



GREEN MACHINE CARTS

Discovery 48V Electric Cart Owners Manual

SAFETY & INSTRUCTION LABELS



WARNING

Please read the attached labels carefully before driving the golf car, and promptly replace any label that is damaged or removed.

OPERATION INSTRUCTIONS



parking pedal Brake pedal Accelerator pedal

- Read the manual and safety instruction labels on the golf car before driving :
- Be sure that passengers are seated stably .
- Select " forward " or " reverse " key .
- Tread the accelerator to start moving ; and tread the parking pedal to stop .
- Please drive safely according to the terrain ,visibility and driving experience ; please drive carefully in the crowded and slippery places .
- When parking , please tread the parking pedal and draw up the handle of hand brake . When starting the car , please release the handle .
- Forward or back off the car when it is ready .

Operarion Instructions Label



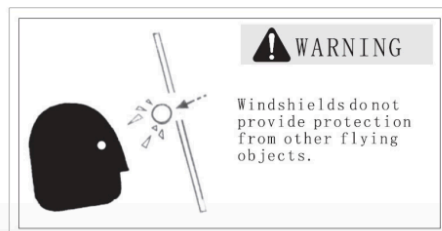
Warning/Avertissment Label



WARNING

- * Please read all safety and instruction labels before operating vehicle
- * No additional passengers beyond the stated vehicle capacity
- * Do not move vehicle until all passengers are seated properly
- * Reduce speed when turning
- * Make sure parking brake is engaged before leaving vehicle
- * Turn off main power switch and remove key when not in use
- * Keep hands and feet inside vehicle at all times

Warning Label



Windshield Warning Label

OPERATOR SAFETY



electric vehicles are designed to be simple to operate. Be sure to observe the following guidelines to reduce the risk of serious injury or death due to loss of vehicle control and/or other hazards:

BEFORE OPERATING THE VEHICLE

- Read and understand the Owners Manual and all safety and instruction labels on the vehicle before operating.
- Perform the pre-operation checks outlined in this manual.
- Only authorized persons should operate the vehicle, and only in designated areas.
- Do not allow more passengers in the vehicle than the actual capacity of that particular vehicle.
- Passenger capacity information for specific models is available in the SPECIFICATIONS section of this manual.
- NEVER operate the vehicle while under the influence of alcohol or drugs. Their effect on vision, depth perception, and judgment make operating a vehicle extremely dangerous.

DURING VEHICLE OPERATION

- Remain seated, and keep your entire body inside the vehicle while it is in motion.
- Do not operate the vehicle until ALL occupants are seated.
- Keep your hands on the steering wheel and eyes on the path ahead.
- When in congested areas, use extra care.
- When backing up, always go slowly and watch carefully.
- Avoid abrupt starts or stops.
- Vehicle speed should be appropriate for the terrain.
- Avoid sharp turns, especially at higher speeds.
- A sharp turn at too high a speed could result in a vehicle rollover.
- Always drive straight up or straight down a slope. Never

SAFETY CONSIDERATIONS

SAFETY PRECAUTIONS DURING MAINTENANCE

When performing maintenance, follow all safety instructions contained in the manufacturer's operation and service manuals, as well as the following safety procedures:

- Properly immobilize golf car before beginning any maintenance to avoid any unexpected vehicle movement.
- Properly block chassis before working underneath golf car to avoid any unexpected vehicle movement.
- When working on the fuel system or the battery, do not smoke, or allow any sparks or open flames near the vehicle, to avoid any fires or explosions.
- Before working on an electric golf car, disable the car's electrical system in accordance with the manufacturer's instructions to avoid electrical shock or damage to the electrical system.
- Use only properly insulated tools when working on electrically powered golf cars or around batteries to avoid electrical shock or damage to the electrical system.
- Maintain all safety devices including brakes, steering mechanisms, warning devices, and governors, in a safe operating condition. Do not modify these safety devices as supplied by the manufacturer.
- After each maintenance or repair, the car must be driven by a qualified, trained, and authorized person - in an area free of pedestrian traffic - to ensure proper operation and adjustment.
- Record all maintenance performed in a maintenance

PRE-OPERATION CHECKS

Pre-operation checks should be made each time you use your golf car. Get in the habit of performing the following checks in the same way so that they become second nature.

WARNING

To keep car from moving while performing pre-operation checks:

- Remove main switch key.
- Apply parking brake.

Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

PRE-OPERATION CHECKLIST

Before each use check the following:

- ✓ Batteries
- ✓ Tire condition
- ✓ Steering system
- ✓ Reverse alarm
- ✓ Pedal operation
- ✓ Body and chassis

SEAT

Open the seat for checking and servicing.

STEERING SYSTEM

Check the steering system for excessive free play by:

- moving the steering wheel up and down, and back and forth.
- turning the steering wheel slightly to the right and left.

If you feel excessive free play, or hear rattling sounds which may indicate loose steering components, consult an ICON dealer.

REVERSE ALARM

Check the reverse alarm by moving the drive select switch to "REV" for reverse. The alarm should sound.

PEDAL OPERATION

Check the following pedal controls for proper operation. If a pedal does not work properly, consult an ICON dealer.

ACCELERATOR PEDAL

⚠ WARNING

with the main switch in the "OFF" position, make sure the accelerator pedal operates smoothly

BATTERIES

Check that the batteries are held securely in place to prevent them from being damaged from vibration or jarring. Also check that no battery caps are missing to prevent battery acid from spilling from the batteries. Check the battery terminals for corrosion.

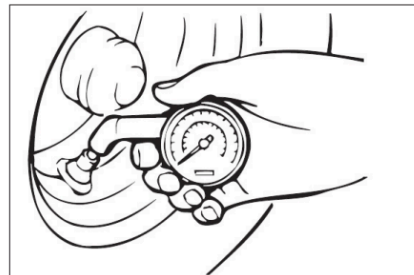
⚠ WARNING

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with skin, eyes or clothing. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries. **KEEP OUT OF REACH OF CHILDREN.**

TIRE CONDITION

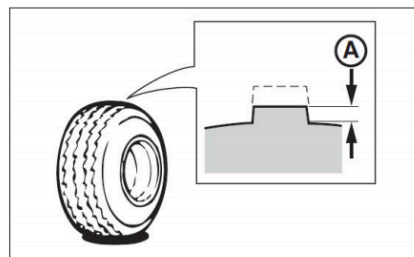
Tire Air Pressure

Check the tire air pressure before operating the golf car.



Tire Wear Limit

Check the tire surface for damage, cracks or embedded objects. When tire tread wears down to 1 mm (0.04 in.), replace the tire.

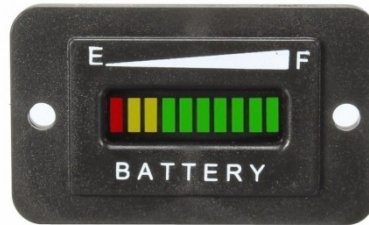


OPERATION AND CONTROL



TURNING ON MAIN SWITCH

The main battery switch is located under the seat bottom. This is usually a large red button. Press button in to turn main power on, off to turn main power off to the cart.



BATTERY INDICATOR

The battery indicator displays the current battery level status. The illuminated status bars will decrease from right to left as the batteries are depleted.



KEY SWITCH

Insert the vehicle key into the ignition slot and turn the key to the right to operate the vehicle. The key cannot be removed until turning the vehicle off.



COMBINATION SWITCH

This switch operates the turn signals, headlights, and horn.



FORWARD/REVERSE SWITCH

The Forward/Reverse switch determines which direction the vehicle will travel. When changing directions, always allow the vehicle to come to a complete stop before switching directions.



BRAKE PEDAL

For vehicles equipped with a manual parking brake, press the top left corner of the brake pedal to engage the parking brake.

To disengage the parking brake, press the accelerator pedal.

For vehicles equipped with a magnetic parking brake, please see the section in this manual regarding magnetic brake operation.

WARNING

Always make sure vehicle comes to a COMPLETE stop before using the F/R switch to change directions.

Pressing the F/R switch while the vehicle is still in motion may damage the switch, the speed sensor, the motor or other components.

MAINTENANCE

STORAGE

PERIODIC MAINTENANCE CHARTS

Regular maintenance is required for the best performance and safe operation of your electric vehicle.

C • CHECK CA • CHECK AND ADJUST R • REPLACE S • SERVICE CL • CLEAN AND LUBRICATE L • LUBRICATE

Remarks	Daily Pre-Operation	40 rounds 20 hours 100 miles 160 kms (Every Month)	250 rounds 125 hours 600 miles 1000 kms (Every 6 Months)	500 rounds 250 hours 1200 miles 2000 kms (Every Year)	1000 rounds 500 hours 2500 miles 4000 kms (Every 2 Years)	2000 rounds 1000 hours 5000 miles 8000 kms (Every 4 Years)
PRE-OP Charge	S	S	S	S	S	S
Clean battery tops, check for tightness of hold-down screws and terminals	S	S	S	S	S	S
Check brake pedal freeplay and adjust if necessary	C	CA	CA	CA	CA	CA
Check steering operation	C	C	C	C	C	C
Check tire pressure, tread depth, tire surface for damage	C	CA	CA	CA	CA	CA
Check tightness of all bolts, nuts, screws and rivets	C	C	C	C	C	C
Check reverse alarm operation	C	C	C	C	C	C
EVERY MONTH Check electrolyte level		C	C	C	C	C
Check for loose or broken connections		C	C	C	C	C
Clean/Lube pedal control area		CL				
EVERY 6 MONTHS Check all wire insulation for cracks and/or worn spots			C	C	C	C
Check shock absorbers for oil leaks and damage springs			C	C	C	C

⚠ WARNING

Be sure to turn off the main switch and apply the parking brake when you perform maintenance, unless otherwise specified. If the owner is not familiar with servicing the machine, death or serious personal injury can result. When in doubt the work should be done at an authorized ICON dealer or other qualified mechanic.

Perform the following preparations when storing your golf car for extended periods of time:

TIP

Turn main switch key to "OFF" position, lift seat and switch main power switch in the "OFF" position. Remove key from main key switch, and store key in a safe place.

NOTICE

Do not allow cleaning solution to enter battery cells. Serious battery damage can result.

3. Clean the top of the batteries with a solution of baking soda and water, as necessary, to remove corrosion.

CHASSIS PREPARATION

1. Verify the tire pressure is set to 137 kPa, 1.4 kgf/cm² (25 psi).
2. Clean exterior of the golf car and apply a rust inhibitor.
3. Cover the golf car with a breathable cover and store it in a dry, well-ventilated area.

BATTERY PREPARATION

1. Remove the batteries from the golf car and store them in a cool, dry place that stays between 0°C (32°F) and 30°C (90°F).
2. Have the batteries recharged every 60-90 days to keep them fully charged. The batteries must be kept fully charged to avoid damage.

GENERAL MAINTENANCE



WHEEL REPLACEMENT

To remove and install a wheel on your golf car:

1. With the wheels blocked to prevent the golf car from moving, loosen the wheel nuts.
2. Elevate the golf car with a jack and remove the wheel nuts and the wheel.
3. Reverse the removal steps when installing the wheel.

Wheel nut tightening torque:
80 Nm, 8.0 m•kg (58 ft•lb)

⚠ WARNING

Before performing wheel or brake maintenance, verify that the main switch is in the "OFF" position.

Accidental starting of the vehicle could cause the vehicle to move, causing death or serious personal injury.

Remarks	Daily Pre-Operation	40 rounds 20 hours 100 miles 160 kms (Every Month)	250 rounds 125 hours 600 miles 1000 kms (Every 6 Months)	500 rounds 250 hours 1200 miles 2000 kms (Every Year)	1000 rounds 500 hours 2500 miles 4000 kms (Every 2 Years)	2000 rounds 1000 hours 5000 miles 8000 kms (Every 4 Years)
EVERY YEAR Perform a discharge test				S	S	S
Apply terminal protectant				S	S	S
Check rear axle bearing play for roughness or freeplay				C	C	C
Check steering knuckle bushing freeplay / Adjust wheel alignment				CA	CA	CA
Check wheel nut tightness, front wheel bearing play				C	C	C
Check transaxle oil level and inspect for leakage				C	C	C
Check pedal stop operation and adjust if necessary				CA	CA	CA
EVERY 4 YEARS Replace transaxle oil						R
Inspect brake shoes and adjust or replace if necessary						CA

⚠ WARNING

Consult your ICON dealer before using your golf car if you suspect brake problems. Brake failure could result in a serious accident.

Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

BRAKE ADJUSTMENT

The brakes on your golf car are self-adjusting.

Before you operate the golf car, press down on the brake pedal several times to make sure the brakes are functioning properly.

BATTERY MAINTENANCE

⚠ WARNING

Do not disconnect the DC output cord from the DC charger receptacle when the charger is on or an arc could occur that may cause an explosion.

BATTERY CHARGING

To charge the batteries in your golf car, follow the instructions contained in your battery charger's owner's manual. The following is a summary of the charging steps.

1. Turn main switch key to "OFF" position.

NOTICE

Always put the main power switch in the "OFF" position before charging battery or damage to the electrical system may result.

2. Lift up the seat and move the main power switch to the OFF position.

NOTICE

Use only battery chargers that are rated for use with 48-volt electric vehicles. Serious battery damage can result. Thoroughly read and understand the user manual supplied with your 48-volt charger.

3. With the charger properly connected and grounded (see charger's owner's manual), insert the charging cord into the charger receptacle.

BATTERY MAINTENANCE

⚠ WARNING

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid.

Avoid contact with skin, eyes, or clothing.

Antidote:

EXTERNAL: Flush with water.

INTERNAL: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.

EYES: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away.

Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

BATTERY CARE

Six 8-volt deep cycle batteries provide power for your electric golf car and must be properly maintained and recharged for maximum performance and service life.

To maintain your batteries:

1. Clean the tops of the batteries with a solution of baking soda and water, as necessary, to remove corrosion.

NOTICE

Do not allow cleaning solution to enter battery cells. Serious battery damage can result.

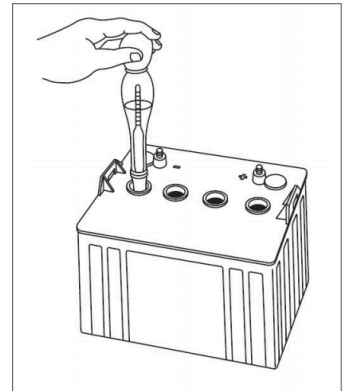
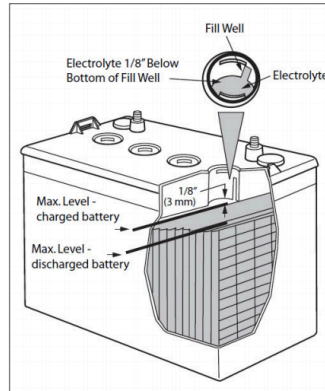
2. Check the fluid level before and after charging.
3. Using a hydrometer, check the specific gravity of the battery fluid in each cell against the readings on the *Hydrometer Chart* (next page.) Consult and ICON dealer if any low readings are found, or if readings vary more than one point between cells.

• Before charging:

only add distilled water if fluid is below the top of the plates, and then add just enough to cover plates.

• After charging:

Water maybe required to be added after charging the car.



HYDROMETER CHART

Temperature		Satisfactory Uncorrected Hydrometer Reading
°C	°F	
48.9	120	1.244
43.3	110	1.248
37.8	100	1.252
32.2	90	1.256
26.7	80	1.260
21.1	70	1.264
15.6	60	1.268
10.0	50	1.272
4.4	40	1.276
-1.1	30	1.280