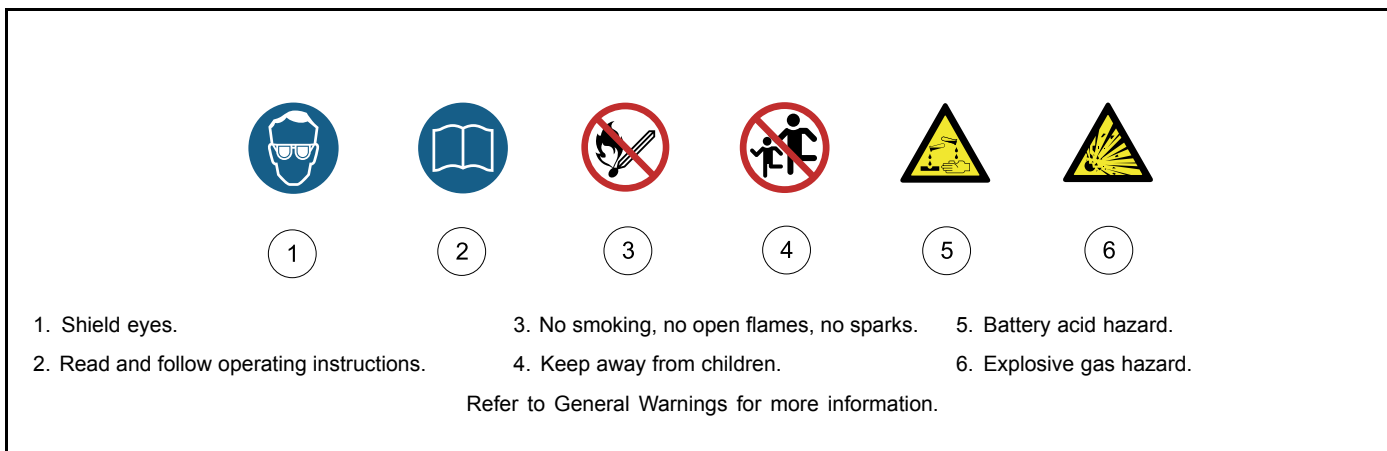


1403

**Figure 4** Dispose of Lead-acid Batteries Properly

## INTERNATIONAL SAFETY SYMBOLS ON BATTERIES

Anyone using, repairing, or servicing the vehicle must understand and heed the safety symbols on the vehicle battery or batteries.



1642  
Figure 5 International Safety Symbols on Batteries

## GENERAL INFORMATION

This manual features three electric vehicles: Turf 252, Carryall 252, and XRT 900; and three gasoline vehicles: Turf 252, Carryall 252, and XRT 900. The electric vehicles use the IQ Plus electrical system.

Throughout this manual, important features unique to each model are highlighted. We urge the owner/operator to read and understand this manual, and to pay special attention to the features specific to their vehicle(s).

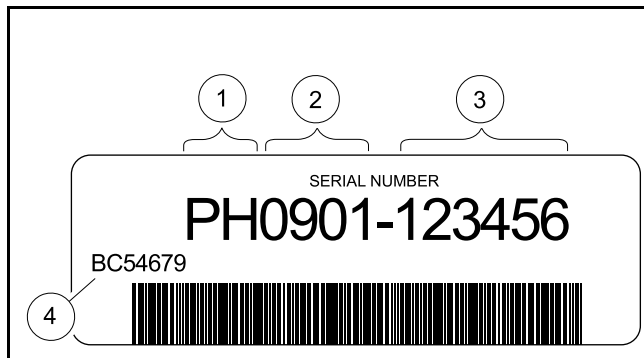
## MODEL IDENTIFICATION

The serial number of each vehicle is printed on a bar code decal mounted either below the passenger side cup holder or above the accelerator or brake pedal (Example: PH0901-583947) (**Figure 6**).

The two letters (1) at the beginning of the serial number indicate the vehicle model. The following four digits (2) indicate the model year and production week during which the vehicle was built. The six digits (3) following the hyphen represent the unique sequential number assigned to each vehicle built within a given model year. **See following NOTE.**

**NOTE:** Have the vehicle serial number available when ordering parts or making inquiries.

**Build Code:** The build code (4) is a five-digit number that appears on the vehicle serial number decal. The build code exists to enable the user to identify the correct owner's manual for a vehicle. This owner's manual is valid for the build code range indicated on the back cover of this owner's manual.



1400

Figure 6 Serial Number Decal

## CONTROLS AND INDICATORS

See General Warnings on page 12.

### **⚠ WARNING**

- Before allowing anyone to drive the vehicle, make sure the driver is familiar with all controls and operating procedures.
- Pedal-start vehicles: Do not shift the Forward/Reverse handle or switch while the vehicle is in motion. To avoid injury to an unsuspecting passenger or damage to the vehicle, always bring the vehicle to a full stop before shifting the handle or switch.
- Key-start vehicles: Stop the vehicle before shifting the Forward/Reverse handle. Engine must be at idle before shifting the Forward/Reverse handle. Failure to do so may result in injury to inattentive passengers and (or) damage to the vehicle.
- Release the accelerator pedal and then press the brake pedal firmly until the vehicle stops. To avoid unintentionally starting or rolling the vehicle, set the park brake, place the Forward/Reverse handle or switch in the NEUTRAL position, turn the key switch to the OFF position, and remove the key when leaving the vehicle.
- Gasoline vehicles only: Do not tamper with the governor. Doing so will void the warranty, as well as damage the engine and other components, and could result in property damage, personal injury, or death due to unsafe speeds.

## KEY SWITCH

The key switch (1) is mounted on the dash to the right of the steering column (**Figure 7 or Figure 8**).

Each vehicle is equipped with either a two-position key switch or a three-position key switch. Vehicles equipped with a two-position key switch are referred to as “pedal-start” and vehicles equipped with a three-position key switch are referred to as “key-start”. All electric vehicles are equipped with a two-position (“pedal-start”) key switch.

- **Pedal-start vehicle:** The key switch has two positions, OFF and ON, which are clearly labeled.
- **Key-start vehicle:** The key switch has three positions, OFF, ON and START. To start the vehicle, turn the key past the ON position to the START position and hold until the engine is running smoothly. Release the key and it will return to the ON position and the engine should idle.

## **⚠ WARNING**

- **Moving parts! Keep clear of the engine compartment while the engine is running.**

## **CAUTION**

- **Do not “rev” the engine for long periods of time while the Forward/Reverse handle is in the NEUTRAL position. Failure to heed this caution could result in damage to the unitized transaxle.**
- **Do not shift the Forward/Reverse handle while the accelerator pedal is pressed. Shift the handle only when the vehicle is at a complete stop. Failure to heed this caution could result in damage to the unitized transaxle.**

***NOTE:** The key can be removed only when the key switch is in the OFF position.*

## **FORWARD/REVERSE CONTROL**

### **Gasoline Vehicles**

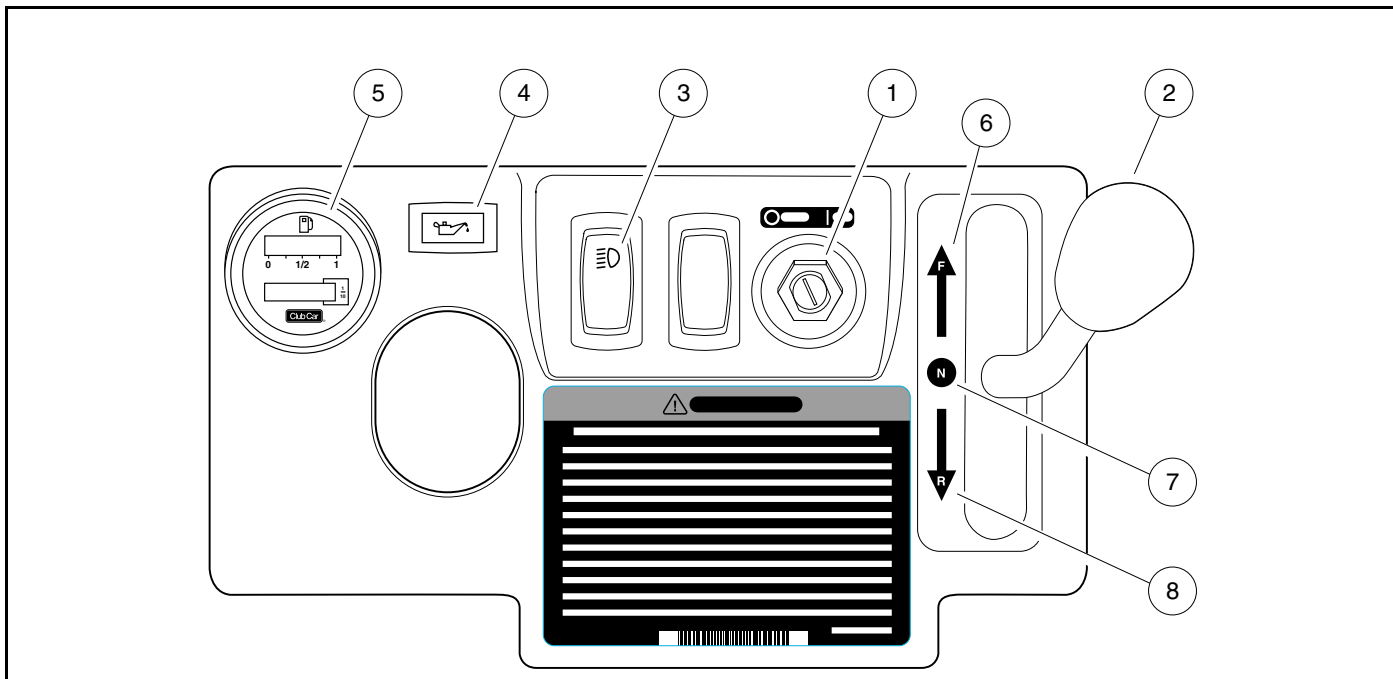
The Forward/Reverse control (2) is located on the right-hand side of the instrument panel (**Figure 7**). The handle has three distinct positions: **F** (FORWARD), **N** (NEUTRAL), and **R** (REVERSE). Push the handle up to operate the vehicle in the forward direction, or pull the handle down to operate the vehicle in reverse.

- **Pedal-start vehicle:** The engine will not run when the handle is in the NEUTRAL position.
- **Key-start vehicle:** The engine will idle while in the NEUTRAL position. The engine must be at idle before shifting the Forward/Reverse handle. **See preceding WARNING and CAUTION.**

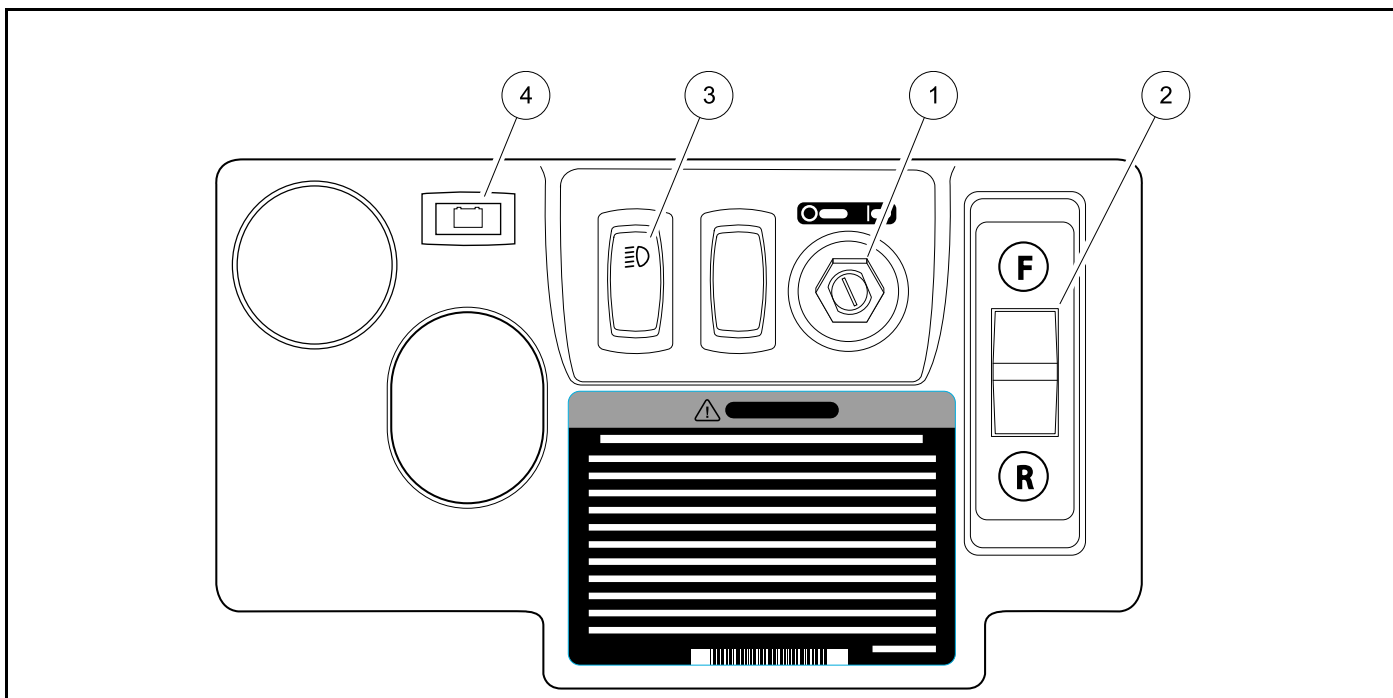
Club Car vehicles operate at reduced speed in reverse. The reverse buzzer will sound as a warning when the Forward/Reverse control is in the REVERSE position.

### **Electric Vehicles**

The Forward/Reverse control (2) is located on the right-hand side of the instrument panel (**Figure 8**). The **F** (FORWARD) and **R** (REVERSE) positions are clearly marked. Press the FORWARD side of the switch to operate the vehicle in the forward direction, or press the REVERSE side of the switch to operate the vehicle in reverse. When the rocker switch is positioned in NEUTRAL, with neither side down, the vehicle will not operate if the accelerator pedal is pressed. The reverse buzzer will sound as a warning when the Forward/Reverse switch is in the REVERSE position.



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Figure 7 Instrument Panel – Gasoline Vehicles



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Figure 8 Instrument Panel – Electric Vehicles

## HEADLIGHT CONTROL

### Vehicles with Headlights

The headlight switch (3) is located on the instrument panel to the right of the steering column (**Figure 7** or **Figure 8**). Press the side of the switch with the headlight symbol to turn the headlights on and press the other side to turn the headlights off.

**NOTE: Gasoline vehicles:** Using the headlights for extended periods of time without the engine running, or with the engine idling will discharge the battery.

## LOW OIL WARNING LIGHT

### Gasoline Vehicles Only

The gasoline vehicle is equipped with a low oil warning light (4), located on the instrument panel just above the steering column (**Figure 7**). If the warning light comes on, oil should be checked and added to the engine as necessary before continuing to use the vehicle. The vehicle should never be driven when the low oil warning light remains on. If the warning light goes on and off, the vehicle may be driven, but oil should be added at the first opportunity. If the oil level is correct and the warning light stays on, have a trained technician check the vehicle.

## CAUTION

- Failure to add oil immediately when the low oil warning light stays on may result in permanent engine damage.

## FUEL GAUGE/HOUR METER

### Gasoline Vehicles Only

The gasoline vehicle is equipped with a fuel gauge/hour meter (5), located on the instrument panel (**Figure 7**). The fuel gauge allows the operator to monitor the fuel level in the vehicle. The hour meter should be used by the trained technician to track vehicle usage and determine when periodic service procedures are required. **See Periodic Service Schedules on page 38.**

## BATTERY WARNING LIGHT

### Electric Vehicles Only

Electric vehicles feature a dash mounted warning light (4) (above steering column) that, when the vehicle is in operation, indicates low battery voltage or, when the vehicle is being charged, indicates a charging problem (**Figure 8**). The battery warning light is controlled by the onboard computer.

When the vehicle is in operation, the warning light will illuminate and remain illuminated if:

- Batteries' voltage drops below 48 when there is no load on the batteries (the vehicle is stopped and there are no accessories on).
- Batteries have discharged to less than 25% of rated capacity.

If the warning light illuminates when the vehicle is operating, there will be enough power remaining to drive the vehicle for approximately 30 minutes. However, the vehicle should be charged at the first opportunity. If the warning light illuminates and the vehicle is unable to operate for 30 minutes, have your Club Car distributor/dealer check the vehicle for a possible battery or electrical system problem.

When the batteries receive an incomplete charge because 1) the DC power cord is disconnected, 2) AC power to the charger is interrupted, 3) automatic charger shut-off occurs after 16 hours of operation, 4) the charger malfunctions, or 5) the wrong charger is used, the warning light will indicate as follows:

- The warning light will not come on if the charge is 90% or more complete. The onboard computer will retain in memory the amount of charge needed to fully replenish the batteries and will complete the charge during the next charge cycle.

- When the charger is unplugged, the warning light will illuminate and remain illuminated for 10 seconds if the charge is less than 90% complete but the vehicle has enough power for approximately 30 minutes of operation. This will alert the operator that the vehicle may be used, but that it must be charged to completion as soon as possible.
- The warning light will repeatedly illuminate for 10 seconds, with 4 second intervals if the charger times out at 16 hours and the batteries are not sufficiently charged. **See battery charger owner's manual.** This indicates an abnormal charge cycle. The charger and batteries should be checked by your Club Car distributor/dealer.
- The warning light will repeatedly illuminate for 10 seconds, with 4 second intervals during a charge cycle (DC plug is still connected) if AC power to the charger is interrupted. The light will go out when AC power is restored.

**LED light:** In addition to the warning light, there is an infrared LED in the dash light assembly, which transmits an infrared signal from the onboard computer (OBC). This signal is received by the optional Communication Display Module, which provides information on the condition of the vehicle and batteries.

## BATTERY CONDITION INDICATOR

### Electric Vehicles Only

The battery condition indicator features a 10-bar LED display that, when the vehicle is in operation, displays the level of battery capacity, measuring battery voltage over a period of time.

When batteries are fully charged, all indicator lights will be on. When battery voltage drops below 75% of full discharge, the last two indicator lights will flash alternately. Continued use of vehicle after indicator lights begin flashing without recharging could result in decreased vehicle performance. **See following NOTE.**

**NOTE:** *If battery condition indicator moves rapidly (approximately 45 minutes) from full charge display to empty, there may be a problem with the wiring or with a battery cell. If indicator display does not reset back to full after recharging, there may be a problem with the battery charger or with one of the batteries. In either case the vehicle should be checked by a Club Car dealer or a trained technician.*

## ACCELERATOR PEDAL

The accelerator pedal is the pedal on the right, with the word GO molded into it (**Figure 9**). The operation of the accelerator pedal differs from that of an automobile:

- **Pedal-start vehicle:** When the key switch is in the ON position, and the Forward/Reverse handle or switch is in either the FORWARD or REVERSE position, pressing the accelerator pedal will automatically release the park brake and start the vehicle moving in the direction selected (forward or reverse). When the accelerator is released, power will be cut off and the motor or engine will stop running.
- **Key-start vehicle:** The engine must first be running before shifting the Forward/Reverse handle and pressing the accelerator pedal. As the accelerator pedal is pressed, speed will increase until full speed is reached. When the accelerator is released, the engine will idle. **See following WARNING and CAUTION.**

### **WARNING**

- **Moving parts! Keep clear of the engine compartment while the engine is running.**

### **CAUTION**

- **Do not “rev” the engine for long periods of time while the Forward/Reverse handle is in the NEUTRAL position. Failure to heed this caution could result in damage to the unitized transaxle.**
- **Do not shift the Forward/Reverse handle while the accelerator pedal is pressed. Shift the handle only when the vehicle is at a complete stop. Failure to heed this caution could result in damage to the unitized transaxle.**

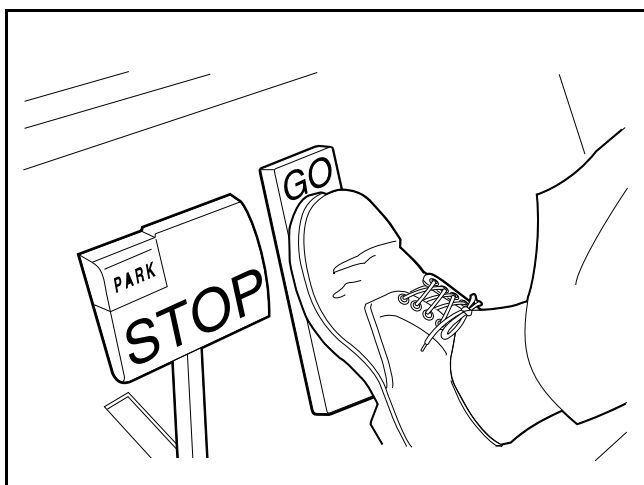
### Electric Vehicles

Electric vehicles use a special electrical system, which employs motor braking in some modes of operation. In those modes, the vehicle operates as follows:

- **Walk-Away Braking:** This prevents the vehicle from rolling away uncontrolled should the driver park on a slope and leave the vehicle without locking the park brake. The vehicle will roll at about 1 mph (1.6 km/h). If the walk-away braking function remains engaged for two seconds or more, a warning buzzer will sound to alert the driver that motor braking has been activated.

## **⚠ WARNING**

- **Walk-away braking will not limit vehicle speed to 1 mph (1.6 km/h) on very steep grades. Do not operate vehicle on slopes exceeding 20% grades.**
- **Pedal Down Motor Braking:** This feature helps to control vehicle downhill speed. Motor braking is activated when the vehicle reaches the programmed top speed and holds the vehicle at that speed. Motor braking is automatically disengaged when vehicle speed slows below the programmed top speed.
- **Pedal Up Motor Braking:** Speed settings are programmable for IQ Plus vehicles. Motor braking is activated when the accelerator pedal is released at or above the programmed speed. When the vehicle slows to the programmed lower speed, motor braking will disengage. If no speed settings are programmed, motor braking will be activated at any time accelerator pedal is released, and it will only disengage when the vehicle comes to a stop. Contact your dealer/distributor to inquire about this programmable feature.



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**Figure 9 Accelerator and Brake Pedals**

## **BRAKE PEDAL**

The brake pedal is the large pedal on the left with the word STOP molded into it (**Figure 9**). To slow or stop the vehicle, press the brake pedal with your right foot (**Figure 10**).

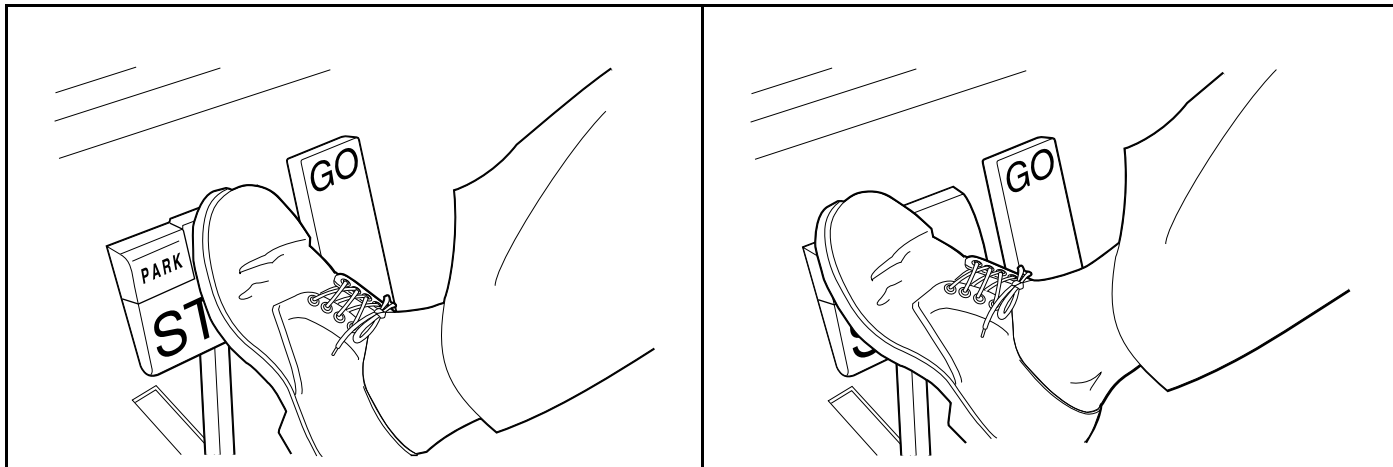
## **PARK BRAKE PEDAL**

The park brake pedal is the small raised portion in the upper left corner of the brake pedal. It has the word PARK molded into it and the words PARK BRAKE marked on top of it (**Figure 9**). To set the park brake, press the brake pedal firmly and tilt the park brake portion of the pedal forward with your foot (**Figure 11**). **See following WARNING.**



## **▲ WARNING**

- The park brake will release automatically when either the accelerator or brake pedal is pressed. The park brake has multiple locking positions and should be firmly pressed and locked to prevent the vehicle from rolling.



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Figure 10 Brake Pedal

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Figure 11 Park Brake

## **TOW/RUN SWITCH**

Electric Vehicles Only

### **▲ WARNING**

- Place Tow/Run switch in the TOW position before disconnecting or connecting the batteries. Failure to heed this warning could result in a battery explosion or severe personal injury.
- When the Tow/Run switch is in the TOW position, all motor braking functions, including walk-away braking, are disabled.

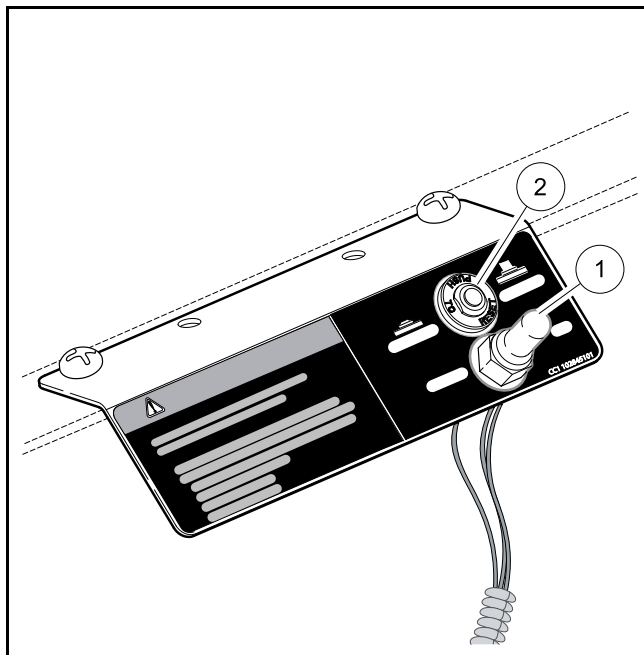
Electric vehicles are equipped with a Tow/Run switch (1), located on the seat support panel under the seat (**Figure 12**). The switch must be in the RUN position in order to operate the vehicle. When the switch is in the TOW position, power to the vehicle electrical components is turned off and the vehicle will not operate. **See following NOTE.**

**NOTE:** After placing the Tow/Run switch in the TOW position, allow 10 seconds to elapse before switching back to the RUN position.

After placing the Tow/Run switch in RUN position, allow 10 seconds to elapse before operating the vehicle.

The Tow/Run switch should be placed in the TOW position under the following conditions:

- **Before Towing the Vehicle:** Place the Tow/Run switch in the TOW position to disable all motor braking functions, thus preventing possible damage that could occur to the vehicle or electrical components if the vehicle is towed while the walk-away braking function is operating.
- **Before Disconnecting or Connecting Battery Cables:** Place the Tow/Run switch in the TOW position to turn off power to the vehicle electrical system, thus preventing severe arcing and possible battery explosion as the battery cables are disconnected.
- **For Long Term Storage:** Place the Tow/Run switch in the TOW position to turn off power to the vehicle electrical system, thus preventing vehicle electrical components from discharging the batteries.



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Figure 12 Tow/Run Switch – IQ Plus

## CIRCUIT BREAKER

### IQ Plus Electric Vehicles Only

IQ Plus vehicles are equipped with a circuit breaker (2), located next to the Tow/Run switch (**Figure 12**). If the circuit breaker has been tripped, a series of rapid beeps will sound and vehicle speed will slow to approximately one-half of its top programmed speed. In the event of a tripped circuit breaker, bring the vehicle to a complete stop, remove seat, and push the breaker to reset. If the circuit breaker trips again when vehicle operation is resumed, contact a local Club Car distributor/dealer.

## NEUTRAL LOCKOUT SWITCH

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### GASOLINE PEDAL-START VEHICLES ONLY

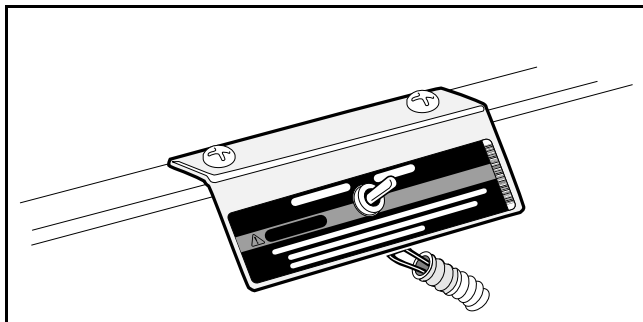
For the convenience of the trained technician, there is a neutral lockout switch located on the seat support panel under the seat (**Figure 13**). The neutral lockout switch has two positions, MAINTENANCE and OPERATE, which are clearly marked.

- When the switch is in the MAINTENANCE position, it will allow the technician to run the engine in the NEUTRAL position to perform certain maintenance and/or repair functions. With the switch in this position, the vehicle will not operate if the Forward/Reverse handle is placed in either the FORWARD or REVERSE position.

## **⚠ WARNING**

- With the switch in the **MAINTENANCE** position and the engine running, the vehicle may move suddenly if the Forward/Reverse handle is shifted or accidentally bumped. To prevent this, chock the front and rear wheels and firmly set the park brake before servicing or leaving the vehicle.

**NOTE:** Be sure to return the switch to the **OPERATE** position after servicing the vehicle, or it will not run with the Forward/Reverse handle in either the **FORWARD** or **REVERSE** position.



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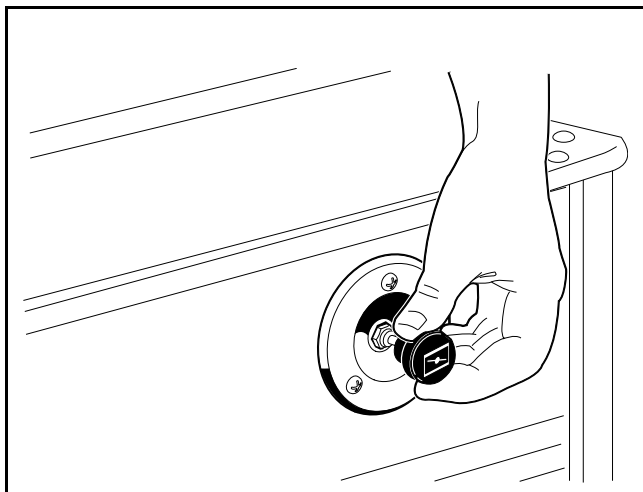
**Figure 13 Neutral Lockout Switch**

## **CHOKE**

### **Gasoline Vehicles Only**

The choke is located on the seat support panel below and to the left of the driver's left knee. If the vehicle is hard to start in cool or cold temperatures, activate the choke:

- Pull out the choke cable. Hold choke cable out during start-up and release it after the engine starts and runs smoothly (**Figure 14**).



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**Figure 14 Cable Choke**

## PRE-OPERATION AND DAILY SAFETY CHECKLIST

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Each Club Car vehicle has been thoroughly inspected and adjusted at the factory; however, upon receiving your new vehicle(s), you should become familiar with its controls, indicators, and operation. Carefully inspect each vehicle to ensure that it is in proper working condition before accepting delivery.

Use the following checklist as a guide to inspect the vehicle. This checklist should be used daily to ensure that the vehicle is in proper working condition and in conjunction with the Performance Inspection on page 26 and the Periodic Service Schedules on page 38. Any problems should be corrected by a Club Car distributor/dealer or a trained technician.

- **General:** All the parts should be in place and properly installed. Be sure that all nuts, bolts, and screws are tight. On gasoline vehicles, check all hose clamps for tight fit as well as the starter belt for tightness.
- **Safety and information decals:** Check to ensure that all safety and information decals are in place. **See Safety Decal and Feature Identification on page 5.**
- **Tires:** Check for proper tire pressure. Visually inspect for wear, damage, and proper inflation on a daily basis. **See Vehicle Specifications – Gasoline Vehicles on page 57. See Vehicle Specifications – Electric Vehicles on page 59.**
- **Battery(ies):** Check electrolyte to ensure that it is at its proper level (**Figure 21, Page 46 or Figure 26, Page 51**). Check battery posts. Wires should be tight and free of corrosion. On electric vehicles, charge batteries fully before first use of vehicle.
- **Charger cord, plug, and receptacle (electric vehicles):** Visually inspect for cracks, loose connections, and frayed wiring. **See Plug and Receptacle on page 49.**
- **Engine (gasoline vehicles):** Check for proper engine oil level. **See Engine Oil – Gasoline Vehicle on page 52.**
- **Fuel (gasoline vehicles):** Check fuel level. **See Fueling Instructions – Gasoline Vehicle on page 55.** Check fuel tank, lines, cap, pump, fuel filters, and carburetor for fuel leakage on a daily basis.
- **Exhaust system (gasoline vehicles):** Check for leaks.
- **Performance Inspection:** Inspect as instructed. **See Performance Inspection on page 26.**

### **WARNING**

- **Be sure the plastic has been removed from the seat bottom before operating the vehicle. Failure to do so may result in a fire, property damage, personal injury, or death.**

## PERFORMANCE INSPECTION

After you have familiarized yourself with the vehicle controls and have read and understood the driving instructions, take the vehicle for a test drive.

Use the following checklist, in conjunction with the Pre-Operation and Daily Safety Checklist, as a guide to inspect the vehicle and check daily for proper operation. Any problems should be corrected by a Club Car distributor/dealer or a trained technician.

### **All Vehicles**

- **Forward/Reverse control:** Check for proper operation. **See Controls and Indicators on page 17.**
- **Brakes:** Be sure the brakes function properly. When brake pedal is fully pressed under moderate pressure, it should not go more than halfway to the floor, and vehicle should come to a smooth, straight stop. If the brake pedal goes more than halfway to the floor, or if the vehicle swerves or fails to stop, have the brake system checked and adjusted as required. Brake adjustment must be maintained so that the brake pedal cannot be pressed to the floor under any circumstance.
- **Park brake:** When latched, the park brake should lock the wheels and hold the vehicle stationary (on an incline of 20% or less). It should release when either the accelerator or brake pedal is pressed.

- **Reverse buzzer:** The reverse buzzer should sound as a warning when the Forward/Reverse handle or switch is in the REVERSE position.
- **Steering:** The vehicle should be easy to steer and should not have any play in the steering wheel.
- **General:** Listen for any unusual noises such as squeaks or rattles. Check the vehicle ride and performance. Have a Club Car distributor/dealer or a trained technician investigate anything unusual.

#### Electric Vehicles

- **Accelerator:** With the key switch in the ON position and the Forward/Reverse switch in the FORWARD position, as the accelerator pedal is pressed, the motor should start and the vehicle should accelerate smoothly to full speed. Club Car vehicles operate at reduced speed in reverse. When the pedal is released, it should return to the original position and the motor should rotate freely or go into motor braking mode. **See Pedal Up Motor Braking below.**
- **Walk-Away Braking:** With the vehicle parked on level ground and the park brake disengaged, place the Tow/Run switch in the RUN position and attempt to push the vehicle. Motor braking should engage and cause resistance to rolling (moving at no more than 1 to 3 mph) (1.5 to 4.8 km/h) with the Forward/Reverse switch in any position. When walk-away braking is engaged, the reverse buzzer should emit a distinct pattern of beeps. **See following WARNING.**

### **⚠ WARNING**

- **Walk-away braking will not limit vehicle speed to 1 mph (1.6 km/h) on very steep grades. Do not operate vehicle on slopes exceeding 20% grades.**
- **Pedal Up Motor Braking:** Accelerate the vehicle to full speed and then release the accelerator pedal. Motor braking should quickly and smoothly slow the vehicle. Motor braking will disengage when vehicle slows to the programmed speed for IQ Plus vehicles. This feature is programmable for IQ Plus vehicles. Contact your local Club Car dealer/distributor to inquire about this adjustable feature.
- **Pedal Down Motor Braking:** Accelerate down an incline with the accelerator pedal pressed. When the vehicle reaches maximum programmed speed, motor braking should engage and limit the vehicle to its maximum programmed speed. On very steep grades, the vehicle may slightly exceed its maximum programmed speed, requiring use of the brake pedal.

#### Gasoline Vehicles

- **Accelerator for pedal-start vehicle:** With the key switch in the ON position and the Forward/Reverse handle in the FORWARD position, as the accelerator pedal is pressed, the engine should start and the vehicle should accelerate smoothly to full speed. When the pedal is released it should return to the original position and the engine should stop. Club Car vehicles operate at reduced speed in reverse.
- **Accelerator for key-start vehicle:** After starting the engine with the key switch and placing the Forward/Reverse handle in the FORWARD position, the vehicle should accelerate smoothly to full speed as the accelerator pedal is pressed. When the accelerator pedal is released it should return to the original position and the engine should idle.
- **Governor:** Check maximum speed of the vehicle on a level surface. Refer to Vehicle Specifications beginning on page 57 for the rated speed of the vehicle.

## DRIVING INSTRUCTIONS

### **⚠ WARNING**

- **Only licensed drivers should be allowed to drive the vehicle.**
- **Before allowing anyone to drive the vehicle, make sure the driver is familiar with all controls and operating procedures.**
- **No one under the age of 16 years should be allowed to drive the vehicle.**

WARNING CONTINUED ON NEXT PAGE

## **WARNING**

- No more than two people should be on the vehicle at one time.
- Do not allow riders in the cargo bed.
- The vehicle is not specially equipped for handicapped persons:
  - Be sure all persons can properly operate the vehicle prior to allowing them to drive the vehicle.
  - Be sure all passengers are capable of securing themselves in a vehicle before allowing them to ride in one.
- For night use, the vehicle must be equipped with headlights, taillights, and reflectors.
- Stop the vehicle before shifting the Forward/Reverse handle or switch. Failure to do so may result in injury to inattentive passengers and (or) damage to the vehicle.
- Do not leave children unattended on vehicle.
- To help avoid being struck, do not stand in front of or behind the vehicle.
- Operate the vehicle from the driver seat only.
- To help prevent falls from the vehicle, remain seated in a moving vehicle and hold on to hand holds or handrails at all times. Driver should keep both hands on the steering wheel when the vehicle is in motion.
- To help prevent the possibility of serious injury, keep entire body inside the vehicle.
- To help prevent overturning the vehicle, drive slowly in turns.
- To help prevent overturning the vehicle, drive slowly straight up and down slopes. Avoid driving the vehicle on slopes exceeding 20% incline.
- Avoid stopping a loaded vehicle on a hill. If a loaded vehicle must be stopped on a hill, avoid sudden starts or rolling backwards and stopping suddenly. Failure to heed this warning could result in overturning the vehicle.
- To help avoid possible injury to inattentive passengers and (or) damage to the vehicle, avoid sudden starts, sudden stops, and abrupt turns.
- To help avoid the possibility of losing control of or overturning the vehicle, reduce speed for adverse driving conditions such as wet grass or rough terrain.
- Do not use the vehicle on public roads. It is neither designed nor intended for street use and should not be licensed for use on public roads.
- The vehicle should be driven in only specified areas by trained drivers.
- Do not drive while under the influence of alcohol, drugs, or medications.
- Use brakes to reduce speed when coasting downhill.
- Never attempt jumps.
- This vehicle is not intended to be used where risk of falling objects exists. If your vehicle will be used in such an environment, contact your local dealer.
- Do not drive the vehicle under tree limbs, bridges, tunnels, or other objects that are less than 80 inches (203 cm) from the ground.

No one should drive the vehicle without first being instructed in the proper operation and use of the vehicle's controls. An experienced operator should accompany each first-time driver on a test drive before allowing them to operate the vehicle alone.

To ensure safe operation of the vehicle, follow exactly and in order, all of the following procedures. Read and understand all instructions prior to driving the vehicle.

## **STARTING THE VEHICLE**

1. Study and understand controls.

2. Make sure load is secure.
3. Make sure everyone is seated and holding onto hand holds or handrails. Driver should have both hands on the steering wheel.
4. Make sure wheels are turned in desired direction and that nothing is obstructing vehicle's path.
5. Start the vehicle:

**Electric and pedal-start gasoline vehicles:**

- 5.1. Turn the key to the ON position.
- 5.2. Select direction by placing the Forward/Reverse handle or switch in the desired position (F = forward or R = reverse). A buzzer will sound as a warning when the Forward/Reverse handle or switch is in the REVERSE position.
- 5.3. Slowly press the accelerator pedal. The park brake will release automatically and the vehicle will start to move. As the accelerator pedal is pressed, speed will increase until full speed is reached. **See following WARNING and NOTE.**

**Key-start gasoline vehicles:**

- 5.4. Make sure the Forward/Reverse handle is in the NEUTRAL position.
- 5.5. Press and hold brake pedal.
- 5.6. Turn the key all the way to the START position and release after the engine has started. The engine will idle with the Forward/Reverse handle in the NEUTRAL position.
- 5.7. Keeping brake engaged, place the Forward/Reverse handle in desired position (F = forward or R = reverse). Engine must be at idle before moving the shift handle. A buzzer will sound as a warning when the vehicle is in the REVERSE position.
- 5.8. Release brake pedal and slowly press accelerator pedal. The park brake will release automatically and the vehicle will start to move. As the accelerator pedal is pressed, speed will increase until full speed is reached. **See following WARNING and NOTE.**

** WARNING**

- Operator must control vehicle speed when going downhill.

**Electric vehicles only:**

- Pedal down or pedal up motor braking may be used to help control speed when going downhill; however, steep terrain or other conditions may require that pedal braking be used in conjunction with motor braking.

**Gasoline vehicles only:**

- Do not shift the vehicle out of FORWARD while going downhill. If you do you will not be able to shift into REVERSE or back into FORWARD until stopped.
- Press the brake pedal as necessary and partially press the accelerator when descending a hill. With the accelerator pedal partially pressed, the governor will cause the engine to assist the brakes in controlling downhill speed.

**NOTE: Pedal-start vehicle:** If the Forward/Reverse handle or switch is shifted into the NEUTRAL position, power will be cut off and the engine will stop running.

**Key-start vehicle:** If the Forward/Reverse handle is shifted from the FORWARD to REVERSE position while the accelerator pedal is pressed, power will be cut off and the engine will stop running. To keep engine running, the accelerator pedal must be released completely before shifting the vehicle.

## STOPPING THE VEHICLE

### **⚠ WARNING**

- **Driving through water may affect the brakes. After driving through water, check effectiveness of the brakes by gently pressing the brake pedal. If the vehicle does not slow down at the normal rate, continue to press the brake pedal until the brakes dry out and normal performance returns.**

### **⚠ CAUTION**

- **When stopped on a hill, use the brake pedal to hold your position. Do not use the accelerator pedal to hold position.**

To stop vehicle, release the accelerator pedal and press the brake pedal until vehicle comes to a complete stop.

## PARKING AND LEAVING THE VEHICLE

1. After coming to a complete stop, firmly press the park brake pedal until it locks. This will prevent the vehicle from rolling.
2. Turn the key switch to the OFF position and place the Forward/Reverse handle or switch in the NEUTRAL position. Remove the key when the vehicle is not in use.
  - **Electric vehicles only:** When the Tow/Run switch is in the RUN position (with the Forward/Reverse switch or key switch in any position), the walk-away braking function will prevent the vehicle from rolling at more than 1 to 3 mph (1.5 to 4.8 km/h) unless the accelerator is pressed. This prevents the possibility of a parked vehicle (with the park brake disengaged) rolling away too fast to be overtaken on foot.
  - **Gasoline vehicles only:** Turn the fuel shut-off valve (1) (**Figure 17, Page 36**) or (**Figure 18, Page 36**) to the closed (OFF) position when the vehicle is not in use.

## BED LATCH

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The vehicle is equipped with a bed latch on the driver side of the vehicle (**Figure 15**). To lift the bed, pull the latch handle toward the rear of the vehicle and lift the bed.

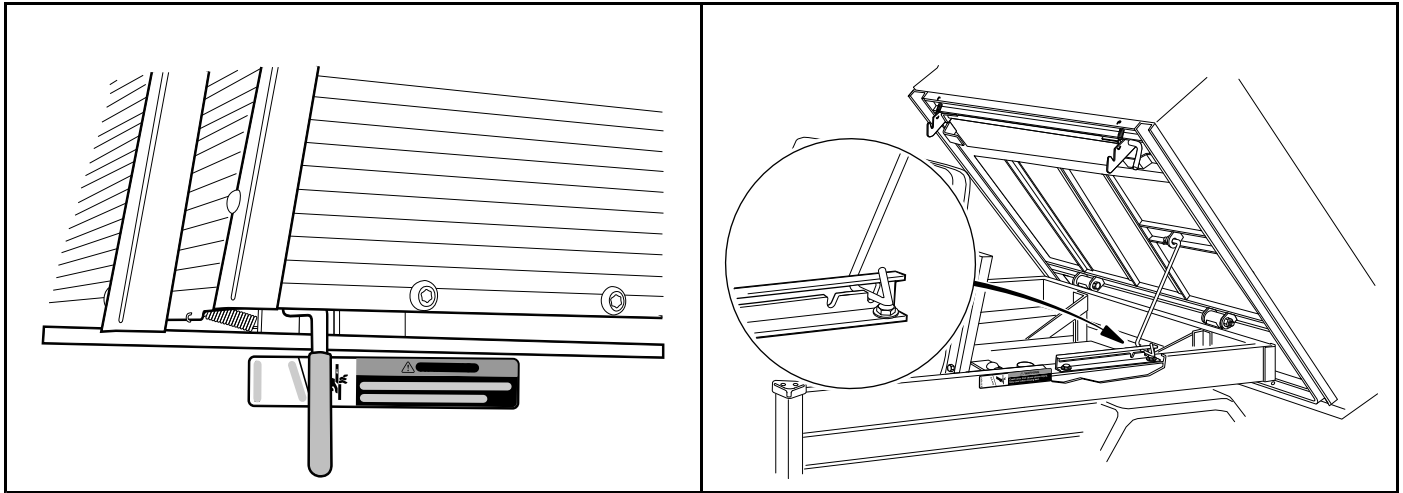
To close the bed, lower it gently until the bed latch engages. DO NOT drop the bed.

### **⚠ WARNING**

- **Keep hands and fingers clear of crush area between the bed and the seat back support.**

**NOTE:** *The vehicle is equipped with an automatically engaging prop rod (**Figure 16**), unless equipped with the hydraulic or electric bed lift option.*





83A

Figure 15 Bed Latch

84

Figure 16 Prop Rod

## PROP ROD

See General Warnings on page 12.

The vehicle is equipped with an automatically engaging prop rod and prop rod track on the driver side of the rear body (**Figure 16**). When pulling the bed latch handle and lifting the bed, the prop rod will come to rest in one of the notches in the prop rod track.

### **⚠ DANGER**

- Use caution when working under bed. Be sure prop rod is secure. Otherwise the bed will fall, resulting in severe personal injury or death.

### **⚠ WARNING**

- Do not disengage prop rod until all persons are clear of cargo bed area.
- Do not drop tilt bed; lower gently and keep entire body clear. Failure to follow these instructions could result in severe injury.
- Keep hands clear of crush area between bed and seat back support.

To lower the bed, lift the bed so that the prop rod is no longer supported in one of the track notches. Push the prop rod toward the front of the vehicle to free it from the track notch and gently lower the bed. DO NOT drop the bed.

## LOADING AND UNLOADING

### **⚠ WARNING**

- Firmly engage the park brake before loading the vehicle.
- Do not allow riders in the cargo bed.
- Do not exceed the rated capacity of the vehicle. Rated capacity is for level surfaces only.
- Overloading can affect vehicle handling or cause component failure, resulting in loss of control of vehicle and possible severe personal injury.
- Reduce vehicle load and speed when driving up or down slopes or on uneven terrain.
- Reduce speed and avoid sudden stops when backing up. Failure to do so may cause the vehicle to overturn or flip over backwards.
- Avoid stopping on a hill when loaded. If you must stop on a hill, avoid sudden starts, or rolling backwards and stopping suddenly. Failure to heed this warning may cause vehicle to overturn, possibly resulting in severe personal injury.
- Do not load the tailgate. The tailgate should be in the upright position and latched securely while the vehicle is in motion.
- To help avoid shifting the vehicle load and possibly overturning the vehicle, avoid sudden starts, sudden stops, and abrupt turns.
- The cargo's center of gravity may affect the handling, steering, and braking of the vehicle. When the vehicle is loaded, reduce speed and drive slowly in turns.
- To help prevent cargo from shifting and possibly injuring a passenger or affecting the vehicle's handling, make sure cargo is well secured.
- Avoid top-heavy loads. The center of gravity of a load should never exceed 15 inches (38 cm) above the bottom of the cargo bed.
- Unload cargo bed before raising vehicle with a lift, hoist, or jack.

When loading the vehicle, center and secure cargo as far forward as possible in the cargo bed. Do not overload the vehicle. **See the following chart for vehicle capacities.**

	All Vehicles
<b>Maximum payload capacity</b> (Cargo bed load plus gross trailer weight)	500 lb. (227 kg)
<b>Maximum vehicle capacity</b> (Cargo bed load, passengers, plus gross trailer weight)	900 lb. (408 kg)
<b>Trailer tongue weight</b>	150 lb. force (667 N)

Maximum payload capacity must be reduced accordingly when any option or accessory is installed on the vehicle. **See following NOTE.**

**NOTE:** A standard vehicle with a cab accessory weighing 235 lb. (107 kg) must reduce its maximum payload capacity by 235 lb. (107 kg).

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## TOWING WITH THE VEHICLE

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### **⚠ WARNING**

- Do not tow a vehicle or trailer on public streets or highways.
- Normal vehicle operating speed should be reduced when towing.
- Extreme caution should be used when towing.
- Total vehicle capacity, including the tow vehicle load rating and the gross weight of the vehicle or trailer being towed should not exceed the weight previously specified.
- Do not allow riders in the vehicle or trailer being towed.
- Avoid sudden starts, sudden stops, and tight turns when towing.
- Avoid stopping on a hill when towing. If you must stop on a hill, avoid sudden starts or rolling backwards and stopping suddenly. Failure to heed this warning could cause the vehicle to overturn, possibly resulting in severe personal injury.

Because towing a vehicle or trailer can have an adverse effect on vehicle handling, be especially cautious when towing with a Club Car vehicle. See the preceding chart for vehicle capacities.

Parking the vehicle with a trailer on a hill should be avoided. If you must park on a hill, apply the brakes and have someone chock the tires of the trailer. Brakes should be released to allow the chocks to absorb the load of the trailer. After the tires have been chocked, engage the park brake.

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## TRANSPORTING ON A TRAILER

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### **⚠ WARNING**

- Do not allow riders in the trailer being towed.
- Avoid sudden starts, sudden stops, and tight turns when towing.
- Avoid stopping on a hill when towing. If you must stop on a hill, avoid sudden starts or rolling backwards and stopping suddenly. Failure to heed this warning could cause the vehicle to overturn, possibly resulting in severe personal injury.
- For use on public roads, the trailer must meet all federal, state, and local requirements such as taillights, brake lights, etc.
- Reduce normal driving speed when transporting a Club Car vehicle on a trailer.
- Do not tow a Club Car vehicle behind a passenger vehicle or truck on a public road unless it is on an approved trailer.
- The vehicle to be transported should be tied securely to the trailer, with the Forward/Reverse handle or switch in the NEUTRAL position, the key switch in the OFF position, and the park brake firmly pressed and locked.
- Because of the added length of the trailer, use caution when making turns.
- Do not transport the vehicle on a trailer with a load in the vehicle cargo bed.
- Remove the vehicle windshield and secure the seat bottom before transporting on a trailer.
- Gasoline vehicles only: Turn the fuel shut-off valve (1) (Figure 17, Page 36) or (Figure 18, Page 36) to the closed (OFF) position.

If the vehicle must be transported over long distances or on public highways, it should be transported on an approved trailer that has a load rating of at least 2000 lb. (909 kg) per vehicle being transported:

**NOTE:** A two-car trailer should be rated at  $2 \times 2000 \text{ lb.} = 4000 \text{ lb.}$  ( $2 \times 909 \text{ kg} = 1818 \text{ kg}$ ).

## STORAGE – ELECTRIC VEHICLES

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See General Warnings on page 12.

### **⚠ WARNING**

- Turn the key switch to the OFF position, remove the key, and leave the Forward/Reverse handle or switch in the NEUTRAL position during storage. This is to prevent unintentionally starting the vehicle or a fire hazard. Place Tow/Run switch in the TOW position.
- Do not attempt to charge frozen batteries or batteries with bulged cases. Discard the battery. Frozen batteries can explode.

### **⚠ CAUTION**

- Batteries in a low state of charge will freeze at low temperatures.
- To avoid exposing electrical components to moisture and subsequent damage, do not use any type or pressure washing or steam cleaning equipment to wash the vehicle.

## PREPARING THE ELECTRIC VEHICLE FOR EXTENDED STORAGE

1. Unload the vehicle so that tires are supporting only the weight of the vehicle.
2. Fully charge batteries. **See Charging Batteries on page 48.**
3. Batteries should be clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup (237 mL) baking soda per 1 gallon (3.8 L) of water). Rinse solution off batteries. Do not allow this solution to enter the batteries. Be sure terminals are tight. Let the terminals dry and then coat them with Battery Terminal Protector Spray (CC P/N 1014305).
4. Store vehicle in a cool, dry place. This will minimize battery self-discharge.
5. Adjust tires to recommended tire pressure. **See Vehicle Specifications – Electric Vehicles on page 59.**
6. Perform semiannual periodic lubrication. **See Periodic Lubrication Schedules on page 42.**
7. Thoroughly clean front body, rear body, seats, cargo bed, battery compartment, and underside of vehicle.
8. Do not engage the park brake. Chock the wheels to prevent the vehicle from rolling.
9. Keep batteries fully charged during storage.
  - 9.1. Leave battery chargers plugged in during storage. The onboard computer (OBC) will automatically activate the charger when necessary.
  - 9.2. If the battery charger is left plugged in during extended storage, check the electrolyte level and charger function monthly to ensure that proper operation is maintained. To check charger function, disconnect the DC cord (stationary charger) from the vehicle or the AC cord (onboard charger) from the power source, wait five seconds, then reconnect it. The charger is functioning properly if the ammeter indicates current.

**NOTE: The OBC keeps track of the time spent in storage mode. When the OBC detects that the storage charge cycles may have depleted the available electrolyte, it will stop the charger from further operation.**

*Disconnecting then reconnecting the DC cord (stationary charger) or AC cord (onboard charger) indicates the electrolyte levels have been maintained and allows the OBC to resume operation.*

*While in storage, the Tow/Run switch should be in Tow. When in Tow mode, the amber battery warning light will not illuminate. Do not attempt to use the battery light as an indication of battery state while in storage.*

- 9.3. If AC power is off for 7 days or longer, the OBC will not function or charge the vehicle again until it has been restarted. To restart the computer, make sure AC power has been restored, disconnect the DC cord (stationary charger) from the vehicle or the AC cord (onboard charger) from the power source, wait five seconds, then reconnect it.

## **CAUTION**

- Be sure to check the batteries and charger monthly to maintain correct battery water level and to ensure the charger is operating correctly during storage.
- 9.4. If the charger cannot remain plugged in, AC power will not be available during extended storage, or electrolyte levels will not be maintained, then disconnect the batteries for storage (**Figure 3, Page 14**).

## **RETURNING THE STORED ELECTRIC VEHICLE TO SERVICE**

1. If necessary, connect batteries. See **Connecting the Batteries – Electric Vehicles on page 15**.
2. Fully charge batteries.
3. Adjust tires to recommended tire pressure. See **Vehicle Specifications – Electric Vehicles on page 59**.
4. Perform the Pre-Operation and Daily Safety Checklist on page 26 and the Performance Inspection on page 26.

## **STORAGE – GASOLINE VEHICLES**

See General Warnings on page 12.

### **DANGER**

- Do not attempt to drain fuel when the engine is hot or while it is running.
- Be sure to clean up any spilled gasoline before operating the vehicle.
- Store fuel in an approved fuel container only. Store in a well-ventilated area away from sparks, open flames, heaters, or heat sources.
- Keep fuel out of the reach of children.
- Do not siphon fuel from the vehicle.

### **WARNING**

- Turn the key switch to the OFF position, remove the key, and leave the Forward/Reverse handle in the NEUTRAL position during storage. This is to prevent unintentionally starting the vehicle or a fire hazard.
- Turn the fuel shut-off valve (1) (Figure 17) or (Figure 18) the closed (OFF) position.
- Do not attempt to charge frozen batteries or batteries with bulged cases. Discard the battery. Frozen batteries can explode.

### **CAUTION**

- Batteries in a low state of charge will freeze at low temperatures.

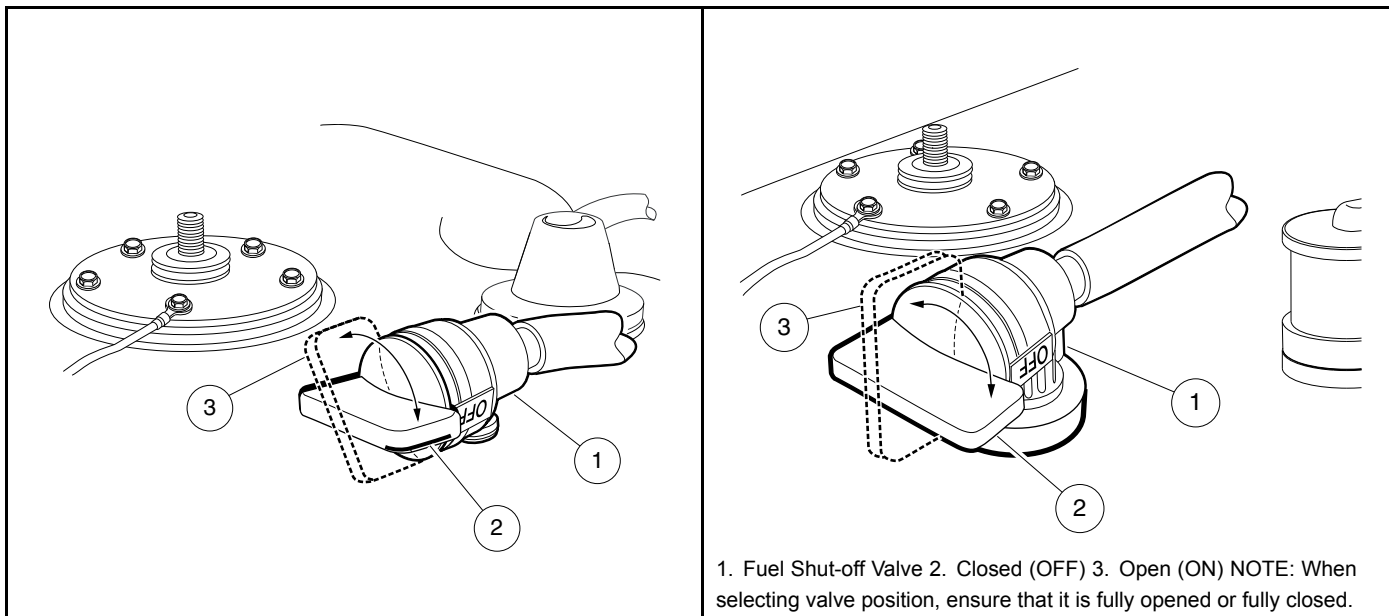
## **PREPARING THE GASOLINE VEHICLE FOR EXTENDED STORAGE**

1. Unload the vehicle so that tires are supporting only the weight of the vehicle.
2. Store vehicle in a cool, dry place. This will minimize battery self-discharge. If the battery appears to be weak, have it charged by a trained technician. Use an automotive-type 12-volt battery charger rated at 10 amps or less.

3. Drain carburetor and seal the fuel tank.

3.1. **Pedal-start vehicles:** Place the Forward/Reverse handle in the NEUTRAL position and the neutral lockout switch in the MAINTENANCE position. Turn the fuel shut-off valve (1) (**Figure 17**) or (**Figure 18**) to the closed (OFF) position and run the engine until fuel remaining in the carburetor and fuel lines is depleted and the engine stalls. Return the neutral lockout switch to the OPERATE position.

3.2. **Key-start vehicles:** Place the Forward/Reverse handle in the NEUTRAL position. Turn the fuel shut-off valve (1) (**Figure 17**) or (**Figure 18**) to the closed (OFF) position and run the engine until fuel remaining in the carburetor and fuel lines is depleted and the engine stalls.



449 **Figure 17 Fuel Shut-off Valve – 49-State Fuel Tank Shown**

450 **Figure 18 Fuel Shut-off Valve – California Fuel Tank Shown**

- 3.3. Loosen, but do not remove, the carburetor drain screw and drain fuel remaining in bowl into a small, clean container, then pour the fuel from the container into vehicle fuel tank. Tighten the carburetor drain screw.
- 3.4. Fill fuel tank to about 1 inch (2.5 cm) from top of fuel tank and, following manufacturer's directions, add a commercially available fuel stabilizer (such as Sta-Bil®).
- 3.5. Disconnect fuel vent line from fuel tank vent nipple.
- 3.6. Plug the fuel tank vent nipple so that it is air tight. We recommend using a slip-on vinyl cap.
4. Disconnect battery and spark plug wire(s). **See Disconnecting the Battery – Gasoline Vehicles on page 14.**
5. Batteries should be clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup (237 mL) baking soda per 1 gallon (3.8 L) of water). Rinse solution off batteries. Do not allow this solution to enter the batteries. Let the terminals dry and then coat them with Battery Terminal Protector Spray (CC P/N 1014305).
6. To protect the engine, remove spark plug and pour 1/2 ounce (14.2 mL) of SAE 10 weight oil into the engine through the spark plug hole. Rotate engine crankshaft by hand several times and then install the spark plug.
7. Adjust tires to recommended tire pressure. **See Vehicle Specifications – Gasoline Vehicles on page 57.**
8. Perform semiannual periodic lubrication. **See Periodic Lubrication Schedules on page 42.**
9. Thoroughly clean front body, rear body, seats, cargo bed, engine compartment, and underside of vehicle.
10. Do not engage the park brake. Chock the wheels to prevent the vehicle from rolling.

## RETURNING THE STORED GASOLINE VEHICLE TO SERVICE

1. Restore fuel system to operation.
  - 1.1. Remove plug from the fuel tank vent (**Figure 32, Page 55**).
  - 1.2. Connect vent tube to fuel tank vent.
2. Connect battery and spark plug wire(s). **See Connecting the Battery – Gasoline Vehicles on page 14.**
3. Completely open the fuel shut-off valve (1) (**Figure 17**) or (**Figure 18**). Make sure the valve is fully open. A partially closed fuel shut-off valve combined with the use of the choke can result in a fouled spark plug and engine failure.
4. **Pedal-start vehicles:** Place the Forward/Reverse handle in the NEUTRAL position and the neutral lockout switch in the MAINTENANCE position. Crank the engine until fuel is pumped into the carburetor and fuel lines and the engine starts. Turn the engine off and return the neutral lockout switch to the OPERATE position. **See following NOTE.**
5. **Key-start vehicles:** Place the Forward/Reverse handle in the NEUTRAL position. Crank the engine until fuel is pumped into the carburetor and fuel lines and the engine starts. Turn the engine off. **See following NOTE.**

**NOTE:** Due to the oil added to the engine in preparation for storage, engine may smoke excessively for a short time when it is run for the first time after storage.

6. Adjust tires to recommended tire pressure. **See Vehicle Specifications – Gasoline Vehicles on page 57.**
7. Perform the Pre-Operation and Daily Safety Checklist on page 26 and the Performance Inspection on page 26.

## MAINTENANCE

**See General Warnings on page 12.**

To ensure trouble-free vehicle performance, it is very important to follow an established preventive maintenance program. Regular and consistent vehicle maintenance can prevent vehicle downtime and expensive repairs that can result from neglect. Use the Pre-Operation and Daily Safety Checklist on page 26, the Performance Inspection on page 26, and the following *Periodic Service Schedules* and *Periodic Lubrication Schedules* to keep the vehicle in proper working condition.

Any vehicle not functioning correctly should be removed from use until it is properly repaired. This will prevent further damage to the vehicle and avoid the possibility of injury due to unsafe conditions.

Contact your local Club Car distributor/dealer to perform all repairs and semiannual and annual periodic service.

### **⚠ WARNING**

- If any problems are found during scheduled inspection or service, do not operate the vehicle until repairs are made. Failure to make necessary repairs could result in fire, property damage, severe personal injury, or death.
- Hot! Do not attempt to service hot engine, motor, or exhaust system. Attempting to do so could cause severe burns.
- Do not work on vehicle powertrain or under the cargo bed when it is loaded.
- Do not wear loose clothing or jewelry, such as rings, watches, chains, etc., when servicing the vehicle.
- Turn the key switch to OFF, remove the key, place the Forward/Reverse handle or switch in the NEUTRAL position, and chock tires prior to servicing.
- Be sure all persons are clear of the vehicle when lifting a cargo bed equipped with a tailgate ramp.
- Do not remove prop rod or close bed until all persons are clear of the bed area. Lower the bed gently, keeping entire body clear. do not drop the bed. Failure to follow these instructions could result in severe personal injury.

WARNING CONTINUED ON NEXT PAGE

## **WARNING**

- A hydraulic bed lift system is under pressure. Wear a face shield and use extreme caution when servicing it.

### Electric vehicles:

- Use only 4-gauge (AWG) wires with low-resistance terminals to replace battery wires on IQ Plus models.
- To avoid unintentionally starting the vehicle, disconnect the batteries and discharge the controller. See Disconnecting the Batteries – Electric Vehicles on page 15.

### Gasoline vehicles only:

- **Moving parts:** Do not attempt to service gasoline vehicle while the engine is running.
- Turn the fuel shut-off valve (1) (Figure 17, Page 36) or (Figure 18, Page 36) to the closed (OFF) position .
- To avoid unintentionally starting the vehicle, disconnect battery and spark plug wire(s). See Disconnecting the Battery – Gasoline Vehicles on page 14.
- **Frame ground** – Do not allow tools or other metal objects to contact frame when disconnecting batteries or other electrical wiring. Never allow a positive wire to touch the vehicle frame, engine, or other metal component.

## PERIODIC SERVICE SCHEDULES

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See General Warnings on page 12.

## **WARNING**

- Service, repairs, and adjustments must be made per instructions in the maintenance and service manual.

**NOTE:** *If the vehicle is constantly hauling heavy loads or hauling a trailer, these preventive maintenance procedures should be performed more often than recommended in the Periodic Service Schedule.*

*Both the Periodic Service Schedules and the Periodic Lubrication Schedules must be followed to keep vehicle in optimum operating condition.*



PERIODIC SERVICE SCHEDULE – ELECTRIC VEHICLES		
REGULAR INTERVAL	SERVICE	
Daily service by owner	Pre-Operation and Daily Safety Checklist	See Pre-Operation and Daily Safety Checklist on page 26.
	Performance Inspection	See Performance Inspection on page 26.
	Batteries	Charge batteries (after each daily use only).
Weekly service by owner	Batteries	Check electrolyte level. Add water if necessary. See page 46.
Monthly service by owner or trained technician	Batteries	Wash battery tops and clean terminals with baking soda/water solution.
	Tires	Check air pressure and adjust if necessary. See Vehicle Specifications – Electric Vehicles on page 59.
	General vehicle	Wash battery compartment and underside of vehicle.
Semiannual service by trained technician only (or every 50 hours of operation, whichever comes first)	Brake system	Check brake shoes; replace if necessary or adjust as required. See Wheel Brake Assemblies Section in the appropriate maintenance and service manual.
		Lubricate brake slides per Lubrication Schedule. See Wheel Brake Assemblies Section in the appropriate maintenance and service manual.
		Check brake cables for damage; replace if necessary.
	Electrical wiring and connections	Check for tightness and damage.
	Forward/Reverse switch	Check condition of contacts and wire connections; make sure connections are tight.
	Front wheel alignment and camber	Check and adjust as required. See Steering and Front Suspension Section in the appropriate maintenance and service manual.
	Motor Controller Output Regulator (MCOR)	Check for loose hardware, cracks, or other damage.
Annual service by trained technician only (or every 100 hours of operation, whichever comes first)	Batteries	If batteries are not performing as expected, see Batteries Section in the maintenance and service manual.

PERIODIC SERVICE SCHEDULE – GASOLINE VEHICLES		
REGULAR INTERVAL	SERVICE	
Daily service by owner	Pre-Operation and Daily Safety Checklist	See Pre-Operation and Daily Safety Checklist on page 26.
	Performance Inspection	See Performance Inspection on page 26.
Monthly service by owner or trained technician	Engine	Check engine oil level; change if necessary. See Periodic Lubrication Schedules on page 42. Dispose of used oil properly.
		Check engine cooling air intake; visually inspect unshrouded area around engine exhaust for grass and debris, and clean if necessary.
	Tires	Check air pressure and adjust if necessary. See Vehicle Specifications – Gasoline Vehicles on page 57.
	General vehicle	Wash engine compartment and underside of vehicle. Do not wash engine when hot.
Semiannual service by trained technician only (or every 50 hours of operation, whichever comes first)	Battery	Clean terminals and wash dirt from casing; check electrolyte level. See page 51.
	Front wheel alignment and camber	Check and adjust if necessary. See Steering and Front Suspension Section in the appropriate maintenance and service manual.
	Electrical wiring and connections	Check for tightness and damage.
	Brake system	Check brake shoes; replace if necessary or adjust as required. See Wheel Brake Assemblies Section in the appropriate maintenance and service manual.
Lubricate brake slides per Lubrication Schedule. See Wheel Brake Assemblies Section in the appropriate maintenance and service manual.		
		Check brake cables for damage; replace as required.

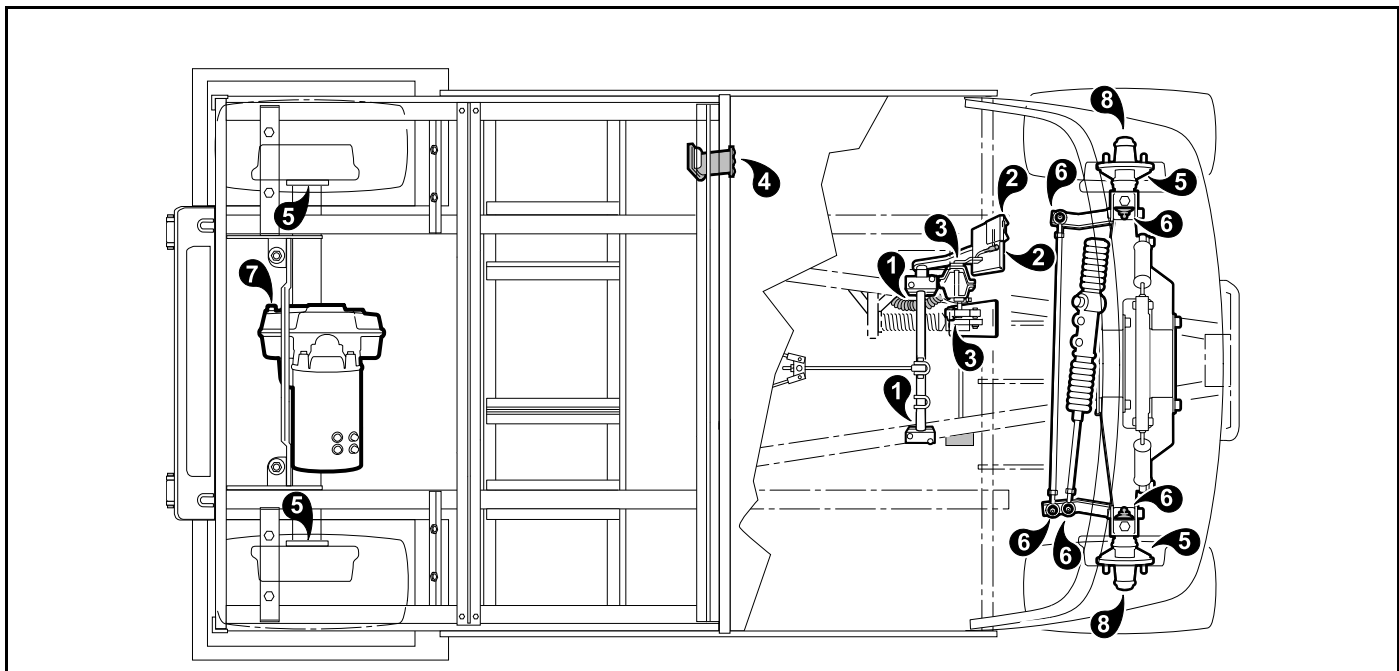
PERIODIC SERVICE SCHEDULE – GASOLINE VEHICLES		
REGULAR INTERVAL	SERVICE	
Annual service by trained technician only (or every 100 hours of operation, whichever comes first)	Engine	Check for leaks around gaskets, fill plugs, etc.
		Inspect, clean and gap spark plug; replace if necessary.
	Engine air intake system	Check air filter element; clean or replace if necessary.
		Check clamps for tightness; check hose for cracks.
General vehicle	Check for loose hardware and tighten if necessary.	
Two year service by trained technician only (or every 200 hours of operation, whichever comes first)	Fuel filters	Replace. Dispose of used filters properly.

** WARNING**

- If any problems are found during scheduled inspection or service, do not operate the vehicle until repairs are made. Failure to make necessary repairs could result in fire, property damage, severe personal injury, or death.

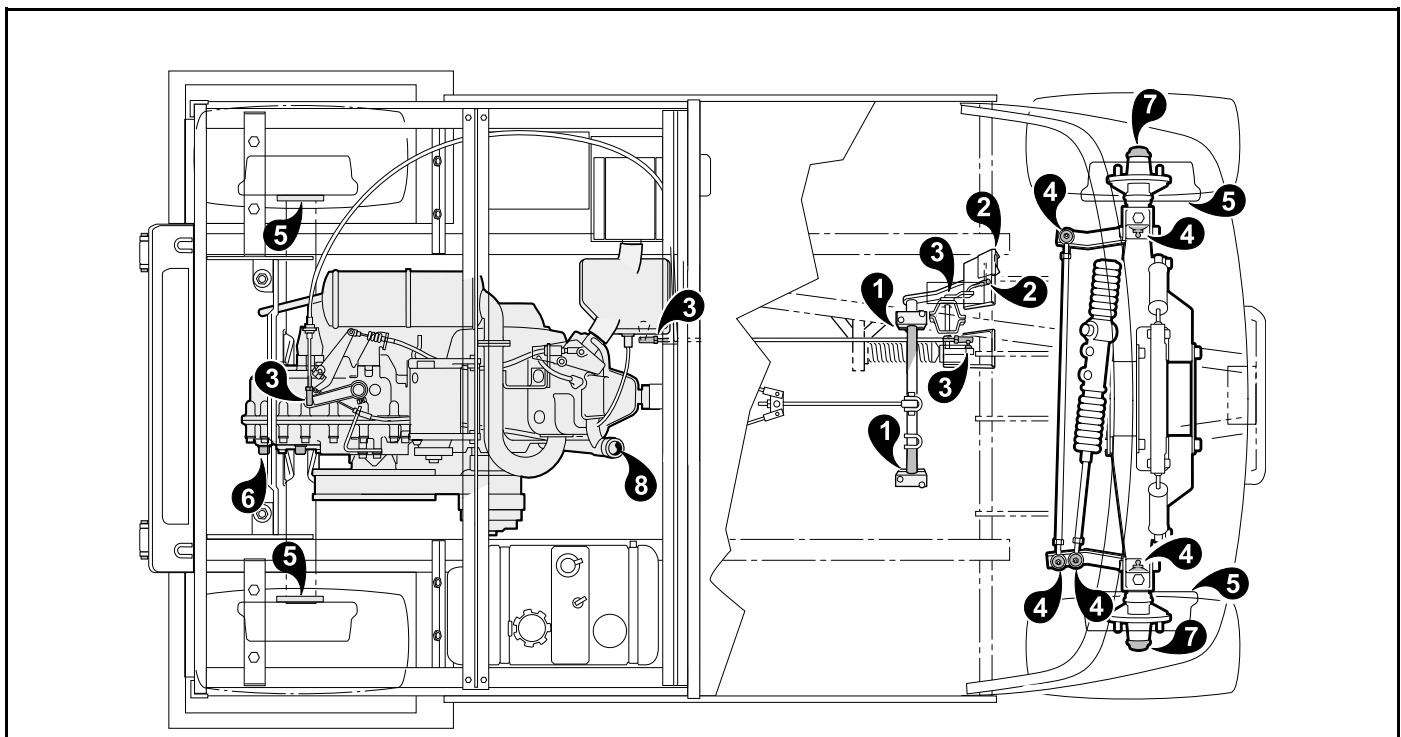
## PERIODIC LUBRICATION SCHEDULES

PERIODIC LUBRICATION SCHEDULE – ELECTRIC VEHICLES			
REGULAR INTERVAL	SERVICE	LUBRICATION POINTS	RECOMMENDED LUBRICANT
Semiannually by owner or trained technician (or every 50 hours of operation, whichever comes first)	Brake pedal shaft bearings	1	Dry Moly Lube (CC P/N 1012151)
	Brake linkage and pivots	2	Dry Moly Lube (CC P/N 1012151)
	Accelerator pivot rod supports	3	Dry Moly Lube (CC P/N 1012151)
	Charger Receptacle	4	WD-40
	Brake slides	5	Dry Moly Lube (CC P/N 1012151)
	Front suspension (5 fittings)	6	Chassis Lube – EP NLGI Grade 2
Annually by trained technician only (or every 100 hours of operation, whichever comes first)	Check/fill transaxle to plug level	7	22 oz. (0.67 liters) SAE 30 WT. API Class SE, SF, or SG Oil (or higher)
	Inspect front wheel bearings (Repack as necessary)	8	Chassis Lube – EP NLGI Grade 2



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Figure 19 Lubrication Points – Electric Vehicles

PERIODIC LUBRICATION SCHEDULE – GASOLINE VEHICLES			
REGULAR INTERVAL	SERVICE	LUBRICATION POINTS	RECOMMENDED LUBRICANT
Semiannually by owner or trained technician (or every 50 hours of operation, whichever comes first)	Brake pedal shaft bearings	1	Dry Moly Lube (CC P/N 1012151)
	Brake linkage and pivots	2	Dry Moly Lube (CC P/N 1012151)
	Accelerator pivot rod supports and shifter cable pivots	3	Dry Moly Lube (CC P/N 1012151)
	Front suspension (5 fittings)	4	Chassis Lube (EP NLGI Grade 2)
	Brake slides	5	Dry Moly Lube (CC P/N 1012151)
Annually by trained technician only (or every 100 hours of operation, whichever comes first)	Check/fill unitized transaxle to plug level	6	27 oz. (.8 liters) 80-90 WT. API Class GL-3 or 80-90 WT. AGMA Class EP Gear Lube
	Inspect front wheel bearings (Repack as necessary)	7	Chassis Lube – EP NLGI Grade 2
First change 100 hours – additional change every 200 hours of operation or annually, whichever comes first	Change engine oil and oil filter	8	32 oz. (.95 liters) without filter; 38 oz. (1.12 liters) with filter (Figure 31, Page 54).



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**Figure 20 Lubrication Points – Gasoline Vehicles**

## BATTERIES – ELECTRIC VEHICLES

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See General Warnings on page 12.

### **⚠ DANGER**

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- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed area. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Charge batteries in a well-ventilated area only. Batteries emit hydrogen while being charged. Hydrogen is an explosive gas and must never exceed a level of 2% of the air.**
- **Battery – Poison! Contains acid! Causes severe burns. Avoid contact with skin, eyes, or clothing. Antidotes:**
  - **External: Flush with water. Call a physician immediately.**
  - **Internal: Drink large quantities of milk or water followed with milk of magnesia or vegetable oil. Call a physician immediately.**
  - **Eyes: Flush with water for 15 minutes. Call a physician immediately.**

### **⚠ WARNING**

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- **Wear safety glasses or approved eye protection when servicing the vehicle or battery charger. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Use insulated tools when working near batteries or electrical connections. Use extreme caution to avoid shorting of components or wiring.**
- **Ensure battery connections are clean and properly tightened. See Battery Care on page 45.**
- **Use only 4-gauge (AWG) wires with low-resistance terminals to replace battery wires on IQ Plus models.**

### **CAUTION**

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- **Turn off all accessories before charging batteries.**

**NOTE:** *Recycle or dispose of discarded batteries in accordance with local, state, and federal regulations.*

Club Car electric vehicles use deep-cycle batteries. Automotive batteries should never be used in electric vehicles. New batteries will not deliver their full capabilities until they have been discharged and recharged 20 to 50 times. To obtain maximum service life from new batteries, restrict the use of vehicles with new batteries to one hour of operation between charges for the first two months vehicle is in service. Batteries should be fully charged before first use of new vehicle, before first use of a vehicle after storage, and before releasing vehicle for use each day.

## WATER QUALITY

To keep batteries in good working condition, the purity of water used is very important. Distilled water is quite pure and is the most common type of water used in batteries. Other acceptable types are deionized water and water from reverse osmosis. Ordinary tap water should not be used because it contains an excessive amount of impurities that will degrade battery performance.

Distilled water is produced by distillation, a process in which water is boiled, the steam is collected and then condensed back into water. This process creates a finished product free of minerals, having left all the impurities in the original water sample. Club Car, along with our battery manufacturers, highly recommends that distilled water be used in electric vehicle batteries.

Deionized water is the purest form of water, but it is also the most expensive. Deionization removes all ionizable particles (organic and inorganic) from water through ion exchange. Positively and negatively charged ions are removed from the water and replaced with H<sup>+</sup> and OH<sup>-</sup> ions. When these two ions are combined, they form H<sub>2</sub>O, or purified water.

Reverse osmosis is a method of removing solids from water by forcing it through a membrane. The membrane rejects all solids while allowing purified water to pass through. The choice of membrane determines the amount of impurities that the water may contain.

Water from municipal supplies, ponds and wells usually contain detrimental levels of dissolved minerals and chemicals. If using tap water, it is important to use an in-line deionizer to remove impurities that can damage batteries and significantly reduce battery life. If tap water is used without a deionizer, regular water analyses must be conducted to check for impurities because water companies commonly revise their additives on a periodic basis. The following chart lists the maximum allowable minerals, solids, and contaminants in parts per million and their impact on battery performance. Your local water company should be able to perform testing and compare their results to the chart.

If using tap water, Club Car's Service Parts Department offers two different deionzier systems: one for vehicles equipped with the Single Point Water System (SPWS) CC P/N AM1240701 and the other for vehicles without SPWS, CC P/N AM10974.

IMPURITY	ALLOWABLE CONTENT (PARTS PER MILLION)	EFFECTS OF IMPURITY
Suspended matter	Trace	-
Total solids	100.0	-
Organic and volatile matter	50.0	Corrosion of positive plates
Ammonia	8.0	Slight self-discharge of both plates
Antimony	5.0	Self-discharge, reduces life, lower on-charge voltage
Arsenic	0.5	Self-discharge, can form poisonous gas
Calcium	40.0	Increase of positive plate shedding
Chloride	5.0	Loss of capacity in plates, greater loss in positive plates
Copper	5.0	Increased self-discharge, lower on-charge voltage
Iron	3.0	Increased self-discharge, lower on-charge voltage
Magnesium	40.0	Reduced life
Nickel	None allowed	Intense lowering of on-charge voltage
Nitrates	10.0	Increased sulfation of negative plate
Nitrates	5.0	Plate corrosion, loss of capacity, reduced life
Platinum	None allowed	Violent self-discharge, lower on-charge voltage
Selenium	2.0	Positive plate shedding
Zinc	4.0	Slight self-discharge of negative plates

## BATTERY CARE

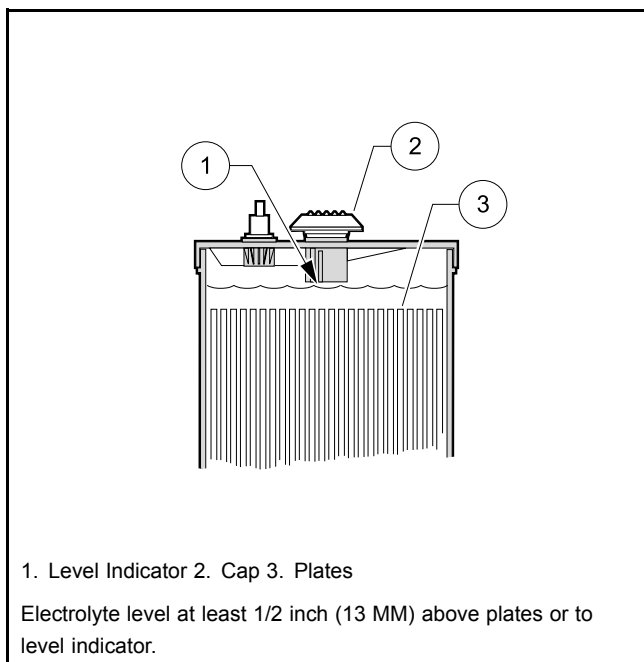
To keep batteries in good working condition, follow this maintenance program on a regular basis. Proper battery maintenance is critical not only for good performance, but also for safe operation. **See following WARNING.**

## **⚠ WARNING**

- Ensure battery connections are clean and properly tightened.
  - Use only 4-gauge (AWG) wires with low-resistance terminals to replace battery wires on IQ Plus models.
  - If battery wire terminals are damaged or corroded, replace or clean them as necessary. Failure to do so may cause them to overheat during operation and could result in a fire, property damage, or personal injury.
1. Batteries should be kept clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup baking soda (237 mL) per gallon (3.8 L) of water). Rinse solution off batteries. Do not allow this solution to enter the battery. Be sure terminals are tight. Let the terminals dry and then spray them with Battery Terminal Protector Spray (CC P/N 1014305).

**NOTE:** Dispose of waste water properly.

2. The electrolyte level in the batteries should be checked weekly (**Figure 21**). Add water only after charging unless the electrolyte level is below the top of the plates. In this case, add just enough water to cover the plates, charge and then check the level again. Never charge batteries if plates are exposed above electrolyte level. For best battery life, use only distilled water. **See following CAUTION and NOTE.**



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**Figure 21 Electric Battery Electrolyte Level**

## **⚠ CAUTION**

- Do not overfill the batteries.

**NOTE:** A battery watering gun or bottle is available at many auto parts dealers.

3. The hold-down straps should be tight enough so batteries do not move while the vehicle is in motion, but not so tight as to crack or buckle the battery case. Tighten hold-down retaining nuts to 40 in-lb (4.5 N·m). The terminal



connections should be clean and tight, and any worn insulation or frayed wires should be replaced. Tighten battery terminals to 110 in-lb (12.4 N·m).

4. After use, the batteries should be placed on charge. The batteries should never be left discharged any longer than absolutely necessary (do not leave batteries discharged overnight).

## BATTERY CHARGER – ELECTRIC VEHICLE

### **⚠ DANGER**

- The charging area must be ventilated. Hydrogen level in the air must never exceed 2%. The total volume of air in the charging area must be changed five times per hour. Exhaust fans should be located at the highest point of the roof. Contact a local HVAC engineer.
- Do not charge the vehicle batteries with the vehicle covered or enclosed. Any enclosure or cover should be removed or unzipped and pulled back when batteries are being charged. An accumulation of hydrogen gas could result in an explosion.

### **⚠ WARNING**

- Only trained technicians should repair or service the charger. Contact a Club Car distributor/dealer.
- Each charger should have its own dedicated 15 or 20 ampere separately protected (circuit breaker or fuse) single phase branch circuit, in accordance with all applicable electrical codes for the location.
- Be sure wire connections at the receptacle and fuse link are clean and tight.
- Have worn, cut, or damaged power cords or wires replaced immediately.
- Do not expose to rain or any liquid. Keep the charger dry.
- Do not use near fuels, grain dust, solvents, thinners, or other flammables. Chargers can ignite flammable materials and vapors.
- Connect the charger AC supply cord to a properly grounded, three-wire outlet of the proper voltage and frequency as shown on the charger.
- Do not use an adapter to plug the charger with a three-prong plug into a two-prong outlet. Improper connection of the equipment-grounding conductor can result in a fire or an electrical shock.
- An extension cord or electrical outlet must accept a three-prong plug. Extension cord should be a three-wire No. 12 AWG (American Wire Gauge) or No. 14 SWG (British Standard Wire Gauge) and be as short as possible (no more than 12 feet (3.7m)). The use of improper extension cord could result in fire or an electrical shock.
- Do not operate the charger if it has received a sharp blow, was dropped, or otherwise damaged in any way.
- Do not push objects of any kind into the charger through cabinet slots. They may touch dangerous voltage points or cause an electrical short circuit that could result in fire or electrical shock.
- Do not connect a stationary charger to the receptacle if the charger cord, plug, or the vehicle receptacle is broken, damaged in any manner, or does not make a good electrical connection. Fire or personal injury can result. Have a qualified technician repair or replace it immediately.
- When using a stationary charger, do not pull on the DC cord (Figure 23, Page 49). Do not twist, rock, or bend the plug. To disconnect the plug from the receptacle, grasp the plug, not the cord, and slowly pull it straight out of the receptacle (Figure 22, Page 49).
- When the charger is ON, the charger DC cord may be disconnected from the vehicle receptacle slowly. Jerking or pulling the DC cord out quickly could cause arcing and burning that could damage the plug and receptacle and could cause batteries to explode.
- Do not use a charger if:

WARNING CONTINUED ON NEXT PAGE

## **⚠ WARNING**

- The plug is too loose or does not make a good connection.
- The plug and receptacle feel hotter than normal during charge.
- The plug pins or contacts are bent or corroded.
- The plug, receptacle or cords are cut, worn, have any exposed wires, or are damaged in any way.
- Using a charger with any of the above symptoms could result in fire, property damage, personal injury, or death.
- Do not block or cover the charger ventilation slots. The slots provide ventilation and prevent the charger from overheating.
- Do not allow clothing, blankets, or other material to cover the charger.
- Do not allow the charger to operate for more than 30 minutes at 19 or more amperes.
- Install surge arrestors on incoming AC power lines. Surge arrestors will help protect electrical components in the charger and on the vehicle from all but direct or close lightning strikes.

**NOTE:** Because the vehicle's onboard computer (OBC) has a storage charge feature that automatically checks and recharges the batteries as necessary every 15 days, the charger can remain plugged to a vehicle throughout the storage period.

*At one hour and at two hours into the charge cycle, the charger will shut off in order to run a self-diagnostic program (ammeter will drop to zero). Charging will resume in a few moments (ammeter returns to previous rate of charge).*

Each electric vehicle is supplied with either a fully automatic, stationary battery charger as standard equipment. The AC cord from the charger should be connected to a source capable of supplying 15 amperes minimum per charger.

To reduce the risk of electric shock, the battery charger must be grounded. The charger is equipped with an AC electric cord having an equipment-grounding conductor and a grounding type plug. The AC plug must be connected to an appropriate receptacle that is properly installed and grounded in accordance with the National Electrical Code and all local codes and ordinances. See the owner's manual supplied with the charger for specific operating instructions before using the charger.

The use of an extension cord with the charger should be avoided. If an extension cord must be used, use a three-conductor no. 12 AWG (American Wire Gauge) or no. 14 SWG (British Standard Wire Gauge), heavy-duty cord with ground, properly wired and in good electrical condition. Keep it as short as possible (no more than 12 feet (3.7 m)). Place all cords so they will not be stepped on, tripped over, or otherwise subject to damage or stress.

Ensure that the charger ventilation slots are unobstructed and that there is adequate ventilation.

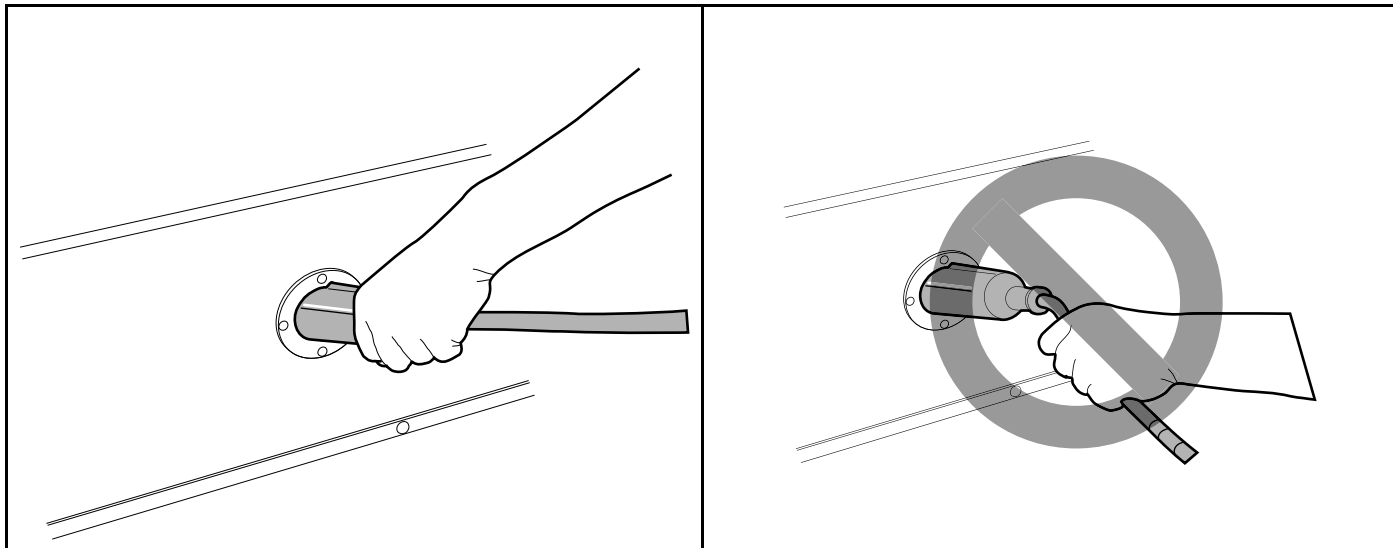
## **⚠ WARNING**

- **Vehicles with a charger receptacle:** Never modify wiring to bypass the gray sense lead fuse (Figure 24, Page 50).

## **CHARGING BATTERIES**

**NOTE:** When temperatures fall below 65 °F (18.3 °C), batteries charged in unheated areas should be placed on charge as soon as possible after use. Batteries are warmest immediately after use, while cold batteries require more time to fully charge.

- **Vehicles with a stationary charger:** Insert charger AC plug into a dedicated AC receptacle that is properly grounded and wired in accordance with the National Electric Code and all local codes and ordinances. Then insert charger DC plug into the vehicle receptacle. Charger will turn on two to ten seconds later (**Figure 22**).



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Figure 22 Charger Receptacle

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Figure 23 Charger Cord Removal

Club Car battery chargers interact with the vehicle onboard computer. The computer records the amount of energy consumed during vehicle use. While the charger is plugged in, the vehicle's control circuit is locked out, preventing operation of the vehicle, as well as the possibility of subsequent damage to the charger and vehicle.

Once the lockout is actuated, the charger turns on. The onboard computer then records the amount of energy being returned to the batteries. When the optimum amount of energy needed to replenish the batteries is returned, the charger will turn off. The control circuit lockout remains activated until the charger plug is disconnected from the vehicle.

PowerDrive and IQ Plus battery chargers are not interchangeable, nor can they be used with other Club Car models or vehicles made by other manufacturers. Charger compatibility for each vehicle is as follows:

- IQ Plus vehicles use the IQ Plus charger.

As long as the charger is allowed to shut off by itself, the batteries will be fully charged. Overcharging and undercharging will normally be prevented.

## **CAUTION**

- **Only IQ Plus chargers should be used with IQ Plus vehicles. Long-term use of a PowerDrive battery charger with IQ Plus vehicles will damage the batteries.**

Batteries should be put on charge even if they have been used for only a short time, i.e., 10 minutes. The charger is automatic and will turn off when batteries are fully charged. If the charger does not seem to be operating properly, or if the batteries seem weak, contact a local Club Car distributor/dealer.

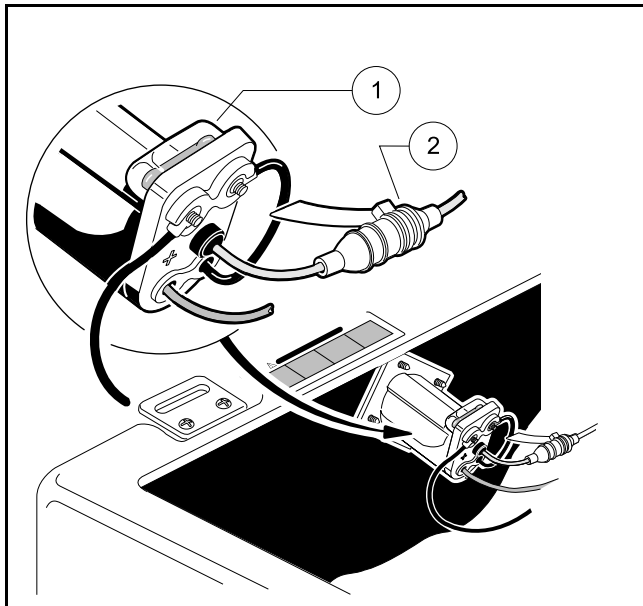
## **PLUG AND RECEPTACLE**

The charger cord, plug, and receptacle are wear items and should be inspected daily. Visually inspect them for cracks, loose connections, and frayed wiring; they must be replaced when worn or damaged. If charger plug or receptacle show signs of corrosion or the plug is difficult to insert or remove, the receptacle contacts and plug terminals should be cleaned with a good electrical contact cleaner or lightly sprayed with WD-40® brand spray lubricant. The plug should then be inserted and removed several times to ensure ease of insertion, ease of removal, and good electrical contact. **See following NOTE.**

**NOTE:** If the warning tag has been damaged or removed from the DC cord, have it replaced immediately.

### Receptacle Fuse Link

As an additional feature to protect the batteries and charging circuit from an overload, The electric vehicle is equipped with a receptacle fuse link (**Figure 24**). If the charger does not turn on when the vehicle is placed on charge, inspect the fuse link.



20

Figure 24 Sense Lead Fuse

### **⚠ WARNING**

- If the receptacle fuse link is blown, determine the source of the electrical problem and correct it before replacing the fuse.

## BATTERY – GASOLINE VEHICLE

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See General Warnings on page 12.

### **⚠ DANGER**

- **Battery – Explosive gases! Do not smoke. Keep sparks and flames away from the vehicle and service area. Ventilate when charging or operating vehicle in an enclosed area. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Follow all instructions carefully when working with batteries.**
- **Charge battery in a well-ventilated area only.**
- **Battery – Poison! Contains acid! Causes severe burns. Avoid contact with skin, eyes, or clothing. Antidotes:**

DANGER CONTINUED ON NEXT PAGE

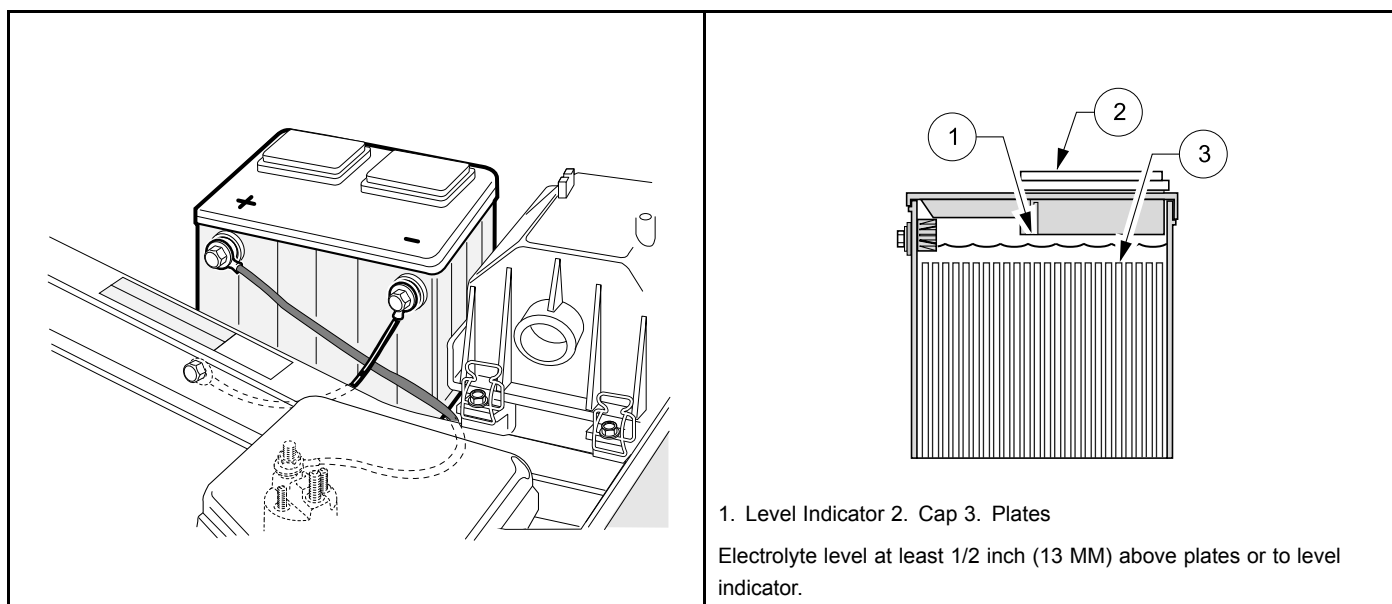
**⚠ DANGER**

- External: Flush with water. Call a physician immediately.
- Internal: Drink large quantities of milk or water followed with milk of magnesia or vegetable oil. Call a physician immediately.
- Eyes: Flush with water for 15 minutes. Call a physician immediately.

**⚠ WARNING**

- Do not jump-start a dead battery using another battery and jumper cables.

The battery in a Club Car gasoline vehicle is a 12-volt, low-maintenance battery that requires infrequent watering (Figure 25).



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**Figure 25 Battery**

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**Figure 26 Gasoline Battery Electrolyte Level**

Any corrosion around the positive (+) or negative (-) terminals should be washed off with a solution of baking soda and water (1 cup (237 mL) per gallon (3.8 L) of water). Rinse solution off the battery. Do not allow this solution to get into the battery. Be sure terminals are tight (battery terminals should be tightened to 80 in-lb (9 N·m)). Let the terminals dry and then spray them with Battery Terminal Protector Spray (CC 1014305). **See following WARNING.**

**⚠ WARNING**

- If battery wire terminals are damaged or corroded, replace or clean them as necessary. Failure to do so may cause them to overheat during operation and could result in a fire, property damage, or personal injury.

Be sure battery clamp is properly tightened. Tighten to 144 in-lb (16 N·m). A loose clamp may allow the battery to become damaged from vibration or jarring.

If battery appears weak, have it charged by a trained technician. The battery should never be left discharged any longer than absolutely necessary (do not leave discharged overnight).

## ENGINE OIL – GASOLINE VEHICLE

Even though the low oil warning light on the dash should illuminate if oil level becomes low, engine oil level should be checked monthly. Vehicle should be on a level surface when checking oil. Do not overfill with oil.

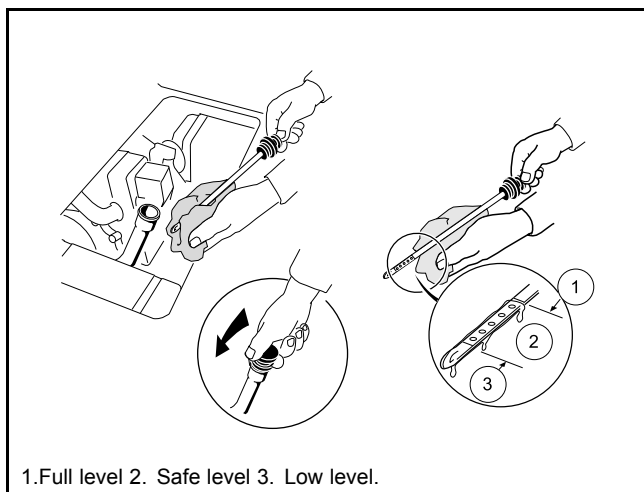
### ENGINE OIL LEVEL CHECK

1. Remove the oil level dipstick from the oil filler tube, and wipe oil off dipstick (1) (**Figure 27**). **See following CAUTION.**

#### **CAUTION**

- **Do not remove dipstick while engine is running.**
2. Check oil by fully inserting the dipstick into the oil filler tube (2) and immediately removing it.
  3. If the oil level is at or below the low level mark on the dipstick gauge, add oil until the level is between low and full levels (safe level) (3).
  4. Insert the dipstick into the oil filler tube. **See following NOTE.**

**NOTE:** Properly recycle or dispose of used oil in accordance with local, state, and federal regulations.



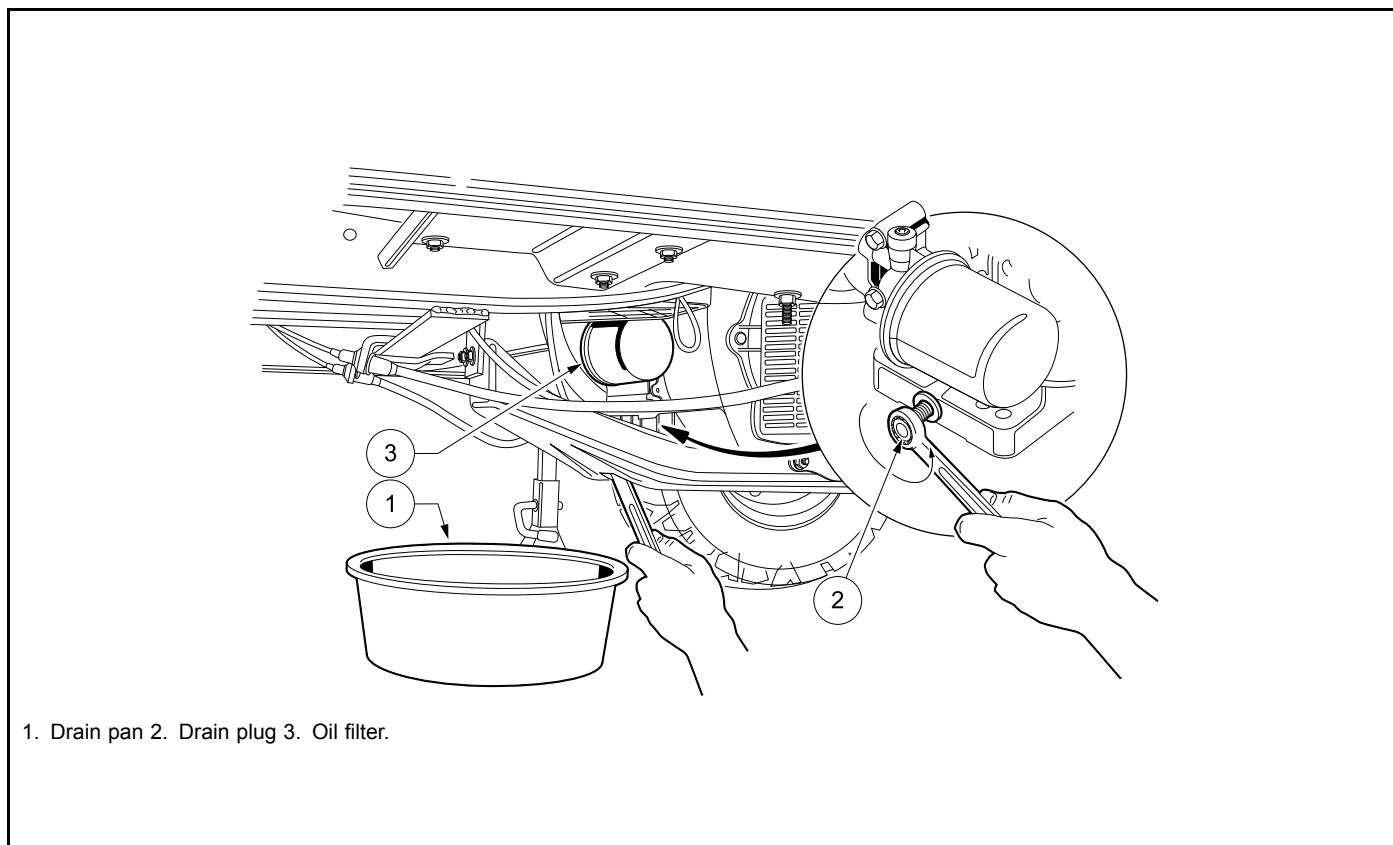
23

**Figure 27 Engine Oil Level Check**

### ENGINE OIL AND FILTER CHANGE

Engine oil and oil filter should be changed after the first 100 hours of operation. After that, they should be changed every 200 hours of operation or annually, whichever comes first.

1. Turn the key switch to the OFF position, then remove the key. Place the Forward/Reverse handle in the neutral POSITION. Chock the front wheels.
2. Access the engine compartment.
3. Disconnect battery and spark plug wire(s). **See Disconnecting the Battery – Gasoline Vehicles on page 14.**
4. Position a pan designed for oil changes under the front drain plug (**Figure 28**).



25  
Figure 28 Engine Oil Drain Plug and Pan

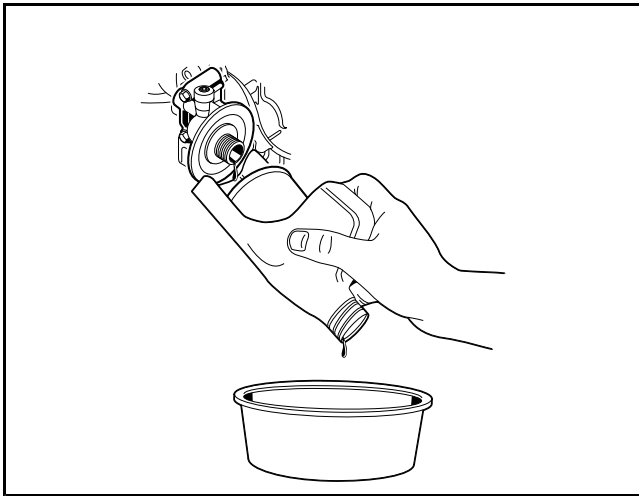
5. Use a 14 mm socket or wrench to remove the drain plug, turning it counterclockwise, and allow the engine oil to drain into the pan. **See following WARNING.**

### **⚠ WARNING**

- Do not attempt to change engine oil when the engine is hot or even warm. Engine oil can cause skin burns.
  - Wear safety glasses or approved eye protection when servicing the vehicle. Wear rubber gloves when handling oil drain plug, oil filter, and oil drain pan.
6. Clean the oil drain plug threads with solvent to remove oil and oil residue. Make sure that the compression washer remains on the drain plug.
  7. Use a 14 mm socket or wrench and replace the front oil drain plug, turning it clockwise, and tighten to 18 ft-lb (24.4 N·m).
  8. Relocate the oil drain pan to a position under the engine oil filter (**Figure 28**).
  9. Remove the engine oil filter (1), turning it counterclockwise, allowing the residual oil in the filter port and filter to drain into the oil drain pan (2) (**Figure 29**). **See following NOTE.**

**NOTE:** An oil drip guard (3) can be used to prevent excess oil from dripping into the engine base plate. Use an empty quart (one liter) container and cut the bottom off at an angle, then slide the open area of the container up and under the oil filter prior to removing. Position the port of the plastic container so oil will be directed into the oil pan. Or, make a drip guard by folding a piece of cardboard, thin metal, or plastic under the oil filter forming a channel to direct the filter port oil into the drain pan.

Dispose of used oil according to the environmental laws and regulations for your area.



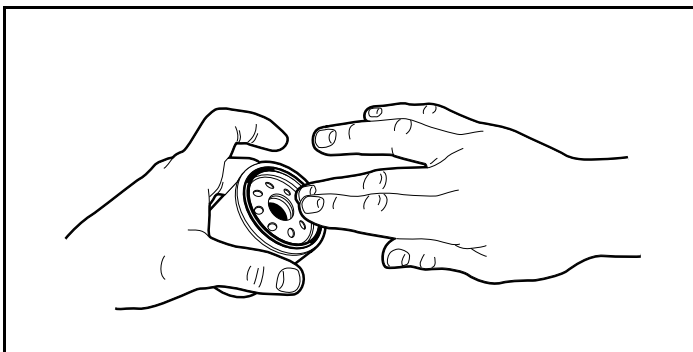
26

**Figure 29 Remove Engine Oil Filter**

10. Use a clean rag and wipe the oil filter mounting bracket surface clean where the oil filter gasket seats.
11. Coat new oil filter gasket with clean engine oil and install the oil filter onto the engine oil filter port (**Figure 30**). **See following NOTE.**

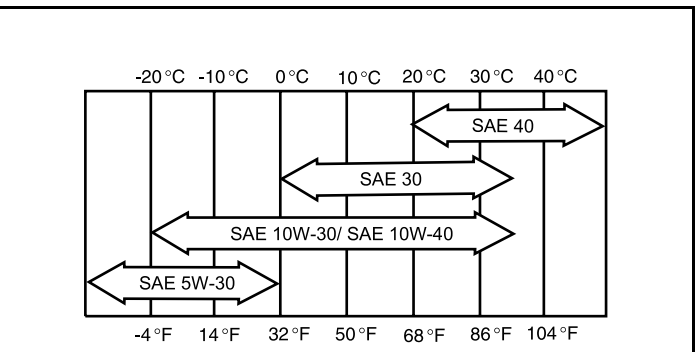
**NOTE:** Use only Club Car oil filters (CC P/N 1016467) designed for this engine.

12. Hand tighten 2/3 to 3/4 turn after filter gasket contacts mounting surface.
13. Remove the dipstick and add engine oil into the dipstick port. Use a funnel or pour spout to direct the oil into the dipstick port. With filter change, the engine requires 38 ounces (1.12 liters) of oil per change. Refer to oil viscosity guidelines for selection of oil grade (**Figure 31**). Replace the dipstick.



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**Figure 30 Coat Oil Filter Rubber Seal**



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**Figure 31 Oil Viscosity Chart**

14. Connect battery and spark plug wire(s). **See Connecting the Battery – Gasoline Vehicles on page 14.**
15. With the Forward/Reverse handle in the NEUTRAL position, run engine for 3 minutes and check for leaks. Observe both the drain plug and the oil filter from under the vehicle and watch for oil leaks. If filter leaks, tighten additional 1/4 turn and retest. If oil drain plug leaks, re-torque and retest.



16. Remove the dip stick and check the engine oil as a final step. Replace the dip stick.

## FUELING INSTRUCTIONS – GASOLINE VEHICLE

See General Warnings on page 12.

### **⚠ DANGER**

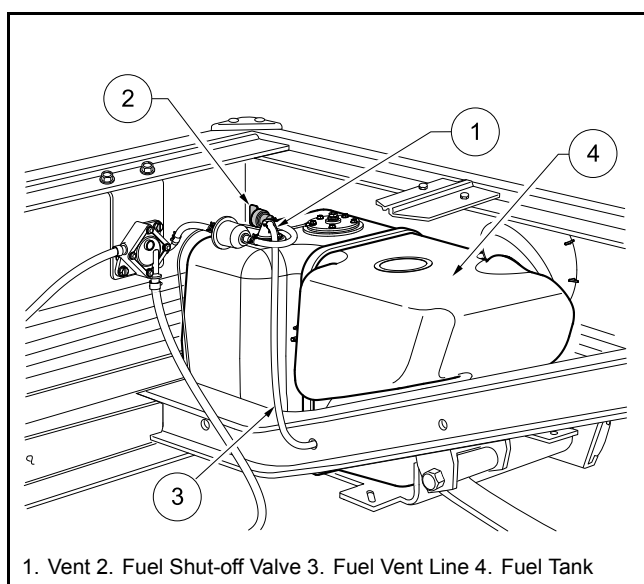
- Turn the key switch to the OFF position before fueling.
- Do not pour fuel into the fuel tank when the engine is hot or while it is running.
- To avoid electric arc caused by static electricity, the fuel storage/pumping device must be grounded. If the pump is not grounded, the vehicle must be grounded to the pump before and during the fueling operation.
- If the vehicle has an all-weather enclosure installed, be sure the fuel tank is properly vented as shown (Figure 32).
- To avoid the possibility of fire, clean up any spilled fuel before operating the vehicle.

### **⚠ CAUTION**

- To allow for expansion, do not fill higher than 2.54 cm (one inch) from the top of the fuel tank. Avoid spilling fuel.

**NOTE:** Whenever possible, avoid using oxygenated fuels and fuels that are blended with alcohol. Vehicles to be stored for extended periods should be prepared for storage as instructed. See **Preparing the Gasoline Vehicle for Extended Storage** on page 35.

1. Remove the fuel cap located on the passenger-side panel and fill the fuel tank with fresh unleaded gasoline only. See preceding **CAUTION** and **NOTE**.
2. Replace fuel cap on tank. Ensure cap is tightened securely.



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Figure 32 Fuel Tank

## CLEANING THE VEHICLE

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The vehicles are equipped with an ArmorFlex® front body, an all-aluminum rear body, and either an aluminum or powder-coated steel cargo bed. Use only commercially available automotive cleaners with a sponge or soft cloth for normal cleaning. A garden hose at normal residential water pressure is adequate. To remove oxidation or discoloration from aluminum, use a commercially available aluminum cleaner paste and fine grade (No. 00) steel wool.

Club Car does not recommend any type of pressure washer or steam cleaning. Such a process will expose electrical components to moisture. Moisture entering electrical components can result in water damage and subsequent component failure.

Use non-abrasive wax products. Battery acid, fertilizers, tars, asphalt, creosote, paint, or chewing gum should be removed immediately to prevent possible stains.

The seats of the vehicle will last longer with proper cleaning. Use a solution of 10% liquid soap and warm water applied with a soft cloth. For imbedded dirt, a soft bristle brush may be used. For heavy soiling, difficult stains or scratches, blemishes, or other body damage, see the appropriate Maintenance and Service Manual.

**NOTE:** Dispose of waste water properly.

## ACCESSORIES

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There is a complete line of accessory equipment available from Club Car and our dealers/distributors. You can obtain the name and phone number of your closest Club Car contact by visiting our web site at [www.clubcar.com](http://www.clubcar.com) and clicking the "Dealer Locator" link.

Care should be taken that these accessories are properly installed by trained technicians, and they are used in the manner for which they were designed. **See following WARNING.**

### **⚠ WARNING**

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- **Custom cab assemblies, weatherproof enclosures, door kits, and tinted windshields will not protect occupants from flying objects.**
- **If the vehicle has a portable refreshment center option installed in the bed, it must be removed before unlatching and lifting the bed.**
- **If the vehicle is equipped with an electric powered lift bed, remove the bed before servicing the bed lift system.**

## SUBSEQUENT OWNER REGISTRATION

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In the event a vehicle is bought as a used vehicle, we strongly urge the new owner to register the vehicle with Club Car. This will enable us to contact you if the need arises. Please send your name, address, and serial number(s) of the vehicle(s) to Club Car, LLC, P.O. Box 204658, Augusta, Georgia 30917-4658, Attention: Vehicle Registration.

## VEHICLE SPECIFICATIONS – GASOLINE VEHICLES

SPECIFICATIONS	XRT 900 GASOLINE	TURF 252 CARRYALL 252 GASOLINE
<b>POWER SOURCE</b>		
<b>Engine:</b> 4 cycle, OHV, 351 cc, 11.5 maximum hp @ 3600 RPM (per SAE J 1940/1349), single cylinder, air cooled, with pressure lubrication system	•	•
<b>Fuel system:</b> Side-draft carburetor with float bowl, fixed jets, fuel filters, and impulse fuel pump	•	•
<b>Governor:</b> Automatic ground-speed sensing, internally geared in unitized transaxle	•	•
<b>Ignition:</b> Transistor electronic ignition with electronic RPM limiter	•	•
<b>Unitized transaxle:</b> Fully synchronized forward and reverse with neutral (11.8:1 forward, 17.1:1 reverse)	•	•
<b>Electrical system:</b> 12 volt, 500 cca at 0 °F (–17.8 °C), 650 at 32 °F (0 °C). 105-minute reserve capacity and 35-amp charging capacity	•	•
<b>Torque converter:</b> Automatic, variable-speed, dry type	•	•
<b>STEERING/SUSPENSION/BRAKES</b>		
<b>Steering:</b> Self-adjusting rack and pinion	•	•
<b>Suspension:</b> Front and rear multi-leaf springs with dual hydraulic shocks	•	•
<b>Brakes:</b> Mechanical brake cable system to manually adjusted drum brakes on each wheel with automatic-release park brake	•	•
<b>BODY/CHASSIS</b>		
<b>Frame/Chassis:</b> Twin I-Beam welded aluminum	•	•
<b>Side and rear body:</b> All aluminum with a powder-coated steel box bed	•	
<b>Side and rear body:</b> All aluminum		•
<b>Front body:</b> ArmorFlex®	•	•
<b>Front body finish:</b> Automotive-grade paint	•	•
<b>Tires:</b> Heavy Duty All Terrain: tubeless, 6-ply rated Turf: tubeless, 4-ply rated	22 x 11.00 x 10 in.	23 x 10.50 x 12 in.
<b>DIMENSIONS/WEIGHT</b>		
<b>Overall length</b>	120.4 in. (305 cm)	
<b>Overall width</b>	51.3 in. (130 cm)	
<b>Overall height (at steering wheel)</b>	51.1 in. (129 cm)	
<b>Overall height (at light bar)</b>	75.3 in. (191 cm)	
<b>Wheelbase</b>	78.5 in. (199 cm)	
<b>Ground clearance (under differential)</b>	6.4 in. (16 cm)	
<b>Ground clearance (under foot platform)</b>	11.0 in. (27.9 cm)	
<b>Front wheel tread</b>	36.5 in. (92 cm)	
<b>Rear wheel tread</b>	41.3 in. (104 cm)	
<b>Weight (standard vehicle with off-road tires (dry))</b>	937 lb. (425 kg)	

SPECIFICATIONS	XRT 900 GASOLINE	TURF 252 CARRYALL 252 GASOLINE
Forward speed	17-19 mph (27-31 km/h)	15-17 mph (24-27 km/h)
Governed RPM	3050 ±30	2900 ±30
Curb clearance circle (diameter)	21 ft.-8 in. (660 cm)	
Turning radius (per SAE J 695)	130 in. (330 cm)	
Load bed height	29.8 in. (75 cm)	
Load bed size (box bed inside dimensions)	48.0 x 49.8 x 10.9 in. (121.9 x 126 x 28 cm) (15.3 cubic feet)	48.8 x 49.8 x 10.9 in. (124 x 126 x 28 cm) (15.3 cubic feet)
Floorboard height	16.0 in. (40 cm)	
Seat height (at seat bottom)	28.0 in. (71 cm)	
Vehicle rated capacity (level surface only)	900 lb. (408 kg)	
Bed load capacity (level surface only)	500 lb. (227 kg)	
Standard seating capacity	2	
<b>LIQUID CAPACITIES</b>		
Engine crankcase without filter	32 oz. (.95 liters)	
Engine crankcase with filter	38 oz. (1.12 liters)	
Unitized transaxle	27 oz. (.8 liters)	
Fuel tank	7 gallons (26.5 liters)	
<b>TIRE PRESSURE</b>		
Off-road tread	14-18 psi (.97-1.24 Bars)	
Turf tread	18-20 psi (1.24-1.38 Bars)	
<b>NOISE AND VIBRATION</b>		
Drive-by noise level to operator Test method: EN 12053:2001	TBD Uncertainty: 2 dBA	71.2 dBA Uncertainty: 2 dBA
Vibration at driver's seat Test method:EN 13059:2002	TBD Uncertainty: TBD	2.2 m/s <sup>2</sup> Uncertainty: 0.058 m/s <sup>2</sup>

## VEHICLE SPECIFICATIONS – ELECTRIC VEHICLES

SPECIFICATIONS	XRT 900 ELECTRIC	TURF 252 CARRYALL 252 ELECTRIC
<b>POWER SOURCE</b>		
<b>Drive motor:</b> Direct drive, 48 volts DC, shunt wound, 3.7 hp	•	•
<b>Transaxle:</b> Double reduction helical gear with 12.3:1 direct drive axle	•	•
<b>Electrical system:</b> 48 volts DC, reduced speed reverse	•	•
<b>Batteries:</b> High capacity, deep cycle, 6-volt, 160 min. capacity	•	•
<b>Charger:</b> Automatic, 17 amp; UL and CSA listed	•	•
<b>STEERING/SUSPENSION/BRAKES</b>		
<b>Steering:</b> Self-adjusting rack and pinion	•	•
<b>Suspension:</b> Front mono-leaf and rear multi-leaf springs with dual hydraulic shocks	•	•
<b>Brakes:</b> Mechanical brake cable system to manually-adjusted drum brakes on all four wheels. Park brake is automatically released.	•	•
<b>BODY/CHASSIS</b>		
<b>Frame/chassis:</b> Twin I-Beam welded aluminum	•	•
<b>Side and rear body:</b> All aluminum with a powder-coated steel box bed	•	
<b>Side and rear body:</b> All aluminum		•
<b>Front body:</b> ArmorFlex®	•	•
<b>Front body finish:</b> Automotive-grade paint	•	•
<b>Tires:</b> Heavy Duty All Terrain: tubeless, 6-ply rated Turf: tubeless, 4-ply rated	•	•
<b>DIMENSIONS/WEIGHT</b>		
<b>Overall length:</b> Standard flatbed configuration		120.4 in. (305 cm)
<b>Overall width</b>		51.3 in. (130 cm)
<b>Overall height:</b> At steering wheel		51.1 in. (129 cm)
<b>Wheelbase</b>		78.5 in. (199 cm)
<b>Ground clearance (under differential)</b>		6.4 in. (16 cm)
<b>Ground clearance (under foot platform)</b>		11.0in. (27.9 cm)
<b>Front wheel tread</b>		36.5 in. (92 cm)
<b>Rear wheel tread</b>		41.3 in. (104 cm)

SPECIFICATIONS	XRT 900 ELECTRIC	TURF 252 CARRYALL 252 ELECTRIC
<b>Weight:</b> Standard electric vehicle	1322 lb. (600 kg)	1322 lb. (600 kg)
<b>Forward speed</b>	17-19 mph (27-31 km/h)	15-17 mph (24-27 km/h)
<b>Curb clearance circle</b> (diameter)	21 ft.-8 in. (660 cm)	
<b>Turning radius per SAE J 695</b>	130 in. (330 cm)	
<b>Load bed height</b>	31.5 in. (80 cm)	
<b>Load bed size</b> (box bed inside dimensions)	48.0 x 49.8 x 10.9 in. (121.9 x 126 x 28 cm) (15.3 cubic feet)	48.8 x 49.8 x 10.9 in. (124 x 126 x 28 cm) (15.3 cubic feet)
<b>Floorboard height</b>	16.0 in. (40 cm)	
<b>Seat height</b>	28.0 in. (71 cm)	
<b>Vehicle rated capacity:</b> Level surface only	900 lb. (408 kg)	
<b>Bed load capacity</b> (level surface only)	500 lb. (227 kg)	
<b>Standard seating capacity</b>	2	
<b>LIQUID CAPACITIES</b>		
<b>Transaxle</b>	22 oz. (0.67 liters)	
<b>TIRE PRESSURE</b>		
<b>Off-road tread</b>	14-18 psi (.97-1.24 Bars)	
<b>Turf tread</b>	18-20 psi (1.24-1.38 Bars)	
<b>NOISE AND VIBRATION</b>		
<b>Drive-by noise level to operator</b> Test method: EN 12053:2001	TBD Uncertainty: 2 dBA	TBD Uncertainty: 2 dBA
<b>Vibration at driver's seat</b> Test method: EN 13059:2002	TBD Uncertainty: TBD	TBD Uncertainty: TBD

## REAR FENDER INSTALLATION

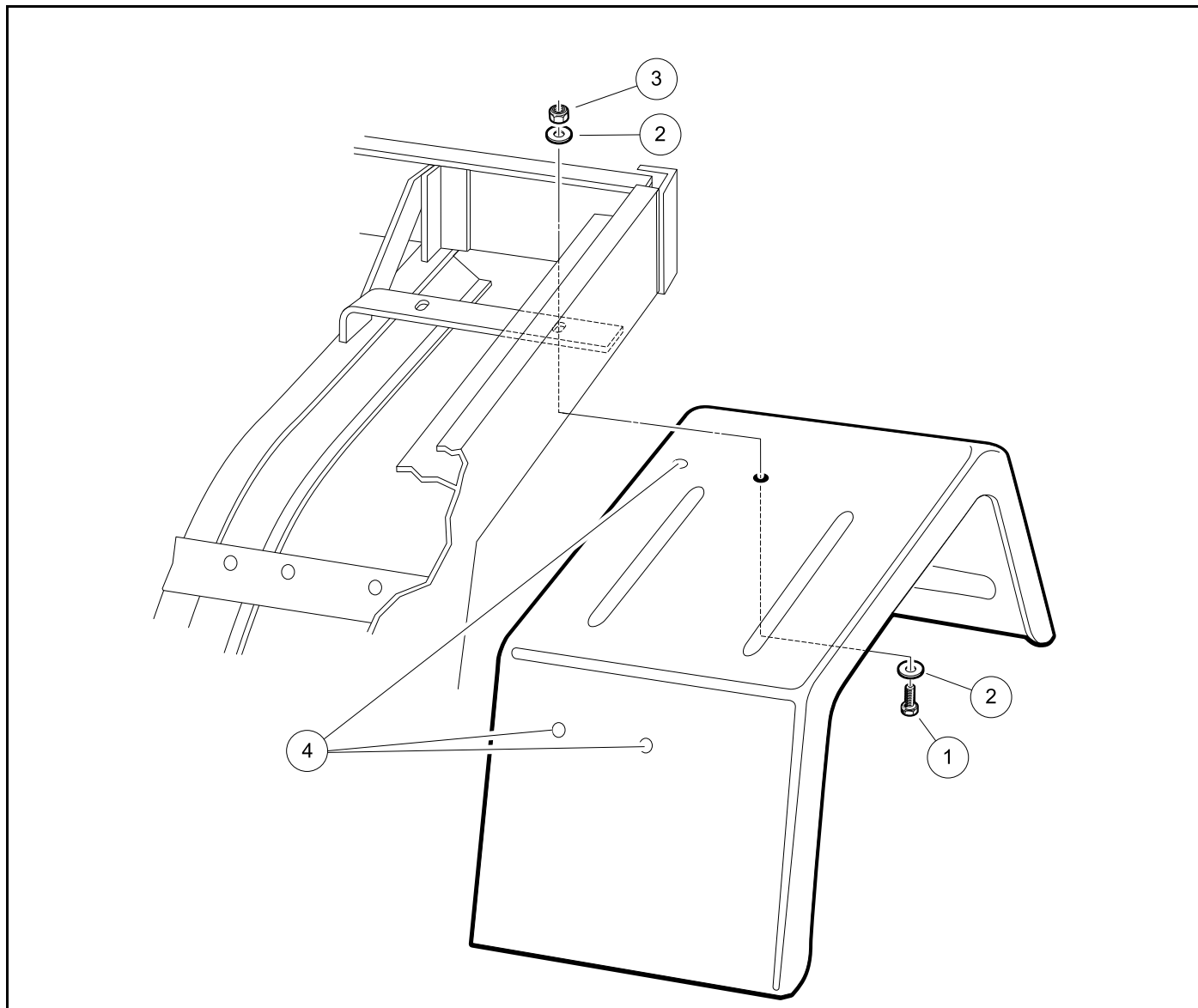
1. Unload the cargo bed.
2. Open the cargo bed and engage the prop rod.

## **⚠ WARNING**

- Use caution when working under bed. Be sure prop rod is secure. Otherwise the bed could fall, resulting in severe personal injury or death.

**NOTE:** The rear fender with the warning decal should be installed on the passenger side of the vehicle. The decal should be plainly visible when the cargo bed is raised.

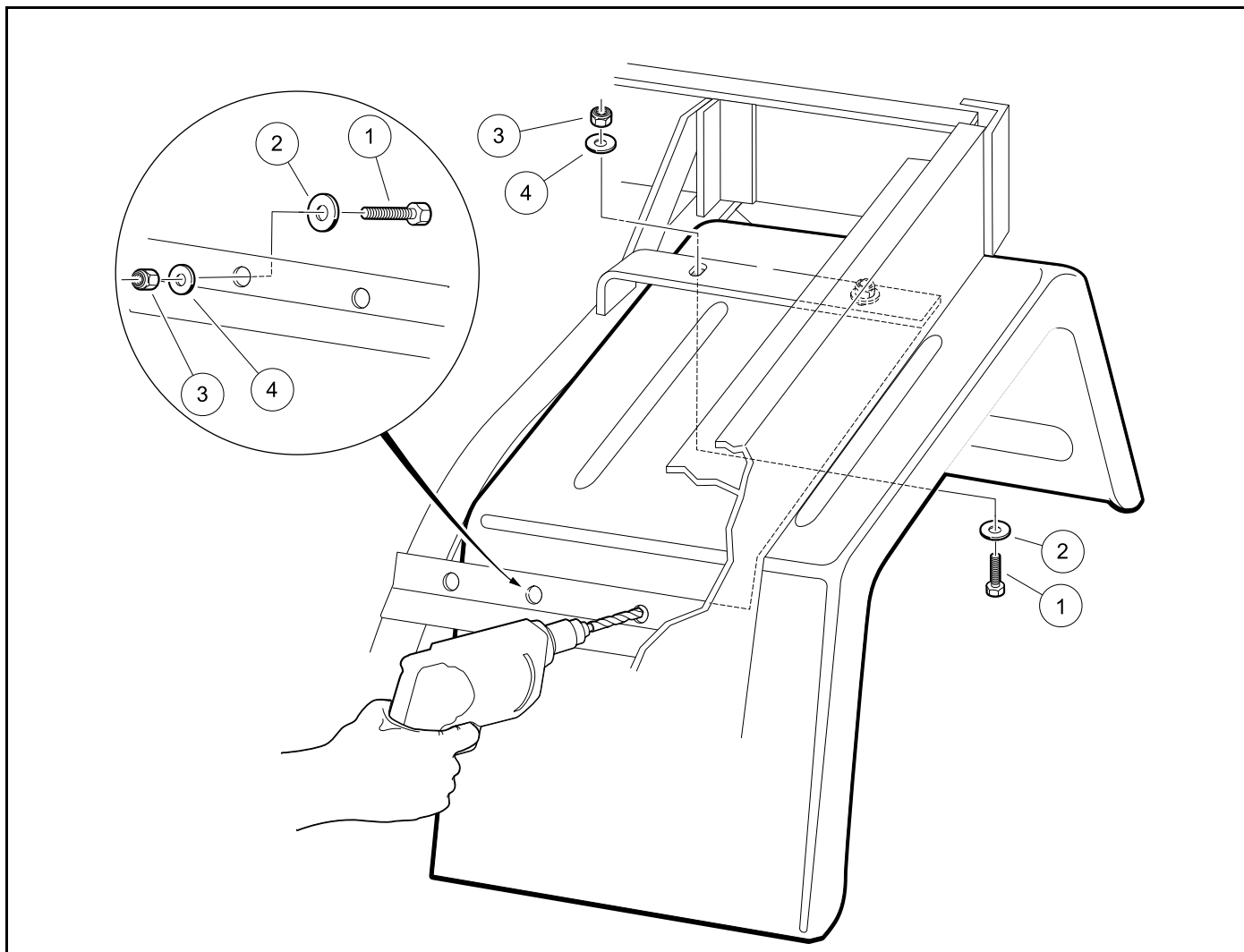
3. Position a fender in the vehicle, align the hole in the fender with the slot in the frame as shown and install bolt (1), large flat washers (2), and locknut (3) (**Figure 33**). Finger-tighten only at this time.



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**Figure 33 Install Hardware in Fender Hole**

4. Make sure fender is correctly aligned in the vehicle by placing the outer fender rib to the outside of the upper side panel, and as far forward as possible, leaving no gap between the fender and side panel (**Figure 34**).

5. Drill three 5/16-inch holes through the fender: two through the outside holes in the front mounting bracket, and one through the slotted hole in the top mounting bracket (**Figure 34**).
6. Loosely install bolts (1), large flat washers (2), small flat washers (4), and locknuts (3) in the front mounting bracket holes.
7. Install bolt (1), large flat washer (2), small flat washer (4) and locknut (3) in the top mounting bracket hole as shown (**Figure 34**).
8. Tighten mounting hardware at both front mounting bracket holes, then both top mounting bracket holes, to 35 in-lb (4.0 N·m).
9. Repeat steps 3-8 for the other rear fender.
10. Lower cargo bed.



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Figure 34 Drill Additional Mounting Holes



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## WHEEL AND TIRE INSTALLATION

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**NOTE:** Upon vehicle delivery, the shipping wheel and tire assemblies must be replaced by the standard wheel and tire assemblies, which are delivered in the vehicle cargo bed.

Do not remove the warning tag attached to the steering wheel until the shipping wheel and tire assemblies have been replaced by standard wheel and tire assemblies.

The front and rear wheels are NOT interchangeable. The rear wheels have a different offset than do the front wheels; the rear wheels must be installed with the deeper offset facing out.

A rectangular sticker on each wheel designates its correct location on the vehicle.

LF —Left Front (driver side)

RF—Right Front (passenger side)

LR—Left Rear

RR—Right Rear

Standard tires (off-road) are directional and must be installed according to the directional arrow mark on each tire, (arrow indicates forward rotation of tire) or tread performance will be severely compromised. The optional turf tire is not directional, and installation is dictated only by correct wheel position, not tire direction.

1. Slightly loosen the lug nuts on all four wheels.
2. Raise one end of the vehicle until the tires are off the ground by approximately six inches. **See following WARNING.**

### **⚠ WARNING**

- **Lift only one end of a vehicle at a time. Before lifting, set the park brake when lifting the front of the vehicle, unload the cargo bed, and chock the wheels that remain on the floor. Use a suitable lifting device (chain hoist or hydraulic floor jack) with 1000 lb. (454 kg) minimum lifting capacity. Do not use lifting device to hold vehicle in raised position. Use approved jack stands of proper weight capacity to support vehicle.**

3. Remove the lug nuts and the wheel.
4. Install the correct wheel and tire assembly and tighten lug nuts (using a crisscross pattern) until they are snug. **Arrow indicates forward rotation of tire.**
5. Repeat steps 3 and 4 for the other side of the vehicle.
6. Lower the vehicle to the ground and finish tightening lug nuts (using a crisscross pattern) to 55 ft-lb (74.6 N·m) for steel wheels or 65 ft-lb (88 N·m) for alloy wheels.
7. Repeat steps 2 through 6 for the other end of the vehicle.

## WARRANTIES

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### CLUB CAR LIMITED TWO YEAR WARRANTY FOR TRANSPORTATION AND UTILITY VEHICLES

1. **WARRANTY:**

CLUB CAR, LLC, ("CLUB CAR") hereby warrants to the Original Retail Purchaser that its new Transportation and Utility Vehicles purchased from CLUB CAR or an authorized dealer shall be free from defects in material and workmanship under normal use and service as a transportation or utility vehicle for the periods stated below, subject to the provisions, limitations and exclusions contained in this limited warranty.

**LIMITED TWO YEAR / 2000 HOUR WARRANTY:** The engine assembly, unitized transaxle assembly (gasoline vehicle), starter/generator (gasoline vehicle), motor, transaxle assembly (electric vehicle), main frame assembly, box bed hydraulic dump kit, Custom Cab assembly and doors, and Driving Range Protective Enclosure are warranted with respect to parts and labor against defects in material and workmanship for a period of two years or 2000 hours of operation, whichever first occurs, from the date of purchase.

**LIMITED ONE YEAR / 1000 HOUR WARRANTY:** All remaining components of the vehicle not specified otherwise, the Portable Refreshment Center, and all other original equipment options and accessories supplied by CLUB CAR are warranted with respect to parts and labor against defects in material and workmanship for a period of one year or 1000 hours of operation, whichever first occurs, from the date of purchase.

This limited warranty covers material, workmanship and repair labor cost as to those items specifically listed above for the periods specified. Such repair labor shall be performed only by CLUB CAR, its authorized dealers, or a service agency approved by CLUB CAR.

IF THE WARRANTY REGISTRATION FORM IS NOT COMPLETED AND RETURNED TO CLUB CAR AT THE TIME OF THE ORIGINAL RETAIL SALE, PURCHASER MUST PROVIDE PROOF OF DATE OF PURCHASE WITH ANY WARRANTY CLAIM.

2. **EXCLUSIONS:**

Excluded from any CLUB CAR warranty are all fuses, filters, decals (except safety decals), spark plugs, light bulbs, lubricants, trim pieces, seats, routine wear items such as the charger plug and receptacle, brake shoes, belts, brushes, bushings, drive buttons, engine mounts, mats and pads, maintenance adjustments, cosmetic deterioration, and items which deteriorate or fail due to exposure or ordinary wear and tear. Batteries, battery charger, onboard computer, and solid-state speed controller are covered under separate CLUB CAR warranties. Also excluded from any CLUB CAR warranty is damage to a vehicle or component resulting from a cause other than a defect including unreasonable or unintended strain or use, improper installation of accessories, installation of parts or accessories that are not original equipment, overloading, accident, alteration, abuse or neglect.

Transportation expenses for warranty services are also excluded from this warranty.

3. **VOIDING OF WARRANTY:**

THIS AND ANY OTHER WARRANTY SHALL BE VOID IF THE VEHICLE IS ABUSED OR USED IN AN UNINTENDED MANNER OR SHOWS INDICATIONS THAT IT HAS BEEN ALTERED IN ANY WAY, INCLUDING, BUT NOT LIMITED TO, MODIFICATION OF THE SPEED GOVERNOR, BRAKING SYSTEM, STEERING, TRANSAXLE, OR OTHER OPERATING SYSTEMS OF THE VEHICLE TO CAUSE IT TO PERFORM OUTSIDE CLUB CAR SPECIFICATIONS. THE WARRANTY IS LIKEWISE VOID IF THE VEHICLE INVOLVED SHOWS INDICATIONS THAT REASONABLE OR NECESSARY MAINTENANCE AS OUTLINED IN THE OWNER'S MANUAL AND MAINTENANCE AND SERVICE MANUAL WAS NOT PERFORMED AT THE TIME AND IN THE MANNER SPECIFIED IN SUCH MANUALS.

4. **SOLE REMEDY:**

CLUB CAR's liability under this limited warranty, or in any action whether based upon warranty, contract, negligence, strict product liability or otherwise, shall be the repair or replacement, at CLUB CAR's option, of the vehicle or component thereof that CLUB CAR deems to be defective. Replacement shall mean furnishing, during the applicable limited warranty period, a new vehicle or factory-reconditioned vehicle or component thereof that is identical or reasonably equivalent to the warranted product or component at no cost to the purchaser. Repair shall mean remedying a defect in the vehicle or component thereof at no cost to the purchaser during the applicable limited warranty period. If CLUB CAR elects to repair the vehicle, it may provide factory-reconditioned parts or components. All parts and components replaced under warranty shall become the property of CLUB CAR.

**5. HOW TO MAKE A WARRANTY CLAIM:**

To make a warranty claim under this limited warranty, you must present the vehicle or defective component to an authorized CLUB CAR dealer or send the defective component, freight prepaid, to WARRANTY SERVICES, CLUB CAR, LLC, 4125 Washington Road, Evans, GA 30809, U.S.A., 706-863-3000.

**6. DISCLAIMER:**

**THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REMEDY OF THE REPLACEMENT OR REPAIR OF THE DEFECTIVE VEHICLE OR COMPONENT THEREOF IS THE SOLE REMEDY OF THE PURCHASER. CLUB CAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, AND NO REPRESENTATIVE, EMPLOYEE, OR DEALER OF CLUB CAR HAS THE AUTHORITY TO MAKE OR IMPLY ANY REPRESENTATION, PROMISE OR AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS WARRANTY.**

In the event that another pre-printed warranty document and/or certificate offered by or through Club Car at the time of sale of this vehicle (each an "Additional Warranty Document") is deemed to conflict with the limitations or exclusions contained herein, the limitations and exclusions contained herein shall continue to apply with respect to both this limited warranty statement and, to the maximum extent permitted by law, to each Additional Warranty Document.

**7. NO CONSEQUENTIAL DAMAGES:**

**IN NO EVENT SHALL CLUB CAR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS RELATED TO PROPERTY OTHER THAN THE VEHICLE, LOSS OF USE, LOSS OF TIME, INCONVENIENCE, OR ANY OTHER ECONOMIC LOSS.**

Some states allow neither limitation on the duration of an implied warranty nor exclusions or limitation of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**8. INFORMATION:**

For further information contact WARRANTY SERVICES, CLUB CAR, LLC, P.O. Box 204658, Augusta, Georgia, 30917- 4658, U.S.A., 706-863-3000.

**9. WARNING:**

Any modification or alteration of any vehicle beyond factory specifications, including those that affect the weight distribution, stability, or speed of the vehicle, can cause serious personal injury or death.

## **CLUB CAR LIMITED FOUR YEAR WARRANTY FOR UTILITY STANDARD 6-VOLT BATTERIES**

CLUB CAR, LLC ("CLUB CAR") hereby warrants to the original retail purchaser that the new Standard 6-Volt Battery installed in its new electric utility vehicle purchased from CLUB CAR or an authorized distributor or dealer will be free from defects in material and workmanship and will provide for a period of four years or 18,000 energy units whichever occurs first, subject to the terms and conditions contained herein.

This limited warranty only covers defects in material and workmanship for a period of four years or 18,000 energy units from date of purchase. The terms of this limited four year warranty shall be as follows:

Free replacement with respect to parts and labor within four years or 18,000 energy units, whichever first occurs, from date of purchase.

The battery should be returned to an authorized CLUB CAR distributor or dealer with evidence of proof of purchase date. CLUB CAR reserves the right to test and recharge any battery returned for adjustment.

**LIMITED WARRANTY EXCLUSIONS**

THE PROVISIONS OF THIS LIMITED WARRANTY SHALL NOT APPLY TO FAILURE DUE TO:

1. Abuse such as overcharging, undercharging, improper fluid levels, loose wiring, or rusted or corroded hardware;
2. Lack of proper maintenance as outlined in the electric vehicle owner's manual;

3. Damages caused by improper installation of the battery;
4. Neglect, breakage, freezing, fire, explosion, wreckage, the addition of any chemical, or the operation of the battery in an uncharged condition (below half charge - 1,200 specific gravity);
5. A battery damaged by a defective charger.

Without limiting the generality of the foregoing in any way, and as part of its limited warranty exclusion, CLUB CAR does not warrant that its battery is suitable for use in any application other than in its products. As in the use of any battery, a prudent owner will read and study the charger owner's manual, the electric vehicle owner's manual, the operator instructions, and the battery warning labels; and will exercise due care in working on or around batteries.

Transportation expenses for warranty services are also excluded from this warranty.

#### **WARRANTY LIMITATIONS**

CLUB CAR's liability under this limited warranty shall be to replace a defective battery. Replacement shall be furnishing a new or used battery with sufficient life to complete the remainder of the warranty term, which is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the four years or 18,000 energy units warranty period, whichever first occurs. All batteries, which are replaced under this limited warranty, become the property of CLUB CAR.

**THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REPLACEMENT OR REPAIR OF THE DEFECTIVE VEHICLE OR COMPONENT THEREOF IS THE SOLE REMEDY OF THE PURCHASER. CLUB CAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND AND NO REPRESENTATIVE, EMPLOYEE, DISTRIBUTOR OR DEALER OF CLUB CAR HAS THE AUTHORITY TO MAKE OR IMPLY ANY REPRESENTATION, PROMISE OR AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS WARRANTY.**

This battery is intended to be used by persons with training and experience with batteries and only in CLUB CAR electric vehicles. Any other use renders the Limited Warranties expressed herein and all implied warranties null and void and same are hereby excluded.

**ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, INCONVENIENCE OR ANY OTHER ECONOMIC LOSS.**

Damage not resulting from a defect in material or workmanship or that occurs due to abuse or neglect (including failure to provide reasonable and necessary maintenance), accident or alteration is excluded from this limited warranty.

Some states allow neither limitation on the duration of an implied warranty nor exclusions or limitations of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from states to states.

For further information contact WARRANTY SERVICES, CLUB CAR, LLC, P.O. Box 204658, Augusta, Georgia, 30917- 4658, U.S.A., 706-863-3000.

## **CLUB CAR LIMITED FOUR YEAR WARRANTY FOR UTILITY HEAVY-DUTY 6-VOLT BATTERIES**

CLUB CAR, LLC ("CLUB CAR") hereby warrants to the original retail purchaser that the new Heavy-Duty 6-Volt Battery installed in its new electric utility vehicle purchased from CLUB CAR or an authorized distributor or dealer will be free from defects in material and workmanship and will provide for a period of four years or 20,000 energy units whichever occurs first, subject to the terms and conditions contained herein.

This limited warranty only covers defects in material and workmanship for a period of four years or 20,000 energy units from date of purchase. The terms of this limited four year warranty shall be as follows:

Free replacement with respect to parts and labor within four years or 20,000 energy units, whichever first occurs, from date of purchase.

The battery should be returned to an authorized CLUB CAR distributor or dealer with evidence of proof of purchase date. CLUB CAR reserves the right to test and recharge any battery returned for adjustment.

#### **LIMITED WARRANTY EXCLUSIONS**

THE PROVISIONS OF THIS LIMITED WARRANTY SHALL NOT APPLY TO FAILURE DUE TO:

1. Abuse such as overcharging, undercharging, improper fluid levels, loose wiring, or rusted or corroded hardware;
2. Lack of proper maintenance as outlined in the electric vehicle owner's manual;
3. Damages caused by improper installation of the battery;
4. Neglect, breakage, freezing, fire, explosion, wreckage, the addition of any chemical, or the operation of the battery in an uncharged condition (below half charge - 1,200 specific gravity);
5. A battery damaged by a defective charger.

Without limiting the generality of the foregoing in any way, and as part of its limited warranty exclusion, CLUB CAR does not warrant that its battery is suitable for use in any application other than in its products. As in the use of any battery, a prudent owner will read and study the charger owner's manual, the electric vehicle owner's manual, the operator instructions, and the battery warning labels; and will exercise due care in working on or around batteries.

Transportation expenses for warranty services are also excluded from this warranty.

### **WARRANTY LIMITATIONS**

CLUB CAR's liability under this limited warranty shall be to replace a defective battery. Replacement shall be furnishing a new or used battery with sufficient life to complete the remainder of the warranty term, which is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the four years or 20,000 energy units warranty period, whichever first occurs. All batteries, which are replaced under this limited warranty, become the property of CLUB CAR.

**THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REPLACEMENT OR REPAIR OF THE DEFECTIVE VEHICLE OR COMPONENT THEREOF IS THE SOLE REMEDY OF THE PURCHASER. CLUB CAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND AND NO REPRESENTATIVE, EMPLOYEE, DISTRIBUTOR OR DEALER OF CLUB CAR HAS THE AUTHORITY TO MAKE OR IMPLY ANY REPRESENTATION, PROMISE OR AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS WARRANTY.**

This battery is intended to be used by persons with training and experience with batteries and only in CLUB CAR electric vehicles. Any other use renders the Limited Warranties expressed herein and all implied warranties null and void and same are hereby excluded.

**ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, INCONVENIENCE OR ANY OTHER ECONOMIC LOSS.**

Damage not resulting from a defect in material or workmanship or that occurs due to abuse or neglect (including failure to provide reasonable and necessary maintenance), accident or alteration is excluded from this limited warranty.

Some states allow neither limitation on the duration of an implied warranty nor exclusions or limitations of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from states to states.

For further information contact WARRANTY SERVICES, CLUB CAR, LLC, P.O. Box 204658, Augusta, Georgia, 30917- 4658, U.S.A., 706-863-3000.

### **CLUB CAR LIMITED FOUR YEAR WARRANTY FOR ONBOARD COMPUTERS AND SOLID STATE SPEED CONTROLLERS**

CLUB CAR, LLC, ("CLUB CAR") hereby warrants to the original retail purchaser that the new Onboard Computer and the Solid State Speed Controller, hereinafter called "Computer" and "Controller" respectively, installed in its new electric vehicle equipped with the PowerDrive® System 48™, PowerDrive Plus®, or IQ System™ or IQ Plus™ purchased from CLUB CAR or an authorized distributor or dealer will be free from defects in material and workmanship for a period of four years or 800 rounds, whichever first occurs, from the date of purchase subject to the terms and conditions contained herein.

This limited warranty only covers defects in material and workmanship for a period of four years or 800 golf car rounds or 16,000 energy units from date of purchase. The terms of this four-year or 800 round limited warranty shall be as follows:

Vehicles used for golf, free replacement with respect to parts and labor within four years or 800 rounds or 16,000 energy units, whichever first occurs, from date of purchase.

Vehicles used for purposes other than golf, free replacement with respect to parts and labor within four years or 16,000 energy units as recorded by the Computer, whichever first occurs, from date of purchase.

The Computer or Controller should be returned to an authorized CLUB CAR distributor or dealer with evidence of proof of purchase date and number of energy units, freight prepaid. CLUB CAR reserves the right to test any Computer returned for warranty and to verify number of energy units played by accessing information contained in the Computer.

#### **LIMITED WARRANTY EXCLUSIONS**

THE PROVISIONS OF THIS LIMITED WARRANTY SHALL NOT APPLY TO FAILURE DUE TO:

- 1) Abuse or neglect, such as improper battery fluid levels, loose wiring, or rusted or corroded hardware;
- 2) Lack of proper maintenance as outlined in the electric vehicle owner's manual;
- 3) Damages caused by improper installation of the Computer or Controller;
- 4) Vehicles charged by systems other than the CLUB CAR PowerDrive Charger.

Without limiting the generality of the foregoing in any way, and as part of its limited warranty exclusion, CLUB CAR does not warrant that the Computer or Controller is suitable for use in any application other than its PowerDrive System 48, PowerDrive Plus, IQ System, and IQ Plus products. As in the use of any battery operated device, a prudent owner will read and study the charger owner's manual, the electric vehicle owner's manual, the operator instructions, and the battery warning labels; and will exercise due care in working on or around batteries.

Transportation expenses for warranty services are also excluded from this warranty.

#### **WARRANTY LIMITATIONS:**

CLUB CAR's liability under this limited warranty shall be to replace a defective Computer or Controller. Replacement shall be furnishing a new or reconditioned Computer or Controller that is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the four-year or 800 round limited warranty period for golf use or four years or 16,000 energy units for use other than golf, whichever first occurs, except for transportation expenses. All parts and components replaced under this limited warranty become the property of CLUB CAR.

**THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REPLACEMENT OR REPAIR OF THE DEFECTIVE VEHICLE OR COMPONENT THEREOF IS THE SOLE REMEDY OF THE PURCHASER. CLUB CAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND AND NO REPRESENTATIVE, EMPLOYEE, DISTRIBUTOR OR DEALER OF CLUB CAR HAS THE AUTHORITY TO MAKE OR IMPLY ANY REPRESENTATION, PROMISE OR AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS WARRANTY.**

This computer or controller is intended to be used only in CLUB CAR PowerDrive System 48, PowerDrive Plus, IQ System, and IQ Plus electric vehicles. Any other use renders the Limited Warranties expressed herein and all implied warranties null and void and same are hereby excluded.

**ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, INCONVENIENCE OR ANY OTHER ECONOMIC LOSS.**

Damage not resulting from a defect in material or workmanship or that occurs due to abuse or neglect (including failure to provide reasonable and necessary maintenance), accident or alteration is excluded from this limited warranty.

Some states allow neither limitation on the duration of an implied warranty nor exclusions or limitations of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

For further information contact WARRANTY SERVICES, CLUB CAR, LLC, P.O. Box 204658, Augusta, Georgia, 30917- 4658, U.S.A., 706-863-3000.

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## CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT

### YOUR WARRANTY RIGHTS AND OBLIGATIONS:

The California Air Resources Board (“CARB”) and Club Car, LLC (“CLUB CAR”) are pleased to explain the emission control system warranty on your 2009-2010 vehicle engine (the “emission warranty”). In California, new small off-road engines (“SORE”) must be designed, built and equipped to meet the State’s stringent anti-smog standards. CLUB CAR shall warrant the emission control system on the vehicle engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine.

Your emission control system may include parts such as the carburetor or fuel-injection system, the ignition system, the catalytic converter and related hoses, belts, connectors and other emission assemblies or components.

Where a warrantable condition exists, as defined herein, CLUB CAR will repair your vehicle engine at no cost to you including diagnosis, parts and labor.

### MANUFACTURER’S WARRANTY COVERAGE:

This emission control system is warranted for two years from the vehicles’ date of purchase. If any emission-related part on your CLUB CAR SORE is defective, the part will be repaired or replaced by CLUB CAR.

### OWNER’S WARRANTY RESPONSIBILITIES:

- As the vehicle engine owner, you are responsible for the performance of the required maintenance listed in your owner’s manual. CLUB CAR recommends that you retain all receipts covering maintenance on your vehicle engine, but CLUB CAR cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

- As the vehicle engine owner, you should however be aware that CLUB CAR may deny you warranty coverage if vehicle engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

- You are responsible for presenting vehicle engine to a CLUB CAR distribution center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact WARRANTY SERVICES, CLUB CAR, LLC, P.O. Box 204658, Augusta, Georgia 30917-4658, U.S.A., 1-706-863-3000.

### CLUB CAR EXPLANATION OF EMISSION CONTROL WARRANTY:

#### 1. WARRANTY:

CLUB CAR warrants to the ultimate purchaser and each subsequent purchaser that the SORE and related emissions equipment is designed, built and equipped so as to conform with all applicable California environmental emission regulations; and free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in CLUB CAR’s application for certification with CARB. The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser or first placed into service. The warranty period is two years from the date of purchase.

#### 2. COVERAGE:

Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

(1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by CLUB CAR according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the original warranty period.

(2) Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining original warranty period.

(3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by CLUB CAR according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station\* at no charge to the owner.

(5) Notwithstanding the provisions herein, warranty services or repairs will be provided at all of our distribution centers that are franchised to service the subject engines or equipment.

(6) The engine or equipment owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station\*.

(7) CLUB CAR is liable for damages to other engine or equipment components proximately caused by a covered failure under warranty of any warranted part.

(8) Throughout the engine or equipment warranty period stated above, CLUB CAR will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of CLUB CAR.

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. CLUB CAR will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

\*CLUB CAR, its authorized dealers, or a service agency approved by CLUB CAR.

**ITEMS COVERED BY THIS WARRANTY:**

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if CLUB CAR demonstrates that the engine or equipment has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts list are covered:

**SYSTEMS COVERED PARTS DESCRIPTION**

Fuel Metering Carburetor assembly, fuel injection pump, fuel injection nozzle, fuel regulator Exhaust Catalytic Converter, Exhaust Manifold Air Induction Air filter housing, air filter\*, crankcase breather tube Ignition Flywheel magneto, ignition pulse generator, ignition coil assembly, ignition control module, spark plug cap, spark plug\* Positive Crankcase Ventilation (PCV) System PCV valve, oil filler cap Evaporative System Fuel Tank, Fuel Cap, Fuel Lines, Fuel Line Fittings, Clamps, Pressure Relief Valves, Purge Valves, Vapor Hoses, Carbon Canister, Canister Mounting Brackets, Carbon Canister Purge Port Connector Misc. Parts Belts, hosing, tubing, fittings, seals, gaskets, clamps, and switches associated with the above systems.

Emission-related parts will vary between vehicles; therefore, certain vehicles may not include all of the listed parts or may include equivalent parts.

**3. VOIDING OF WARRANTY:**

THIS AND ANY OTHER WARRANTY SHALL BE VOID IF THE VEHICLE IS ABUSED OR USED IN AN UNINTENDED MANNER OR SHOWS INDICATIONS THAT IT HAS BEEN ALTERED IN ANY WAY, INCLUDING, BUT NOT LIMITED TO, MODIFICATION OF THE SPEED GOVERNOR, BRAKING SYSTEM, STEERING, TRANSAXLE, OR OTHER OPERATING SYSTEMS OF THE VEHICLE TO CAUSE IT TO PERFORM OUTSIDE CLUB CAR SPECIFICATIONS.

**4. HOW TO MAKE A WARRANTY CLAIM:**

To make a warranty claim under this limited warranty, you must present the vehicle or defective component to an authorized CLUB CAR dealer or send the defective component, freight prepaid, to WARRANTY SERVICES, CLUB CAR, LLC, 4125 Washington Road, Evans, Georgia 30809, U.S.A., 706-863-3000.



## EMISSION CONTROL INFORMATION

### Fuel Information

THIS VEHICLE IS CERTIFIED TO OPERATE ON UNLEADED REGULAR GRADE GASOLINE ONLY. A minimum of 87 octane of the anti-knock index is recommended. The anti-knock index is posted on service station pumps in the U.S.A.

### Emission Control Information

To protect the environment in which we all live, Club Car has incorporated crankcase emission (1) and exhaust emission (2) control systems (EM) in compliance with applicable regulations of the U.S. Environmental Protection Agency and California Air Resources Board.

#### 1. Crankcase Emission Control System

A sealed-type crankcase emission control system is used to eliminate blow-by gases. The blow-by gases are led to the breather chamber through the crankcase. Then, it is led to the air cleaner.

Oil is separated from the gases while passing through the inside of the breather chamber from the crankcase, and then returned back to the bottom of the crankcase.

#### 2. Exhaust Emission Control System

The exhaust emission control system applied to this engine consists of a carburetor and an ignition system having optimum ignition timing characteristics.

The carburetors have been calibrated to provide lean air/fuel mixture characteristics and optimum fuel economy with a suitable air cleaner and exhaust system.

#### Maintenance and Warranty

Proper maintenance is necessary to ensure that your engine will continue to have low emission levels. Those items identified by the Periodic Maintenance Chart are necessary to ensure compliance with the applicable standards.

The Club Car Limited Emission Control System Warranty requires that you return your engine to an authorized Club Car Dealer for remedy under warranty. Please read the warranty carefully, and keep it valid by complying with the owner's obligations it contains.

#### Tampering with Emission Control System Prohibited

California State law prohibits the following

acts or the causing thereof: (1) the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new engine for the purposes of emission control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the engine after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

Do not tamper with the original emission related parts:

- Carburetor and internal parts
- Spark plugs
- Magneto or electronic ignition system
- Fuel filter element
- Air cleaner element
- Crankcase
- Cylinder head
- Breather chamber and internal parts
- Intake pipe and tube

## FUEL AND OIL RECOMMENDATIONS

### Fuel

Use only clean, fresh, unleaded regular grade gasoline.

### Octane Rating

The octane rating of a gasoline is a measure of its resistance to "knocking". Use of a minimum of 87 octane of the anti-knock index is recommended. The anti-knock index is posted on service station pumps in the U.S.A.

#### NOTE

- If "knocking or pinging" occurs, use a different brand of gasoline or higher octane rating.

### CAUTION

- Do not mix oil with gasoline.

### Oxygenated Fuel

If you use oxygenated fuel (either ethanol or MTBE added to gasoline), be sure it is unleaded and meets the minimum octane rating requirement.

The following are the EPA approved percentages of fuel oxygenates.

**ETHANOL:**(Ethyl or Grain Alcohol) You may use gasoline containing up to 10% ethanol by volume.

**MTBE:**(Methyl Tertiary Butyl Ether) You may use gasoline containing up to 15% MTBE by volume.

**METHANOL:**(Methanol or Wood Alcohol) 5% by volume.

You may use gasoline containing up to 5% methanol by volume, as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

### WARNING

- Gasoline is extremely flammable and can be explosive under certain conditions. Turn the engine switch OFF. Do not smoke. Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Never fill the tank so the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vent in the fuel tank.

### Engine Oil

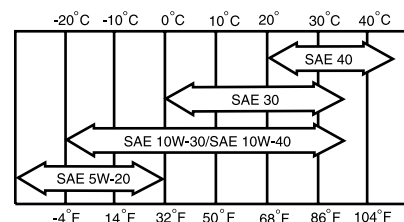
The following engine oils are recommended. API Service Classification: SC, SD, SE, SF, SG, or SH.

### WARNING

- After refueling, make sure the tank cap is closed securely.
- If gasoline is spilled on the fuel tank wipe it off immediately.

### Oil Viscosity

Choose the viscosity according to the temperature as follows:



#### NOTE

- Using multi-grade oils (5W-20, 10W-30, and 10W-40) will increase oil consumption. Check oil level more frequently when using them.





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