

# ELECTROSPOT 8000 ELECTROSPOT 9500

**INSTRUCTION MANUAL** 







### **INSTRUCTIONS FOR**

# ELECTROSPOT 8000 ELECTROSPOT 9500

Thank you for purchasing a Sealey ElectroSpot welder. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



IMPORTANT: BEFORE USING THIS PRODUCT, PLEASE READ THE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE, FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

#### 1. SAFETY INSTRUCTIONS

#### 1.1. ELECTRICAL SAFETY

□ WARNING! ELECTRICAL INSTALLATION OF SPOT WELDER TO A 3 PHASE 415VOLT SUPPLY MUST ONLY BE CARRIED OUT BY A QUALIFIED ELECTRICIAN. Make sure that the power supply cable is correctly connected to the Earth. It is the user's responsibility to read, understand and comply with the following:

You must check all electrical equipment and appliances to ensure that they are safe before using. You must inspect power supply leads, plugs and all electrical connections for wear and damage. You must ensure the risk of electric shock is minimised by the installation of appropriate safety devices. An RCCB (Residual Current Circuit Breaker) should be incorporated in the main distribution board.

1.1.1. The *Electricity At Work Act 1989* requires all portable electrical appliances, if used on business premises, to be tested by

- a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.

  1.1.2. The *Health & Safety at Work Act 1974* makes owners of electrical appliances responsible for the safe condition of the appliance
- and the safety of the appliance operator. *If in any doubt about electrical safety, contact a qualified electrician.*1.1.3. Ensure that the insulation on all cables and the product itself is safe before connecting to mains power supply.
- 1.1.4. Ensure that cables are always protected against short circuit and overload.

You must also read and understand the following instructions concerning electrical safety.

- 1.1.5. Regularly inspect power supply, leads, plugs and all electrical connections for wear and damage, and especially power connections, to ensure that none is loose.
- 1.1.6. Important: Ensure that the voltage marked on the product is the same as the power supply to be used. A three phase plug must be fitted to this machine.
- 1.1.7. DO NOT pull or carry the appliance by any of the input or output cables.
- 1.1.8. DO NOT pull power plugs from sockets by the power cable.
- 1.1.9. DO NOT use worn or damage leads, plugs or connections. Immediately replace or have repaired by a qualified electrician.
- 1.1.10. DO NOT use this product with a cable extension reel.
- 1.1.11. THE SPOT WELDER HAS A 'SINGLE PHASE CABLE' BUT MUST BE CONNECTED TO A THREE PHASE SUPPLY.

This product must be fitted with a 3 phase plug according to this diagram, and will require a 32 amp per phase supply. You must contact a qualified electrician to ensure that an appropriately fused supply is available.

Connect GREEN/YELLOW wire to Earth (E or (1)) terminal.

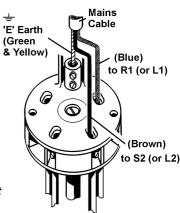
Connect BLUE wire to R1 (or L1) terminal.

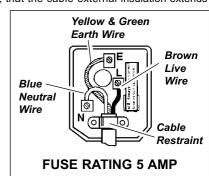
Connect BROWN wire to S2 (or L2) terminal.

Note that both brown and blue wires will be 'live' when the plug is connected to the supply.

Finally, check that there are no bare wires, that all wires have been connected correctly, that the cable external insulation extends beyond the cable restraint and that the restraint is tight.

- 1.1.12. The water cooler (ElectroSpot 9500 only) will require a BS 1363/A 3 pin plug to be fitted as follows (UK only):
  - a) Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.
  - b) Connect the BROWN live wire to the live terminal 'L'.
  - c) Connect the BLUE neutral wire to the neutral terminal 'N'.
  - d) After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.
  - e) Fit a fuse, rated as shown on the right, to the plug.





#### 1.2. GENERAL SAFETY

Note: Spot welding produces sparks, fused metal projectiles and fumes which are dangerous.

- □ WARNING: Unplug from power supply before connecting cables and accessories, or before performing maintenance or service.
- Ensure that the welder and all cables are in good order and condition.
- Replace or repair damaged parts. Use genuine parts only, unauthorised parts may be dangerous and will invalidate the warranty.
- ✓ Keep the welder clean for best and safest performance.
- ✓ Locate the welder in a suitable work area and ensure that good ventilation is provided.
- Keep work area clean and tidy and free from unrelated materials and ensure that there is adequate lighting.
- WARNING: Ensure that no flammable or combustible materials are in, or near, the work area. Welding containers or pipes which hold, or have held, dangerous gases or substances may cause explosion or fire. Materials cleaned with chlorinated solvents, or varnished surfaces pose the danger of toxic fumes.
- WARNING: Spot welding generates strong magnetic fields. Take great care to ensure that there are no items near your work area that may be attracted to the welding process and ensure that there are no items that may be damaged or adversely effected by operating the welder.
- □ WARNING: Electronic watches may be damaged. Persons wearing heart pace-makers must not operate, or be in the area of the welder.
- ☐ WARNING: You MUST use safety goggles or a face shield, such as the Sealey SSP9, or SSP10.
- ▲ DANGER! Permanent eye damage may result if you do not use the correct protection. Also wear safety welding gauntlets and dry, oil-free safety protective clothing to protect yourself from sparks and hot droplets of fused metal. Cover exposed flesh to avoid burns.
- X DO NOT operate the welder if it or the cables are damaged.
- x DO NOT hold or touch the pieces to be welded. All workpieces must be suitably clamped.
- x DO NOT place your hands near the electrodes danger of burning and/or crushing.
- ✓ The operator must be fully trained in the use of the welder and must be aware of the potential dangers.
- ✓ The work area must be closed off in order to keep non-essential persons at a safe distance from the welding operation. Persons within the work area are subject to the same dangers as user.
- ✓ Remove ties, watches, rings and other jewellery and contain long hair.
- x DO NOT use the welder for any purpose other than that for which it is designed.
- X DO NOT use the welder in damp or wet locations, or outside when raining or snowing.

#### ▲ DANGER! DO NOT weld near inflammable materials, solids, liquids, or gases.

- X DO NOT operate welder while under the influence of drugs, alcohol or other medication, or if tired.
- X DO NOT touch newly welded parts as they will be very hot.
- x DO NOT pull the welder by the cable, or the welding clamp.
- ✓ When not in use, switch off machine and remove the plug from the power supply. Store in a safe, dry location.

#### 1.3. ELECTROMAGNETIC FIELDS

When operating, the spot welder produces a very intense electromagnetic field which could cause malfunctions and/or damage to the following:

Pace makers Metallic prostheses Watches

Magnetic cards Instrumentation Data transmission systems or local telephone lines

#### 1.4. ELECTROMAGNETIC COMPATIBILITY

Spot welding equipment which is connected to a public electricity supply can cause radio frequency interference (e.g. poor radio/television reception) for other supply users.



### 2. INTRODUCTION

Microprocessor controlled power unit with push-button control automatically recognises which welding accessories are fitted and adapts power and duration characteristics for optimum results. Includes operator override. Features pulse facility for welding high stress materials. Checkpanel indicates machine status including: supply, thermostat, supply over/under voltage. Piggy-back water-cooler cools both power cables and arms for maximum duty-cycle (9500 only). Supplied with pneumatic pincers and set of arms. Includes trolley.

#### 3. CONTENTS & SPECIFICATIONS

Unpack the product and check that there are no missing or damaged parts. If you do experience a problem contact your supplier immediately. Your kit should consist of the following: Spot welder and pneumatic air cooled clamp - 130mm arms (water cooled, 9500 only) and standard electrodes - with cables. Filter-pressure regulator, gauge and electrovalve (compressed air supply). Water cooler (9500 only). Trolley.

#### **SPECIFICATIONS:**

	ElectroSpot 8000	ElectroSpot 9500
Power supply	400V(380V-415V)	400V(380V-415V)
	- 1ph-50/60Hz	- 1ph-50/60Hz
Power supply - water cooler		230V - 1ph-50/60Hz
Electrical protection class		
Insulation class		
Casing protection class	IP22	IP22
Dimensions with trolley (LxWxH)	.650x400x1100mm	650x400x1100mm

#### Input

	ElectroSpot 8000	ElectroSpot 9500
Max welding power (Smax)		58kVA
Rated power at 50% (Sn)	6.7kW	.(water cooled)13.0kW
Power factor at Smax (Cosφ)		
Delayed mains fuses		
Automatic mains switch	25A	
Mains cable $(L \le 4m)$	3x2.5mm²	3x4mm²
Water cooler	N/A	

#### Output

	FlectroSpot 8000	ElectroSpot 9500
	Liecti Oopot 0000	Liecti oopot 3300
Secondary no-load voltage (U₀max)		
Max welding current (I <sub>2</sub> max)	4.5kA	7kA
Capacity (low carbon steel)	max. 1.5+1.5mm	max. 3+3mm
Duty cycle	3%	
Spots/hour on steel 1+1mm - air cool	ed clamp 200	
water cooled arms a	nd clampN/A	
Max. force at electrodes		
Min. coolant flow		
Automatic spot welding current adjus-	tment.	

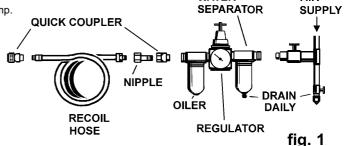
Automatic spot welding time adjustment to suit sheet thickness and clamp used.



### 4. AIR SUPPLY

An air supply is required to operate the pneumatic clamps. See fig. 1 for the recommended hook-up.

- 4.1. Ensure that the air valve is in the "off" position before connecting to the air supply.
- 4.2. The pneumatic clamps require a compressed air supply of 6 to 8 bar connected to the filter-regulator at the rear of the welder.
- 4.3. □ WARNING! Ensure that the air supply does not exceed 8 bar while operating the welder. Too high an air pressure and/or unclean air will shorten the product life, due to excessive wear, and may be dangerous, causing possible damage and/or personal injury.
  WATER AIR
- 4.4. Drain the air tank daily. Water in the air line will damage the clamp.
- 4.5. Clean the compressor air inlet filter screen weekly.
- 4.6. Line pressure should be increased to compensate for unusually long air hoses (over 8 metres). The minimum hose diameter should be 10mm I.D. and fittings must have the same inside dimensions.
- 4.7. Keep hoses away from heat, oil and sharp edges. Check hoses for wear, and make certain that all connections are secure.



#### 5. TROLLEY ASSEMBLY

A diagram showing the assembly of the trolley may be found at the end of these Instructions.

□ WARNING! DO NOT attempt to put the spot welder onto the trolley until you are certain that all the trolley assembly fixings are tight and that the wheels have been correctly mounted.

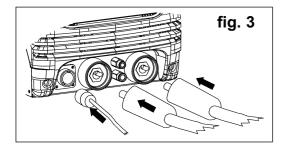
#### 6. INSTALLATION - ELECTROSPOT 8000

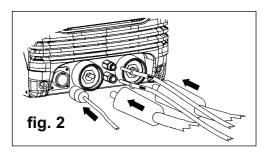
□ WARNING: Unplug from mains power supply before connecting cables and accessories.

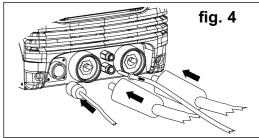
6.1. **ELECTRICAL CONNECTION** 

Ensure that the machine is compatible with your mains supply.

- **PNEUMATIC CONNECTION (fig. 2)** 6.2.
- Connect to an air supply according to Section 4. 6.2.1.
- Connect the two Dinse plugs into the welder sockets. 6.2.2.
- 6.2.3. Connect the two air lines and the control cable.
- MANUAL CLAMP, CLAMP STUDDER & GROUND CABLE CONNECTION (fig. 3)
- 6.3.1. Connect the two Dinse plugs into the welder sockets.
- 6.3.2. Plug in control cable.
- AIR PULLER & GROUND CABLE CONNECTION (fig 4) 6.4.
- 6.4.1. Connect the two Dinse plugs into the welder sockets.
- Plug in air-line from puller to welder air outlet and connect control cable. 6.4.2.







#### 7. FRONT PANEL - ELECTROSPOT 8000

The following describes the functions of the front panel key buttons and meanings of symbols, and refers to fig. 5.

Adjusts the spot welding time above or below the default setting.

Key 2 Selects the appropriate sheet thickness.

Key 3



To spot weld pins. rivets, washers, special washers with the correct electrode.



To spot weld 4mm diameter screws with the correct electrode.



To spot weld 5 & 6mm diameter screws and 5mm diameter rivets with the correct electrode.



To spot weld single stitches with the correct electrode.



To temper sheet with carbon electrode. To upset sheets with the correct electrode.



Intermittent spot welding for patching on sheets with the correct electrode.

The spot welder automatically adjusts the spot welding time to suit the sheet thickness.

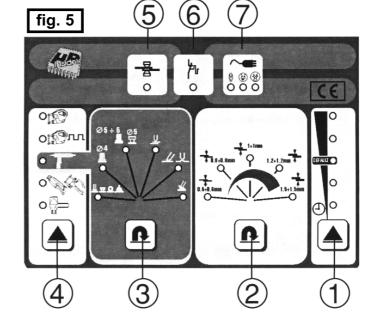
Key 4



Pneumatic clamp. To spot weld opposed sheets accessible from both sides with maximum performance from the spot welder.



Pneumatic clamp.
The welding current is pulsating thus improving spot welding capacity on sheets with a high yield point or on sheets with special protective films. These sheets are used on the bodies of current production automobiles.





Clamp Studder is used in all procedures selectable by pressing key 3.



Manual clamp. To spot weld opposed sheets from both sides.



Pneumatic clamp (air puller) is used to straighten out autobody dents.



Double spot clamp. Used to spot weld sheets which are not accessible from both sides.



LED which indicates welding in progress. 6



LED which indicates thermostatic protection. Signals the spot welder has cut out because of overheating of terminals, welding cables, or the working tool.

7



LED indicating supply connected.



Supply voltage low.



Supply voltage correct.



Supply voltage high.

#### 8. INSTALLATION - ELECTROSPOT 9500

WARNING! Unplug from mains power supply before connecting cables and accessories.

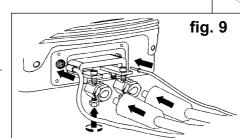
**ELECTRICAL CONNECTION** 8.1.

Ensure that the machine is compatible with your mains supply.

- COOLANT (for water cooled clamp, arms) 8.2.
- 8.2.1 Connect the coolant pipes to the water cooler, as shown in fig. 6.
- 8.2.2. Fill cooler with distilled water (approx. 5 litres).
- Open vent plug (fig. 6.A) and run pump until all air is expelled close plug. 8.2.3.
- PNEUMATIC CLAMP CONNECTION (fig. 7) 8.3.
- 8.3.1. Fit the cable connectors to the welder output plates and rotate to engage (fig.7.1).
- 8.3.2. Retain by tightening the lower nuts.
- Connect the control cable and the two air lines (fig. 7.2). 8.3.3.
- MANUAL CLAMP, CLAMP STUDDER & GROUND CABLE CONNECTION (fig. 8) 8.4.
- 8.4.1. Connect the two Dinse adaptors to the welder output plates.
- 8.4.2. Plug the Dinse plugs into the adaptors and connect the control cable.
- AIR PULLER & GROUND CABLE CONNECTION (fig. 9) 8.5.
- 8.5.1. Connect the two Dinse adaptors to the welder output plates.
- 8.5.2. Connect the two Dinse plugs into the adaptors.
- 8.5.3. Plug air-line from puller into welder air outlet and connect control cable.

#### **DOUBLE SPOT CLAMP** 8.6. CONNECTION

Proceed as for the Pneumatic Clamp but note that there is only one air line to connect.



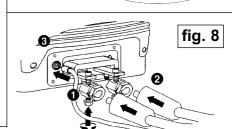


fig. 6

fig. 7

2

#### 9. FRONT PANEL - ELECTROSPOT 9500

- The following describes the functions of the key buttons and the meanings of symbols, and refers to fig. 10.
- Key 1 Adjusts the spot welding time above or below the default setting and, in the programming mode, selects welding current. See Section 9.2.
- Key 2 Selects the appropriate sheet thickness and gives access to the programming mode. See Section 9.2.

Key 3



To spot weld pins. rivets, washers, special washers with the correct electrode.



To spot weld 4mm diameter screws with the correct electrode.



To spot weld 5 & 6mm diameter screws and 5mm diameter rivets with the correct electrode.



To spot weld single stitches with the correct electrode.



To temper sheet with carbon electrode. To upset sheets with the correct electrode.



Intermittent spot welding for patching on sheets with the correct electrode.

The spot welder automatically adjusts the spot welding time to suit the sheet thickness.

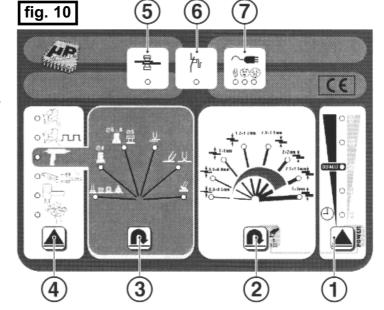
Key 4



Pneumatic clamp. To spot weld opposed sheets accessible from both sides with maximum performance from the spot welder.



Pneumatic clamp. The welding current is pulsating thus improving spot welding capacity on sheets with a high yield point or on sheets with special protective films. These sheets are used on the bodies of current production automobiles.





Clamp Studder is used in all procedures selectable by pressing key 3.



To spot weld opposed sheets accessible from both sides.

Manual clamp.



Pneumatic clamp (air puller) is used to straighten out autobody dents.



Double spot clamp. Used to spot weld sheets which are not accessible from both sides.



LED which indicates welding in progress.

6

**LED** which indicates thermostatic protection. Signals the spot welder has cut out because of overheating of terminals, welding cables, or the working tool.

7



LED indicating supply connected.



Supply voltage low.



Supply voltage correct.



Supply voltage high.

#### 9.2. KEYS 1 & 2

#### Key 1 Spot welding time and current

The welder has a programmed 5kA output suitable for a 10kVA supply. If it is necessary to alter this setting (i.e. the machine indicates low voltage), then it can be increased or decreased with this key before welding commences. Recommended max. welding current in kA equals half the available power in kVA, i.e. available power 8kVA, then set max. welding current to 4kA.

In order to program the current press key 2 for at least 5 seconds, to enter programming mode. Release key 2 and press key 1 to select required current - scale is marked in units of 1000(1k) amps. Press key 2 for another 5 seconds to exit programming mode.

The lower the selected current the thinner the weldable sheet and the welder will automatically indicate if the sheet thickness selected exceeds that suitable for the programmed current.

Key 1 - as well as selecting welding current as above - will adjust spot welding time either side of the factory-set default, when not in programme mode.

#### Key 2 Programme mode and sheet thickness

Key 2, if pressed for more than 5 seconds gives entry to, and exit from, the programming mode. It is also used to specify the thickness of the sheet to be welded. If the LED corresponding to the selected thickness flashes, then the programmed current is insufficient to weld such sheet correctly.

#### 10. OPERATING INSTRUCTIONS

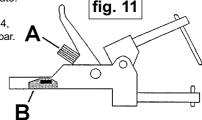
#### 10.1. PRELIMINARY CHECKS

#### 10.1.1. General

At the start of each work cycle it is important to perform the following checks before using the welder.

- 1. Ensure that the machine is compatible with your mains supply by checking the data plate.
- 2. Check that the electrical connections are correct and fully plugged in.
- 3. When you use the pneumatic clamp, connect to an air supply as described in Section 4, check the compressed air connections and set the pressure regulator to between 5 and 8 bar.
- 4. Manual clamp adjustment.

Position a shim (having the same thickness as the sum of the two sheets to be welded) between the electrodes. Ensure that, when the lever is operated, the electrode arms are parallel and the electrode holders are in line. Make adjustments by loosening the locking screws on the electrode holders until you find the most suitable position for the job to be performed. Re-tighten the locking screws. Adjust the force of the electrodes during welding phase by adjusting the knurled



nut (fig. 11.A). Screw this nut clockwise to increase the clamp force, but adjust so that clamp will close exerting enough force to activate the microswitch (fig. 11.B).

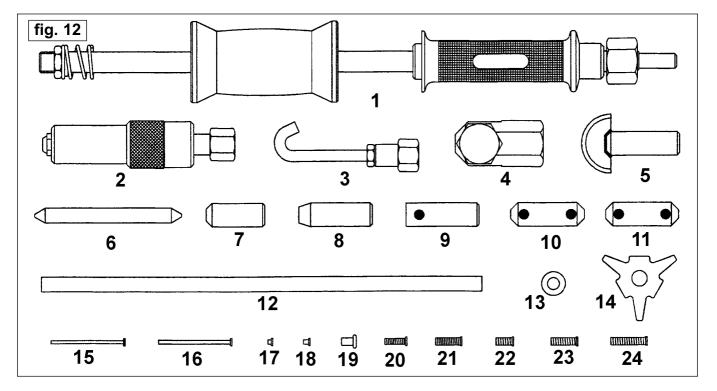
#### 10.1.2. Pneumatic Clamp Mechanical Adjustment

- 1. Turn 'ON' the main switch (located at the rear of the welder).
- 2. Position between the electrodes a shim of the same thickness as the sheet to be welded.
- 3. Press the clamp push-button to close the electrodes.
- 4. Without any welding current:

Ensure that the electrode faces align squarely and adjust the arms if necessary. Tighten all adjustment locking screws. The electrode lengths should be adjusted so that the clamp closes approx 8mm before clamping the sheets. This will ensure that the correct clamping force is applied. The air pressure controls the clamping force and should be set at between 4 and 8 bar (58 to 116psi). The required pressure will increase with sheet thickness and with electrode diameter.

#### 10.2. APPLICATIONS & ACCESSORIES (not supplied)

The following text will refer to fig. 12 below for identification.



#### 10.2.1. OPPOSED SPOT WELDING

The parameters which determine the diameter and the strength of a spot weld are:

- 1. The clamp force of the electrodes.
- 2. The electrode face diameter.
- 3. Welding current and welding time.

Select the appropriate sheet thickness with key 2 and the welder will automatically select the optimum weld time. This selected time may be adjusted, by key 1 if necessary.

For example: If the low supply voltage LED is on, the weld time might need to be increased slightly.

If sheets of 0.8 to 1.2mm thick and with a high yield point have to be welded, switch to the pulsation welding \\_\\_\ mode, key 4. The pulsation cycle is automatically controlled and requires no user input.

**IMPORTANT:** A spot weld is considered satisfactory if, when subjected to a tensile stress test, the weld is torn from one of the sheets without any separation in the weld itself.

## 10.2.2. MANUAL CLAMPS 🗨 🎞

Place the lower electrode on the sheet to be welded. Operate clamping lever, giving:

- a) Clamping of the sheets between the electrodes with a pre-adjusted clamp force.
- b) A pre-set welding current for the pre-set time. Welding is indicated by the illumination of the green LED

Release the clamp lever <u>a few moments after</u> the LED goes out. This delay in releasing the clamp load improves the mechanical strength of the weld.

#### 10.2.3. PNEUMATIC CLAMP

Place one electrode on the surface to be welded.

Operate push-button, giving:

Clamping of the sheets between the electrodes with a pre-set clamp force.

A pre-set welding current for a pre-set time.

Welding is indicated by the green LED == .

Release the clamp lever <u>a few moments after</u> the LED goes out. This delay in releasing the clamp load improves the mechanical strength of the weld.

Operate the pneumatic clamp with a regulated air supply of 4 to 8 bar.

## 10.2.4. HOW TO USE THE STUDDER

To assemble or disassemble electrodes use two hex. wrenches, one to prevent the clamp spindle rotating and the other to loosen the clamp nut.

When working on hinged panels, doors, bonnets, tail gates ensure that the ground cable is attached to the work panel rather than to the vehicle body, so that current does not pass through the hinges.

#### 10.2.5. HOW TO CONNECT THE GROUND CABLE

- a) Base sheet area must be at least as big as the ground bar contact area and should be as near as possible to the welding area.
- b) Fasten the copper ground bar to the sheet with an articulated clamp (welding type) or -

spot weld a washer (part of kit) to the surface of the sheet, pass the washer through the opening in the ground bar and clamp it in place.

### 10.2.6. SPOT WELDING WASHER TO FASTEN GROUND BAR 🕰

Mount the special electrode (fig. 12.9) on the clamp spindle and insert washer (fig. 12.13).

Position washer on chosen "ground" area and contact ground terminal on the same area. Press torch push-button to weld washer. Attach ground bar to washer as above.

## 10.2.7. SPOT WELDING SCREWS, WASHER, NAILS, RIVETS 丛豆Q 🎄

Fit the appropriate electrode and place the item to be welded in position on the sheet. Press the clamp push-button and release only after the green LED = goes out.

## 10.2.8. SPOT WELDING SHEETS ON ONE SIDE ONLY

Fit the electrode (fig. 12.6) in the spindle and press on the surface to be welded. Press the clamp push-button and release only after the green LED = goes out.

**NOTE:** The maximum sheet thickness that can be welded in this way is 1mm (i.e. 1mm per sheet, 2 sheets would therefore have a maximum thickness of 2mm).

This method is not allowed on load bearing structures of vehicle bodies.

In order to achieve good results when spot welding sheets the following conditions must be met:

- 1. A perfect ground connection.
- 2. Sheets to be welded must be clean and free from varnish, grease, oil, paint etc.
- 3. Sheets to be welded must be in contact with no air gap. If pressure is required to achieve this, apply pressure with a separate tool and not with the welding clamp as too much pressure from the clamp will result in a poor weld.
- 4. The thickness of the upper sheet must not exceed 1mm.
- 5. The electrode face must have a 2.5mm diameter.
- 6. Take care with the electrode fastening nut and ensure that the cable connectors are locked.
- 7. When spot welding press lightly (3-4kg) on electrode. DO NOT move electrode until the weld is completed green LED goes out.
- 3. DO NOT attempt to weld at a position more than 300mm from the ground bar.

#### 10.2.9. SIMULTANEOUS TRACTION AND SPOT WELDING ON SPECIAL WASHERS 🛕

Mount and fasten the spindle (fig. 12.4) on the threaded end of the extractor body (fig. 12.1), and then fasten the other end of the extractor into the studder.

Insert the special washer (fig. 12.14) into the spindle and lock in place with the special screw. Spot weld washer in desired position as for normal washer spot welding and then apply traction.

Once finished, rotate extractor by 90° to remove the washer which can then be re-used.

## 10.2.10. HEATING AND SHEET UPSETTING 4

For these operations the timer is inoperative. The current duration is thus determined by the operator.

Current is controlled automatically according to the sheet thickness.

Mount the carbon electrode (fig. 12.12) on the studder spindle and lock in place by tightening the nut ring.

Touch the carbon face of the electrode on the work area and press clamp push-button. Operate from the outside towards the inside of the work area, using circular movements to heat the sheet, which will go back to its original position. In order to prevent the sheet from tempering too much, work on a small area and, when finished, immediately wipe with a wet cloth to cool.

## 10.2.11. INTERMITTENT SPOT WELDING (PATCHING)



To weld small rectangular pieces of sheet over holes caused by corrosion or minor damage. Mount the electrode (fig. 12.5) on the studder spindle and tighten ring nut.

Position the patch piece and press the electrode on it - press the clamp push-button and keep it pressed. Move the electrode during each 'pause' in the weld/pause cycle provided by the machine.

The work/pause cycles are controlled automatically by the spot welder according to sheet thickness.

Keep a light pressure on the electrode (3-4kg) and weld along a line ideally 2-3mm in from the edge of the new piece.

To achieve good results

DO NOT weld more than 300mm from ground point.

Use sheet of 0.8mm maximum thickness.

Only move electrode during the 'pauses' - never when welding.

#### 10.2.12. EXTRACTOR (fig. 12.1)

Mount and lock the hook spindle (fig. 12.3) onto the extractor (fig. 12.1). Hook washer (fig. 12.13), previously welded as in 10.11, and begin traction. When finished, rotate the extractor through 90° to break off washer.

#### 11. MAINTENANCE

☐ WARNING! DO NOT remove any panels without first switching the machine off and unplugging the unit from mains power supply.

- Periodically, depending on environmental conditions, remove panels and clean dust and metallic particles from inside the welder using dry, compressed air at no more than 10 bar pressure (wear safety eye protection and dust mask). Avoid directing compressed air at the electronic circuit board - rather, clean with a soft brush and suitable solvents.
- Check that all cables are in good condition with undamaged insulation and clean un-oxidised connectors. 11.2.
- 11.3. Check that screws connecting the transformer secondary circuit to the welding cable taps are secure and do not show signs of overheating or oxidation.
- 11.4 If the welder is not operating correctly check the following before contacting your service agent.
  - a) With welder connected to mains supply and welder mains switched 'Off' green LED should be on. If not there is a supply fault or the supply voltage is too low.
  - b) That the microswitch in the clamp is operating correctly and signalling the electronic circuits green (welding) LED on.
  - c) Thermal protection has not triggered (yellow LED flashed).
  - d) The connections in the secondary circuit (fuse, arm holders, arms, electrode holder), are not producing high resistance due to loose screws or oxidised contact surfaces.
  - e) The electrode face diameter and the electrode pressure being used are appropriate to the weld being produced.
- Periodically clean the water cooler filter (ElectroSpot 9500 only). 11.5.

#### 12. DECLARATION OF CONFORMITY

Declaration of Conformity We, the sole importer into the UK, declare that the products listed below are in conformity with the following standards and directives

> **SPOT WELDERS ELECTROSPOT 8000 ELECTROSPOT 9500**

The construction files for these products are held by the manufacturer and may be inspected, by a national authority, upon request to Jack Sealey Ltd.

73/23/EEC LV Directive 89/336/EEC EMC Directive Signed by Mark Sweetman

3rd July 2002

For Jack Sealey Ltd. Sole importer into the UK of Sealey Power Welders.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**IMPORTANT:** No liability is accepted for incorrect use of this equipment.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



Sole UK Distributor, Sealey Group,

Bury St. Edmunds, Suffolk.





E-mail: sales@sealey.co.uk

Web: www.sealey.co.uk