

Model 1200 Service Instructions

2024 version

SAFETY INFORMATION

Important: - Always use appropriate PPE while servicing your Aquaflame – wear eye protection & protective gloves.

Do Not breathe in the dust or vapour from the solution.

DO carry out the service in a well-ventilated area.

You will need a set of Torx screwdrivers to fit the different size screws throughout the machine. A metal pan scrub & metal brass brush.

Read through the instructions before starting the service work.

**DO NOT UNDERTAKE THE SERVICE IF YOU ARE NOT CONFIDENT
DOING SO YOURSELF.**

**AQUAFLAME TAKES NO RESPONSIBILITY OR LIABILITY FOR SERVICES
CARRIED OUT BY THE USER OF THIS SERVICE KIT.**

Aquaflame has a full-service department that can service most types of Aquaflame / micro-weld machines. service@aquafamesystems.com if you are not confident to carry out the service, please contact Aquaflame.

IMPORTANT - Before removing the cover ensure the machine is disconnected from the mains electricity supply and the fuse is removed.

**The potassium hydroxide solution in the inner cell is caustic. DO NOT
under any circumstance attempt to syphon by mouth.**

Hand Syphons can be purchased online or from Aquaflame.

**If the inner cell is full of solution, carefully syphon out the solution
using a hand syphon pump into a suitable container.**

The solution must be disposed of safely according to your local regulations.

Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200 –

Make sure your machine **is not connected** to the electricity supply – remove the plug from the socket at the back.

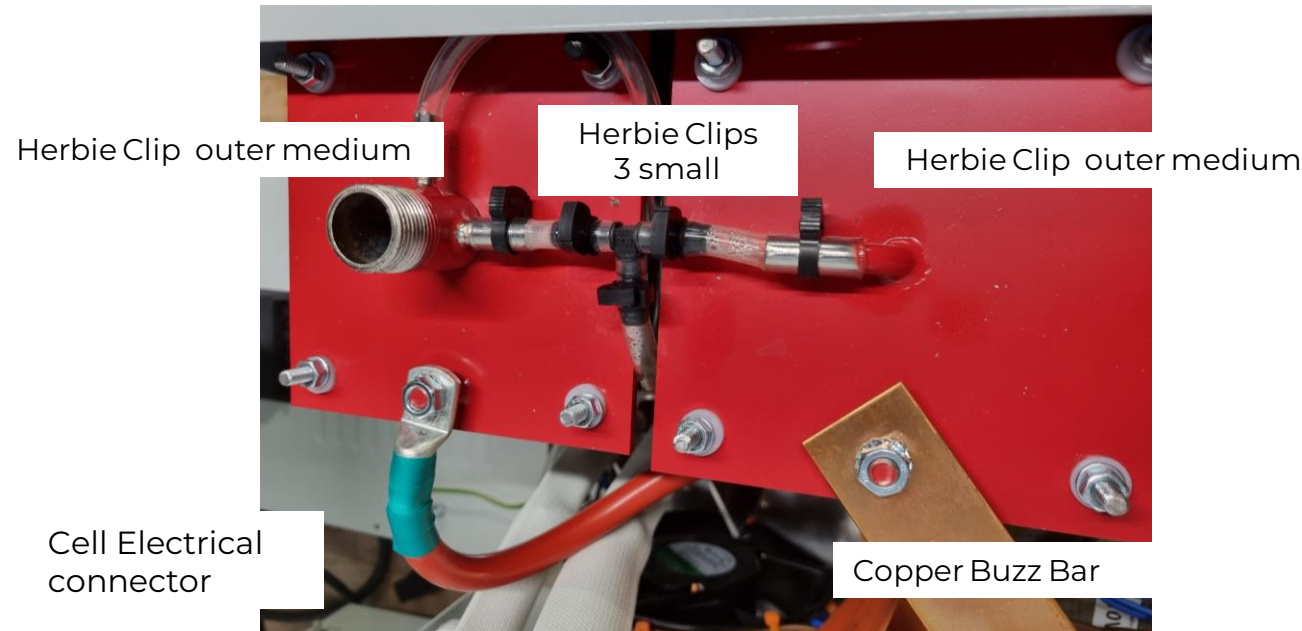
Unscrew the grey cell top cap from the top of the machine and place on one side.

Remove the booster from the bracket and disconnect the rubber tubing from the gas outlet. Set the booster aside.

Remove the Torx screws from the case cover and remove the case top. Keep these screws safe as they are needed. Carefully detach the fan lead and case earth leads.

Remove the M8 nut connecting the main cable or copper buzz bar from the transformer and the red inner cell top. (See images)
Remove the cell electrical connector from the other cell. (orange cable)

Remove the Herbie clips and T-piece connector from the cells – remove the tube from the top cell remove all other tubing from the Aquaflame.



Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200 –

Unscrew the 4 nuts from each of the cell tops and remove the white plastic cell insulators and washers.

Lift out the red topped inner cells from the outer cells and remove the rubber gaskets. Dispose of the rubber gasket safely.

Hand syphon out as much of the Koh as possible from both the cells into a plastic jug or bottle – Potassium hydroxide is caustic take precautions.

Unscrew the 2 white plastic sight tube brackets from inside the front case to free the sight tube.

Remove the outer cells from the base of the machine by unscrewing the eight locating nuts underneath the case and taking the whole cells out of the case.

Remove the diodes and aluminium heat sinks from the bottom of the case.

Rinse the inner cells with hot water; **DO NOT USE ANY CLEANING DETERGENTS OR AGENTS.** Scrub the inside of the inner cell with a metal pan scrub to remove any rust or residue from the inside of the cells. NB – do not scratch the plating on the outside of the inner cell.

Remove the sight tube from the outer cell and rinse the cell with hot water, **DO NOT USE ANY CLEANING DETERGENTS OR AGENTS.** Scrub inside the cell with a wire brush to remove debris or rust.

Clean the aluminium heat sinks with the wire brush to remove any debris to create a clean surface.

Thoroughly dry both the inner and outer cells, preferably with a hot air gun to prevent surface rust.

Model 1200
Service Instructions

2024 version

SERVICE INSTRUCTIONS Model 1200

While the cells are drying, brush out any accumulated dust inside the machine with a stiff bristle brush or paintbrush. Take care around the wiring so as not to accidentally disconnect any of the connectors.

If the base has any signs of dried solution, then carefully clean it with a wire brush. Take care not to breathe in the dust.

Re-Assembly

Replace the pressure switch – make sure you put the wiring in the correct positions on the pressure switch. (See diagram of wire placement.)

Replace the small 10mm blue gasket provided on the pressure switch air outlet.

Replace internal flashback arrestor. (See image)

Connect the pressure switch and flashback with 220mm of 5mm clear PVC tube. Then connect the 570mm of 5mm clear PVC tubing to the other end of the flashback.

Connect 300mm length of 6mm clear PVC tube to the outer cell & secure it with the Herbie clips provided.

Secure the first outer cell to the base using the larger M6 washers and M6 nuts provided. Use the original Tufnols in the base to raise the cell off the metal. These only go under the cell that has the single connector on the top.

Connect the 16mm tubing to the large cell connector tube and loosely secure with the large Herbie clip.

Put the new gasket onto the inner cell and place them both into the outer cell.

Model 1200 Service Instructions

2024 version

SERVICE INSTRUCTIONS Model 1200

Replace the new white plastic cell insulators and washers onto each of the four cell rods and through the holes in the inner cell. (See image)

Replace the small M6 washers and the M6 nuts onto the cell rods - do not fully tighten yet.

Place the second cell into the base of the case and attach the other end of the 16mm tubing using the second large Herbie clip – secure the bolts to the bottom of the case, no Tufnol are under the second cell.

Put the new gasket onto the inner cell and place them both into the outer cell.

Replace the new white plastic cell insulators and washers onto each of the four cell rods and through the holes in the inner cell. (See image)

Replace the small M6 washers and the M6 nuts onto the cell rods - do not tighten yet.

Replace the t-piece to the cell top with the 50mm & 65mm 6mm clear tubing use the 2 medium Herbie grips the 2 medium sizes go on the two outside cell connectors. The three small Herbie grips go on the T-piece.

Then connect the 6mm - 460cm clear PVC tube from the T-piece to the gas outlet.

Reconnect the copper buzz bar to the top of the cell with the single outlet. Make sure this is screwed in tightly.

Reconnect the orange cable to the side of the cell with the single outlet and the top of the cell with the main filling cap. *See image for correct way.*

Reconnect the 5mm - 570mm from the flashback to the top cell tucking the tubing between the cells and making sure it does not twist.

Model 1200
Service Instructions

2024 version

SERVICE INSTRUCTIONS Model 1200

Replace the rubber case top insulator with the one provided.

Place the case top back on and use this as a jig to centralise the inner cell moving the filler tube to place the cell into position. Remove the case top and make sure the rubber gasket is covering the entire outer cell.

Then tighten the nuts on the inner cell.

Connect the fan and earth case wires back on and secure the top case with the screws.

Replace the polo and plain washers inside the grey plastic top cell cap and tighten to the cell filling tube.

Carefully pour fresh electrolyte solution into the cell. *Use the getting started instructions to fill your machine*

Model 1200 Service Instructions 2024 version

Booster

Clean the booster out with hot water – drain the water out as much as possible.

Replace the Chemical proof sight tube on the stainless-steel booster with the new one provided.

Replace the polo and plain washers inside the steel booster top cap.

Put fresh MEK solution in the booster and tighten the steel booster cap. 220ml is the correct amount to refill
Connect the torch and booster to the machine with the new neoprene rubber tube provided.

Place the fuse back into the fuse holder and plug the machine into a circuit breaker.

Recheck you have followed all the instructions closely.

SERVICE INSTRUCTIONS Model 1200

Turn on the machine and allow 2 minutes for the gas to generate through the system.

Do the leak tests as indicated on the front of the machine to check the unit is sealed correctly.

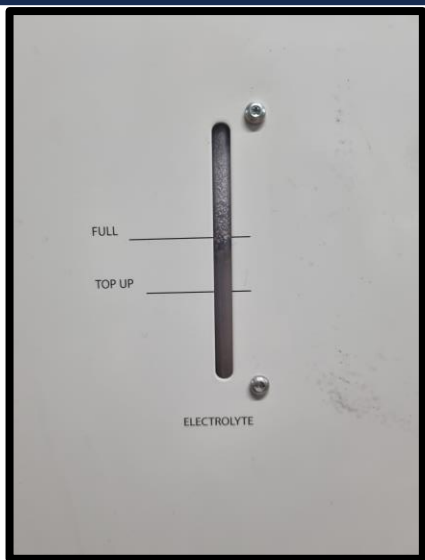
Fit the corrosive label provided to the top of the machine near to the deionised water filler cap.

The PVC tubes are a tight fit so gently apply a heat gun to soften the tubes before attaching. A small amount of petroleum jelly will also help to slide the tubes into place.

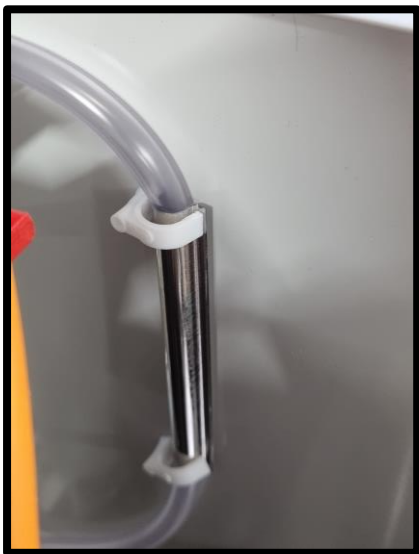
Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200

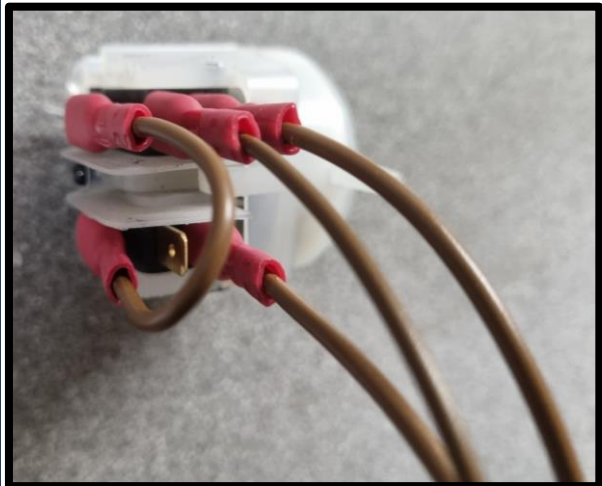
Sight tube clips & screws



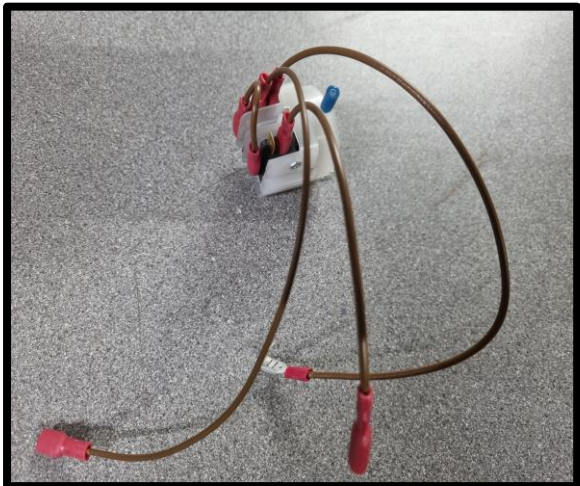
Sight tube clips & screws



Pressure Switch Replacement



Pressure Switch Replacement



Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200

No Herbie clip on this tube outlet



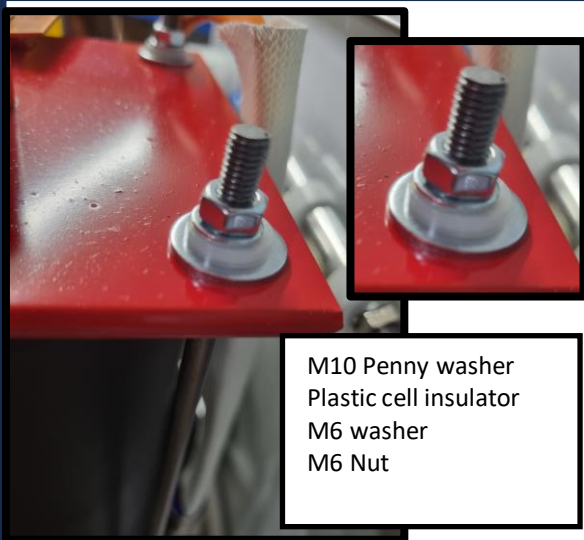
Transformer to the top cell



Flash Back arrestor to
pressure switch



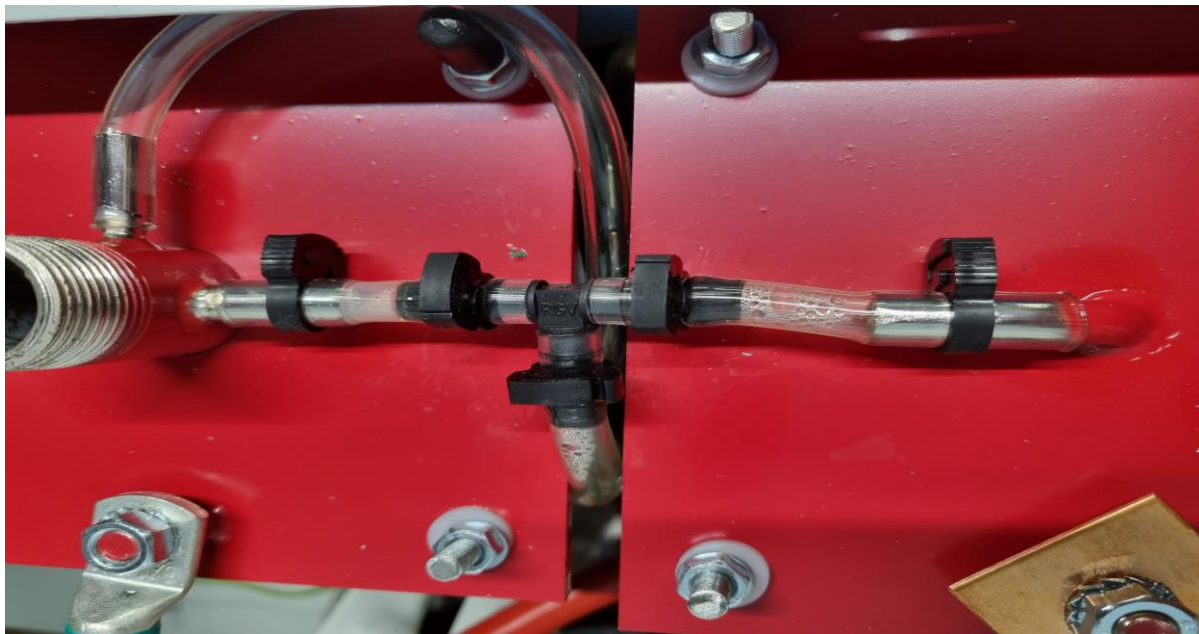
Plastic cell top insulators



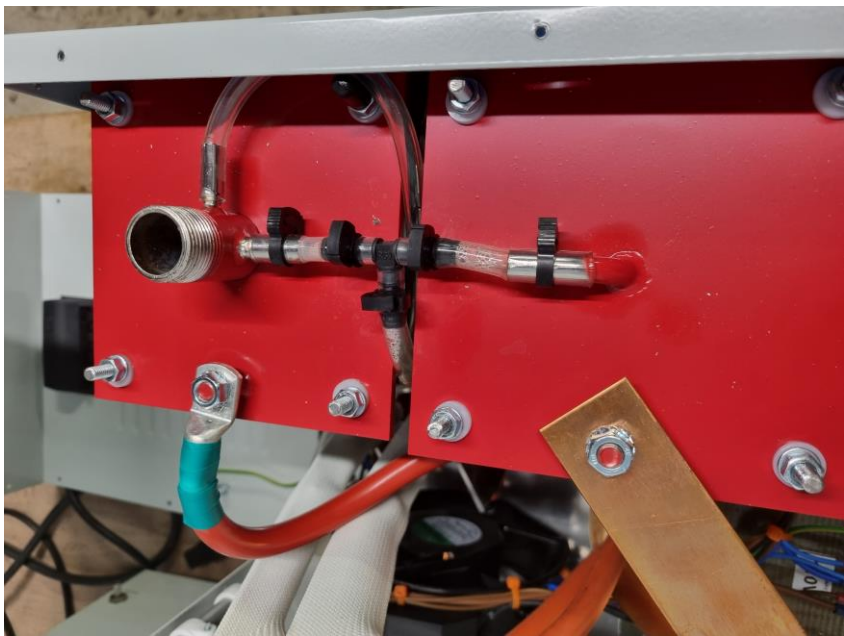
M10 Penny washer
Plastic cell insulator
M6 washer
M6 Nut

Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200



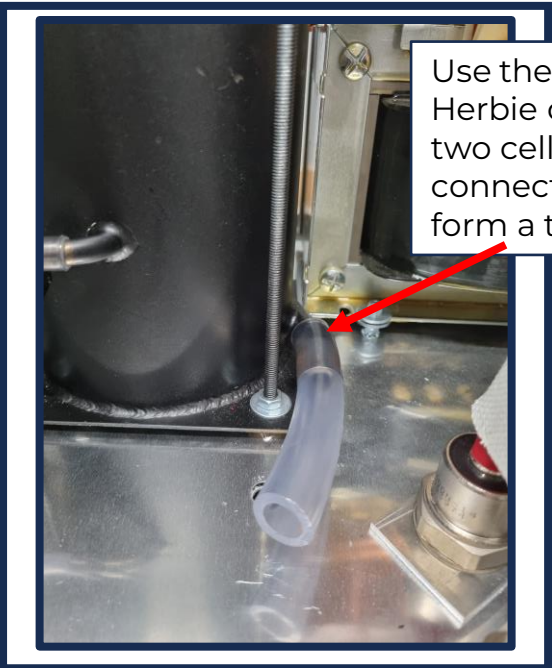
Images of the different connectors for the T-piece & top cells



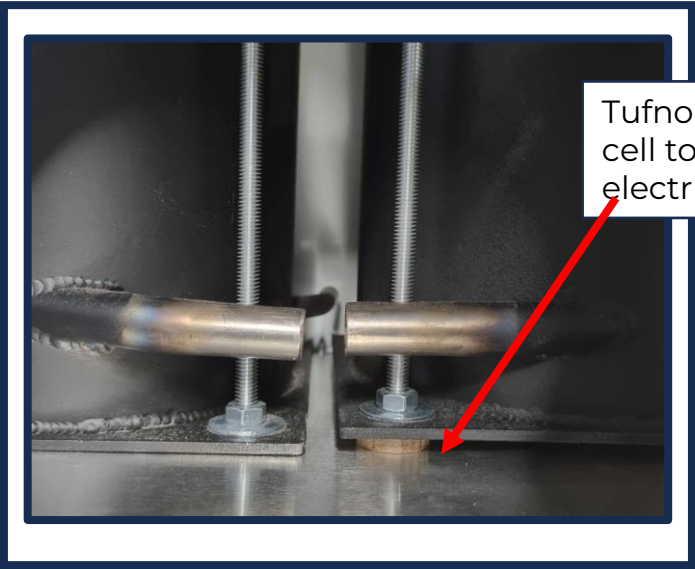
Model 1200
Service Instructions
2024 version

SERVICE INSTRUCTIONS Model 1200

Images of the Tufnols & the large cell connector tubes.



Use the large
Herbie clip on the
two cell
connectors to
form a tight seal.



Tufnols under the
cell to stop
electrical contact.

