



# 1990 DS Electric Golf Car Owner's Manual

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Manual Number  
1015438  
Effective August 1, 1989  
0889A00000

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**WARNING:**

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This instruction manual should be read completely and carefully before attempting to drive or service this car. Failure to follow the instructions in this manual could result in severe personal injury or death.

NOTE: If this vehicle is equipped as a Fairway Villager four-passenger vehicle, supplements to this manual are required. If this information does not accompany this manual, contact CLUB CAR, INC., Customer Service and request the Fairway Villager supplement.

**Safety Details:**

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

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**DANGER:**

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A danger indicates an immediate hazard which will result in severe personal injury or death.

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**WARNING:**

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A warning indicates an immediate hazard which could result in severe personal injury or death.

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**CAUTION:**

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A caution indicates hazards or unsafe practices which could result in minor personal injury or product or property damage.

NOTE: A note provides key information to make procedures easier or clearer.

The safety procedures listed below must be followed whenever the car is being repaired or serviced. Other specific warnings appear throughout this manual.

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**WARNING:**

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Only trained people should repair or service this car. Everyone doing even simple repairs or service should follow the correct procedures and obey the warnings listed in this manual as well as the maintenance and service manual.

Always wear safety glasses or eye protection when servicing the car.

Remove key, place forward and reverse switch in neutral (straight up position) and disconnect batteries before working on car.

Always use insulated tools when working around batteries or electrical connections.

Improper use of this vehicle or the failure to maintain it could result in decreased vehicle performance or severe personal injury.

Any modification or change to the vehicle which affects the stability or increases the speed beyond the factory specifications could result in severe personal injury or death.

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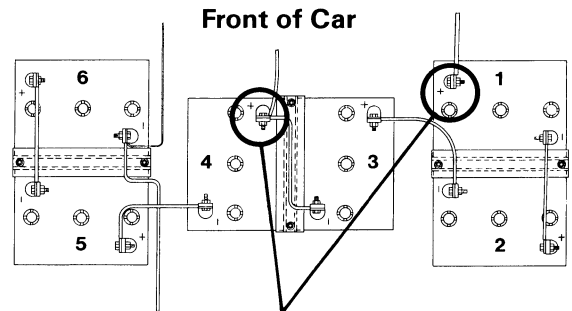
**DANGER:**

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**Battery Vapors — Flammable — Explosive — Do not smoke. Keep sparks and flames away from the area of the car. Only service in well-ventilated area.**

If any of the warning labels become damaged, have been removed or cannot be easily read, they should be replaced immediately. Contact your CLUB CAR Distributor/Dealer.

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Remove these battery cables before working on car.

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### Foreword

Congratulations for having chosen the finest golf car on the market today! Over 25 years of the most advanced development, engineering and field experience known to this industry has gone into the manufacture of your golf car. With your choice of the CLUB CAR Model DS Electric golf car as your personal or fleet vehicle, you have joined a select group of discriminating owners who look for the very best and who have shown their concern for safety, efficiency and long-term lasting value. This owner's manual is designed to instruct you or anyone you may rent or loan the golf car to in the safe operation of the CLUB CAR DS Electric golf car. In addition, this manual will acquaint you with the normal preventive maintenance required in order to provide you safe, optimum vehicle performance.

If any repairs or service need to be performed, there are certain basic mechanical procedures that should be known and understood. Without this knowledge, repairs or service to this golf car may render the golf car unsafe which could result in severe personal injury or death. For this reason, we advise that all repairs and service be performed by an authorized CLUB CAR Distributor/Dealer or representative except as specified in the Periodic Service Schedule. Should you require further information, please contact your nearest CLUB CAR Distributor/Dealer who can provide you with technical advice, service, parts, or the CLUB CAR DS Electric Golf Car Maintenance and Service Manual. For the name and address of your nearest CLUB CAR Distributor/Dealer, contact CLUB CAR, INC., P. O. Box 4658, Augusta, Georgia 30917-4658, U.S.A., Telephone: 404/863-3000.

The CLUB CAR Limited Warranty appears on the inside back cover of this manual. No other warranties express or implied are contained herein. Your Distributor/Dealer has checked your car(s) prior to delivery to you and will provide you with a completed warranty registration card.

CLUB CAR, INC., shall not be liable for errors contained herein or for incidental or consequential damages which result from the use of the material in this manual.

This manual should be considered a permanent part of this vehicle. It should stay with the vehicle when sold to provide the next owner with important operating, safety, and maintenance information.

# Vehicle Feature

## OPERATING INSTRUCTIONS LABEL

**OPERATING INSTRUCTIONS**

- Study And Understand Controls. Be Sure Everyone Is Seated.
- Before Driving Car, Read Safety Warnings Located Above Pedals.
- Make Sure Wheels Are Turned In Desired Direction.
- Be Sure Nothing Is In Your Path.
- Turn Key To ON Position.
- Select Direction By Placing Shift Lever In Desired Position:  
F - Forward      N - Neutral      R - Reverse
- Slowly Push Accelerator Pedal To Increase Speed. Park Brake Will Release When Accelerator Pedal Is Pushed.
- To Stop Car, Release Accelerator Pedal and Push Brake Pedal.
- After Stopping Car, Firmly Push Park Brake Until It Locks.
- Remove Key And Place Shift Lever In The Straight Up Neutral Position When Car Is Not In Use.
- For Further Details, Read Owner's Manual.


## PARK BRAKE PEDAL

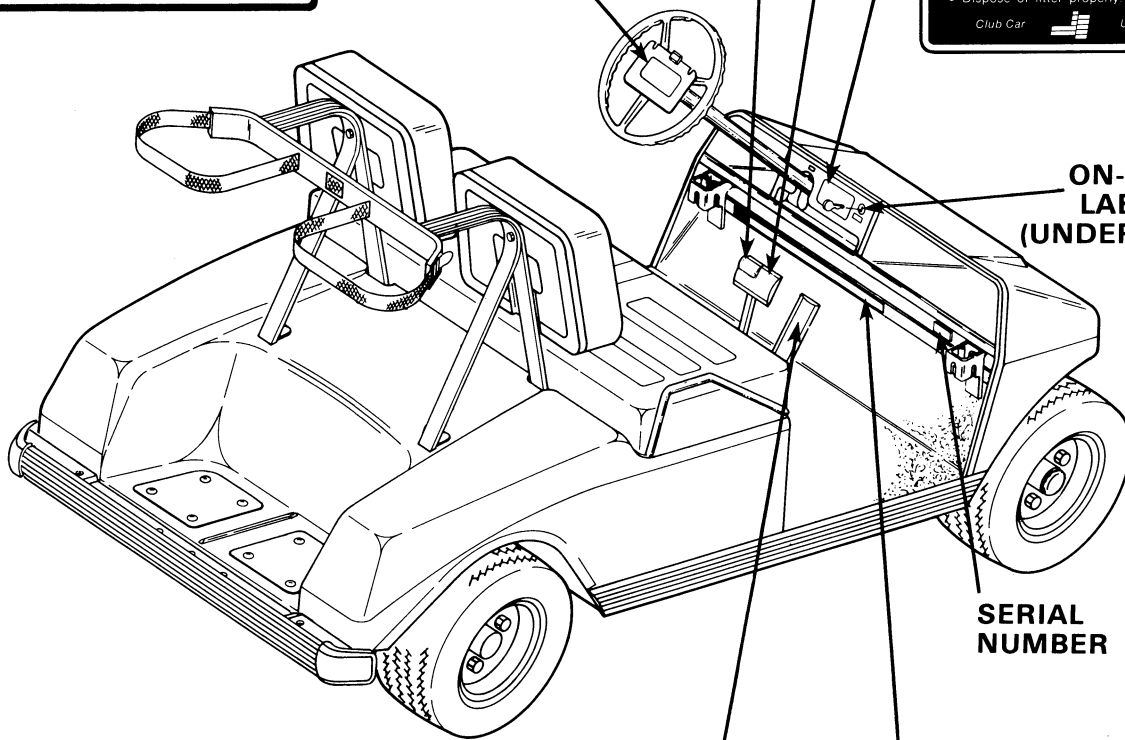
## BRAKE PEDAL

## GOLF ETIQUETTE LABEL

**PRACTICE GOLF ETIQUETTE**

- Observe club rules.
- Drive on golf car paths when possible.
- Keep proper distance from greens.
- Replace divots.
- Repair ball marks on greens.
- Rake sand traps.
- Allow faster players to play through.
- Help speed up play.
- Dispose of litter properly.

Club Car  USA




**ON-OFF LABEL (UNDER KEY SWITCH)**

**SERIAL NUMBER**




**ACCELERATOR PEDAL**

## SAFETY WARNING LABEL


 <p><b>WARNING</b> Failure To Follow These Instructions Can Cause Severe Injury Or Death</p>	<ul style="list-style-type: none"> <li>• Read Operating Instructions Before Using Vehicle.</li> <li>• Never Stand In Front Of Or Behind Vehicle.</li> <li>• Vehicle Should Be Driven Only In Specified Areas By Trained Persons.</li> </ul>	<ul style="list-style-type: none"> <li>• Do Not Use On Public Roads.</li> <li>• Only Two Persons Per Seat.</li> <li>• Operate Vehicle From Drivers Side Only</li> <li>• Do Not Start Vehicle Until All People Are Seated.</li> </ul>	<ul style="list-style-type: none"> <li>• Remain Seated &amp; Hold On In Moving Vehicle.</li> <li>• Keep Arms, Legs, Feet &amp; Body Inside Vehicle.</li> <li>• Stop Vehicle Before Changing Direction. Buzzer Will Sound In Reverse.</li> <li>• Drive Slowly In Turns.</li> </ul>	<ul style="list-style-type: none"> <li>• Drive Slowly Straight Up &amp; Down Slopes.</li> <li>• Set Park Brake Before Leaving Vehicle.</li> <li>• Remove Key When Vehicle Is Not In Use.</li> <li>• Place Shift Lever In Neutral When Vehicle Is Not In Use.</li> </ul>
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# Identification

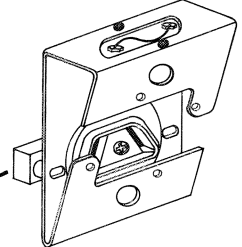
## DANGER LABEL (ON BODY)

Shield Eyes Contains Sulfuric Acid		<b>POISON • DANGER</b> <ul style="list-style-type: none"> <li>• In event of accident flush with water and call a physician.</li> <li>• CAUSES SEVERE BURNS - Avoid contact with skin, eyes or clothing. KEEP OUT OF REACH OF CHILDREN</li> </ul>
Explosive Gas		
Avoid Spark/Flame		<ul style="list-style-type: none"> <li>• Charge in well ventilated areas only. Do not charge, service or adjust battery post connections without proper instruction and training.</li> <li>• Cigarettes, flames or sparks could cause battery to explode.</li> </ul>

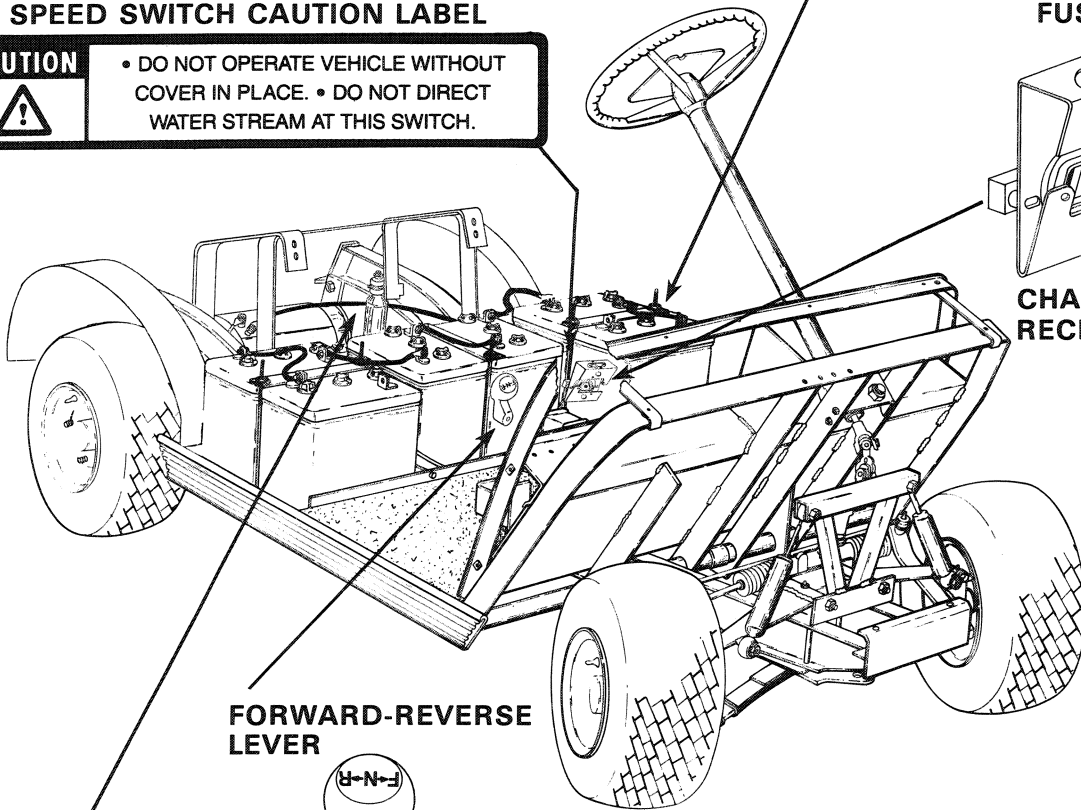
## SPEED SWITCH CAUTION LABEL

<b>CAUTION</b>	<ul style="list-style-type: none"> <li>• DO NOT OPERATE VEHICLE WITHOUT COVER IN PLACE.</li> <li>• DO NOT DIRECT WATER STREAM AT THIS SWITCH.</li> </ul>
	

## FUSE LINK



## CHARGER RECEPTACLE



## FORWARD-REVERSE LEVER



## RESISTOR WARNING LABEL (ON BODY)

	<b>WARNING</b>	<b>HOT RESISTORS CAN CAUSE SEVERE BURNS.</b>
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## Model Identification:

The serial number of your CLUB CAR is stamped on a data plate mounted on the frame directly under the right dash (Example: A9001-123456).

NOTE: Always mention this number when ordering parts or making inquiries (See Figure 1).

## Safety Committee:

If the golf car is going 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 includes such things as where the golf cars should be driven, who should and who should not drive the golf cars, instructing all first time drivers in the controls and operation of the golf car, seeing that the golf cars are well maintained in safe driving condition and how the various rules are to be enforced. The safety committee should include all these items at a minimum and such others as the committee feels necessary or appropriate.

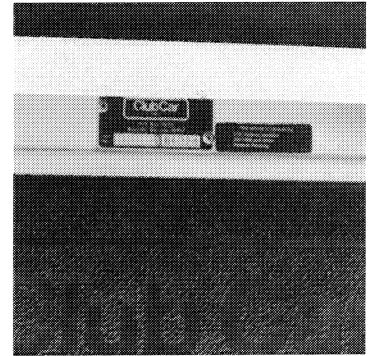


Figure 1

## Pre-Operation Checklist:

Your CLUB CAR has been thoroughly inspected and adjusted by the factory and by your CLUB CAR Distributor/Dealer. However, when receiving your new CLUB CAR(s) you should become familiar with its controls and operation and carefully inspect each car to be satisfied with its condition before accepting delivery.

### WARNING:

Only trained people should repair or service this car. Everyone doing even simple repairs or service should follow the correct procedures and obey the warnings listed in this manual as well as the maintenance and service manual.

Always wear safety glasses or eye protection when servicing the car.

### CAUTION:

Do not operate vehicle without speed switch cover in place.

Use this checklist as a guide to inspect your car. Any problems must be corrected by your Distributor/Dealer or a trained mechanic.

**Visual Inspection** - Look for the following on your vehicle:

**General:**

All the parts should be in place and properly installed. Be sure that all nuts, bolts and screws are tight.

**Warning Labels:**

Check that all warning and operation labels are in place (See Pages 2 & 3).

**Tires:**

Check tire pressure. It should be 18 psi.

**Batteries:**

Check the electrolyte level to insure it is at its proper level (See Page 11). Check the battery posts for corrosion. All wire connectors should be held firmly in place.

**Speed Switch:**

Be sure speed switch cover is in place prior to operating vehicle

### CAUTION:

Be sure the plastic has been removed from the bottom of the seat before operating vehicle. Failure to do so may result in a fire or property damage.

**Performance Inspection** - After you have familiarized yourself with the car's controls (See Page 5) and have read and understood the driving instructions (See Page 6), take the car for a short test drive. Check the following:

**Brakes:**

Be sure that the brakes work properly. Both rear wheels should brake properly and the pedal should not go more than halfway to the floor. If it does, have brakes adjusted.

**Park Brake:**

The park brake should lock the wheels when latched and should release when the accelerator or brake pedal is pushed.

**Steering:**

The car should be easy to steer and should not have free play in the steering wheel.

**Speed Switch:**

Be sure that as the accelerator pedal is pushed, the car comes smoothly up to full speed. It should run 12-14 mph on a level surface. Car runs half speed in reverse.

**General:**

Listen for any unusual noises such as squeaks or rattles. Check the car's ride and performance. Have a CLUB CAR Distributor/Dealer or trained mechanic investigate anything unusual.

**NOTE:** For cars that are new or have been in storage, charge batteries prior to use to avoid damage (See Page 13.)

**WARNING:**

Any modification or change to the vehicle which affects the stability or increases the speed beyond the factory specifications could result in severe personal injury or death.

**Controls:**

**WARNING:**

If renting or loaning this car, make sure that the driver is familiar with all controls and operating instructions before allowing the car to be driven.

**Key Switch** - The key switch is mounted on the dash to the right of the steering column (See Figure 2). It has two (2) positions, "on" and "off" which are clearly labeled. Remove key in the "off" position only.

**WARNING:**

Turn key switch to "off" and remove key when car is not in use to avoid unintentional starting of the car.

**Forward-Reverse Control** - The forward-reverse shift lever is located below and to the right of the driver's right knee on the seat support panel (See Figure 3). The lever has three (3) distinct positions: F (forward), N (neutral), and R (reverse). Rotate the lever toward the driver (F) to run the car in forward and toward the passenger (R) to run the car in reverse. The car operates at half speed in reverse.

**WARNING:**

Do not shift forward and reverse lever while car is in motion. Always bring car to a full stop before shifting lever to avoid injury to an unsuspecting passenger and damage to the car.

Turn key switch "off" and place shift lever in neutral when leaving car to avoid unintentional starting of the car.

Buzzer will sound as a warning when car is in reverse.

**Accelerator Pedal** - The accelerator pedal is the pedal on the right with the word "GO" molded in it (See Figure 4). When the key switch is "on," the shift lever is in either forward or reverse and the accelerator pedal is pushed, the parking brake will be automatically released and the car will begin moving. As the accelerator pedal is pushed further, the speed will increase.

The accelerator pedal differs from that of an automobile in the following way: Depressing the accelerator will release the parking brake if engaged. Depressing the accelerator automatically starts the vehicle moving. Each time the accelerator pedal is released, power to the motor will be cut off.

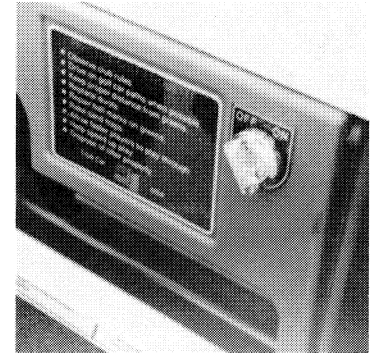


Figure 2

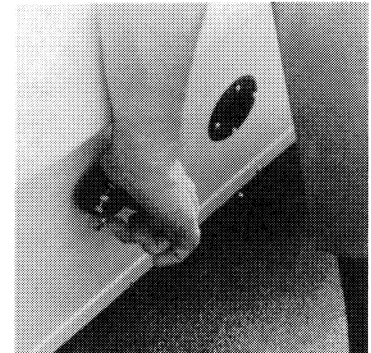


Figure 3

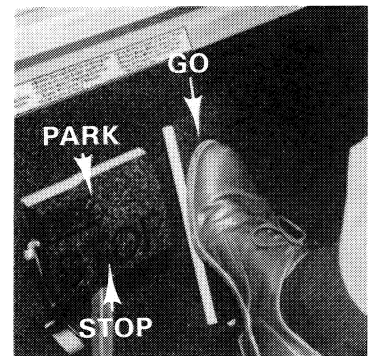


Figure 4

**Brake Pedal** - The brake pedal is the large pedal on the left with the word "STOP" molded in it (See Figure 5). To slow or stop the car, push the brake pedal with your right foot.

**Parking Brake Pedal** - The parking or park brake pedal is the small raised portion in the upper left corner of the brake pedal with the word "PARK" molded in it (See Figure 5). The words "Park Brake" are marked above this pedal. To set the park brake, push the brake pedal and tilt the park brake portion of the pedal forward with right foot (See Figure 6).

The park brake pedal will release when the accelerator or brake pedal is pushed. The parking brake has many locking teeth so that the brake can be locked in several positions.

### **WARNING:**

Always set the park brake firmly before leaving the golf car to prevent the car from rolling.

### **Driving Instructions:**

No one should drive the golf car without first being instructed in the proper operation and use of the golf car controls. An experienced operator should accompany each first time driver on a short test drive before they operate the golf car alone. Only licensed drivers should be allowed to drive this vehicle. Do not drive under the influence of alcohol, drugs or medications.

### **WARNING:**

If renting or loaning this golf car, make sure the driver is familiar with all controls and operating procedures before allowing the car to be driven.

This car is not specially equipped for handicapped persons. Be sure all persons can properly operate the car prior to allowing them to drive.

To insure safe operation of the DS Electric golf car, follow all of the procedures listed below exactly and in order. Read and understand all instructions prior to driving the car.

#### **Starting the Car:**

1. Enter the car.
2. Be sure everyone is seated.
3. Study and understand controls.
4. Read safety warnings located above pedals.
5. Make sure wheels are turned in desired direction.
6. Be sure nothing is in your path.
7. Turn key to "on" position.
8. Select direction by placing shift lever in desired position F = forward or R = reverse.
9. Slowly push accelerator pedal to increase speed. The park brake pedal will release and vehicle will start to move. Depress pedal further to increase speed.

### **WARNING:**

No more than two people should be on the vehicle at one time.

Do not shift forward and reverse lever while car is in motion. Always bring car to a full stop before shifting lever to avoid injury to an unsuspecting passenger and damage to the car.

A buzzer will sound when the car is in reverse to warn anyone in the area.

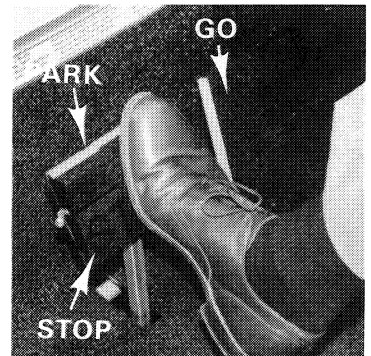


Figure 5

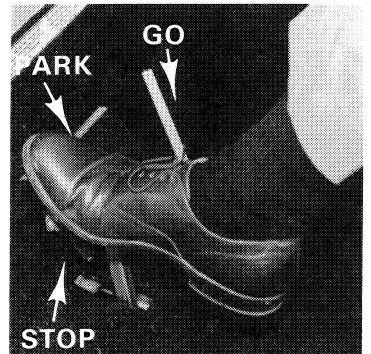


Figure 6

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**WARNING:****When Driving The Car:**

- Operate the car from the driver's seat only.
  - Remain seated in moving car and hold on to prevent falls.
  - Keep arms, legs, feet and entire body inside car to prevent getting them caught between the golf car and the ground or other objects.
  - Drive slowly in turns and drive slowly straight up and down slopes to prevent turning the car over.
  - Reduce speed for poor driving conditions such as wet grass or rough terrain to avoid losing control of the car.
  - Do not use on public roads. This car 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.
  - Cars should be driven only in specified areas by trained people.
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**Stopping the Car:**

1. To stop the car, release the accelerator pedal and push the brake pedal with your right foot.

**CAUTION:**

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

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**WARNING:**

Driving through deep water may affect the brakes. Check their effectiveness by pressing the brake pedal gently. If the car does not slow down at the normal rate, continue to apply the brakes gently until they dry out and normal performance returns.

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**Parking and Leaving the Car:**

1. After stopping the car, firmly push park brake pedal until it locks. This will prevent the car from rolling.
2. Turn the key to "off" and place shift lever in the straight up "neutral" position when the car is not in use. This avoids unintentional starting of car. Remove key when car is not in use.

**WARNING:**

To avoid being struck by a golf car, do not stand in front of or behind car.

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**Towing and Transporting:**

**Towing** - All CLUB CARS are equipped with tow bar attaching points both front and rear. For breakdown towing and single-car towing, a light-duty tow bar is available. For multi-car towing, a heavy-duty tow bar is available. Observe all of the following warnings and precautions when towing.

**WARNING:**

Never tow a golf car on public streets or highways.

Use only approved CLUB CAR tow bars.

Turn key switch off and place shift lever in neutral when car is in tow.

Extreme caution should be used when towing any golf car.

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**WARNING:**

Do not exceed five (5) miles per hour towing speed.

Do not tow more than one (1) car with another CLUB CAR.

If more than one car must be towed, a properly fitted vehicle with tow hitch height of 11 inches should be used. Only heavy-duty tow bars should be used for multi-car towing. Never tow more than five (5) cars at one time.

Do not allow people in cars being towed.

Avoid sudden starts, stops and tight turns.

**Transporting On A Trailer** - If your golf car must be transported over long distances or on public highways, it should be done on an approved trailer observing all the following warnings and precautions.

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**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. per golf car. (Example: A 2-car trailer should be rated at  $2 \times 1200 = 2400$  lbs.).

The golf car should be securely tied down to the trailer. The golf car's key switch should be "off", the shift lever in "neutral" and the park brake firmly applied and locked.

When towing a trailer, normal speeds should be reduced and care should be used when turning a corner due to the added length of the trailer.

Never tow a golf car behind a passenger vehicle or truck unless it is on an approved trailer.

Remove the windshield before transporting a golf car on a trailer.

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**Storage:**

To prepare your golf car for extended off season storage:

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**WARNING:**

Turn key switch off, remove key and place forward and reverse lever in neutral position to avoid unintentional starting of the vehicle.

1. Fully charge golf car batteries.

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**CAUTION:**

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

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**WARNING:**

Do not attempt to charge a battery if it is frozen or the case is bulged. Discard battery. Frozen batteries can explode.

2. Wash off any corrosion around the terminals with a solution of baking soda and water. Rinse. (NOTE: Do not allow this solution to enter the battery.) Let the terminals dry and coat them with grease or protective spray.
3. Store in cool, dry place. This will prevent self discharge of the batteries.
4. Recharge every 6-8 weeks, as necessary (See Page 13).
5. Increase the tire pressure to 20 psi.
6. Grease front suspension and do all quarterly periodic lubrication shown in lubrication chart (See Page 10).

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**CAUTION:**

When washing the vehicle, do not direct water stream at speed switch.

7. Thoroughly clean body, seats and underside of car.
  8. Do not latch the park brake. Block the wheels to prevent the car from rolling.
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### To Return Stored Cars To Service:

1. Fully charge golf car batteries (See Page 13).
2. Readjust tire pressure to 18 psi.
3. Perform the pre-operation checks (See Page 4) before returning the car to service.

### Maintenance:

**General Information** - To be sure you have a trouble-free car, it is very important to follow an established preventive maintenance program. This is the least expensive maintenance requirement. Preventive maintenance means regularly scheduled services which include certain maintenance procedures that are performed on the cars even though the cars are functional. A good preventive maintenance program can prevent more expensive repairs from being required. Any car that is not functioning correctly should be removed from use until it is properly repaired.

Contact your local CLUB CAR Distributor/Dealer to perform all repairs and the semi-annual and annual periodic service.

### WARNING:

**Only trained people should repair or service this car. Everyone doing even simple repairs or service should follow the correct procedures and obey the warnings listed in this manual as well as the maintenance and service manual.**

**Turn key switch off, remove key, and place forward and reverse lever in neutral position prior to servicing.**

**Disconnect batteries as described on inside front cover.**

**Always wear safety glasses or eye protection when servicing this car.**

**Do not wear loose clothing and remove jewelry, such as rings, watches, chains, etc., before servicing vehicle.**

**Always use insulated tools when working around batteries or electrical connections.**

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### Periodic Service Schedule:

Regular Interval	Service
Daily Service by Owner	Check to be sure park brake latches and releases properly Charge batteries after each use Check for smooth acceleration and proper speed Check brake operation Check steering and linkages Check to be sure all warning labels are in place (See Pages 2 & 3) Check charger plug and receptacle for damage and snug fit (See Page 13) Check tires for wear and damage Check accelerator linkage for free movement and return Check reverse warning buzzer for proper operation
Weekly Service by Owner	Check all electrical wires for tightness or damage Check battery electrolyte level Clean battery terminals and wash dirt off battery cases Inspect car for loose hardware and tighten as required Wash underside of car Check all daily items listed above
Monthly Service by Owner	Check brake pedal play Check tire pressure and adjust to 18 psi Check all daily and weekly items listed above
Quarterly Service by Owner	Check resistor assembly for broken coils or loose connections Do quarterly lubrication as shown in lubrication chart on Page 10 Check all daily, weekly and monthly items listed above
Semi-Annual Service by Trained Personnel Only (Every 100 rounds or every 50 hours of operation)	Check front wheel alignment Check all wire insulation for cracks and worn spots Check, clean and adjust brakes Test batteries Do semi-annual lubrication shown in lubrication chart on Page 10 Check all daily, weekly, monthly and quarterly items listed above

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**Regular Interval****Service**

Annual Service by Trained Personnel Only  
(Every 200 rounds or every 100 hours of operation)

Check motor brushes and commutator  
Check accelerator switch adjustment  
Do annual lubrication as shown in lubrication chart  
Check all items listed above

**WARNING:**

If your periodic service inspection reveals any problems, do not operate until repairs are made. Failure to make necessary repairs could result in fire, severe personal injury or death.

**Periodic Lubrication Schedule and Lubrication Chart:**

Regular Interval	Service	Recommended Lubricant
Quarterly	1. Brake shaft bearing	Dry Graphite Lube CLUB CAR part #1012151
	2. Brake linkage and pivots	Dry Graphite Lube CLUB CAR part #1012151
	3. Accelerator push rod pivots	Dry Graphite Lube CLUB CAR part #1012151
	4. Front suspension (9 fittings)	Chassis Lube
Semi-Annually by Trained Personnel Only	5. Check/fill drive unit to the level plug	22 oz. 80-90 WT. API Class GL-3 or 80-90 WT. AGMA Class 5 EP Gear Lube
Annually by Trained Personnel Only	6. Inspect front wheel bearings and repack as necessary	Chassis Lube

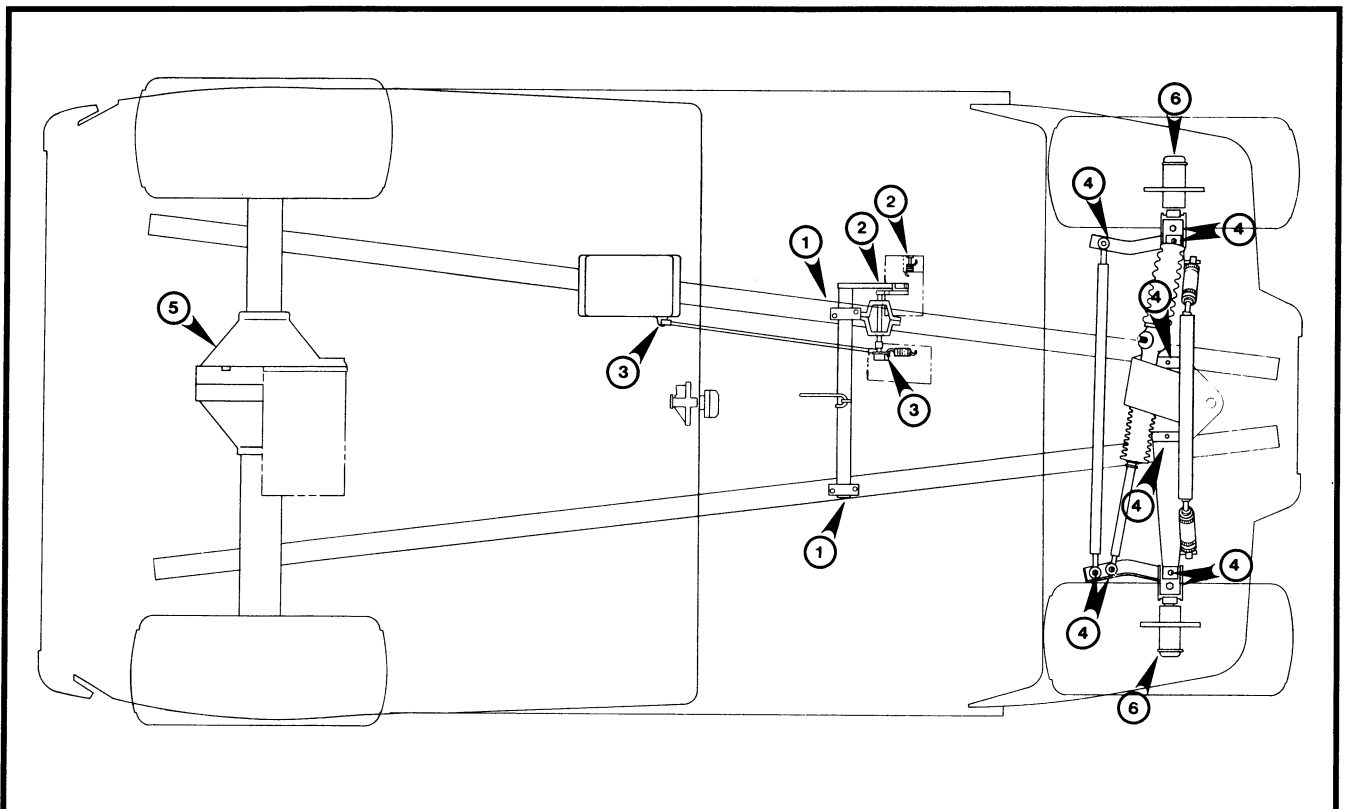


Figure 7

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## Batteries:

### General

Power is supplied by six batteries of 6 volts each. Golf car batteries are deep cycle batteries, especially built for a golf car application. Automotive batteries should never be used. New batteries will not deliver their full range until they have been run and recharged from 20-50 times. Restrict golf car with new batteries to 18 holes between charges in the first two months of use.

### WARNING:

Always wear safety glasses or eye protection when servicing the car.

Always use insulated tools when working around batteries or electrical connections.

### DANGER:

**EXPLOSIVE GASES** - Batteries emit hydrogen while being charged. Hydrogen is an **EXPLOSIVE GAS**. Keep sparks, flames, cigarettes away. Tools, wires and metal objects can cause sparks when "shorted" across a battery or batteries. Do not use without proper instructions.

**POISON - CONTAINS ACID** - Causes severe burns - Avoid contact with skin, eyes or clothing.

### Antidotes:

**External** - Flush with water. Call physician immediately.

**Internal** - Drink large quantities of milk or water, follow with milk of magnesia or vegetable oil. Call physician immediately.

**Eyes** - Flush with water for 15 minutes. Call physician immediately.

### Battery Care:

To keep your batteries in good 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. (NOTE: Do not allow this solution to enter the battery.) Rinse. Be sure terminals are tight. Let the terminals dry and then coat them with CLUB CAR battery protector spray, part #1014305.
2. The water level in the batteries should be checked weekly (See Figure 8 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. For best battery life, add only distilled water to the batteries.
3. The hold down bars should be tight enough so the batteries do not move while the car is in motion, but not so tight as to crack or buckle the battery case. The terminal connections should be clean and tight, and any worn or frayed wires should be replaced.
4. After use, the batteries should be placed on charge. The batteries should never be left discharged for any length of time.

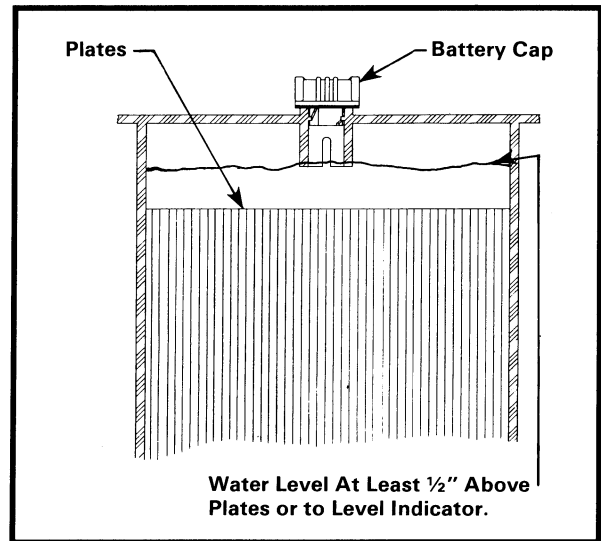


Figure 8

### Battery Charger:

#### General

Each CLUB CAR DS Electric is supplied with a fully automatic battery charger as standard equipment. The AC line to which the charger is to be connected must be capable of supplying 15 amperes to each charger.

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**WARNING:**

Each charger should have its own 20 ampere (maximum) branch circuit protection (circuit breaker or fuse), in accordance with the National Electrical Code, ANSI/NFPA 70, and local codes and ordinances.

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This battery charger must be grounded to reduce the risk of electric shock. This 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. This plug must be connected to an appropriate receptacle that is properly installed and grounded in accordance with the National Electrical Code, ANSI/NFPA 70, and all local codes and ordinances.

**WARNING:**

Improper connection of the equipment-grounding conductor can result in a risk of an electric shock.

Do not use an adaptor to plug this charger into a two-prong outlet. Extension cord or electrical outlet must have a three-prong outlet.

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

**WARNING:**

The use of an improper extension cord could result in a fire or an electric shock. Do not operate this charger if it has received a sharp blow, was dropped or otherwise damaged in any way; contact your nearest CLUB CAR Distributor/Dealer. Only trained people should repair or service this charger.

Replace worn, cut or damaged power cords or wires immediately.

Do not disconnect the DC output plug from the battery receptacle when the charger is on. The resulting arcing between the plug and receptacle could cause an explosion. If the charger must be stopped, disconnect the AC supply plug from the wall outlet before disconnecting the charger DC output plug.

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Provide adequate ventilation for the charger. Keep all charger ventilation openings at least two (2) inches away from walls and other objects.

**CAUTION:**

Do not allow clothing, blankets or other materials to cover the charger.

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**WARNING:**

Chargers can ignite flammable materials and vapors. Do not use near fuels, grain dust, solvents, thinners or other flammables.

Keep dry - do not expose to rain.

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## Charging Guidelines

### **DANGER:**

Batteries emit hydrogen while being charged. Hydrogen is an **EXPLOSIVE GAS**. Charging areas must be ventilated so the **TOTAL** volume of air in the building is changed five (5) times per hour. Exhaust fans should be located at the highest point of the roof.

### **CAUTION:**

Do not leave DC plug plugged in while unattended for more than two consecutive days.

Ventilating 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 local HVAC engineer.

To charge batteries, insert DC plug into receptacle and the charger will turn on two to five seconds later (See Figure 9). As long as the charger is allowed to shut off by itself, the batteries will be fully charged and overcharging or undercharging should be prevented. Batteries should be put on charge even if only used for 9 holes of golf or 10 minutes. If charger does not seem to be operating properly or the batteries seem weak, contact your nearest CLUB CAR Distributor/Dealer.

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

### **Plug and Receptacle**

If the charger plug becomes difficult to insert or remove, the receptacle contacts should be sprayed with WD-40 brand spray lubricant. Then the plug should be inserted and removed several times to ensure ease of insertion and removal and good firm electrical contact.

### **WARNING:**

Be sure all wire connections at the receptacle and fuse link are clean and tight.

To connect the charger plug to the vehicle receptacle, grasp the plug handle and push the plug straight into the receptacle. Do not rock or bend the plug (See Figure 9).

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 pull on the cord (See Figure 10). Do not twist, rock or bend the plug.

Failure to follow these instructions could result in damage to the charger cord, plug or vehicle receptacle.

Do not use this 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 blades or contacts are bent or corroded.
- The plug, receptacle or cords are cut, worn or have any exposed wires.
- The plug, cords, charger or receptacle are damaged in any way.

Using this charger with any of the above symptoms could result in a fire, property damage or personal injury.

If warning tag has been removed from DC cord, have it replaced.

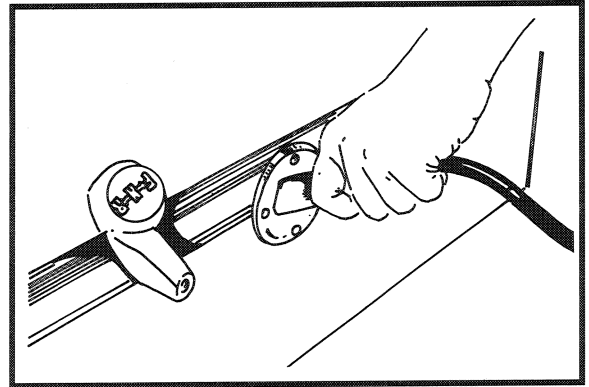


Figure 9

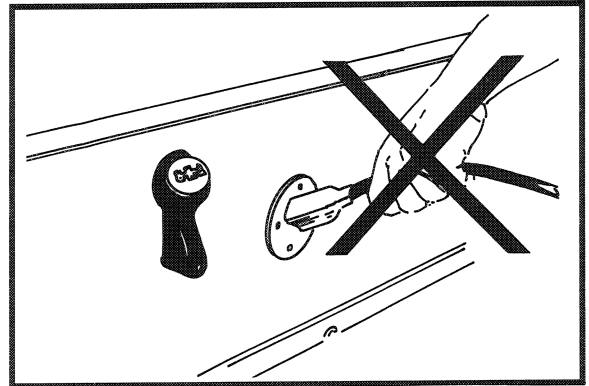


Figure 10

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## Fuse Link

As an additional feature to protect the batteries and golf car charging circuit from an overload, the CLUB CAR DS Electric is equipped with a fuse link (See Figure 11). If the charger does not come on when the car is placed on charge, visually inspect the fuse link.

### **WARNING:**

**If fuse link is blown, contact your nearest CLUB CAR Distributor/ Dealer to determine source of the electrical problem and correct it before replacing fuse.**

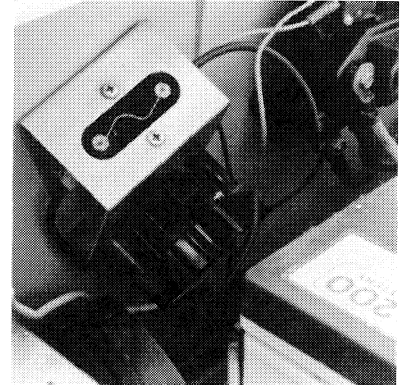


Figure 11

**NOTE:** On the optional solid state fully automatic charger, the yellow charge-on indicator should light when the car is placed on charge.

## Cleaning:

The CLUB CAR is equipped with a reaction injection molded plastic cowl and a compression molded fiber reinforced plastic body. Use only mild dishwashing liquid soap with a sponge or soft cloth for normal cleaning.

Minor scratches or blemishes in the body can be buffed out using most commercially available polishing compounds and polishes.

Your golf car seat will last longer with proper cleaning. Mild soap or detergent with a sponge or soft cloth for normal cleaning is recommended. For stubborn or imbedded dirt, a soft bristle brush may be used.

Do not use any harsh detergents or cleaning solvents on the body, cowl or seat.

Battery acid, fertilizers, tars, asphalt, creosote, paint or chewing gum should be removed immediately to prevent possible stains.

## Subsequent Owner Registration:

In the event that this vehicle has been bought as a used car from another individual or from a distributor/dealer, re-registration is necessary. This will enable us to contact you if the need arises. Please send your name, address and serial number(s) of the car(s) to CLUB CAR, INC., P.O. Box 4658, Augusta, GA 30917-4658, ATTN: Vehicle Registration.

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# DS Electric Specifications

Overall Length	91.25"
Overall Width	47.25"
Overall Height	46"
Wheelbase	65.5"
Ground Clearance	4.5"
Front Wheel Tread	34.5"
Rear Wheel Tread	38.5"
Weight without Batteries	447 lbs.
Forward Speed	12-14 mph
Curb to Curb Clearance Circle	17'6"
Braking Distance	14' at 12 mph
Drive Motor	Direct Drive, 36 Volt DC, Series Wound, 2.0 hp.
Electrical System	36 Volt DC, 18 Volt reverse
Drive Unit	Double reduction helical gear with 12.28 to 1 direct drive motor axle. Capacity - 22 oz.
Steering	Self-adjusting rack and pinion
Suspension	Front and rear tapered mono-leaf springs with dual hydraulic shock absorbers
Frame-Chassis	Twin I-Beam welded aluminum
Rear Body	Fiber reinforced plastic (compression molded)
Front Body	Reaction injection molded plastic
Paint	Two part epoxy synthetic enamel
Brakes	Mechanical brake cable system to individual drum brakes on each rear wheel. Park brake is automatically released.
Tires	18.00 x 8.50-8.00 tubeless, 4-ply rated. Tire pressure: 18 psi
Seating Capacity	2 persons
Standard Equipment	Rack and Pinion Steering, Ball Holder, Beverage Holders, Dual Dash Compartments, Scorecard and Pencil Holder, Reverse Warning Buzzer, Wear Resistant Floor Mats and Pedals, Front and Rear Bumpers, Side Rubber Rails, Two-Way Ignition Key, Automatic Release Park Brake, Quick Release Bag Strap Buckles, Automatic 25 amp Charger, High Capacity Series 2200 Batteries.
Optional Equipment	Canopy Top, Snap-On Tinted Windshield, Weatherproof Enclosure, Extra Two-Bag Attachment, Sweater Basket, Rake Holder and Rake, Bagwell Protector, Adjustable Seat Back, Wheel Covers, Power Rib Tires, Extra Traction Tires, White Wall Tires, Club Insignia, I.D. Numbers, Accent Stripe, Custom Colors, Stereo Radio, Ashtray, Lighting Package (High/Low Headlights, Taillights, Brakelights and Horn), Lighting Package with Turn Signals, Fuel Gauge, Hour Meter, Sand Bottle Kit, Woodgrain Trim, Ice Cooler, Info Holder, Tee Holder, Extra Beverage Holders (2 or 4), Trailer Hitch, Rear View Mirror, Permanent Tow Bar for multiple car towing (factory installation), Temporary Tow Bar for single car towing.

CLUB CAR, INC., reserves the right to change specifications and designs at any time without notice and without incurring any obligation or liability whatsoever.



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## CLUB CAR LIMITED TWO (2) YEAR WARRANTY

CLUB CAR, INC., "Manufacturer," warrants to the original retail purchaser that its new DS Golf Car purchased from Manufacturer or an authorized distributor or dealer is free from defects in materials and workmanship for a period of two (2) years from the date of purchase, subject to the terms and provisions contained herein.

This limited warranty covers materials and workmanship for a period of two (2) years from the date of purchase and repair labor costs for a period of one (1) year from the date of purchase. Such labor shall be performed only by Manufacturer, its authorized distributors or dealers, or a service agency approved by Manufacturer. IF THE WARRANTY REGISTRATION FORM IS NOT COMPLETED AND RETURNED TO CLUB CAR AT THE TIME OF THE ORIGINAL RETAIL SALE, PROOF OF DATE OF PURCHASE MUST BE PROVIDED WITH ANY WARRANTY CLAIM. For further information or to present a warranty claim, contact: Warranty Administrator, CLUB CAR, INC., P. O. Box 4658, Augusta, Georgia 30917-4658 U.S.A., (404) 863-3000. **ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE VOID AND EXCLUDED SUBSEQUENT TO TWO (2) YEARS FROM THE DATE OF PURCHASE. THE REPLACEMENT OR REPAIR OF THE GOLF CAR OR DEFECTIVE COMPONENT THEREOF IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. MANUFACTURER MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, AND NO REPRESENTATIVE, EMPLOYEE, DISTRIBUTOR OR DEALER OF MANUFACTURER 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 exclusions, Manufacturer does not warrant that its golf car is suitable for use on any particular golf course or terrain. As in the operation of any vehicle, a prudent driver will read and study the Owner's Manual, learn the proper operation of the controls, and exercise care and safe driving habits.

THE PROVISIONS OF THIS LIMITED WARRANTY SHALL NOT APPLY TO:

- (a) Normal maintenance services such as brake adjustments, steering and suspension adjustments, linkage adjustments, recommended lubrication, oil changes, and filter replacements;
- (b) All accessory options, bag straps, battery wires and connectors, body panels and trim pieces, charger plugs and receptacles, decals, drive and generator belts, filters, floor mats, oils and lubricants, pedal pads, seats, spark plugs, fuses, tubes and hoses; and
- (c) Tires, batteries and battery chargers (Warranted solely through their respective manufacturers).

Any warranty service which includes labor must be performed by Manufacturer, its authorized distributors or dealers, or a service agency approved by manufacturer.

**THIS GOLF CAR IS INTENDED TO BE USED BY PERSONS PLAYING GOLF WITHIN THE CONFINES OF A GOLF COURSE AND 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, LOSS OF REVENUE, LOSS OF TIME, OR INCONVENIENCE.** Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above limitations or exclusions may not apply to you.

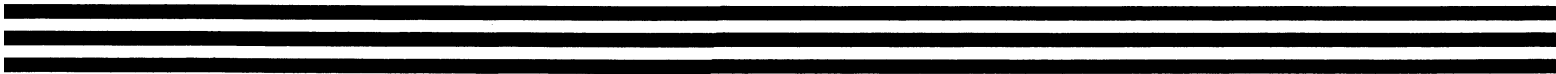
### WARRANTY LIMITATIONS

Manufacturer's liability shall be at its sole option to either replace or repair a defective golf car or component thereof. Replacement shall mean furnishing a new golf car or component thereof which is identical or reasonably equivalent to the warranted product at no cost to purchaser during the two (2) year limited warranty period except for repair labor costs after the first year. Repair shall mean remedying a defect in the golf car or component thereof at no cost to purchaser during the two (2) year limited warranty period except for repair labor costs after the first year. If Manufacturer elects to repair your golf car, it may use factory reconditioned parts or components.

Damage to a vehicle or component thereof not resulting from a defect or which occurs due to unreasonable or unintended use, overloading, abuse or neglect (including failure to provide reasonable or necessary maintenance as outlined in the Owner's Manual), accident or alteration, including increasing the speed beyond factory specifications or modifications which affect the stability of the vehicle or the operation thereof, is excluded from the 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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