



INSTRUCTIONS FOR  
**MIG  
WELDERS**

STOCK CODES:

**S0816**

**S0817**





## INSTRUCTION MANUAL

### MIG WELDERS

STOCK CODES  
**S0816**  
**S0817**

Thank you for purchasing a Siegen product. 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. MAKE CAREFUL NOTE OF SAFETY INSTRUCTIONS, WARNINGS AND CAUTIONS. THIS PRODUCT SHOULD ONLY BE USED FOR ITS INTENDED PURPOSE. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.**

## 1. SAFETY INSTRUCTIONS

### 1.1. ELECTRICAL SAFETY

**WARNING!** It is the user's responsibility to read, understand and comply with the following:

You must check all electrical equipment and appliances to ensure 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. We also recommend that an RCD (Residual Current Device) is used with all electrical products. It is particularly important to use an RCD together with portable products that are plugged into an electrical supply not protected by an RCCB. If in doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Siegen dealer. **You must** also read and understand the following instructions concerning electrical safety.

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 the insulation on all cables and the product itself is safe before connecting to the mains power supply. See 1.1.1. & 1.1.2. above and use a Portable Appliance Tester (PAT).

1.1.4. Ensure that cables are always protected against short circuit and overload.

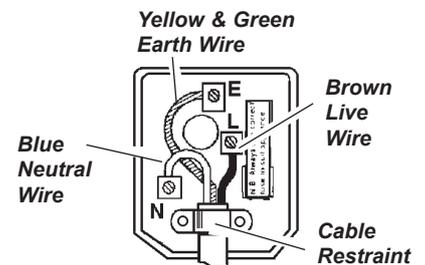
1.1.5. Regularly inspect power supply leads, plugs and all electrical connections for wear and damage and especially power connections, to ensure that none is loose.

1.1.6. **Important:** Ensure the voltage marked on the product is the same as the electrical power supply to be used and check that plugs are fitted with the correct capacity fuse. A 13 amp plug may require a fuse smaller than 13 amps for certain products, see fuse rating at right.

1.1.7. **DO NOT** pull or carry the powered appliance by its power supply lead.

1.1.8. **DO NOT** pull power plugs from sockets by the power cable.

1.1.9. **DO NOT** use worn or damaged leads, plugs or connections. Immediately replace or have repaired by a qualified electrician. A U.K. 3 pin plug must be fitted according to the following instructions. (UK only - see diagram at right).



**FUSE RATING**  
**13 AMP**

Ensure the unit is correctly earthed via a three-pin plug.

a) Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.

b) Connect the BROWN live wire to 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 external insulation extends beyond the cable restraint and that the restraint is tight.

1.1.10. **Cable extension reels.** When a cable extension reel is used it should be fully unwound before connection. A cable reel with an RCD fitted is recommended since any product which is plugged into the cable reel will be protected. The section of the cable on the cable reel is important and should be at least 1.5mm<sup>2</sup>, but to be absolutely sure that the capacity of the cable is suitable for this product and for others that may be used in the other output sockets, we recommend the use of 2.5mm<sup>2</sup> section cable.

**WARNING!** Be very cautious if using a generator to power the welder. The generator must be self-regulating and stable with regard to voltage, wave form and frequency. The output must be greater than the power consumption of the welder. If any of these requirements is not met the electronics within the welder may be affected.

**NOTE:** The use of an unregulated generator may be dangerous and will invalidate the warranty on the welder.

**WARNING!** The welder may produce voltage surges in the mains supply which can damage other sensitive equipment (e.g. computers). To prevent this happening, it is recommended that the welder is connected to a power supply that does not feed any sensitive equipment.

1.1.11 **IMPORTANT!** If using welder to full capacity, we recommend a 16amp supply. We recommend you discuss the installation of a 16amp industrial round pin plug and socket with your electrician.

### 1.2. GENERAL SAFETY

▲ **DANGER!** Unplug the welder from the mains power supply before performing maintenance or service.

✓ Keep the welder and cables in good working order and condition. Take immediate action to repair or replace damaged parts.

✓ Use genuine parts and accessories only. Unapproved parts may be dangerous and will invalidate the warranty.

✓ Use an air hose to regularly blow out any dirt from the liner and keep the welder clean for best and safest performance.

✓ Check and spray the gas cup and contact tip regularly with anti-spatter spray, available from your Siegen dealer.

✓ Locate welder in a suitable work area. Ensure that the area has adequate ventilation as welding fumes are harmful.

✓ Keep work area clean, tidy and free from unrelated materials. Also ensure the working area has adequate lighting and that a fire extinguisher is at hand.

**WARNING!** Use welding head shield to protect eyes and avoid exposing skin to ultraviolet rays given off by electric arc. Wear safety welding gauntlets.

✓ Remove ill fitting clothing, remove ties, watches, rings and other loose jewellery and contain long hair.

✓ Ensure the workpiece is correctly secured before welding.

✓ Avoid unintentional contact with the workpiece. Accidental or uncontrolled use of the torch may be dangerous and will wear the nozzle.

✓ Keep unauthorised persons away from the work area. Any persons working within the area must wear a protective head shield and gloves.

✓ Operators must receive adequate training before using the welder.

✓ Stand correctly keeping a good footing and balance, ensure the floor is not slippery and wear non-slip shoes.

- X **DO NOT** operate the welder if it or the cables are damaged and **DO NOT** attempt to fit any unapproved torches or other components to the welder.
- X **DO NOT** get welder wet or use in damp or wet locations or areas where there is condensation.
- ▲ **DANGER! DO NOT weld near flammable solids, liquids or gases and DO NOT weld containers or pipes which have held flammable materials. Avoid welding materials which have been cleaned with chlorinated solvents or welding near such solvents.**
- X **DO NOT** stand welder on a metal workbench, car bodywork or similar.
- X **DO NOT** touch any live metal parts of the torch or electrode while the machine is switched on.
- X **DO NOT** pull the welder by the cable, or the torch. Protect cables from sharp or abrasive items. **DO NOT** bend, strain or stand on cables or leads. Protect from heat. Long lengths of slack must be gathered and neatly coiled. **DO NOT** place cables where they endanger others.
- X **DO NOT** touch the torch or workpiece immediately after welding as they will be very hot. Allow to cool.
- X **DO NOT** operate welder while under the influence of drugs, alcohol or intoxicating medication, or if tired.
- ✓ When not in use store the welder in a safe, dry, childproof area.

### 1.3. GAS SAFETY

- ✓ Store gas cylinders in a vertical position only and ensure the storage area is correctly secured.
- X **DO NOT** store gas cylinders in areas where the temperature may exceed 50°C. **DO NOT** use direct heat on a cylinder. Always keep gas cylinders cool.
- X **DO NOT** attempt to repair or modify any part of a gas cylinder or valve and **DO NOT** puncture or damage a cylinder.
- X **DO NOT** obscure or remove any official labels on a cylinder. Always check the gas identity before use. Avoid getting gas cylinders oily or greasy.
- X **DO NOT** lift a cylinder by the cap, guard or valve. Always keep caps and guards in place and close valve when not in use.

## 2. INTRODUCTION & SPECIFICATION

**IMPORTANT:** These instructions contain the information you require to prepare your machine for welding, together with a maintenance and a troubleshooting section. The instructions are not intended to teach you how to weld. If you have no experience, we recommend that you seek training from an expert source. MIG welding is relatively easy, but does require a steady hand and supervised practice on scrap metal, as it is only with continued practice that you will achieve the desired results.

**INTRODUCTION:** Your Seigen Mig welder features a heavy-duty, high output transformer and forced air cooling to ensure the highest level of performance. Suitable for welding with CO<sub>2</sub>, Argon or CO<sub>2</sub>/Argon mix. Contoured grip, non live torch is comfortable in the hand, thus ensuring a steadier weld bead. Includes, industrial gas regulator, starter spool of 0.6mm mild steel wire, 0.6 and 0.8 contact tips and gas cup. To weld steel you will need CO<sub>2</sub> gas which is not supplied with machine. (To weld aluminium, order a roll of 0.8mm aluminium wire, a packet of 0.8mm contact tips, and a bottle of Argon gas).

**Stock Code:S0816** Welding Current..... 30 - 150A  
 Wire Capacity - steel ..... 0.7 - 5.0kg  
 Wire Capacity - aluminium..... 0.5 - 2.0kg  
 Duty Cycle ..... 100% @ 50A, 75% @ 55A, 50% @ 66A, 20% @ 105A  
 Cooling System ..... Forced Air  
 Gas Type ..... CO<sub>2</sub>/Argon mix & Argon & CO<sub>2</sub>  
 Torch ..... Non-live  
 Power Input ..... 230V 1ph  
 Absorbed power..... 4.1kW

**Stock Code:S0817** Welding Current..... 30 - 180A  
 Wire Capacity - steel ..... 0.7 - 5.0kg  
 Wire Capacity - aluminium..... 0.5 - 2.0kg  
 Duty Cycle ..... 100% @ 56A, 75% @ 65A, 60% @ 73A, 15% @ 145A  
 Cooling System ..... Forced Air  
 Gas Type ..... CO<sub>2</sub>/Argon mix & Argon & CO<sub>2</sub>  
 Torch ..... Non-live  
 Power Input ..... 230V 1ph  
 Absorbed power..... 5.7kW

## 3. ASSEMBLY & PREPARATION

### 3.1. Assembly.

3.1.1 Depending on the model you have it may be necessary to assemble the wheels as follows. Slide the rear axle through the loops on the underside of the rear tray. Slide a wheel onto each end of the axle and retain with the washers and split pins provided. Attach the front foot to the underside of the welder using the screws provided. Where castor wheels are specified these should be bolted to the underside of the welder using the fixings provided.

### 3.2. Connecting the gas cylinder (See Section 4.3 regarding gas types)

3.2.1. Place the lower end of the gas cylinder on to the rear tray, between the two wheels. See fig.2-C. Allow the upper part of the cylinder to rest into the metal support. See fig.2-D. Secure the cylinder by hooking either end of the chain E through the metal support as shown in fig.2.

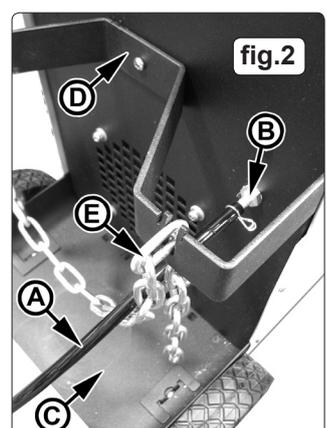
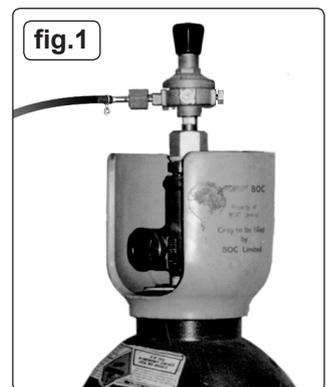
### 3.3. Connecting the gas cylinder

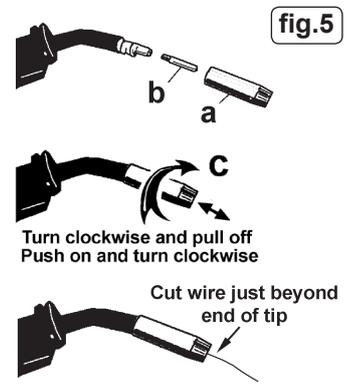
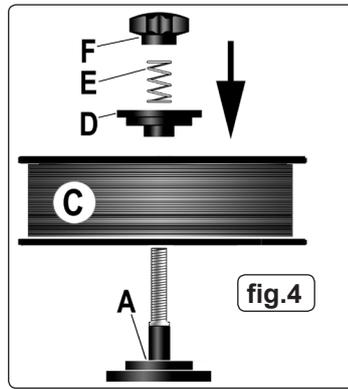
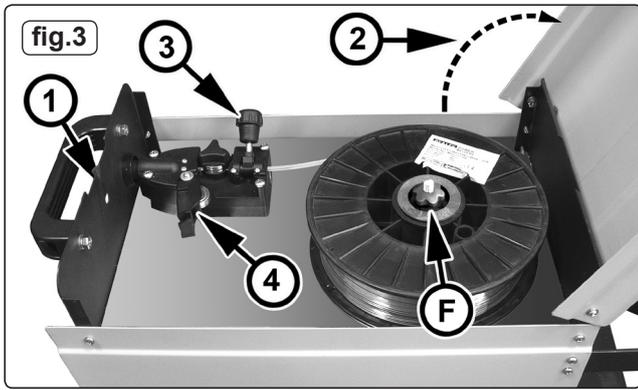
- 3.3.1. When using Argon or Argon mixtures, you will need to use the "bull nose adaptor". Fit the bull nose adaptor to the cylinder with a spanner. (If you intend to use CO<sub>2</sub> gas the regulator will fit directly onto the cylinder.)
- 3.3.2. Fit the gas regulator on to the bull nose adaptor as shown in fig.1.
- 3.3.3. Push the black gas tube provided (see fig.2-A) onto the gas inlet nozzle and retain it with the wire clip provided as shown in fig.2-B. Push the other end of the tube onto the gas outlet nozzle on the regulator and retain it with the other wire clip provided. See fig.1.

3.3.4. When you are ready to weld set the regulator flow rate to 5-8 litres/min depending on the material to be welded, and whether there are draughts which are strong enough to disturb the gas flow.

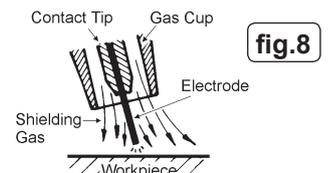
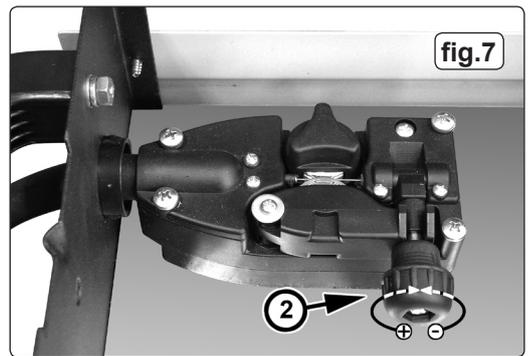
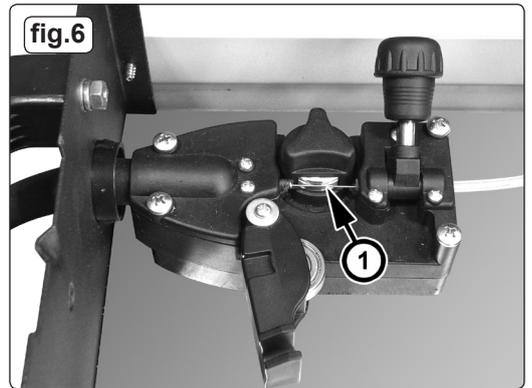
### 3.4. Fitting a reel of wire.

- 3.4.1 Depress the silver button behind the handle at the top of the control panel and open the top compartment. See 1 & 2 in fig.3. The welder is supplied with a mini spool of mild steel wire, but will accept spools of up to 5kg without modification.
- 3.4.2. Referring to fig.4, rotate the pressure knob (F) anti-clockwise and remove it from the threaded spindle together with the spring (E) and the top disc (D). Small reels of wire will run on the spindle itself. The larger 5kg wire reel will run on the larger diameter flange at the base of the reel spindle (A). Place the wire reel (C) onto the spindle ensuring that the wire withdraws from the spool in a forwards direction and on the same side of the compartment as the wire feed unit. Place the plastic top disc (D) over the end of the spindle followed by the reel spring (E). Thread the pressure knob (F) onto the end of the spindle and screw it down clockwise until the spring is partially compressed. The reel take off pressure should be set to provide a mild braking effect to prevent overrun where loose coils of wire form on the reel. Do not overtighten this knob as too much braking will conflict with the wire tension set on the wire drive unit.
- 3.4.3. Referring to fig.3 turn the knob on the wire lock screw (3) anti-clockwise and unlatch it from the pressure roller moulding. Swing the pressure roller moulding (4) away from the drive roller.
- 3.4.4. Straighten 40-50mm of spool wire (do not allow wire to uncoil), and gently push wire through the plastic guide and through the 6 or 8mm feed roller groove (fig.6) and into the torch liner. Refer to section 6.3 on how to reverse the roller for either 6 or 8mm wire.





- 3.4.4. Move the pressure roller moulding back round onto the grooved drive wheel and swing down the wire lock screw back down to lock it in place. See 3.5.2 regarding wire tension.
- 3.4.5. **Feeding the wire through to the torch.** (See fig.5)  
 Remove gas cup (a) and contact tip (b) from end of torch as follows:  
 a) Take torch in left hand with the torch tip facing to the right.  
 b) Grasp gas cup firmly in your right hand.  
 c) Turn gas cup clockwise only and pull cup out to the right.  
**WARNING!** do not turn gas cup anti-clockwise, as this will damage internal spring.  
 d) Unscrew the copper contact tip (right hand thread) to remove.
- 3.4.6. Check welder is switched off "0" and that the earth clamp is away from the torch tip. Connect the welder to the mains power supply and set the voltage switch to one.
- 3.4.7. Set the wire speed knob to position 5 or 6. Keeping the torch cable as straight as possible and press the torch switch. The wire will feed through the torch.
- 3.4.8. When wire has fed through, switch welder off, **unplug from mains.**  
 a) Take torch in left hand and screw contact tip back into place.  
 b) Grasp gas cup in right hand, push onto torch head and turn clockwise only.  
**WARNING!** do not turn gas cup anti-clockwise, as this will damage internal spring.  
 c) Cut wire so that it is just protruding from the cup.
- 3.5. **Setting wire tension.**  
**IMPORTANT:** You must set the correct tension, too little or too much tension will cause problematic wire feed and result in a poor weld.
- 3.5.1. For mild steel 0.6mm wire the wire tension screw must be fully tightened and undone approximately two complete turns (fig 7).
- 3.5.2. Correct tension between the rollers is checked by slowing down the wire between the fingers. If the pressure roller skids the tension is correct. Try to use the lowest tension possible as too high a tension will deform the wire and may result in blowing a fuse on the printed circuit board. When you have completed welding, remove the torch and store in a safe, dry place. Note: Damaged torches and cables are not covered under warranty.



## 4. WELDING PRINCIPLES

### 4.1. Mig/Mag welding

Welding wire is automatically fed through an insulated liner to the tip of the torch. The torch consists of a switch, liner, gas hose, and control cable. The switch activates the wire feed roller and the gas flow. Releasing the switch stops wire feed and gas flow. The weld current is transferred to the electrode (the wire) from the contact tip at the torch end. The current to the electrode is set using the rotary switch on the front of the control panel. The S0816 has a four position switch (See fig.9) and the S0817 has a six switch position switch, (See fig.10). Wire speed must be adjusted according to current output using the rotary control positioned to the left of the current switch. The higher the current the faster the wire speed. A gas cup fits over the contact tip to direct gas flow towards the weld, (See fig.8) ensuring that the arc welding process is shielded from oxidation. The shielding gas also assists heating of the weld. The torch is connected to the positive side of a DC rectifier, and the negative clamp is attached to the workpiece.

- 4.2. **Preparation for welding: IMPORTANT! BEFORE YOU COMMENCE, MAKE SURE THE MACHINE IS SWITCHED OFF AT THE MAINS. IF WELDING A CAR, DISCONNECT THE BATTERY OR FIT AN ELECTRONIC CIRCUIT PROTECTOR. ENSURE THAT YOU READ, UNDERSTAND AND APPLY THE SAFETY INSTRUCTIONS IN SECTION 1.**

- 4.2.1. To ensure a complete circuit, the negative lead must be securely attached to the workpiece close to the weld area. Best connection is obtained by grinding the point of contact on the workpiece before connecting the clamp.
- 4.2.2. The weld area must be free of paint, rust, grease, etc.

### 4.3. Gas types and their use

Welding mild steel with CO<sup>2</sup> gas is appropriate for most welding tasks where spatter and high build-up of weld do not pose a problem. To achieve a spatter free and flat weld however, requires an Argon/CO<sup>2</sup> mixture.

- 4.3.1. To weld aluminium use: ✓Argon Gas ✓0.8mm Contact Tip ✓0.8mm Aluminium Wire (MIG/2/KAL08).

### 4.4. Thermal Protection

Should the welder become overheated due to prolonged use beyond the stated duty cycle the thermal protection will cause the welder to cut out and the orange light on the front panel will illuminate. Wait for fifteen minutes for the welder to cool down at which time it will reconnect automatically.



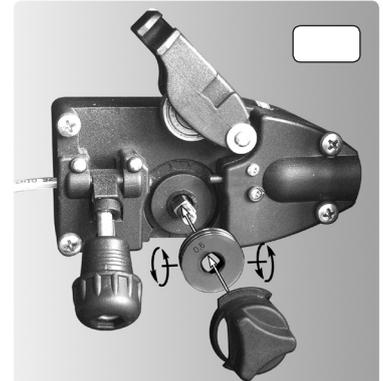
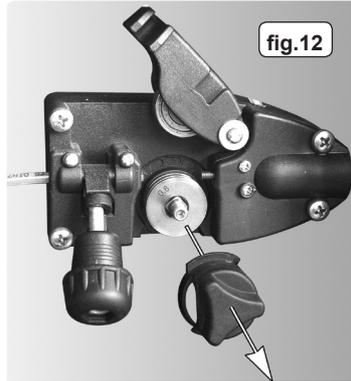
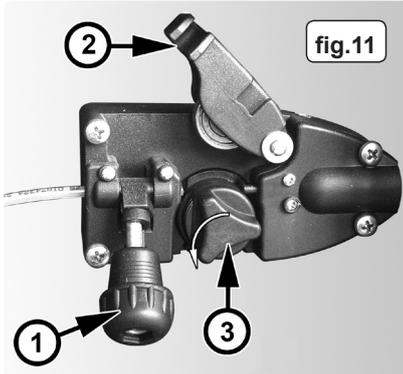
## 5. RATINGS PLATE

On the front panel of the welder is the ratings plate, giving the following data:

- 1 - The BS/EU standard relating to the safety and construction of arc welding and associated equipment.
- 2 - Inverter-transformer-rectifier symbols
- 3 - Symbol indicates welding with a continuous flow of welding wire.
- 4 - Symbol for Single-phase AC supply.
- 5 - Rating of internal protection provided by casing.
- 6 - Output
  - $U_0$ : Maximum open-circuit voltage.
  - $I_2$ ,  $U_2$ : Current and corresponding voltage.
  - X: Welding ratio based on a 10 minute cycle. 20% indicates 2 minutes welding and 8 minutes rest, 100% would indicate continuous welding.
- 7 - Mains Supply  $U_1$ : Rated supply voltage and frequency.  $I_{1max}$ : Maximum current.  $I_{1eff}$ : Maximum effective current.
- 8 - A/V - A/V: Welding current adjustment range and corresponding voltages.
- 9 - Serial Number. Specifically identifies each welder.

STOCK CODE: S0816		NO. 07111325001		⑨	
②		EN 60974 - 1		①	
③		30A/ 15.5V ~ 105A/19.3V			⑧
		X	20 %	50 %	75 %
		$I_2$	105 A	66 A	55 A
		$U_2$	19.3 V	17.3 V	16.7 V
④		$U_1 = 230 V$	$I_{1max} = 18 A$	$I_{1eff} = 8 A$	⑦
⑤		IP21S	INSULATION CLASS: H		

## 6. MAINTENANCE



▲ **DANGER! Unplug the welder from the mains power supply before performing maintenance or service.**

### 6.1. Wire feed unit:

- 6.1.1 Check the wire feed unit at regular intervals. The feed roller wire guide plays an important part in obtaining consistent results. Poor wire feed affects the weld. Clean the rollers weekly, especially the feed roller groove, removing all dust deposits.

### 6.2. Torch:

- 6.2.1 Protect the torch cable assembly from mechanical wear. Clean the liner from the machine forwards by using compressed air. If the liner is blocked it must be replaced.

### 6.3. Turning feed roller **IMPORTANT**: Turn the feed roller to suit the wire size.

- 6.3.1 There are two grooves on the feed roller, 0.6mm and 0.8mm. Always have the groove that is being used on the outside of the roller (nearest to you). To turn the feed roller first loosen the wire tension knob and move it into its down position (see fig.11-1) then move the tensioning roller assembly to its up position (see fig.11-2). Take hold of the triangular knob on the roller retainer and rotate it 90° anticlockwise to release it as shown in fig.11.3. Now pull the roller retainer off the drive spindle to reveal the roller as shown in fig.12. Pull the roller off the drive spindle, flip it over and put it back on the drive spindle. (See fig 13) The groove size you require should now be visible on the face of the roller. Push the roller retainer back onto the drive spindle with the opening facing left. Ensure that the flanges at the base of the retainer, seat fully into the circular recess in the main moulding and then rotate the retainer through 90° to lock it in place.

### 6.4. Contact tip (to remove tip follow steps in 3.4.5)

- 6.4.1 The contact tip is a consumable item and must be replaced when the bore becomes enlarged or oval. The contact tip **MUST** be kept free from spatter to ensure an unimpeded flow of gas.

### 6.5. Gas cup (to remove cup follow steps in 3.4.5)

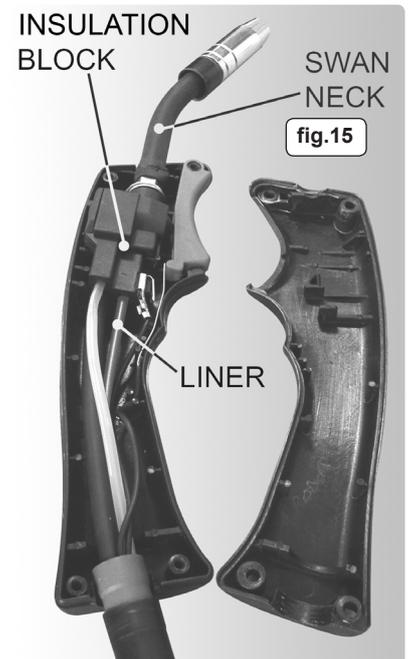
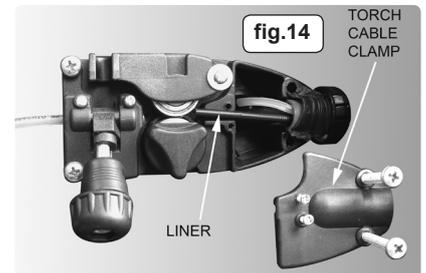
- 6.5.1 The gas cup must also be kept clean and free from spatter. Build-up of spatter inside the gas cup can cause a short circuit at the contact tip which will result in either the fuse blowing on the printed circuit card, or expensive machine repairs. To keep the contact tip free from spatter, we recommend the use of anti-spatter spray (MIG/722307) available from your Siegen dealer.

### 6.6. Replacing wire liner.

- 6.6.1 A worn or damaged wire liner will seriously affect the performance of the welder and should be immediately replaced. First wind the wire back onto the spool and secure it. Remove the four screws securing the torch cable clamp to the wire feed unit (fig.14) and take off the clamp. Undo the torch case (fig.15) and pull the wire liner from insulation block. Pull out the liner from the torch cable and insert the new one. Reverse the process to re-assemble. Ensure the liner is fully inserted into the torch insulation block and reassemble the torch. Trim the other end of the liner as close to the feed roller as possible. Replace the torch cable clamp.

### 6.7. Replacing gears.

- 6.7.1 An inexperienced welder can allow spatter to build up in the tip and shroud. In severe cases this can block the wire feed causing gear damage in the wire drive. To check if the gears are worn depress the button on the torch with the set switched on. If the gears are worn, a grating sound will be heard coming from the wire feed motor and you may also observe the feed roller vibrating instead of rotating smoothly. In this case, open the gearbox, remove the worn or damaged gears and replace with new ones.



## 7. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
Weld current interrupted	Overheating protection activated due to overload	Protection automatically resets when transformer has cooled (approx. 15 min).
No weld current, fuse blowing in 13amp plug	Rectifier blown	Replace rectifier.
No weld current	Bad connection between clamp and workpiece Break in earth lead Break in torch lead	Clean or grind contact surface and weld area. Repair or replace earth lead. Repair or replace.
Feed motor not working	Gear damaged or worn Motor defective	Replace gears (Section 6). Replace motor (Contact service agent).
Wire does not feed, feed roller rotates	Pressure roller improperly adjusted Dirt, copper, dust, etc. have collected in torch liner Gas cup (nozzle) or tip defective Deformed wire	Adjust tension. Clean the liner from the machine forward. Use compressed air. If too much dirt, replace the liner (Section 6). Replace gas cup (nozzle) and/or tip (Section 6). Check roller tension (Section 3).
Wire feeds unevenly	Dirt, etc. in liner Gas cup (nozzle) or tip defective Gas cup (nozzle) spattered Feed roller groove clogged Feed roller groove deformed Pressure roller tension incorrect	Clean the liner from the machine forward using compressed air. Replace gas cup (nozzle) and/or tip (Section 6). Clean or replace gas cup (nozzle) (Section 6). Clean feed roller (Section 6). Replace feed roller (Section 6). Adjust tension (Section 3).
Unstable arc	Incorrect settings Impurities in weld area Worn or defective gas cup (nozzle)	Check settings (Section 4). Clean and/or grind workpiece (Section 4). Replace gas cup (nozzle) (Section 6).
Porous weld	No gas Gas cup clogged Draft blowing away shielding gas Rusty/dirty joints Torch too far from, or at wrong angle to, workpiece Gas leak	Open gas cylinder, regulate gas flow. Clean or replace cup (Section 6). Screen off welding site or increase gas flow. Clean or grind the workpiece (Section 4). Gas cup to workpiece should be 8-10mm. Torch angle approx 75°. Check hoses, connections and torch assembly (Section 6).
Wire sticking in gas cup (nozzle)	Worn or defective gas cup (nozzle) Wire deformed Wire speed too slow	Replace gas cup (nozzle) (Section 6). Check roller tension (Section 3). Increase wire speed.
Irregular weld head	Torch incorrectly held Wire weaving in weld pool	Use correct torch angle. Check roller tension and adjust (Section 3).
Weld bead too narrow and raised	Weld current too low Weld speed too fast	Increase power and wire speed (Section 4). Move torch slower and weave a little more.
Weld bead too wide	Weld current too high Weld speed too slow	Decrease current and wire speed (Section 4). Move torch faster and weave less.
Poor penetration	Weld current too low Arc too long	Increase current and wire speed (Section 4). Bring torch closer to workpiece.
Excessive penetration	Weld current too high Weld speed too slow Incorrect distance of torch to workpiece	Decrease current and wire speed (Section 4). Move torch faster. Torch distance should be 8-10mm.

**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 12 months from purchase date, proof of which will be required for any claim.

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