



## Golf Car (Including Hunting Buggy) Users' Manual And Service Manual

## Operation Manual for Electric Golf Car

Thanks for purchasing our electric golf cars. This manual contains information for proper operation and maintenance and care of your golf car. A thorough understanding of this manual will help you to obtain maximum enjoyment from this golf car. Please keep it properly for future reference.

### Important Information:

Particularly important information is distinguished by the following notations:

#### WARNING!

Fail to follow Warning instructions could result in severe injury or death to the vehicle occupants, bystanders or persons inspecting or repairing the vehicle.

#### CAUTION

Fail to follow Caution instructions could cause damage to the vehicle.

#### Special Notice:

**Because the seat & backrest wrapping film may stick to the seat vinyl and cause seat vinyl fading or stained, please remove the seat & backrest wrapping film when you start to use the vehicle!**

**If you have to stock the vehicle for long time, please also remove the seat & backrest wrapping film.**

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## 1 . OVERVIEW

Our golf car is environment-friendly and suitable for use on golf course, and it can also be used as a people mover or utility car in vacation villages, villa areas, resort hotels, private residential areas, tourist scenic spots, or any other place where this type of golf car is allowed.

### WARNING!

Please learn whether there is any restriction in the area where you intend to use the golf cars to avoid any unpleasant experience.

## 2. SAFE OPERATION INSTRUCTIONS

Our golf car is designed for simple operation, however, please make sure to observe following safe operation instructions:

### BEFORE OPERATING THE GOLF CAR:

- ALWAYS read this first before you start driving the golf car.
- ONLY authorized people should drive this golf car, from the driver's side ONLY
- Drive the golf car ONLY in areas where the golf car is allowed by law or local regulations and the conditions are safe to do so.
- DO NOT allow more people on the golf car than its designed capacity.
- DO NOT overload the golf car, otherwise the motor may be damaged, the car may also lose control and/or the driver and passengers will be in danger.
- DO NOT operate the golf car while under the influence of alcohol or drugs, otherwise, their affect on vision and judgment put the driver and passenger in danger.
- DO NOT make the car climb any slope beyond its gradeability.
- DO NOT overtake other vehicles at crossroads, in blind areas or in any dangerous areas.

### WHILE OPERATING THE GOLF CAR

- Keep your entire body inside the golf car, keep seated and hold on while the golf car is moving.
- Do not start the golf car until all occupants are securely seated.
- Keep your hands on the steering wheel and your eyes on the path you are going.
- Always back up slowly, and watch the back carefully.
- Avoid starting or stopping suddenly.
- Avoid turning the steering wheel too sharply at higher speed.

- Always drive slowly up or down on the incline. Do not make any modification or addition which may affect the capacity or safety
- Children are not allowed to play in the car. Children should be seated between adults and protected by them when the car is moving.

### 3. TECHNICAL DATA

The data below have been confirmed by an independent authority lab.

Technical Date Of Golf Car

ITEMS	Two Passengers			Four Passengers			Six Passengers		
	36V	48V		36V	48V		36V	48V	
Battery Setup	6pcs x 6V	6pcs x 8V	8pcs x 6V	6pcs x 6V	6pcs x 8V	8pcs x 6V	6pcs x 6V	6pcs x 8V	8pcs x 6V
Dimensions (mm) (L x W x H)	2350*1180*1750			3150*1180*1850			3800*1200*1870		
Range (km/h) based on flat road at a speed of 20km/h	> 60	> 60	> 80	>55	> 55	> 75	>50	>50	> 70
Maximum Speed (km/h) for Gear Ratio of 12.49:1	21	25 for 3KW motor 32 for 4KW motor	25 for 3KW motor 32 for 4KW motor	21	25 for 3KW motor 32 for 4KW motor	25 for 3KW motor 32 for 4KW motor	21	25 for 3KW motor 32 for 4KW motor	25 for 3KW motor 32 for 4KW motor
Maximum Speed (km/h) for Gear Ratio of 10.25:1	25	27 for 3KW motor 36 for 4KW motor	27 for 3KW motor 36 for 4KW motor	25	27 for 3KW motor 36 for 4KW motor	27 for 3KW motor 36 for 4KW motor	25	27 for 3KW motor 36 for 4KW motor	27 for 3KW motor 36 for 4KW motor
Minimum Turning Diameter (m)	7	7	7	9	9	9	12	12	12
Maximum Loading Capacity (Kg)	150	150	150	300	300	300	450	450	450
Maximum Gradeability	25%	25%	25%	20%	20%	20%	20%	20%	20%
Noise (dB)	≤70			≤70			≤70		
Maximum Brake Distance (V=20km/h)	< 4			< 4			< 4		

Technical Data Of Hunting Buggy

ITEMS	Hunting Buggy 2+2	Hunting Buggy 4+2
Voltage (V)	48V	48V
Battery Setup	8pcs x 6V	8pcs x 6V
Dimensions (mm) (L x W x H)	2500x1300x1900	3500x1300x1900
Range (km/h) based on flat road at a speed of 20km/h	> 75	> 70
Maximum Speed (km/h) for Gear Ratio of 12.49:1	32	32
Maximum Speed (km/h) for Gear Ratio of 10.25:1	36	36
Minimum Turning Diameter (m)	9	12
Maximum Loading Capacity (Kg)	300	450
Maximum Gradeability	28%	28%
Noise (dB)	≤70	≤70
Maximum Brake Distance (V=20km/h)	< 4	< 4

### 4. CONTROLS

#### 1) Schematic Figure of controls



06 type dashboard

08 type dashboard

- 1) Power key
- 2) Forward/reverse switch
- 3) Accelerator pedal
- 4) Service brake pedal
- 5) Parking brake pedal
- 6) Steering wheel
- 7) Battery power meter
- 8) Tow/Run switch
- 9) Turn signal and horn switch
- 10) Hand brake (optional)
- 11) Battery receptacle
- 12) Headlight switch



#### 2) Functions of Controls

##### Power key

The power key is used to switch on the electrical system of the golf car.

To engage the motor and drive the golf car, Insert the key and turn it clockwise to the ON position.

To engage the 12V accessory system (including the headlight, turn signal, taillight, brake light and horns) at the same time driving the golf car, turn the key clockwise to one more position of LIGHT.

To switch the power off, turn the key counterclockwise to OFF position.

##### Forward/reverse switch

This switch is a three-position switch, depressing the upper part gets the golf car moving forward while depressing the lower part gets the golf car moving backwards, and the middle is neutral.

**WARNING!** This switch must be fully depressed into the proper position, or the electric system and motor will be damaged.

NOTE: the buzzer will beep when the lower part of this switch is depressed to give warning to the people around your golf car.

### Accelerator pedal

The accelerator pedal is used to control the speed to move the golf car. Press it down slowly to increase the speed. The car will speed up with the gradual stepping down the accelerator pedal, eventually reaching the full speed when the pedal is stepped down to the bottom. The golf car slows down with the lifting of the pedal. When the pedal is fully lifted, electric brake will function, and the golf car will stop.

### Service Brake pedal

The brake pedal is used in deceleration or stopping.

1) Effective braking force is around 30Kgf. The distance to step down the braking pedal is not more than 2/3 of the overall stepping-down distance of the braking pedal.

2) Effective parking force is around (200N) 20kgf. When the parking pedal is released to its free position, the parking function is released.

NOTE: the brake pedal is combined with the park brake pedal which will be elaborated as below.

### Parking Brake Pedal

The park brake pedal is used in braking for parking. The park brake pedal should be engaged into parking position whenever the golf car is left unattended: press down this pedal fully, then press the upper part of this pedal and release the lower part of this pedal to lock the park brake pedal into position. This operation will make the golf car stay in parking position when this golf car is unattended.

NOTE: If the park brake pedal fails to be locked in the lock position, please repeat above procedure until it is locked.

NOTE: on some golf cars, the park brake pedal is replaced by the hand brake. The function of the hand brake is the same as that for the park brake pedal.

### WARNING!

It is prohibited to step down both the brake pedal and the accelerator pedal all together, otherwise this type of operation will damage the motor badly.

### WARNING!

The parking brake will automatically release when the accelerator pedal is depressed. If the power key is in ON position, depressing the accelerator pedal may cause the golf car to move suddenly.

### Steering wheel

The steering wheel is used to control the driving direction. Please avoid any sudden and wild turn.

### Battery Power Meter

There are 10 divisions in this meter (from 0 to 1). This meter will descend from higher division to low ones as the battery discharges. When the battery is too low, the red indicator light will flash, reminding you to recharge the battery.

NOTE: please refer to your Battery Chargers Owners Manual for how to recharge the batteries.

### TOW/RUN SWITCH

Before operating the golf car, make sure the RUN/TOW switch is in RUN position.

Make sure the RUN/TOW switch is in the TOW position if towing the golf car. **WARNING!**

Whenever the RUN/TOW switch is moved from the RUN position to the TOW position, please move it back to the RUN position, there is a delay of approximately 30 seconds before the golf car will run.

### TURN SIGNAL/HORN SWITCH

This switch is used to switch on/off the auxiliary lighting system including headlight, front turn signal, rear turn signal, taillight, brake light and horn.

1) Pull Button A rightwards to switch on the headlight, reverse this operation to switch off the headlight.

2) Move upwards Handle Lever B to switch on the right turn signal.

3) Move downwards Handle Lever B to switch on the left turn signal.

4) The middle position of Handle Lever B is neutral.

5) Handle Lever B Pulled towards the driver sounds on the horn.

## 5. OPERATION

### OPERATION FOR GOLF CAR WITH MECHANICAL BRAKE SYSTEM

#### STARTING:

a) With the park brake applied, press the forward/reverse switch and lock it in the desired position.

#### CAUTION!

Do not shift from Forward ↑ to Reverse ↓ while the golf car is moving.

b) Turn the power key to ON position.

### **WARNING!**

Do not step down the accelerator pedal when turning on the power key, otherwise, the golf car may suddenly start moving.

C) Check that your path is clear in the direction you will go, and slowly step down the accelerator pedal, the golf car will start to move.

**NOTE:** The park brake automatically releases when the accelerator pedal is stepped down.

### **WARNING!**

If the accelerator pedal is stepped down before the power key is switched on, the car will not run. In this case, you should release the accelerator pedal first, then turn the power key to ON position, then step down the accelerator pedal again, the golf car will start moving.

### **STOPPING:**

To stop the golf car, gradually press down on the brake pedal. When the golf car has come to a stop, apply the parking brake pedal and turn the power key to OFF position.

### **CAUTION:**

Do not hold the golf car on an incline with the accelerator, please use the brake.

### **OPERATION FOR GOLF CAR WITH HYDRAULIC BRAKE SYSTEM (optional)**

If your golf car comes with hydraulic brake, then please refer to the separated page for its operation and maintenance.

## **6. MAINTENANCE**

Users should perform regular maintenance to insure the golf car in good performance.

### **MAINTENANCE OF BATTERY**

**WARNING!** Battery electrolyte is poisonous and dangerous, may cause sever burns, injury, etc. Always wear protective clothing, gloves, and goggles when handling batteries, electrolyte, and charging your batteries.

**KEEP OUT OF REACH OF CHILDREN.**

#### **1) Cleaning**

- a. The exterior of the battery, the battery connection and bolts should always

be kept clean and dry. When cleaning, please make sure all vent caps are tightly in place. Clean the battery top with a cloth or brush and solution of baking soda and water. When cleaning, do not allow any cleaning solution, or other foreign matter to get inside the battery. This should be done every week.

- b. Clean battery terminals and the inside of cable clamps using a post and clamp cleaner. Clean terminals will have a bright metallic shine. This should be done when it is necessary.

- c. Reconnect the clamps to the terminals and thinly coat them with petroleum jelly (Vaseline) to prevent corrosion.

**WARNING!** Before you disconnect any battery cable from any terminal on the battery, please always remove the power by disconnecting the main battery cable from the controller.

#### **2) Checking the terminals and nuts**

The connection of the battery should always be kept in good condition. Please check every week on whether any battery cable terminal or nut has become loose in order to prevent any spark or damage to terminals. Please check every week on whether any battery cable is damaged or not, the damaged battery cable should be replaced immediately.

#### **3) No foreign matter**

Do not place any objects on the battery and do not connect the positive pole to the negative pole. This may cause a short circuit, dangerous spark or may cause damage to the battery or injury to your body.

#### **4) Recharging**

- a. As long as you use the golf car, regardless of how long you have used it, the battery shall be recharged fully on the same day. Any delay on the re-charging will cause negative effect on the battery. **Notes:** the lead-acid battery does not develop a memory, so need not be fully discharged before recharging.

- B. If the golf car is going to be kept unused for a certain long time, the battery shall be fully recharged first. After that, the battery shall be fully recharged every 2 weeks.

- c. When driving, the driver shall be always aware of the drop level of the battery power from the battery power meter, any drop means the battery power is diminishing. Besides, the driver shall estimate the distance needed to be taken, and recharge the battery at a proper time in case that the car cannot get back to the recharging station in time for recharging.

**WARNING!** Please make sure the battery is recharged before the

battery power meter shows 20% power is left inside the battery. Over-discharged battery will have a very short service life and will make the recharging very difficult.

**WARNING!** During recharging, the car shall be parked in a well-ventilated area with the fill caps tightly secured. Keep far away from any flame and sparks to avoid any explosion or fire that could cause physical injury or damage to the property.

## 5) WATERING

Flooded batteries need water. More importantly, watering must be done at the right time and in the right amount or else the battery's performance and longevity suffers.

Water should always be added after fully charging the battery. Prior to charging, there should be enough water to cover the plates. If the battery has been discharged partially or fully, the water level should also be above the plates. Keeping the water at the correct level after a full charge will prevent having to worry about the water level at a different state of charge.

Depending on the local climate, charging methods, application, etc.. Trojan recommends that batteries be checked once a month until you get a feel for how thirsty your batteries are.

### Important things to remember:

1. Do not let the plates get exposed to air. This will damage (corrode) the plates.
2. Do not fill the water level in the filling well to the cap. This most likely will cause the battery to overflow acid, consequently losing capacity and causing a corrosive mess.
3. Do not use water with a high mineral content. Use distilled or deionized water only.

**CAUTION: The electrolyte is a solution of acid and water so skin contact should be avoided.**

### Step by step watering procedure:

1. Open the vent caps and look inside the fill wells.
2. Check electrolyte level; the minimum level is at the top of the plates.
3. If necessary add just enough water to cover the plates at this time.
4. Put batteries on a complete charge before adding any additional water (refer to the Charging section).
5. Once charging is completed, open the vent caps and look inside the fill wells.
6. Add water until the electrolyte level is 1/8" below the bottom of the fill

well.

7. A piece of rubber can be used safely as a dipstick to help determine this level.

8. Clean, replace, and tighten all vent caps.

**WARNING: Never add acid to a battery.**

## 6) TESTING

Visual inspection alone is not sufficient to determine the overall health of the battery. Both open-circuit voltage and specific gravity readings can give a good indication of the battery's charge level, age, and health. Routine voltage and gravity checks will not only show the state of charge but also help spot signs of improper care, such as undercharging and over-watering, and possibly even locate a bad or weak battery. The following steps outline how to properly perform routine voltage and specific gravity testing on batteries.

### I. Specific Gravity Test (Flooded batteries only)

1. Do not add water at this time.
2. Fill and drain the hydrometer 2 to 4 times before pulling out a sample.
3. There should be enough sample electrolyte in the hydrometer to completely support the float.
4. Take a reading, record it, and return the electrolyte back to the cell.
5. To check another cell, repeat the 3 steps above.
6. Check all cells in the battery.
7. Replace the vent caps and wipe off any electrolyte that might have been spilled.
8. Correct the readings to 80o F:  
Add .004 to readings for every 10o above 80o F  
Subtract .004 for every 10o below 80o F.
9. Compare the readings.
10. Check the state of charge using Table 1.

The readings should be at or above the factory specification of 1.277 +/- .007. If any specific gravity readings register low, then follow the steps below.

1. Check and record voltage level(s).
2. Put battery(s) on a complete charge.
3. Take specific gravity readings again.

If any specific gravity readings still register low then follow the steps below.

1. Check voltage level(s).
2. Perform equalization charge. Refer to the Equalizing section for the proper procedure.

### 3. Take specific gravity readings again.

If any specific gravity reading still registers lower than the factory specification of 1.277+/- .007 then one or more of the following conditions may exist:

1. The battery is old and approaching the end of its life.
2. The battery was left in a state of discharge too long.
3. Electrolyte was lost due to spillage or overflow.
4. A weak or bad cell is developing.
5. Battery was watered excessively previous to testing.

Batteries in conditions 1 - 4 should be taken to a specialist for further evaluation or retired from service.

## II. Open-Circuit Voltage Test

For accurate voltage readings, batteries must remain idle (no charging, no discharging) for at least 6 hrs, preferably 24 hrs.

1. Disconnect all loads from the batteries.
2. Measure the voltage using a DC voltmeter.
3. Check the state of charge with Table 1.
4. Charge the battery if it registers 0% to 70% charged.

If battery registers below the Table 1 values, the following conditions may exist:

1. The battery was left in a state of discharge too long.
2. The battery has a bad cell.

Batteries in these conditions should be taken to a specialist for further evaluation or retired from service.

**TABLE 1. State of charge as related to specific gravity and open circuit voltage**

Percentage of Charge	Specific Gravity Corrected to 80o F	Open-Circuit Voltage					
		6V	8V	12V	24V	36V	48V
100	1.277	6.37	8.49	12.73	25.46	38.20	50.93
90	1.258	6.31	8.41	12.62	25.24	37.85	50.47
80	1.238	6.25	8.33	12.50	25.00	37.49	49.99
70	1.217	6.19	8.25	12.37	24.74	37.12	49.49
60	1.195	6.12	8.16	12.24	24.48	36.72	48.96

50	1.172	6.05	8.07	12.10	24.20	36.31	48.41
40	1.148	5.98	7.97	11.96	23.92	35.87	47.83
30	1.124	5.91	7.88	11.81	23.63	35.44	47.26
20	1.098	5.83	7.77	11.66	23.32	34.97	46.63
10	1.073	5.75	7.67	11.51	23.02	34.52	46.03

## 7) Battery installation

### WARNING!

When working with the battery, DO NOT put wrenches or any other metal objects across the battery terminals, otherwise, an arc can occur, and it may cause explosion of the battery and physical injury.

Battery is installed or replaced only by the qualified electrician.

## 8) BATTERY CHARGING

### WARNING!

Before you use the charger, please read the operation manual provided with the charger.

### WARNING!

Explosive hydrogen gas is produced while battery is charged. Only charge the battery in well-ventilated areas.

### WARNING!

Before using the charger, please check if the battery charger you are getting to use is correctly rated as per your local AC electricity network.

### WARNING!

When using new battery, make sure new battery is in same specifications as original one and is appropriate in application.

The following is the charging steps:

- 1) Turn the power key to OFF position.
- 2) Connect the DC output plug to the golf car receptacle first, then connect it to your local AC power outlet.

### WARNING!

Do not disconnect the DC output cord from the battery receptacle when the charger is ON, otherwise an arc could occur which may cause an explosion.

- 3) The charger will turn off automatically when the battery is charged fully.

### WARNING!

The battery receptacle is combined with a security switch which can cut off the power of the golf car when the batter is being charged, so the golf car cannot be started as long as the DC plug is plugged into the battery receptacle.

- 4) After the charger turns off, disconnect the plug on the AC charging cable from the AC power outlet first, then disconnect the DC output plug from the golf car receptacle.
- 5) It is prohibited to open the housing of the charger.
- 6) Only qualified electrician is allowed to open the housing of the charger.
- 7) The charger should be stored in safe and dry room with good ventilation.
- 8) The charger should be packed properly if not used for long time.
- 9) Read carefully the operation manual for the charger for detailed operation instructions.

### Maintenance of the Traction Motor

**WARNING!** Make sure no explosive gas vapor is in the air, otherwise, it may cause injury and damage to your body and property if the explosive gas vapor contacts the sparks generated from the motor.

- 1) The carbon brushes should be checked every 3 months to see if they are worn or not as it is an easily worn part. If it is not replaced in time before it becomes worn out, it will damage the motor badly.
- 2) Do not keep the motor running idly for long periods of time. Any idle running of the motor should be avoided.
- 3) Removal of mud, sand and other clinging objects shall be done frequently to facilitate the heat-radiation.
- 4) Periodically use low pressure air to remove the dust from the carbon brush and the commutator. Periodically check the connection of the carbon brush and the commutator.

### Maintenance of the Controller:

#### **CAUTION**

Only a qualified technician is allowed to perform the maintenance on the controller.

#### **WARNING!**

There are no user serviceable parts inside the controller. No attempt should be made to open, repair, or otherwise modify the controller. Doing so may damage the controller and will void the warranty.

#### **CLEANING**

It is recommended that the controller be kept clean and dry and that its fault

history file be checked and cleared periodically.

Periodically cleaning the controller exterior will help protect it against corrosion and possible electrical control problems caused by the dirt, grime, and chemicals that are part of the operating environment and that normally exist in battery powered systems.

Please use the following cleaning procedure for routine maintenance:

- 1) Turn the power key to OFF position.
- 2) Remove power by disconnecting the battery.
- 3) Discharge the capacitors in the controller by connecting a load (such as a contactor coil or a horn) across the controller's B+ and B- terminals.
- 4) Remove any dirt or corrosion from the connector areas. The controller should be wiped clean with moist rag. Dry it before reconnecting the battery. The controller should not be subjected to pressured water flow from either a standard hose or a power washer.
- 5) Make sure the connections are tight, but do not overtighten them.

### **Faulty History File**

The handheld programmer (to be ordered separately) can be used to access the controller's fault history file. The programmer will read out all the faults the controller has experienced since the last time the history file was cleared. Faults such as contactor faults may be the result of loose wires; contractor wiring should be carefully checked. Faults such as overtemperature may be caused by operator habits or by overloading.

After a problem has been diagnosed and corrected, it is a good idea to clear the fault history file. This allows the controller to accumulate a new file of faults. By checking the new history file at a later date, you can readily determine whether the problem was indeed fixed.

Or checking the problems according to the flashing way of the STATUS light on the top of the controller, please refer to the details mentioned in our service manual which is available separately.

Please contact your local dealer or a qualified electrician to work on the problems related to the motor, controller or electrical system of the golf car when you are not able to fix them.

### Maintenance of Rear Axle:

While using your vehicle, the rear axle should be maintained daily, periodically and randomly.

1. Periodic maintenance means the driver should do some daily maintenance before, in or after driving to prevent something unexpected from happening. The



maintenance is focused on clearance and examine as followed:

- 1) Clean the dust and mud on the cover to keep the axle clean
- 2) Check all the connection are in good condition, in case there is any damage if any contact sticks or there is any travel in the contact.
- 3) Check the gear oil is enough or not. Gear oil level should be 5.5cm(2.17") below the top of the fill well, add oil type "ESSO Mobil 85W/90,GL-5" if necessary.
- 4) Check if there is any link in the connection and transmission units or any unusual sound inside the axle;
- 5) Check the brake drum, the exterior temperature and smell, it should be adjusted and repaired in time if there is any problem.
- 6) Check if the breather valve ventilate or not in case the oil linked;
- 7) Check if there is any section in the parking brake cable broken or loose, replace with a new one if it is necessary.

2. Periodic maintenance: The axle should be done first grade maintenance, second grade maintenance and third grade maintenance

First grade maintenance focuses on lubricate, fixation and gear oil replacement.

Second grade maintenance focuses on check adjustment and gear oil replacement.

Third grade maintenance focuses on the whole part cleaning, assembly and gear oil replacement.

Maintenance in each grade should follow the requirement.

Periodic maintenance following sheet:

Period	Grade
Each Month	Do first grade maintenance as required above
Each 2 month	Do second grade maintenance as required above
Each half year	Do third grade maintenance as required above

## 7. Main Trouble and troubleshooting

Symptom(s)	Possible cause(s)	Troubleshooting
The axle housing gear and bearing are damaged untimely and there is too much noise on the final drive	1. The gear oil is out of use or used improperly	Fill some oil or replace a new one
	2.The bearing is assembled un correct	Assembly correctly
	3. Adjust the brake shoe pin shim or the interval.	Adjust or replace
	4.The gear between axle 1 and 2 is not touched tightly	Adjust correctly

Symptom(s)	Possible cause(s)	Troubleshooting
The axle housing gear and bearing are damaged untimely and there is too much noise on the final drive	5.The final drive is too noisy: 1)Check if there is any impurity 2)Check the if the gear is damaged	Remove the impurity
	6.Axle 1 strikes heavily	Adjust or replace a new one
	7.The rear axle is out of shape (check if it is over loaded)	Replace
Lack of breaking force	1. There is interval between the brake shoes and drum.	Adjust the interval
	2. There is oily dirty on the brake shoes or drum.	Remove the impurity
	3.There is air in brake pipe	Dispel the air
	4. The brake pipe links.	Repair the link
	5. The brake shoes are over-rubbed.	Replace a new one
	6. The brake cable is too long or is blocked.	Adjust the brake cable
The brake is difficult to stop	1.The brake pedal is not bounces back smoothly	Replace a new one
	2.The brake shoe is out of shape	Refit or replace
	3.The is some block on the transmission unit's replace	Refit or replace
The oil links	1.The Oil Seal is damaged	Replace a new one
	2.Too much Oil	Adjust the oil lever

## Wheel Replacement

### WARNING!

Before doing anything on the wheel and tire, please make sure the power key is positioned on OFF position.

Please read the tire manufacturer's instructions and never exceed their recommendation.

Protect face and eyes from escaping air when removing the valve core. Be sure the mounting/demounting machine is anchored to floor.

Wear safety equipment when mounting/demounting the wheel and tire.

To remove a wheel on the golf car:

- 1) Blocking the wheel, then loosen the wheel nuts
- 2) Use a jack to lift the golf car, then remove the wheel nuts and the wheel.

To install a wheel on the golf car:

- 1) Use a jack to lift the golf car, then put the wheel onto the wheel hub with lug nuts.
- 2) Finger tighten the lug nuts, then tighten lug nuts to 50-85ft.lbs.(70-115Nm) in 20ft.lbs.(30Nm) increments
- 3) Remove the jack.

If the tire is flat, remove the wheel and inflate the tire to the maximum recommended pressure for the tire. Immerse the tire in water to locate the leak and mark with chalk. Insert tire plug according to the manufacturer's specifications.

### Brake Adjustment

#### WARNING!

If you have any problem with the brakes, please consult our dealers. Brake failure can result in serious accident or physical danger.

The brakes on the golf car are self-adjusting.

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

### 6. Lubrication

- 1) use 90GL hypoid gear oil of 1 liter for the rear end.
- 2) lubrication points: a. Spindle assembly (driver side and passenger side) ; b. Middle shaft; c. Rear end;



Spindle (Passenger Side)



Spindle (Driver Side)



Rear End



Middle Shaft

## 8. PERIODIC MAINTENANCE CHARTS

Regular maintenance is required for the best performance and safe operation of the golf car.

#### WARNING!

Make sure to turn off the power key and apply the park brake when you do the maintenance unless otherwise specified. If the owner is not familiar with the maintenance of this golf car, this work should be done by the dealer from who you get your golf car:

item	Descriptions	1D	1W	1M	1Q	0.5Y
<b>Battery</b>	1. check the liquid level. Please add the distilled water if necessary.	Y				
	2. Charge the battery	Y				
	3. Tighten the nut on the battery cable		Y			
	4. Check if the battery is over-discharged (the battery power meter flashing)	Y				
	5. Check the liquid density of the battery, standard density should be $1.277 \pm 0.007 \text{g/cm}^3$ ( $80^\circ \text{F}$ )( $^\circ \text{F} = ^\circ \text{C} \times 9/5 + 32$ )when the battery is full charged		Y			
	6. Check if the battery is charged fully by 3 ways: a) using the hydrometer; b) checking the battery power meter;	Y				
	7. Clean the surface of battery		Y			
<b>Charger</b>	8. Observe the charging status, check if the charger plug becomes hot.	Y				
	9. Clean the surface of the charger. Do not get any water inside the charger.		Y			
<b>Controller</b>	10. Check if all terminals are tightened properly. Please do this after the power is off.				Y	
	11. Clean the surface of the controller.				Y	
	12. Check if the solenoid is in order, checking its touching point.					Y
<b>Motor</b>	13. Check if any water gets in. Check if it becomes too hot.	Y				
	14. Check if the carbon brush should be replaced.					Y
	15. Check if the accelerator pedal works well and if it can be released freely and automatically.				Y	
<b>Chassis and body</b>	16. Check if the brake drum and the brake shoe should be replaced or not.				Y	
	17. Check if the hand brake functions. (applicable for golf car with hand brake).				Y	
	18. Check if the hose and tube for the brake liquid leaking. ( applicable for golf car with hydraulic brake).			Y		
	19. Check if the brake liquid inside the brake liquid tank is enough. (applicable for golf car with hydraulic brake).			Y		
	20. Check the air pressure inside the tire, check if the tire surface is worn, check if the nuts are tightened properly.		Y			

1D-per day 1W-per week 1M-per month 1Q-per quarter 0.5Y-half year

## 9. STORAGE

Please follow the steps as below when the golf car is stored.

1. Check the liquid level inside the battery, recharge it fully before storing the golf car.

#### WARNING!

Please charge the battery once a month if your golf car will be stored more than

one month.

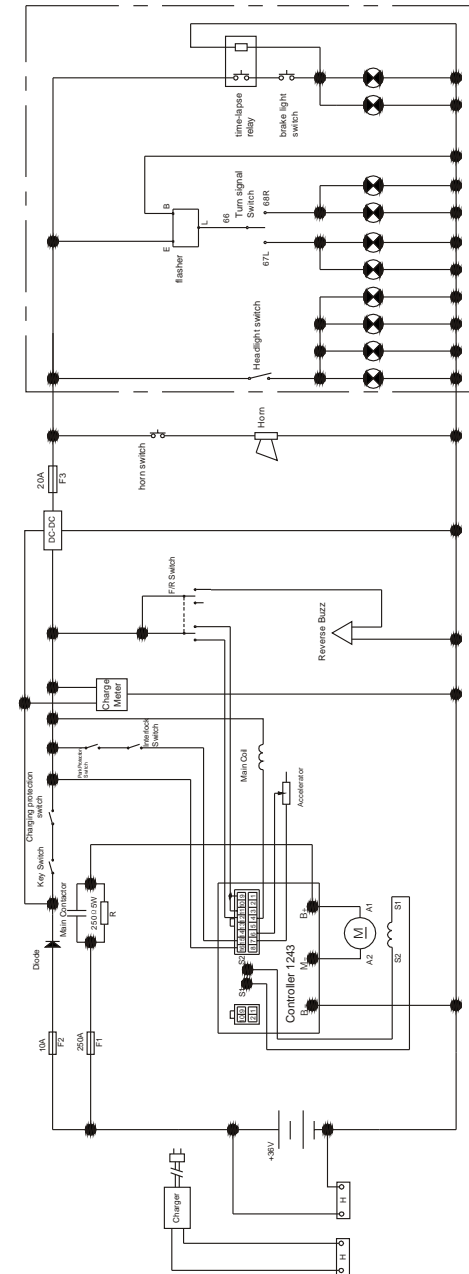
2. Turn the power key to OFF position, remove the key, and store the key in a safe position.
3. Move the tow switch into TOW position on the controller cover.
4. Check tire pressure to make sure pressure is set to recommended pressure.
5. Clean the exterior of the golf car and apply the rust inhibitor.
6. Cover the golf car with a breathable cover and store it in a dry, safe and well-ventilated place.
7. If the golf car is planned to store for a longer time, then please check the liquid level inside the battery once a month, recharge the battery

## 10. Wiring Diagram

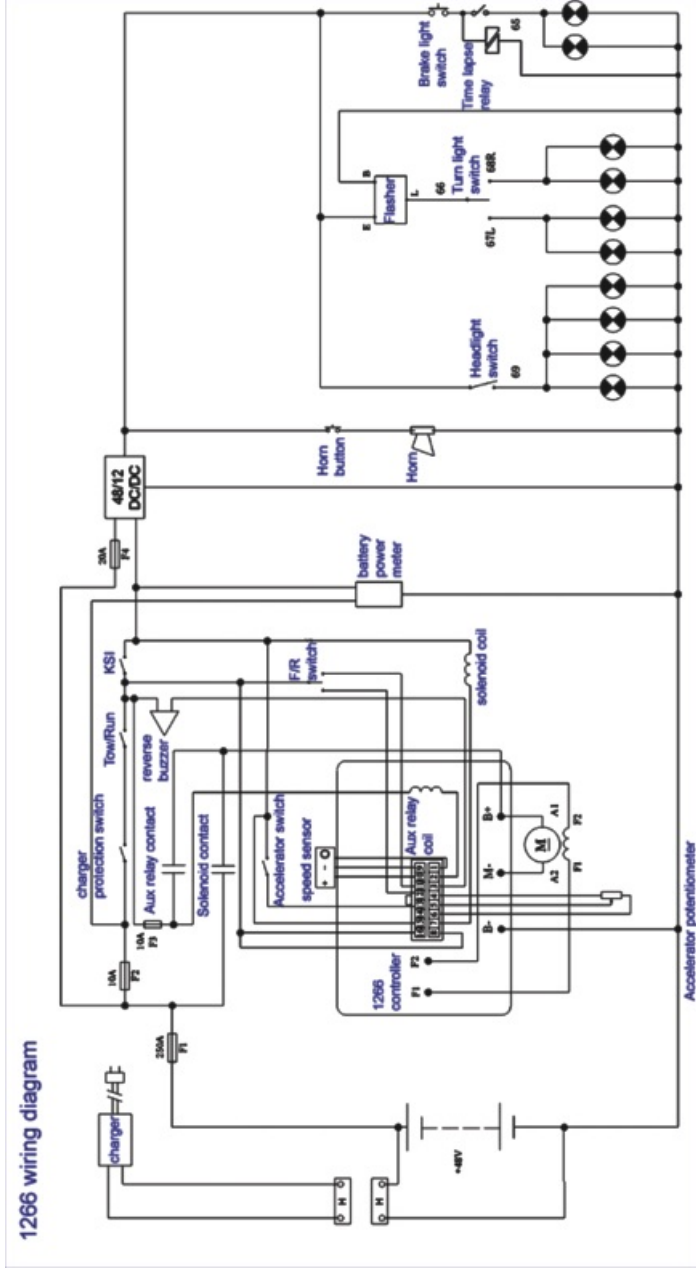
- 1) Wiring diagram for golf car 36V with Curtis controller 1243 (FIG. 1)
- 2) Wiring diagram for golf car 48V with Curtis controller 1266 (FIG.2)
- 3) Wiring diagram for golf car 48V with Curtis controller 1268 (FIG.3)

This manual tries to be as sound and elaborate as possible in literal and figurative description as well as technical description on the basis of existent data. At the same time, our company reserves the right to alter the content of this manual and this manual is subject to change without prior notice; in addition, our company has the final say on the interpretation of this manual. All rights reserved.

1243 Wiring Diagram



1266 Wiring Diagram



1268 Wiring Diagram

