



FAIRWAY RIDER
G3

OPERATION AND MAINTENANCE MANUAL



www.fairwayrider.co.uk

Workshop & Technical Support: 07495 063 014

CONTENTS

Buggy operation	3
General Maintenance.....	5
Technical Maintenance	6
• Front wheel bearing replacement.....	6
• Rear wheel bearing replacement.....	7
• Chain replacement.....	8
• Chain Adjustment.....	9
• Brake caliper replacement.....	9
• Brake pad replacement.....	10
• Brake cut-out switch replacement.....	10
• Brake lever replacement	10
• Throttle replacement.....	11
• Controller replacement	12

BUGGY OPERATION

Your G3 buggy is fitted with three switches on the front part of the body:

- A key operated ignition switch – insert the key and rotate clockwise to turn on the ignition
 - This should be turned off when the buggy is not in use.
- A forward reverse switch
 - Only change the position of the switch whilst the buggy is stationary. Changing the position while the buggy is moving will have no effect until the buggy stops.
- A High / Low speed switch
 - There are two forward speeds – low speed should be used for flat terrain, and high for hills;
 - There is a single reverse speed, so the switch has no effect when going backwards.

The buggy has a twist-grip throttle fitted to the right hand side of the handlebars, which incorporates three lights to indicate the state of battery charge:

- Twist the grip gently towards you to gradually increase speed. Releasing the grip will stop the motor
- Battery condition lights
 - When all three lights are lit (Red, Amber and Green) the batteries are fully charged;
 - When Amber and Red are lit, batteries are at half charge;
 - When only the Red light is illuminated, the batteries are virtually flat.
- In normal use, the buggy will easily cover 36 holes of golf on a full charge. We recommend that the buggy is put on charge overnight after each time it is used.

The battery compartment cover incorporates two charging points:

- Plug the battery charger connector into either of the charging points, and then connect the charger to a 240v mains supply (a normal UK mains supply). NB either can be used, and it is not necessary to use both. All 6 batteries are charged simultaneously.
- The battery charger is fitted with two indicator lights:
 - Two red lights indicates that the charger is connected to the mains and the batteries are charging;

- One red and one green light indicates that charging is complete.

A brake lever is fitted to the left hand side of the handlebars and this operates the hydraulic brake, which acts on the rear wheel.

- The brake lever incorporates a cut out switch which stops the motor when the brake is activated;
- The parking brake (for use when the buggy is stationary) is activated by pulling the lever, and then pushing down on the button positioned near the brake fluid reservoir. It is released by pulling again on the lever – the button will spring up.

For safety reasons you should remain seated at all times when operating your buggy. Exercise care at all times, especially when traversing slopes and turning, and always have due regard for other users of the golf course.

GENERAL MAINTENANCE

With a little basic regular maintenance, your G3 buggy will serve you well for many years.

Cleaning

- Wash the bodywork with warm soapy water to remove any mud and dirt that accumulates on the buggy;
- Do not use any abrasive cleaners, and take care not to spray water upwards underneath the main bodywork where the buggy's electronic controller is located.

Tyre pressures

- The tyres are fitted with normal car tyre type valves, so can be inflated using a car foot pump or compressor;
- The front tyres should be maintained at 22-24 psi;
- The rear tyre should be maintained at 24-26 psi;
- General tightening of body attachment screws;
- The main body of the buggy, and the side panels, are attached with cross-headed set-screws. Occasionally these may loosen with use, and it is recommended that you check their tightness on a monthly basis.

Drive chain

- The drive chain of the buggy should be kept clean and greased. It is recommended that you apply a motorcycle-type spray grease to the chain on a monthly basis.

Front wheel alignment

- The front wheels of your buggy are aligned at the factory so that they run parallel to each other. Ensure that this is the case each time you use the buggy. If they are not set correctly, the buggy will steer awkwardly, and excessive wear of the tyres will result, plus damage to the golf course.

Brake fluid level

- Once per month check the brake fluid level – there is a transparent window in the side of the fluid reservoir through which the level can be seen;
- If the fluid level is low, replenish using only DOT2 or DOT3 formulation brake fluid. The reservoir cap is removed by un-fastening the 2 cross-headed screws on top of the reservoir.

TECHNICAL MAINTENANCE

This section provides more detailed instructions so that competent persons can carry out more significant work on the G3 buggy should it become necessary. If you have any doubt about your ability to complete the job successfully, do not embark upon it. The subjects covered are those which we have most commonly come across through our extensive experience of the G3 buggy and its predecessors. If at any time you need further assistance than that which is contained here, please contact Fairway Rider G3 Ltd. directly.

Front wheel bearing replacement

- Each front wheel is fitted with an inner and an outer wheel bearing;
- Lift the front of the buggy so that one or both of the front wheels are off the ground. This can be achieved either using a trolley jack, or suitably sized blocks of wood;
- Remove the hub nut and washer which secures the wheel to the stub shaft;
- Withdraw the wheel assembly from the stub shaft. This should not require any special tools or force;
- Note the position of the metal spacers on the stub shaft – they will need to be replaced identically;
- Using an appropriately sized metal drift, punch the inner bearing from its location in the wheel;
- Repeat for the outer bearing;
- Retain the central spacer tube which is situated between the bearings;
- Locate the new inner bearing in place in the wheel, and drift into position;
- Re-position the central spacer tube, and then locate the new outer bearing in place in the wheel, and drift into position;
- Replace the wheel assembly onto the stub shaft, ensuring all metal spacers are in the correct positions;
- Replace the hub nut and washer, and re-tighten;
- Repeat all above steps for the other wheel.

Rear wheel bearing replacement

- Remove the rearmost 3 body panel bolts on both sides. The upper one on each side should have a rubber spacer between the panel and the chassis;
- Lift the rear of the buggy off the ground on suitable blocks;
- Rotate the rear wheel until the removable chain link is visible – it is easiest to remove adjacent to the rear sprocket. Remove the spring clip and plate, then remove the joining link, and remove the chain;
- On both sides remove the 2 x 14mm wheel shaft nuts;
- Starting on the brake side, remove the 2 x 8mm bolts attaching the caliper to its mounting bracket. Lift the brake caliper out of the way (handbrake should be off, and NB brake should not be operated while caliper is not on the disc);
- Remove the 2 x 10mm locknuts from the bolts attaching the caliper bracket to the chassis, and then remove the 2 x 8mm bolts (the bracket will remain attached to the buggy as the rear wheel shaft passes through it);
- On both sides remove the 2 x 13mm locknuts from the bolts situated in front of the wheel shaft, and then remove the 2 x 10mm bolts;
- Now remove the wheel to the rear of the buggy;
- Make a note of the order / position of the components on the shaft on either side of the wheel. NB the spacers are of different sizes – they need to be replaced in the correct position in order that the wheel runs centrally.;
- The wheel bearings should be removed by hitting the end of the shaft with a soft faced mallet or similar. Once one is removed, use the shaft to drive the second one out. Note the direction that the shaft is inserted in the wheel in order that it can be replaced in the same way;
- Reassemble the wheel using the new bearings – if necessary drive the new bearings onto the shaft using an appropriate piece of pipe / socket etc.;
- Reassembly is the reverse of dismantling. It may be easier to re-install the chain if you slacken both adjusters to allow the wheel to go forward into the chassis slightly. NB do not tighten any of the bolts until you are happy with the chain tension.

Chain replacement

- Lift the rear of the buggy off the ground on suitable blocks;
- Rotate the rear wheel until the removable chain link is visible – it is easiest to remove adjacent to the rear sprocket. Remove the spring clip and plate, then remove the joining link, and remove the chain;
- On both sides slacken the 2 x 14mm wheel shaft nuts;
- Starting on the brake side, remove the 2 x 8mm bolts attaching the caliper to its mounting bracket. Lift the brake caliper out of the way (handbrake should be off, and NB brake should not be operated while caliper is not on the disc);
- Slacken the 2 x 10mm locknuts from the bolts attaching the caliper bracket to the chassis, and then slacken the 2 x 8mm bolts (the bracket will remain attached to the buggy as the rear wheel shaft passes through it);
- On both sides slacken the 2 x 13mm locknuts from the bolts situated in front of the wheel shaft, and then slacken the 2 x 10mm bolts;
- Slacken the 2 x 10mm chain adjuster nuts located one each side at the rear of the buggy;
- Install the new chain. It is generally easiest to locate the two ends onto the rear sprocket on adjacent teeth to insert the joining link;
- Gradually tighten the two chain adjuster nuts. The aim is to have between 10mm to 15mm free play on the longest travel of the chain, and maintain the wheel in a position so that the chain is running in a straight line between the rear sprocket and the motor sprocket;
- Once you are happy with the tension, re-tighten all the bolts and lock nuts, and re-install the brake caliper;
- Replace the body panel bolts.

Chain Adjustment

- Lift the rear of the buggy off the ground on suitable blocks;
- On both sides slacken the 2 x 14mm wheel shaft nuts;
- Starting on the brake side, remove the 2 x 8mm bolts attaching the caliper to its mounting bracket. Lift the brake caliper out of the way (handbrake should be off, and NB brake should not be operated while caliper is not on the disc);
- Slacken the 2 x 10mm locknuts from the bolts attaching the caliper bracket to the chassis, and then slacken the 2 x 8mm bolts (the bracket will remain attached to the buggy as the rear wheel shaft passes through it);
- On both sides slacken the 2 x 13mm locknuts from the bolts situated in front of the wheel shaft, and then slacken the 2 x 10mm bolts;
- Slacken the 2 x 10mm chain adjuster nuts located one each side at the rear of the buggy;
- Gradually tighten the two chain adjuster nuts. The aim is to have between 10mm to 15mm free play on the longest travel of the chain, and maintain the wheel in a position so that the chain is running in a straight line between the rear sprocket and the motor sprocket;
- Once you are happy with the tension, re-tighten all the bolts and lock nuts, and re-install the brake caliper;
- Replace the body panel bolts.

Brake caliper replacement

- Disconnect the hydraulic pipe banjo union from the brake caliper using a 10mm spanner;
- Take care that any brake fluid which comes out of the pipe or caliper does not touch any painted surfaces – it is a highly effective paint stripper;
- Remove the brake caliper from its bracket by undoing 2 x 8mm bolts;
- Install the new caliper complete with brake pads, and tighten into position using 2 x 8mm bolts;
- Re-connect the hydraulic banjo union;
- Inspect the brake fluid level in the reservoir on the handlebars and replenish as necessary using DOT 2 or DOT3 formulation fluid only;
- Slacken the bleed nipple on the brake caliper, and operate the brake lever. This should expel air from the caliper;
- Tighten the bleed nipple whilst continuing to hold the lever (it may be useful to have an assistant when you do this);
- Repeat as necessary until all air is expelled, whilst continuing to maintain the fluid level within the reservoir.

Brake pad replacement

- Remove caliper assembly from buggy by undoing 2 x 8mm;
- NB do not remove the hydraulic pipe;
- Press the caliper mounting bracket in the direction of the arrow in the diagram ie towards the cylinder piston;
- Brake pad no. 2 has two lugs which locate it in position in the mounting bracket; as the mounting bracket moves down, the pad should emerge from the caliper. If it does not, lever it upwards from the underside of the mounting bracket;
- Once pad no. 2 is removed, and the bracket is fully pressed into the caliper, pad no.1 can be removed. It may need to be twisted to remove first from one mounting pin;
- Once removed from one pin, the pad will swivel to allow removal from the second pin;
- Replacement of new pads is the reverse of the above instructions.

Brake cut-out switch replacement

- The switch is located underneath the brake lever, and has two spade terminals connected to it;
- Remove the two spade terminals;
- Remove the small cross headed screw which holds the switch in position;
- Install the new switch, fastening the screw, and replacing the two spade terminals

Brake lever replacement

- The brake lever pivots around a pin which has a screwdriver slot in its top, and a 10mm nut at the bottom;
- Hold the pivot bolt in position with an appropriate flat-bladed screwdriver, and undo the 10mm nut;
- Remove the pivot bolt, retaining the parking brake button assembly, and discard the old brake lever;
- Reassemble using the new brake lever;
- Take care not to over-tighten the 10mm nut as this may result in the brake lever being stiff to use, and not releasing automatically after use.

Throttle replacement

- Remove any cable ties securing the throttle wire to the handlebar assembly using side-cutters;
- Undo the throttle from the handlebars using an appropriately sized hex key;
- Undo the bottom of the seat spring / shock absorber from its bracket and hinge the front of the buggy forwards (NB you will need to remove the bag stand to make this possible);
- Disconnect the two multi-pin pugs connected to the throttle wiring. There will be a nine pin plug, and a 4 pin plug;
- Remove any additional cable ties which are securing the throttle wires underneath the bodywork, again using side-cutters;
- You will need to remove the 4 wires, which are connected to the throttle from these two connectors. Each one of the metal pins in the connector is located by a small metal tang, which will need to be pushed back using a small screwdriver. Once each tang is pushed back, the metal pin will pull from the nylon body of the connector;
- Install the new throttle on the handlebars, tightening with the hex key;
- Cable tie the wire to the handlebar assembly, and feed under the bodywork;
- Push each of the 4 metal pins into the appropriate position in the connectors;
- Replace the connectors, and cable tie any loose cable under the bodywork.

Controller replacement

- Undo the bottom of the seat spring / shock absorber from its bracket and hinge the front of the buggy forwards (NB you will need to remove the bag stand to make this possible);
- Remove both footplates from the buggy. Each is secured by three cross-headed bolts;
- Remove the battery compartment cover, and disconnect the two block connectors for the charging points, and the two block connectors for the battery packs;
- Undo the four bodywork screws securing the front of the battery compartment, and remove the front section of the battery compartment;
- Disconnect the three block connectors adjacent to the controller which is situated underneath the main part of the body;
- Remove any cable ties securing the main motor feed wires from the controller (these are cables coloured blue and yellow, and connected to black and red cables going to the motor). NB make a note of which cable goes to which;
- Remove any insulating tape around these connections, and then undo the small nuts and bolts which connect the ring terminals
- Remove the four wing nuts and washers which secure the controller to the chassis;
- Remove any cable ties, and bend back any metal lugs which secure the battery connection / charging point harness to the chassis;
- Carefully remove the controller and its associated wiring from the buggy;
- Install the new controller into position, and secure using the wing nuts and washers;
- Feed the battery / charging harness back into position, using cable ties as necessary;
- Re-connect the motor wires to the controller, and secure using nuts and bolts. It is important that these connections are tight. Re-insulate as necessary using insulating tape, and secure using cable ties.
- Re-connect the three block connectors;
- Replace the battery compartment front section, top cover, and footplates;
- Re-connect the charging points and batteries. You are likely to experience a large spark when you re-connect the first battery pack – this is quite normal;
- Lower the body, and replace the bolt at the bottom of the seat spring / shock absorber.