



AUTO DARKENING WELDING HELMET WITH TH2 POWERED AIR PURIFYING RESPIRATOR (PAPR)

MODEL NO: PWH617

Thank you for purchasing a Sealey 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: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE 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. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Charger indoor use only

1. SAFETY

1.1. ELECTRICAL SAFETY

WARNING! It is the user's responsibility to check the following:

Check all electrical equipment and appliances to ensure that they are safe before using. Inspect power supply leads, plugs and all electrical connections for wear and damage. Sealey recommend that an RCD (Residual Current Device) is used with all electrical products. If the product is used in the course of business duties, it must be maintained in a safe condition and routinely PAT (Portable Appliance Test) tested.

Electrical safety information, it is important that the following information is read and understood.

- 1.1.1. Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
- 1.1.2. Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that they are secure.
- 1.1.3. **Important:** Ensure that the voltage rating on the appliance suits the power supply to be used.
 - * **DO NOT** pull or carry the appliance by the cable.
 - * **DO NOT** pull the plug from the socket by the cable. Remove the plug from the socket by maintaining a firm grip on the plug.
 - * **DO NOT** use worn or damaged cables, plugs or connectors. Ensure that any faulty item is repaired or replaced immediately by a qualified electrician.
- 1.1.4. If the cable or plug is damaged during use, switch the electricity supply and remove from use.
Class II products are wired with live (brown) and neutral (blue) only and are marked with the Class II symbol: 
Sealey recommend that repairs are carried out by a qualified electrician.

1.2. GENERAL SAFETY

- ✓ Ensure all workshop safety rules, regulations and conditions are complied with when using this equipment. The face shield will not offer protection against misuse of workshop tools, equipment, or accessories.
- ✓ Maintain the welding helmet in good condition and protect cartridge from liquid and dirt contact.
- ✓ Use genuine parts only. Unauthorised parts may be dangerous and will invalidate the warranty.
- ✓ Fit the face shield and adjust the head band so the face shield will sit as low and near to your face as possible.
- ✓ Ensure that the face hood is securely attached to the face shield.
- ✓ Use welding helmet only in temperatures ranging from -5°C to 55°C.
- ✓ Remove ill fitting clothing, remove ties, watches, rings and other loose jewellery.
- ✓ Maintain correct balance and footing.
- ✓ Ensure the floor is clear from obstructions, not slippery and wear non-slip shoes.
- ✓ Keep children and unauthorised persons away from the working area.
- ✓ Use of this welding helmet is for face and eye protection against low energy impact and splashing liquids.
- ✓ Inspect the welding helmet frequently as a pitted or scratched face shield reduces vision and therefore should be replaced immediately.
- ✓ Be aware if wearing standard ophthalmic spectacles they may transmit impacts, creating a hazard for the user.
- ✓ Before welding, adjust the auto-darkening lens sensitivity setting to meet the application.
- ✓ Stop welding immediately if the auto-darkening lens does not darken when the arc is struck.
- * **DO NOT** use if any part of the welding helmet is cracked or broken.
- * **DO NOT** place this product on a hot surface.
- * **DO NOT** use this face shield for protection against gases, ultra violet or infra red radiation, ionising radiation, liquids under pressure or other severe hazards.
- * **DO NOT** use this face shield against heavy impact hazards, the lens is breakable.
- * **DO NOT** use welding helmet for any purpose for which it is not designed.
- WARNING! DO NOT** use the welding helmet if damaged or you suspect it may be faulty. (Contact Sealey Stockist).
- ▲ **DANGER! DO NOT** wear this respirator system to enter areas where:
 1. Atmospheres are oxygen deficient.
 2. Contaminant concentrations are unknown.
 3. Contaminant concentrations are Immediately Dangerous to Life or Health.
 4. Contaminant concentrations exceed the maximum use concentration determined using the assigned Protection Factor for the specific respirator system.
- ✓ If ventilation is poor, wear an approved air-supplied respirator.
- ✓ Work in confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watch-person nearby. Ensure the breathing air is safe.

- ✓ Read and follow these instructions and the safety labels carefully.
- ✓ The powered air purifying respirator (PAPR) helps protect the user from specific airborne contaminants but must be used correctly to be fully effective. Have an industrial hygienist test the air in your facility to ensure the PAPR provides adequate protection from contaminants in your environment. If you have questions about the respirator, see equipment warning label and consult your Safety Director and a certified Industrial Hygienist.
- ✓ Follow all applicable EN/ANSI/CSA/AS&NZS, and other regulatory guidelines pertaining to the use of respirators.
- ✗ **DO NOT** use the powered air purifying respirator where there is danger of fire or explosion.
- ✗ **DO NOT** use the powered air purifying respirator in windy conditions or negative pressure inside the hood may draw in contaminants from the outside air.
- ✓ The powered air purifying respirator does not supply oxygen. Use the respirator only in atmospheres for which it is EN/ANSI/CSA/AS&NZS approved.
- ✗ **DO NOT** use the respirator where oxygen levels are 19.5% or lower, where contaminant levels are unknown or are immediately dangerous to life or health, or where the contaminant levels exceed the respirator specifications.
- ✗ **DO NOT** enter a hazardous area until you are sure the respirator equipment is correctly assembled, working properly, and properly worn.
- ✓ Before each use, inspect the respirator equipment for damage and verify it operates properly.
- ✓ Before using the respirator, test air flow to verify it is providing an adequate volume of air.
- ✗ **DO NOT** use the powered air purifying respirator without all filter components or with the blower turned off, as hazardous levels of oxygen and carbon dioxide may accumulate in helmet.
- ✓ Always wear the powered air purifying respirator when entering a contaminated area.
- ✗ **DO NOT** remove the respirator until outside the contaminated area.
- ✓ Dangerous contaminants may not smell or be visible. Leave the area immediately if you notice the following:
 - Breathing becomes difficult.
 - You experience dizziness, impaired vision, or eye, nose, or mouth irritation.
 - The powered air purifying respirator alarm sounds.
 - The equipment is damaged.
 - Air flow decreases or stops.
 - If you think the equipment is not supplying adequate protection.
- ✗ **DO NOT** remove the equipment until you are in a safe area.
- ✗ **DO NOT** repair, modify, or disassemble the powered air purifying respirator or use with parts or accessories not supplied by the manufacturer. Use only those components that are part of the approved assembly.
- ✓ Replace damaged or clogged filters.
- ☐ **WARNING!** The particle filter **CAN NOT** be cleaned.
- ✗ **DO NOT** wash or reuse filters.
- ✗ **DO NOT** clean filters by tapping or with compressed air as this will destroy the filters, the equipment will not give the expected protection and the warranty will be invalidated.
- ✓ Dispose of used filter elements according to local requirements.
- ✓ The powered air purifying respirator must be used with the welding helmet, face hood, and filters recommended by the manufacturer to provide a respirator system. See the label on the blower for information on the required equipment.
- ✗ **DO NOT** use the powered air purifying respirator belt or shoulder straps (if equipped) as a safety harness.

2. INTRODUCTION

PAPR (Powered Air Purifying Respirator) system with auto darkening welding helmet. Large viewing area of 98mm x 55mm. True colour technology for improved depth perception, allowing far greater welding precision. Lithium battery powered respirator unit provides the user with a constant filtered stream of air to their head and face for up to approximately 5 hours. The filter is designed to reduce or remove dust and particles but not vapours and gases. The kit meets performance class TH2 (Less than 2% inward leakage) according to EN 12941:1998/A2:2008. Adjustable airflow settings of 150/180L/min. Features an audible alarm to alert user of low battery/low airflow. Welding helmet has adjustable shade control from 9-13 and 5-8. Fully automatic switching from light to dark on striking arc @ 1/25,000s. Solar panel power supply to welding helmet. Suitable for MIG, TIG, MMA/ARC welding, cutting & grinding. Complies with all BS EN379, EN175, EN12941 and DIN standards.

3. SPECIFICATION

Model No:.....PWH617
 Grinding Function:..... Yes
 Operating temperature: -5° to 55°C
 Operating time Light/Dark: 1/25,000s
 PAPR Air flow settings:..... 150/180 L/min
 PAPR Filter classification: TH2 P R SL
 PAPR Lithium battery charging time:..... 3hr approx.
 PAPR Operating Time: Low Speed: 5hr Approx.
 High Speed: 4hr Approx.
 Power:..... Solar Cells/Rechargeable Lithium Battery
 Shade Active: 5-8 & 9-13 Variable
 Shade Inactive: 4
 Storage temperature: -10° to 50°C
 Viewing Area: 98 x 55mm

4. OPERATION

Unpack the product and check contents. Should there be any damaged or missing parts contact your supplier immediately.
REFER TO ATTACHED PARTS LIST.

4.1. CHARGING THE BATTERY

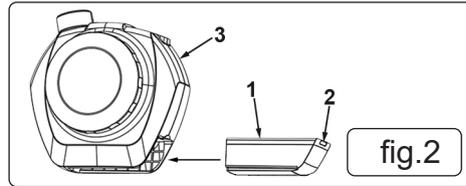
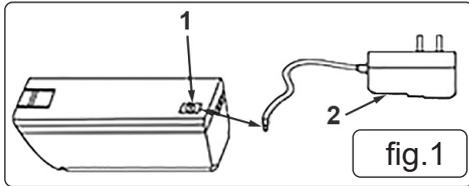
- ☐ **WARNING!** Allow the battery to cool before charging.
- 4.1.1. Remove the battery pack, SSP80PAPR.BP, from the blower assembly (see section 4.3 below).
- 4.1.2. Connect the charge cord connector to the charging socket on the battery pack, SSP80PAPR.BP, (fig 1 -1) and plug the mains charger,

SSP80PAPR.C, (fig 1 - 2) into a mains socket.

- 4.1.3. When charging the indicator light on the mains charger will display red.
- 4.1.4. When fully charged the indicator light on the mains charger will change to display green.
- 4.1.5. When charging is complete, unplug the mains charger, SSP80PAPR.C, from the mains and the battery pack.

x
x
x
x
x
x
x
x

DO NOT leave the battery pack on charge for long periods.



4.2. BATTERY INSTALLATION

4.2.1. Slide the battery pack, SSP80PAPR.BP, (fig 2 - 1) into the blower body, SSP80PAPR.H09, (fig 2 - 3) until it locks into place.

4.3. BATTERY REMOVAL

4.3.1. Hold the blower body (fig 2 - 3) firmly and lift up the battery lock button (fig 2 - 2), then slide and remove the battery pack (fig 2 - 1).

4.4. AIR FILTER INSTALLATION

4.4.1. Remove the filter cover, SSP80PAPR.F04 (fig 3 - 4).

4.4.2. Install the filter, SSP80PAPR.F, (fig 3 - 2) into the filter body, SSP80PAPR.F01, (fig 3 - 1) and lock into position by screwing clockwise until secure.

4.4.3. Install the foam filter, SSP80PAPR.F03, (fig 3 - 3) above the filter, SSP80PAPR.F, (fig 3 - 2).

4.4.4. Push fit the filter cover, SSP80PAPR.F04, (fig 3 - 4) until it "clicks" into position.

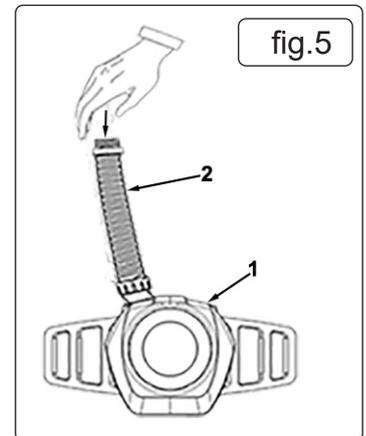
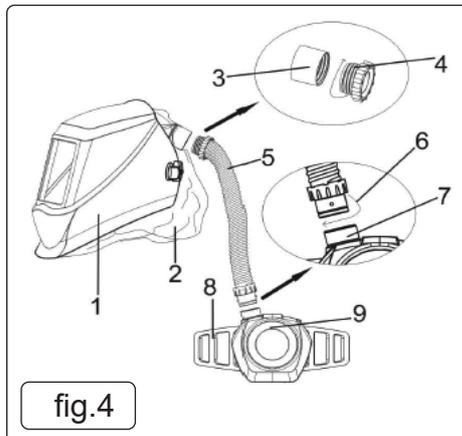
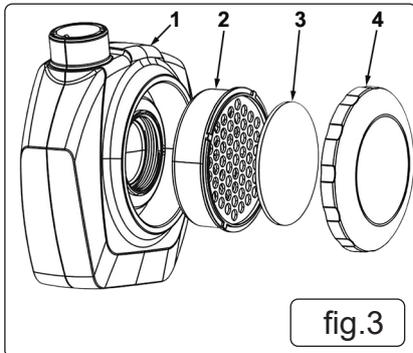
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DO NOT use the respirator without the filter cover, foam filter and filter installed.

DO NOT wash filters, clean with compressed air, or reuse dirty air filters. Replace damaged or dirty air filter.

4.5. AIR FILTER REMOVAL

4.5.1. Removal of the filter is as section 4.4 but in reverse.



4.6. ATTACHING THE HOSE ASSEMBLY TO BLOWER BODY

4.6.1. Insert hose assembly connector, SSP80PAPR.H06, (fig 4 - 6) into blower body connector outlet, SSP80PAPR.H07, (fig 4 - 7) until snug and then turn 1/8 turn clockwise to lock the hose assembly, SSP80PAPR.H05, (fig 4 - 5) into place.

4.7. ATTACHING THE HOSE ASSEMBLY TO WELDING HELMET

4.7.1. Thread the hose assembly connector, SSP80PAPR.H04, (fig 4 - 4) into the welding helmet connection, SSP80PAPR.H03, (fig 4 - 3) and turn clockwise until the hose assembly, SSP80PAPR.H05, (fig 4 - 5) locks into position.

4.8. TESTING THE AIR FLOW ALARM

4.8.1. Disconnect the hose assembly, SSP80PAPR.H05, (fig 4 - 5) from welding helmet, SSP80PAPR.H02, (fig 4 - 2).

4.8.2. Start the blower, SSP80PAPR.H09, (fig 5 - 1) and block the air flow by placing your hand over the open end of the hose assembly, SSP80PAPR.H05, (fig 5 - 2).

4.8.3. Continue to block the air flow (fig 5) until the alarm sounds and the blower begins to vibrate.

4.8.4. If the alarm does not sound and the blower fails to vibrate, check the battery and filter element.

4.9. OPERATING THE CONTROLS

4.9.1. TO START

4.9.2. Press the ON/OFF button (fig 6 - 1) for approx one second, until the blower starts (fig 6 - 6).

4.9.3. The low (fig 6 - 2) and high (fig 6 - 3) speed indicator lights will flash on, then off, the alarm sounds briefly and the blower will vibrate momentarily.

NOTE: The blower will start in the low speed position.

4.9.4. When the blower (fig 6 - 6) is operating press the ON/OFF button (fig 6 - 1) to alternate between low speed and high speed.

4.9.5. TO STOP

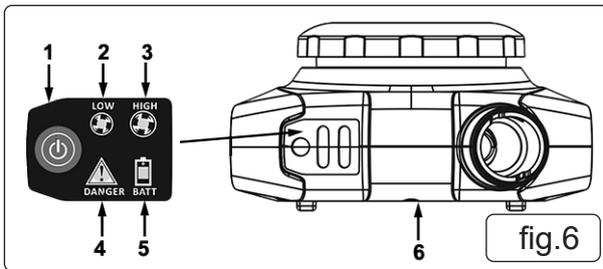
4.9.6. Press the ON/OFF button (fig 6 - 1) for approx one second, until the audible alarm and blower stops.

□

WARNING! If the danger indicator light (fig 6 - 4) comes on, the audible alarm sounds and the blower (fig 6 - 6) vibrates, this indicates, that either the battery charge level is low, the air flow is reduced due to a dirty filter, the hose assembly is blocked or there is another possible problem.

4.10. BATTERY LEVEL INDICATOR

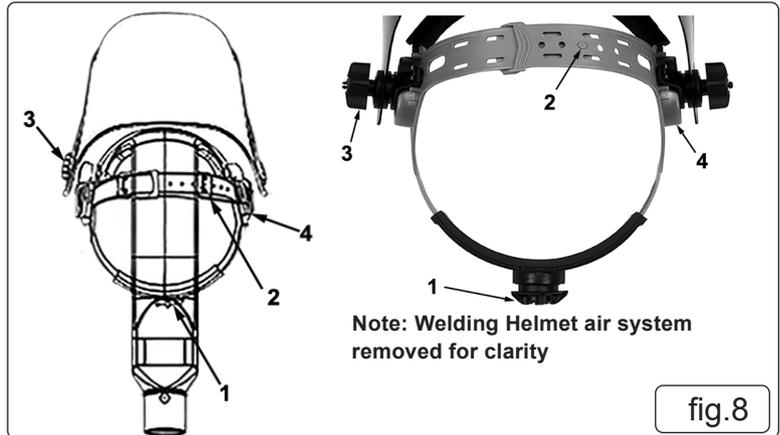
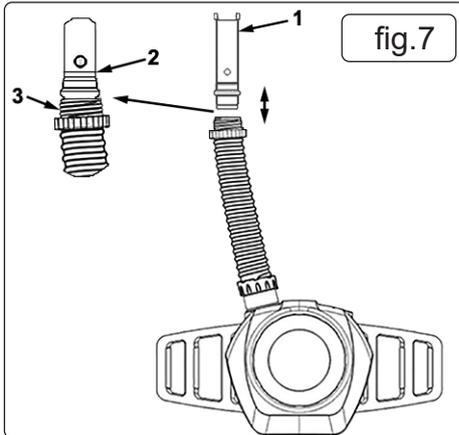
4.10.1. The battery level indicator light (fig 6 - 5) indicates the remaining charge in the battery.



BATTERY LEVEL INDICATOR	
LEVEL INDICATOR LIGHT	REMAINING POWER (%)
Green	90
Yellow	30 - 90
Red	10 - 30
Red - Flashing	0 - 10

4.11. TEST AIR FLOW

- 4.11.1. Disconnect hose assembly, SSP80PAPR.H05, (fig 4 - 5) from welding helmet, SSP80PAPR.H04, (fig 4 - 2).
 - 4.11.2. Insert air flow meter, SSP80PAPR.12, (fig 7 - 1) into hose assembly connector, SSP80PAPR.H04, (fig 7 - 3).
 - 4.11.3. Hold the flow meter vertically and start the blower (see section 4.9.1).
 - 4.11.4. The flow meter ball should float above the MIN mark (fig 7 - 2).
- ☐ **WARNING!** If the flow meter indicates MIN or below turn the blower off (see section 4.9.5), then check the battery and filter elements.



4.12. WELDING HELMET ADJUSTMENT

- 4.12.1. Adjust the welding helmet circumference with the thumb wheel (fig 8 - 1) on the back band of the welding helmet. The thumb wheel is locked in position. Press the thumb wheel in to unlock, then twist clockwise to tighten and counter-clockwise to loosen. At the desired circumference release the thumb wheel back into the locked position, adjust the height by snapping the pin on the top band (fig 8 - 2) into the required hole location to lock securely in place.
- 4.12.2. To adjust the viewing angle, loosen the thumb wheels (fig 8 - 3) on both sides of the welding helmet and change the angle locker to the desired tilt position. There are 5 pre-set positions with the head shield supplied in the mid setting.

NOTE: The welding helmet should still be free enough to be raised up, but not to drift downwards.
- 4.12.3. To adjust the distance between the user's face and the welding helmet, loosen the thumb wheels (fig 8 - 3) on both sides of the welding helmet until the headband can move back and forth freely. Position the headband into one of the 3 slots (fig 8 - 4), as desired (the welding helmet is supplied in the mid setting). This should be completed one side at a time and both sides must be located in the same location. Re-tighten the thumb wheels.

4.13. CHECKING THE WELDING HELMET WITH POWERED AIR PURIFYING RESPIRATOR BEFORE USE

Before using the respirator, check the following items:

- ✓ Air Filter Assembly: Ensure that the air filter is suitable for the application. Also be sure the filter is undamaged, and securely connected to the blower assembly. See section 4.4.
 - ✓ Hose assembly: Ensure the tube is undamaged and properly connected to the blower assembly and hood. See sections 4.6 & 4.7.
 - ✓ Battery: Verify the battery is fully charged and securely connected to the blower assembly. See sections 4.1 & 4.2.
 - ✓ Air Flow: Test air flow according to Section 4.11.
 - ✓ Air Flow Alarm: Turn on blower assembly and check for audible, visual, and vibratory alarms. See section 4.8.
- Face Hood: Inspect the welding helmet, ensure it is attached correctly and replace if damaged.

4.14. PUTTING ON THE WELDING HELMET WITH POWERED AIR PURIFYING RESPIRATOR

- 4.14.1. Place the blower assembly against the lower back with the hose assembly extending upwards (fig 9).
- 4.14.2. Fasten belt, SSP80PAPR.H08, around the waist and adjust to a comfortable fit.
- 4.14.3. Place face shield assembly over and onto head. Ensure it is a comfortable snug fit.



fig.9

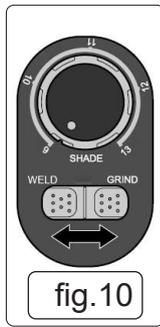


fig.10

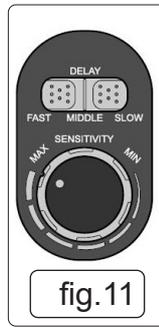


fig.11

4.15. SHADE CONTROL (fig.10)

4.15.1. Select the shade DIN 9 to 13 based upon the welding process you will use by consulting the“Shade Guide Table” based on EN 379. The variable shade control knob is for external adjustment. Grind mode DIN 4 prevents filter lens from auto-darkening for grinding use.

4.16. SENSITIVITY CONTROL (fig.11)

4.16.1. The sensitivity can be set from MIN to MAX by using the infinitely dial knob. The MIN setting suits excess ambient light or with another welding machine close by. The MAX setting suits low amperage welding and welding in areas with low light conditions, especially low amperage argon arc welding. Selections between MIN and MAX are suitable for most of indoor and outdoor welding operations.

4.17. DELAY CONTROL (fig.11)

4.17.1. When welding ceases, the viewing window automatically changes from dark back to light but with a pre-set delay to compensate. The delay time can be set from SLOW(0.8s) to MIDDLE(0.5s) to FAST(0.2s), by the DELAY switch.The minimum delay suits spot or short welds. The maximum delay suits heavy current welding and reduces eye fatigue from the arc. Selections between SLOW-MIDDLE are suitable for most of indoor and outdoor welding operations.

4.18. SHADE GUIDE TABLE.

	Welding Process	Arc Current(Amperes)																					
		1.5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500	600	
☉	SMAW				8			9		10		11		12		13		14					
☉	MAG						8	9	10		11		12		13		14						
☉	TIG			8		9		10		11		12		13									
☉	MIG(heavy)							9		10		11		12		13		14					
☉	MIG(light)									10		11		12		13		14					
☉	PAC								9	10	11		12		13								
☉	PAW	4	5	6	7	8	9	10	11	12													
	Note	★ SMAW-Covered electrodes ★ MAG-Metal arc Welding ★ TIG-Gas Tungsten Arc Welding ★ MIG(Heavy)-MIG with heavy metals											★ MIG(light)-MIG with light alloys ★ PAC-Plasma jet cutting ★ PAW-Microplasma arc welding										

5. MAINTENANCE

5.1. PAPR CLEANING:

5.1.1. Detach the battery pack, hose assembly and the blower. Inspect all parts for damage. Replace all damaged parts prior to storage or next use.

5.2. BLOWER

5.2.1. Clean the outer surfaces of PAPR assembly and battery pack with a soft cloth dampened in a solution of water and mild, pH neutral detergent.

- ✗ **DO NOT** immerse the blower or battery pack in water.
- ✗ **DO NOT** use solvents or abrasive cleaners.
- ✗ **DO NOT** attempt to clean the interior of the blower with compressed air or vacuum.
- ✓ Ensure the electrical contacts of the blower and battery pack are dry.

5.3. HOSE ASSEMBLY

5.3.1. Clean the connection joints on the hose assembly with water and a mild detergent solution.

NOTE: The hose assembly can be immersed in water for cleaning.

5.3.2. Air dry or dry by connecting to the blower unit and blow dry the hose.

NOTE: The inside of the hose must be completely dried prior to use or storage.

5.4. HEPA FILTER

5.4.1. Remove the filter cover and inspect the filter,replace if excessively dirty.

5.5. FRONT COVER LENS REPLACEMENT

5.5.1. Replace the front cover lens if it is damaged (cracked, scratched, pitted or dirty). Remove the old front cover lens by pressing two lock switches at the bottom of the retaining frame and pull the frame and ADF out. Take the old front cover lens out, and remove any protective film before installing the new one. Cover lens by pressing two lock switches at the bottom of the retaining frame and pull the frame and ADF out.

5.6. INSIDE COVER LENS REPLACEMENT

5.6.1. Replace the inside cover lens if it is damaged (cracked, scratched, pitted or dirty). Place your finger or thumb into the recess and flex the inside cover lens upwards until it releases from one edge. Then remove any protective film before installing the new one.

5.7. BATTERIES REPLACEMENT

5.7.1. When low voltage indicator (inside the helmet, on the left) turns red, you have to remove the battery slide cover plates and replace the old battery with a new CR2450. After that, put on cover plates.

5.8. CLEANING AND STORING

5.8.1. Keep the sensors, solar cell and filter lens clean. Clean filter cartridge and helmet shell by using a soapy water solution and soft cloth. do not use solvents or abrasive cleaning detergent. Switch the product to grind mode and put it in a clean, dry location for storage.

6. TROUBLESHOOTING

PROBLEMS	SUGGESTED SOLUTION
Blower does not supply air to hood.	1. Press ON/OFF to start blower. 2. Recharge battery. 3. Verify battery is properly connected to blower. 4. Remove blockage from blower outlet and breathing tube.
Battery pack's charge lasts less than expected.	1. Ensure battery pack is fully charged. 2. Replace battery. 3. Replace charger. 4. Check the air filter (HEPA filter & Foam prefilter), and replace it if necessary.
Blower cannot be turned off.	Press ON/OFF button for one second.
Battery red level light is flashing.	Charge or replace the battery.
Danger light is on, alarm sounds or blower vibrates.	Check the blower air flow as section 4.11.

PROBLEMS	POSSIBLE CAUSE(S)	SUGGESTED SOLUTION(S)
Difficult to see through filter.	Cover lens dirty.	Clean or replace cover lens.
	Filter lens dirty.	Clean filter lens.
Filter does not darken when arc is struck.	Grind or Cut Mode selected.	Adjust Shade from 9 to 13.
	Sensors or Solar Panel blocked.	Make sure sensors or solar panel are exposed to weld arc without blocking.
	Set Sensitivity to MIN.	Adjust Sensitivity to required level.
	Low voltage of lithium battery.	Replace with new lithium battery if indicator turns red.
Filter darkens without arc.	Set Sensitivity to MAX.	Adjust Sensitivity to required level.
Filter remains dark after welding.	Set Delay to FAST.	Adjust Delay to required level.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



REGISTER YOUR PURCHASE HERE



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.



BATTERY REMOVAL

Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd's Batteries Producer Registration Number (BPRN) is BPRN00705.

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 product.

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

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