

# VILLAGER 8 ELECTRIC Operators Manual



APPLICABLE TO VILLAGER 8 ELECTRIC VEHICLES WITH SERIAL PREFIX OF CI



## INTRODUCTION

## **VEHICLE OWNERSHIP**

Congratulations! The Club Car brand is widely recognized as the industry leader in vehicle efficiency and long-lasting value. Read, understand, and obey the technical content in this manual to protect your investment and provide years of reliable vehicle operation.

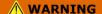
Read, understand, and obey all instructions and safety precautions in this manual to prevent the risk of personal injury or property damage.

Club Car recommends owners that rent or loan vehicles make sure operators read this manual before vehicle operation.

Club Car recommends owners register their vehicles immediately after purchase. The previous owner must include this manual with the vehicle when sold to a new owner. Registration of the vehicle will make sure Club Car is able to communicate necessary information directly to owners. Send your name, address, and serial number of the vehicle to:

Club Car, LLC
Attention: Vehicle Registration
P.O. Box 204658
Augusta, Georgia 30917-4658
United States Of America

## **CALIFORNIA PROPOSITION 65**



OPERATING, SERVICING AND MAINTAINING A PASSENGER VEHICLE OR OFF-ROAD VEHICLE CAN EXPOSE YOU TO CHEMICALS INCLUDING **ENGINE EXHAUST, CARBON MONOXIDE,** PHTHALATES, AND LEAD, WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE **CANCER AND BIRTH DEFECTS OR OTHER** REPRODUCTIVE HARM. TO MINIMIZE **EXPOSURE, AVOID BREATHING EXHAUST, DO** NOT IDLE THE ENGINE EXCEPT AS NECESSARY. SERVICE YOUR VEHICLE IN A WELL-**VENTILATED AREA AND WEAR GLOVES OR** WASH YOUR HANDS FREQUENTLY WHEN SERVICING YOUR VEHICLE. FOR MORE INFORMATION GO TO WWW.P65WARNINGS. CA.GOV/PASSENGER-VEHICLE.

## APPROVED DEALERS AND DISTRIBUTORS

Club Car's customer support system offers fast and courteous service. Speak with your dealer or distributor for:

- Accessories
- Publications
- Replacement Parts

- Technical Advice
- Warranty Work



To find your nearest dealer or distributor:

- Visit www.clubcardealer.com
- Scan the dealer locator Quick Response (QR) code

## **COMPANY CONTACT INFORMATION**

Send written correspondence to:

Club Car, LLC
Attention: Marketing Services
P.O. Box 204658
Augusta, Georgia 30917-4658
United States Of America

## SATISFACTION AND FEEDBACK

Let your voice be heard!

Your feedback will help improve our publications. You can access the survey through any internet-connected device with a web browser. The survey is available in many different languages.



Scan the Quick Response (QR) code or type the web address http://bit.ly/1w9uFMh to complete the survey.



## **NOTICES**

## **VEHICLE MODEL AND SERIAL NUMBER**

The vehicle serial number is located on a bar code decal installed near the accelerator.

- 1. A two-letter code that identifies the vehicle model.
- 2. A four-digit code that identifies the model year and production week the vehicle was assembled.
- 3. A unique six-digit number given to each vehicle built within a specified model year.



## LIABILITY AND VEHICLE DESIGN CHANGES

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.

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

This manual is the original instructions provided by the manufacturer if in English. This manual is a translation of the original instructions if in any language other than English.

#### **VEHICLE MODIFICATIONS**



MODIFICATIONS OR CHANGES TO THE VEHICLE THAT AFFECT THE OCCUPANT RETENTION, ELECTRICAL SYSTEM, STABILITY OR HANDLING OF THE VEHICLE, OR INCREASES THE MAXIMUM VEHICLE SPEED CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH.



MODIFICATIONS TO THE VEHICLE MUST NOT COMPROMISE COMPLIANCE WITH STATE OR FEDERAL REGULATIONS.

Modifications made to vehicles or installation of accessories that are not approved by Club Car may adversely affect the safe operation and performance of the vehicle. These modifications include, but are not limited to lift kits, seating changes, increased speed and cargo capacity. Club Car does not recommend any modification of this vehicle except kits and upgrades specifically designed and offered by Club Car. However, if the vehicle is modified, the modifier shall:

- 1. arrange for the modification to be designed, tested and implemented by an engineer with expertise in vehicles and their safety;
- 2. maintain a permanent record of the design, testing and implementation of the modification;
- 3. make appropriate changes to the capacity, plate(s), decals, and operation and maintenance manuals; and
- 4. apply a permanent and readily visible label on the vehicle stating the vehicle has been modified with the date of the modification and the name of the entity that made the modification.

The entity making any modification becomes the original equipment manufacturer of the modified vehicle, assumes liability for the vehicle, and has the responsibilities listed above.

Modifications may void the warranty. Refer to the warranty for more details.



## **VEHICLE WARRANTY**

Warranty information is located in the warranty section of this manual. No other expressed or implied warranties are contained herein.

Your dealer or distributor examined the vehicle before it was delivered to you. The dealer or distributor will also supply you a copy of the completed vehicle warranty registration form.

## **GOVERNMENTAL AND INDUSTRY STANDARDS**

## **U.S.A. FEDERAL VEHICLE SAFETY STANDARDS**

The configuration of this vehicle does not comply with United States Of America Federal Motor Vehicle Safety Standards (FMVSS) for automobiles and FMVSS 500 for low-speed vehicles as it existed on the date the vehicle was shipped from the Club Car manufacturing facility.

## **CANADIAN STANDARD ICES-002**

This vehicle complies, when marked with an ICES decal, with CAN ICES-2 / NMB-2 as it was on the date the vehicle was shipped from the Club Car manufacturing facility.

## **EUROPEAN UNION VIBRATION AND NOISE PREN 15997**

European Union specification prEN 15997 was used to measure the vibration and noise levels of the vehicle. The vibration and noise values are recorded in the vehicle specification section of this manual.

## **EUROPEAN UNION DIRECTIVES**

This vehicle, when marked with a CE decal, complies with:

- 2014/30/EU
- 2006/42/EC
- 2006/66/EC
- 2014/35/EU

The following standards were used:

- EN ISO 12100:2010
- EN ISO 13857:2008
- EN 60204-1
- EN 61000-6-2:2005
- EN 61000-6-4:2007/A1:2011
- EN 60335-2-29:2004

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# **SAFETY INFORMATION**

## **GENERAL SAFETY INFORMATION**

This vehicle is designed and intended to transport people and cargo on improved or semi-improved surfaces for applications including commercial, industrial and resorts. Always adhere to local laws and regulations pertaining to the use of the vehicle.

Only operate this vehicle as described in this manual. Speak with your local dealer or distributor for changes, additions, or modifications that are necessary to comply with local laws and regulations pertaining to the use of the vehicle.

Any vehicle can be used in a variety of usages outside of the manufacturer's intent. Club Car cannot anticipate and warn for every possible usage condition. Therefore, the operator must exercise good sense and judgement and must operate the vehicle in an appropriate manner for the way in which the vehicle is being used.

## **PRACTICE SAFETY**



Signal words (DANGER, WARNING, CAUTION, and NOTICE) and safety messages are in this manual and on safety decals. Read, understand, and obey all instructions, safety precautions, and safety decals before vehicle operations.

Replace missing, damaged, or unreadable safety decals immediately to prevent possible property damage, personal injury, or death. Purchase replacement safety decals from your dealer or distributor.

Know and understand all laws and regulations for vehicle operation in your area.

Speak with your dealer or distributor if you have questions about material contained in this manual or the vehicle.

#### **SAFETY SIGNAL WORDS**

Signal words (DANGER, WARNING, CAUTION, and NOTICE) and safety messages are in this manual and on safety decals. Read, understand, and obey all instructions, safety precautions, and safety decals before vehicle operations.

Safety messages are necessary and must be obeyed.



The safety alert symbol is used to alert you to possible personal injury hazards. Obey all safety messages that follow this symbol to prevent possible injury or death.

SAFETY SIGNAL WORD	SIGNIFICANCE
<b>▲ DANGER</b>	A DANGER identifies a hazardous situation which will result in death or serious injury.
<b>△ WARNING</b>	A WARNING identifies a hazardous situation which could result in death or serious injury.
<b>△ CAUTION</b>	A CAUTION identifies a hazardous situation which could result in minor or moderate injury.
NOTICE	A NOTICE identifies a hazardous situation which could result in property damage.

## **SAFETY COMMITTEE**

If the vehicle is rented or part of a fleet, Club Car recommends a safety committee. The primary concern of the safety committee is safe vehicle operation.

Safety committee objectives include:

- Approve vehicle operation areas.
- Identify all hazards.
- Identify who is approved to operate the vehicle.
- Keep the vehicles in a safe and serviceable condition.
- Supply instructions on safe vehicle operation.
- Visually show all hazards.

## VEHICLE SAFETY INFORMATION



FAILURE TO OBEY INSTRUCTIONS IN THIS MANUAL CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. BEFORE YOU OPERATE THE VEHICLE OR DO THE SERVICING OF THE VEHICLE, READ AND FULLY UNDERSTAND THE OWNER'S MANUAL.

CLUB CAR VEHICLES ARE NOT RATED FOR OPERATION IN EXPLOSIVE AREAS. THE VEHICLE OR BATTERY CHARGER CAN CAUSE FLAMMABLE MATERIAL AND FUME IGNITION. DO NOT OPERATE THE VEHICLE OR BATTERY CHARGER NEAR FLAMMABLE MATERIALS AND FUMES.

THE VEHICLE DOES NOT GIVE PROTECTION FROM LIGHTNING, FLYING OBJECTS, OR OTHER STORM RELATED HAZARDS. DO NOT OPERATE THE VEHICLE IN STORMS. STOP THE VEHICLE. GET OUT OF THE VEHICLE IMMEDIATELY AND FIND A SHELTER IN ACCORDANCE WITH APPLICABLE SAFETY GUIDELINES FOR YOUR LOCATION IF IN A STORM.

UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. MAKE SURE THAT CHILDREN ARE ALWAYS SUPERVISED IN AND AROUND THE VEHICLE.

DO NOT OPERATE THE VEHICLE UNDER THE INFLUENCE OF ALCOHOL, DRUGS, MEDICATIONS, OR WHILE DISTRACTED.



ELECTRICAL SHORTS CAN CAUSE A FIRE, ELECTRICAL SHOCK, SERIOUS PERSONAL INJURY, OR DEATH. PREVENT CONTACT BETWEEN POSITIVE VOLTAGE AND THE GROUND CIRCUIT. USE INSULATED TOOLS.

TO HELP PREVENT BEING HIT, DO NOT STAND IN FRONT OF OR BEHIND THE VEHICLE.

ONLY TWO PERSONS PER BENCH SEAT. ONLY RIDE ON THE BENCH SEAT. DO NOT LET PEOPLE RIDE ON ANY PART OF THE VEHICLE THAT IS NOT EQUIPPED WITH A SEAT. DO NOT LET A PASSENGER HOLD A CHILD IN HIS OR HER LAP WHILE THE VEHICLE MOVES.

ONLY TRAINED TECHNICIANS SHOULD SERVICE OR REPAIR THE VEHICLE. 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.

## **VEHICLE SAFETY AND COMPLIANCE DECALS**

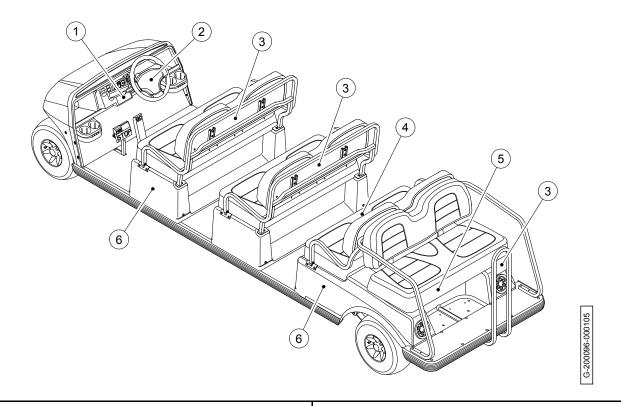


MAKE SURE ALL OF THE SAFETY AND OPERATION DECALS ARE IN THE CORRECT LOCATION ON THE VEHICLE. REPLACE THE SAFETY AND OPERATION DECALS THAT ARE MISSING OR DAMAGED.

Understand and obey all safety decals. The instructions on these safety decals must be followed in order to prevent the risk of dangerous personal injury or property damage.

Use a soft moist cloth to clean the decals. Do not use solvents, gasoline, or other chemicals to clean the decals. Do not pressure wash decals.





## **⚠ WARNING**

## UNINTENDED MOVEMENT, ROLLOVERS, OR FALLING OUT CAN CAUSE SERIOUS INJURY OR DEATH.

- Vehicle to be operated by licensed and authorized persons only.
  Use in authorized area only. Do not operate on public roads.
  Two (2) persons per bench seat maximum.

- Operate from driver's seat only.
  Do not start vehicle until all occupants are fully seated.

- Do not start vehicle until all occupants are fully seated.
  Drive slowly in turns and straight up and down slopes.
  Remain fully seated while moving.
  Hold on and keep entire body inside vehicle while moving.
  Do not leave children unattended in vehicle at any time.
  Children requiring a child safety seat must not ride in vehicle.
  Never operate under the influence of alcohol or drugs.
- Never attempt jumps and avoid extreme braking in reverse.

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## **OPERATING INSTRUCTIONS**

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

- TO OPERATE
   Ensure wheels are turned in desired direction of travel and path is clear.
- Turn key to ON.
  Set the FNR control to FORWARD (F) or REVERSE (R) only when Disengage the park brake.

  Vehicle will start moving when accelerator pedal is pushed.
  Slowly push the accelerator pedal to increase speed.

- During operation, a beeping alarm indicates a reduction in regenerative braking.
  To stop, release accelerator pedal and push the brake pedal.

## WARNING

UNINTENDED VEHICLE MOVEMENT CAN CAUSE SERIOUS INJURY OR DEATH

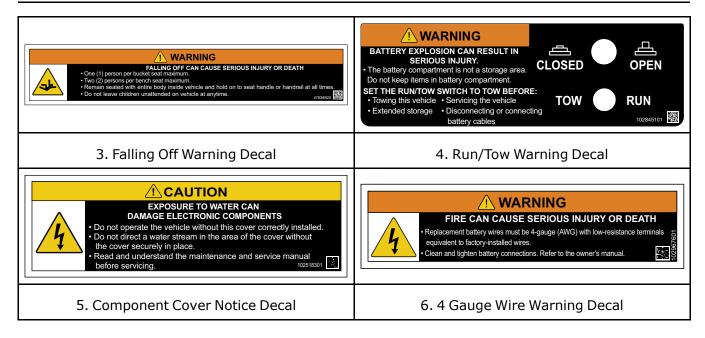
Before leaving vehicle:

- Engage park brake to lock wheels. Set the FNR control to NEUTRAL (N). Turn the key to OFF and remove key.

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1. Rollover Warning Decal

2. Operating Instructions Decal



## **VEHICLE SAFETY FEATURES**

## **BATTERY CHARGING INTERLOCK**

The battery charging interlock is a safety feature that prevents possible damage to the battery charger and vehicle. The battery charging interlock will automatically engage when the AC cord is connected to a power source. The vehicle will not operate when the AC cord is connected.

#### **MULTI-PURPOSE BUZZER**

The vehicle comes equipped with a multi-purpose buzzer. The multi-purpose buzzer makes an audible tone when:

- The Forward / Neutral / Reverse control (FNR) is set to R.
- The walk-away braking engages for longer than two seconds.
- The regenerative braking performance decreases because the batteries are fully charged.
- The batteries start to charge.

#### REGENERATIVE BRAKING



WHEN THE BATTERIES ARE FULLY CHARGED, A WARNING BUZZER WILL OPERATE DURING REGENERATIVE BRAKING TO TELL THE DRIVER THAT REGENERATIVE BRAKING PERFORMANCE WILL DECREASE. USE THE BRAKE PEDAL TO CONTROL THE VEHICLE SPEED.

Regenerative braking helps maintain the downhill speed of the vehicle in relation to the accelerator pedal position.

Regenerative braking performance decreases when the batteries are fully charged.

Regenerative braking cannot maintain the vehicle speed on an excessive grade (more than 20%). Use the brake pedal to control the vehicle speed.



ACCELERATOR PEDAL POSITION	CONDITION	
Fully Pushed	Regenerative braking holds the vehicle at the programmed top speed.	
Between Fully Pushed And Released	Regenerative braking holds the vehicle at a percentage of the programmed top speed in relation to the accelerator pedal position.	
Fully Released	Regenerative braking will do one of the two based on the controller settings:  • Factory Default - Stop the vehicle slowly.  • Optional - Let the vehicle coast freely.  Note: The regenerative braking functions are controlled by the controller settings. Speak with your dealer or distributor for more information.	

#### **WALK-AWAY BRAKING**



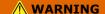
WALK-AWAY BRAKING WILL NOT LIMIT VEHICLE SPEED TO 3 MPH (4.8 KM/H) ON STEEP SLOPES. DO NOT OPERATE THE VEHICLE ON SLOPES THAT ARE MORE THAN A 20% GRADE.

Walk-away braking is a safety function that limits the roll-away speed of a vehicle when the park brake is disengaged. The multi-purpose buzzer will make an audible tone when the walk-away braking safety device engages for more than two seconds.

## **BATTERY SAFETY INFORMATION**



BATTERY ACID CAN CAUSE SERIOUS BURNS. PREVENT CONTACT WITH SKIN, EYES, AND CLOTHING. WEAR A FULL FACE SHIELD AND RUBBER GLOVES WHEN SERVICING A BATTERY. 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.



FROZEN BATTERY ACID CAN CAUSE DAMAGE INCLUDING LEAKS AND EXPLOSIONS. IF THE BATTERY ACID FREEZES, REPLACE THE BATTERY BEFORE CHARGING OR USE. BATTERIES IN A LOW STATE OF CHARGE WILL FREEZE AT LOW TEMPERATURES. KEEP THE BATTERIES IN A HIGH STATE OF CHARGE.

FLOODED AND SUBMERGED BATTERIES CAN CAUSE DAMAGE INCLUDING LEAKS AND EXPLOSION. IF A BATTERY IS SUBMERGED, REPLACE THE BATTERY BEFORE CHARGING OR USE.

LOOSE BATTERY WIRES CAN CAUSE A FIRE, PROPERTY DAMAGE, OR SERIOUS PERSONAL INJURY. MAKE SURE THAT ALL BATTERY WIRES AND TERMINALS ARE CLEAN AND TIGHTENED CORRECTLY.

BATTERY WIRES WITH DAMAGE OR CORROSION CAN BECOME TOO HOT AND CAUSE A FIRE, PROPERTY DAMAGE, OR SERIOUS PERSONAL INJURY. REPLACE BATTERY WIRES THAT HAVE DAMAGE OR CORROSION. CLEAN CORROSION FROM THE BATTERY TERMINALS.

## **BATTERY INTERNATIONAL SAFETY SYMBOLS**

Understand and obey the international safety symbols on the vehicle battery before you use, repair, or service the vehicle.

SYMBOL	SIGNIFICANCE
	Shield eyes
	Read and obey operation and maintenance instructions
	Do not smoke, No open flames, No sparks
TI	Keep away from children
	Explosive gas hazard

#### LEAD-ACID BATTERY RECYCLING

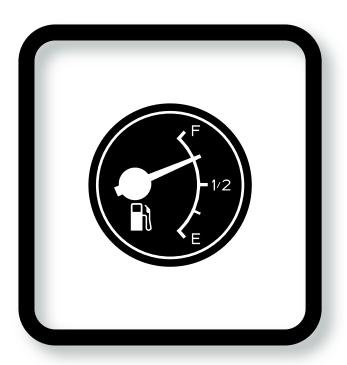


LEAD-ACID BATTERIES CONTAIN DANGEROUS MATERIALS THAT CAN CONTAMINATE THE WATER AND SOIL, CAUSE ENVIRONMENTAL DAMAGE, CAUSE PROPERTY DAMAGE, AND CAUSE SERIOUS PERSONAL INJURY. SPEAK WITH YOUR DEALER OR DISTRIBUTOR FOR INFORMATION ON HOW TO DISCARD A BATTERY CORRECTLY.

Lead-acid batteries and other components which have the Waste Electrical and Electronic Equipment (WEEE) symbol printed on them must be collected and recycled separately from other waste. Do not discard lead-acid batteries as municipal waste.

Speak with your dealer or distributor on how to correctly recycle lead-acid batteries.

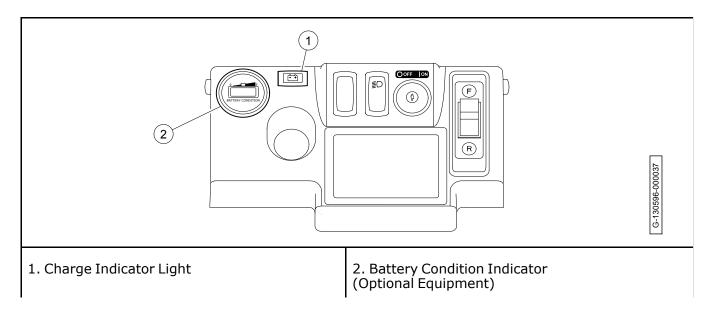




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# INDICATORS, GAUGES, AND DISPLAYS

## **INDICATOR, GAUGE, AND DISPLAY LOCATIONS**



## **BATTERY CONDITION INDICATOR**



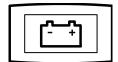
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The battery condition indicator gives a visual indication of the batteries state of charge (SOC). The battery condition indicator has a 10-bar LED display.

## **CHARGE INDICATOR LIGHT**



WHEN THE CHARGE INDICATOR LIGHT IS ON, CHARGE BATTERIES AS QUICKLY AS POSSIBLE.



The charge indicator lamp gives a visual indication when:

- The battery state of charge (SOC) is less than 20%. Charge the batteries as quickly as possible.
- The batteries start to charge.

Note: The multi-purpose buzzer will operate three times.

STATUS	CONDITION
OFF	Battery SOC is more than 20%.
ON (CONSTANT)	Battery SOC is less than 20% but more than 10%.
ON (FLASH ON AND OFF)	Battery SOC is less than 10%.
ON (FLASH ON AND OFF THREE TIMES)	The batteries charging has started.

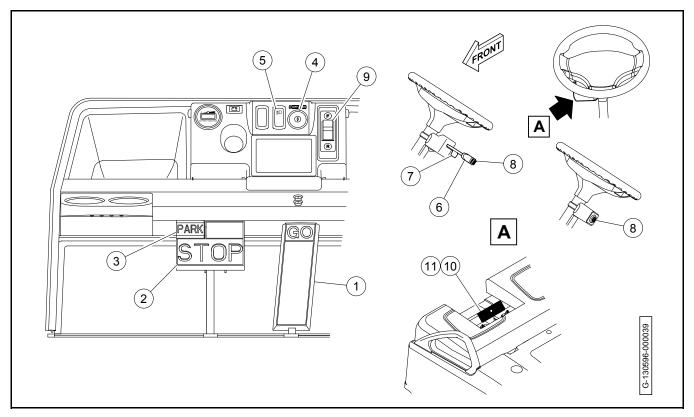




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# **VEHICLE CONTROLS**

## **VEHICLE CONTROLS LOCATOR**



1. Accelerator Pedal	2. Brake Pedal
3. Park Brake	4. Key Switch
5. Headlight Switch (Optional Equipment)	6. Turn Signal Lever (Optional Equipment)
7. Hazard Lights Switch (Optional Equipment)	8. Horn Button (Optional Equipment)
9. Forward / Neutral / Reverse Control (FNR)	10. Run/Tow Switch
11. Circuit Breaker	

## **ACCELERATOR PEDAL**



The accelerator pedal is used to increase and maintain the speed of the vehicle.

## **BRAKE PEDAL**



The brake pedal is used to decrease speed or stop the vehicle.

## CIRCUIT BREAKER



The circuit breaker protects the electrical system of the vehicle from electrical overload. An open circuit breaker will cause the multi-purpose buzzer to make a series of audible beeps and the vehicle will operate at one-half normal operational speed.

POSITION	FUNCTION	
NORMAL	Closed Circuit: Normal Operation	
TRIPPED	Open Circuit:  1. Stop the vehicle.  2. Remove the bench seat to get access to the circuit breaker.  3. Push to close the circuit breaker.  Note: Have a trained technician examine the vehicle after two open circuit breaker events.	

## FORWARD / NEUTRAL / REVERSE CONTROL



FAILURE TO STOP THE VEHICLE BEFORE SHIFTING THE FORWARD / NEUTRAL / REVERSE CONTROL (FNR) CAN CAUSE PROPERTY DAMAGE AND SERIOUS PERSONAL INJURY. STOP THE VEHICLE BEFORE SHIFTING THE FORWARD / NEUTRAL / REVERSE CONTROL (FNR).

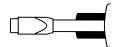


The Forward / Neutral / Reverse control (FNR) sets the direction of vehicle movement.

Stop the vehicle to change the FNR position.

POSITION	FUNCTION
F	Forward
N (Center)	Neutral
R	Reverse

## **HAZARD LIGHT SWITCH**



The hazard light switch controls the operation of the hazard lights. Move the turn signal switch up or down to turn off the hazard lights.

POSITION	FUNCTION
Out	On
In	Off

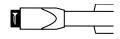
## **HEADLIGHT SWITCH**



The headlight switch controls the operation of the headlights.

POSITION	FUNCTION
Тор	On
Bottom	Off

## **HORN**



The horn button is used to control the horn. The horn button is spring loaded to stay in the off position. Push and hold the horn button to operate the horn.

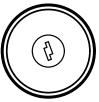


## **KEY SWITCH**



THE KEY SWITCH CAN BE USED TO STOP THE VEHICLE IN AN EMERGENCY. DO NOT BREAK OFF KEYS IN THE KEY SWITCH.





The key switch controls the motor and electrical system. A key is used to select the key switch position. The key can only be inserted or removed when the key switch is set to OFF.

POSITION	CONDITION	
OFF	Normal position when the vehicle is not in use.  Electrical power from the batteries is not available to power the motor or electrical systems.  Note: Some electrical accessories operate independently of the key switch.	
ON	Normal position when the vehicle is in use.  Electrical power from the batteries is available to power the motor and electrical systems.	

## PARK BRAKE



FAILURE TO ENGAGE THE PARK BRAKE CAN CAUSE PROPERTY DAMAGE AND SERIOUS PERSONAL INJURY. AFTER THE VEHICLE STOPS, ENGAGE THE PARK BRAKE UNTIL IT IS FULLY ENGAGED AND PREVENTS THE VEHICLE FROM MOVING.

UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. THE PARK BRAKE WILL RELEASE AUTOMATICALLY WHEN THE ACCELERATOR OR BRAKE PEDAL IS PUSHED. PREVENT ACCIDENTAL ACCELERATOR OR BRAKE PEDAL ACTUATION.



The park brake is a variable position control that is used to make sure that a vehicle does not move while parked.

Push the park brake firmly to engage the park brake.

To disengage the park brake, push the accelerator or brake pedal.

## **RUN/TOW SWITCH**



UNINTENDED VEHICLE MOVEMENT CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. WHEN THE RUN/TOW SWITCH IS IN THE TOW POSITION, ALL MOTOR BRAKING FUNCTIONS, INCLUDING WALK-AWAY BRAKING, ARE DISABLED.



The Run/Tow switch is used during towing, maintenance, or extended storage. Set the switch to RUN for normal operation. Set the switch to TOW for maintenance, extended storage, or when towed.

Wait 10 seconds before vehicle operation when the switch is set from TOW to RUN.

Do not quickly operate the switch from RUN to TOW and back to RUN. Wait 10 seconds to set the switch to RUN.

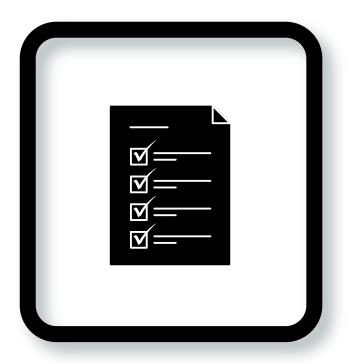
POSITION	FUNCTION	
RUN	Normal Operation	
TOW	<ul> <li>Connect the battery cables.</li> <li>Disconnect the battery cables.</li> <li>To do vehicle maintenance.</li> </ul>	
	<ul> <li>Put the vehicle into extended storage.</li> <li>Tow the vehicle.</li> </ul>	

## **TURN SIGNAL LEVER**



The turn signal lever controls the operation of the turn signal lights. The turn signal light will flash when turned on.

POSITION	FUNCTION
Down	Left
Center	Off
Up	Right



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## **VEHICLE FEATURES**

The vehicle features listed are standard and optional.

## **FIXED REAR SEAT**

The fixed rear seat is for two additional passengers.

## **FOLD-DOWN REAR SEAT**

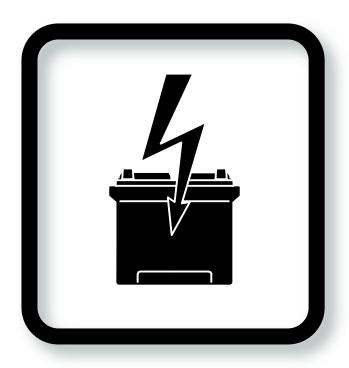
The fold-down rear seat is for two additional passengers and increased cargo space.

## **USB RECEPTACLE**

The 5-volt, 2.1-amp USB receptacle supplies electricity to power and charge portable devices. The USB receptacle is not for the movement of data.

The USB receptacle will only operate when a shielded USB cord is connected. When the USB receptacle is not in use, remove the shielded USB cord to prevent battery discharge.





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## **BATTERY CHARGER**



A BATTERY CHARGER, CORD, PLUG, OR VEHICLE CHARGER RECEPTACLE THAT HAS DAMAGE OR A BAD ELECTRICAL CONNECTION CAN CAUSE A FIRE, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT CONNECT THE DAMAGED BATTERY CHARGER TO AN AC POWER SOURCE. DO NOT TRY TO REPAIR THE BATTERY CHARGER, CORD, PLUG, OR VEHICLE CHARGER RECEPTACLE. SPEAK WITH YOUR LOCAL DEALER OR DISTRIBUTOR FOR REPAIRS.

## **MARNING**

CONNECTION OF THE AC CORD TO AN INCORRECT RECEPTACLE CAN CAUSE A FIRE, ELECTRICAL SHOCK, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT USE AN ADAPTER TO CONNECT THE AC CORD INTO A TWO-PRONG POWER SOURCE. CONNECT THE AC CORD TO AN APPROVED POWER SOURCE AND RECEPTACLE.

A BATTERY CHARGER CORD, PLUG, OR VEHICLE CHARGER RECEPTACLE THAT HAS DAMAGE OR A BAD ELECTRICAL CONNECTION CAN CAUSE A FIRE, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT USE A BATTERY CHARGER THAT HAS DAMAGE, FELL, OR WAS HIT. PUT THE CORDS IN AN AREA TO PREVENT THEM FROM BEING STEPPED ON, TRIPPED OVER, OR SUBJECTED TO DAMAGE OR STRESS. SPEAK WITH YOUR LOCAL DEALER OR DISTRIBUTOR FOR REPAIRS.

LIQUID ON THE BATTERY CHARGER CAN CAUSE PROPERTY DAMAGE, ELECTRICAL SHOCK, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT LET THE BATTERY CHARGER BECOME WET. KEEP THE BATTERY CHARGER DRY.

#### NOTICE

IF THE BATTERIES ARE REPLACED WITH A DIFFERENT BRAND OR TYPE, BATTERY DAMAGE CAN OCCUR. UPDATE THE BATTERY CHARGER ALGORITHM WHEN A DIFFERENT BRAND OR TYPE OF BATTERY IS INSTALLED. SPEAK WITH YOUR LOCAL APPROVED DEALER OR DISTRIBUTOR TO UPDATE THE BATTERY CHARGER ALGORITHM.

A LIGHTNING STRIKE CAN CAUSE ELECTRICAL COMPONENT DAMAGE. A SURGE ARRESTOR CAN HELP PROTECT ELECTRICAL COMPONENTS. INSTALL A SURGE ARRESTOR ON THE AC CORD.

## INTRODUCTION

The QuiQ battery charger is a High Frequency (HF) Power Factor Corrected (PFC) charger. Some of the benefits of the QuiQ charger are:

EFFICIENT	<ul> <li>More efficient, faster, and optimal charging through improved switch mode high frequency design.</li> </ul>
	<ul> <li>Decrease utility surcharges and optimize the use of AC line with a Power Factor of more than 0.99.</li> </ul>
RELIABLE	<ul> <li>Increased reliability through convection cooling and the elimination for a cooling fan.</li> </ul>



SAFE	Reverse polarity and short circuit protection provide safe operation.
EASY	Quick charge status determination LEDs.

## **SPECIFICATIONS**

## **MANUFACTURER INFORMATION**

Manufacturer	Delta Q Technologies
Model Name	QuiQ
Model Number	105161901

## **DIMENSION AND WEIGHT**

Dimension	11 in (28 cm) length 9.7 in (24.6 cm) width 4.3 in (11 cm) height
Weight	11 lb (4.9 kg)

## **OPERATIONAL TEMPERATURE**

Temperature Range	32° F to 86° F (0° C to 30° C)

## **AC INPUT**

Voltage	85 to 265 VAC minimum/maximum 120 to 240 VAC maximum efficiency range
Current	12 A maximum 9.5 A at 120 VAC nominal 5.0 A at 230 VAC nominal
Frequency	45 to 65 Hz

## **DC OUTPUT**

Voltage	48 VDC minimum 68 VDC maximum
Current	18 A minimum 1 A maximum

## GOVERNMENTAL AND INDUSTRY CERTIFICATIONS

#### **EUROPEAN CONFORMITY**

The battery charger is European conformity (CE) certified per EU 2014/30/EU Electromagnetic Compatibility Directive, 2014/35/EU Low Voltage Equipment Directive, 2014/65/EU Restriction of Hazardous Substances Directive, LV Directives EN 60335-1:2012 and EN 60335-2-29:2004, and EMC Directives EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 61000-6-2: 2005, EN 61000-6-4: 2007.

#### FEDERAL COMMUNICATIONS COMMISSION

The battery charger is Federal Communications Commission (FCC) certified.

Note.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in an industrial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

## INTERNATIONAL PROTECTION MARKING

The battery charger has an International Protection Marking (IP) certification of IP66.

The battery charger enclosure has an International Protection Marking (IP) certification of IP46.

The battery charger USB receptacle with the dust cover has an International Protection Marking (IP) certification of IP66.

The AC supply connector has an International Protection Marking (IP) certification of IP20.

Note: The AC supply connector is applicable for indoor use only. Keep all AC connections clean and dry.

# UNDERWRITERS LABORATORIES AND CANADIAN STANDARDS ASSOCIATION

Listed by Underwriters Laboratories (UL) and Canadian Underwriters. Meets the criteria of the Canadian Standards Association (CSA).

#### **FEATURES**

## **AC ELECTRICAL CORD AND PLUG**

The AC electric cord has an equipment-grounding conductor and grounding type plug. The AC plug must be connected to a correctly rated ground fault circuit interrupter (GFCI) receptacle with arc flash protection. The receptacle must be installed and grounded in accordance with the National Electrical Code, local codes, and local ordinances.

Only one battery charger can be on a single phase branch circuit protected by a 15A circuit breaker or fuse.



AN EXTENSION CORD IS NOT RECOMMENDED. INCORRECT CONNECTION OF THE CHARGER AC CORD TO AN EXTENSION CORD CAN CAUSE A FIRE OR AN ELECTRICAL SHOCK.

Use of an extension cord with the charger is not recommended. Precautions when the use of an extension cord is necessary:



- The extension cord must accept a three-prong plug.
- The extension cord must be as short as possible and not exceed 12 ft (3.7 m).
- The extension cord must be a three-wire No. 12-AWG (American Wire Gauge) or No. 14-SWG (British Standard Wire Gauge).
- Make sure that cords will not be stepped on, tripped over, or subject to damage or stress.

## **BATTERY CHARGING INTERLOCK**

The battery charging interlock is a safety feature that prevents possible damage to the battery charger and vehicle. The battery charging interlock will automatically engage when the AC cord is connected to a power source. The vehicle will not operate when the AC cord is connected.

## **EXTENDED STORAGE CHARGE**

The battery charger can stay connected to AC electrical power during off-season or extended storage.

## STATUS INDICATOR LIGHTS

The status indicator lights give AC power availability, charge progress, and charger condition.

SYMBOL	Light Status	CONDITION
<u>                                      </u>	Amber (Constant)	Shows approximate scale of current output during Bulk phase.
	Amber (Flash On And Off)	Voltage output decreased because of high internal charger temperature.  Shows algorithm numbers 1 to 6 for 11 seconds if no battery is connected.
	Amber (Constant)	80% or Bulk charge phase complete. In Absorption phase.
	Amber (Flash On And Off)	Shows algorithm numbers 1 to 6 for 11 seconds if no battery is connected.
	Green (Constant)	Charging is complete. Charger in maintenance Mode.
	Green (Flash On And Off)	Absorption phase complete. In finish phase.

Amber (Constant)	AC power sensed.
Amber (Flash On And Off)	Low AC Voltage. Check voltage and power cord length.
Red (Flash On And Off)	Charger error. Reset charger power and refer to troubleshooting instructions.

## **INSPECTION AND SERVICE**

#### **ALGORITHM PROGRAM NUMBER**

To find the algorithm program number:

- 1. Disconnect the AC electrical cord from the outlet.
- 2. Set the Tow/Run switch to TOW.
- 3. Disconnect the battery cable from battery number 8 negative (-) post.
- 4. Plug the AC electrical cord into an approved power source. Let the battery charger to do the start-up self-test.
- 5. When the start-up self-test is done the 80% LED will show a sequence of flashes that represent the algorithm number.

*Note:* One flash, pause, two flashes, pause, and five flashes would be an example of Algorithm number 125.

6. Repeat Step 1 through Step 4 to see the algorithm code again.

## **ELECTRICAL CORDS**

Examine electrical cords for wear and damage before use. Immediately replace electrical cords for:

- Cracks
- Cuts
- Frayed wiring
- Insulation damage
- Loose connections
- Splices



Make sure that the DC electrical cord has the warning tag attached. Make sure that the warning tag has no damage and all words can be read. Replace a missing or damaged warning tag immediately.

## **ELECTRICAL PLUGS AND RECEPTACLES**



IF THE PLUG PINS ARE BENT, SPEAK WITH YOUR LOCAL DEALER OR DISTRIBUTOR FOR REPAIRS. DO NOT TRY TO REPAIR THE AC CORD PLUG OR PINS.

Examine electrical plugs for wear and damage before use. Immediately replace electrical plugs for:

- Bent pins
- Corrosion
- Cracks
- · Loose connections
- Missing pins
- · Worn pins

## **TROUBLESHOOTING**

## **DIAGNOSTIC CODE**

The charger is designed to show a diagnostic code if a fault occurs.

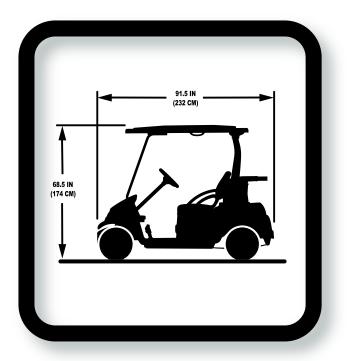
To find the shown fault:

- 1. Count the number of red flashes on the charger indicator lamp. The charger will pause between fault code displays.
- 2. Use the Fault Code Identification And Recommended Solutions table to find the fault and recommended solution.

NUMBER OF FLASHES	FAULT	RECOMMENDED SOLUTION
1	High Voltage Sensed	Make sure that vehicle batteries are rated for 48 volts and have 24 cells. Replace batteries as necessary.
		Reset charger by removing electrical power for a minimum 15 seconds.
2		Make sure that vehicle batteries are rated for 48 volts and have 24 cells. Replace batteries as necessary.
	Low Voltage Sensed	Do a voltage check on each individual vehicle battery. Replace batteries as necessary.
		Reset charger by removing electrical power for a minimum 15 seconds.



NUMBER OF FLASHES	FAULT	RECOMMENDED SOLUTION
	Charge canceled because of inadequate input voltage to charger.	Inspect for loose or corrosion connections. Tighten loose connections and replace corrosion connections.
3	Voltage output decreased because of high internal	Inspect for worn or defective batteries. Replace batteries as necessary.
charger temperature.	Operate charger in a lower ambient temperature environment.	
4	Battery could not be trickle charged up to minimum voltage	Inspect for worn or defective batteries. Replace batteries as necessary.
5 high internal of	Charger shutdown because of high internal charger	Inspect for dirty, blocked, or damaged cooling fins. Clean dirty cooling fins and remove blockages as necessary. Replace damaged fins immediately.
	temperature.	Reset charger by removing electrical power for a minimum 15 seconds.
6	Chausau intounal facult	Reset charger by removing electrical power for a minimum 15 seconds.
	Charger internal fault	Return charger to an approved service center if fault persists.





# **VEHICLE SPECIFICATIONS**

# **DIMENSIONS**

Length	179.25 in (455.3 cm)
Width	47.25 in (120 cm)
Height	48.0 in (122 cm) - at steering wheel with standard tires 46.8 in (118.8 cm) - at steering wheel with premium tires 45 in (114.3 cm) - at seat with standard tires 46.5 in (118.1 cm) - at seat with premium tires 11.8 in (30 cm) - at floorboard
Ground Clearance	4.5 in (11 cm)
Wheel Track	37 in (94 cm) - front wheel 38.5 (97.8 cm) - rear wheel

## **PERFORMANCE**

Forward Speed (On Level Ground)	14 to 16 mph (22 to 25 km/h)
Turning Radius (SAE J695)	191 in (485 cm) – standard tires 197.3 in (501.1 cm) - premium tires
Intersecting Aisle Clearance	108 in (274 cm) - standard tires 117.3 in (297.9 cm) - premium tires
Curb-To-Curb	398.7 in (1012.6 cm)
Wall-To-Wall	401.6 in (1020 cm)

# **TIRES**

Go to the approved wheel and tire assemblies matrix on <a href="http://www.clubcar.com">http://www.clubcar.com</a> for information regarding tire type, inflation pressure, and lugnut torque.

# **ELECTRIC MOTOR**

Motor Type	48V DC motor
Motor Horsepower Rating	3.7 hp (2.75 kW)

# **BATTERIES**

Battery Type	6V high capacity deep cycle flooded lead acid
Battery Quantity	8



## **NOISE AND VIBRATION**

Drive-by Noise Level To Operator (EN 12053–2001)	68.2 dBA (±2.5)
Vibration At Driver's Seat (EN 13059-2002)	2.3 (m/s <sup>2</sup> ) <sup>2</sup> (±0.7)

## **TRANSAXLE**

Fluid Capacity	22 fl-oz (0.67 l)
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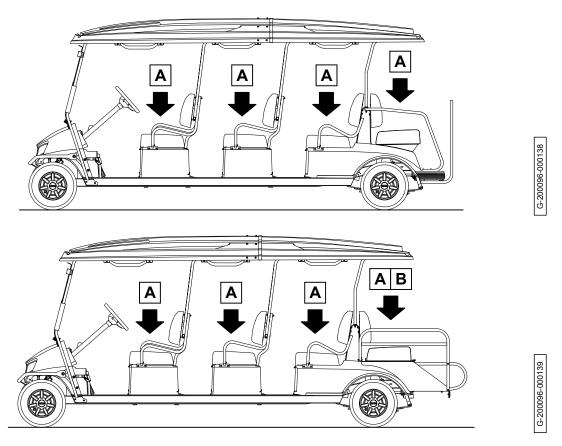
## **VEHICLE WEIGHTS AND LOAD CAPACITIES**



IF THE RATED CAPACITIES OF THE VEHICLE ARE EXCEEDED, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH CAN OCCUR. DO NOT EXCEED THE RATED CAPACITY OF THE VEHICLE. RATED CAPACITY IS FOR LEVEL SURFACES ONLY.

TOO MUCH WEIGHT IN THE VEHICLE CAN AFFECT THE VEHICLES HANDLING, OR CAUSE COMPONENT FAILURE, RESULTING IN LOSS OF CONTROL OF VEHICLE AND SERIOUS PERSONAL INJURY. DO NOT EXCEED THE VEHICLE LOAD CAPACITIES.

DO NOT TOW WHEN THE CARGO CAPACITY IS EXCEEDED.



Description	Weight
Vehicle Dry Weight	1026 lb (465.3 kg)
Vehicle Curb Weight	1530 lb (693.9 kg)
Maximum Occupant Capacity (A)	1500 lb (680.3 kg)
Maximum Cargo Capacity (B)	300 lb (136 kg)
Maximum Trailer Tongue Weight (C)	Not Applicable
Maximum Gross Trailer Weight (D)	Not Applicable
Vehicle Rated Capacity	1500 lb (680.3 kg)
Vehicle Combination Rated Capacity	Not Applicable
Maximum Gross Vehicle Weight	3030 lb (1419.7 kg)
Maximum Gross Vehicle Combination Weight	Not Applicable

TERM	DEFINITION
Vehicle Dry Weight	The vehicle dry weight is the weight of the vehicle with no batteries.
Vehicle Curb Weight	The vehicle curb weight is the weight of the vehicle with the batteries installed.
Maximum Occupant Capacity	The occupant capacity is the maximum permitted weight of occupants to operate the vehicle safely.
Maximum Cargo Capacity	The cargo capacity is the maximum weight of a load that the vehicle can have in the cargo area. The cargo capacity includes the weight of optional equipment.
Maximum Trailer Tongue Weight	The trailer tongue weight is the maximum permitted weight applied by the trailer tongue onto the trailer hitch.
Maximum Gross Trailer Weight	The gross trailer weight is the trailer weight plus the weight of the load on the trailer.
Vehicle Rated Capacity	The vehicle rated capacity is the maximum weight on the vehicle. This capacity includes the weight of: bed load, cargo, occupants, and optional equipment.
Vehicle Combination Rated Capacity	The vehicle combination rated capacity is the maximum weight on the vehicle with a trailer. This capacity includes: vehicle rated capacity and the gross trailer weight.
Maximum Gross Vehicle Weight	The maximum gross vehicle weight is the vehicle weight plus the vehicle rated capacity.
Maximum Gross Vehicle Combination Weight	The maximum gross vehicle combination weight is the maximum gross vehicle weight plus the gross trailer weight.





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# **VEHICLE OPERATION**

## **MARNING**

FALLING OBJECTS CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT OPERATE THE VEHICLE WHERE THERE IS A RISK OF FALLING OBJECTS.

OPERATING THE VEHICLE WHILE OCCUPANTS ARE NOT FULLY SEATED CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. START THE VEHICLE ONLY WHEN ALL OCCUPANTS ARE FULLY SEATED.

DO NOT LET A PASSENGER HOLD A CHILD ON THEIR LAP WHILE THE VEHICLE IS IN OPERATION.

DO NOT LET PASSENGERS RIDE IN THE VEHICLE OR TRAILER BEING TOWED.

KEEP AWAY FROM DROP-OFFS, STEEP SLOPES, AND UNSTABLE SURFACES.

THE VEHICLE IS NOT INTENDED TO BE USED ON PUBLIC ROADS. USE CAUTION WHEN OPERATING ON PUBLIC ROADS WHERE PERMITTED BY LAW. FOLLOW ALL APPLICABLE LAWS AND REGULATIONS.

SUDDEN STARTS, STOPS, AND TURNS CAN CAUSE PROPERTY DAMAGE AND SERIOUS PERSONAL INJURY. PREVENT SUDDEN STARTS, STOPS, AND TURNS.

FAILURE TO CORRECTLY MAINTAIN THE VEHICLE AND MAKE NECESSARY REPAIRS CAN DECREASE VEHICLE PERFORMANCE, CAUSE A FIRE, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. IF PROBLEMS ARE FOUND DURING SCHEDULED INSPECTION OR SERVICE, OPERATE THE VEHICLE ONLY WHEN REPAIRS ARE MADE.

MAKE SURE THAT ALL PASSENGERS CAN SECURE THEMSELVES IN THE VEHICLE BEFORE VEHICLE OPERATION.

TO PREVENT SERIOUS PERSONAL INJURY, KEEP ENTIRE BODY IN THE VEHICLE DURING OPERATION.

THE VEHICLE IS NOT SPECIALLY EQUIPPED FOR HANDICAPPED PERSONS. BEFORE VEHICLE OPERATION, MAKE SURE THAT ALL PERSONS COMPLY WITH THE WARNINGS AND OPERATING INSTRUCTIONS.

INCORRECT OPERATION OF THE VEHICLE CAN CAUSE DECREASED VEHICLE PERFORMANCE, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH.

TO PREVENT FALLS FROM THE VEHICLE, PASSENGERS MUST STAY SEATED AND ALWAYS HOLD ON TO HAND HOLDS OR HANDRAILS WHEN THE VEHICLE IS IN OPERATION. THE DRIVER MUST KEEP BOTH HANDS ON THE STEERING WHEEL WHEN THE VEHICLE IS IN OPERATION.

A SHARP TURN AT HIGH SPEEDS CAN CAUSE A ROLL-OVER OR FALLING OFF WHICH CAN RESULT IN PROPERTY DAMAGE, AND SERIOUS PERSONAL INJURY. OPERATE THE VEHICLE SLOWLY IN TURNS.

UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. BEFORE LEAVING THE VEHICLE OR DURING VEHICLE MAINTENANCE, DISABLE THE VEHICLE.



THE VEHICLE IS NOT DESIGNED TO MEET CHILD SAFETY SEAT COMPATIBILITY REQUIREMENTS. CHILDREN REQUIRING A CHILD SAFETY SEAT MUST NOT RIDE ON THE VEHICLE. COMPLY WITH STATE AND LOCAL LAWS PERTAINING TO CHILD SAFETY.

THIS VEHICLE IS NOT INTENDED FOR USE BY PERSONS, INCLUDING CHILDREN, WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF EXPERIENCE AND KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE VEHICLE BY A PERSON RESPONSIBLE FOR THEIR SAFETY. CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE VEHICLE.

**↑** CAUTION

OPERATE THE VEHICLE ONLY FROM THE DRIVERS SEAT.

OPERATE THE VEHICLE ONLY IN SPECIFIED AREAS.

ONLY AN AUTHORIZED LICENSED DRIVER CAN OPERATE THE VEHICLE.

ONLY OPERATE THE VEHICLE IN COMPLIANCE WITH LOCAL AND STATE LAWS.

USE CAUTION WHEN OPERATING THE VEHICLE IN THE PRESENCE OF HIGHER-SPEED VEHICLES, IN CONGESTED AREAS, OR ON UNIMPROVED SURFACES.

## DAILY PRE-OPERATIONAL SAFETY AND PERFORMANCE CHECKS

### **OVERVIEW**

Use the daily pre-operational checklist and vehicle performance inspection to inspect the operational condition and performance of the vehicle.

If a vehicle is found to be in bad operational condition, remove it from operation. Removal from operation will prevent more damage to the vehicle and prevent a serious injury.

If the vehicle is removed from operation, speak with your dealer or distributor for maintenance and repairs.

## **DAILY PRE-OPERATIONAL SAFETY CHECKLIST**

INSPECTION AREA	INSPECTION CRITERIA
	Make sure that all parts are correctly installed.
General	Make sure that all nuts, bolts, and screws are tight.
	Replace missing, worn, or damaged items.
	<ul> <li>Make sure all safety, regulatory, and marketing decals are correctly installed.</li> </ul>
Decals	Clean the decals with a soft moist cloth.
	Replace missing, worn, or damaged decals.
	Examine for wear and damage.
Tires	Replace worn or damaged tires.
	Make sure that the tire pressure is correct.
	Make sure that all battery hold-downs are tight.
	<ul> <li>Make sure that the battery cables are correctly attached. Tighten as necessary.</li> </ul>
Batteries	<ul> <li>Examine the battery posts for corrosion. If corrosion is found, remove the corrosion.</li> </ul>
	<ul> <li>Make sure that the batteries are fully charged.</li> </ul>
	<ul> <li>Examine the battery acid level. Add deionized or distilled water as necessary.</li> </ul>
	Replace missing, worn, or damaged items.
	<ul> <li>Examine the electrical cords for cracks, loose connections, and frayed wires.</li> </ul>
Battery Charger	Examine receptacle contacts and plug terminals. Clean as necessary.
	Replace missing, worn, or damaged items.
	Make sure that the battery charger operates correctly.
Vehicle Performance Inspection	Do a vehicle performance inspection.

## **VEHICLE PERFORMANCE INSPECTION**

Before the vehicle performance inspection:

- Read and obey all safety decals and information located on the vehicle.
- Understand how to operate the vehicle correctly and safely.



- Understand the function of all vehicle controls, indicators, displays, and gauges.
- Front wheels are turned in the direction of travel.
- No obstructions are in the vehicle's path.

### During the vehicle performance inspection:

- Listen for unusual noises such as squeaks or rattles.
- Examine the ride and performance of the vehicle.
- Examine the steering. The vehicle must be easy to steer and must not have play in the steering wheel.
- The vehicle must stop smooth and straight. The brake pedal must not be able to be pushed to the floorboard. Have a trained technician do a brake system check if:
  - The vehicle swerves.
  - The brake pedal goes more than half the distance to the floorboard with moderate pressure applied.
  - The vehicle does not stop.

## To do the vehicle performance inspection:

- 1. Turn the key to ON.
- 2. Push and hold the brake pedal.
- 3. Set the Forward / Neutral / Reverse control (FNR) to R. Make sure that the multi-purpose buzzer operates.
- 4. Release the brake pedal.
- 5. Slowly push the accelerator pedal. Make sure the vehicle moves in reverse.
- 6. Slowly push the brake pedal. Stop the vehicle.
- 7. Set the FNR to F. Make sure that the multi-purpose buzzer does not operate.
- 8. Release the brake pedal.
- 9. Slowly push the accelerator pedal. Make sure that the vehicle moves forward.
- 10. Operate the vehicle to full speed.
- 11. Release the accelerator pedal. Make sure:
  - 11.A The accelerator pedal goes back to its initial position.
  - 11.B Make sure that the regenerative braking functions normally.
- 12. Slowly push the brake pedal. Stop the vehicle.
- 13. Park the vehicle on a level surface.
- 14. Disengage the park brake.
- 15. Try to push the vehicle to engage the walk-away braking. Walk-away braking is engaged when:
  - 15.A The multi-purpose buzzer operates.
    - Note: Regenerative braking operates and limits the vehicle speed to no more than 1 to 3 mph (1.6 to 4.8 km/h).
- 16. Stop the vehicle.

- 17. Park the vehicle on a grade of 20% or less. Make sure that the park brake holds the vehicles position.
- 18. Slowly push the accelerator pedal. Increase the vehicle to maximum speed down a grade of 20% or less.
- 19. Make sure regenerative braking engages at the maximum programmed speed and limits the vehicle to its maximum programmed speed.
- 20. Slowly push the brake pedal. Stop the vehicle. Make sure regenerative braking disengages when the vehicle speed is below the maximum programmed top speed.

## **VEHICLE MOVEMENT**

## **OVERVIEW**

Operate the vehicle only after you read, understand, and know:

- The Driving Instructions
- Indicators
- Gauges
- Displays
- Controls

## **MOTOR START**

### Before motor start:

- Read and obey all safety decals and information located on the vehicle.
- Understand how to operate the vehicle correctly and safely.
- Understand the function of all vehicle controls, indicators, displays, and gauges.
- Make sure that all passengers are seated and use the hand holds or handrails. The operator must have both hands on the steering wheel.
- Front wheels are turned in the direction of travel.
- No obstructions are in the vehicle's path.
- Forward / Neutral / Reverse control (FNR) is set to N.
- The park brake is set.
- The accelerator pedal is not pushed.
- The vehicle is at a full stop.

#### To start the motor:

- 1. Put the key into the key switch.
- 2. Turn the key to ON.
- 3. Set the FNR to F or R.
- 4. Push the accelerator pedal to start the motor.



## **TURN OFF MOTOR**

- 1. Release the accelerator pedal.
- 2. Stop the vehicle.
- Push and hold the brake pedal.
- 4. Set the Forward / Neutral / Reverse control (FNR) to N.
- 5. Turn the key to OFF.
- 6. Engage the park brake to lock the wheels.
- 7. Remove the key. Keep the key in a safe area.

### **FORWARD MOVEMENT**



FAILURE TO DECREASE THE VEHICLE SPEED IN BAD DRIVING CONDITIONS CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DECREASE THE VEHICLE SPEED WHEN IN BAD DRIVING CONDITIONS SUCH AS WET GRASS OR ROUGH TERRAIN.

#### Before forward movement:

- Read and obey all safety decals and information located on the vehicle.
- Understand how to operate the vehicle correctly and safely.
- Understand the function of all vehicle controls, indicators, displays, and gauges.
- Make sure that all passengers are seated with seat belts fastened (if equipped) and use the hand holds or handrails. The operator must have both hands on the steering wheel.
- Make sure that the front wheels are turned in the direction of travel.
- Make sure that there are no obstructions in the vehicles path.
- The key switch is set to ON.
- The vehicle is at a full stop.

#### To move the vehicle forward:

- 1. Set the Forward / Neutral / Reverse control (FNR) to F.
- 2. Disengage the park brake.
- 3. Slowly push the accelerator pedal.

### REVERSE MOVEMENT



FAILURE TO DECREASE THE VEHICLE SPEED WHEN IN REVERSE CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DECREASE THE VEHICLE SPEED WHEN IN REVERSE AND PREVENT SUDDEN STOPS.

### Before reverse movement:

• Read and obey all safety decals and information located on the vehicle.

- Understand how to operate the vehicle correctly and safely.
- Understand the function of all vehicle controls, indicators, displays, and gauges.
- Make sure that all passengers are seated with seat belts fastened (if equipped) and use the hand holds or handrails. The operator must have both hands on the steering wheel.
- Make sure that the front wheels are turned in the direction of travel.
- Make sure that there are no obstructions are in the vehicles path.
- The key switch is set to ON.
- The vehicle is at a full stop.

#### To move the vehicle in reverse:

- Set the Forward / Neutral / Reverse control (FNR) to R. Make sure that the multi-purpose buzzer operates.
- 2. Disengage the park brake.
- 3. Slowly push the accelerator pedal.

## **SLOW OR STOP THE VEHICLE**

- 1. Release the accelerator pedal.
- 2. Push the brake pedal.

### **PARK THE VEHICLE**

- 1. Stop the vehicle.
- 2. Engage the park brake to prevent vehicle movement.
- 3. Set the Forward / Neutral / Reverse control (FNR) to N.
- 4. Turn the key to OFF.
- 5. Remove the key. Keep the key in a safe area.

## DRIVING CONDITIONS

## **UNPAVED SURFACES**

Precautions for operation on unpaved or unimproved surfaces:

- Decrease vehicle speed.
- · Use extreme caution.

### **UPHILL SLOPE**



VEHICLE ROLL-OVER CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. PREVENT STOPPING ON A HILL WHEN TOWING OR WITH A LOADED VEHICLE. IF A VEHICLE WITH A LOAD IS STOPPED ON A HILL, PREVENT SUDDEN STARTS, ROLLING BACKWARD, AND SUDDEN STOPS.

DO NOT USE THE ACCELERATOR PEDAL TO HOLD THE VEHICLE POSITION ON A SLOPE. WHEN STOPPED ON A SLOPE, USE THE BRAKE PEDAL TO HOLD THE VEHICLE POSITION.



TO PREVENT ROLL-OVER, OPERATE THE VEHICLE SLOWLY STRAIGHT UP AND DOWN SLOPES. DO NOT OPERATE THE VEHICLE ON SLOPES THAT ARE MORE THAN A 20% GRADE.

VEHICLE ROLLBACK WHEN STARTING ON AN INCLINE CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. USE THE BRAKE PEDAL TO HOLD THE VEHICLE UNTIL THE DRIVETRAIN IS FULLY ENGAGED.

Precautions when on an uphill slope:

- Prevent driving on slopes that exceed 20% grade.
- Always examine the terrain carefully before driving on a slope. Do not drive on a slope with slippery or loose surfaces.
- Keep your feet on the floorboard.
- Drive in a straight line on the slope.
- Prevent driving at an offset angle. An offset angle will cause the vehicle to lean sharply to one side.
- Continue at a stable rate of speed. Do not accelerate quickly.
- Do not stop a vehicle with a load on a slope. If a vehicle with a load must stop on a slope, prevent backwards movement or sudden starts or stops.
- Do not go over the top of a hill at high speed. Obstacles, sharp drop-offs, other vehicles, or persons could be on the other side of the hill.

### SIDE HILL SLOPE



TO PREVENT ROLL-OVER, PROPERTY DAMAGE, AND SERIOUS PERSONAL INJURY, OPERATE THE VEHICLE SLOWLY ON A SLOPE.

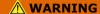
VEHICLE ROLLBACK WHEN STARTING ON AN INCLINE CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. USE THE BRAKE PEDAL TO HOLD THE VEHICLE UNTIL THE DRIVETRAIN IS FULLY ENGAGED.

Vehicle operation on a side hill slope is not recommended.

Precautions if driving on a side hill slope is unavoidable:

- Prevent driving on slopes that exceed 10% grade.
- Decrease vehicle speed.
- Use extreme caution.
- Always examine the terrain carefully before driving on a slope. Do not drive on a slope with slippery or loose surfaces.
- Keep your feet on the floorboard.
- Continue at a stable rate of speed. Do not accelerate quickly.

## **DOWNHILL SLOPE**



VEHICLE ROLL-OVER CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. PREVENT STOPPING ON A HILL WHEN TOWING OR WITH A LOADED VEHICLE. IF A VEHICLE WITH A LOAD IS STOPPED ON A HILL, PREVENT SUDDEN STARTS, ROLLING BACKWARD, AND SUDDEN STOPS.

TO PREVENT ROLL-OVER, OPERATE THE VEHICLE SLOWLY STRAIGHT UP AND DOWN SLOPES. DO NOT OPERATE THE VEHICLE ON SLOPES THAT ARE MORE THAN A 20% GRADE.

USE THE BRAKE PEDAL TO CONTROL THE VEHICLE SPEED WHEN DRIVING DOWN A SLOPE.

THE OPERATOR MUST CONTROL THE VEHICLE SPEED WHEN GOING DOWN A SLOPE.

VEHICLE ROLLBACK WHEN STARTING ON AN INCLINE CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. USE THE BRAKE PEDAL TO HOLD THE VEHICLE UNTIL THE DRIVETRAIN IS FULLY ENGAGED.

Precautions when on a downhill slope:

- Prevent driving on slopes that exceed 20% grade.
- Always examine the terrain carefully before driving on a slope. Do not drive on a slope with slippery or loose surfaces.
- Keep the heavy end of the vehicle uphill.
- Keep your feet on the floorboard.
- Drive in a straight line on the slope.
- Prevent driving at an offset angle. An offset angle will cause the vehicle to lean sharply to one side.
- Continue at a stable rate of speed. Do not accelerate quickly.
- Decrease the vehicle speed.
- Push the brake pedal gradually to slow the vehicle.

### **OVER OBSTACLES**

Driving over obstacles is not recommended and should be avoided.

Precautions if driving over obstacles is unavoidable:

- Always examine the terrain for obstacles before driving in a new area.
- Look forward and learn to read the terrain. Be constantly alert for hazards.
- Drive slowly and use caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.
- Do not drive over large obstacles such as large rocks and fallen trees.



## **BELOW OBSTACLES**



DO NOT OPERATE THE VEHICLE BELOW OBJECTS WITH A HEIGHT THAT IS LESS THAN THE HEIGHT OF THE VEHICLE.

Driving below obstacles is not recommended.

Precautions if operation below obstacles is unavoidable:

- Always examine the terrain for obstacles before driving in a new area.
- Look forward and learn to read the terrain. Be constantly alert for low hanging obstacles such as tree limbs.
- Drive slowly and use caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.

## **NIGHT TIME**



OPERATING THE VEHICLE AT NIGHT WITHOUT THE CORRECT EQUIPMENT CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. TO OPERATE THE VEHICLE AT NIGHT, THE VEHICLE MUST HAVE HEADLIGHTS, TAILLIGHTS, AND REFLECTORS.

Vehicle operation at night is not recommended. When driving at night is unavoidable, the vehicle must have:

- Headlights
- Taillights
- Reflectors

Precautions if driving at night is unavoidable:

- Always have headlights on.
- Always examine the terrain for obstacles before driving in a new area.
- Look forward and learn to read the terrain. Be constantly alert for hazards.
- Drive slowly and use caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.

## **THROUGH WATER**



DRIVING THROUGH WATER CAN DECREASE BRAKE PERFORMANCE. AFTER DRIVING THROUGH WATER, LIGHTLY PUSH THE BRAKE PEDAL TO CHECK THE BRAKE PERFORMANCE. IF THE VEHICLE SPEED DOES NOT DECREASE AT A NORMAL RATE, CONTINUE TO PUSH THE BRAKE PEDAL UNTIL THE BRAKE PERFORMANCE IS BACK TO NORMAL.

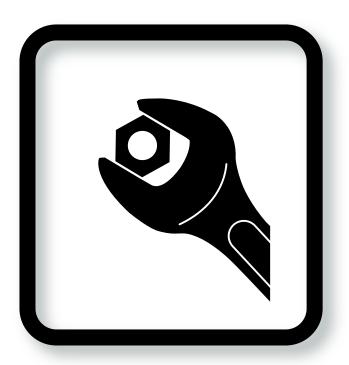
Vehicle operation through water is not recommended and should be avoided.

Precautions when driving through water is unavoidable:

- Decrease the vehicle speed.
- Use extreme caution.
- Do not drive through water that is more than 3 inches (7.62 cm) deep.







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# **VEHICLE MAINTENANCE**



A WHEEL OR TIRE THAT HAS DAMAGE CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. DO NOT TRY TO REPAIR A WHEEL OR TIRE. SPEAK WITH YOUR LOCAL DEALER OR DISTRIBUTOR FOR REPAIRS.

**MARNING** 

UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. BEFORE LEAVING THE VEHICLE OR DURING VEHICLE MAINTENANCE, DISABLE THE VEHICLE.

ONLY TRAINED TECHNICIANS SHOULD SERVICE OR REPAIR THE VEHICLE. 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.

FAILURE TO CORRECTLY MAINTAIN THE VEHICLE AND MAKE NECESSARY REPAIRS CAN DECREASE VEHICLE PERFORMANCE, CAUSE A FIRE, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. IF PROBLEMS ARE FOUND DURING SCHEDULED INSPECTION OR SERVICE, OPERATE THE VEHICLE ONLY WHEN REPAIRS ARE MADE.

UNINTENTIONAL VEHICLE STARTUP CAN CAUSE A FIRE, PROPERTY DAMAGE, OR SERIOUS PERSONAL INJURY. SET THE RUN/TOW SWITCH TO TOW. DISCONNECT THE BATTERIES. WAIT 90 SECONDS FOR THE CONTROLLER DISCHARGE.

DO NOT WORK ON THE VEHICLE POWERTRAIN WHEN THE VEHICLE IS LOADED.

ELECTRICAL SHORTS CAN CAUSE A FIRE, ELECTRICAL SHOCK, SERIOUS PERSONAL INJURY, OR DEATH. PREVENT CONTACT BETWEEN POSITIVE VOLTAGE AND THE GROUND CIRCUIT. USE INSULATED TOOLS.

DO NOT WEAR LOOSE CLOTHING OR JEWELRY SUCH AS RINGS, WATCHES, CHAINS, ETC., WHEN SERVICING THE VEHICLE OR BATTERY CHARGER.

LIFT ONLY ONE END OF THE VEHICLE AT A TIME. USE A SUITABLE LIFTING DEVICE WITH 1000 LB (454 KG) MINIMUM LIFTING CAPACITY. DO NOT USE THE LIFTING DEVICE TO HOLD THE VEHICLE IN THE LIFTED POSITION. USE APPROVED JACK STANDS OF PROPER WEIGHT CAPACITY TO SUPPORT THE VEHICLE AND CHOCK THE WHEELS THAT REMAIN ON THE FLOOR.

IF WIRES ARE REMOVED OR REPLACED, MAKE SURE THAT THE WIRING AND WIRE HARNESS ARE CORRECTLY ROUTED AND ATTACHED. FAILURE TO CORRECTLY ROUTE AND ATTACH THE WIRING COULD RESULT IN VEHICLE MALFUNCTION, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH.

**A** CAUTION

WEAR SAFETY GLASSES OR APPROVED EYE PROTECTION WHEN YOU DO THE SERVICING OF THE VEHICLE. WEAR A FULL FACE SHIELD AND RUBBER GLOVES WHEN NEAR BATTERIES.



## **DISABLE THE VEHICLE**



UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. BEFORE LEAVING THE VEHICLE OR DURING VEHICLE MAINTENANCE, DISABLE THE VEHICLE.

- Park the vehicle on a solid level surface.
- 2. Engage the park brake to prevent vehicle movement.
- 3. Turn the key to OFF.
- 4. Remove the key.
- 5. Set the Forward / Neutral / Reverse control (FNR) to N.
- 6. Put the chocks against the wheels.

## **VEHICLE CLEANING**

### **CLEANING THE WINDSHIELD**

Use a soft towel and water to clean the windshield. Use mild soap as necessary. Do not use a household window cleaner.

## **CLEANING THE VEHICLE EXTERIOR**



MOISTURE CAN CAUSE ELECTRICAL COMPONENT DAMAGE. DO NOT USE A PRESSURE WASHER OR STEAM CLEANER TO CLEAN THE VEHICLE.

Use only commercially available automotive cleaners with a sponge or soft cloth for normal cleaning. A garden hose at normal residential water pressure is sufficient.

Use a commercially available aluminum cleaner paste and fine grade (No. 00) steel wool to remove oxidation or discoloration from aluminum.

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

Discard the waste water correctly.

### CLEANING THE VEHICLE INTERIOR



MOISTURE CAN CAUSE ELECTRICAL COMPONENT DAMAGE. DO NOT USE A PRESSURE WASHER OR STEAM CLEANER TO CLEAN THE VEHICLE.

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. Use a soft bristle brush to remove embedded dirt.

Discard the waste water correctly.

## **MAINTENANCE SCHEDULE**

### MAINTENANCE SCHEDULE OVERVIEW

A preventive maintenance program with regular maintenance can prevent excessive vehicle downtime and repair costs. Use these items to keep the vehicle in proper working condition.

- Daily Pre-Operation Safety Checklist
- Vehicle Performance Inspection
- Maintenance Service Schedule

If a vehicle is found to be in bad operational condition, remove it from operation. Removal from operation will prevent more damage to the vehicle and prevent the possible injury because of dangerous conditions.

Speak with your dealer or distributor for maintenance and repairs.

## MAINTENANCE SERVICE SCHEDULE

*Note:* The Maintenance Service Schedule must be done more frequently on vehicles that are constantly subjected to heavy use or severe operating conditions.

INTERVAL OR HOURS (WHICHEVER COMES FIRST)	DESCRIPTION
Initial: 6 weeks	Single Point Watering System (SPWS): Establish a watering interval.  SPWS: Make sure the valves operate correctly. Examine the battery acid level of all the batteries. Add water if necessary.
Daily	Do the Daily Pre-Operational Safety Check.  Do the Daily Vehicle Performance Inspection.  Charge the batteries.
Weekly	No SPWS: Examine the battery acid level of all the batteries. Add water as necessary.
Monthly	Examine the tire pressure.  Clean the vehicle.  SPWS: Add water to the batteries.  Clean the batteries.  Clean the battery compartment.  Make sure the battery cables are tight.  Make sure the battery hold-downs are tight.

INTERVAL OR HOURS (WHICHEVER COMES FIRST)	DESCRIPTION
Quarterly	Do an inspection of the deionizer.  Do an inspection of the SPWS.
	Use WD-40® to lubricate the battery charger receptacle.
6 months / 50 hours	Have a trained technician:      examine and lubricate the brake system     examine the electrical system     examine the front wheel alignment     lubricate the front suspension     lubricate the accelerator pedal
12 months / 100 hours	Have a trained technician examine the:  • batteries  • front wheel bearings  • pedal components  • safety decals  • transaxle fluid

# **MAINTENANCE TASKS**

## LIFT THE VEHICLE

## LIFT THE FRONT OF THE VEHICLE

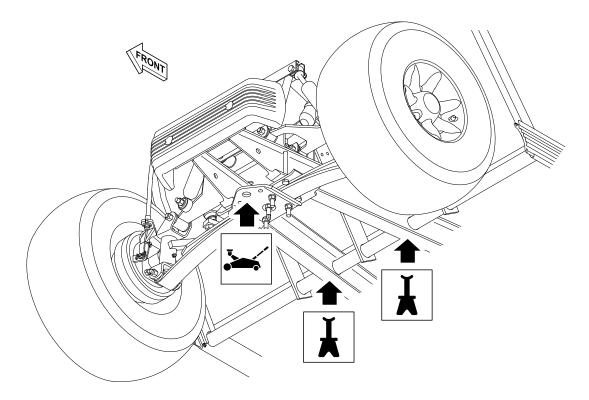


LIFTING THE VEHICLE WITH CARGO CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. REMOVE ALL CARGO FROM THE CARGO BED BEFORE THE VEHICLE IS LIFTED.

Before the vehicle is lifted:

- Disable the vehicle.
- Disconnect the batteries.
- Use a jack and jack stands rated for the vehicle.

To lift the front of the vehicle:



- 1. Place the jack in the center of the lift point.
- 2. Lift the front of the vehicle.
- 3. Put jack stands under the frame rails.
- 4. Lower the vehicle onto the jack stands.

## LIFT THE REAR OF THE VEHICLE

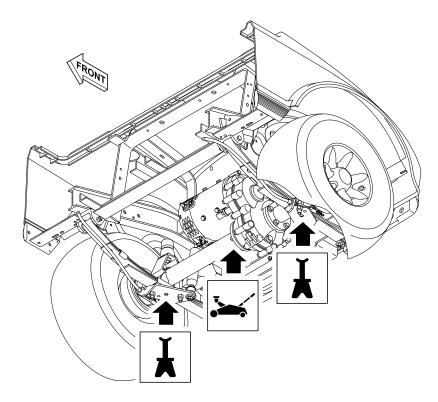


LIFTING THE VEHICLE WITH CARGO CAN CAUSE PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR DEATH. REMOVE ALL CARGO FROM THE CARGO BED BEFORE THE VEHICLE IS LIFTED.

Before the vehicle is lifted:

- Disable the vehicle.
- Disconnect the batteries.
- Use a jack and jack stands rated for the vehicle.

To lift the rear of the vehicle:



- 1. Place the jack in the center of the lift point.
- 2. Lift the rear of the vehicle.
- 3. Put jack stands under the frame rails.
- 4. Lower the vehicle onto the jack stands.

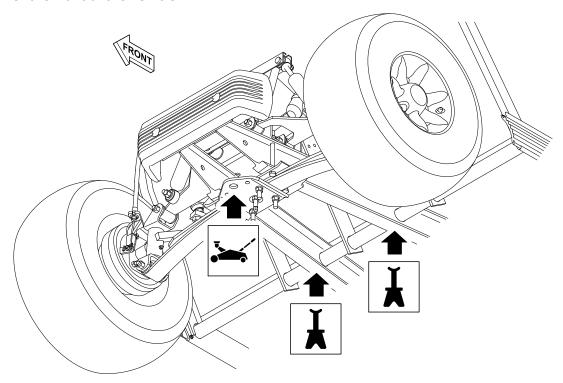
## **LOWER THE VEHICLE**

# **LOWER THE FRONT OF THE VEHICLE**

Before the front of the vehicle is lowered:

• Use a jack rated for the vehicle.

## To lower the front of the vehicle:



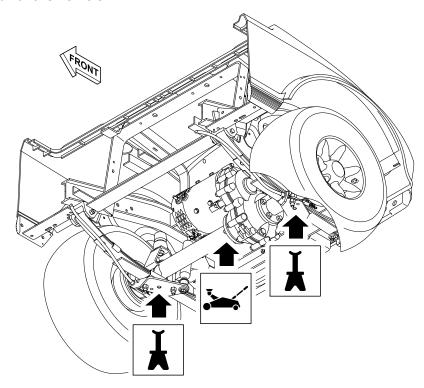
- 1. Place the jack in the center of the lift point.
- 2. Lift the vehicle off of the jack stands.
- 3. Remove the jack stands.
- 4. Lower the vehicle.

# **LOWER THE REAR OF THE VEHICLE**

Before the rear of the vehicle is lowered:

• Use a jack rated for the vehicle.

### To lower the rear of the vehicle:



- 1. Place the jack in the center of the lift point.
- 2. Lift the vehicle off of the jack stands.
- 3. Remove the jack stands.
- 4. Lower the vehicle.

## TIRE PRESSURE MEASUREMENT

Before the tire pressure measurement:

• Disable the vehicle.

To measure the tire pressure:

- 1. Remove the valve stem cap.
- 2. Use a pressure gauge to measure the tire pressure.
- 3. Adjust to meet the recommended tire pressure.

*Note:* Go to the approved wheel and tire assemblies matrix on <a href="http://www.clubcar.com">http://www.clubcar.com</a> for information regarding tire type, inflation pressure, and lug nut torque.

4. Install the valve stem cap.

## WHEEL ASSEMBLY

## WHEEL ASSEMBLY REMOVAL

Before the wheel assembly is removed:

• Disable the vehicle.

To remove the wheel assembly:

- 1. Remove the wheel cover.
- 2. Loosen the lug nuts.
- 3. Lift the vehicle to allow for removal of the wheel assembly.
- 4. Remove the lug nuts.
- 5. Remove the wheel assembly.

## WHEEL ASSEMBLY INSTALLATION

Before wheel assembly installation:

Disable the vehicle.

To install the wheel assembly:

- 1. Lift the vehicle to allow for installation of the wheel assembly.
- 2. Align the wheel assembly onto the hub of the vehicle.

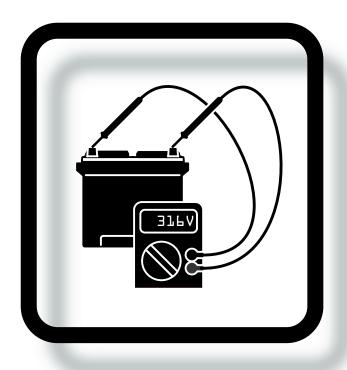
*Note:* Make sure that the valve stem points to the outer side of the vehicle.

*Note:* Make sure that the tire tread is in the correct direction of travel.

- 3. Tighten the lug nuts until they are hand-tight.
- 4. Lower the vehicle.
- 5. Tighten the lug nuts to the recommended torque specification.

Note: Go to the approved wheel and tire assemblies matrix on http://www.clubcar.com for information regarding tire type, inflation pressure, and lugnut torque.

6. Install the wheel cover.



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# **BATTERY MAINTENANCE**

**MARNING** 

ELECTRICAL SHORTS CAN CAUSE A FIRE, ELECTRICAL SHOCK, SERIOUS PERSONAL INJURY, OR DEATH. PREVENT CONTACT BETWEEN POSITIVE VOLTAGE AND THE GROUND CIRCUIT. USE INSULATED TOOLS.

**A** CAUTION

WATER MAY BOIL OVER AND LEAK BATTERY ACID AND CAUSE PERSONAL INJURY OR PROPERTY DAMAGE. CHARGE THE BATTERIES BEFORE WATER IS ADDED.

LEAD-ACID BATTERIES CONTAIN DANGEROUS MATERIALS THAT CAN CONTAMINATE THE WATER AND SOIL, CAUSE ENVIRONMENTAL DAMAGE, CAUSE PROPERTY DAMAGE, AND CAUSE SERIOUS PERSONAL INJURY. DO NOT ADD TOO MUCH WATER TO THE BATTERIES.

WEAR SAFETY GLASSES OR APPROVED EYE PROTECTION WHEN YOU DO THE SERVICING OF THE VEHICLE. WEAR A FULL FACE SHIELD AND RUBBER GLOVES WHEN NEAR BATTERIES.

## **BATTERY CLEANING**

- 1. Apply an approved battery cleaner spray or water solution to the battery top and terminals.

  Note: The water solution is 1 cup (237 ml) baking soda for each 1 gallon (3.8 l) water.
- 2. Use a soft bristle brush to clean the battery top and terminals. Remove all corrosion.
- 3. Use tap water to clean the solution from the batteries. Correctly discard the waste water.
- 4. If the battery cable has corrosion, have a trained technician replace the battery cable.
- 5. Make sure the battery cables are tight. If a battery cable is not tight, tighten the hardware to 110 lb·in (12.4 N·m).
- 6. Let the terminals dry.
- 7. Apply battery terminal protector spray to the terminals.

## **BATTERY CHARGING**

### CHARGING WITH ONBOARD CHARGER



CHARGING LEAD-ACID BATTERIES EMIT HYDROGEN GAS, THAT IS EXPLOSIVE ABOVE 2% AIR CONCENTRATION. CHARGE THE BATTERIES IN A VENTILATED AREA WITHOUT COVERS OR ENCLOSURES.

CHARGING BATTERIES EMIT HYDROGEN GAS, THAT IS EXPLOSIVE ABOVE 2% AIR CONCENTRATION. KEEP BATTERIES AWAY FROM SPARKS AND OPEN FLAMES.

CHARGING BATTERIES EMIT HYDROGEN. HYDROGEN BECOMES AN EXPLOSIVE GAS AT 2% AIR CONCENTRATION. INDIVIDUAL VEHICLES REQUIRE ONE AIR EXCHANGE PER HOUR. FLEET 5 TIMES PER HOUR. THE TOTAL VOLUME OF AIR IN THE CHARGING AREA MUST BE CHANGED AT LEAST FIVE TIMES PER HOUR. EXHAUST FANS MUST BE LOCATED AT THE HIGHEST POINT OF THE ROOF. SPEAK WITH A LOCAL HVAC ENGINEER.



CHARGING THE BATTERIES WITH ACCESSORIES ON CAN CAUSE A FIRE AND SERIOUS PERSONAL INJURY. TURN OFF ALL ACCESSORIES BEFORE CHARGING THE BATTERIES.



LOOSE CORD CONNECTIONS CAN CAUSE A FIRE. MAKE SURE THAT ALL CORD CONNECTIONS AT THE RECEPTACLE ARE CLEAN AND TIGHT.

To charge with an onboard charger:

- 1. Disable the vehicle.
- 2. Turn off all accessories.
- 3. Connect the AC cord (1) to the power source.

*Note:* The vehicle will start to charge in 10 seconds or less.

The charge indicator light will flash and the multi-purpose buzzer will operate when the vehicle starts to charge.

4. Before vehicle operation, disconnect and retract the AC cord.

## **BATTERY ELECTRICAL CONNECTION**

### **DISCONNECT THE BATTERIES**

Before the batteries are disconnected:

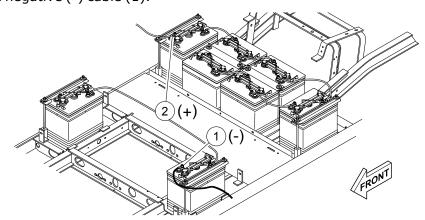
• Disable the vehicle.

To disconnect the batteries:



BATTERIES DISCONNECTED OR CONNECTED WITH THE RUN/ TOW SWITCH SET TO RUN CAN CAUSE A BATTERY EXPLOSION AND SERIOUS PERSONAL INJURY. SET THE RUN/TOW SWITCH TO TOW BEFORE THE BATTERIES ARE DISCONNECTED OR CONNECTED.

- Set the Run/Tow switch to TOW.
- 2. Disconnect the negative (-) cable (1).



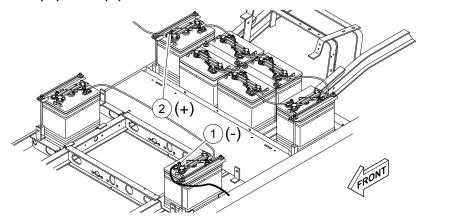
- 3. Disconnect the positive (+) cable (2).
- 4. Wait 90 seconds for the controller capacitors to discharge.

## **CONNECT THE BATTERIES**



BATTERIES DISCONNECTED OR CONNECTED WITH THE RUN/ TOW SWITCH SET TO RUN CAN CAUSE A BATTERY EXPLOSION AND SERIOUS PERSONAL INJURY. SET THE RUN/TOW SWITCH TO TOW BEFORE THE BATTERIES ARE DISCONNECTED OR CONNECTED.

- 1. Set the Run/Tow switch to TOW.
- 2. Connect the positive (+) cable (2).



3. Connect the negative (-) cable (1).



LOOSE BATTERY WIRES CAN CAUSE A FIRE, PROPERTY DAMAGE, OR SERIOUS PERSONAL INJURY. MAKE SURE THAT ALL BATTERY WIRES AND TERMINALS ARE CLEAN AND TIGHTENED CORRECTLY.

- 4. Tighten the hardware to 110 lb·in (12.4 N·m).
- 5. Apply battery terminal protector spray to the battery terminals.
- 6. Set the Run/Tow switch to RUN.

## **BATTERY HOLD-DOWN**

Each hold-down must be tight to prevent the battery movement while the vehicle is in operation. Do not tighten too much or the battery case can crack or buckle.

1. Tighten the hold-down nuts to 110 lb·in (12.4 N·m).

# ADD WATER TO A BATTERY WITHOUT SINGLE POINT WATERING SYSTEM

This information is for batteries without a Single Point Watering System (SPWS). Before water is added:

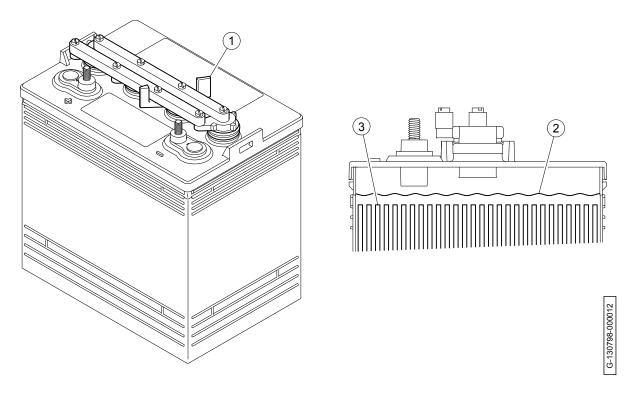


G-130798-000017

• Disable the vehicle.

To add water to the batteries:

1. Unlock and remove the cap (1).



- 2. Make sure that the battery acid (2) is level with or above the top of the plates (3).
- 3. If the battery acid is level with or above the top of the plates:
  - 3.A Install and lock the cap.
  - 3.B Fully charge the batteries.
- 4. If the battery acid is below the top of the plates:
  - 4.A Add water until the battery acid is level with the top of the plates.
  - 4.B Install and lock the cap.
  - 4.C Fully charge the batteries.
- 5. Unlock and remove the cap.
- 6. Make sure that the battery acid is 0.5 inches (13 mm) above the top of the plates. Add water as necessary.



LOOSE BATTERY CAPS CAN CAUSE BATTERY ACID TO LEAK. FULLY ATTACH THE BATTERY CAPS TO PREVENT LEAKAGE.

7. Install and lock the cap.

## **DEIONIZER**

NOTICE

FREEZING TEMPERATURES WILL CAUSE DAMAGE TO WATER SUPPLY COMPONENTS. DRAIN ALL WATER SUPPLY COMPONENTS IN AN EMPTY STATE.

Refer to the deionizer operator and maintenance manual for maintenance and operator information.

# ADD WATER TO BATTERIES WITH SINGLE POINT WATERING SYSTEM

**⚠ CAUTION** 

LEAD-ACID BATTERIES CONTAIN DANGEROUS MATERIALS THAT CAN CONTAMINATE THE WATER AND SOIL, CAUSE ENVIRONMENTAL DAMAGE, CAUSE PROPERTY DAMAGE, AND CAUSE SERIOUS PERSONAL INJURY. IF BATTERY ACID LEAKS FROM THE BATTERIES, STOP THE FILL PROCESS. DISCONNECT THE PRESSURE REGULATOR FROM THE BATTERY FILL COUPLING. SPEAK WITH YOUR DEALER OR DISTRIBUTOR.

**NOTICE** 

FREEZING TEMPERATURES WILL CAUSE DAMAGE TO WATER SUPPLY COMPONENTS. DRAIN ALL WATER SUPPLY COMPONENTS IN AN EMPTY STATE.

1. Add water to the batteries. Refer to the: installation, operation, and maintenance manual, hand pump manual, and deionizer operator and maintenance manual.

## WATERING INTERVALS

The watering intervals are affected by:

- Age of the batteries
- Application
- Charging methods
- Local climate

Examine the consumption rates manually. Examine new batteries monthly until consumption rates are known. Examine used batteries weekly until consumption rates are known. The watering interval must maintain the electrolyte level above the top of the plates.

During periods of heavy use, water the batteries no more than one time a week. During periods of light use, water the batteries no more than one time a month. Only add water to a warm battery that is fully charged. Do not add water to the batteries before charging.

# WATER QUALITY

### **OVERVIEW**

Water purity is one of the more important factors in the performance and life of the vehicle batteries. Club Car has put an increased importance on water purity and battery maintenance. Club Car recommends the use of distilled water or a deionizer because of the cost of water testing and fluctuations in the daily changes to water quality.



#### PREFERRED SOURCES

### **DEIONIZED WATER**

Deionized water is water that has all charged mineral ions removed (example: sodium, calcium, iron, copper, and chloride).

Obey the manufacturers' recommendation for filter replacement. A clean filter will make sure that the deionized water quality stays high.

### **DISTILLED WATER**

Distilled water is the most common type of water used in batteries. Distilled water is made 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.

#### **ALTERNATE SOURCES**

## **REVERSE OSMOSIS**

Reverse osmosis involves the movement of water through a membrane that lets water pass while trapping solids. The selection of membranes and usage frequency determines the quantity of solids or impurities which get caught and hence the purity quality of the filtered water. Because of the variance in water quality consistency, Club Car recommends the use of the deionizer or distilled water.

# **TAP WATER**

Because of the levels of dissolved minerals and chemicals that can degrade battery performance and life the use of tap water without filtering should be limited. Regular water analyses must be done to check for impurities if unfiltered tap water is used.

#### **WATER IMPURITY**

Listed are the maximum permitted water soluble minerals, solids, and contaminates in parts per million and their impact on battery performance.

IMPURITY	PERMITTED CONTENT (PARTS PER MILLION)	IMPURITY EFFECTS
Ammonia	8.0	Slight self-discharge of both plates
Antimony	5.0	Self-discharge, decreases life, and lower on-charge voltage
Arsenic	0.5	Self-discharge and can form poisonous gas
Calcium	40.0	Increase of positive plate shedding
Chloride	5.0	Loss of capacity in plates and greater loss in positive plates
Copper	5.0	Increased self-discharge and lower on-charge voltage



IMPURITY	PERMITTED CONTENT (PARTS PER MILLION)	IMPURITY EFFECTS
Iron	3.0	Increased self-discharge and lower on-charge voltage
Magnesium	40.0	Decreased 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, and decreased life
Platinum	None allowed	Violent self-discharge and lower on-charge voltage
Selenium	2.0	Positive plate shedding
Zinc	4.0	Slight self-discharge of negative plates
Organic and volatile matter	50.0	Corrosion of positive plates
Suspended matter	Trace	None
Total solids	100.0	None



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# **TRANSPORT AND TOW**

**M** DANGER

DO NOT LET PASSENGERS RIDE IN THE VEHICLE OR TRAILER BEING TOWED.

**MARNING** 

KEEP AWAY FROM THE AREA BETWEEN THE TOW VEHICLE AND THE TOWED VEHICLE OR TRAILER.

DO NOT TOW A CLUB CAR VEHICLE BEHIND A PASSENGER VEHICLE OR TRUCK ON A PUBLIC ROAD. ONLY TRANSPORT A CLUB CAR VEHICLE ON AN APPROVED TRAILER.

**⚠** CAUTION

THE VEHICLE CAN FALL OFF THE TRAILER AND CAUSE PROPERTY DAMAGE AND SERIOUS PERSONAL INJURY. MAKE SURE THE VEHICLE IS CORRECTLY SECURED TO THE TRAILER.

BEFORE TRANSPORTING THE VEHICLE ON A TRAILER, REMOVE THE WINDSHIELD. SECURE THE SEAT BOTTOM.

WHEN A TRAILER IS USED ON A PUBLIC ROAD, THE TRAILER MUST MEET ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS SUCH AS TAILLIGHTS AND BRAKE LIGHTS.

# PREPARE THE VEHICLE TO BE TOWED

- Turn the key to OFF.
- 2. Remove the key. Keep the key in a safe area.
- 3. Set the Forward / Neutral / Reverse control (FNR) to N.
- 4. Set the Run/Tow switch to TOW.

## **TOWING A TRAILER OR VEHICLE**



USE EXTREME CAUTION WHEN TOWING A TRAILER OR VEHICLE. DO NOT MAKE SHARP TURNS WHEN TOWING A TRAILER OR VEHICLE. DO NOT TOW A TRAILER OR VEHICLE ON PUBLIC ROADS OR HIGHWAYS. DECREASE THE VEHICLE SPEED WHEN TOWING A TRAILER OR VEHICLE.

This vehicle is not designed for towing operation.

## VEHICLE TRANSPORT PREPARATION



USE EXTREME CAUTION WHEN TRANSPORTING THE VEHICLE ON A TRAILER. REFER TO THE TOW VEHICLE OPERATOR MANUAL.

The vehicle is not designed to be towed at speeds over 5 mph. If movement over long distances or on public roads is necessary, transport the vehicle on a trailer. Use a trailer with appropriate load rating.

- 1. Set the park brake.
- 2. Set the Forward / Neutral / Reverse control (FNR) to N.
- 3. Turn the key to OFF.



- 4. Remove the key. Keep the key in a safe area.
- 5. Set the Run/Tow switch to TOW.
- 6. Remove all cargo from the vehicle.
- 7. Remove the windshield from the vehicle.
- 8. Secure all doors, access panels, seat bottoms, and windshield.
- 9. Examine the vehicle for loose parts. Tighten as necessary.
- 10. Secure the vehicle to the trailer.

# **VEHICLE TRANSPORT RECOVERY**

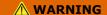
- 1. Make sure that the trailer is correctly configured to remove the vehicle from the trailer safely.
- 2. Remove all materials used to secure the vehicle to the trailer.
- 3. Examine the vehicle for loose parts. Tighten as necessary.
- 4. Install the windshield.





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# **EXTENDED STORAGE**



FROZEN BATTERY ACID CAN CAUSE DAMAGE INCLUDING LEAKS AND EXPLOSIONS. IF THE BATTERY ACID FREEZES, REPLACE THE BATTERY BEFORE CHARGING OR USE. BATTERIES IN A LOW STATE OF CHARGE WILL FREEZE AT LOW TEMPERATURES. KEEP THE BATTERIES IN A HIGH STATE OF CHARGE.

UNINTENDED VEHICLE OPERATION CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH. BEFORE LEAVING THE VEHICLE OR DURING VEHICLE MAINTENANCE, DISABLE THE VEHICLE.

## EXTENDED STORAGE PREPARATION

Keep sufficient water levels in each battery cell for a minimum of two weeks before extended storage to make sure proper mixing of water and battery acid. If necessary, add water as necessary then correctly charge batteries.

Note: It takes approximately five charge cycles with a minimum of 10-amp hours of use after each charge to correctly mix the water with battery acid.

To prepare your vehicle for extended storage:

- 1. Turn off all electronic accessories.
- 2. Set the Forward / Neutral / Reverse control (FNR) to N.
- 3. Turn the key to OFF.
- 4. Remove the key. Keep the key in a safe area.
- 5. Put chocks against the wheels.
  - *Note:* Do not engage the park brake.
- 6. Remove all cargo and personal items.
- 7. Run/Tow switch position:
  - *Note:* The charge indicator light is disabled when the Run/Tow switch is set to TOW.
  - 7.A On vehicles equipped with Visage that will have remote monitoring, set the Run/Tow switch to RUN.
  - 7.B On vehicles equipped with Visage that will not have remote monitoring, set the Run/Tow switch to TOW.
  - 7.C On all other vehicles, set the Run/Tow switch to TOW.
- 8. Clean the batteries.
- 9. Tighten all battery cable connections to 110 lb·in (12.4 N·m).
- 10. Keep the vehicle in a cool and dry area to keep battery self-discharge to a minimum.
- 11. Adjust pressure in each tire to the recommended tire pressure.
  - Note: Go to the approved wheel and tire assemblies matrix on http://www.clubcar.com for information regarding tire type, inflation pressure, and lugnut torque.
- 12. Clean the vehicle.



- 13. <u>If one or more conditions shown cannot be done while in storage,</u> disconnect the negative (-) battery cable. Make sure that the negative (-) battery cable does not touch the battery terminal.
  - The battery charger must stay connected to an electric outlet
  - AC electrical power will be available during storage
  - Battery acid levels will be kept at a sufficient level while in storage
- 14. If all conditions shown can be done while in storage, do as follows:
  - The battery charger must stay connected to an electric outlet
  - AC electrical power will be available during storage
  - Battery battery acid levels will be kept at a sufficient level while in storage
  - 14.A Connect the battery charger to the vehicle. Keep battery chargers connected during storage. The charger will automatically connect when necessary.
  - 14.B Examine the battery acid level and charger function monthly.

*Note:* The charger is operating correctly when the blue light is on and the triangular light is off.

## RETURN TO SERVICE FROM EXTENDED STORAGE

- 1. Clean the batteries.
- 2. If the batteries were disconnected, connect the batteries.
- 3. Fully charge the batteries.
- 4. Set the Forward / Neutral / Reverse control (FNR) to N.
- 5. Set the Run/Tow switch to RUN.
- 6. Adjust the pressure in each tire to the recommended tire pressure.
  - Note: Go to the approved wheel and tire assemblies matrix on http://www.clubcar.com for information regarding tire type, inflation pressure, and lugnut torque.
- 7. Have a trained technician lubricate the vehicle.
- 8. Do a daily pre-operation safety checklist.
- 9. Do a vehicle performance inspection.





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# **WARRANTIES**

# LIMITED WARRANTY

#### **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.

# **WARRANTY TIMEFRAME**

ITEM	SUB-ITEMS	COVERAGE
VEHICLE MAINFRAME	Not applicable	2 years or 2,000 hours
SUSPENSION	Steering gearbox, steering column, shocks, and leaf springs	2 years or 2,000 hours
ELECTRIC POWERTRAIN	Electric motor, transaxle, and MCOR	3 years or 2,000 hours
	6-volt standard	4 years or 18,000 hours
DEEP CYCLE BATTERY	6-volt heavy duty	4 years or 23,000 hours
	8-volt	4 years or 16,000 hours
MAJOR ELECTRONICS	Solid state speed controller and battery charger	4 years or 16,000 hours
PEDAL GROUP	Pedal group mechanical assembly, brake cluster assemblies, and brake cables	2 years or 2,000 hours
SEATS	Seat bottom, seat back, and armrests	2 years or 2,000 hours
CANOPY SYSTEM	Canopy, rear canopy supports, drainage system, and structural accessory module (SAM)	2 years or 2,000 hours

BODY GROUP	Body and dash panels	2 years or 2,000 hours
ALL REMAINING COMPONENTS	Solenoid, limit switches, voltage regulator, F&R switch, and options and accessories supplied by Club Car, including components not specified otherwise	2 years or 2,000 hours

#### **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 nonapproved 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 engine mounts, bed floor lining, mats, pads, spark plugs, light bulbs, brake pads, belts, brushes, solenoids, 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 the following conditions:

- Batteries
  - Improper charging of a vehicle due to the use of a battery charger model not approved by Club Car for use with the vehicle.
  - Use of water in batteries, including tap water, that contains impurities. Distilled water or a properly maintained, Club Car approved battery water deionizer and filter system must be used to ensure water quality.
  - Abuse such as overcharging, undercharging, improper fluid levels, loose wiring and fasteners, or rusted or corroded hardware.
  - Use of energy management systems that do not allow a minimum of 12 hours of charge time to assure proper charging.
  - Use of any accessories that do not draw power off the complete system voltage.
  - 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.
  - A battery damaged by a defective charger or batteries in vehicles that do not receive proper charging.
  - A vehicle not having an operational charger on a circuit that has the parameters specified in the vehicle operator's manual (the number of operational chargers must equal the number of operational vehicles), or use of an unapproved algorithm.
- 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 operator's manual.
- Damages caused by improper installation of the component.
- Failed semiconductor parts such diodes and fuses that are vulnerable to electrical overloads (including lightning) beyond the control of Club Car.



Damaged charger AC and DC cord set with plug, which is a wear item and subject to user abuse.

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 operator'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 damaged, involved in an accident, 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 operator'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 amp hours (if applicable) to an authorized Club Car dealer.

For warranty-related communication, contact:

E-mail

cci\_warrantyadministration@clubcar.com

Postal Service

Club Car, LLC
Attention: Warranty Services
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Evans, Georgia 30809
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