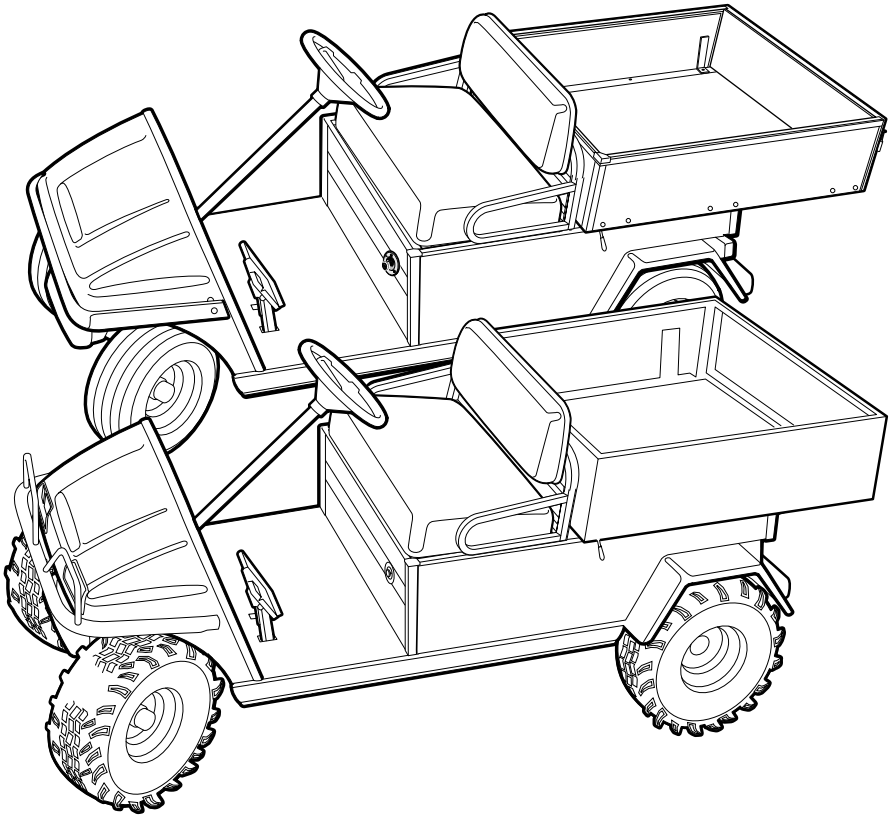
Club Car®

Turf/Carryall 252, CE 252 and XRT 900 Vehicle Owner's Manual

Electric and Gasoline

[Refer to back cover for applicable build code range]



Ingersoll Rand
Industrial Technologies

NOTICE

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 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.

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 utility vehicles are four-wheel, general-purpose vehicles intended to transport people and cargo on improved or groomed surfaces. These vehicles do not conform to U.S. Federal Motor Vehicle Safety Standards (FMVSS) 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.

P.O. Box 204658
Augusta, Georgia 30917–4658 USA
Telephone 706–863–3000
Service Parts Fax 706–855–7413
www.clubcar.com

This manual effective August 2, 2010

FOREWORD

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 or call 1-800-ClubCar (258-2227) or 1-706-863-3000. 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.

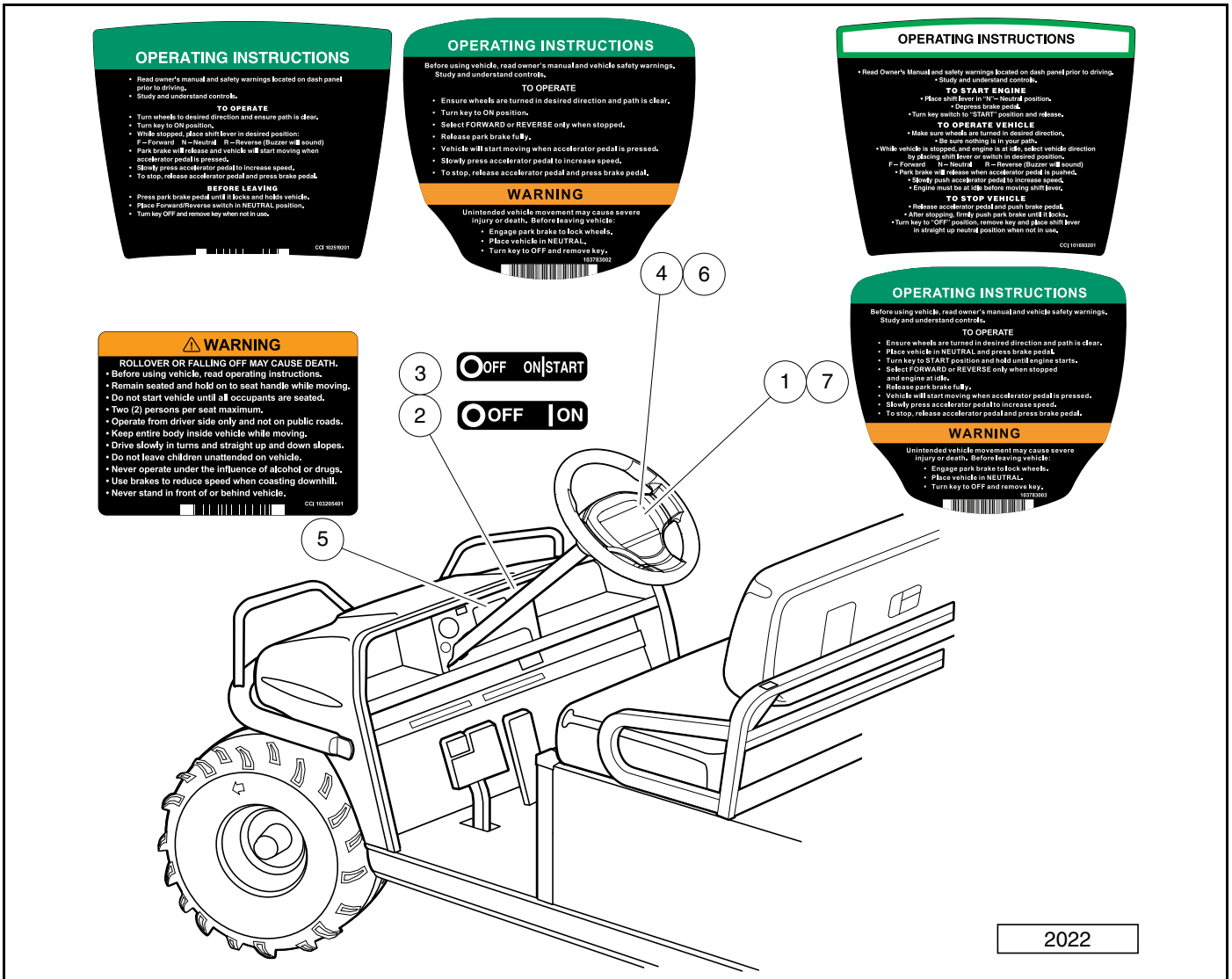
REGULAR MAINTENANCE ITEMS	PERIODIC MAINTENANCE ITEMS
Engine Oil Filter CC P/N 1016467	**Spark Plug O.H.V.** Either CC P/N AM1232301 or 101881101
Engine Air Filter CC P/N 1015426	**Spring Tune-Up Kit** CC P/N 101611003
Engine Fuel Filter CC P/N 102003201	
Battery Terminal Protector Spray CC P/N 1014305	
Dry Moly Lube CC P/N 1012151	

TABLE OF CONTENTS

SAFETY DECAL AND FEATURE IDENTIFICATION

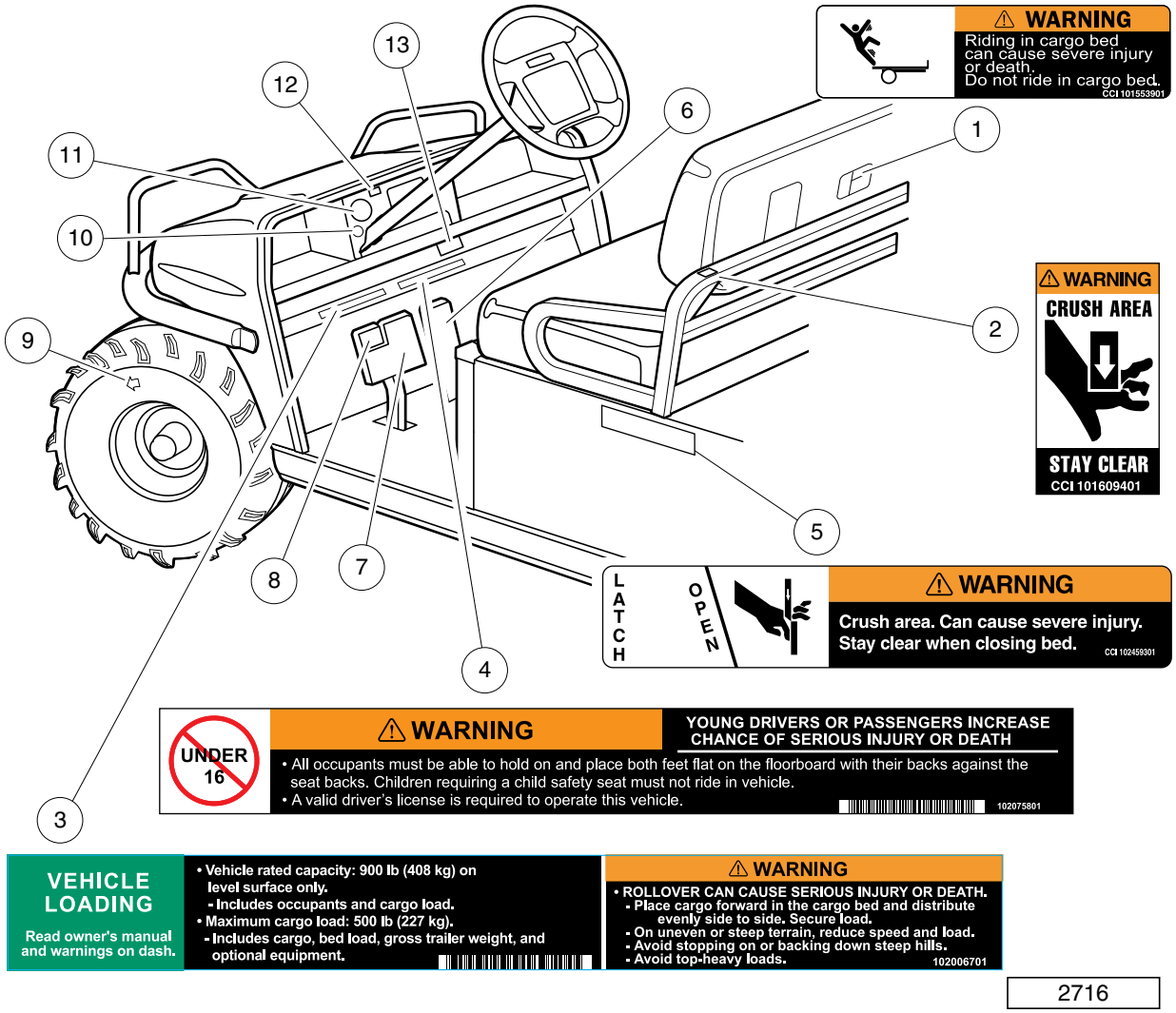
The following pages contain safety decal and feature identification information. For detailed information on specific features, read the appropriate section in this manual.

GASOLINE TURF 252/CARRYALL 252/XRT 900



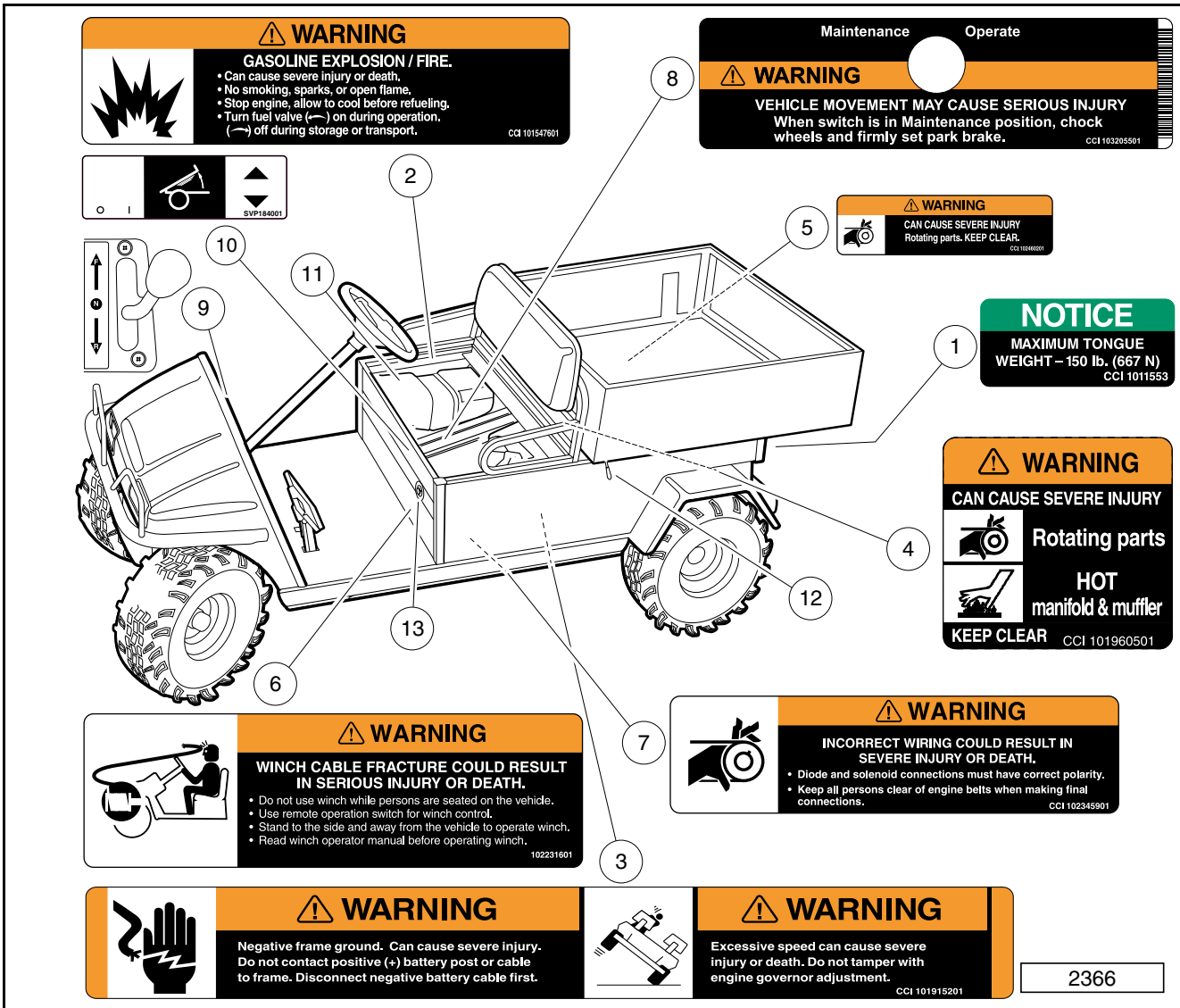
1	101693201	Decal, Operating Instructions (on steering wheel) XRT 900	5	103205401	Decal, Rollover Warning (on instrument panel)
2	101825101	Decal, On/Off Key Switch (above key switch) T/CA 252	6	103783002	Decal, Operating Instructions (on steering wheel) T/CA 252
3	101825102	Decal, On/Off/Start Key Switch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



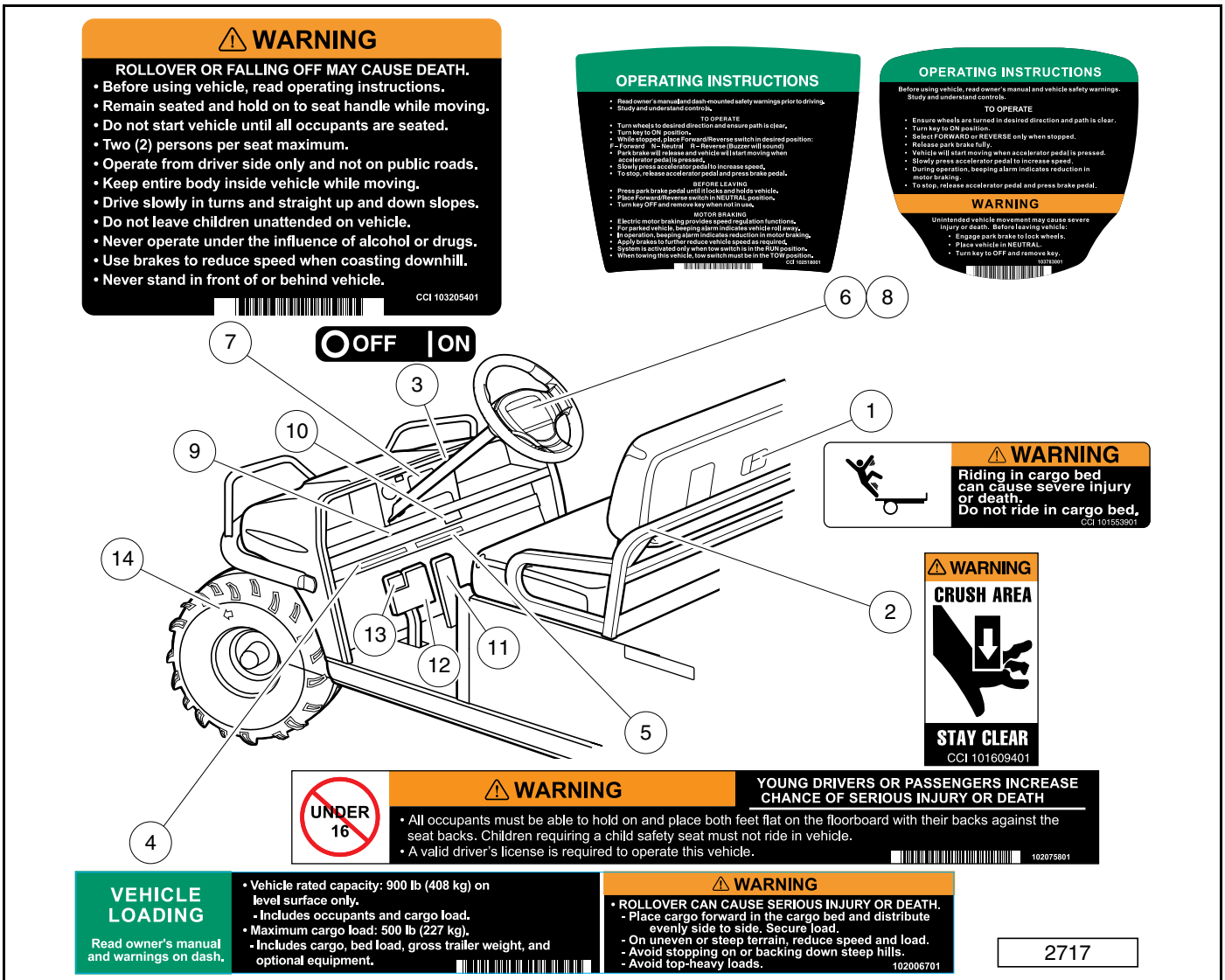
1	101553901	Decal, Bed Loading Warning (on cargo bed or seat back)	8		Park Brake Pedal
2	101609401	Decal, Crush Area Warning (behind seat, near cargo bed)	9		Directional Arrow
3	102006701	Decal, Vehicle Loading Instructions (below instrument panel)	10		Light Switch
4	102075801	Decal, Young Driver Warning (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



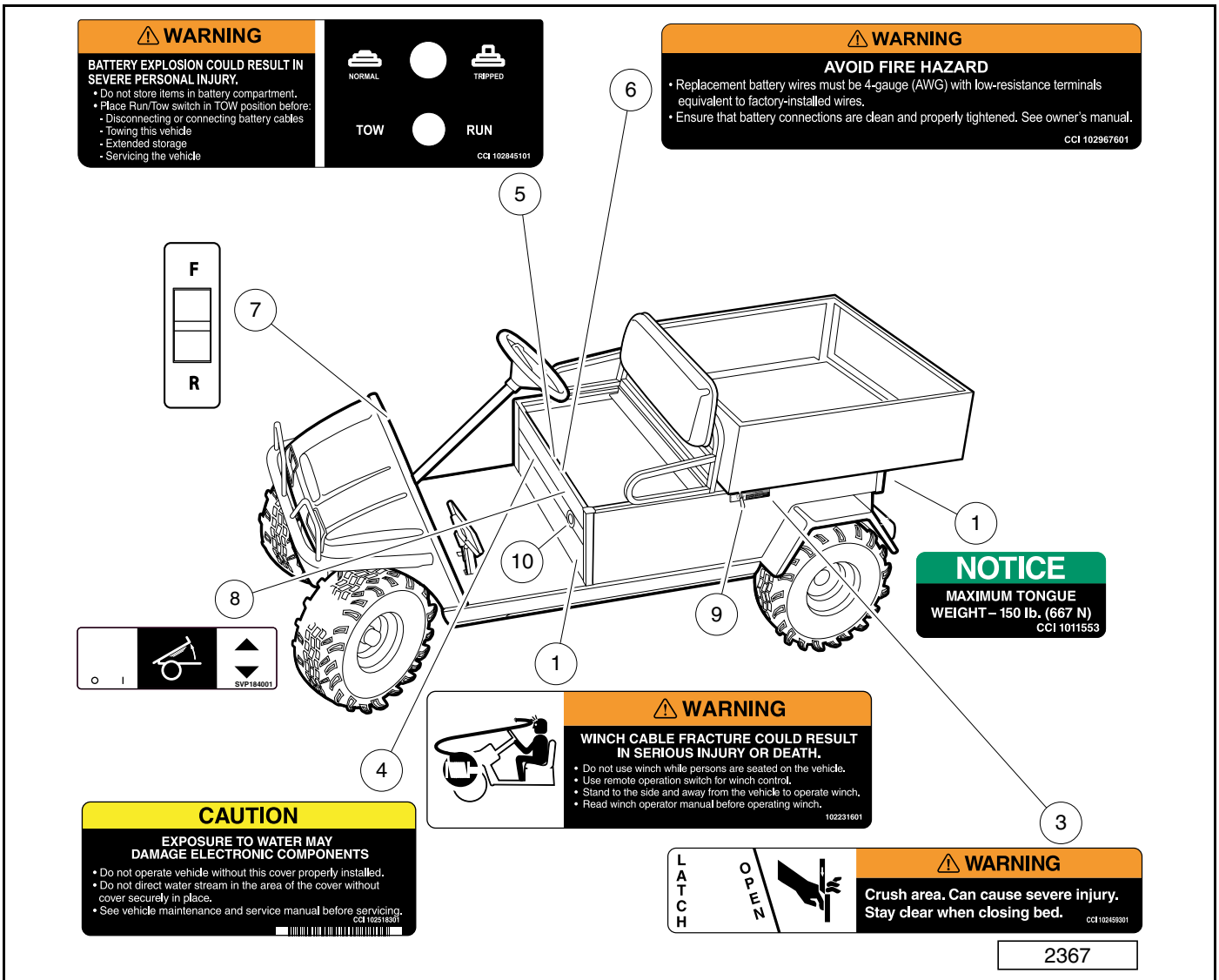
1	1011553	Decal, Trailer Hitch Tongue Weight Notice (on trailer/receiver hitch)	8	103205501	Decal, Maintenance/Operate Warning (on Maintenance/Operate switch plate, under seat) T/CA 252
2	101547601	Decal, Gasoline Fuel Warning (at fuel fill or on frame, near fuel tank)	9	103210201	Decal, Forward/Reverse (on instrument panel)
3	101915201	Decal, Frame Ground/Governor Warning (on vehicle frame near battery)	10	SVP184001	Decal, Bed Lift Switch (on vehicle body) (vehicles equipped with electric bed lift)
4	101960501	Decal, Rotating Parts/Hot Manifold Warning (on engine, starter/generator, and transaxle)	11		Fuel Shut-Off Valve
5	102460201	Decal, Rotating Parts Warning (on vehicle body, under seat)	12		Bed Latch
6	102231601	Decal, Winch Safety Warning (on vehicle body, below seat) (with winch option)	13		Choke
7	102345901	Decal, Diode Safety Warning (on vehicle frame, near diode) XRT 900			

ELECTRIC TURF 252/CARRYALL 252/XRT 900



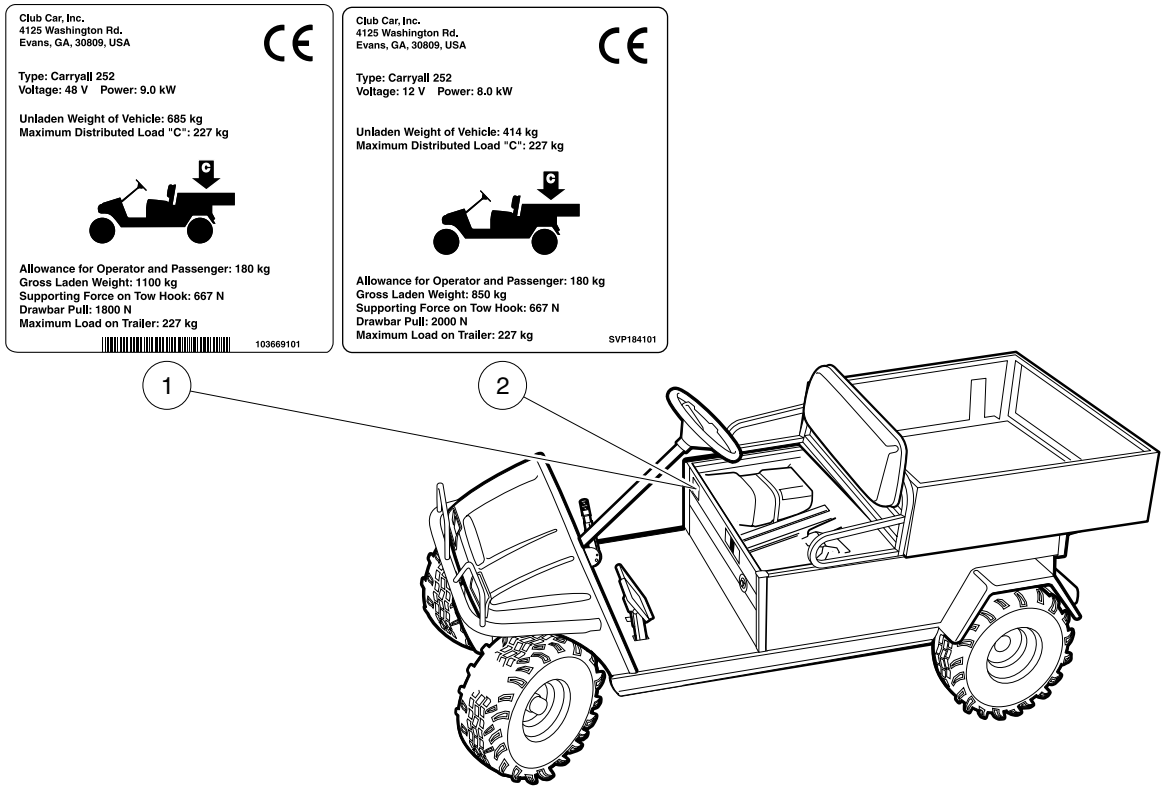
1	101553901	Decal, Bed Loading Warning (on cargo bed or seat back)	8	103783001	Decal, Operating Instructions (on steering wheel)
2	101609401	Decal, Crush Area Warning (behind seat, near cargo bed)	9		IQDM Diagnostic Port (under instrument panel)
3	101825101	Decal, On/Off Key Switch (above key switch)	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

ELECTRIC TURF 252/CARRYALL 252/XRT 900



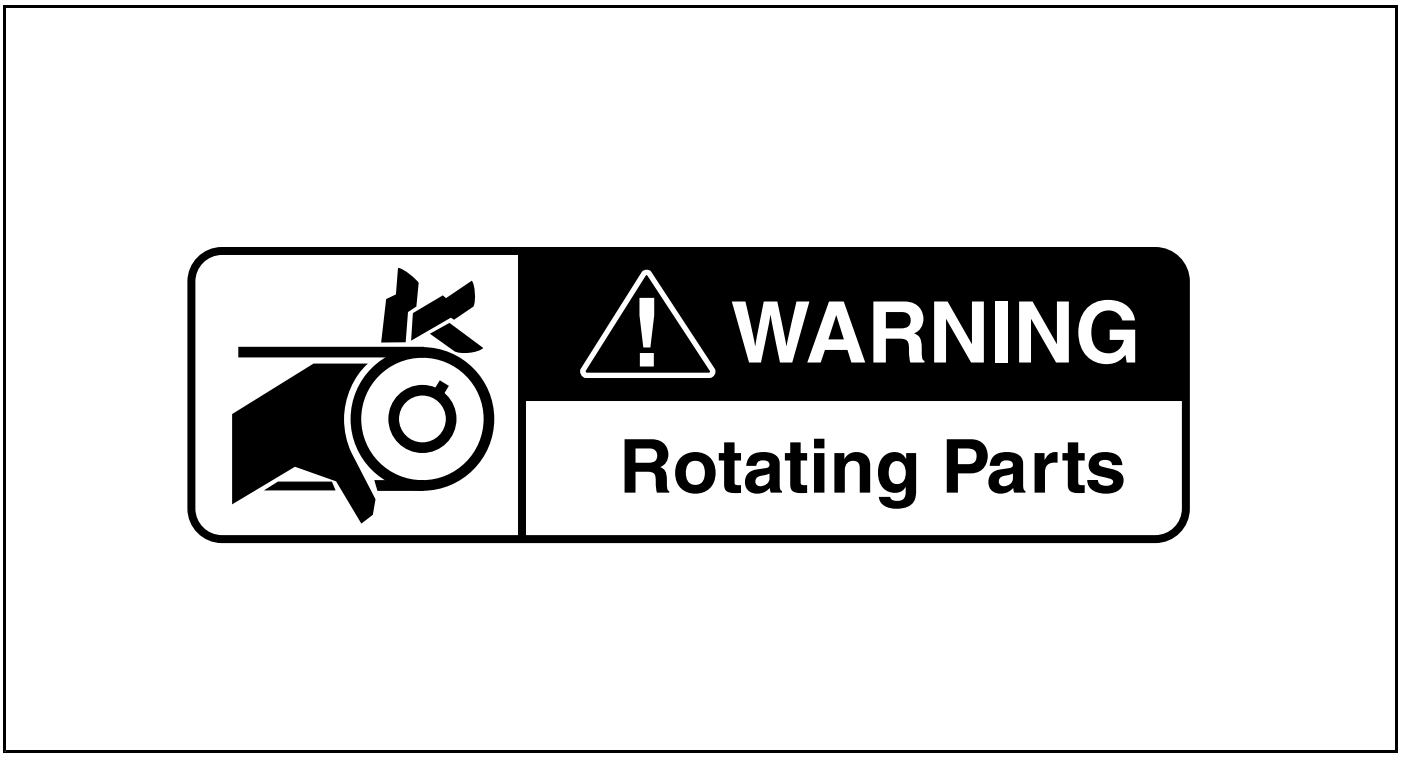
1	1011553	Decal, Trailer Hitch Tongue Weight Notice (on trailer/receiver hitch)	6	102967601	Decal, 4 Gauge Wire Warning (on frame in battery compartment)
2	102231601	Decal, Winch Safety Warning (on vehicle body, below seat) (with winch option)	7	103210301	Decal, Forward/Reverse (on instrument panel)
3	102459301	Decal, Bed Latch Warning (on vehicle body, below bed latch)	8	SVP184001	Decal, Bed Lift Switch (on vehicle body) (vehicles equipped with electric bed lift)
4	102518301	Decal, Component Cover Caution (on electrical component cover)	9		Bed Latch
5	102845101	Decal, Tow/Run Switch Warning (on Tow/Run switch plate, under seat)	10		Battery Charger Receptacle

TURF 252/CARRYALL 252 – CE MARK



1	103669101	Decal, CE Mark (on vehicle body, below seat) (electric vehicle)	2	SVP184101	Decal, CE Mark (on vehicle body, below seat) (gasoline vehicle)

PRACTICE SAFETY



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, 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 electrical system, 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 (including accessories) 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 16.**
- **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 52.**

WARNING CONTINUED ON NEXT PAGE

⚠ WARNING

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 15.**
- **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:

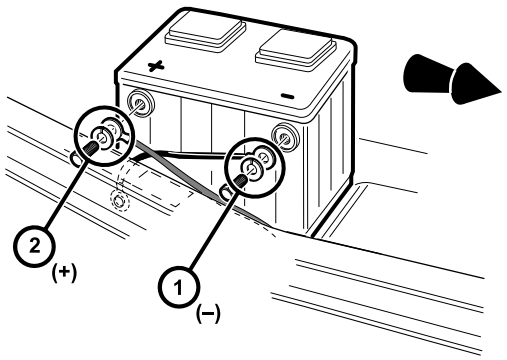
- **Wear safety glasses or approved eye protection when servicing the vehicle or battery charger. Wear a full face shield and rubber gloves when working on or near batteries.**
- **Do not wear loose clothing or jewelry such as rings, watches, chains, etc., when servicing the vehicle or battery charger.**
- **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 15.**
2. Disconnect the battery cables, negative (–) cable first, as shown **(Figure 2)**.
3. Disconnect the spark plug wire(s) from the spark plug(s).



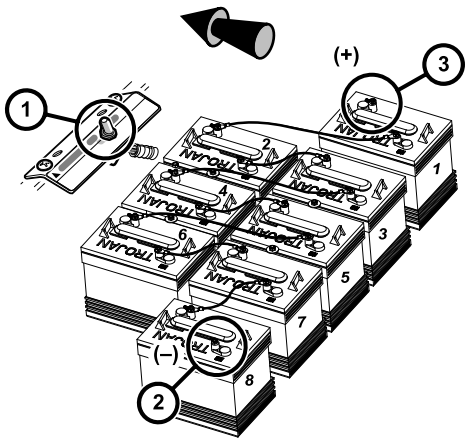
(Viewed from passenger side of vehicle)

1. Remove negative battery cable.
2. Remove positive battery cable.

Connect battery cables in reverse order.

1

Figure 2 Gasoline Vehicle



1. Place Tow/Run Switch in TOW before disconnecting or connecting battery cables.
2. Remove negative battery cable.
3. Remove positive battery cable.

Connect battery cables in reverse order.

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 15.**
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

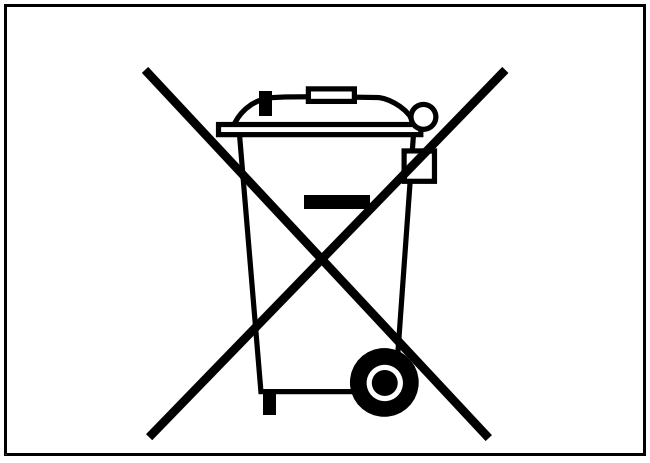
1. Ensure the Tow/Run switch is in the TOW position.
2. Connect the battery cables, positive (+) cable first.
3. Tighten battery terminals to 110 in-lb (12.4 N·m).
4. Coat terminals with Battery Terminal Protector Spray (CC P/N 1014305) to minimize corrosion.

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.

1. Shield eyes.
2. Read and follow operating instructions.
3. No smoking, no open flames, no sparks.
4. Keep away from children.
5. Battery acid hazard.
6. Explosive gas hazard.

Refer to General Warnings for more information.

1642

Figure 5 International Safety Symbols on Batteries

GENERAL INFORMATION

This manual features four electric vehicles: Turf 252, Carryall 252, CE Mark 252 and XRT 900; and four gasoline vehicles: Turf 252, Carryall 252, CE Mark 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

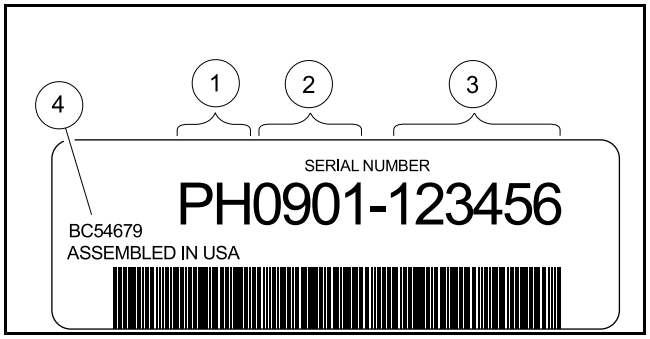
The serial number of each vehicle is printed on a bar code decal mounted either below the passenger side cup holder or above the accelerator or brake pedal (Example: PH0901-583947) **(Figure 6)**.

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.*

A 17-digit Product Information Number (PIN) is included on this vehicle next to the serial number. This number may be used to register the vehicle where required.

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 13.

⚠ 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.**

WARNING CONTINUED ON NEXT PAGE

⚠ WARNING

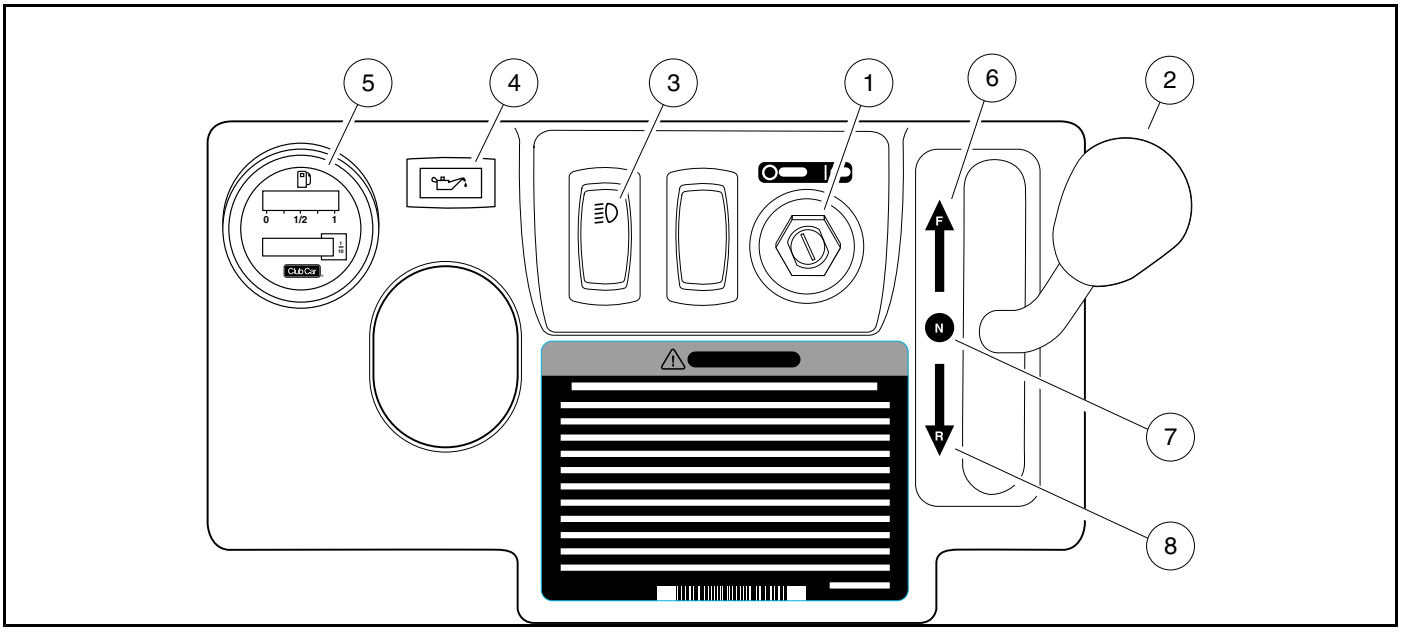
- **Key-start vehicles: Stop the vehicle before shifting the Forward/Reverse handle. Engine must be at idle before shifting the Forward/Reverse handle. Failure to do so may result in injury to inattentive passengers and (or) damage to the vehicle.**
- **Release the accelerator pedal and then press the 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)**.

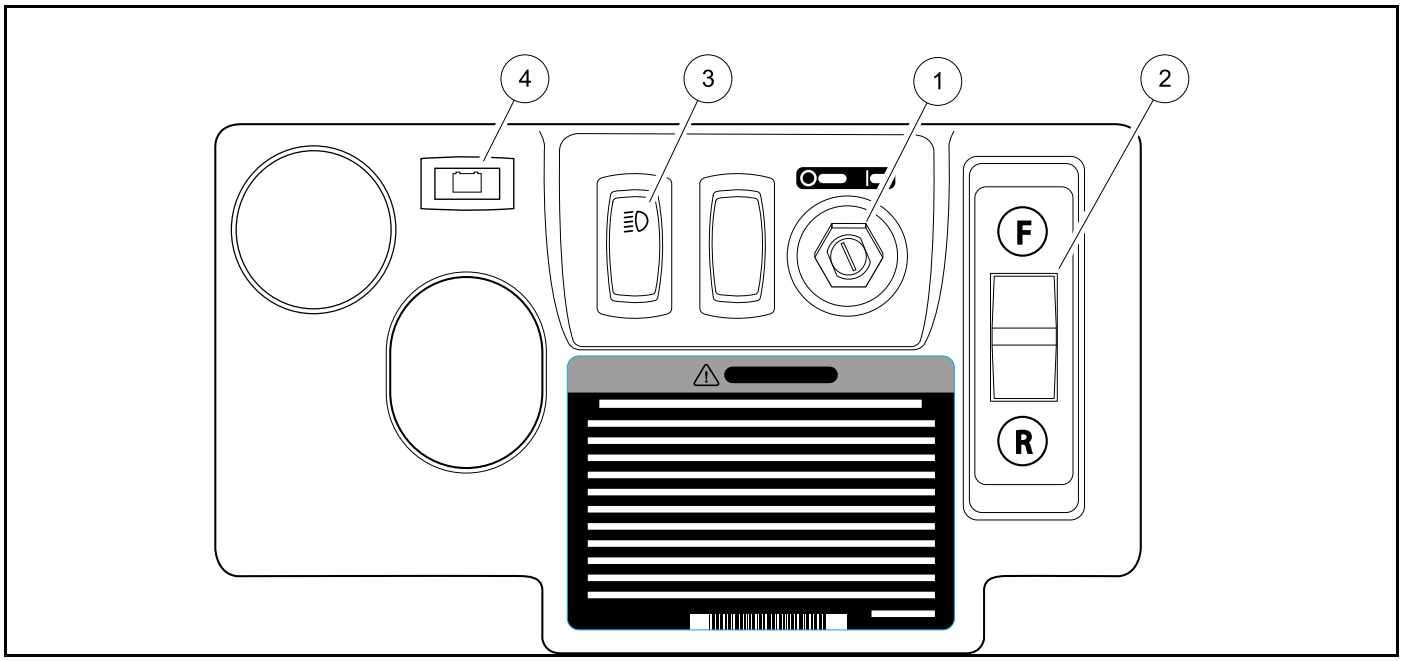
Each vehicle is equipped with either a two-position key switch or a three-position key switch. Vehicles equipped with a two-position key switch are referred to as “pedal-start” and vehicles equipped with a three-position key switch are referred to as “key-start”. All electric vehicles are equipped with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



75

Figure 7 Instrument Panel – Gasoline Vehicles



76

Figure 8 Instrument Panel – Electric Vehicles

⚠ 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: *When the key is turned to the OFF position, the main vehicle systems are disabled. The key switch may be used as an emergency stop.*

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.

HEADLIGHT CONTROL

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 44.**

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 to 3 mph (1.6 to 4.8 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

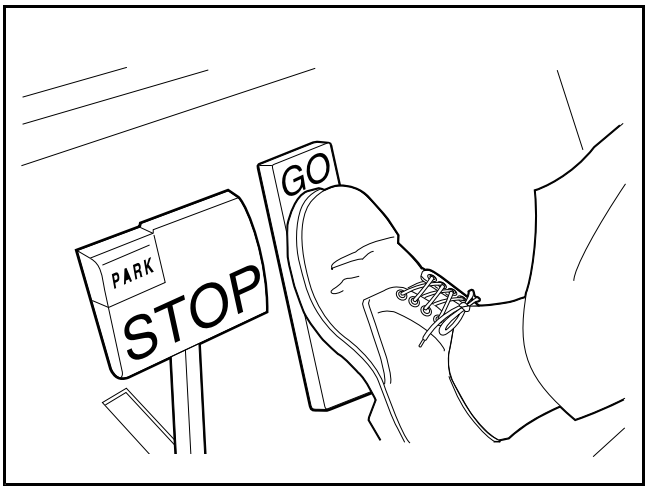
- **Walk-away braking will not limit vehicle speed to 3 mph (4.8 km/h) on very steep grades. Do not operate vehicle on slopes exceeding 20% grades.**

- **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. **See following WARNING.**

- **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. **See following WARNING.**

⚠ WARNING

- **When batteries are fully charged, a warning buzzer will sound during motor braking to alert the driver that motor braking is operating at a reduced level of performance. When this occurs, use the brake pedal to control vehicle speed.**



77

Figure 9 Accelerator and Brake Pedals

BRAKE PEDAL

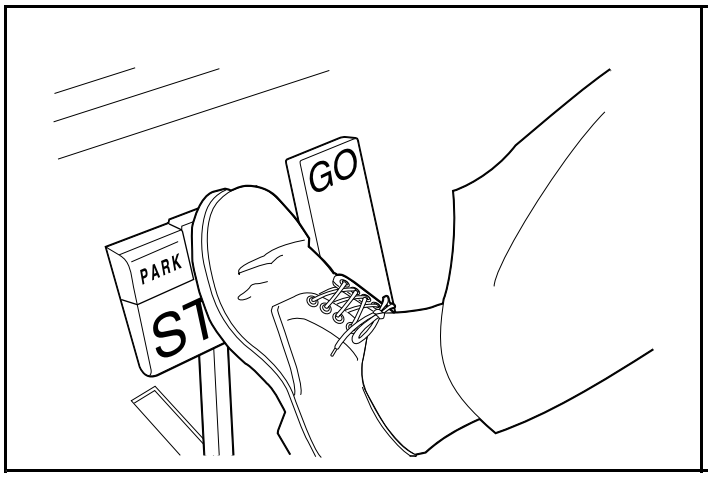
The brake pedal is the large pedal on the left with the word STOP molded into it **(Figure 9)**. To slow or stop the vehicle, press the brake pedal with your right foot **(Figure 10)**.

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.**

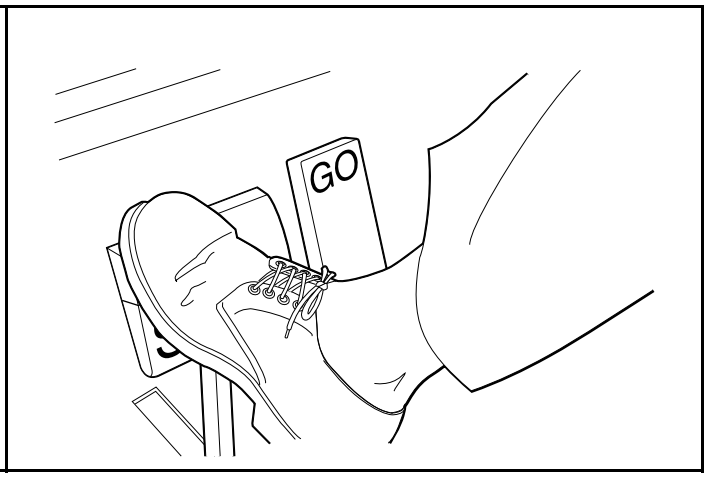
⚠ WARNING

- **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.**



78

Figure 10 Brake Pedal

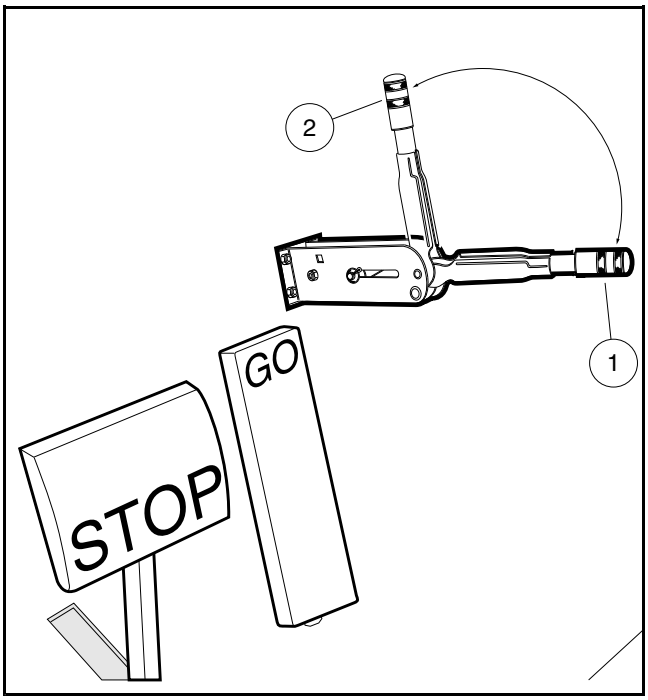


79

Figure 11 Park Brake

PARK BRAKE HANDLE (OPTIONAL ON CE MODELS)

The park brake handle is located on the floorboard to the right of the accelerator pedal. To set the park brake, pull the park brake handle down until park brake is fully engaged (1). To disengage, press the button on the end of the handle and return handle to upright position (2) **(Figure 12)**.



186

Figure 12 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.**

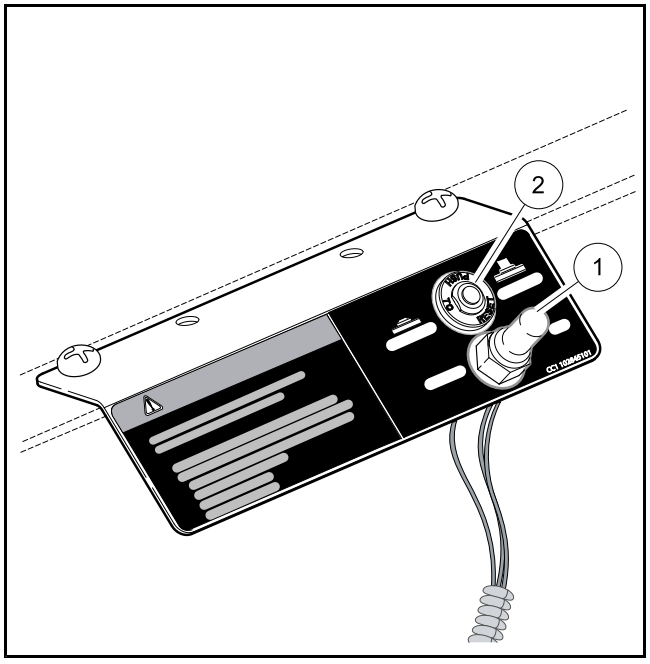
Electric vehicles are equipped with a Tow/Run switch (1), located on the seat support panel under the seat **(Figure 13)**. The switch must be in the RUN position in order to operate the vehicle. When the switch is in the TOW position, power to the vehicle electrical components is turned off and the 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.



80

Figure 13 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 13)**. 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

Gasoline Pedal-start Vehicles Only

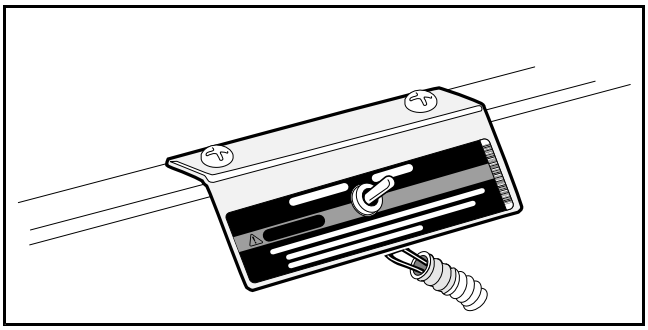
For the convenience of the trained technician, there is a neutral lockout switch located on the seat support panel under the seat **(Figure 14)**. The neutral lockout switch has two positions, MAINTENANCE and OPERATE, which are clearly marked.

- 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.*

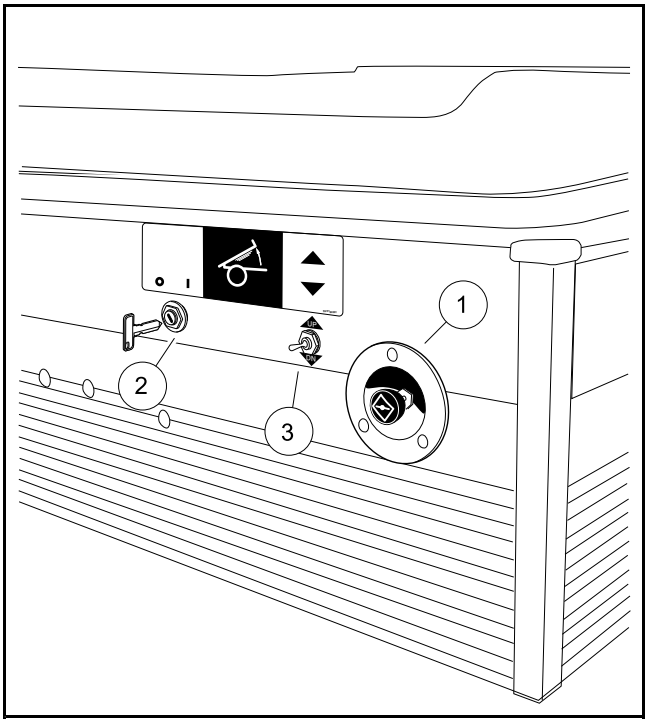


81

Figure 14 Neutral Lockout Switch

ELECTRIC BED LIFT

For vehicles equipped with an electric bed lift, the electric bed lift switch (3) is located on the seat support panel, to the left of the choke (1) (gasoline vehicles) or charger receptacle (electric vehicles) **(Figure 15)**. The bed lift is equipped with a key switch (2) that locks the lift switch, minimizing unauthorized access to the powertrain.



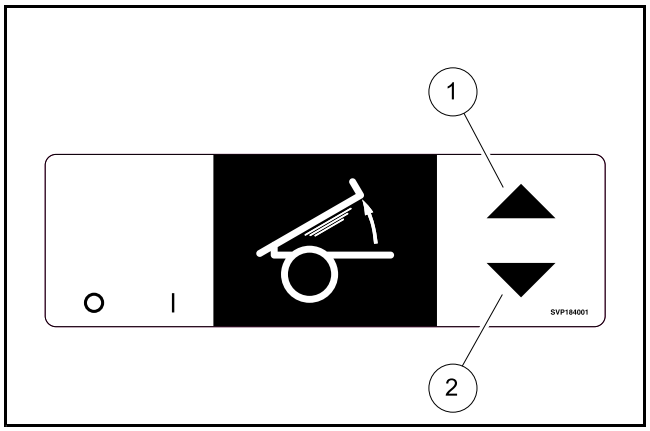
187

Figure 15 Bed Lift Switch and Key

To lift the bed, insert the lift switch key (2) **(Figure 15)**, and turn it to the on (**|**) position **(Figure 16)**. Pull up and hold the toggle switch (3) **(Figure 15)** in the up position (1) **(Figure 16)**. Release switch to stop lifting operation. To close the bed, press down and hold switch in the down position (2) **(Figure 16)**. The bed lift will make a loud clicking sound to signal the bed is in the rest position. Turn the lift switch key to the locked (**O**) position and remove key.

⚠ WARNING

- **Gasoline vehicles: Keep clear of moving parts when bed is in the raised position and the engine is running.**



417

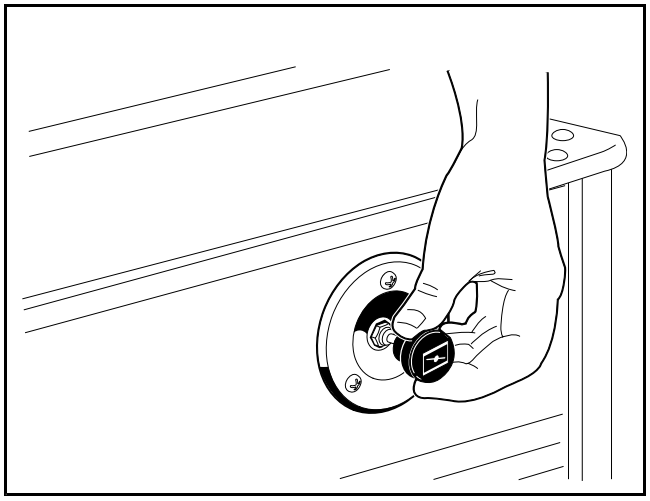
Figure 16 Bed Lift Switch

CHOKE

Gasoline Vehicles Only

The choke knob 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 17)**.



83

Figure 17 Choke

HORN

The horn button is located on the on the left side of the steering column. Press the button to sound the horn.

BED LATCH

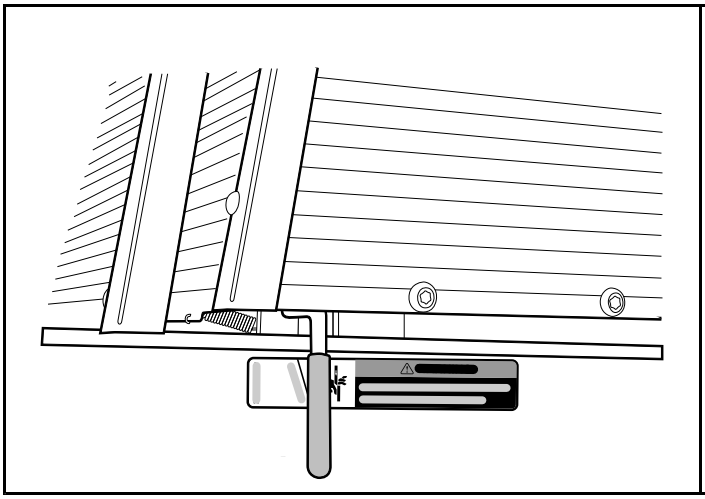
Unless equipped with a hydraulic or electric bed lift, the vehicle is equipped with a bed latch on the driver side of the vehicle **(Figure 18)**. To lift the bed, pull the latch handle toward the rear of the vehicle and lift the bed.

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

⚠ WARNING

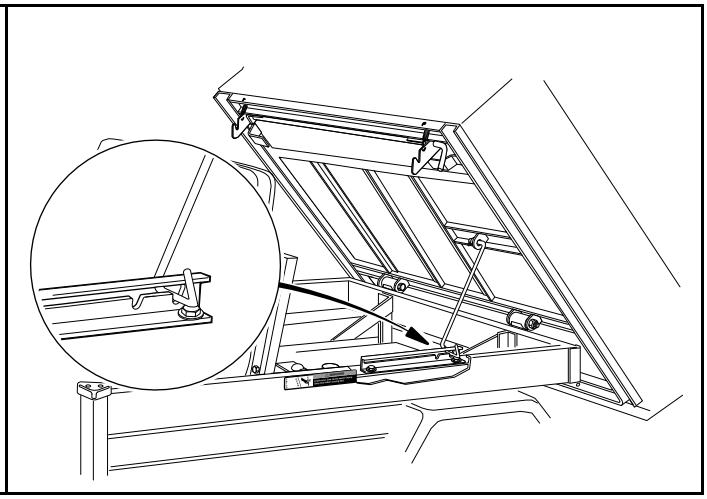
- **Keep hands and fingers clear of crush area between the bed and the seat back support.**

NOTE: *The vehicle is equipped with an automatically engaging prop rod **(Figure 19)**, unless equipped with the hydraulic or electric bed lift.*



83A

Figure 18 Bed Latch



84

Figure 19 Prop Rod

PROP ROD

See General Warnings on page 13.

Unless equipped with a hydraulic or electric bed lift, the vehicle is equipped with an automatically engaging prop rod and prop rod track on the driver side of the rear body **(Figure 19)**. 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.

PRE-OPERATION AND DAILY SAFETY CHECKLIST

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 31 and the Periodic Service Schedules on page 44. 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:** Visually inspect for wear, damage, and proper inflation on a daily basis. **See Vehicle Specifications – Gasoline Vehicles on page 66. See Vehicle Specifications – Electric Vehicles on page 70.**
- **Battery(ies):** Check electrolyte to ensure that it is at its proper level **(Figure 23, Page 53 or Figure 28, Page 58)**. 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 56.**
- **Engine (gasoline vehicles):** Check for proper engine oil level. **See Engine Oil – Gasoline Vehicle on page 60.** Inspect air intake for blockage.
- **Fuel (gasoline vehicles):** Check fuel level. **See Fueling Instructions – Gasoline Vehicle on page 63.** Check fuel tank, lines, cap, pump, fuel filters, and carburetor for fuel leakage on a daily basis.
- **Performance Inspection:** Inspect as instructed. **See Performance Inspection on page 31.**

⚠ 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 18.**
- **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 pedal:** 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.

- **Park brake handle (optional on CE models):** Apply moderate pressure to park brake handle. Tension should increase as the handle is pulled. When latched, the park brake should lock the wheels and hold the vehicle stationary (on an incline of 20% or less).
- **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) (1.6 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 3 mph (4.8 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 66 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.**
- **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. Read safety and information decals located on the vehicle.
2. Study and understand controls.
3. Make sure load is secure.
4. Make sure everyone is seated and holding onto hand holds or handrails. Driver should have both hands on the steering wheel.
5. Make sure wheels are turned in desired direction and that nothing is obstructing vehicle's path.
6. **For electric and pedal-start gasoline vehicles equipped with a park brake pedal:** Start the vehicle:
   - 6.1. Turn the key to the ON position.
   - 6.2. 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.
   - 6.3. 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.**
7. **For electric and pedal-start gasoline vehicles equipped with a park brake handle:** Start the vehicle:
   - 7.1. Turn the key to the ON position.
   - 7.2. 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.
   - 7.3. Press and hold brake pedal.
   - 7.4. Release the park brake.
   - 7.5. Slowly press the accelerator pedal 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.**
8. **For key-start gasoline vehicles equipped with a park brake pedal:** Start the vehicle:
   - 8.1. Make sure the Forward/Reverse handle is in the NEUTRAL position.
   - 8.2. Press and hold brake pedal.
   - 8.3. 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.
   - 8.4. Keeping brake engaged, place the Forward/Reverse handle in desired position (F = Forward or R = Reverse). Engine must be at idle before moving the handle. A buzzer will sound as a warning when the vehicle is in the REVERSE position.
   - 8.5. 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.**
9. **For key-start gasoline vehicles equipped with a park brake handle:** Start the vehicle:
   - 9.1. Make sure the Forward/Reverse handle is in the NEUTRAL position.
   - 9.2. Press and hold brake pedal.
   - 9.3. 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.
   - 9.4. Release the park brake.
   - 9.5. 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.
   - 9.6. Release brake pedal and slowly press accelerator pedal. The vehicle will start to move as the accelerator pedal is pressed and 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 stopping the vehicle, firmly set the park brake until it is fully engaged and prevents 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 (1.6 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 20, Page 41)** to the closed (OFF) position when the vehicle is not in use.

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.**

Compare the calculated value for the total load. Cargo load should never exceed maximum rated capacity.

	All Non-CE Mark Vehicles
Maximum passenger capacity	400 lb (180 kg)
Maximum payload capacity (Cargo bed load plus gross trailer weight)	500 lb (227 kg)
Maximum vehicle capacity (Cargo bed load, passengers, plus gross trailer weight)	900 lb (408 kg)
Trailer tongue weight	150 lb force (667 N)

	CE Mark Gasoline Vehicles	CE Mark Electric Vehicles
Unladen vehicle mass	913 lb (414 kg)	1510 lb (685 kg)
Maximum passenger capacity (Operator and passenger)	400 lb (180 kg)	400 lb (180 kg)
Maximum payload capacity (Cargo bed load and gross trailer weight)	500 lb (227 kg)	500 lb (227 kg)
Maximum vehicle gross weight (Fully loaded vehicle, including accessories)	1813 lb (822 kg)	2410 lb (1093 kg)
Trailer tongue weight	150 lb force (667 N)	150 lb force (667 N)
Draw bar pull	450 lb force (2000 N)	450 lb force (2000 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).*

TOWING WITH THE VEHICLE

⚠ 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.**
- **Stay clear from the area between the tow vehicle and the towed vehicle or trailer.**

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.

TRANSPORTING ON A TRAILER

⚠ 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 engaged to prevent movement.**
- **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 20) 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 x 2000 lb = 4000 lb (2 x 909 kg = 1818 kg).*

STORAGE – ELECTRIC VEHICLES

See General Warnings on page 13.

⚠ 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

Check Battery Water Levels Two Weeks Prior to Storage

Check water levels at least two weeks prior to winter storage to ensure proper mixing of water and electrolyte. Note that it takes approximately five charge cycles with a minimum of 10 energy units (EUs) removed to properly mix the water with electrolyte. Do NOT water batteries immediately prior to storage because this will not provide sufficient charge time to mix the water with the electrolyte. Freezing can occur when batteries are stored in this condition.

1. Check the water levels in each battery cell. If water is required, fill the cells to cover the plates, charge the batteries, and then use distilled water to fill each cell to the correct level. Electrolyte level should be from 1/2 inch (13 mm) above plates to 0.25 inch (6 mm) below the level indicator **(Figure 23)**.

Immediately Prior to Storage, Perform the Following Steps

1. Turn the key switch to the OFF position, remove the key, and leave the Forward/Reverse switch in the NEUTRAL position during storage.
2. If so installed, turn off all accessories, including GPS units, fans, etc.
3. Place the tow/run switch in the TOW position. Because the battery warning light does not illuminate with the key in the OFF position and the tow switch in TOW, do not use the warning light as an indication of the batteries' state of charge.

NOTE: *If Visage or Guardian units are installed on vehicles and remote monitoring will be used during the storage period, make sure the Tow/Run Switch remains in the RUN position rather than in the TOW position required for all other vehicles.*

4. 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).
5. Tighten all battery cable connections to 110 in-lb (12.4 N·m).
6. Store vehicle in a cool, dry place. This will minimize battery self-discharge.
7. Adjust tires to recommended tire pressure. **See Vehicle Specifications – Electric Vehicles on page 70.**
8. Perform semiannual periodic lubrication. **See Periodic Lubrication Schedules on page 48.**
9. Thoroughly clean front body, rear body, seats, battery compartment, and underside of vehicle.
10. Do not engage the park brake. Chock the wheels to prevent the vehicle from rolling.

NOTE: *It is recommended that the vehicles be plugged in and the electrolyte level maintained throughout the storage period. If any of the following conditions exist, however, then disconnect the batteries for storage: 1) The charger cannot remain plugged in, 2) AC power will not be available during extended storage, or 3) Electrolyte levels will not be maintained. To disconnect batteries for storage, go to step 12.*

11. To keep batteries fully charged during storage:
    11.1. Plug the battery charger into the car. Leave battery chargers plugged in during storage. The onboard computer (OBC) will automatically activate the charger when necessary.
    11.2. 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.*

    11.3. 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.**

12. To disconnect the batteries for storage:
    12.1. Disconnect B negative (-) battery cable that comes from the OBC and secure it in a way that ensures the cable will not come into contact with battery terminal.

RETURNING THE STORED ELECTRIC VEHICLE TO SERVICE

1. If necessary, connect batteries. **See Connecting the Batteries – Electric Vehicles on page 16.**
2. Fully charge batteries.
3. Adjust tires to recommended tire pressure. **See Vehicle Specifications – Electric Vehicles on page 70.**
4. Perform the Pre-Operation and Daily Safety Checklist on page 31 and the Performance Inspection on page 31.

STORAGE – GASOLINE VEHICLES

See General Warnings on page 13.

⚠ 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 20) the closed (OFF) position.**
- **Do not attempt to charge frozen batteries or batteries with bulged cases. Discard the battery. Frozen batteries can explode.**

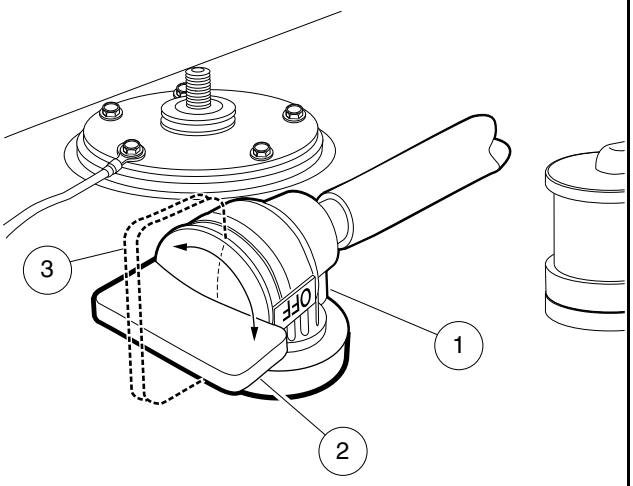
⚠ CAUTION

- **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 20)** 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 20)** to the closed (OFF) position and run the engine until fuel remaining in the carburetor and fuel lines is depleted and the engine stalls.
   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 15.**
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 66.**
8. Perform semiannual periodic lubrication. **See Periodic Lubrication Schedules on page 48.**
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.



1. Fuel Shut-off Valve 2. Closed (OFF) 3. Open (ON) NOTE: When selecting valve position, ensure that it is fully opened or fully closed.

450

Figure 20 Fuel Shut-off Valve

RETURNING THE STORED GASOLINE VEHICLE TO SERVICE

1. Restore fuel system to operation.
   1.1. Remove plug from the fuel tank vent **(Figure 34, Page 64)**.
   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 15.**
3. Completely open the fuel shut-off valve (1) **(Figure 20)**. 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 66.**
7. Perform the Pre-Operation and Daily Safety Checklist on page 31 and the Performance Inspection on page 31.

MAINTENANCE

See General Warnings on page 13.

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 31, the Performance Inspection on page 31, 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 16.**

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 20, Page 41) 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 15.**
- **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

See General Warnings on page 13.

⚠ WARNING

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

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.

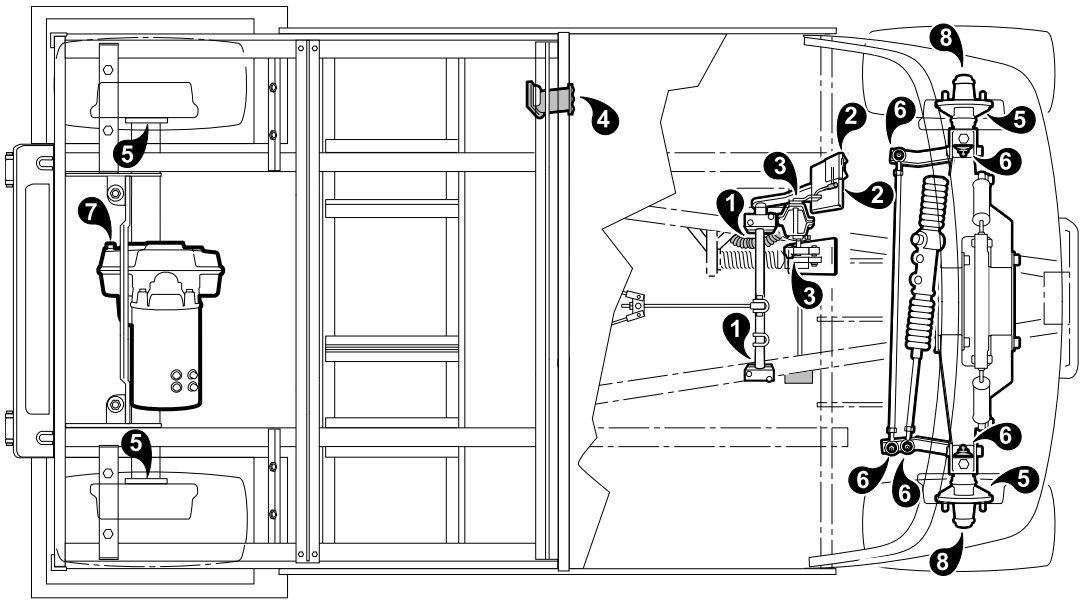
PERIODIC SERVICE SCHEDULE – ELECTRIC VEHICLES		
REGULAR INTERVAL	**SERVICE**	
Daily service by owner	Pre-Operation and Daily Safety Checklist	**See Pre-Operation and Daily Safety Checklist on page 31.**
	Performance Inspection	**See Performance Inspection on page 31.**
	Batteries	Charge batteries (after each daily use only).
Weekly service by owner	Batteries	Check electrolyte level. Add water if necessary. **See page 53.**
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 70.**
	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.
		Lubricate brake slides per Lubrication Schedule.
		Check brake cables for damage; replace if necessary.
		Check brake cable equalizer adjustment; adjust 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.
	Safety Decals	Check safety decals. Replace if damaged or illegible.

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 31.**
	Performance Inspection	**See Performance Inspection on page 31.**
Monthly service by owner or trained technician	Engine	Check engine oil level; change if necessary. **See Periodic Lubrication Schedules on page 48.** 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 66.**
	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 58.**
	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.
		Lubricate brake slides per Lubrication Schedule.
		Check brake cables for damage; replace as required.
		Check brake cable equalizer adjustment; adjust if necessary.
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.

PERIODIC SERVICE SCHEDULE – GASOLINE VEHICLES		
REGULAR INTERVAL	**SERVICE**	
	Safety Decals	Check safety decals. Replace if damaged or illegible.
Two year service by trained technician only (or every 200 hours of operation, whichever comes first)	Fuel filters	Replace. Dispose of used filters properly.

PERIODIC LUBRICATION SCHEDULES

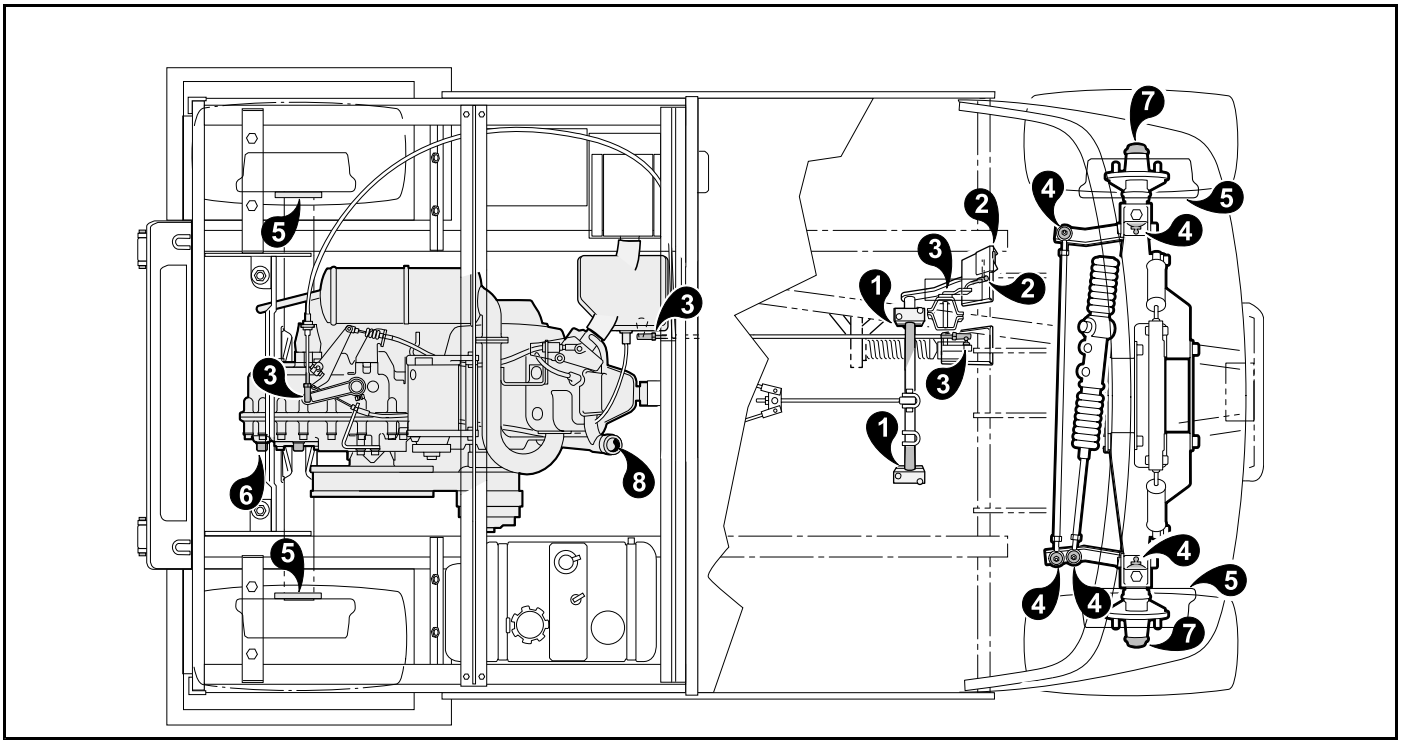
PERIODIC LUBRICATION SCHEDULE – ELECTRIC VEHICLES			
REGULAR INTERVAL	**SERVICE**	**LUBRICATION POINTS**	**RECOMMENDED LUBRICANT**
Semiannually by owner or trained technician (or every 50 hours of operation, whichever comes first)	Brake pedal shaft bearings	1	Dry Moly Lube (CC P/N 1012151)
	Brake linkage 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 (2 or 5 fittings depending on model year)	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 L) 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



90

Figure 21 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 (2 or 5 fittings depending on model year)	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 (0.8 L) 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 (0.95 L) without filter; 38 oz (1.12 L) with filter **(Figure 33, Page 62)**.



91

Figure 22 Lubrication Points – Gasoline Vehicles

BATTERIES – ELECTRIC VEHICLES

See General Warnings on page 13.

⚠ 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.**
- **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

- **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 52.**
- **Use only 4-gauge (AWG) wires with low-resistance terminals to replace battery wires on IQ Plus models.**

CAUTION

- **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

Water purity is the most important factor in the performance and lifespan of the vehicle batteries. Club Car has, therefore, placed an increased importance on battery maintenance beginning with Model Year 2014 Precedent vehicles.

Outlined below are four battery watering procedures, grouped into two categories: Preferred and Alternate methods. Club Car recommends the use of a deionizer or distilled water. Alternate methods of reverse osmosis or tap water are allowable but should be avoided since water quality can change from day to day depending on additives, water main leaks, etc.

Preferred Methods

- **Distilled Water:** Distilled water is the most common type of water used in batteries. Distilled water is created by boiling water, collecting the steam from the boiling, and allowing the steam to condense back into water. The distilling process results in a water source which is free of minerals that can lead to the degradation of battery performance and life.
- **Deionized Water:** Deionized water is created by inducing electrically charged resins that attract and bind to sodium, calcium, iron, copper, chloride, and bromide ions. The result of this electrical filtering is a purified water, which contains little to no mineral ions. To make sure the deionized water remains at a high quality, replace the filter in the deionizer per the manufacturer's recommendations.

  The Service Parts Department at Club Car offers two different deionizer systems: one for vehicles equipped with the Single Point Watering System (SPWS), CC P/N AM1240701 and the other for vehicles without SPWS, CC P/N AM10974.

Alternate Methods

- **Reverse Osmosis:**Reverse osmosis involves forcing water through a membrane that allows the water to pass while trapping the solids. The choice of membrane used determines the amount of solids or impurities which get trapped and hence the purity quality of the filtered water. In addition, the usage frequency of the membrane can also contribute to the filtered water quality. Due to the variance in water quality consistency, Club Car recommends the use of the deionizer or distilled water.
- **Tap Water:** While the use of tap water without filtering is an alternate method of battery watering, its use should be limited due to the levels of dissolved minerals and chemicals that can degrade battery performance and life. If unfiltered tap water is used, regular water analyses must be conducted to check for impurities. The following chart lists the maximum allowable minerals, solids, and contaminates in parts per million and their impact on battery performance. Water testing, however, is expensive, and water quality can change from day to day depending on additives, water main leaks, etc. Due to the cost and labor of performing water quality tests, Club Car recommends the use of distilled water or a deionizer.

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
Nitrites	5.0	Plate corrosion, loss of capacity, reduced life

IMPURITY	ALLOWABLE CONTENT (PARTS PER MILLION)	EFFECTS OF IMPURITY
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.**

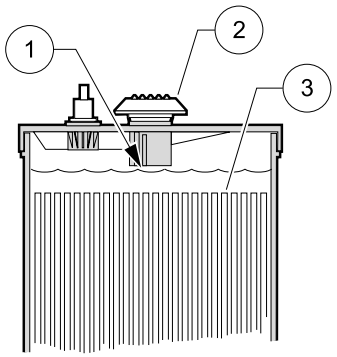
⚠ WARNING

- **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 1 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 23)**. 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.**



1. Level Indicator 2. Cap 3. Plates

Maintain electrolyte level from at least 1/2 inch (13 mm) above plates to 1/4 inch (6 mm) below level indicator.

17

Figure 23 Electric Battery Electrolyte Level

⚠ CAUTION

- **Do not overfill the batteries.**

NOTE: *A battery watering gun or bottle is available from your authorized Club Car dealer.*

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 55 in-lb (6.2 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 at least 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 (3.7 m)). 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 25, Page 56). 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 24, Page 56).**
- **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:**
  - **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.**

WARNING CONTINUED ON NEXT PAGE

⚠ WARNING

- **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.

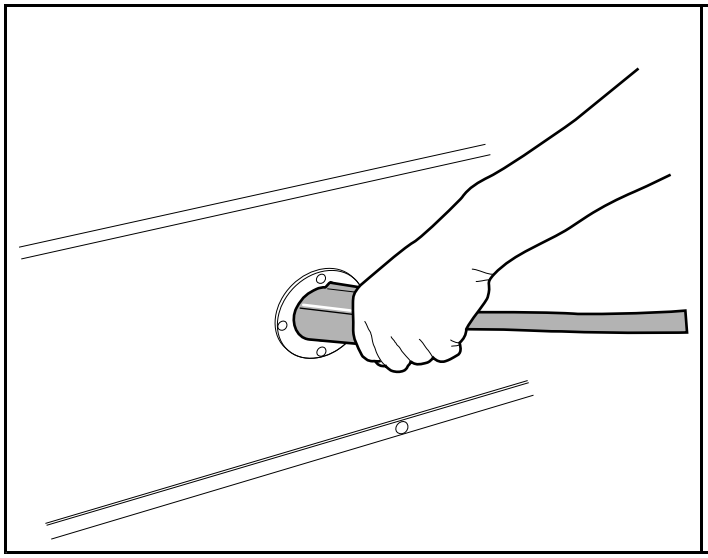
⚠ WARNING

- **Vehicles with a charger receptacle: Never modify wiring to bypass the gray sense lead fuse (Figure 26, Page 57).**

CHARGING BATTERIES

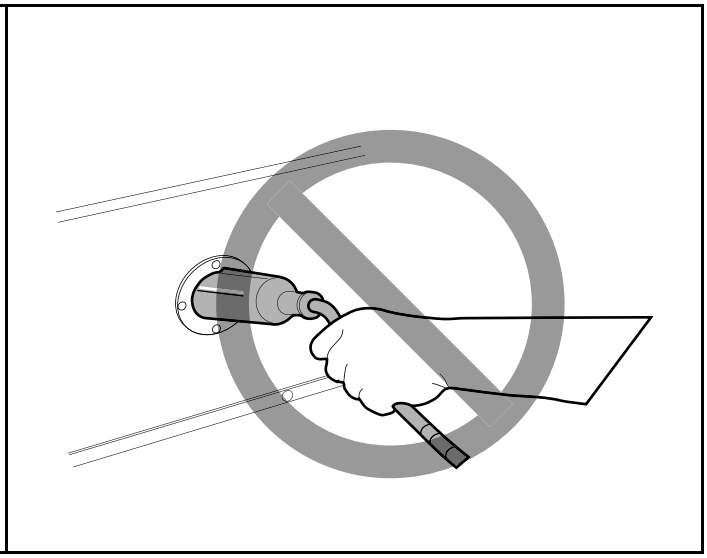
NOTE: *When temperatures fall below 65 °F (18.3 °C), batteries charged in unheated areas should be placed on charge as soon as possible after use. Batteries are warmest immediately after use, while cold batteries require more time to fully charge.*

- **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 24)***.



18A

Figure 24 Charger Receptacle



43

Figure 25 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.

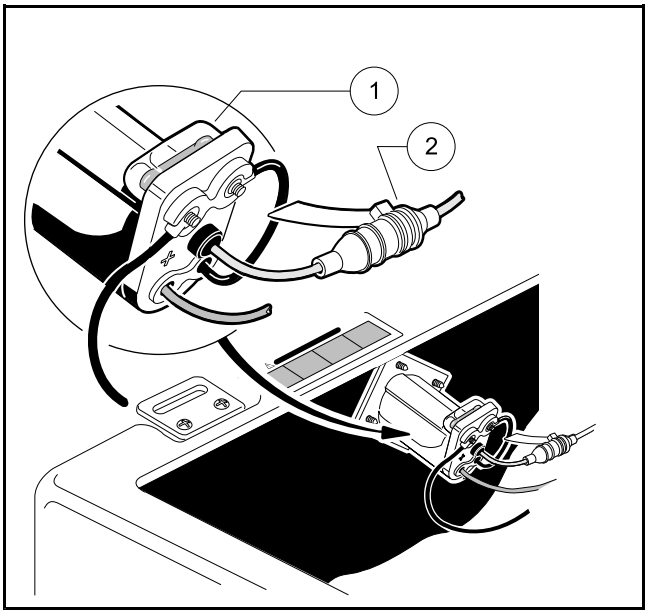
PLUG AND RECEPTACLE

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 26)**. If the charger does not turn on when the vehicle is placed on charge, inspect the fuse link.



20

Figure 26 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

See General Warnings on page 13.

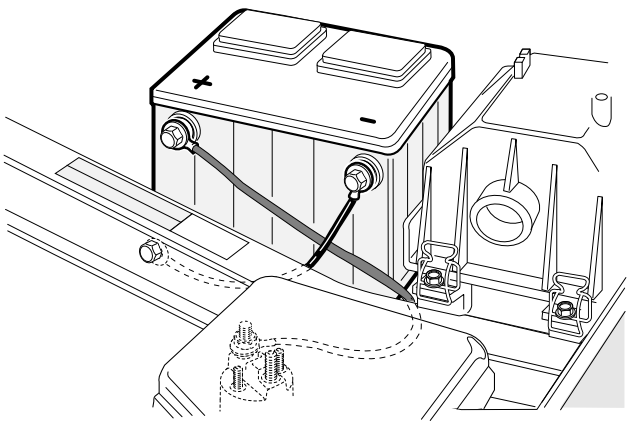
⚠ DANGER

- **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:**
  - **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

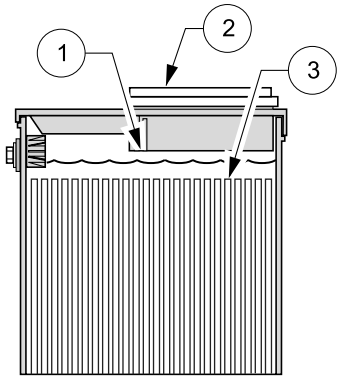
- **Do not jump-start a dead battery using another battery and jumper cables.**

The battery in a Club Car gasoline vehicle is a 12-volt, low-maintenance battery that requires infrequent watering **(Figure 27)**.



21

Figure 27 Battery



1. Level Indicator 2. Cap 3. Plates

Electrolyte level at least 1/2 inch (13 mm) above plates or to level indicator.

22

Figure 28 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 1 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

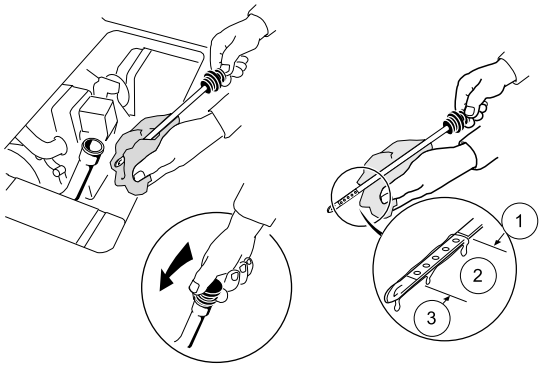
1. Remove the oil level dipstick from the oil filler tube, and wipe oil off dipstick (1) **(Figure 29)**. **See following CAUTION.**

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.*



1. Full level 2. Safe level 3. Low level.

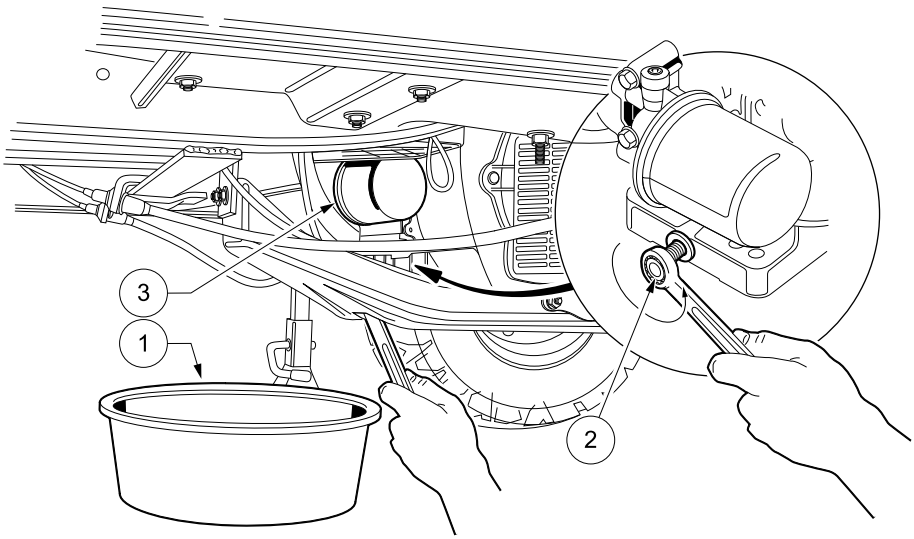
23

Figure 29 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 15.**
4. Position a pan designed for oil changes under the front drain plug **(Figure 30)**.



1. Drain pan 2. Drain plug 3. Oil filter.

25
Figure 30 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.**

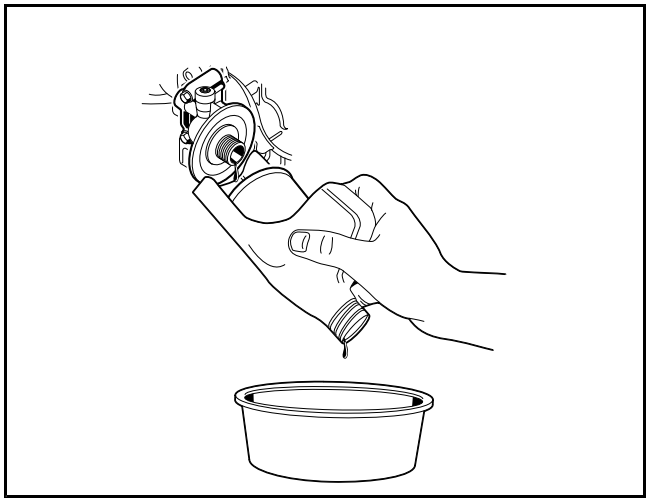
⚠ WARNING

- **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 30)**.
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 31)**. **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 31 Remove Engine Oil Filter

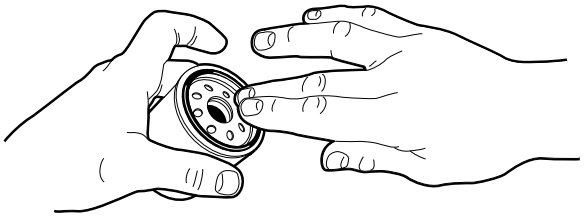
10. Use a clean rag and wipe the oil filter mounting bracket surface clean where the oil filter gasket seats.
11. Coat new oil filter gasket with clean engine oil and install the oil filter onto the engine oil filter port **(Figure 32)**. **See following NOTE.**

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 L) of oil per change. Refer to oil viscosity guidelines for selection of oil grade **(Figure 33)**. Replace the dipstick.

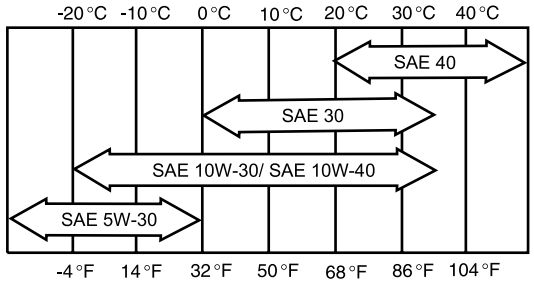
NOTE: *Gasoline Vehicles Only: Below 40 °F (4 °C), the use of SAE 30 may result in hard starting.*

Gasoline Vehicles Only: Above 80 °F (27 °C), the use of 10W-30 may cause increased oil consumption. Check oil level more frequently.



27

Figure 32 Coat Oil Filter Rubber Seal



213

Figure 33 Oil Viscosity Chart

14. Connect battery and spark plug wire(s). **See Connecting the Battery – Gasoline Vehicles on page 15.**

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 13.

⚠ 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.**
- **Be sure the fuel tank ground wire, located next to the fuel shut-off valve, is properly connected before fueling the vehicle.**
- **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 34).**
- **To avoid the possibility of fire, clean up any spilled fuel before operating the vehicle.**

NOTE: *Vehicles to be stored for extended periods should be prepared for storage as instructed.* ***See Preparing the Gasoline Vehicle for Extended Storage on page 40.***

1. Remove the fuel cap located on the passenger-side panel and fill the fuel tank with fresh unleaded gasoline only. **See preceding DANGER and following CAUTION.**

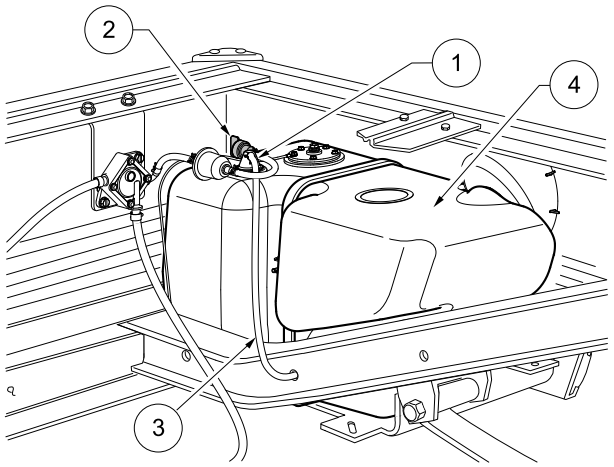
⚠ CAUTION

- **To allow for expansion, do not fill higher than 1 in. (2.54 cm) from the top of the fuel tank. Avoid spilling fuel.**

CAUTION

- **Use unleaded gasoline only.**
- **Whenever possible, avoid using oxygenated and blended fuels.**
- **Do not use any fuel with an alcohol content that exceeds 10% by volume (such as E15 and E85). Ethanol is an alcohol that readily absorbs moisture, causing corrosion of fuel system components. It also damages neoprene and other plastic and rubber components. Use of these fuels in this vehicle will void the warranty.**

2. Replace fuel cap on tank. Ensure cap is tightened securely (tighten until it clicks).



1. Vent 2. Fuel Shut-off Valve 3. Fuel Vent Line 4. Fuel Tank

89A

Figure 34 Fuel Tank

CLEANING THE VEHICLE

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

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 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

- **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

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
POWER SOURCE		
Engine: 4-cycle OHV, 351 cc, 10.4 Engine Horsepower (7.6 kW) rated @ 3600 RPM (per SAE J1349), single-cylinder, air-cooled, with pressure lubrication system.	•	•
Fuel system: Side-draft carburetor with float bowl, fixed jets, fuel filters, and impulse fuel pump	•	•
Governor: Automatic ground-speed sensing, internally geared in unitized transaxle	•	•
Ignition: Transistor electronic ignition with electronic RPM limiter	•	•
Unitized transaxle: Fully synchronized forward and reverse with neutral (11.8:1 forward, 17.1:1 reverse)	•	•
Electrical system: 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	•	•
Torque converter: Automatic, variable-speed, dry type	•	•
STEERING/SUSPENSION/BRAKES		
Steering: Self-adjusting rack and pinion	•	•
Suspension: Front and rear multi-leaf springs with dual hydraulic shocks	•	•
Brakes: Mechanical brake cable system to manually-adjusted drum brakes on all four wheels. Park brake is automatically released.	•	•
BODY/CHASSIS		
Frame/Chassis: Twin I-Beam welded aluminum	•	•
Side and rear body: All aluminum with a powder-coated steel box bed	•	
Side and rear body: All aluminum		•
Front body: ArmorFlex®	•	•
Front body finish: Automotive-grade paint	•	•
Tires: 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.
DIMENSIONS/WEIGHT		
Overall length	120.4 in. (305 cm)	
Overall width	51.3 in. (130 cm)	
Overall height (at steering wheel)	51.1 in. (129 cm)	
Overall height (at light bar)	75.3 in. (191 cm)	
Wheelbase	78.5 in. (199 cm)	
Ground clearance (under differential)	6.4 in. (16 cm)	
Ground clearance (under foot platform)	11.0 in. (27.9 cm)	
Front wheel tread	36.5 in. (92 cm)	
Rear wheel tread	41.3 in. (104 cm)	
Weight (standard vehicle with off-road tires (dry))	937 lb (425 kg)	

SPECIFICATIONS	XRT 900 GASOLINE	TURF 252 CARRYALL 252 GASOLINE
Forward speed	17 to 19 mph (27 to 31 km/h)	15 to 17 mph (24 to 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 (0.43 cm)	48.8 x 49.8 x 10.9 in. (124 x 126 x 28 cm) 15.3 cubic feet (0.43 cm)
Floorboard height	16.0 in. (40 cm)	
Seat height (at seat bottom)	28.0 in. (71 cm)	
Standard seating capacity	2	
Maximum passenger capacity	400 lb (180 kg)	
Bed load capacity (level surface only)	500 lb (227 kg)	
Vehicle rated capacity (level surface only)	900 lb (408 kg)	
LIQUID CAPACITIES		
Engine crankcase without filter	32 oz (0.95 L)	
Engine crankcase with filter	38 oz (1.12 L)	
Unitized transaxle	27 oz. (0.8 L)	
Fuel tank	5 gallons (19 L)	
TIRE PRESSURE		
Off-road tread	14 to 18 psig (97 to 124 kPa)	
Turf tread	18 to 20 psig (124 to 138 kPa)	
NOISE AND VIBRATION		
Drive-by noise level to operator Test method: EN 12053:2001	N/A	Noise: 71.2 dBA Uncertainty: 2 dBA
Vibration at driver's seat Test method: EN 13059:2002	N/A	Whole Body Vibration: 2.2 m/s^2 Uncertainty: 0.174 m/s^2

VEHICLE SPECIFICATIONS – CE MARK GASOLINE VEHICLES

SPECIFICATIONS	TURF 252 CARRYALL 252 GASOLINE
POWER SOURCE	
Engine: 4-cycle OHV, 351 cc, 10.4 Engine Horsepower (7.6 kW) rated @ 3600 RPM (per SAE J1349), single-cylinder, air-cooled, with pressure lubrication system.	•
Fuel system: Side-draft carburetor with float bowl, fixed jets, fuel filters, and impulse fuel pump	•
Governor: Automatic ground-speed sensing, internally geared in unitized transaxle	•
Ignition: Transistor electronic ignition with electronic RPM limiter	•
Unitized transaxle: Fully synchronized forward and reverse with neutral (11.8:1 forward, 17.1:1 reverse)	•
Electrical system: 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	•
Torque converter: Automatic, variable-speed, dry type	•
STEERING/SUSPENSION/BRAKES	
Steering: Self-adjusting rack and pinion	•
Suspension: Front and rear multi-leaf springs with dual hydraulic shocks	•
Brakes: Mechanical brake cable system to manually adjusted drum brakes on each wheel with automatic-release, foot-operated park brake (or optional manual-release, hand-operated park brake).	•
BODY/CHASSIS	
Frame/Chassis: Twin I-Beam welded aluminum	•
Side and rear body: All aluminum	•
Front body: ArmorFlex®	•
Front body finish: Automotive-grade paint	•
Tires: Heavy Duty All Terrain: tubeless, 6-ply rated Turf: tubeless, 4-ply rated	23 x 10.50 x 12 in.
DIMENSIONS/WEIGHT	
Overall length	120.4 in. (305 cm)
Overall width	51.3 in. (130 cm)
Overall height (at steering wheel)	51.1 in. (129 cm)
Overall height (at light bar)	75.3 in. (191 cm)
Wheelbase	78.5 in. (199 cm)
Ground clearance (under differential)	6.4 in. (16 cm)
Ground clearance (under foot platform)	11.0 in. (27.9 cm)
Front wheel tread	36.5 in (92 cm)
Rear wheel tread	41.3 in (104 cm)
Forward speed	15 to17 mph (24 to 27 km/h)
Governed RPM	2900 (±30)
Curb clearance circle (diameter)	21 ft·8 in. (660 cm)

SPECIFICATIONS	TURF 252 CARRYALL 252 GASOLINE
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)	(48.8 x 49.8 x 10.9 in.) 15.3 cubic feet 124 x 126 x 28 cm
Floorboard height	16.0 in. (40 cm)
Seat height (at seat bottom)	28.0 in. (71 cm)
Standard seating capacity	2
Unladen vehicle mass (with battery)	913 lb (414 kg)
Maximum passenger capacity	400 lb (180 kg)
Maximum payload capacity (cargo load plus gross trailer weight: level surface only)	500 lb (227 kg)
Maximum vehicle gross weight (fully loaded, accessories included)	1813 lb (822 kg)
Standard seating capacity	2
CLIMATIC EXTREMES	
Operating Temperature Range	4 to 104 °F (–20 to 40 °C)
LIQUID CAPACITIES	
Engine crankcase without filter	32 oz (0.95 L)
Engine crankcase with filter	38 oz (1.12 L)
Unitized transaxle	27 oz (0.8 L)
Fuel tank	5 gallons (19 L)
TIRE PRESSURE	
Off-road tread	14 to 18 psig (.97 to 124 kPa)
Turf tread	18 to 20 psig (124 to 138 kPa)
NOISE AND VIBRATION	
Drive-by noise level to operator Test method: EN 12053:2001	Noise: 71.2 dBA Uncertainty: 2 dBA
Vibration at driver's seat Test method: EN 13059:2002	Whole Body Vibration: 2.2 m/s^2 Uncertainty: 0.174 m/s^2

VEHICLE SPECIFICATIONS – ELECTRIC VEHICLES

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

SPECIFICATIONS	XRT 900 ELECTRIC	TURF 252 CARRYALL 252 ELECTRIC
Rear wheel tread	41.3 in. (104 cm)	
Weight: Standard electric vehicle	1322 lb (600 kg)	1322 lb (600 kg)
Forward speed	17 to 19 mph (27 to 31 km/h)	15 to 17 mph (24 to 27 km/h)
Curb clearance circle (diameter)	21 ft.-8 in. (660 cm)	
Turning radius per SAE J 695	130 in. (330 cm)	
Load bed height	31.5 in. (80 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	28.0 in. (71 cm)	
Standard seating capacity	2	
Maximum passenger capacity	400 lb (180 kg)	
Bed load capacity (level surface only)	500 lb (227 kg)	
Vehicle rated capacity Level surface only	900 lb (408 kg)	
Bed load capacity (level surface only)	500 lb (227 kg)	
LIQUID CAPACITIES		
Transaxle	22 oz. (0.67 L)	
TIRE PRESSURE		
Off-road tread	14 to 18 psig (97 to 124 kPa)	
Turf tread	18 to 20 psig (124 to 138 kPa)	
NOISE AND VIBRATION		
Drive-by noise level to operator Test method: EN 12053:2001	N/A	Noise: 64.2 dBA Uncertainty: 2 dBA
Vibration at driver's seat Test method: EN 13059:2002	N/A	Vibration : 2.3 m/s^2 Uncertainty: 0.23 m/s^2

VEHICLE SPECIFICATIONS – CE MARK ELECTRIC VEHICLES

SPECIFICATIONS	TURF 252 CARRYALL 252 ELECTRIC
POWER SOURCE	
Drive motor: Direct drive, 48 volts DC, shunt wound, 3.7 hp	•
Transaxle: Double reduction helical gear with 12.3:1 direct drive axle	•
Electrical system: 48 volts DC, reduced speed reverse	•
Batteries: High capacity, deep cycle, 6-volt, 160 min. capacity	•
Charger: Automatic, 17 amp; UL and CSA listed	•
STEERING/SUSPENSION/BRAKES	
Steering: Self-adjusting rack and pinion	•
Suspension: Front mono-leaf and rear multi-leaf springs with dual hydraulic shocks	•
Brakes: Mechanical brake cable system to manually adjusted drum brakes on each wheel with automatic-release, foot-operated park brake (or optional manual-release, hand-operated park brake).	•
BODY/CHASSIS	
Frame/chassis: Twin I-Beam welded aluminum	•
Side and rear body: All aluminum	•
Front body: ArmorFlex®	•
Front body finish: Automotive-grade paint	•
Tires: Heavy Duty All Terrain: tubeless, 6-ply rated Turf: tubeless, 4-ply rated	23 x 10.50 x 12 in.
DIMENSIONS/WEIGHT	
Overall length: Standard flatbed configuration	120.4 in. (305 cm)
Overall width	51.3 in. (130 cm)
Overall height: (at steering wheel)	51.1 in. (129 cm)
Overall height (at light bar)	75.3 in. (191 cm)
Wheelbase	78.5 in. (199 cm)
Ground clearance (under differential)	6.4 in. (16 cm)
Ground clearance (under foot platform)	11.0 in. (27.9 cm)
Front wheel tread	36.5 in. (92 cm)
Rear wheel tread	41.3 in. (104 cm)
Forward speed	15 to 17 mph (24 to 27 km/h)
Curb clearance circle (diameter)	21 ft.-8 in. (660 cm)
Turning radius per SAE J 695	130 in. (330 cm)
Load bed height	31.5 in. (80 cm)
Load bed size (box bed inside dimensions)	48.8 x 49.8 x 10.9 in. 15.3 cubic feet (124 x 126 x 28 cm)
Floorboard height	16.0 in. (40 cm)

SPECIFICATIONS	TURF 252 CARRYALL 252 ELECTRIC
Seat height	28.0 in. (71 cm)
Standard seating capacity	2
Unladen vehicle mass (with batteries)	1510 lb (685 kg)
Maximum passenger capacity	400 lb (180 kg)
Maximum payload capacity(cargo load plus gross trailer weight: Level surface only)	500 lb (227 kg)
Maximum vehicle gross weight (fully loaded, accessories included)	2410 lb (1093 kg)
CLIMATIC EXTREMES	
Operating Temperature Range	4 to 104 °F (– 20 to 40 °C)
LIQUID CAPACITIES	
Transaxle	22 oz (0.67L)
TIRE PRESSURE	
Off-road tread	14 to 18 psig (97 to 124 kPa)
Turf tread	18 to 20 psig (124 to 138 kPa)
NOISE AND VIBRATION	
Drive-by noise level to operator Test Method: EN12053:2001	Noise: 64.2 dBA Uncertainty: 2 dBA
Vibration at driver's seat Test Method: EN13059:2002	Vibration: 2.3 m/s^2 Uncertainty: 0.23 m/s^2

REAR FENDER INSTALLATION

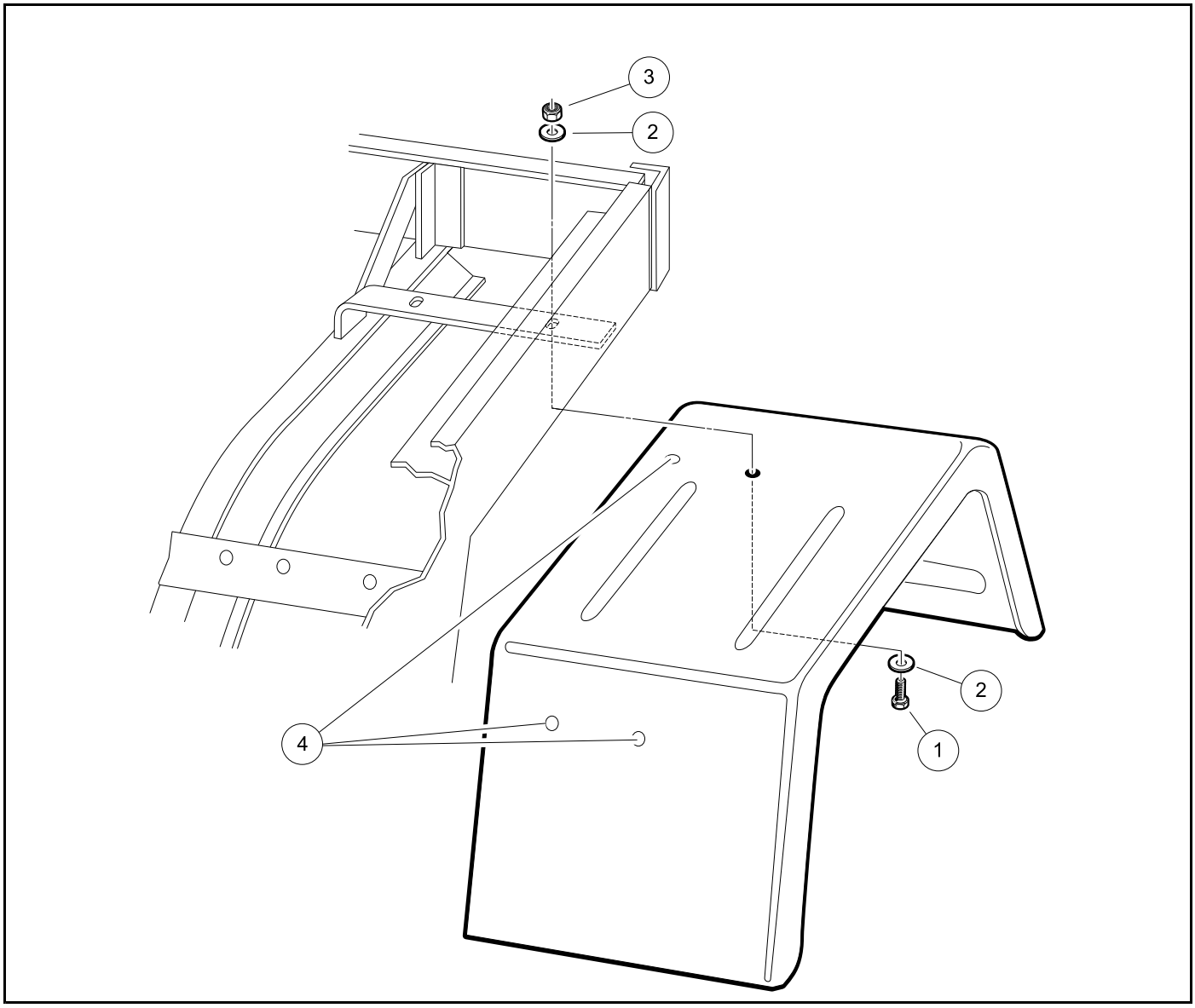
1. Unload the cargo bed.
2. Open the cargo bed and engage the prop rod.

⚠ 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.*

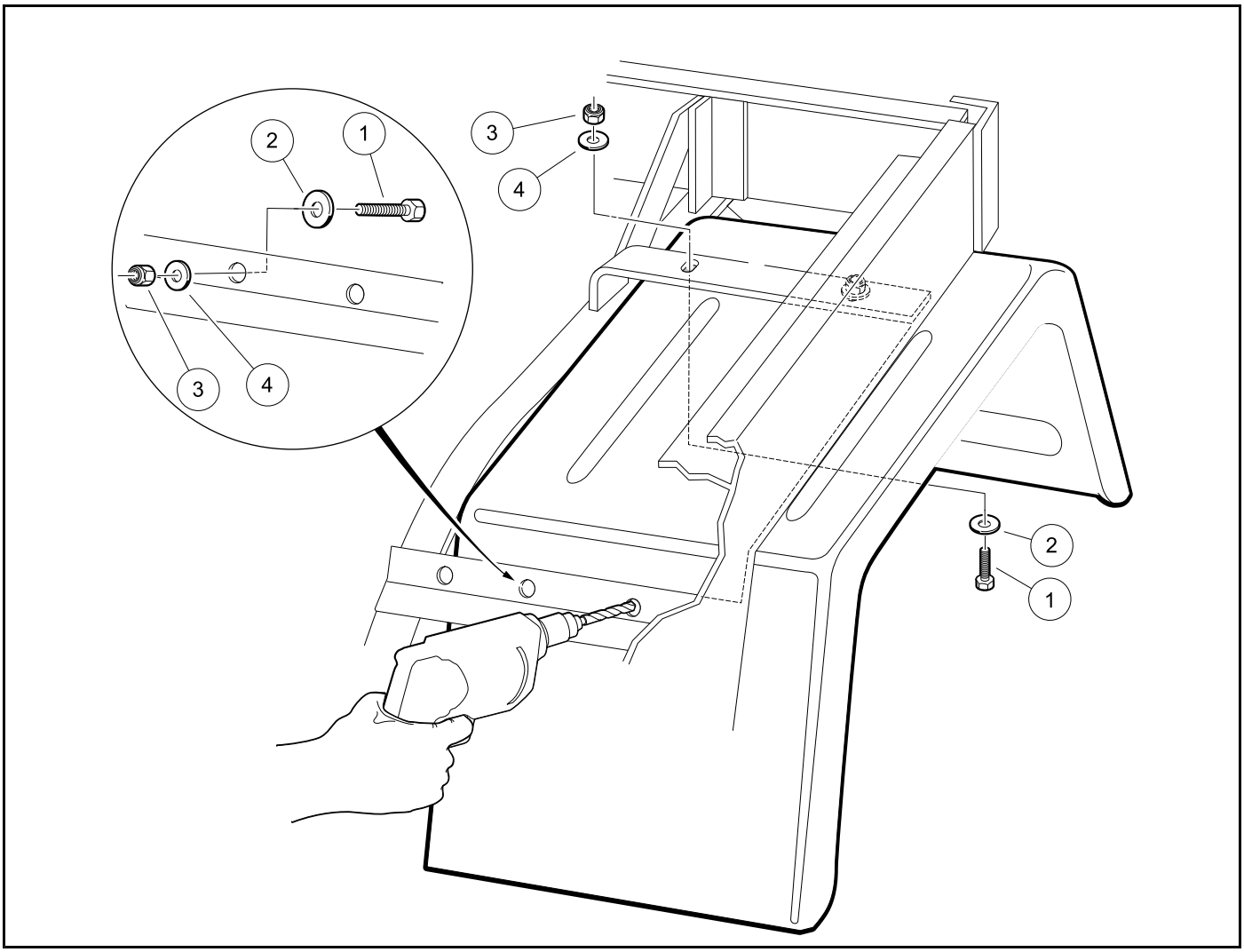
3. Position a fender in the vehicle, align the hole in the fender with the slot in the frame as shown and install bolt (1), large flat washers (2), and locknut (3) **(Figure 35)**. Finger-tighten only at this time.



93
Figure 35 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 36)**.
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 36)**.
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 36)**.
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 through 8 for the other rear fender.

10. Lower cargo bed.



94
Figure 36 Drill Additional Mounting Holes

WHEEL AND TIRE INSTALLATION

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 6 in. (15.24 cm). **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

CLUB CAR® LIMITED WARRANTY FOR TRANSPORTATION AND UTILITY VEHICLES

WARRANTY

CLUB CAR, LLC (“CLUB CAR”) hereby warrants to the Original Purchaser or Lessee, as those terms are defined herein, and subject to the provisions, limitations and exclusions in this limited warranty, that its new vehicle or new component purchased from CLUB CAR or an Authorized Dealer or Distributor shall be free from defects in material and workmanship under normal use and service for the periods stated below, subject to the provisions, limitations and exclusions in this limited warranty.

This limited warranty covers material, workmanship and repair labor cost as to those items specifically listed below for the periods specified. Such repair labor shall be performed only by CLUB CAR, its Authorized Dealers or Distributors, or a service agency approved by CLUB CAR. For repairs made by qualified technicians other than CLUB CAR’s factory technicians or an Authorized Dealer or Distributor, CLUB CAR will provide only the replacement parts or components.

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.

TO THE ORIGINAL OWNER ONLY (NON-TRANSFERABLE)	TERMS COVERED	HOURS/ ENERGY UNITS COVERED
LIMITED TWO YEAR: Engine assembly, unitized transaxle assembly (gasoline vehicle), starter/generator (gasoline vehicle), motor, transaxle assembly (electric vehicle), main frame assembly, bed box hydraulic dump kit, cab assembly and doors, and Driving Range Protective Enclosure.	2 YEARS	2000
LIMITED ONE YEAR: Solenoid, MCOR, limit switches, voltage regulators, F&R switches, brake components, wiring harness, electrical switches, canopy systems, seats, pedal group assembly, body, portable refreshment center and all original equipment options and accessories supplied by CLUB CAR and all remaining components of the vehicle not specified otherwise.	1 YEAR	1000
6-VOLT BATTERY (STANDARD DUTY)	4 YEARS	18000
6-VOLT BATTERY (HEAVY DUTY)	4 YEARS	20000
8-VOLT BATTERY (STANDARD/HEAVY DUTY)	4 YEARS	16000
ONBOARD COMPUTER	4 YEARS	16000
CONTROLLER	4 YEARS	16000
BATTERY CHARGER	4 YEARS	

EXCLUSIONS

Excluded from any CLUB CAR warranty is damage to a vehicle or component resulting from a cause other than a defect including poor maintenance, neglect, abuse, accident and collision, maintenance adjustments, unreasonable or unintended strain or use, improper installation of accessories, installation of parts or accessories that are not original equipment including Club Car approved or non-approved GPS systems, non-approved alteration and acts of God. Also excluded from any CLUB CAR warranty are all fuses, filters, decals (except safety decals), lubricants, routine wear items such as the charger plug and receptacle, engine mounts, mats, pads, spark plugs, light bulbs, brake shoes, belts, brushes, bushings, drive buttons, cosmetic deterioration, and items that deteriorate, fade or fail due to exposure or ordinary wear and tear.

The provisions of this limited warranty shall not apply to failure due to:

1. Abuse such as overcharging, undercharging, improper fluid levels, use of contaminated water in batteries (See “Water Quality” in owner’s manual), loose wiring and fasteners, or rusted or corroded hardware.

2. Lack of proper maintenance such as preventive maintenance checks, proper rotation of vehicles in a fleet application, maintaining proper tire pressure and alignment and tightening loose wire connections as outlined in the owner's manual.
3. Damages caused by improper installation of the component.
4. Neglect, breakage, freezing, fire, explosion, wreckage, melted terminal posts, the addition of any chemical, or the operation of the battery in an uncharged condition (below half charge 1.200 specific gravity); the installation of the batteries in reverse or recharging in reverse, breakage of containers, covers, or terminal post, or batteries used in applications for which they were not designed.
5. A battery damaged by a defective charger or batteries in vehicles that do not receive proper charging.
6. Every vehicle must have an operational charger on its own circuit. (Number of operational chargers must equal the number of operational vehicles.)
7. Vehicles charged by systems other than the CLUB CAR Charger.
8. Semiconductor parts such diodes and fuses that are vulnerable to electrical overloads (including lightning) beyond the control of CLUB CAR.
9. Charger DC cord set with plug, which is a wear item and subject to user abuse.
10. Use of gasoline containing more than 10% ethanol.

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 vehicle or components such as batteries, computer, controller or electrical device are suitable for use in any application other than in its products. As in the use of any vehicle, batteries, computer, controller or electrical device, a prudent owner will read and study the owner's manual, the operator instructions and the warning labels; and will exercise due care in working on or around vehicles, batteries or electrical devices.

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

VOIDING OF WARRANTY

THIS AND ANY OTHER WARRANTY SHALL BE VOID IF THE VEHICLE OR COMPONENT 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 CAR TO CAUSE IT TO PERFORM OUTSIDE CLUB CAR SPECIFICATIONS. THE WARRANTY IS LIKEWISE VOID IF THE VEHICLE 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.

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. CLUB CAR reserves the right to test and recharge any component returned for adjustment. If CLUB CAR elects to repair the vehicle or component, it may provide factory-reconditioned parts or components. All parts and components replaced under warranty shall become the property of CLUB CAR.

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 ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE SOLE 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, 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.

In the event that another pre-printed warranty document, certificate or both 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 to both this limited warranty statement and, to the maximum extent permitted by law, to each Additional Warranty Document.

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.

HOW TO MAKE A WARRANTY CLAIM

To make a warranty claim under this limited warranty, you must present the vehicle or defective component with evidence of proof of purchase date and number of energy units (if applicable) to an authorized CLUB CAR dealer.

For warranty-related communication, contact Warranty Services, Club Car, 4125 Washington Rd., Evans, GA 30809, USA, 706.863.3000.

WARNING

Any modification or change to the vehicle that affects the electrical system, stability or handling of the vehicle, or increases maximum vehicle speed beyond factory specifications, could result in severe personal injury or death.

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 2014 or newer 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.

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.

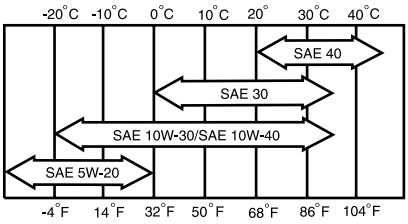
API Service Classification:SC, SD, SE, SF, SG, or SH.

⚠ 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.

EC DECLARATION OF CONFORMITY (SAMPLE DOCUMENT)

When properly configured, the vehicle complies with the listed Directives.

EC DECLARATION OF CONFORMITY – ELECTRIC VEHICLES		
	DESCRIPTION OF MACHINERY	**SERIAL NUMBER PREFIX**
	DS Electric Golf Cars	AQ
	Carryall Electric Utility Vehicles	XM, FD, QB, JL, JR
	Precedent Electric Golf Cars	PV, PU, PH, PD
	Precedent Electric Utility Vehicles	PJ
	Transporter Electric Utility Vehicles	JS, JP
	Turf Electric Utility Vehicles	HD, QT, JK
	Villager Electric Utility Vehicles	QS, QE
	XRT Electric Utility Vehicles	JM
Complies with Directive:		
2006/42/EC Machinery	2006/66/EC Battery	2004/108/EC Electromagnetic Compatibility Standards Used for Verification: EN 61000-6-2, EN 61000-6-4
Manufacturer:		
Club Car, LLC 4125 Washington Road Evans, Georgia 30809 USA	Club Car Ingersoll Rand Alma Court Building, Lenneke Marelaan 6 B-1932 Sint-Stevens-Woluwe, Belgium	

EC DECLARATION OF CONFORMITY – GASOLINE AND DIESEL VEHICLES		
	DESCRIPTION OF MACHINERY	**SERIAL NUMBER PREFIX**
	DS Gas Golf Cars	AG
	Carryall Gas Utility Vehicles	XL, ZG, AF, FG, PG, EG, QG, JU
	Carryall Diesel Utility Vehicles	SD, RF
	Precedent Gas Golf Cars	CF, PR
	Precedent Gas Utility Vehicles	PF
	Transporter Gas Utility Vehicles	JT, JQ
	Turf Gas Utility Vehicles	HG, RG, XG, SG, JV
	Villager Gas Utility Vehicles	KG, MG
Complies with Directive:		
2006/42/EC Machinery	2006/66/EC Battery	
Manufacturer:		
Club Car, LLC 4125 Washington Road Evans, Georgia 30809 USA	Club Car Ingersoll Rand Alma Court Building, Lenneke Marelaan 6 B-1932 Sint-Stevens-Woluwe, Belgium	

BC56471

Publication Part Number 103814506

Edition Code 0710E0613D

103814506

Club Car, LLC
P.O. Box 204658
Augusta, GA 30917-4658
USA

Web www.clubcar.com
Phone 1.706.863.3000
1.800.ClubCar
Int'l +1 706.863.3000
Fax 1.706.863.5808