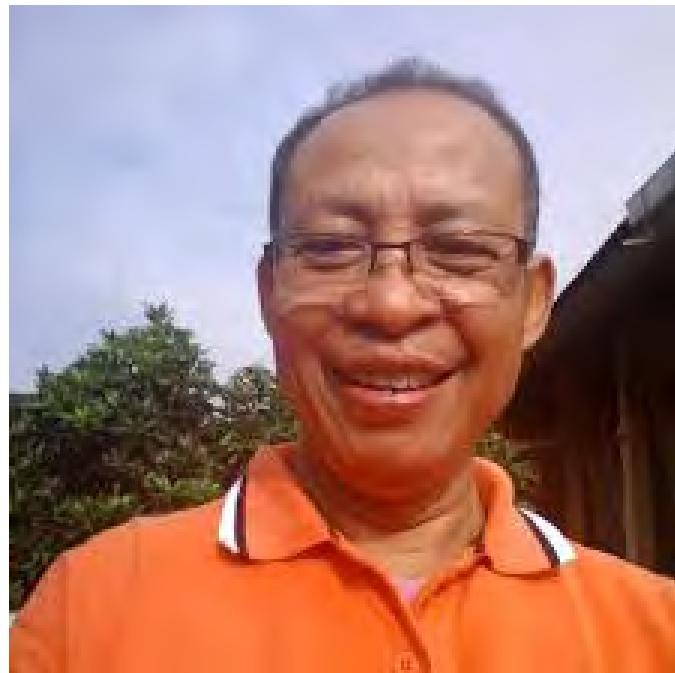


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SPHM  
HOSPITALITY

GOLF CART PROGRAM



By: | Agustinus Agus Purwanto, SE MM



Series 300

# Golf Cart Program

Subject: Battery Care

G-301

- A. Policy. It is the policy of the Club that golf car batteries be maintained properly to extend their lives.
- B. Discussion. To keep batteries in good working condition, follow this maintenance program on a regular basis:
  1. Batteries should be kept clean and free of corrosion. Wash tops and terminals of batteries with a solution of baking soda and water (1 cup baking soda per gallon of water) once per week. Rinse solution off batteries.
    - a. Do not allow this solution to enter the battery.
    - b. Dispose waste water properly.
    - c. Ensure terminals are tight. Let terminals dry and then spray with battery protector spray (Club Car Part No. 1014305).
  2. The electrolyte level in the batteries should be checked weekly (**See Figure 12, Page 19, for proper level**). Add water only after charging unless the water level is below the top of the plates. In this case, add just enough water to cover the plates, charge and then check the level again. Never charge batteries if plates are exposed above water level. For best battery life, add only distilled water.
  3. The hold-down straps should be tight enough so that the batteries do not move while the vehicle is in motion, but not so tight as to crack or buckle the battery case. Torque hold-down retaining nuts to 40 in. lb (4.5 N-m). The terminal connections should be clean and tight, and any worn insulation or frayed wires should be replaced. Torque battery terminals to 110 in. lb (12.4 N-m).
- CAUTION:** If battery wire terminals are damaged or corroded, they should be replaced or cleaned as necessary. Failure to do so may cause them to overheat during operation.
4. After use, the batteries should be placed on charge. The batteries should never be left discharged any longer than absolutely necessary (do not leave discharged overnight).

Subject: Battery Charging

G-302

A. Policy. It is the policy of the Club that golf car batteries be properly charged each night to ensure that golf cars have appropriate power to operate.

B. Discussion

1. To charge batteries:

- a. Insert the charger DC plug into the vehicle receptacle. The charger will turn on two to ten seconds later (Figure 13, Page 22).
  - (1) When inserting the PowerDrive System 48 DC plug, align the raised guide on the plug with the guide slot in the receptacle and push straight in slowly.
  - (2) The PowerDrive Charger interacts with an onboard computer on the PowerDrive System 48 vehicle. The computer records the amount of energy consumed during vehicle use. While the charger is plugged in, the vehicle's control circuit is locked out, preventing operation of the vehicle, as well as the possibility of consequent damage to the charger and the vehicle.
- b. Once the lock-out is actuated, the charger turns on. The onboard computer then records the amount of energy being returned to the batteries. When the optimum amount of energy needed to replenish the batteries is returned, the charger will shut off. The control circuit lock-out remains activated until the charger plug is disconnected from the vehicle.
- c. As long as the charger is allowed to shut off by itself, the batteries will be fully charged. Overcharging and undercharging will normally be prevented.
- d. Batteries should be put on charge even if they have been used for only a short period (9 holes of golf or 10 minutes). The charger is automatic and will turn off when batteries are fully charged. If the charger does not seem to be operating properly, or if the batteries seem weak, contact your local Club Car distributor/dealer.

2. Plug and Receptacle

- a. If the charger plug becomes difficult to insert or disconnect, the receptacle contacts should be lightly sprayed with WD-40 brand spray lubricant.
- b. The plug should then be inserted and removed several times ensure ease of insertion, ease of removal, and good electrical contact.
- c. If the warning tag has been damaged or removed from the DC cord, replace it immediately.

3. Receptacle Fuse Link

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

**WARNING:** If the receptacle fuse link is blown, determine the source of the electrical problem and correct it before replacing the fuse. Contact your Club Car Distributor or Dealer.

#### 4. General Warnings

- a. Be sure all wire connections at the receptacle and the fuse link are clean and tight.
- b. Do not rock or bend the plug. To connect the charger plug to the vehicle receptacle, grasp the plug handle and push the plug straight into the receptacle (figure 13, page 22).
- c. Do not pull on the dc cord (figure 14, page 22). Do not twist, rock or bend the plug. To disconnect the charger plug from the vehicle receptacle, grasp the plug by the handle and pull the plug straight out of the receptacle.
- d. Do not connect a charge to the receptacle if the charger cord, plug, or the vehicle receptacle is broken, damaged in any manner, or does not make a good electrical connection. Fire or personal injury can result. Have it replaced by a qualified service person immediately.
- e. Failure to follow these instructions could result in damage to the charger cord, the plug, and (or) the vehicle receptacle.

Do not use a charger if:

- (1) The plug is too loose or does not make a good connection.
- (2) The plug and receptacle feel hotter than normal during charge.
- (3) The plug pins (powerdrive chargers) or blades (accu-power chargers), or receptacle contacts are bent or corroded.
- (4) The plug, receptacle, or cords are cut, worn, have any exposed wires or are damaged in any way.
- (5) Using the charger with any of the above symptoms could result in a fire, property damage, personal injury, or death.
- f. The DC charger cord and plug are wear items and must be replaced when worn or damaged.

5. Note. When temperatures fall below 65 f (18.3c), batteries charged in unheated areas should be placed on charge as soon as possible after use. Batteries are warmest immediately after use, and cold batteries require more time to fully charge.

Subject: Pre-Operation Safety Check

G-303

A. Policy. It is the policy of the Club that golf cars be given a daily pre-operation safety check.

B. Discussion

1. Inspect and drive the vehicle, using the Pre-operation Checklist (**Page 6**) and Performance Inspection (**Page 6**) as a guide to check the following items:
  - a. Vehicle warning decals.
  - b. Brake system.
  - c. Park brake.
  - d. Reverse warning buzzer.
  - e. Steering and linkages.
  - f. Proper acceleration and maximum speed.
  - g. Batteries.
  - h. Accelerator Switch.
2. In addition, check the items listed below:
  - a. Tires: Visually inspect for wear, damage and proper inflation.
  - b. Forward/Reverse switch: Check for proper operation. **See controls, Page 7.**

Subject: Periodic Service Schedule

G-304

A. Policy. It is the policy of the Club that golf cars receive routine servicing according to an established schedule.

B. Schedule

<u>Interval</u>	<u>Service</u>	<u>Detail</u>
Daily Service by Owner	Batteries	Charge batteries (after each use only).
Weekly Service by Owner	Batteries	Check electrolyte level. Add water as necessary per Maintenance and Service Manual.
	Batteries	Wash battery tops and clean terminals with baking soda/water solution. Dispose of waste water properly.
	Tires	Check air pressure and adjust as necessary (See Vehicle Capacities Chart on Page 17)
Monthly Service by Owner or Trained Mechanic	Wiper Switch	Check for cracks or other damage; make sure switch is securely fastened to frame. Check movable contact for correct operation.
	General Vehicle	Wash battery compartment and underside of vehicle. Dispose of waste water properly. Check brake shoes; replace if necessary. (See DS Maintenance and Service Manual.)
	Brake System	Lubricate brake slides per Lubrication Schedule. (See DS Maintenance and Service Manual) Check brake cables for damage; replace as required.
Semi-annual Service by	Electrical Wiring	Check for tightness and damage

Trained Mechanic Only  
(Every 50 hrs of operation  
or 100 rounds of golf)

and Connections

Forward and Reverse

Check condition of contacts Switch  
and wire connections; Make  
sure connections are tight.

Front Wheel Alignment

Check and adjust as required  
and Camber(See Maintenance & Service  
Manual, Section 7).

Annual Service by Trained  
Mechanic Only (Every 100  
hrs of operation or 200  
Rounds of golf)

Batteries

Perform battery tests per  
Maintenance & Service Manual.

#### C. Warnings

1. If any problems are found, do not operate the vehicle until repairs are made. Failure to make necessary repairs could result in fire, property damage, severe personal injury, or death.
2. Service, repairs, and adjustments must be made per instructions in the 1999 DS Golf Car maintenance & service manual.

#### D. Note

1. If the vehicle is constantly subjected to heavy use or severe operating conditions, the preventative maintenance procedure should be performed more often than recommended in the service and lubrication schedules.
2. Both the periodic service schedule and periodic lubrication schedule must be followed to keep vehicle in optimum operating condition.

Subject: Periodic Lubrication Schedule

G-305

A. Policy. It is the policy of the Club that golf cars receive routine servicing according to an established schedule.

B. Schedule

<u>Interval</u>	<u>Service</u>	<u>Place*</u>	<u>Recommended Lubricant</u>
Semi-Annually by Owner or Trained Technician (Every 50 hrs of operation or 100 rounds of golf)	Brake shaft bearings	1.	Dry Moly Lube-Club Car Part No. 1012151
	Brake Linkage and Pivots	2.	Dry Moly Lube-Club Car Part No. 1012151
	Accelerator push rod pivots and mounts	3.	Dry Moly Lube-Club Car Part No. 1012151
	Forward/Reverse Switch Contacts and charger receptacle	4.	WD 40
	Brake Slides	5.	Dry Moly Lube-Club Car Part No. 1012151
	Front Suspension	6.	Chassis Lube-EP NLGI Grade 2 (5 fittings)
Annually by Trained Technician Only (Every 100 hours of operation or 200 rounds of golf)	Check/fill trans-axle to plug level	7.	22 oz. (.67 liter) SAE 30 WT. API Class SE, SF, or SG Oil (or higher)
	Inspect front wheel bearings (Repack as necessary)	8.	Chassis Lube-EP NLGI Grade 2

\*See Figure 11, Page 17

Subject: Golf Cart Cleaning

G-306

- A. Policy. It is the policy of the Club to clean golf carts thoroughly before use by members.
- B. Discussion
  1. Members' perceptions define the level of professionalism of the golf operation.
  2. The cleanliness and set up of golf carts has a direct impact on members' perceptions of their golfing experience.
  3. Therefore, it is incumbent that the Club set the highest standards of cleanliness and maintenance of its golf cart fleet.
- C. Daily Cleaning Procedures
  1. Vacuum – daily after use. Vacuum glove compartments to remove any excess debris.
  2. Brush – daily after use. Use soapy brush to wash off foot tread, tires, bag shelf, and top of canopy.
  3. Wash – daily after use
    - a. Spray wash the cart while parked over the drain grate in the cart wash area.
    - b. Wipe down all surfaces with soapy water and a cleaning rag.
    - c. Rinse cart with water.
    - d. Wipe dry cloth to remove excess water.
  4. Windex – daily before use. Spray Windex on inside and outside of windshield. Wipe off with clean rag.
- D. Detailing Procedures
  1. Wax – once a month according to schedule
    - a. Apply wax to blue body components as per instruction on the can.
    - b. Wipe off with a shammy cloth and polish with a power buffer.
  2. Armor-All – once a month according to schedule. Apply to foot tread and bag shelf as directed on the can.

3. Tire Polish – once a month according to schedule. Apply to tires as directed on the can.
4. Detailing Schedule
  - a. The following schedule will detail each cart every three weeks, allowing a make up week to complete all carts once a month:
    - (1) Tuesdays through Thursdays – 5 carts/day
    - (2) Fridays through Sundays – 3 carts/day
  - b. Detailing of carts will be tracked on the Monthly Cart Detailing Report, [SPM Form 515]. The report will be signed by the 1<sup>st</sup> Golf Professional, submitted to the Head Golf Professional for review, and forwarded to the General Manager by the 5<sup>th</sup> day of the following month.

Subject: Golf Cart Storage

G-307

A. Policy. It is the policy of the Club to store golf carts in designated parking spaces in the Cart Barn.

B. Discussion

1. The Cart Barn has designated parking stalls for each golf cart. The stall designations match the numbered decals on the golf cart. Stall designations are located on the wall behind each two stalls.
2. Each stall has a corresponding battery charger cable to recharge the batteries on carts.
3. For a diagram of the Cart Barn with stall designations, see [Cart Barn].

Subject: Golf Cart PM Program

G-308

A. Policy. It is the policy of the Club to perform routine preventive maintenance on the golf cart fleet to ensure long, serviceable life and to repair inoperable or unserviceable golf carts in a timely manner.

B. Discussion

1. The Club has a large investment in its golf cart fleet.
2. The useful life of golf carts can be maintained and even extended by proper preventive maintenance.
3. Inoperative or unserviceable golf carts must be repaired in a timely manner.

C. Golf Cart Preventive Maintenance Program

1. The Golf Cart Preventive Maintenance Program is a comprehensive series of checks and services to properly maintain golf carts in good working order.
2. The program entails six basic components:
  - a. [Battery Care]
  - b. [Battery Charging]
  - c. [Pre-Operation Safety Check]
  - d. [Periodic Service Schedule]
  - e. [Periodic Lubrication Schedule]
  - f. [Golf Cart Cleaning]

D. Repairs

1. Golf carts needing repairs will be reported to the Facilities Manager on [Work Orders].
2. The Facility Manager will inspect golf carts needing repair to determine the level of work necessary.
  - a. Repair work that can be done in-house by Club staff will be repaired on property.
  - b. Major repairs will be done by a golf cart repair contractor on a time and material basis.

E. Semi-Annual Servicing

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1. The Club has a service contract with an authorized golf cart repair service.
2. This contract calls for the contractor to perform semi-annual and annual servicing of golf carts, according to the following schedule:
  - a. Semi-Annual
 

(1) Batteries – check specific gravity & OCV.	Jun
(2) Brakes – check and adjust.	Apr, Oct
(3) Differential – check lubrication.	Mar, Sep
(4) Forward-Reverse Switch	Jun, Dec
(a) Check contacts and lead connection.	
(b) Lubricate.	
(5) Tires	Apr, Oct
(a) Check for wear and damage.	
(b) Check tire pressure.	
(6) Wheel Alignment – check.	Mar, Sep
  - b. Annual
 

(1) Batteries – test.	Feb
(2) Front Wheel Bearings – check.	Aug
(3) Motor – check.	Nov

**F. Documentation**

1. All golf cart preventive maintenance and repair will be documented by cart attendants and the Facilities Manager using the following forms:
  - a. Golf Cart Service Schedule, [SPHM Form 523], maintained for each golf cart by the cart attendant staff.
  - b. Golf Cart Lubrication Schedule, [SPHM Form 524], maintained for each golf cart by the cart attendant staff.

- c. Golf Cart Repair Log, [SPHM Form 525], maintained by the Facilities Manager.
2. These completed forms for each golf cart will be kept in the Golf Cart Preventive Maintenance Program Book, kept in the Village Barn and subject to inspection by management at any time.
3. Preventive maintenance and repair documents will be reviewed quarterly by the Facilities Manager who will prepare a Golf Cart Preventive Maintenance Program Report, [SPHM Form 526]. This report will be completed, signed, and turned in to the General Manager by the 10<sup>th</sup> of April, July, Oct, and Jan.

**G. Responsibilities**

1. It is the responsibility of the Head Golf Professional to ensure that all preventive maintenance is performed according to schedule. Further, it is his responsibility to ensure that cart attendants are properly trained to perform routine preventive maintenance checks and servicing according to schedule.
2. It is the Facility Manager's responsibility to:
  - a. monitor the performance of routine preventive maintenance,
  - b. assist the Head Golf Professional in establishing and maintaining the Golf Cart Preventive Maintenance Program, and
  - c. provide expert assistance and advice to the Head Golf Professional and cart attendants in dealing with specific maintenance and repair problems with golf carts.
3. It is the cart attendants' responsibility to perform all specified checks and services called for in the Golf Cart Preventive Maintenance Program and to report problems to the Head Golf Professional in a timely manner.

Subject: Cart Fleet Rotation

G-309

A. Policy. It is the policy of the Club to rotate usage of the golf cart fleet to ensure even distribution of use among all carts.

B. Discussion

1. The Club leases 72 battery-powered golf carts for use by its members.
2. Each golf cart has a numbered-decal to identify it.
3. The Cart Barn has striped parking stalls for all golf carts. These parking stalls are also numbered with numbers corresponding to the numbers on carts. Cart attendants will be instructed to park all carts in their assigned stalls.
4. Each day, sufficient carts will be pulled out of the Cart Barn to provide for the expected level of play. Carts will be pulled out in sequence, beginning with the next numbered cart from the last cart used the previous day.
5. Cart Attendants will keep track of which carts are used each day by means of a Cart Usage Tracking Sheet, [SPH Form 508]. This form will be maintained in the Cart Attendants three-ring binder that is kept on the Supplies Storage Shelves in the Village Barn.
6. If any cart is malfunctioning or in need of repair, it will be skipped in the normal rotation and noted on the Cart Usage Tracking Sheet.
7. Once a month as close to the last day of the month as possible, Cart Attendants will read the charge on each cart with the Battery Usage Meter and record it on a Monthly Cart Battery Usage Report, [SPHM Form 509]. This form will be turned in to the 1<sup>st</sup> Assistant Professional when completed.