POWER TEC

92418

Plastic Welding Kit

For welding and repairing plastic parts or components, vehicle bumpers, broken headlight fixings, cracks, fractures and deep scratches.

YouTube

Specially designed support slot for hot iron

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92418

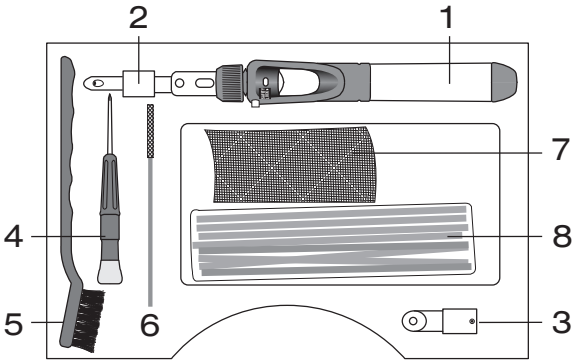
Butane-powered Plastic Welding Kit

Due to the high costs associated with the replacement of plastic panels (bumpers, inner wings, headlamp bodies, engine covers, motorcycle bodywork, etc), the kit was developed to repair small to medium sized damage that could render a panel unusable.

Thin plastic parts can be welded due to applied heat being contained in a small area. Advantage over similar devices that gas exhausts forward in the direction of welding therefore speeding up material warm-up.

Kit is supplied with two sizes of welding head, Stainless Steel reinforcing mesh and plastic welding filler rods suitable for ABS (acrylonitrile butadiene styrene), PP (polypropylene), PE (polyethylene) and PS (polystyrene) plastics, plus cleaning utensils (wire brush and cleaning rod).

Components:



Ref.	Component
1	Plastic Welding Tool
2	Welding Head (9mm)
3	Welding Head (12mm)
4	Precision Screwdriver
5	Wire Brush
6	Cleaning Rod
7	Reinforcing Mesh (Stainless Steel)
8	Plastic Welding Rods

Controls:

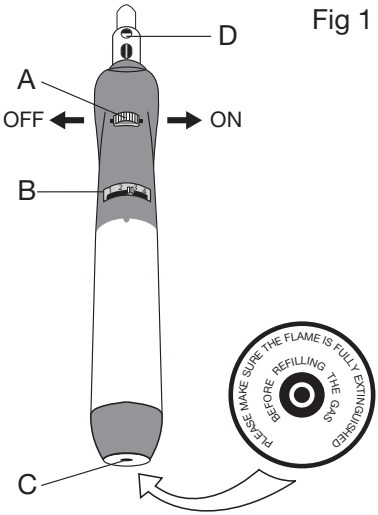


Fig 1

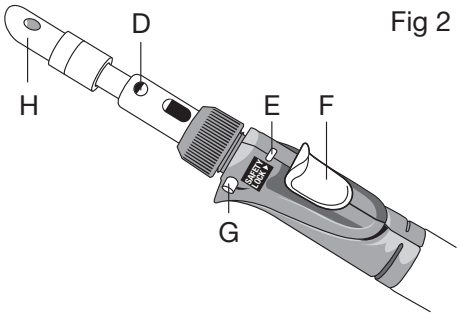


Fig 2

Ref.	Controls: (refer to Figs 1 & 2)
A	OFF-ON (continuous)
B	Gas flow control
C	Gas fill valve
D	Catalyst block
E	Safety lock button
F	Ignition slider
G	Gas cut-off button
H	Welding head

Ignition:

- Fit welding head (**H**) first and tighten securely with screwdriver supplied. Size of head is dictated by job/component to be welded.
- Move gas flow control (**B**) approximately to position 3.
- With one hand hold pressure against the OFF-ON switch (**A**) in the ON (continuous) direction while simultaneously depressing the safety lock button (**E**). Then sharply depress the ignition slider (**F**); as the ignition slider moves down the ON-OFF switch will move to the ON position.

- Move the gas flow control (**B**) down to position 2. With experience the operator will ascertain the best position to provide the correct amount of heat for the size of welding head being used.
- As the welding head heats up the (normally white) catalyst block (**D**) will turn orange. **CAUTION:** All metalwork forward of the control section will get very hot — do not touch. Take care to keep the welding head and metal body away from flammable objects.
- The gas exhausts forward in the direction of welding thus providing a hot air flow onto the job. This hot air flow can be interrupted by pressing the gas cut-off button (**G**); releasing the button restores the flow.

Shutting off:

- Move the OFF-ON switch (**A**) left to the OFF position.
- Let the plastic welder fully cool down before replacing in case.

Using the Plastic Welder:

With experience, many uses can be found for the plastic welding tool. An example of a repair is outlined below:

Repairing a split or crack in a plastic bumper:

- Using a mini-sander or belt-sander fitted with a 120-180 grit disc, remove paint and primer from the surrounding area and bring the level of the surface down around the area to be repaired. Then feather off with a DA sander.
- Switch plastic welder ON (refer to **Ignition** notes above).
- **Be aware** that the metal body (not just the welding head) of the plastic welder gets very hot in use and can cause serious burns if handled. Take care to keep the tip and metal body away from flammable objects.

- If the split goes to the edge of the panel, it is recommended to reinforce with a hot staple inserted at the top edge of the split. The edge is held straight and flush as the staple is applied. (Power-TEC Cordless Hot Stapler: part number: 92373, or Hot Stapler Plastic Repair Systems: part numbers 91781 or 92259.)
- As the plastic welder warms up, if necessary, the stainless steel reinforcing mesh can be cut to size. For a split it will be cut to strips about 12-25 millimetres wide. We recommend that Technicians Scissors (Power-TEC part number: 92318) are used to cut the mesh.
- When the plastic welder has come up to temperature initially tack the mesh onto the end of the repair. The hot plastic welder is used to heat the mesh and soften the plastic of the panel as the mesh is pressed into the plastic. As the melted plastic comes through the mesh it can be smoothed over with the iron.
- If the crack or damaged area follows a curve, the stainless steel mesh can be formed to also follow the curve. The intention is to bury the mesh below the surface of the plastic, smoothing off with the iron as you proceed.
- If required, to bring the level of surface back up and to add strength we can use the welding filler rods to add material. Use the correct type of welding rod for the plastic substrate being repaired.

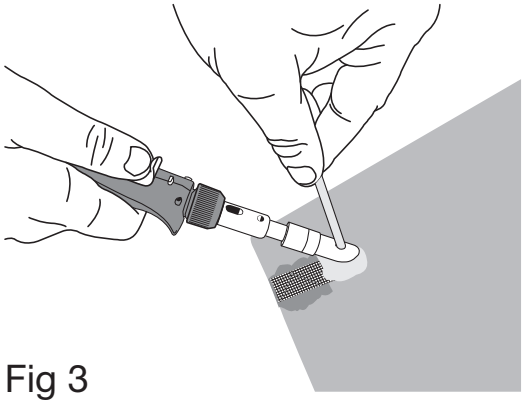


Fig 3

- Refer to Fig 3. Heat up the adjacent area with the welding head before applying the filler. The filler rod is melted and applied to the job by inserting through the aperture in the welding head.
- Then melt into the adjacent plastic and smooth over using the welding head to achieve the desired shape.
- Remember that you can stop repair and then recommence at any time. This is a heat-based process. You are not dependant on any chemical curing so you can stop and start when convenient.
- The repair is then sanded down to continue with the preparation and painting.
- When finished, the welding head can be cleaned up using both the included wire brush (**5**) and cleaning rod (**6**).

Gas refilling:

- Let the plastic welder fully cool down before gas filling.
- Ensure the switch (**A**) is turned to the OFF position before filling.
- Invert the unit; insert the gas container's nozzle vertically into filling valve (**5**).
- When gas escapes from filling valve, remove the nozzle from the filling valve.

Spares:

Welding filler rods and reinforcing mesh are consumables and are also available separately:

Welding rods:
ABS - **Part No. 92420**
PS - **Part No. 92421**
PE - **Part No. 92422**
PP - **Part No. 92423**

Stainless Steel reinforcing mesh - **Part No. 92424**

Caution:

- Failure to use the plastic welder correctly may result in fire, damage and/or personal injury.
- Keep hands and body clear of the welding head when operating as it becomes very hot.
- **Do not leave an operating plastic welder unattended.**
- Do not get the plastic welder wet or attempt to cool the welding head with water.
- Caution — contains flammable gas under pressure.
- Do not fill gas or store near a naked flame, heater or combustible materials.
- Use only high quality butane gas.
- Butane is highly flammable — handle with care.
- Do not drop, puncture or incinerate.
- Do not store or operate at temperatures above 50ºC.
- Keep out of reach of children.
- Let the plastic welder fully cool down before replacing in case.

Note: no responsibility is accepted for incorrect use of the plastic welding kit.

Safety First. Be Protected.

Our products are designed to be used correctly and with care for the purpose for which they are intended. No liability is accepted by the Tool Connection for incorrect use of any of our products, and the Tool Connection cannot be held responsible for any damage to personnel, property or equipment when using the tools. Incorrect use will also invalidate the warranty.

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