

DS Golf Car

Electric
Vehicles

1999 Owner's Manual

Club Car[®]

play to win

NOTICE

The Club Car Limited Warranty for owners of single golf cars appears on the pages following this notice, and the Limited Lifetime Fleet Warranty appears at the end of this manual, along with limited warranty information for 1999 T-105 6-volt batteries, 1999 PowerDrive 8-volt batteries, 1999 PowerDrive Battery Chargers, 1999 onboard computers and solid-state speed controllers. No other warranties, express or implied, are contained herein. Your authorized representative checked this vehicle before it was delivered to you and will provide a completed warranty registration card to you.

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.

This vehicle conforms to the current American National Standards Institute's Z130 Safety and Performance Requirements for Golf Cars. This standard, which promotes safety in the design, application, and operation of golf cars, defines a golf car as "a vehicle used to convey a person or persons and equipment to play the game of golf in an area designated as a golf course." Throughout this manual, the words "golf car" and "vehicle" are used interchangeably.

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

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

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

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This manual effective July 27, 1998

CLUB CAR LIMITED THREE YEAR WARRANTY FOR 1999 SINGLE GOLF CARS IN THE UNITED STATES AND CANADA

1. WARRANTY:

CLUB CAR, INC., ("CLUB CAR") hereby warrants to the original retail purchaser that its new 1999 Model DS golf car purchased from CLUB CAR or an authorized distributor or dealer for use in the United States or Canada shall be free from defects in materials and workmanship under normal use and service as a golf car for the periods stated below, subject to the provisions, limitations, and exclusions contained in this limited warranty.

LIMITED THREE YEAR WARRANTY:

The golf car frame (excluding the front and rear bumper mounts), rack and pinion steering gearbox unit, suspension system (defined as the shock absorbers, shock mounts, A-plate, leaf springs, shackles, and associated hardware), gasoline engine, unitized transaxle, torque converters (drive and driven), starter generator, transaxle (electric vehicle), and electric motor are warranted with respect to parts and labor against defects in materials and workmanship for a period of three years from the date of purchase.

LIMITED TWO YEAR WARRANTY:

All remaining components of the golf car not specified otherwise, except options and accessories, are warranted with respect to parts and labor against defects in materials and workmanship for a period of two years from the date of purchase.

LIMITED ONE YEAR WARRANTY:

All original equipment options and accessories supplied by Club Car are warranted with respect to parts and labor against defects in material and workmanship for a period of one year from the date of purchase.

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

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

2. EXCLUSIONS:

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

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

3. VOIDING OF WARRANTY:

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

4. SOLE REMEDY:

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

5. HOW TO MAKE A WARRANTY CLAIM:

To make a warranty claim under this limited warranty, you must present the golf car or defective component to an authorized CLUB CAR distributor or dealer or send the defective component, freight prepaid, to WARRANTY ADMINISTRATION, CLUB CAR, INC., P.O. Box 204658, 4152 Washington Road, Augusta, Georgia 30907-4658.

6. DISCLAIMER:

THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REMEDY OF REPLACEMENT OR REPAIR OF THE DEFECTIVE GOLF CAR OR COMPONENT THEREOF IS THE EXCLUSIVE AND 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.

7. NO CONSEQUENTIAL DAMAGES:

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

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

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

8. INFORMATION:

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

9. WARNING:

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

FOREWORD

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

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

Club Car products are backed by a customer support system designed to offer you fast, courteous service. In the event that your golf car needs repairs or service, we recommend that your local authorized Club Car representative perform them. For the name and address of the Club Car representative nearest you, call 706-863-3000, Ext. 2601. If you would prefer to write to us, direct your letter to: Club Car, Attention: Marketing Services, P.O. Box 204658, Augusta, Ga. 30917-4658 USA. Your local authorized Club Car representative can also provide technical advice, parts, and service manuals.

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

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Practice Safety



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

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

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

SAFETY DETAILS

⚠ WARNING

- THIS OWNER'S MANUAL SHOULD BE READ COMPLETELY BEFORE ATTEMPTING TO DRIVE OR SERVICE THE VEHICLE. FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN PROPERTY DAMAGE, SEVERE PERSONAL INJURY, OR DEATH.

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

Throughout this manual and on the operation and warning decals affixed to the vehicle, the words "golf car" and "vehicle" are used interchangeably. "Golf car" is defined in the Notice of this manual and no other representation is stated or implied.

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

⚠ DANGER

- A DANGER INDICATES AN IMMEDIATE HAZARD WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ WARNING

- A WARNING INDICATES AN IMMEDIATE HAZARD WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ CAUTION

- A CAUTION INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN PRODUCT OR PROPERTY DAMAGE OR MINOR PERSONAL INJURY.

NOTE

- A NOTE PROVIDES KEY INFORMATION TO MAKE PROCEDURES MORE EASILY UNDERSTOOD.

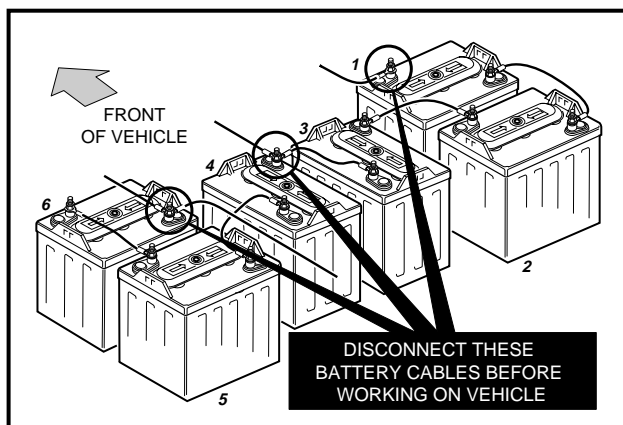


Figure 1 V-Glide 36-Volt Vehicle

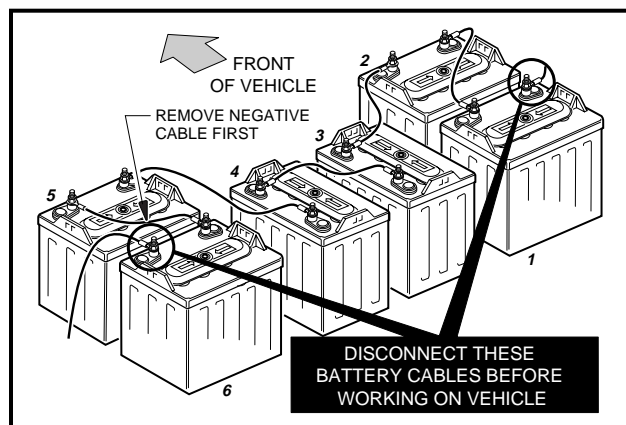


Figure 2 PowerDrive System 48 and PowerDrive Plus Vehicles

GENERAL WARNINGS

The safety procedures listed must be followed whenever the vehicle is being operated, repaired, or serviced. Vehicle feature identification information is also included on page 4. Other specific **WARNING** statements appear throughout this manual and on the vehicle.

DANGER

- **BATTERY VAPORS - FLAMMABLE! EXPLOSIVE! DO NOT SMOKE. KEEP SPARKS AND FLAMES AWAY FROM THE AREA OF THE VEHICLE. SERVICE ONLY IN WELL-VENTILATED AREAS.**
- **A GOLF CAR WILL *NOT* PROVIDE PROTECTION FROM LIGHTNING, FLYING OBJECTS, OR OTHER STORM RELATED HAZARDS. IF CAUGHT IN A STORM WHILE DRIVING A GOLF CAR, EXIT THE VEHICLE AND SEEK SHELTER IN ACCORDANCE WITH APPLICABLE SAFETY GUIDELINES FOR YOUR LOCATION.**

WARNING

- NEVER LEAVE CHILDREN UNATTENDED IN THE VEHICLE.
- ONLY TRAINED MECHANICS SHOULD REPAIR OR SERVICE THE VEHICLE. ANYONE DOING EVEN SIMPLE REPAIRS OR SERVICE SHOULD FOLLOW THE PROCEDURES EXACTLY AS STATED IN THIS MANUAL, AND FOLLOW ALL **DANGER**, **WARNING**, AND **CAUTION** PROCEDURES LISTED IN THIS MANUAL AS WELL AS THOSE AFFIXED TO THE VEHICLE.
- ALWAYS WEAR SAFETY GLASSES OR APPROVED EYE PROTECTION WHEN SERVICING THE VEHICLE. WEAR A FULL FACE SHIELD WHEN WORKING WITH BATTERIES.
- TURN THE KEY SWITCH TO **OFF**, REMOVE THE KEY, CHOCK THE WHEELS, PLACE THE FORWARD/REVERSE SWITCH IN **NEUTRAL**, AND DISCONNECT BATTERIES PRIOR TO SERVICING THE VEHICLE:
- **POWERDRIVE PLUS VEHICLES ONLY:** PLACE TOW/RUN SWITCH IN THE **TOW** POSITION BEFORE DISCONNECTING BATTERIES.
- TO AVOID UNINTENTIONALLY STARTING THE VEHICLE, DISCONNECT THE BATTERIES AS SHOWN (**FIGURE 1 AND FIGURE 2, PAGE 2**). **ON POWERDRIVE SYSTEM 48 AND POWERDRIVE PLUS VEHICLES**, ALSO DISCHARGE THE CONTROLLER AS FOLLOWS:
 - TURN THE KEY SWITCH TO **ON** AND PLACE THE FORWARD/REVERSE SWITCH IN THE **REVERSE** POSITION.
 - SLOWLY DEPRESS THE ACCELERATOR PEDAL AND KEEP IT DEPRESSED UNTIL THE REVERSE WARNING BUZZER CAN NO LONGER BE HEARD. WHEN THE BUZZER STOPS SOUNDING, THE CONTROLLER IS DISCHARGED.
- ALWAYS USE INSULATED TOOLS WHEN WORKING AROUND BATTERIES OR ELECTRICAL CONNECTIONS.
- IMPROPER USE OF THE VEHICLE OR FAILURE TO PROPERLY MAINTAIN IT, COULD RESULT IN DECREASED VEHICLE PERFORMANCE OR SEVERE PERSONAL INJURY.
- ANY MODIFICATION OR CHANGE TO THE VEHICLE WHICH AFFECTS THE STABILITY OR HANDLING OF THE VEHICLE, OR INCREASES MAXIMUM VEHICLE SPEED BEYOND FACTORY SPECIFICATIONS, COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

DS ELECTRIC VEHICLE

DRIVER / PASSENGER WARNING DECAL

WARNING

READ AND FOLLOW THESE WARNINGS AND THE OPERATING INSTRUCTIONS BEFORE USING VEHICLE. FAILURE TO DO SO CAN CAUSE SEVERE INJURY OR DEATH.

- Operation from driver side by authorized persons only and only in designated areas - not on public roads.
- DO NOT start vehicle until all occupants (two (2) per seat maximum) are seated.
- Remain seated with entire body inside vehicle and hold on to seat handle or handrail at all times.
- Drive slowly in turns and straight up and down slopes.
- Never stand in front of or behind vehicle.
- DO NOT operate while under the influence of alcohol or drugs.
- DO NOT leave children unattended on vehicle at any time.

CCI 1019806-01

KEY SWITCH



OPERATING INSTRUCTIONS

- Read Owner's Manual and safety warnings located on dash panel prior to driving.
- Study and understand controls.
- Make sure wheels are turned in desired direction.
- Turn key to "ON" position and be sure nothing is in your path.
- While vehicle is stopped, select direction by placing shift lever or switch in desired position:
F - Forward N - Neutral R - Reverse (Buzzer will sound)
- Vehicle will start moving when accelerator pedal is depressed.
- Slowly depress accelerator pedal to increase speed. Park brake will release when accelerator pedal is depressed.
- To stop, release accelerator pedal and depress brake pedal.
- After stopping, firmly depress park brake until it locks.
- Place forward and reverse switch in neutral position.

Turn key "OFF" and remove key when not in use.

CCI 1016216-01

OPERATING INSTRUCTIONS DECAL

BATTERY WARNING LIGHT

SERIAL NUMBER

ACCELERATOR PEDAL

BRAKE PEDAL

DANGER DECAL (ON BODY UNDER SEAT)

IMPORTANT NOTICE

VEHICLE EQUIPPED TO LIMIT DOWNHILL SPEED

- Maximum vehicle speed is limited during downhill operation with accelerator pedal depressed.
- Vehicle will brake gently when accelerator pedal is released.
- System is activated only when tow switch is in the "RUN" position.
- When towing vehicle, tow switch must be in the "TOW" position.

CCI 1019599-01

MOTOR BRAKING DECAL (POWERDRIVE PLUS VEHICLES ONLY)

DANGER / POISON

| | | | | |
|--|-------------|----------------------------|---|-----------------------------------|
| EXPLOSIVE GASES CAN CAUSE BLINDNESS OR DEATH | SHIELD EYES | NO SPARKS, FLAMES, SMOKING | SULFURIC ACID CAN CAUSE BLINDNESS OR SEVERE BURNS | FLUSH EYES IMMEDIATELY WITH WATER |
|--|-------------|----------------------------|---|-----------------------------------|

KEEP OUT OF THE REACH OF CHILDREN - DO NOT TIP - KEEP VENT CAPS TIGHT AND LEVEL

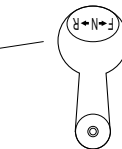
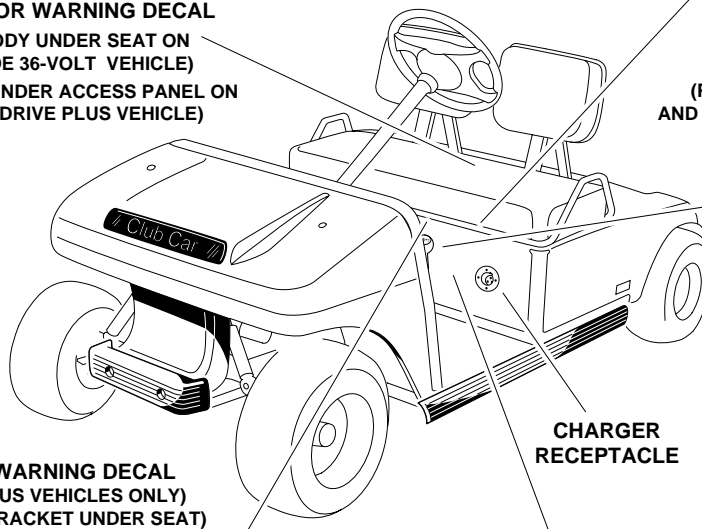
WARNING HOT RESISTORS (COILED WIRE) CAN CAUSE SEVERE BURNS.

RESISTOR WARNING DECAL

(ON BODY UNDER SEAT ON V-GLIDE 36-VOLT VEHICLE)

(ON BODY UNDER ACCESS PANEL ON POWERDRIVE PLUS VEHICLE)

FORWARD/REVERSE HANDLE (POWERDRIVE SYSTEM 48 AND V-GLIDE 36-VOLT VEHICLES)



OR



CHARGER RECEPTACLE

FORWARD/REVERSE SWITCH (POWERDRIVE PLUS VEHICLES ONLY)

TOW SWITCH WARNING DECAL (POWERDRIVE PLUS VEHICLES ONLY) (ON TOW SWITCH BRACKET UNDER SEAT)

WARNING TOW RUN

PLACE TOW SWITCH IN "TOW" POSITION BEFORE:

- TOWING
- EXTENDED STORAGE
- SERVICING
- DISCONNECTING BATTERIES

FAILURE TO DO SO COULD RESULT IN DAMAGE TO VEHICLE OR BATTERY EXPLOSION.

CCI 1019086-01

NOTICE

- DO NOT OPERATE VEHICLE WITHOUT COVER IN PLACE.
- DO NOT DIRECT WATER STREAM AT THIS SWITCH.

CCI 1016109-01

POTENTIOMETER CAUTION DECAL (ON WIPER SWITCH COVER INSIDE BATTERY COMPARTMENT)

GENERAL INFORMATION

There are three electric DS Golf Car models: the DS V-Glide 36-volt vehicle, the DS PowerDrive System 48 (48-volt) electric vehicle, and the DS PowerDrive Plus (48-volt) vehicle. Throughout this manual, important features unique to each model are highlighted. We urge the owner/operator to read and understand this manual, and to pay special attention to the features specific to his/her vehicle(s).

MODEL IDENTIFICATION

The serial number of your Club Car is printed on a bar code decal mounted on the frame directly above the accelerator pedal (Example: A9901-123456) (**Figure 3, Page 5**). There is also a second serial number decal mounted on the front body frame behind the center dash panel. The center dash panel must be removed to access it. **See following NOTE.**

NOTE

- ALWAYS HAVE THE VEHICLE SERIAL NUMBER AT HAND WHEN ORDERING PARTS OR MAKING INQUIRIES. IF THE VEHICLE IS EQUIPPED AS A FAIRWAY VILLAGER FOUR PASSENGER VEHICLE, READ THE SPECIAL INSTRUCTIONS BEGINNING ON PAGE 25.

SAFETY COMMITTEE

If the golf car is to be rented or is part of a fleet, we strongly recommend that a safety committee be appointed. One of the main concerns of this committee should be the safe operation of the golf cars.

This should include at a minimum:

- Where golf cars should be driven.
- Ensuring that proper warnings of driving hazards are displayed and visible.
- Who should and who should not drive golf cars.
- Instructing first time drivers.
- Maintaining golf cars in a safe driving condition.
- How various rules are to be enforced.

The safety committee should include all these items and such others as the committee feels necessary or appropriate.

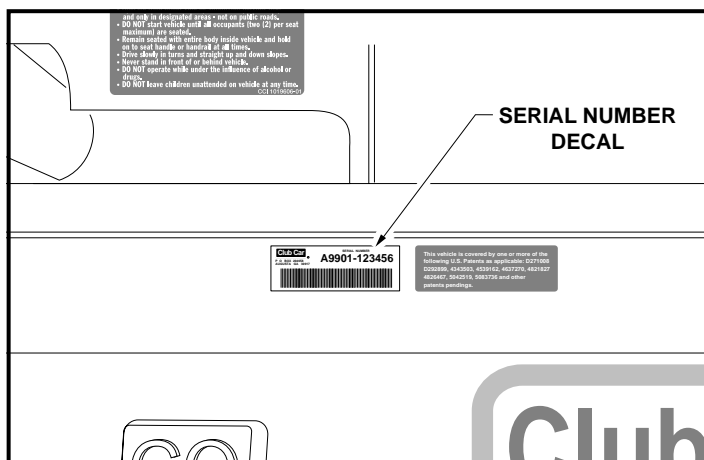


Figure 3 Serial Number Location

PRE-OPERATION CHECKLIST

Your Club Car has been thoroughly inspected and adjusted at the factory, and also by your Club Car distributor/dealer. However, upon arrival of your new Club Car(s), you should become familiar with its controls and operation, and carefully inspect each vehicle to be satisfied that it is in proper working condition before accepting delivery.

Use the following checklist as a guide to inspect your new vehicle, and in conjunction with the Periodic Service Schedule on page 15. Any problems should be corrected only by your Club Car distributor/dealer or a trained mechanic.

- **General:** All the parts should be in place and properly installed. Be sure that all nuts, bolts, and screws are tight.
- **Warning Decals:** Check to ensure that all warning and operation decals are in place (**See page 4**).
- **Tires:** Check for proper tire pressure (**See Vehicle Capacities, Page 17**).
- **Batteries:** Check electrolyte to ensure that it is at its proper level (**Figure 12, Page 19**). Check battery posts. Wires should be tight and free of corrosion. Charge batteries fully before first use of vehicle.
- **Multi-Step Potentiometer (48-volt electric vehicles) and V-Glide Wiper Switch (36-volt electric vehicles):** Be sure accelerator switch cover is properly secured prior to operating the vehicle.

WARNING

- BE SURE THE PLASTIC HAS BEEN REMOVED FROM THE SEAT BOTTOM BEFORE OPERATING THE VEHICLE. FAILURE TO DO SO MAY RESULT IN A FIRE, PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

PERFORMANCE INSPECTION

After you have familiarized yourself with the vehicle's controls and have read and understood the driving instructions, take the vehicle for a test drive. Use the following checklist as a guide to inspect your new vehicle. Any problems should be corrected only by your Club Car distributor/dealer or a trained technician.

All vehicles

- **Brakes:** Be sure the brakes function properly. When brake pedal is fully depressed under moderate pressure, it should *not* go more than halfway to the floor, and vehicle should come to a smooth, straight stop within 14 feet. If the pedal goes more than halfway to the floor, or if the vehicle swerves or fails to stop within 14 feet, have the brake system checked and adjusted as required. Brake adjustment must be maintained so that the brake pedal *cannot* be depressed to the floor under any circumstances.
- **Park Brake:** When latched, the park brake should lock the wheels and hold the vehicle stationary (on incline of 20% or less). It should release when either the accelerator or brake pedal is depressed.
- **Reverse Buzzer:** The reverse buzzer should sound as a warning when the vehicle is in reverse.
- **Steering:** The vehicle should be easy to steer and should not have any play in the steering wheel.
- **Accelerator:** With the key switch ON and the Forward/Reverse switch in the FORWARD position; as the accelerator pedal is depressed, the motor should start and the vehicle should come up smoothly to full speed. When the pedal is released it should return to the original position and the motor should stop. All DS vehicles run at reduced speed in reverse.
- **General:** Listen for any unusual noises such as squeaks or rattles. Check the vehicle's ride and performance. Have a Club Car distributor/dealer or a trained mechanic investigate anything unusual.

DS PowerDrive Plus Vehicles

- **Zero Speed Detect:** With the vehicle parked on level ground and the park brake disengaged, place the tow switch in the RUN position and attempt to push the vehicle. It should resist rolling (moving at no more than 1 or 2 mph) with the Forward/Reverse switch in any position.

- **“Pedal Up” Motor Braking:** Accelerate the vehicle to full speed and then release the accelerator pedal. Motor braking should quickly and smoothly slow the vehicle to approximately 9 mph. Motor braking will disengage when vehicle slows to 9 mph.
- **“Pedal Down” Motor Braking:** Accelerate down an incline with the accelerator pedal depressed. When the vehicle reaches approximately 15 mph, motor braking should engage and moderate vehicle speed between 15 and 16 mph, depending upon the grade of the hill.

CONTROLS

Read **DANGER** and **WARNING** on page 3.

⚠ WARNING

- IF RENTING OR LOANING THE VEHICLE, MAKE SURE THE DRIVER IS FAMILIAR WITH ALL CONTROLS AND OPERATING PROCEDURES BEFORE ALLOWING THE VEHICLE TO BE DRIVEN.
- DO NOT MODIFY OR CHANGE THE VEHICLE IN ANY WAY WHICH MIGHT AFFECT ITS STABILITY OR HANDLING, OR INCREASE MAXIMUM SPEED BEYOND FACTORY SPECIFICATIONS. PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH COULD RESULT.
- DO NOT SHIFT THE FORWARD/REVERSE (F&R) SWITCH WHILE THE VEHICLE IS MOVING. TO AVOID INJURY TO AN UNSUSPECTING PASSENGER OR DAMAGE TO THE VEHICLE, ALWAYS BRING THE VEHICLE TO A FULL STOP BEFORE SHIFTING THE F&R SWITCH. A BUZZER WILL SOUND AS A WARNING WHEN THE VEHICLE IS IN **REVERSE**.
- RELEASE THE ACCELERATOR PEDAL AND THEN DEPRESS THE BRAKE PEDAL FIRMLY UNTIL THE VEHICLE STOPS. TO AVOID UNINTENTIONALLY STARTING OR ROLLING THE VEHICLE, SET THE PARK BRAKE, TURN THE KEY SWITCH TO **OFF**, AND REMOVE THE KEY WHEN LEAVING THE VEHICLE.

KEY SWITCH

The key switch is mounted on the dash to the right of the steering column (**Figure 4, Page 7**). It has two positions, OFF and ON, which are clearly labeled. **See following NOTE.**

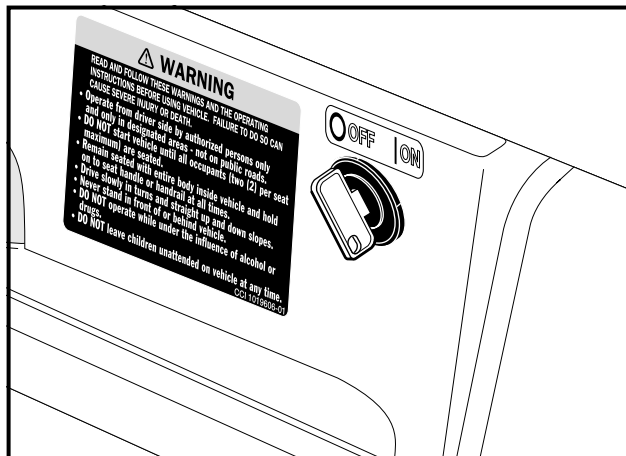


Figure 4 Key Switch

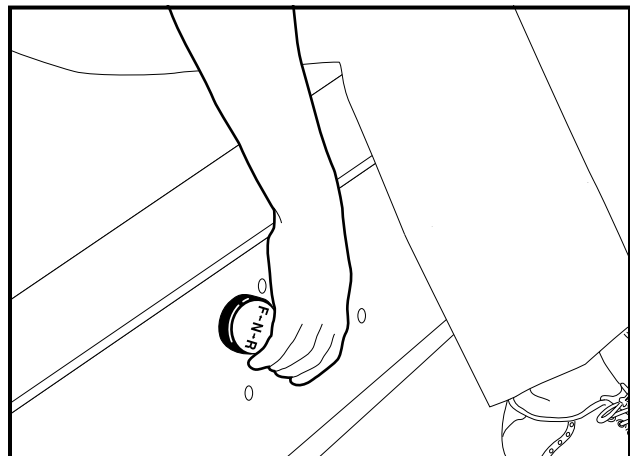


Figure 5 Forward/Reverse Handle

NOTE

- THE KEY CAN BE REMOVED WHEN THE KEY SWITCH IS IN THE **OFF** POSITION ONLY.

FORWARD/REVERSE CONTROL

DS V-Glide Electric and DS PowerDrive System 48

The Forward/Reverse (F&R) handle is located on the seat support panel, below and to the right of the driver's right knee (**Figure 5, Page 7**). The F&R handle has three distinct positions—FORWARD, REVERSE, and NEUTRAL. Rotate the handle to the FORWARD (F) position, towards the driver, to operate the vehicle in the forward direction. Rotate the handle to the REVERSE (R) position, towards the passenger, to drive the vehicle in the reverse direction. When the F&R handle is in the straight-up, NEUTRAL (N) position, the vehicle will not run. DS vehicles operate at reduced speed in reverse. When the vehicle is in reverse, the reverse warning buzzer will sound.

DS PowerDrive Plus

The Forward/Reverse (F&R) rocker switch is located in the same place as the Forward/Reverse handle on all other DS models; on the seat support panel below and to the right of the driver's right knee. The FORWARD (F) and REVERSE (R) positions are clearly marked on the F&R rocker switch. Push down the FORWARD (F) side of the switch to operate the vehicle in the forward direction, or push down the REVERSE (R) side of the switch to run the vehicle in reverse. When the F&R rocker switch is positioned in NEUTRAL, with neither side down, the vehicle will not operate if the accelerator pedal is depressed (**Figure 6, Page 9**). See following NOTE.

NOTE

- THE REVERSE BUZZER WILL SOUND AS A WARNING WHEN THE VEHICLE IS IN REVERSE.

ACCELERATOR PEDAL

The accelerator pedal is the pedal on the right, with the word GO molded into it (**Figure 7, Page 9**). See following NOTE.

NOTE

- **THE OPERATION OF THE ACCELERATOR PEDAL DIFFERS FROM THAT OF AN AUTOMOBILE.** WHEN THE KEY SWITCH IS ON, AND THE FORWARD/REVERSE HANDLE IS IN EITHER FORWARD OR REVERSE, DEPRESSING THE ACCELERATOR PEDAL WILL AUTOMATICALLY RELEASE THE PARK BRAKE AND START THE VEHICLE MOVING IN THE DIRECTION SELECTED (FORWARD OR REVERSE). AS THE ACCELERATOR PEDAL IS DEPRESSED, SPEED WILL INCREASE UNTIL FULL SPEED IS REACHED. WHEN THE ACCELERATOR IS RELEASED, POWER WILL BE CUT OFF AND THE MOTOR WILL STOP RUNNING.
- **POWERDRIVE PLUS VEHICLES ONLY:** SEE "PEDAL-UP" AND "PEDAL-DOWN" MOTOR BRAKING ON PAGE 7.

BRAKE PEDAL

The brake pedal is the large pedal on the left with the word STOP molded into it (**Figure 7, Page 9**). To slow or stop the vehicle, depress the brake pedal with your foot (**Figure 8, Page 9**).

PARK BRAKE PEDAL

The park brake pedal is the small raised portion in the upper left corner of the brake pedal. It has the word PARK molded into it and the words PARK BRAKE marked on top of it (**Figure 8, Page 9**). To set the park brake, depress the brake pedal firmly and tilt the park brake portion of the pedal forward with your foot (**Figure 9, Page 9**). See following WARNING.

WARNING

- THE PARK BRAKE WILL RELEASE AUTOMATICALLY WHEN EITHER THE ACCELERATOR OR BRAKE PEDAL IS DEPRESSED. THE PARK BRAKE HAS MULTIPLE LOCKING POSITIONS AND SHOULD BE FIRMLY PRESSED AND LOCKED TO PREVENT THE VEHICLE FROM ROLLING.

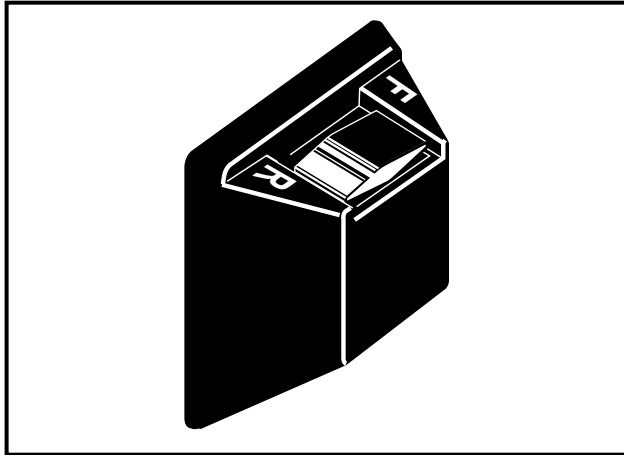


Figure 6 Forward/Reverse Rocker Switch

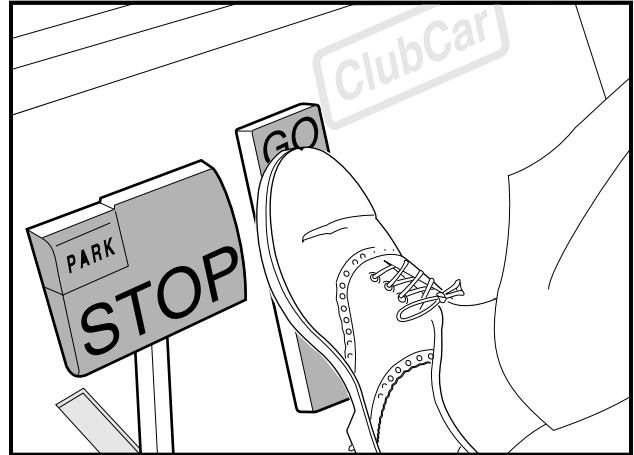


Figure 7 Accelerator and Brake Pedal

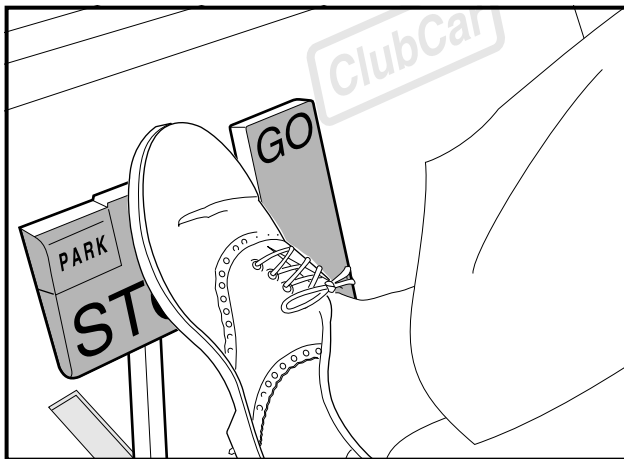


Figure 8 Brake Pedal

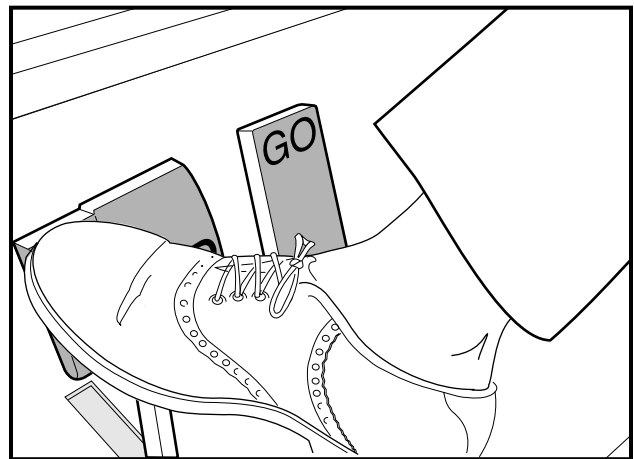


Figure 9 Park Brake Pedal

POWERDRIVE SYSTEM 48 AND POWERDRIVE PLUS ELECTRIC VEHICLES ONLY

Battery Warning Light

PowerDrive System 48 and PowerDrive Plus vehicles feature a dash mounted warning light (above steering column) that, when the vehicle is in operation, indicates low battery voltage, or, when the vehicle is being charged, indicates a charging problem. The battery warning light is controlled by the PowerDrive onboard computer.

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

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

If the warning light comes on during a round of golf, there is enough power remaining to finish the round, but the car should be charged before being used again. If the warning light comes on and the vehicle is unable to finish the round, have your Club Car distributor/dealer check the vehicle for a possible battery or electrical system problem.

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

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

- When the charger is unplugged, the warning light will come on and remain illuminated for 10 seconds if the charge is less than 90% complete but the car has enough power to complete 36 holes of golf. This will alert the fleet operator that the car may be used, but that it must be charged to completion as soon as possible.
- The warning light will repeatedly illuminate for 10 seconds, with 4 second intervals, if the charger times out at 16 hours (see charger manual) and the batteries are not sufficiently charged. This indicates an abnormal charge cycle. Charger and batteries should be checked by your Club Car distributor/dealer.
- The warning light will repeatedly illuminate for 10 seconds, with 4 second intervals, during a charge cycle (DC plug is still connected) if AC power to the charger is interrupted. The light will go out when AC power is restored.

POWERDRIVE PLUS VEHICLES ONLY

Tow/Run Switch

⚠ WARNING

- TO AVOID POSSIBLE BATTERY EXPLOSION, THE TOW/RUN SWITCH MUST BE IN THE **TOW** POSITION BEFORE DISCONNECTING OR CONNECTING BATTERY WIRES.
- WHEN THE TOW/RUN SWITCH IS IN THE **TOW** POSITION, ALL MOTOR BRAKING FUNCTIONS, INCLUDING ZERO-SPEED DETECT, ARE DISABLED.

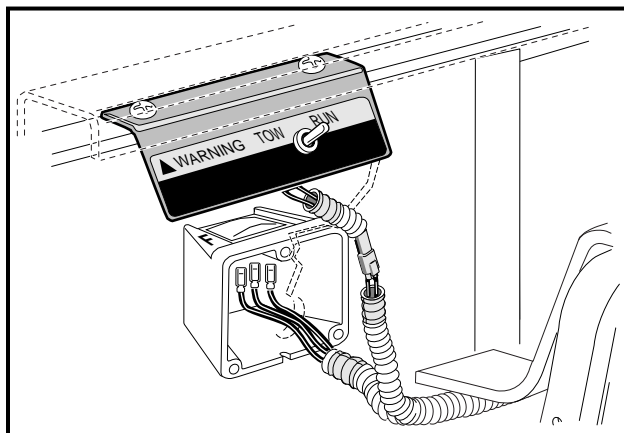


Figure 10 Tow/Run Switch

All 1999 DS PowerDrive Plus vehicles are equipped with a Tow/Run switch, located under the seat just above the Forward/Reverse switch (**Figure 10, Page 10**). The switch must be in the RUN position in order to operate the vehicle. When the switch is in the TOW position, power to the vehicle electrical components is turned off and the vehicle will not operate. **See following NOTE.**

NOTE

- AFTER PLACING THE SWITCH IN **TOW** POSITION, ALLOW 10 SECONDS BEFORE SWITCHING BACK TO RUN.
- AFTER PLACING THE SWITCH IN **RUN** POSITION, ALLOW 10 SECONDS BEFORE OPERATING THE VEHICLE.

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

- **Before Towing the Vehicle** - Place the Tow/Run switch in the TOW position to disable all motor braking functions, thus preventing possible damage that could occur to the vehicle or electrical components if the vehicle is towed while the Zero-Speed Detect motor braking function is operating.

- **Before Disconnecting or Attaching Battery Wires** - Place the Tow/Run switch in the TOW position to turn off power to the vehicle electrical system, thus preventing severe arcing and possible battery explosion as the battery wires are disconnected.
- **For Long Term Storage** - Place the Tow/Run switch in the TOW position to turn off power to the vehicle electrical system, thus preventing vehicle electrical components from discharging the batteries.

DRIVING INSTRUCTIONS

WARNING

- IF RENTING OR LOANING THE VEHICLE, MAKE SURE THE DRIVER IS FAMILIAR WITH ALL CONTROLS AND OPERATING PROCEDURES BEFORE ALLOWING THE VEHICLE TO BE DRIVEN.
- NO MORE THAN TWO PEOPLE SHOULD BE ON THE VEHICLE AT ONE TIME.
- THE VEHICLE IS NOT SPECIALLY EQUIPPED FOR HANDICAPPED PERSONS. BE SURE ALL PERSONS CAN PROPERLY OPERATE THE VEHICLE PRIOR TO ALLOWING THEM TO DRIVE THE VEHICLE.
- FOR NIGHT USE, THE VEHICLE MUST BE EQUIPPED WITH HEADLIGHTS, TAILLIGHTS, AND REFLECTORS.
- STOP THE VEHICLE BEFORE SHIFTING THE FORWARD/REVERSE SWITCH. FAILURE TO DO SO MAY RESULT IN INJURY TO AN UNSUSPECTING PASSENGER AND (OR) DAMAGE TO THE VEHICLE. A BUZZER WILL SOUND AS A WARNING WHEN THE VEHICLE IS IN REVERSE.

WHEN DRIVING THE VEHICLE:

- OPERATE THE VEHICLE FROM THE DRIVER SEAT ONLY.
- TO PREVENT FALLS FROM THE VEHICLE, REMAIN SEATED IN A MOVING VEHICLE AND HOLD ON TO SEAT HANDLES OR HANDRAILS AT ALL TIMES. DRIVER SHOULD KEEP BOTH HANDS ON THE STEERING WHEEL WHEN THE VEHICLE IS IN MOTION.
- TO PREVENT THE POSSIBILITY OF SERIOUS INJURY, KEEP YOUR ENTIRE BODY INSIDE THE VEHICLE.
- TO PREVENT OVERTURNING THE VEHICLE, DRIVE SLOWLY IN TURNS.
- TO PREVENT OVERTURNING THE VEHICLE, DRIVE SLOWLY STRAIGHT UP AND DOWN SLOPES. **DO NOT DRIVE THE VEHICLE ON SLOPES EXCEEDING 20% INCLINE.**
- TO AVOID POSSIBLE INJURY TO AN UNSUSPECTING PASSENGER AND (OR) DAMAGE TO THE VEHICLE, AVOID SUDDEN STARTS, SUDDEN STOPS, AND ABRUPT TURNS.
- TO AVOID THE POSSIBILITY OF LOSING CONTROL OF OR OVERTURNING THE VEHICLE, REDUCE SPEED FOR ADVERSE DRIVING CONDITIONS SUCH AS WET GRASS OR ROUGH TERRAIN.
- DO NOT USE THE VEHICLE ON PUBLIC ROADS. IT IS NOT DESIGNED OR INTENDED FOR STREET USE AND SHOULD NOT BE LICENSED FOR USE ON PUBLIC ROADS.
- OBEY ALL LOCAL RULES CONCERNING GOLF CARS.
- THE VEHICLE SHOULD BE DRIVEN IN ONLY SPECIFIED AREAS BY TRAINED DRIVERS.
- TO AVOID BEING STRUCK, DO NOT STAND IN FRONT OF OR BEHIND THE VEHICLE.
- DO NOT DRIVE WHILE UNDER THE INFLUENCE OF ALCOHOL, DRUGS, OR MEDICATIONS.

No one should drive the vehicle without first being instructed in the proper operation and use of the vehicle's controls. An experienced operator should accompany each first-time driver on a test drive before allowing him(her) to operate the vehicle alone. Only licensed drivers should be allowed to drive this vehicle.

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

STARTING THE VEHICLE

1. Study and understand controls.
2. Make sure everyone is seated and holding onto seat handles or handrails.
3. Read safety warnings located on dash and (or) above pedals.
4. Make sure wheels are turned in desired direction.
5. Turn key to the ON position and make sure nothing is in your path.
6. Select direction by placing Forward/Reverse handle in desired position (F = forward or R = reverse).
7. Slowly depress accelerator pedal. The park brake will release automatically and the vehicle will start to move. As the accelerator pedal is depressed, speed will increase until full speed is reached. **See following WARNING.**

WARNING

- VEHICLE OPERATOR MUST CONTROL SPEED WHEN GOING DOWNHILL.

POWERDRIVE PLUS VEHICLE ONLY:

- “PEDAL DOWN” OR “PEDAL UP” MOTOR BRAKING MAY BE USED TO CONTROL SPEED WHEN GOING DOWNHILL (**SEE PERFORMANCE INSPECTION ON PAGE 7**). HOWEVER, TERRAIN OR OTHER CONDITIONS MAY REQUIRE THAT PEDAL BRAKING BE USED IN CONJUNCTION WITH MOTOR BRAKING.

STOPPING THE VEHICLE

WARNING

- DRIVING THROUGH WATER MAY AFFECT THE BRAKES. AFTER DRIVING THROUGH WATER, CHECK EFFECTIVENESS OF THE BRAKES BY GENTLY DEPRESSING THE BRAKE PEDAL. IF THE VEHICLE DOES NOT SLOW DOWN AT THE NORMAL RATE, CONTINUE TO DEPRESS THE BRAKE PEDAL UNTIL THE BRAKES DRY OUT AND NORMAL PERFORMANCE RETURNS.

CAUTION

- WHEN STOPPED ON A HILL, USE THE BRAKE PEDAL TO HOLD YOUR POSITION. DO NOT USE THE ACCELERATOR PEDAL.

To stop the vehicle, release the accelerator pedal and depress the brake pedal with your right foot until the vehicle comes to a complete stop.

PARKING AND LEAVING THE VEHICLE

1. After stopping the vehicle, firmly depress the park brake pedal until it locks. This will prevent the vehicle from rolling.
2. Turn the key switch to OFF and place the Forward/Reverse handle in the NEUTRAL position. Remove the key when the vehicle is not in use.
 - **PowerDrive Plus Vehicles Only:** When the Tow/Run switch is in the RUN position, (with the Forward/Reverse switch or key switch in any position), the “zero speed detect” function will prevent the vehicle from rolling at more than 1 or 2 mph unless the accelerator is depressed. This prevents the possibility of a parked vehicle (with the park brake disengaged) rolling away too fast to be overtaken on foot. **See “Zero Speed Detect” on Page 6.**

TOWING

WARNING

- NEVER TOW THE VEHICLE ON PUBLIC STREETS OR HIGHWAYS.
- USE ONLY APPROVED CLUB CAR TOW BARS.
- TURN THE KEY SWITCH TO **OFF** AND PLACE THE FORWARD/REVERSE SWITCH IN **NEUTRAL** BEFORE TOWING THE VEHICLE.
- EXTREME CAUTION SHOULD BE USED WHEN TOWING ANY VEHICLE.
- DO NOT EXCEED 5 MPH (8 KPH) TOWING SPEED.
- DO NOT ALLOW PEOPLE IN THE VEHICLES BEING TOWED.
- AVOID SUDDEN STARTS, SUDDEN STOPS, AND TIGHT TURNS WHEN TOWING.
- DO NOT TOW MORE THAN ONE CLUB CAR VEHICLE WITH ANOTHER CLUB CAR VEHICLE. IF MORE THAN ONE VEHICLE MUST BE TOWED, AN ADEQUATELY POWERED VEHICLE (TRACTOR OR FULL SIZED TRUCK) PROPERLY FITTED, WITH A TOW HITCH HEIGHT OF 11 INCHES SHOULD BE USED. ONLY HEAVY-DUTY TOW BARS SHOULD BE USED FOR MULTI-VEHICLE TOWING. **NEVER TOW MORE THAN FIVE VEHICLES AT ONE TIME.**
- **POWERDRIVE PLUS VEHICLE ONLY:** PLACE THE TOW/RUN SWITCH IN **TOW** POSITION. THE VEHICLE WILL NOT ROLL OTHERWISE.

All vehicles are equipped with both front and rear tow bar attaching points. A light duty tow bar is available for break-down towing and single vehicle towing. A heavy duty tow bar and an onboard tow bar are available for multi-vehicle towing. Observe all of the previous WARNING statements when towing.

TRANSPORTING ON A TRAILER

If your vehicle must be transported over long distances or on public highways, it should be done on an approved trailer; and all the following WARNING procedures should be followed:

WARNING

- FOR USE ON PUBLIC ROADS, THE TRAILER MUST MEET ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS SUCH AS TAILLIGHTS, BRAKE LIGHTS, ETC.
- ALWAYS USE AN APPROVED TRAILER THAT HAS A LOAD RATING OF 1200 LBS. (544 KG) PER VEHICLE TO BE TOWED (EXAMPLE: A TWO-CAR TRAILER SHOULD BE RATED AT $2 \times 1200 = 2400$ LBS ($2 \times 544 = 1088$ KG)).
- NEVER TOW A CLUB CAR VEHICLE BEHIND A PASSENGER VEHICLE OR TRUCK ON A PUBLIC ROAD UNLESS IT IS ON AN APPROVED TRAILER.
- THE VEHICLE TO BE TOWED SHOULD BE TIED SECURELY TO THE TRAILER, WITH THE FORWARD/REVERSE SWITCH IN **NEUTRAL**, THE KEY SWITCH **OFF**, AND THE PARK BRAKE FIRMLY DEPRESSED AND LOCKED.
- WHEN TOWING ON A TRAILER, NORMAL ROAD SPEED OF THE TOW VEHICLE SHOULD BE REDUCED.
- BECAUSE OF THE ADDED LENGTH OF THE TRAILER, CAUTION SHOULD BE USED WHEN TURNING A CORNER.
- REMOVE THE VEHICLE WINDSHIELD BEFORE TRANSPORTING ON A TRAILER.

STORAGE

Read **DANGER** and **WARNING** on page 3.

WARNING

- TURN KEY SWITCH TO **OFF**, REMOVE KEY, AND LEAVE THE FORWARD/REVERSE SWITCH IN **NEUTRAL** POSITION DURING STORAGE. THIS IS TO PREVENT UNINTENTIONALLY STARTING VEHICLE.
- DO NOT ATTEMPT TO CHARGE FROZEN BATTERIES OR BATTERIES WITH BULGED CASES. DISCARD THE BATTERIES. FROZEN BATTERIES CAN EXPLODE.

CAUTION

- BATTERIES IN LOW STATE OF CHARGE WILL FREEZE AT LOW TEMPERATURES.
- WHEN WASHING THE VEHICLE, DO NOT DIRECT WATER STREAM AT THE MULTI-STEP POTENTIOMETER (48-VOLT VEHICLES) OR V-GLIDE SPEED SWITCH (36-VOLT VEHICLE), FORWARD/REVERSE SWITCH, OR OTHER ELECTRICAL COMPONENT.
- IF BATTERY WIRE TERMINALS ARE DAMAGED OR CORRODED, THEY SHOULD BE REPLACED OR CLEANED AS NECESSARY. FAILURE TO DO SO MAY CAUSE THEM TO OVERHEAT DURING OPERATION.
- **POWERDRIVE PLUS VEHICLES ONLY:** PLACE TOW/RUN SWITCH IN THE **TOW** POSITION.

1. Fully charge batteries. **See Batteries, Page 17.**
2. Wash off any corrosion around the terminals with a solution of baking soda and water (one cup per gallon of water), then rinse solution from the batteries (do not allow this solution to enter the batteries). Let the terminals dry and coat them with Club Car battery terminal spray, Part No. 1014305.
3. Store in a cool, dry place. This will prevent self-discharge of the batteries.
4. Adjust tire pressure to 20 psi (138 kPa).
5. Grease front suspension and do all other semi-annual periodic lubrication. **See Periodic Lubrication Schedule, Page 16.**
6. Thoroughly clean front body, rear body, seats, battery compartment, and underside of vehicle.
7. Do not latch the park brake. Chock wheels to prevent the vehicle from rolling.
8. Keep batteries fully charged during storage. **See Batteries, Page 17.**
 - If possible, charge 36-volt vehicles with Accu-Power battery chargers every 6-8 weeks as necessary. If it is not possible or practical to charge the batteries, leave them disconnected while the vehicle is in storage.
 - Leave PowerDrive System 48 and PowerDrive Plus vehicles with PowerDrive chargers plugged in during storage. The PowerDrive storage charge feature will automatically charge the batteries as needed throughout storage period. **See Batteries, Page 17. See following NOTE.**

NOTE

- A POWERDRIVE SYSTEM 48 OR POWERDRIVE PLUS VEHICLE WILL NOT OPERATE WHILE PLUGGED TO A CHARGER.

TO RETURN THE STORED VEHICLE TO SERVICE

1. Fully charge batteries. **See Batteries, Page 17.**
2. Readjust tire pressure to 18-20 psi (124/138 kPa).
3. Perform the Pre-Operation Checklist. **See page 6.**

MAINTENANCE

Read **DANGER** and **WARNING** on page 3.

GENERAL INFORMATION

To ensure trouble-free vehicle performance, it is very important to follow an established preventive maintenance program (regularly scheduled service, even though the vehicle is functional). Regular and consistent vehicle maintenance can prevent vehicle down-time and expensive repairs that result from neglect. Any vehicle not functioning correctly should be removed from use until it is properly repaired. This will prevent further damage to the vehicle and avoid the possibility of injury due to unsafe conditions.

Contact your local Club Car distributor/dealer to perform all repairs and semi-annual and annual periodic service. **See following WARNING.**

WARNING

- IF PROBLEMS ARE FOUND DURING SCHEDULED INSPECTION OR SERVICE, DO NOT OPERATE THE VEHICLE UNTIL REPAIRS ARE MADE. FAILURE TO MAKE NECESSARY REPAIRS COULD RESULT IN FIRE, PROPERTY DAMAGE, SEVERE PERSONAL INJURY, OR DEATH.
- HOT! DO NOT ATTEMPT TO SERVICE HOT MOTOR OR RESISTORS. ATTEMPTING TO DO SO COULD CAUSE SEVERE BURNS.

DAILY PRE-OPERATION SAFETY CHECKLIST

Inspect and drive the vehicle, using the Pre-operation Checklist (**Page 6**) and Performance Inspection (**Page 6**) as a guide to check the following items.

- Vehicle warning decals
- Brake system
- Park brake
- Reverse warning buzzer
- Steering and linkages
- Proper acceleration and maximum speed
- Batteries
- Accelerator Switch

In addition, check the items listed below:

- Tires: Visually inspect for wear, damage and proper inflation.
- Forward/Reverse switch: Check for proper operation. **See Controls, Page 7.**

PERIODIC SERVICE SCHEDULE

WARNING

- SERVICE, REPAIRS, AND ADJUSTMENTS MUST BE MADE PER INSTRUCTIONS IN THE 1999 DS GOLF CAR MAINTENANCE & SERVICE MANUAL.

NOTE

- IF THE VEHICLE IS CONSTANTLY SUBJECTED TO HEAVY USE OR SEVERE OPERATING CONDITIONS, THE PREVENTATIVE MAINTENANCE PROCEDURE SHOULD BE PERFORMED MORE OFTEN THAN RECOMMENDED IN THE SERVICE AND LUBRICATION SCHEDULES.
- BOTH THE PERIODIC SERVICE SCHEDULE AND PERIODIC LUBRICATION SCHEDULE MUST BE FOLLOWED TO KEEP VEHICLE IN OPTIMUM OPERATING CONDITION.

| PERIODIC SERVICE SCHEDULE | | |
|--|---|--|
| REGULAR INTERVAL | SERVICE | |
| Daily Service by Owner | Batteries | Charge batteries (after each use only). |
| Weekly Service by Owner | Batteries | Check electrolyte level. Add water as necessary per Maintenance and Service Manual. |
| Monthly Service by Owner or Trained Mechanic | Batteries | Wash battery tops and clean terminals with baking soda/water solution. Dispose of waste water properly. |
| | Tires | Check air pressure and adjust as necessary (See Vehicle Capacities Chart on Page 17). |
| | Wiper Switch | Check for cracks or other damage; make sure switch is securely fastened to frame. Check movable contact for correct operation. |
| | General Vehicle | Wash battery compartment and underside of vehicle. Dispose of waste water properly. |
| Semi-annual Service by Trained Mechanic Only (Every 50 hours of operation or 100 rounds of golf) | Brake System | Check brake shoes; replace if necessary. (See DS Maintenance and Service Manual.) |
| | | Lubricate brake slides per Lubrication Schedule. (See DS Maintenance and Service Manual.) |
| | | Check brake cables for damage; replace as required. |
| | Electrical Wiring and connections | Check for tightness and damage. |
| | Forward and Reverse Switch | Check condition of contacts and wire connections; Make sure connections are tight. |
| Front Wheel Alignment and Camber | Check and adjust as required (See Maintenance & Service Manual, Section 7). | |
| Annual Service by Trained Mechanic Only (Every 100 hours of operation or 200 rounds of golf) | Batteries | Perform battery tests per Maintenance & Service Manual. |

⚠ WARNING

- IF ANY PROBLEMS ARE FOUND, DO NOT OPERATE THE VEHICLE UNTIL REPAIRS ARE MADE. FAILURE TO MAKE NECESSARY REPAIRS COULD RESULT IN FIRE, PROPERTY DAMAGE, SEVERE PERSONAL INJURY, OR DEATH.

PERIODIC LUBRICATION SCHEDULE

| PERIODIC LUBRICATION SCHEDULE | | | |
|--|--|--------|---|
| REGULAR INTERVAL | SERVICE | PLACE* | RECOMMENDED LUBRICANT |
| Semi-Annually by Owner or Trained Technician (Every 50 hours of operation or every 100 rounds for golf cars) | Brake shaft bearings | 1. | Dry Moly Lube - Club Car Part No. 1012151 |
| | Brake Linkage and Pivots | 2. | Dry Moly Lube - Club Car Part No. 1012151 |
| | Accelerator push rod pivots and mounts | 3. | Dry Moly Lube - Club Car Part No. 1012151 |
| | Forward/Reverse Switch Contacts and charger receptacle | 4. | WD 40 |
| | Brake Slides | 5. | Dry Moly Lube - Club Car Part No. 1012151 |
| | Front Suspension (5 fittings) | 6. | Chassis Lube - EP NLGI Grade 2 |
| Periodic Lubrication Schedule continued on following page. | | | |

| PERIODIC LUBRICATION SCHEDULE | | | |
|--|--|--------|---|
| REGULAR INTERVAL | SERVICE | PLACE* | RECOMMENDED LUBRICANT |
| Annually by Trained Technician Only (Every 100 hours of operation or 200 rounds of golf) | Check/fill transaxle to plug level | 7. | 22 oz. (.67 liter) SAE 30 WT. API Class SE, SF, or SG Oil (or higher) |
| | Inspect front wheel bearings (Repack as necessary) | 8. | Chassis Lube - EP NLGI Grade 2 |

*See Figure 11, Page 17.

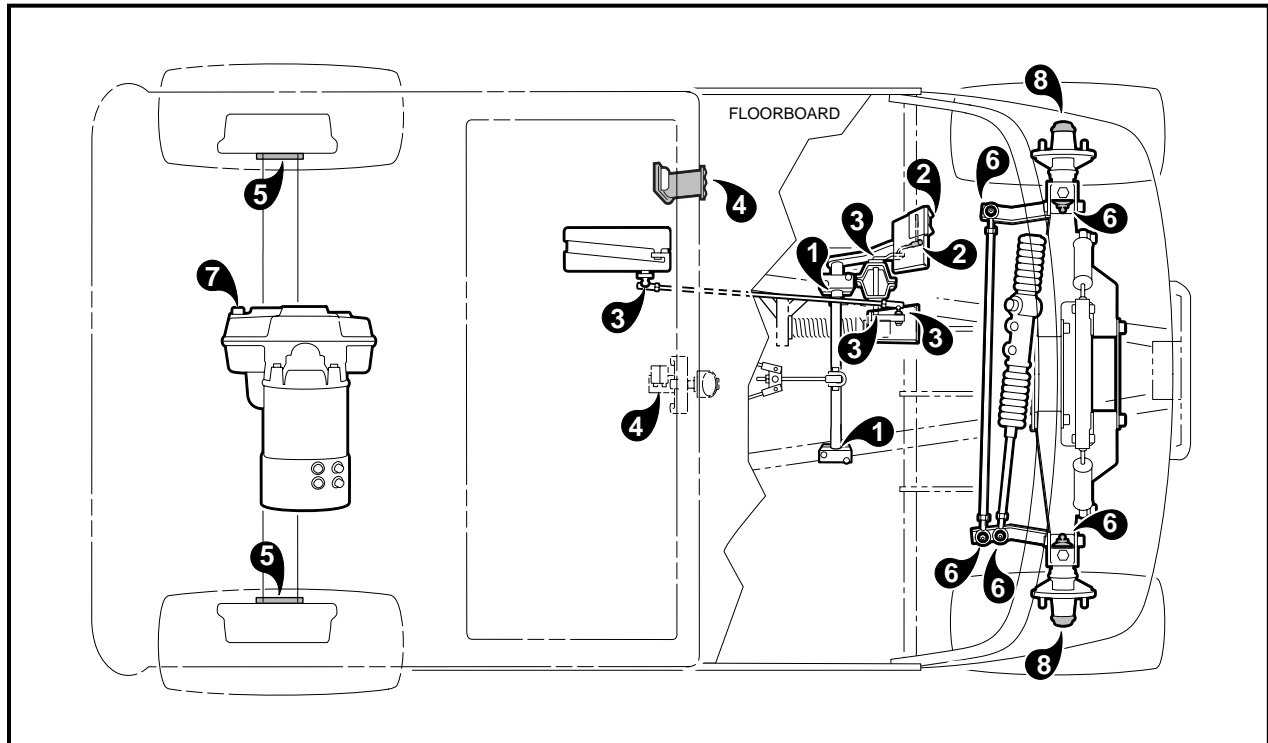


Figure 11 Vehicle Lubrication Points

VEHICLE CAPACITIES

| CAPACITIES | |
|---------------|-------------------------|
| Transaxle | 22 oz. (.67 liters) |
| Tire Pressure | 18-20 psi (124-138 kPa) |

VEHICLE CONTROLLER

The DS electric vehicle is equipped with either a Solid State Speed Controller (PowerDrive System 48 and PowerDrive Plus), or a V-Glide Speed Controller (36-Volt Vehicle).

In order to properly service and maintain the Solid State Controller Vehicle or the V-Glide Speed Controller Vehicle, it is necessary to understand the electrical circuitry and the functions of all components in both systems. Therefore, if any repair or servicing needs to be performed, we recommend that it be performed by an authorized Club Car distributor/dealer using Club Car OEM parts.

BATTERIES

Read **DANGER** and **WARNING** on page 3.

DANGER

- **BATTERY - EXPLOSIVE GASES! DO NOT SMOKE! KEEP SPARKS AND FLAMES A SAFE DISTANCE FROM THE VEHICLE. TOOLS, WIRES, AND METAL OBJECTS CAN CAUSE SPARKS WHEN SHORTED ACROSS A BATTERY. FOLLOW ALL INSTRUCTIONS CAREFULLY WHEN DEALING WITH BATTERIES.**
- **CHARGE BATTERIES IN A WELL-VENTILATED AREA ONLY. BATTERIES EMIT HYDROGEN WHILE BEING CHARGED. HYDROGEN IS AN EXPLOSIVE GAS AND MUST NEVER EXCEED A LEVEL OF 2% OF THE AIR.**
- **POISON! CONTAINS ACID! CAUSES SEVERE BURNS - AVOID CONTACT WITH SKIN, EYES, OR CLOTHING. ANTIDOTES:**
 - **EXTERNAL: FLUSH WITH WATER FOR 15 MINUTES. 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.**

CAUTION

- ON ALL VEHICLES, TURN OFF ALL ACCESSORIES BEFORE CHARGING BATTERIES.

NOTE

- RECYCLE OR DISPOSE OF DISCARDED BATTERIES IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

- **The batteries in DS V-Glide 36-Volt Electric Vehicles are 6 volts each.**
- **The batteries in PowerDrive System 48 and PowerDrive Plus Electric Vehicles are 8 volts each.**

Both the 6- and 8-volt batteries are deep cycle batteries, specially built for electric vehicle application. Automotive batteries should never be used.

New batteries will not deliver their full capabilities until they have been discharged and recharged 20 to 50 times. To obtain the maximum service life from new batteries, restrict PowerDrive System 48 vehicles with new batteries to 36 holes of use between charges in the first two months of operation; V-Glide 36-volt vehicles should be limited to 18 holes between charges in the first two months. Batteries should be fully charged before first use of new vehicle, before first use of a vehicle after storage, and before releasing vehicle for use each day.

BATTERY CARE

To keep batteries in good working condition, follow this maintenance program on a regular basis:

1. The batteries should be kept clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup baking soda per gallon of water) once per week. Rinse solution off batteries. **See following NOTE.**

NOTE

- **DO NOT ALLOW THIS SOLUTION TO ENTER THE BATTERY.**
- **DISPOSE OF WASTE WATER PROPERLY.**

Be sure terminals are tight. Let the terminals dry and then spray them with CLUB CAR battery protector spray (Part No. 1014305).

- The electrolyte level in the batteries should be checked weekly (**See Figure 12, Page 19, for proper level**). Add water only after charging unless the water level is below the top of the plates. In this case, add just enough water to cover the plates, charge and then check the level again. Never charge batteries if plates are exposed above water level. For best battery life, add only distilled water. **See following NOTE.**

NOTE

- A BATTERY WATERING GUN OR BOTTLE IS AVAILABLE AT MANY AUTO PARTS DEALERS.

- The hold-down straps should be tight enough so that the batteries do not move while the vehicle is in motion, but not so tight as to crack or buckle the battery case. Torque hold-down retaining nuts to 40 in.lb (4.5 N-m). The terminal connections should be clean and tight, and any worn insulation or frayed wires should be replaced. Torque battery terminals to 110 in.lb (12.4 N-m). **See following CAUTION.**

CAUTION

- IF BATTERY WIRE TERMINALS ARE DAMAGED OR CORRODED, THEY SHOULD BE REPLACED OR CLEANED AS NECESSARY. FAILURE TO DO SO MAY CAUSE THEM TO OVERHEAT DURING OPERATION.

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

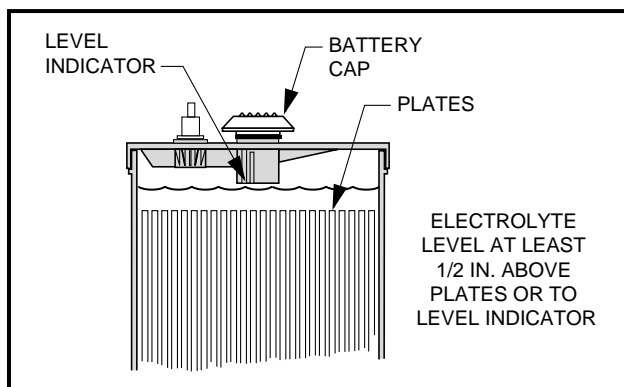


Figure 12 Electrolyte Level in Batteries

BATTERY CHARGER

DANGER

- BATTERIES EMIT HYDROGEN WHILE BEING CHARGED. HYDROGEN IS AN EXPLOSIVE GAS. IF THE VEHICLE IS EQUIPPED WITH A WEATHERPROOF ENCLOSURE, IT SHOULD BE UNZIPPED AND PULLED BACK WHILE BATTERIES ARE BEING CHARGED. THIS IS TO AVOID THE ACCUMULATION OF HYDROGEN GAS INSIDE THE ENCLOSURE.**
- THE CHARGING AREA MUST BE VENTILATED. HYDROGEN LEVEL IN THE AIR MUST NEVER EXCEED 2%. THE TOTAL VOLUME OF AIR IN THE BUILDING MUST BE CHANGED FIVE TIMES PER HOUR. EXHAUST FANS SHOULD BE LOCATED AT THE HIGHEST POINT OF THE ROOF. CONTACT A LOCAL HVAC ENGINEER.**

WARNING

- EACH CHARGER SHOULD HAVE ITS OWN DEDICATED 15 OR 20 AMPERE SEPARATELY PROTECTED (CIRCUIT BREAKER OR FUSE) SINGLE PHASE BRANCH CIRCUIT, IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODES FOR THE LOCATION.
- CONNECT THE CHARGER AC SUPPLY CORD TO A PROPERLY GROUNDED, THREE-WIRE OUTLET OF THE PROPER VOLTAGE AND FREQUENCY AS SHOWN ON THE CHARGER.
- DO NOT USE AN ADAPTER TO PLUG THE CHARGER WITH A THREE-PRONG PLUG INTO A TWO-PRONG OUTLET. IMPROPER CONNECTION OF THE EQUIPMENT-GROUNDING CONDUCTOR CAN RESULT IN A FIRE OR AN ELECTRICAL SHOCK.
- AN EXTENSION CORD OR ELECTRICAL OUTLET MUST ACCEPT A THREE-PRONG PLUG. EXTENSION CORD SHOULD BE A THREE-WIRE NO. 12 AWG, AND BE AS SHORT AS POSSIBLE. THE USE OF IMPROPER EXTENSION CORD COULD RESULT IN FIRE OR AN ELECTRICAL SHOCK.
- ONLY TRAINED TECHNICIANS SHOULD REPAIR OR SERVICE THE CHARGER. CONTACT YOUR NEAREST CLUB CAR DISTRIBUTOR/DEALER.
- DO NOT OPERATE THE CHARGER IF IT HAS RECEIVED A SHARP BLOW, WAS DROPPED, OR OTHERWISE DAMAGED IN ANY WAY.
- HAVE WORN, CUT, OR DAMAGED POWER CORDS OR WIRES REPLACED IMMEDIATELY.
- DO NOT USE NEAR FUELS, GRAIN DUST, SOLVENTS, THINNERS, OR OTHER FLAMMABLES. CHARGERS CAN IGNITE FLAMMABLE MATERIALS AND VAPORS.
- DO NOT EXPOSE TO RAIN OR ANY LIQUID. KEEP THE CHARGER DRY.
- NEVER PUSH OBJECTS OF ANY KIND INTO THE CHARGER THROUGH CABINET SLOTS. THEY MAY TOUCH DANGEROUS VOLTAGE POINTS OR CAUSE AN ELECTRICAL SHORT CIRCUIT THAT COULD RESULT IN FIRE OR ELECTRICAL SHOCK.
- **36-VOLT ACCU-POWER CHARGER:** DO NOT DISCONNECT THE DC OUTPUT PLUG FROM THE VEHICLE RECEPTACLE WHEN THE CHARGER IS ON. THE RESULTING ARCING AND BURNING COULD DAMAGE THE PLUG AND RECEPTACLE AND COULD CAUSE BATTERIES TO EXPLODE. IF THE CHARGER MUST BE STOPPED, DISCONNECT THE AC SUPPLY PLUG FROM THE WALL OUTLET BEFORE DISCONNECTING THE CHARGER DC CORD FROM THE VEHICLE RECEPTACLE.
- **48-VOLT POWERDRIVE CHARGER:** WHEN THE CHARGER IS ON, THE CHARGER DC CORD MAY BE DISCONNECTED FROM THE VEHICLE RECEPTACLE **SLOWLY**. JERKING OR PULLING THE DC CORD OUT QUICKLY COULD CAUSE ARCING AND BURNING THAT COULD DAMAGE THE PLUG AND RECEPTACLE AND COULD CAUSE BATTERIES TO EXPLODE.

CAUTION

- DO NOT BLOCK OR COVER SLOTS AND OPENINGS IN THE BACK AND BOTTOM OF CHARGER CABINET. THEY PROVIDE VENTILATION AND PROTECT THE CHARGER FROM OVERHEATING.
- DO NOT ALLOW CLOTHING, BLANKETS, OR OTHER MATERIAL TO COVER THE CHARGER.
- PROVIDE ADEQUATE VENTILATION FOR THE CHARGER.
- **36-VOLT ACCU-POWER CHARGER:** DO NOT LEAVE THE DC CORD PLUGGED INTO A VEHICLE RECEPTACLE WHILE UNATTENDED FOR MORE THAN TWO CONSECUTIVE DAYS. SEVERE OVERHEATING AND DAMAGE TO THE BATTERIES MAY RESULT IF THE CHARGER DOES NOT TURN OFF.
- INSTALL SURGE ARRESTORS ON INCOMING AC POWER LINES. SURGE ARRESTORS WILL HELP PROTECT ELECTRICAL/ELECTRONIC COMPONENTS IN THE CHARGER AND ON THE VEHICLE FROM ALL BUT DIRECT OR VERY CLOSE LIGHTNING STRIKES.

NOTE

- BECAUSE THE **POWERDRIVE** CHARGER HAS A STORAGE CHARGE FEATURE THAT AUTOMATICALLY CHECKS AND RECHARGES THE BATTERIES AS NECESSARY EVERY 15 DAYS, IT CAN REMAIN PLUGGED TO A POWERDRIVE VEHICLE THROUGHOUT THE STORAGE PERIOD.
- SHORTLY AFTER CHARGING HAS BEGUN, THE **POWERDRIVE** CHARGER WILL SHUT OFF IN ORDER TO RUN A SELF-DIAGNOSTIC PROGRAM (AMMETER WILL DROP TO 0). CHARGING WILL RESUME IN A FEW MOMENTS (AMMETER WILL RETURN TO CURRENT STATE OF CHARGE).
- RECYCLE OR DISPOSE OF DISCARDED BATTERIES IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

Each electric vehicle is supplied with a fully automatic battery charger as standard equipment. The AC cord to each charger is to be connected to a source capable of supplying 10 amperes minimum per charger.

The battery charger must be grounded to reduce the risk of electrical shock. The charger is equipped with an AC electric cord having an equipment-grounding conductor and a grounding type plug and is for use on a nominal 115 Volt 60 Hertz circuit, unless otherwise noted on the charger. The plug must be grounded to an appropriate dedicated receptacle that is properly installed and grounded in accordance with the National Electrical Code, ANSI/NFPA 70, and all local codes and ordinances.

The use of an extension cord with the charger should be avoided. If an extension cord must be used, a three conductor No. 12 AWG heavy duty cord with a ground conductor in good electrical condition must be used. Keep it as short as possible (no more than twelve feet). Locate all cords so that they will not be stepped on, tripped over, or otherwise subject to damage or stress.

Ventilation fans should be located at the highest point in the room and must be capable of changing the total volume of air in the room five times per hour. Consult a local HVAC engineer.

TO CHARGE BATTERIES**⚠ WARNING**

- BE SURE ALL WIRE CONNECTIONS AT THE RECEPTACLE AND THE FUSE LINK ARE CLEAN AND TIGHT.
- DO NOT ROCK OR BEND THE PLUG. TO CONNECT THE CHARGER PLUG TO THE VEHICLE RECEPTACLE, GRASP THE PLUG HANDLE AND PUSH THE PLUG STRAIGHT INTO THE RECEPTACLE (**FIGURE 13, PAGE 22**).
- DO NOT PULL ON THE DC CORD (**FIGURE 14, PAGE 22**). DO NOT TWIST, ROCK OR BEND THE PLUG. TO DISCONNECT THE CHARGER PLUG FROM THE VEHICLE RECEPTACLE, GRASP THE PLUG BY THE HANDLE AND PULL THE PLUG STRAIGHT OUT OF THE RECEPTACLE.
- DO NOT CONNECT A CHARGER TO THE RECEPTACLE IF THE CHARGER CORD, PLUG, OR THE VEHICLE RECEPTACLE IS BROKEN, DAMAGED IN ANY MANNER, OR DOES NOT MAKE A GOOD ELECTRICAL CONNECTION. FIRE OR PERSONAL INJURY CAN RESULT. HAVE IT REPLACED BY A QUALIFIED SERVICE PERSON IMMEDIATELY.
- FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE CHARGER CORD, THE PLUG, AND (OR) THE VEHICLE RECEPTACLE.

DO NOT USE A CHARGER IF:

- THE PLUG IS TOO LOOSE OR DOES NOT MAKE A GOOD CONNECTION.
- THE PLUG AND RECEPTACLE FEEL HOTTER THAN NORMAL DURING CHARGE.
- THE PLUG PINS (POWERDRIVE CHARGERS) OR BLADES (ACCU-POWER CHARGERS), OR RECEPTACLE CONTACTS ARE BENT OR CORRODED.
- THE PLUG, RECEPTACLE, OR CORDS ARE CUT, WORN, HAVE ANY EXPOSED WIRES OR ARE DAMAGED IN ANY WAY.

WARNING CONTINUED ON FOLLOWING PAGE.

⚠ WARNING

- USING THE CHARGER WITH ANY OF THE ABOVE SYMPTOMS COULD RESULT IN A FIRE, PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.
- THE DC CHARGER CORD AND PLUG ARE WEAR ITEMS AND MUST BE REPLACED WHEN WORN OR DAMAGED.

NOTE

- WHEN TEMPERATURES FALL BELOW 65° F (18.3 C), BATTERIES CHARGED IN UNHEATED AREAS SHOULD BE PLACED ON CHARGE AS SOON AS POSSIBLE AFTER USE. BATTERIES ARE WARMEST IMMEDIATELY AFTER USE, AND COLD BATTERIES REQUIRE MORE TIME TO FULLY CHARGE.

Insert the charger DC plug into the vehicle receptacle. The charger will turn on two to ten seconds later (**Figure 13, Page 22**).

- When inserting the PowerDrive System 48 DC plug, align the raised guide on the plug with the guide slot in the receptacle and push straight in slowly.
- The **PowerDrive Charger** interacts with an onboard computer on the PowerDrive System 48 vehicle. The computer records the amount of energy consumed during vehicle use. While the charger is plugged in, the vehicle's control circuit is locked out, preventing operation of the vehicle, as well as the possibility of consequent damage to the charger and the vehicle.

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

Because of these unique features, **only PowerDrive System 48 vehicles are compatible with the PowerDrive Charger** (neither vehicles made by other manufacturers, nor other Club Car models are compatible).

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

Batteries should be put on charge even if they have been used for only a short period (9 holes of golf or 10 minutes). The charger is automatic and will turn off when batteries are fully charged. If the charger does not seem to be operating properly, or if the batteries seem weak, contact your local Club Car distributor/dealer.

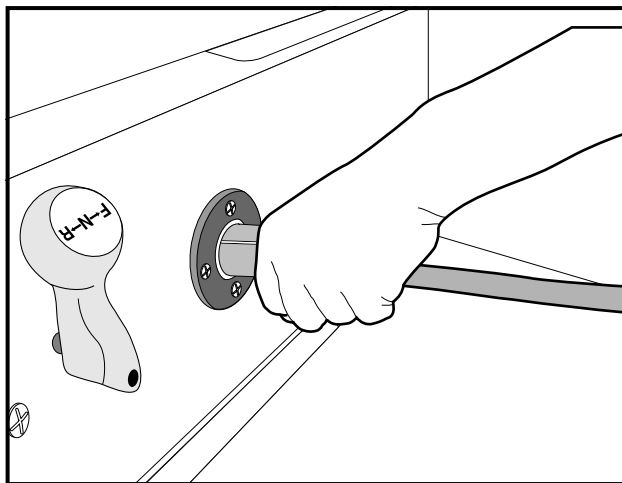


Figure 13 Correct Insertion of Charger DC Plug

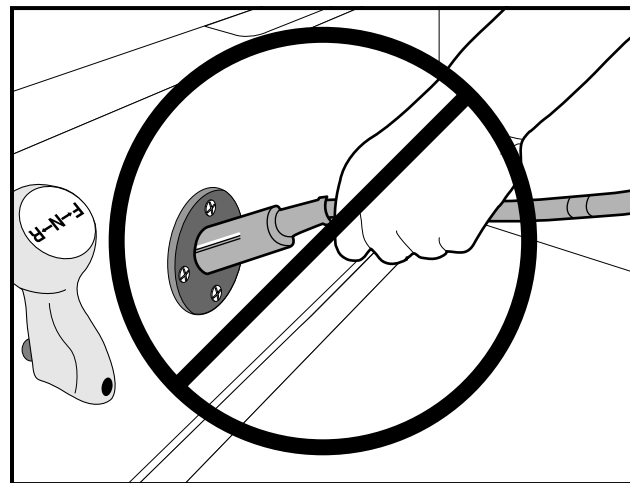


Figure 14 Incorrect Insertion of Charger DC Plug

PLUG AND RECEPTACLE

If the charger plug becomes difficult to insert or disconnect, the receptacle contacts should be lightly sprayed with WD-40 brand spray lubricant. The plug should then be inserted and removed several times to ensure ease of insertion, ease of removal, and good electrical contact. **See following NOTE.**

NOTE

- IF THE WARNING TAG HAS BEEN DAMAGED OR REMOVED FROM THE DC CORD, HAVE IT REPLACED IMMEDIATELY.

Receptacle Fuse Link

As an additional feature to protect the batteries and charging circuit from an overload, the electric vehicle is equipped with a receptacle fuse link (**Figure 15, Page 23 for V-Glide 36-Volt vehicle, or Figure 16, Page 23 for PowerDrive System 48 vehicle**). If the charger does not come on when the vehicle is placed on charge, visually inspect the fuse link. **See following WARNING.**

⚠ WARNING

- IF THE RECEPTACLE FUSE LINK IS BLOWN, DETERMINE THE SOURCE OF THE ELECTRICAL PROBLEM AND CORRECT IT BEFORE REPLACING THE FUSE. CONTACT YOUR NEAREST CLUB CAR DISTRIBUTOR/DEALER.

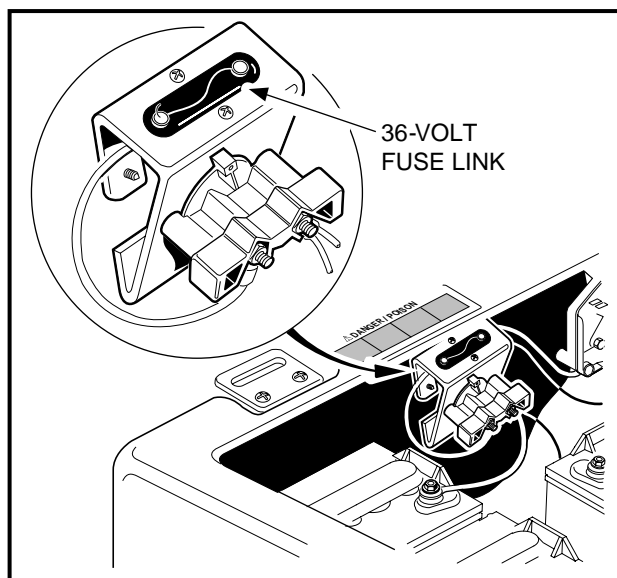


Figure 15 Receptacle Fuse Link for 36-Volt Vehicle

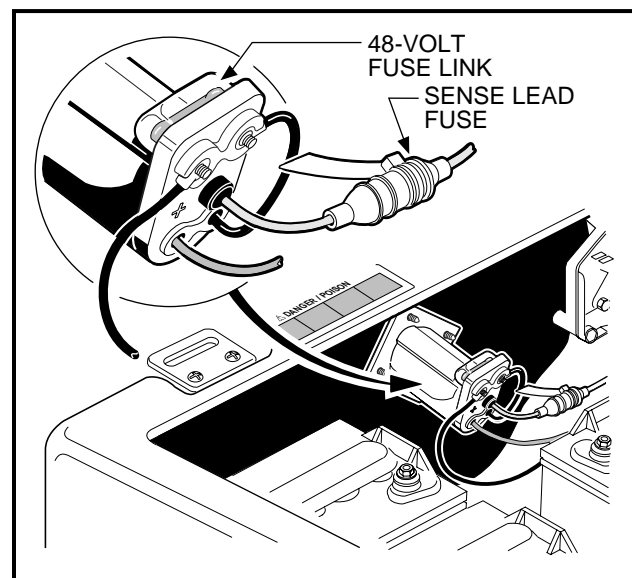


Figure 16 Receptacle Fuse Link for 48-Volt Vehicle

CLEANING THE VEHICLE

DS vehicles are equipped with Armorflex® front and rear bodies. Use only mild dishwashing liquid soap with a sponge or soft cloth for normal cleaning. **See following CAUTION and NOTE.**

⚠ CAUTION

- IF A PRESSURE WASHER IS USED, DO NOT EXCEED 500 PSI (3448 KPA). NOZZLE SHOULD BE SET TO WIDE ANGLE SPRAY.

NOTE

- DISPOSE OF WASTE WATER PROPERLY.

Battery acid, fertilizers, tars, asphalt, creosote, paint, or chewing gum should be removed immediately to prevent possible stains. Because the finish on the vehicle is the same as the finish on today's automobiles, commercial automotive cleaning products may be used.

The seats of the vehicle will last longer with proper cleaning. Use a solution of 10% liquid dish soap and warm water applied with a soft cloth. For imbedded dirt, a soft bristle brush may be used. For heavy soiling or difficult stains, see Section 4 of the DS Maintenance and Service Manual.

Also, for scratches, blemishes, or other body damage, see Section 4 of the DS Maintenance and Service Manual.

ACCESSORIES

A complete line of accessories is available from Club Car and our dealers/distributors. Care should be taken that these accessories are properly installed by trained technicians, and that they are used in the manner for which they were designed. **See following WARNING.**

⚠ WARNING

- TINTED WINDSHIELDS AND WEATHER-PROOF ENCLOSURES WILL **NOT** PROTECT OCCUPANTS FROM FLYING OBJECTS (GOLF BALLS, ETC.).

ACCESSORY EQUIPMENT

- Accent Striping
- Custom Club Decals
- Number Decals
- Canopy Top
- Rear Rain Curtain
- Weather-proof Enclosure
- Tinted Split Windshield
- Tinted Snap-on Windshield
- Adjustable Seat Back
- Sand Bottle Divot Repair Kit
- Turn Signals (for vehicles with lights)
- Sand Basket and Divot Bucket Repair Kit
- Temporary Tow Bar for Single Vehicle Towing
- Rear View Mirror
- Glove Box
- Performance Grade Tires
- Standard Tread Tires
- Extra Traction Tires
- DC to DC Converter
- Chrome Hub Wheel Covers
- Chrome Sport Wheel Covers
- Trailer Hitch
- Uncommon Key Switch
- Permanent Tow Bar for Multiple Vehicle Towing (factory installed)
- 3.5 hp Electric Motor (V-Glide 36-Volt vehicle only)
- Onboard Tow Bar
- Differential Guard
- Hour Meter
- Information Holder
- Beverage Cooler
- Extra Two-bag Attachment
- Sand Bunker Rake Kit
- Golf Club and Ball Cleaner
- Battery Indicator
- Ashtray
- Club Protector
- 3.75 hp Electric Motor (PowerDrive System 48 vehicle only)
- Lighting Package (headlights, taillights, brake lights, and horn)
- Onboard Charger with Rewind Cord

SUBSEQUENT OWNER REGISTRATION

In the event a vehicle is bought as a used vehicle from another individual or from a distributor/dealer, we strongly urge the new owner to re-register the vehicle with Club Car. This will enable us to contact you if the need arises. Please send your name, address, and serial number(s) of the vehicle(s) to CLUB CAR, INC., P.O. Box 204658, Augusta, GA 30917-4658, ATTN: Vehicle Registration.

FAIRWAY VILLAGER

The electric Fairway Villager is designed to provide a smooth and comfortable ride for four passengers, and is offered in the PowerDrive System 48 electric power configuration only. A rack for two golf bags is also available. Contact your nearest Club Car distributor/dealer. This Owner's Manual should be read thoroughly prior to operating the vehicle.

The Fairway Villager should be driven and maintained as stated in this Owner's Manual with the following additions:

WARNING

- TO PREVENT POSSIBLE INJURY TO AN UNSUSPECTING PASSENGER, OR DAMAGE TO THE VEHICLE, AVOID SUDDEN STARTS, SUDDEN STOPS, AND ABRUPT TURNS.
- VEHICLE SHOULD BE DRIVEN AT SLOWER SPEEDS WHEN FOUR PERSONS ARE IN THE VEHICLE.
- PASSENGERS SHOULD HOLD ON TO SEAT HANDLES OR HAND RAILS AT ALL TIMES (**FIGURE 17, PAGE 26**). DRIVER SHOULD KEEP BOTH HANDS ON THE STEERING WHEEL WHILE VEHICLE IS MOVING.
- NEVER LEAVE CHILDREN UNATTENDED IN THE VEHICLE.
- DO NOT LEAVE CHILDREN UNATTENDED ON THE REAR SEAT WHILE VEHICLE IS MOVING.
- NO MORE THAN FOUR PERSONS SHOULD BE ON THE VEHICLE AT ONE TIME.
- TO PREVENT THE POSSIBILITY OF SERIOUS INJURY, KEEP YOUR ENTIRE BODY INSIDE THE VEHICLE.

MAINTENANCE

Refer to Pages 15 through 16 for Periodic Service and Lubrication Schedules. **See following NOTE.**

NOTE

- IF THE VEHICLE IS CONSTANTLY HAULING HEAVY LOADS, THE PREVENTIVE MAINTENANCE PROCEDURES SHOULD BE PERFORMED MORE OFTEN THAN RECOMMENDED IN THE SERVICE AND LUBRICATION SCHEDULES.

STORAGE COMPARTMENT

There is an enclosed storage compartment underneath the rear seat with 2 cu.ft. (.6 cu.m.) of storage area. Access the storage compartment by lifting the rear seat.

ACCESSORY ONBOARD CHARGER

An onboard charger, which is installed under the rear seat, is available for the Fairway Villager electric vehicle. The charger should be plugged into a properly grounded nominal 115 Volts AC, 60 Hertz outlet. The AC line to which the charger is to be connected must be capable of supplying 15 amperes minimum to the charger. The rear seat should be propped open while charging the batteries. **See following WARNING and CAUTION.**

WARNING

- EACH CHARGER SHOULD HAVE ITS OWN DEDICATED 15 OR 20 AMPERE SEPARATELY PROTECTED (CIRCUIT BREAKER OR FUSE) SINGLE PHASE BRANCH CIRCUIT, IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODES FOR THE LOCATION.

⚠ CAUTION

- BEFORE CHARGING BATTERIES, TURN OFF ALL ACCESSORIES ON ALL VEHICLES.
- IF USING AN ONBOARD CHARGER, BE SURE THE AC PLUG IS UNPLUGGED FROM THE OUTLET BEFORE ATTEMPTING TO DRIVE THE VEHICLE. CHARGER AND AC OUTLET WILL BE DAMAGED IF THE CHARGER IS NOT UNPLUGGED BEFORE DRIVING. BE SURE THE AC CORD IS PROPERLY WOUND UP ON THE REEL BEFORE DRIVING THE VEHICLE. STUDY ALL GENERAL INFORMATION, **NOTE**, **CAUTION**, AND **WARNING** STATEMENTS, AS WELL AS ALL INFORMATION, **NOTE**, **CAUTION**, AND **WARNING** STATEMENTS SPECIFIC TO THE POWERDRIVE CHARGER AND POWERDRIVE SYSTEM 48 IN THE BATTERY CHARGER SECTION OF THIS OWNER'S MANUAL (PAGE 19).

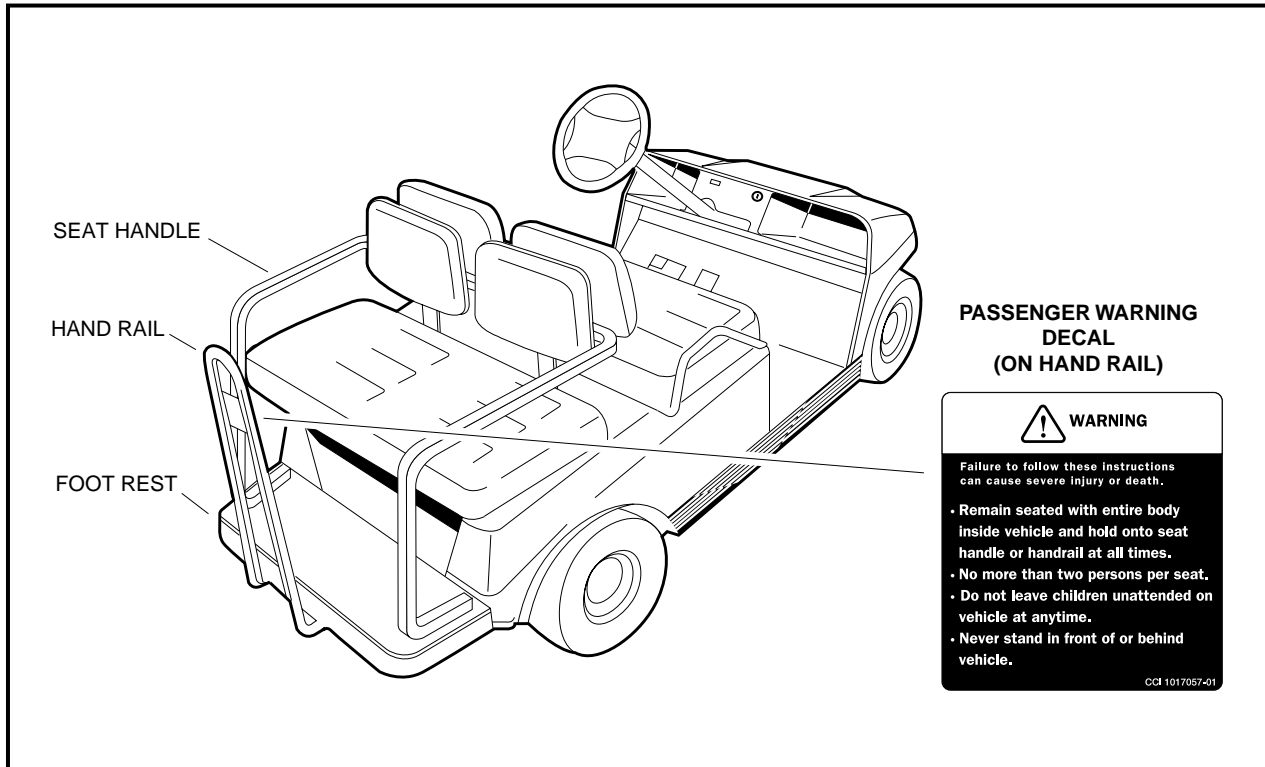


Figure 17 Fairway Villager

DS ELECTRIC VEHICLE SPECIFICATIONS

| SPECIFICATIONS | POWERDRIVE SYSTEM 48 | POWERDRIVE PLUS | DS 36-Volt |
|---|----------------------|-----------------|------------|
| POWER SOURCE | | | |
| Drive Motor: Direct drive, 48-volts DC, series wound, 3.1 hp. | • | | |
| Drive Motor: Direct drive, 48-volts DC, shunt wound, 3.2 hp. | | • | |
| Drive Motor: Direct drive, 36-volts DC, series wound, 2.97 hp. | | | • |
| Transaxle: Double reduction helical gear with 12.28:1 direct drive axle. | • | • | • |
| Electrical System: 48-volts DC, reduced speed reverse. | • | • | |
| Electrical System: 36-volts DC, reduced speed reverse. | | | • |
| Vehicle Specifications Continued on Next Page. | | | |

| SPECIFICATIONS | POWERDRIVE SYSTEM 48 | POWERDRIVE PLUS | DS 36-Volt |
|---|------------------------------|------------------------------|------------------------------|
| Batteries: High capacity, deep cycle, Trojan PowerDrive 8-volt, 117 min. capacity. | • | • | |
| Batteries: High capacity, deep cycle, Trojan 6-volt, 115 min. capacity. | | | • |
| Charger: Automatic, 17 amp PowerDrive; UL and CSA listed. | • | • | |
| Charger: Automatic, 21 amp Accu-Power; UL and CSA listed. | | | • |
| STEERING/SUSPENSION/BRAKES | | | |
| Steering: Self-adjusting rack and pinion. | • | • | • |
| Suspension: Front and rear tapered mono-leaf springs with dual hydraulic shocks. | • | • | • |
| Brakes: Dual rear wheel self-adjusting brakes with cast iron drums and single brake pedal with automatic-release park brake. | • | • | • |
| BODY/CHASSIS | | | |
| Frame/Chassis: Twin I-Beam welded aluminum. | • | • | • |
| Front and Rear Body: Armorflex® | • | • | • |
| Body Finish: Matched paint finish over molded-in color. | • | • | • |
| Tires: 18.00 x 8.50 - 8.00 tubeless, 4 ply rated. | • | • | • |
| SEATING CAPACITY/FUEL CAPACITY | | | |
| Standard Seating Capacity: 2 persons | • | • | • |
| Fairway Villager Seating Capacity: 4 persons | • | • | • |
| DIMENSIONS/WEIGHT | | | |
| Overall Length | 91-1/2" (232 cm) | 91-1/2" (232 cm) | 91-1/2" (232 cm) |
| Overall Width | 47-1/4" (120 cm) | 47-1/4" (120 cm) | 47-1/4" (120 cm) |
| Overall Height: At Steering Wheel. | 48" (122 cm) | 48" (122 cm) | 48" (122 cm) |
| Wheelbase | 65-1/2" (166 cm) | 65-1/2" (166 cm) | 65-1/2" (166 cm) |
| Ground Clearance | 4-1/2" (11 cm) | 4-1/2" (11 cm) | 4-1/2" (11 cm) |
| Front Wheel Tread | 34-1/2" (88 cm) | 34-1/2" (88 cm) | 34-1/2" (88 cm) |
| Rear Wheel Tread | 38-1/2" (98 cm) | 38-1/2" (98 cm) | 38-1/2" (98 cm) |
| Weight: Standard electric vehicle (without batteries) | 455 lbs. (206 kg) | 477 lbs. (216 kg) | 448 lbs. (203 kg) |
| Weight: Fairway Villager electric vehicle (without batteries) | 495 lbs. (225 kg) | N/A | N/A |
| Forward Speed: At 2700 rpm | 12 - 15 mph (19 - 24 kph) | 12 - 15 mph (19 - 24 kph) | 12 - 15 mph (19 - 24 kph) |
| Clearance Circle (diameter) | 17'-6" (533 cm) | 17'-6" (533 cm) | 17'-6" (533 cm) |
| Braking Distance: At 12 mph (19 kph) | 14' (427 cm) | 14' (427 cm) | 14' (427 cm) |

CLUB CAR LIMITED LIFETIME WARRANTY FOR 1999 FLEET GOLF CARS IN THE UNITED STATES AND CANADA

1. WARRANTY:

CLUB CAR, INC., ("CLUB CAR") hereby warrants to the Original Retail Fleet Purchaser or Original Retail Fleet Lessee, as those terms are defined herein, and subject to the provisions, limitations and exclusions contained in this limited warranty, that its new 1999 Model DS golf car purchased from CLUB CAR or an authorized distributor or dealer for use in the United States or Canada shall be free from defects in materials and workmanship under normal use and service as a golf car for the periods stated below.

LIMITED LIFETIME WARRANTY:

The golf car frame (excluding the front and rear bumper mounts), the rack and pinion steering gearbox unit, and the suspension system (defined as the shock absorbers, shock mounts, A-plates, leaf springs, shackles and associated hardware) are warranted with respect to parts and labor against defects in materials and workmanship for the lifetime of the vehicle while owned by the Original Retail Fleet Purchaser or in the possession of the Original Retail Fleet Lessee.

LIMITED THREE YEAR WARRANTY:

The gasoline engine, transmission, torque converter (drive and driven), unitized transaxle, starter generator, transaxle (electric vehicle), and electric motor are warranted with respect to parts and labor against defects in materials and workmanship for a period of three years from the date of purchase while owned by the Original Retail Fleet Purchaser or in the possession of the Original Retail Fleet Lessee.

LIMITED TWO YEAR WARRANTY:

All remaining components of the golf car not specified otherwise, except options and accessories, are warranted with respect to parts and labor against defects in materials and workmanship for a period of two years from the date of purchase while owned by the Original Retail Fleet Purchaser or in the possession of the Original Retail Fleet Lessee.

LIMITED ONE YEAR WARRANTY:

All original equipment options and accessories supplied by Club Car are warranted with respect to parts and labor against defects in material and workmanship for a period of one year from the date of purchase.

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

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

2. EXCLUSIONS:

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

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

3. VOIDING OF WARRANTY:

THIS AND ANY OTHER WARRANTY SHALL BE VOID IF THE GOLF CAR IS ABUSED OR USED IN AN UNINTENDED MANNER OR SHOWS INDICATIONS THAT IT HAS BEEN ALTERED IN ANY WAY,

INCLUDING, BUT NOT LIMITED TO, MODIFICATION OF THE SPEED GOVERNOR, BRAKING SYSTEM, STEERING, TRANSAXLE, OR OTHER OPERATING SYSTEMS OF THE CAR TO CAUSE IT TO PERFORM OUTSIDE CLUB CAR SPECIFICATIONS. THE WARRANTY IS LIKEWISE VOID IF THE CAR SHOWS INDICATIONS THAT REASONABLE OR NECESSARY MAINTENANCE AS OUTLINED IN THE OWNER'S MANUAL AND MAINTENANCE AND SERVICE MANUAL WAS NOT PERFORMED AT THE TIME AND IN THE MANNER SPECIFIED IN SUCH MANUALS.

4. SOLE REMEDY:

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

5. HOW TO MAKE A WARRANTY CLAIM:

To make a warranty claim under this limited warranty, you must present the golf car or defective component to an authorized CLUB CAR distributor or dealer or send the defective component, freight prepaid, to WARRANTY ADMINISTRATION, CLUB CAR, INC., P.O. Box 204658, 4152 Washington Road, Augusta, Georgia 30907-4658.

6. DEFINITIONS:

For the purpose of this warranty, an Original Retail Fleet Purchaser is the original purchaser of the golf car who is in the business of owning or operating golf courses and who purchases such golf car for the purpose of renting it to golf players for use on such courses. An Original Retail Fleet Lessee is the first end-user of the golf car who is in the business of owning and operating golf courses and who leases such golf car for the purpose of renting it to golf players for use on such golf courses. In the event the golf car is purchased or leased by any entity for the purpose of leasing it to an Original Retail Fleet Lessee, then this limited warranty shall extend only to the first Original Retail Fleet Lessee, and not to such entity or to any subsequent lessee of the golf car.

7. DISCLAIMER:

THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REMEDY OF REPAIR OR REPLACEMENT OF THE DEFECTIVE GOLF CAR OR COMPONENT THEREOF IS THE EXCLUSIVE AND 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.

8. 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 GOLF CAR, 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.

9. INFORMATION:

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

10. WARNING:

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

CLUB CAR LIMITED THREE YEAR WARRANTY FOR 1999 T-105 6-VOLT BATTERIES IN THE UNITED STATES AND CANADA

CLUB CAR, INC., ("CLUB CAR") warrants to the original retail purchaser that the new "Trojan T-105" 6-Volt Battery installed in its new electric vehicle purchased from CLUB CAR or an authorized distributor or dealer will be free from defects in materials and workmanship and will provide 36 hole performance (60 minute discharge capacity) for a period of three years or 600 rounds from the date of purchase, whichever event first occurs, subject to the terms and conditions contained herein.

The terms of this three year or 600 round limited warranty shall be as follows:

Free replacement within three years or 600 rounds from date of purchase, whichever event first occurs. No labor or transportation expenses are included in this limited warranty.

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

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE VOID AND EXCLUDED SUBSEQUENT TO ONE YEAR FROM THE DATE OF PURCHASE. THE REPLACEMENT OF THE BATTERY IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. 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 LIMITED WARRANTY.

LIMITED WARRANTY EXCLUSIONS

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

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

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

THIS BATTERY IS INTENDED TO BE USED BY PERSONS WITH TRAINING AND EXPERIENCE WITH BATTERIES AND ONLY IN CLUB CAR ELECTRIC VEHICLES. ANY OTHER USE RENDERS THE LIMITED WARRANTIES EXPRESSED HEREIN AND ALL IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED.

ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, OR INCONVENIENCE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS NOR EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

WARRANTY LIMITATIONS

CLUB CAR's only liability under this warranty shall be to replace a defective battery. Replacement shall mean furnishing a new or used battery with sufficient life to complete the remainder of the warranty term, which is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the three year or 600 round limited warranty period, whichever event first occurs, except for labor or transportation expenses. All batteries which are replaced under this limited warranty become the property of CLUB CAR.

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

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

For further information or to submit a warranty claim, contact Warranty Administrator, CLUB CAR, Inc., P.O. Box 204658, Augusta, GA 30917-4658 USA 706/863-3000.

CLUB CAR FOUR YEAR LIMITED WARRANTY FOR 1999 POWERDRIVE® 8-VOLT BATTERIES IN THE UNITED STATES AND CANADA

CLUB CAR, Inc., ("CLUB CAR") hereby warrants to the Original Retail Purchaser that the new PowerDrive, 8-volt Battery installed in its new electric vehicle equipped with the PowerDrive® System 48™ purchased from CLUB CAR or an authorized distributor or dealer will be free from defects in materials and workmanship and will provide 36-hole performance (60 minute discharge capacity) for a period of four years or 800 rounds from the date of purchase, whichever event first occurs, subject to the terms and conditions contained herein.

This limited warranty only covers defects in materials and workmanship for a period of four years or 800 golf car rounds from date of purchase, whichever event first occurs. The terms of this four year or 800 round limited warranty shall be as follows:

Free replacement within four years or 800 rounds, whichever event first occurs, from date of purchase. No labor or transportation expenses are included in this limited warranty.

The battery should be returned to CLUB CAR or an authorized distributor or dealer with evidence of proof of purchase date and number of rounds, freight prepaid. CLUB CAR reserves the right to test and recharge any battery returned for adjustment, and to verify number of rounds played by accessing information contained in the PowerDrive® System 48™ Onboard Computer. In the event the vehicles are used for purposes other than golf, the warranty will be four years or 16,000 energy units as recorded on the Onboard Computer, whichever event first occurs.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE VOID AND EXCLUDED SUBSEQUENT TO ONE YEAR FROM THE DATE OF PURCHASE. THE REPLACEMENT OF THE BATTERY IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. 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 LIMITED WARRANTY.

LIMITED WARRANTY EXCLUSIONS

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

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

Abuse or neglect such as improper fluid levels, loose wiring, or rusted or corroded hardware; Lack of proper maintenance as outlined in the electric vehicle owner's manual; Damage caused by improper installation of the battery; Neglect, breakage, freezing, fire, explosion, wreckage, the addition of any chemical, or the operation of the battery in an uncharged condition (below half-charge - 1.200 specific gravity); and a battery charged by systems other than the CLUB CAR PowerDrive, Charger.

THIS BATTERY IS INTENDED TO BE USED BY PERSONS WITH TRAINING AND EXPERIENCE WITH BATTERIES AND ONLY IN CLUB CAR ELECTRIC VEHICLES. ANY OTHER USE RENDERS THE LIMITED WARRANTIES EXPRESSED HEREIN AND ALL IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED.

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

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

WARRANTY LIMITATIONS

CLUB CAR's liability shall be to replace a defective battery. Replacement shall mean furnishing a new battery or used battery with sufficient life to complete the remainder of the warranty term, which is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the four year or 800 round limited warranty period, whichever event first occurs, except for labor or transportation expenses.

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

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. For further information or to submit a warranty claim, contact Warranty Administrator, CLUB CAR, INC., P.O. Box 204658, Augusta, Georgia 30917-4658, U.S.A., 706/863-3000.

CLUB CAR LIMITED FOUR YEAR WARRANTY FOR 1999 POWERDRIVE® BATTERY CHARGERS IN THE UNITED STATES AND CANADA

CLUB CAR, INC., ("CLUB CAR") warrants to the original retail purchaser that its new PowerDrive Charger purchased from CLUB CAR or an authorized distributor/dealer for use in the United States or Canada will be free from defects in materials and workmanship under normal use and service for a period of four years from the date of purchase, subject to the terms, provisions, limitations, and exclusions contained herein.

The limited warranty covers defects in materials and workmanship for a period of four years from the date of purchase and repair labor costs for a period of one year from the date of purchase. Such repair labor shall be performed only by CLUB CAR at its facility in Augusta, Georgia, or by an authorized distributor/dealer. Purchaser shall be responsible for all freight costs to and from CLUB CAR's facility. For further information or to present a warranty claim, contact: Warranty Administration, CLUB CAR, INC., P.O. Box 204658, Augusta, Georgia 30917-4658 U.S.A., 706/863-3000.

WARRANTY EXCLUSIONS: THE PROVISIONS OF THIS LIMITED WARRANTY SHALL NOT APPLY TO:

- a) Normal maintenance services such as preventive maintenance checks and tightening loose wire connections;
- b) Parts such as diodes and fuses which are vulnerable to electrical overloads (including lightning) beyond the control of CLUB CAR; and
- c) Charger DC cord set with plug which is a wear item and subject to user abuse.

Any warranty service which includes labor must be performed by CLUB CAR or by an authorized distributor/dealer. FOR REPAIRS MADE BY QUALIFIED TECHNICIANS OTHER THAN CLUB CAR'S FACTORY TECHNICIANS OR AN AUTHORIZED DISTRIBUTOR/DEALER, CLUB CAR WILL PROVIDE ONLY THE REPLACEMENT PARTS OR COMPONENTS.

THIS POWERDRIVE CHARGER IS INTENDED TO BE USED BY PERSONS KNOWLEDGEABLE WITH THE CHARGER AND PROPER CHARGING PRACTICES AND ONLY ON CLUB CAR POWERDRIVE® SYSTEM 48™ VEHICLES. ANY OTHER USE RENDERS THE LIMITED WARRANTIES EXPRESSED HEREIN AND ANY IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED.

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

Damage not resulting from a defect of which occurs due to unreasonable use, abuse or neglect (including failure to provide reasonable or necessary maintenance), accident or alteration, is excluded from the limited warranty.

THIS LIMITED WARRANTY IS EXCLUSIVE. CLUB CAR MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS OR TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY CLUB CAR AND EXCLUDED FROM THIS WARRANTY. THE PURCHASER AND CLUB CAR EXPRESSLY AGREE THAT THE REMEDY OF REPAIR OR REPLACEMENT OF THE DEFECTIVE CHARGER OR COMPONENT THEREOF IS THE EXCLUSIVE AND 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 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 BATTERY CHARGER, 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 limitations of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you.

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

CLUB CAR FOUR YEAR LIMITED WARRANTY FOR 1999 ONBOARD COMPUTERS AND SOLID STATE SPEED CONTROLLERS IN THE UNITED STATES AND CANADA

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

This limited warranty only covers defects in materials and workmanship for a period of four years or 800 rounds from the date of purchase, whichever event first occurs. The terms of this four year or 800 round limited warranty shall be as follows:

Free replacement with respect to parts and labor within four years or 800 rounds from date of purchase, whichever event first occurs.

The Computer or Controller should be returned to CLUB CAR or an authorized distributor or dealer with evidence of proof of purchase date, and number of rounds, freight prepaid. CLUB CAR reserves the right to

test any Computer returned for warranty and to verify number of rounds played by accessing information contained in the Computer. In the event the vehicles are used for purposes other than golf, the warranty will be four years or 16,000 energy units as recorded by the Computer, whichever event first occurs.

For further information or to submit a warranty claim, contact:

WARRANTY ADMINISTRATOR, CLUB CAR, INC., 4152 Washington Road, P.O. Box 204658, Augusta, Georgia 30917-4658 U.S.A., 706-863-3000.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE VOID AND EXCLUDED SUBSEQUENT TO ONE YEAR FROM THE DATE OF PURCHASE. THE REPLACEMENT OF THE COMPUTER OR CONTROLLER IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY TO ANY IMPLIED WARRANTY. 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 LIMITED WARRANTY.

LIMITED WARRANTY EXCLUSIONS:

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

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

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

THIS COMPUTER OR CONTROLLER IS INTENDED TO BE USED ONLY IN CLUB CAR POWERDRIVE SYSTEM 48 ELECTRIC VEHICLES. ANY OTHER USE RENDERS THE LIMITED WARRANTIES EXPRESSED HEREIN AND ALL IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED.

ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, INCONVENIENCE OR ANY OTHER ECONOMIC LOSS. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS NOR THE EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

WARRANTY LIMITATIONS:

CLUB CAR's only liability under this limited warranty shall be to replace a defective Computer or Controller. Replacement shall mean furnishing a new or reconditioned Computer or Controller, which is identical or reasonably equivalent to the warranted product at no cost to the purchaser during the four year or 800 round limited warranty period, whichever event first occurs, except for transportation expenses. All parts and components replaced under warranty shall become the property of CLUB CAR.

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

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

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CLUB CAR
INGERSOLL-RAND