



Purelite Xstream



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User Instructions

GB, IRL

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Fig. 1

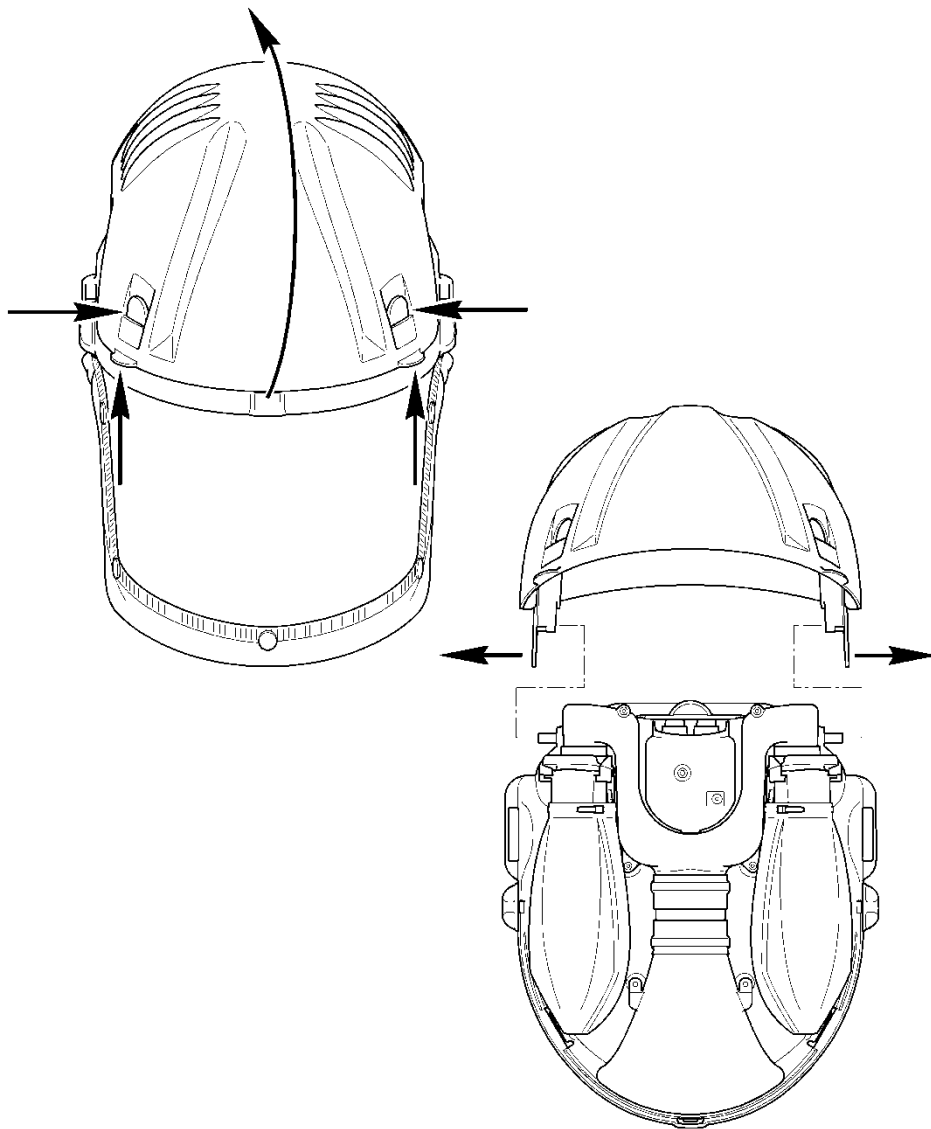


Fig. 2

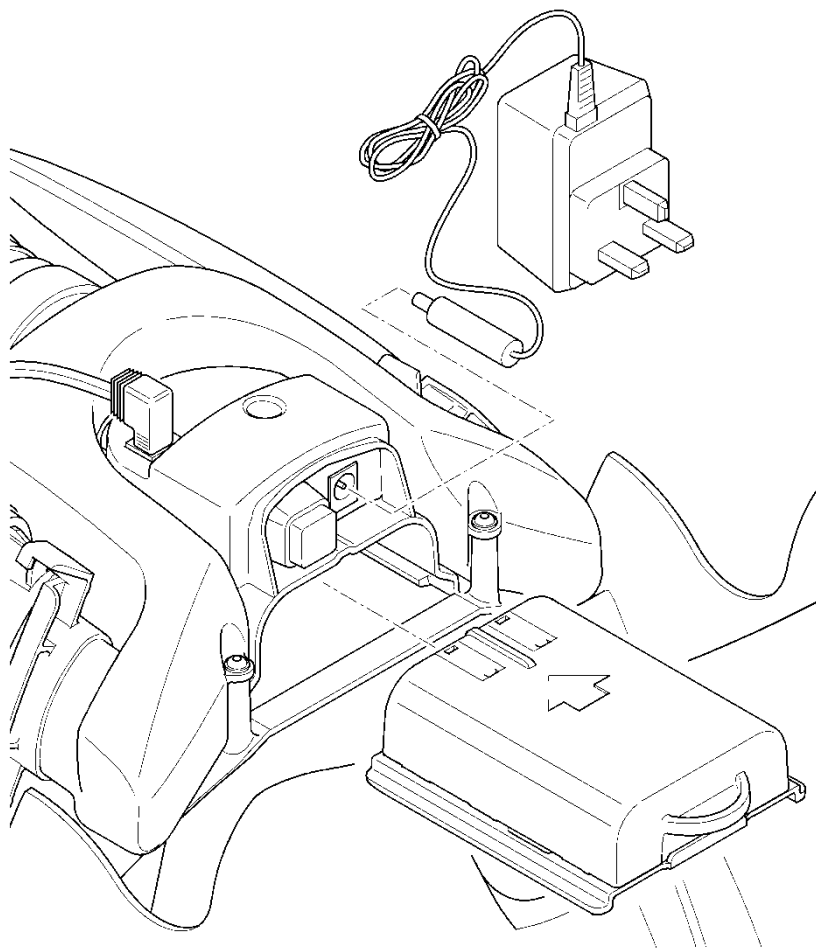


Fig. 3

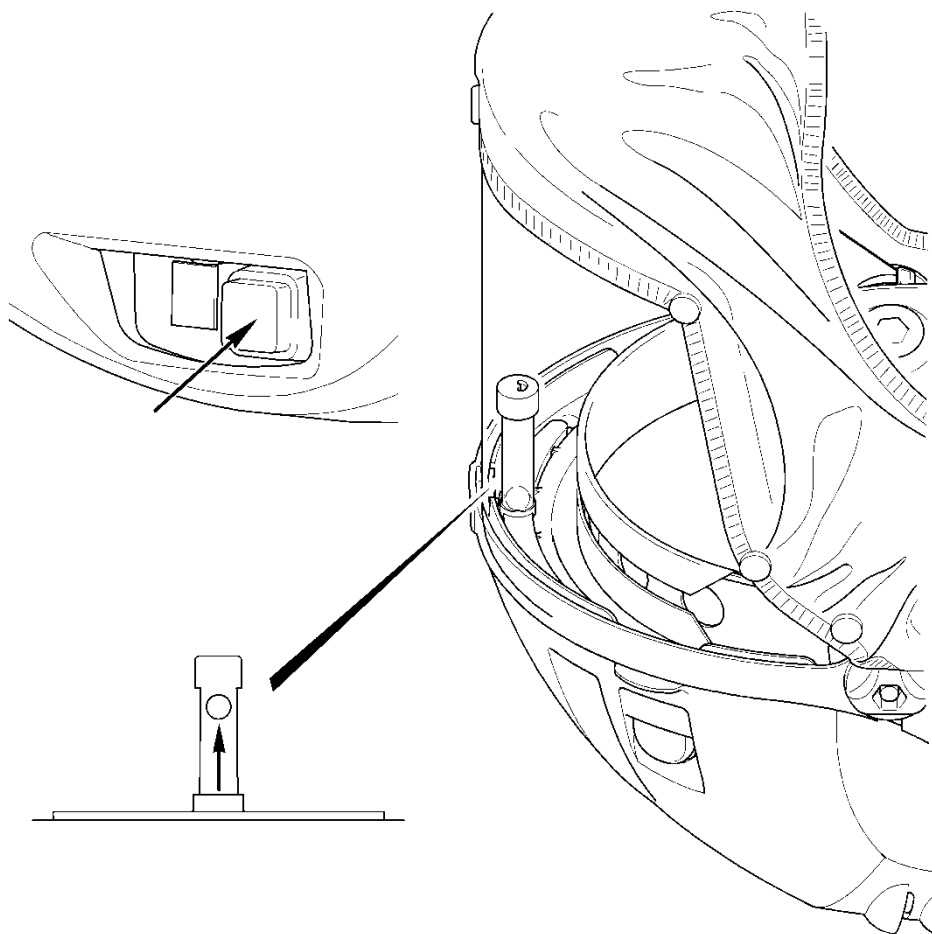
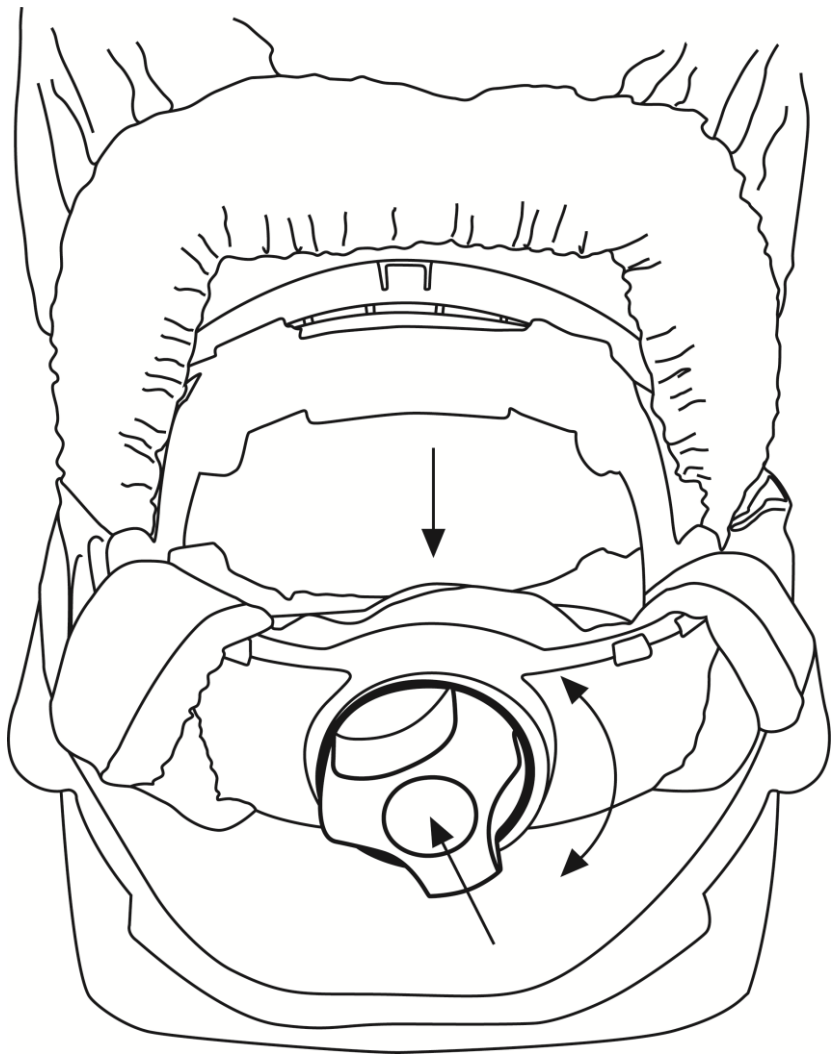


Fig. 4



**Fig. 5**

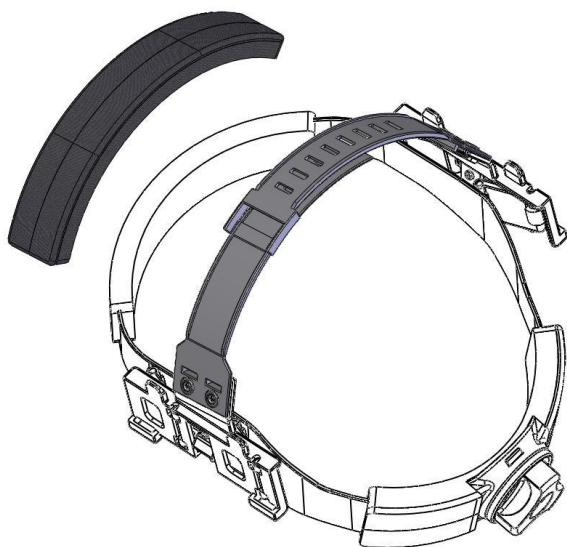
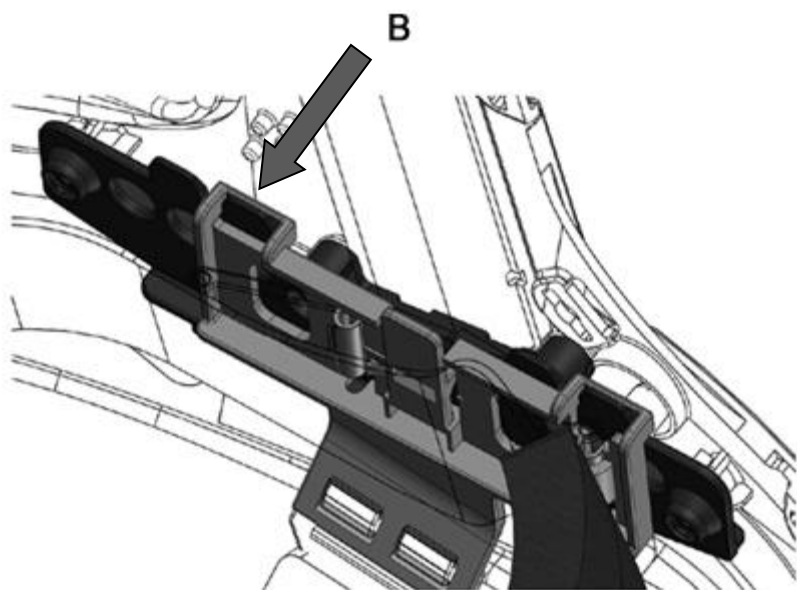
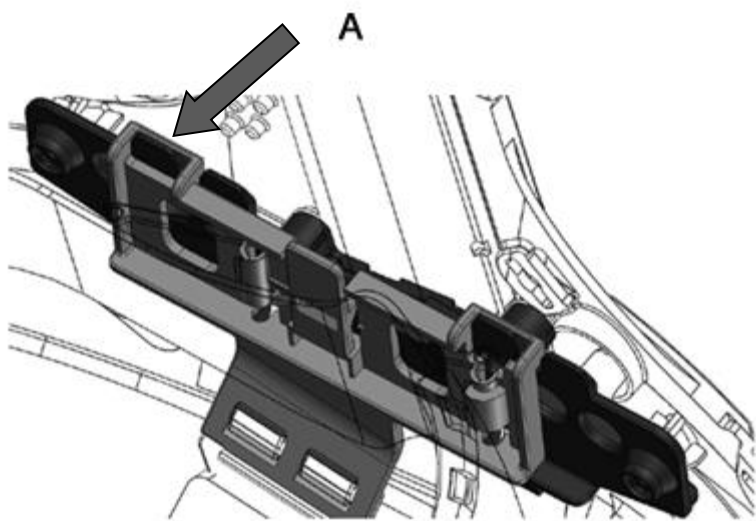
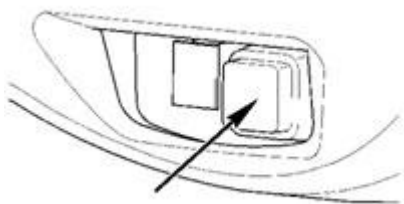


Fig. 6





**Fig. 7**



**Fig. 8**

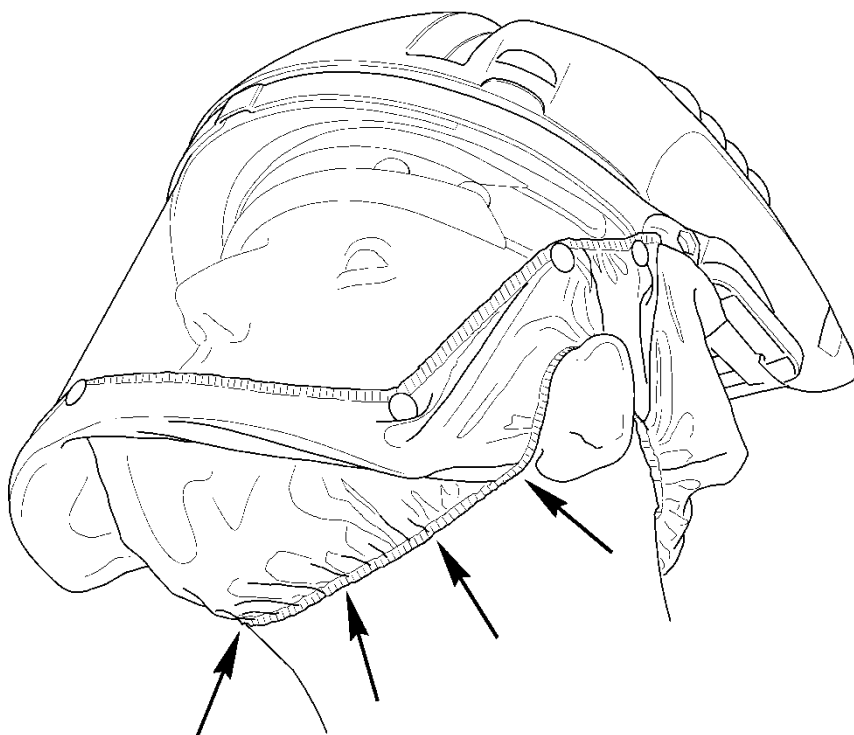


Fig. 9

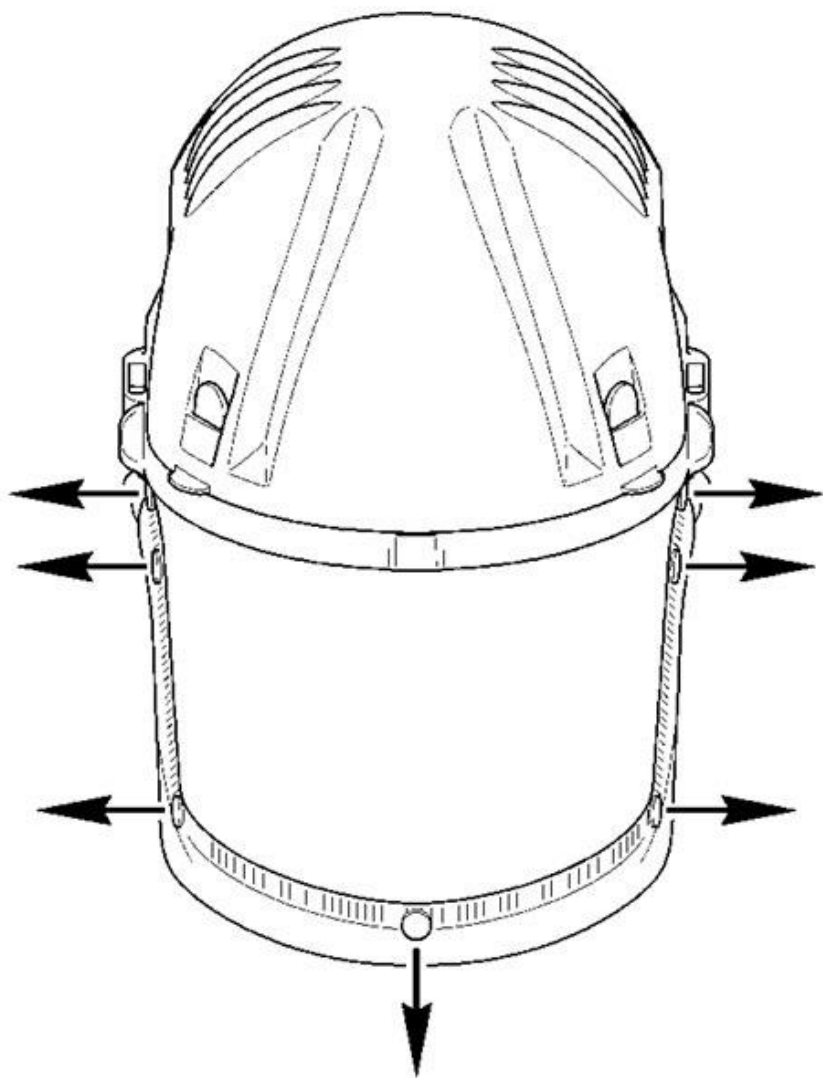


Fig. 10

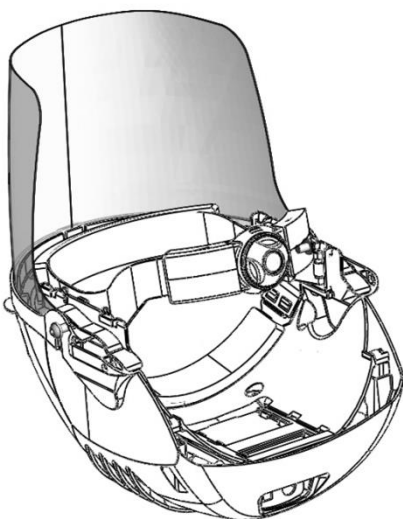
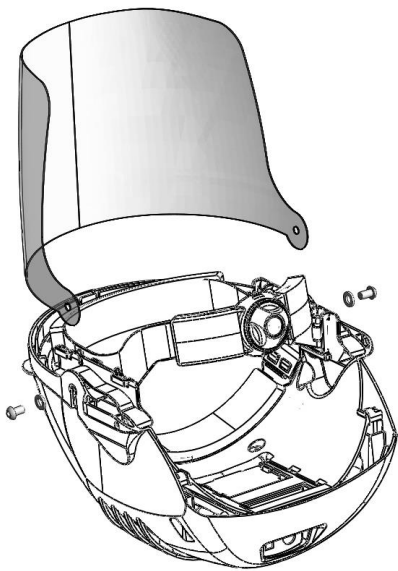


Fig. 11

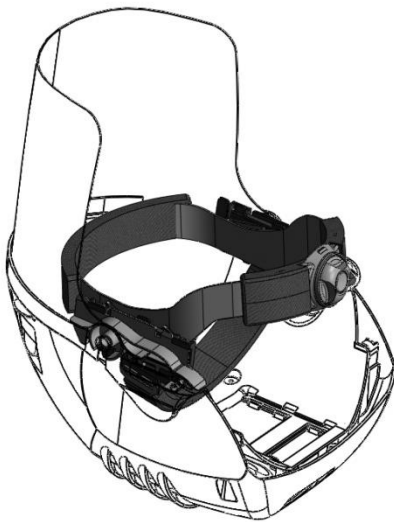
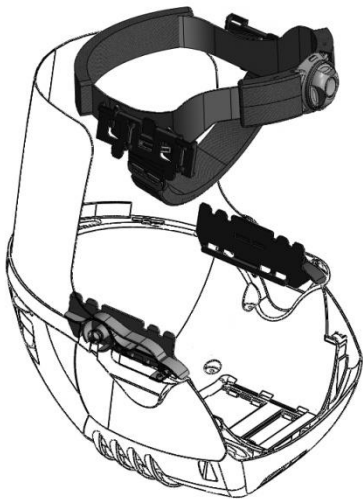


Fig. 12

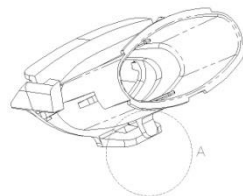
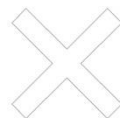
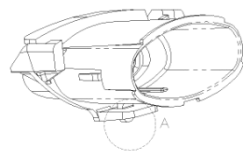
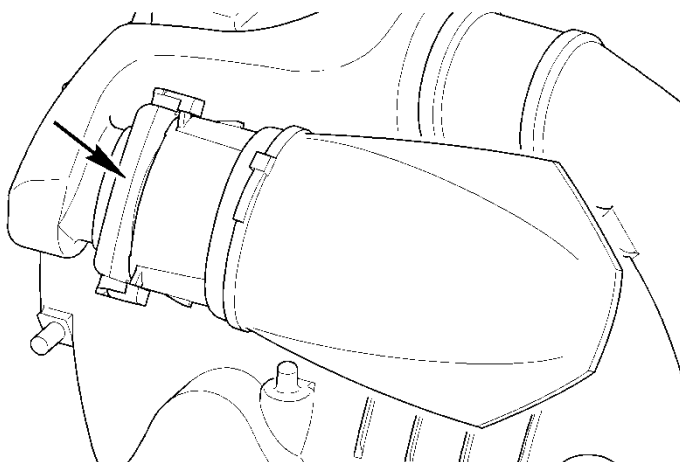
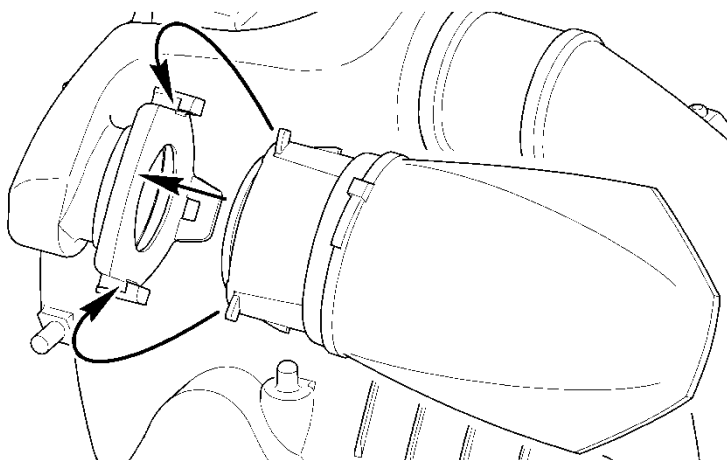
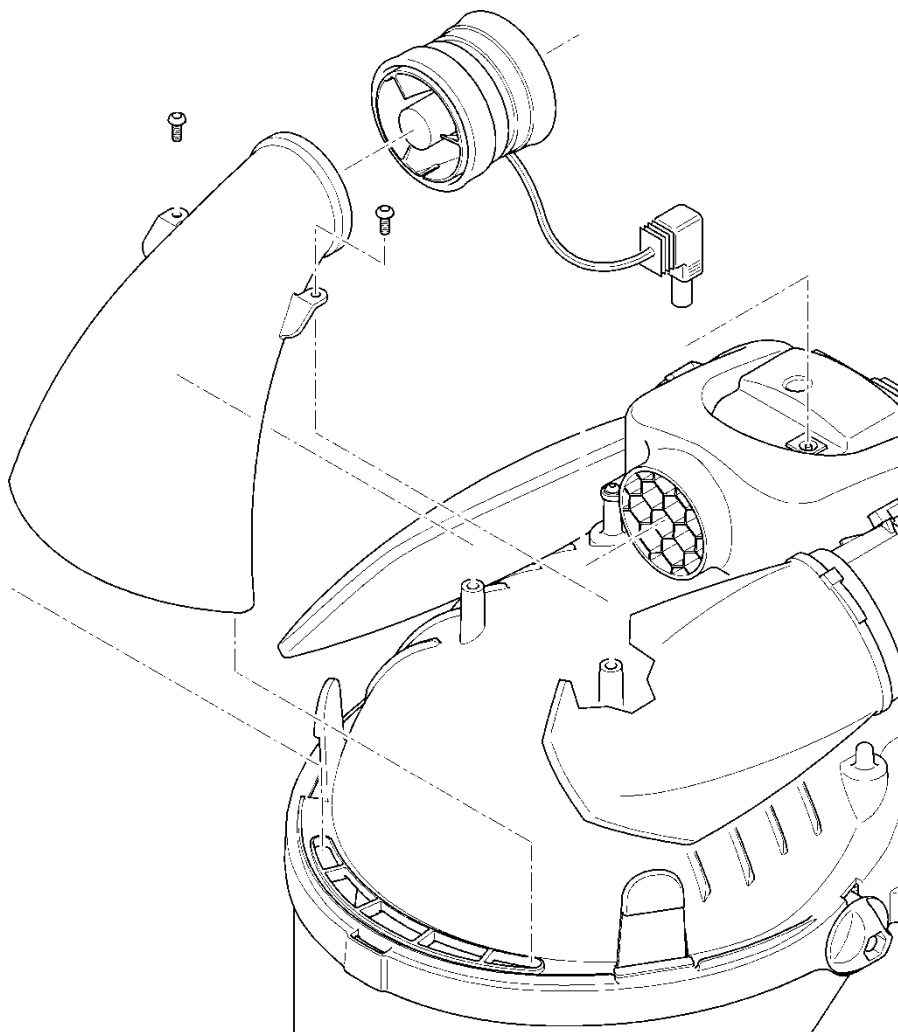
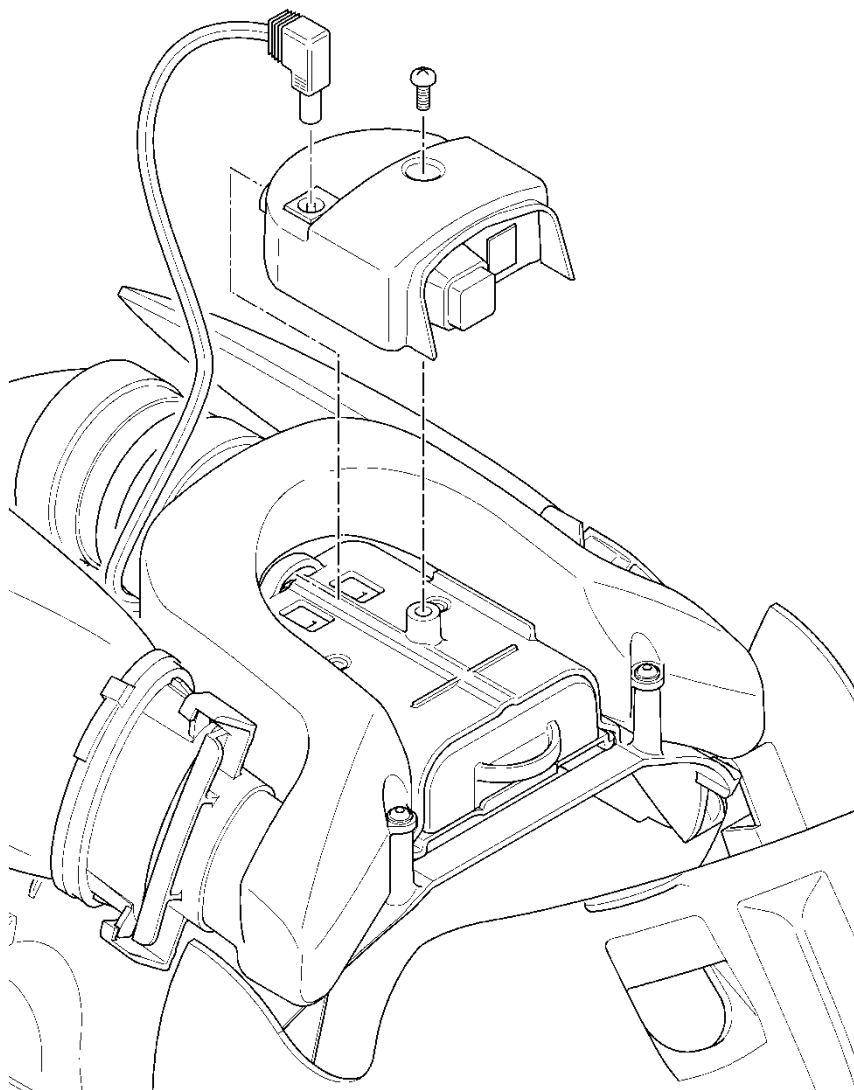


Fig. 13



**Fig. 14**



# Purelite Xstream

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## **WARNINGS & CAUTIONS**

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1. REPAIR IS BY REPLACEMENT OF DEFECTIVE PARTS ONLY.
2. ONLY APPROVED ORIGINAL PURELITE PARTS SHOULD BE USED.
3. UNITS MUST BE STORED IN ACCORDANCE WITH THESE INSTRUCTIONS. (INCLUDING DURING BREAK TIMES ETC)
4. UNITS MUST BE REGULARLY CLEANED IN ACCORDANCE WITH THESE INSTRUCTIONS.
5. UNITS MUST BE DECONTAMINATED IN ACCORDANCE WITH THESE INSTRUCTIONS.
6. THE HEADBAND, FIXINGS AND MOUNTING POINTS FORM PART OF THE STRUCTURE OF THE UNIT. WHEN RE-FITTING A HEADBAND ENSURE THAT IT IS FITTED CORRECTLY OR THE INTEGRITY OF THE UNIT MAY BE COMPROMISED.



## USER INSTRUCTIONS

GB, IRL

1. Please read these instructions and then store them in a safe place for future reference.
2. The respirator must be fitted and used in accordance with these instructions in order to obtain the approved level of performance.

## INTRODUCTION

3. The Purelite Xstream is a self-contained, lightweight Powered Air Purifying Respirator intended for protection against solid aerosols only. This is combined with eye protection from impact and liquid splash.
4. The Purelite Xstream is powered by a rechargeable battery pack held inside the respirator. Air is filtered through the respirator to provide a constant flow of clean air over the face. A face seal ensures that positive pressure is maintained within the respirator.
5. The Purelite Xstream contains an adjustable quick release headband ensuring a comfortable fit for most head sizes.

## GENERAL DESCRIPTION

6. The standard Purelite Xstream unit contains the following items:

Part Number	Quantity	Description
Xstream	1	Powered Air Purifying Respirator incorporating Eye Protection
	1	Battery Charger
	1	Battery Pack
	1	Airflow Indicator
	1	Storage Bag
	1	User Instructions
	1	COSHH Record Card

**NOTE:** Non-standard units may be shipped with different quantities of the items listed above.

## APPROVAL FOR USE

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7. This product has been shown to meet the requirements of Article 10 of the European Directive 89/686/EEC and is manufactured in accordance with Article 11B quality monitoring system, and thus is CE marked.
8. Article 10 and 11B assessments conducted by: British Standards Institution, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes, MK5 8PP, UK

(Notified Body Number: 0086)

9. Product assessed against the requirements of the following standards:

**Respiratory Protection:** BS EN 12941 1999, respiratory devices, powered filtering devices class TH2P. For use against solid particulates only.

**Eye Protection:** BS EN 166: 2002, personal eye protection. Class 1B3.  
Optical class 1; high-speed particles - medium energy impact, B; liquid droplets and splashes, 3.

## SUITABILITY FOR USE

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10. This respirator must be used strictly in accordance with these instructions.
  - 10.1. Do not use this respirator for protection against unknown atmospheric contaminants or when concentrations of contaminants are unknown or immediately dangerous to life or health, or in atmospheres likely to be deficient in oxygen.
  - 10.2. Only use this respirator with the parts and accessories listed in these instructions.
  - 10.3. The respirator is only for use by trained, competent personnel.
  - 10.4. In the power-off state little or no respiratory protection is to be expected, and this is considered to be an abnormal situation.
  - 10.5. In the power-off state there will be a rapid build up of carbon dioxide and depletion of oxygen may occur.
  - 10.6. Without the face seal fitted no respiratory protection is to be expected.
  - 10.7. At very high work rates and peak inhalation the pressure flow in the device may become negative.

- 10.8. Ophthalmic spectacles may transmit impacts from high-speed particles, thus creating a hazard to the wearer.
- 10.9. Leave the contaminated area immediately if any of the following conditions apply:
- The alarm sounds.
  - Any part of the respirator becomes damaged.
  - Airflow into the respirator decreases or stops.
  - Breathing becomes difficult.
  - Dizziness or other physical distress or irritation occurs.
  - The user tastes or smells contaminants.
- 10.10. Never modify or alter this product, except as directed in the service tasks contained in these instructions.
- 10.11. Materials which may come into contact with the wearer's skin could cause allergic reactions to susceptible individuals.

### ***Transportation***

11. For transportation purposes use the carry bag provided and protect the unit from physical or chemical damage.

## **PREPARATION FOR USE**

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12. The following tasks must be performed prior to use:

### ***Installation and battery charging***

13. The nominal recharge time for a flat battery pack is 14 hours. The battery pack must be fully charged before first use. To install and charge the battery pack:
- 13.1. Lift the cover by pressing the forward side tabs inwards and rotating the cover rearwards as shown in Fig. 1.
- 13.2. Slide the battery pack into its housing as shown in Fig. 2.
- 13.3. Fit the battery charger connector into the rear of the electronics unit and connect the charger to a mains AC supply. The LED lights up and remains lit even after a full charge has been completed. Charge for 14 hours.

- 13.4. After charging switch off the mains AC supply, remove the charger connector from the unit and refit cover ensuring tabs lock the cover in position.
14. For external charging see optional charge cradle in accessories list.

### ***Visual inspection***

15. Carry out a visual inspection of the unit as follows:
  - 15.1. Check the face seal material for damage.
  - 15.2. Check the face seal attachment to the respirator chassis.
  - 15.3. Check the visor seal for damage.
  - 15.4. Check the quick release headband is properly installed.
16. Replace any damaged parts including scratched or damaged visors.

### ***Airflow pre-use check***

17. Ensure that the air filters have been installed correctly as described in the Filter replacement section on page 27.
18. Refer to Fig. 3 and check the airflow as follows:
  - 18.1. Turn the unit upside down and locate the airflow indicator on the four slots at the front of the unit.
  - 18.2. Press the red on/off switch to operate the fan. An audible tone should sound briefly one time. The red ball is raised to the top of the indicator tube if the system is operating correctly.
  - 18.3. If the red ball is raised to less than half the height of the tube then either the battery charge is low or the filters are blocked and need replacing.

### ***Low battery warning***

19. If an audible regular intermittent tone sounds recharge or replace the battery pack.

## **WEARING AND USING**

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### ***Fitting the respirator***

20. Fit the unit as follows:

- 20.1. The quick release headband must be adjusted for comfort and balance prior to entering the work environment. Increase the circumference by pressing the ratchet release button as shown in Fig. 4 and pulling gently on the headband strap. Reduce the circumference by rotating the ratchet, see Fig. 4.
- 20.2. Set the respirator brow height by adjusting the crown strap, see Fig. 5
- 20.3. To achieve optimum comfort and safety it is important to adjust the respirator to achieve the best balance as shown in Fig. 6. Position 'A' is the front position. Position 'B' is the rear position.
- 20.4. The respirator can be used in conjunction with corrective prescription spectacles and compatible hearing protection (see page 24). Corrective prescription spectacles may transmit impacts from high-speed particles, thus creating a hazard to the wearer.

**CAUTION: Do not hold or suspend the respirator by the face seal.**

- 20.5. Switch the unit on using the on switch (Fig. 7).
- 20.6. Don the unit and ensure face seal is pulled under chin and is not twisted or folded. (See Fig. 8)

### ***Removing the respirator***

21. Do not remove the respirator until you have vacated the contaminated area.

- 21.1. Remove the respirator. Press the on/off switch to switch the unit off.
- 21.2. If special decontamination procedures are required take appropriate cautions and place the respirator in a suitable sealed container. Otherwise clean the respirator as indicated below after every use.

## **Cleaning**

**WARNING:**        **Never use a blow gun on any part of the respirator.**

22. To clean the respirator proceed as follows:

22.1. For units with gross contamination ensure unit is upright. Clean using a clean cloth with a mild solution of a household liquid soap and water. For ingrained dirt on the outside of the unit (excluding visor), a nail brush, ultrasonic brush or scouring pad may be used. Dry the unit with a clean lint free cloth - do not use heat source.

22.2. Wipe the **inside** & outside of the unit including motor plenum - PUREWIPE (PR01110SP) cleaning wipes are recommended for this purpose.

22.3. Do not immerse the unit in water or any fluid.

22.4. Do not use organic solvents or abrasive cleaning agents on any part of the equipment.

22.5. Launder comfort pads as required using a mild solution of a household detergent and water (Max 30°C).

22.6. Hand wash the face seal as required using a mild solution of a household detergent and water. (Max 30°C).

23. Disposal and cleaning of parts should be undertaken in accordance with local health and safety, and environmental regulations.

24. If a respirator has been used in an area that has caused it to become contaminated with a substance requiring special decontamination procedures, observe the precautions described in the manufacturer's health and safety information.

**NOTE:**            For further advice and support on fitting and cleaning procedures contact your area representative for information on the certified training programme.

## PARTS LISTS

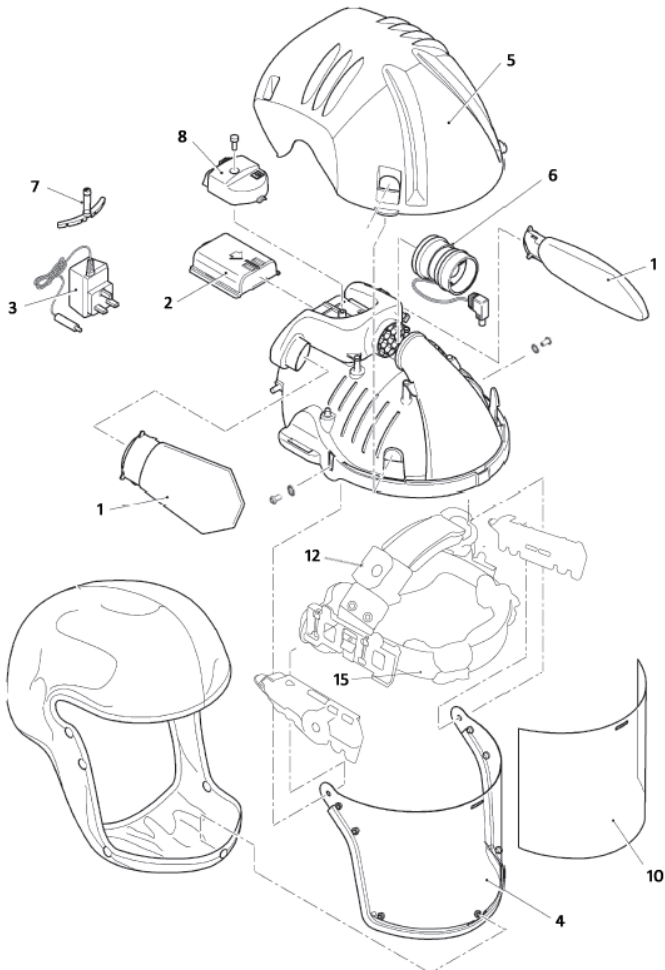
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25. See table below and refer to Illustrated parts on page 24.

No	Part No	Description	Qty
1	PL01170-1SP	Filter TH2P (Pair) (UK & EU)	1
1	PL01170-3SP	Filter TH2P (Pair) (AUS)	1
2	PL01171-1SP	8hr Battery Pack (UK & EU)	1
2	PL01171-5SP	8hr Battery Pack (AUS)	1
3	PL01172-1SP	Battery Charger (EU)	1
3	PL01172-3SP	Battery Charger (AUS)	1
3	PL01172-7SP	Battery Charger (UK)	1
4	PL01173-1SP	Visor Assembly (UK & EU)	1
4	PL01173-3SP	Visor Assembly (AUS)	1
5	PL01174-2SP	Cover (UK & EU)	1
5	PL01174-4SP	Cover (AUS)	1
6	PL01177-2SP	Fan Motor Assembly (UK & EU)	1
6	PL01177-5SP	Fan Motor Assembly (AUS)	1
7	PL01178-2SP	Airflow Indicator (UK & EU)	1
7	PL01178-5SP	Airflow Indicator (AUS)	1
8	PL01179-2SP	On/Off Switch Assembly (UK & EU)	1
8	PL01179-5SP	On/Off Switch Assembly (AUS)	1
9	PL01182-2SP	Charge Cradle	1
10	PL01185-2SP	Visor Overlays (Clear)	5
11	PL03119SP	Head Cover & Face Seal for Quick Release Headband	1
12	PR01077SP	Hygiene/Comfort Pad Kit	1

13	PR01078SP	Super Comfort/Hygiene Pad Kit	1
14	PR01110SP	Purewipes	1
15	PR01601SP	Quick Release Headband Assy (inc PR01077SP)	1

**Illustrated parts**





### ***Compatible hearing protection***

26. The recommended hearing protection and communications for use with the Purelite Xstream respirator include:

Hearing Protection Only: Disposable, re-usable or banded ear plugs to EN352-2. Please note it is the responsibility of the end user to ensure adequate attenuation levels are met for the specific workplace.

Communications Headsets Only: Please consult the radio supplier and request unit compatible headset that does not require attachment to the respirator shell.

Communications & Hearing Protection: Please consult the radio supplier and request unit compatible headset that does not require attachment to the respirator shell.

The headset will need to include ear plugs (possibly custom moulded) to EN352-2. Please note it is the responsibility of the end user to ensure adequate attenuation levels are met for the specific workplace.

## SERVICING

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### ***Annual Servicing***

27. Please note all Purelite respirator units should be sent for an annual service and calibration once each year. For further details on your nearest Pureflo servicing centre, please visit [www.helmets.co.uk](http://www.helmets.co.uk).

### ***Before any disassembly***

28. If a respirator has been used in an area that has caused it to become contaminated with a substance requiring special decontamination procedures, observe the precautions described in the manufacturer's health and safety information.

29. Always clean gross contamination from the unit in accordance with the instructions on page 22 before disassembly or filter replacement.

**WARNING:**        **Never use a blow gun on any part of the respirator.**

**NOTE:**            Repair is by replacement of defective parts only.

### ***Visor overlays***

30. Install a new set of visor overlays by adhering to the main visor using the adhesive strips provided.

### ***Head cover & face seal replacement***

31. Refer to Fig. 9 and replace the head cover and face seal as follows:

31.1. Starting from the centre of the visor pop studs on head cover & face seal.

31.2. Release touch and close tape from front of helmet to remove head cover & face seal from helmet.

31.3. Secure the new head cover & face seal to the touch and close tape at the rear of the unit.

31.4. Fit head cover & face seal over headband and secure to visor pop studs.

32. Head cover & face seals should be stored out of direct sunlight and replaced at least every 5 years.

### ***Quick release headband assembly replacement***

**WARNING:**        **The headband, fixings and mounting points form part of the structure of the headtop. Ensure that the new assembly is fitted correctly or the integrity of the unit may be compromised.**

33. Remove and install a new headband assembly as shown in Fig. 11

### ***Visor assembly replacement***

34. Replace the old or damaged visor assembly as shown in Fig. 10.

34.1. Remove face seal as described in paragraph 31.

34.2. Remove quick release headband as described in paragraph 33.

34.3. Remove M6 screws and washers on both left and right hand sides.

34.4. Disengage the moulded clip on the unit that secures the visor and remove.

35. Visors should be stored out of direct sunlight and replaced at least every 5 years or according to local regulations, whichever is soonest.

### ***Filter replacement***

36. Replace the filters as follows:

36.1. Lift the cover as shown in Fig. 1

36.2. Refer to Fig. 12. Hold the neck of the fitted filter and push firmly towards sealing face to release from securing tabs and lift filter upwards to remove. Discard appropriately.

36.3. Locate new filter against sealing face. Push firmly toward sealing face and downwards. Filter will click into in securing tabs. Ensure the rear locating tag is engaged in the slot and the filter lays parallel to the chassis.

36.4. Refit cover.

### ***Fan motor assembly replacement***

37. Replace the fan motor assembly as follows:

- 37.1. Lift the cover as shown in Fig. 1
- 37.2. Refer to Fig. 13. Disconnect fan/motor electrical lead from the electronics unit.
- 37.3. Remove the two screws securing the front air duct. Lift the air duct from locating lip and pull fan/motor from rear air duct. Separate fan/motor from front air duct.
- 37.4. Fold back both seals on replacement fan/motor assembly. With electrical lead point downwards locate with front air duct and secure by unfolding seal over duct.
- 37.5. Connect electrical lead to electronics unit.
- 37.6. Locate front air duct in lip and fan/motor with rear air duct, tuck excess cable under fan/motor unit and unfold seal to secure. Secure air duct with screws.
- 37.7. Ensure both seals are fully engaged with ducts and are fully unfolded, failure to do so may compromise the unit's performance.
- 37.8. Refit cover.

### ***On/Off Switch Assembly***

38. Replace the on/off switch assembly as follows:

- 38.1. Lift the cover as shown in Fig. 1
- 38.2. Replace on/off switch assembly as shown in Fig. 14.

## **STORAGE (Including temporary e.g. Break Time)**

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39. The equipment should be stored in dry, clean conditions away from direct sunlight, sources of heat, petrol and solvent vapours. Store in accordance with the guide below.
40. Store the equipment within the temperature range +5°C to +40°C and the humidity range 0-90%.

**NOTE:** Free workplace posters providing storage information are available from your area representative.

## TECHNICAL SPECIFICATION

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Weight	1.1kg nominal
Head Size Range	54 - 61cm
Protection Factor	Assigned (APF) 20

### ***Environmental range (storage and use)***

Humidity 0-90% storage and use (store out of direct sunlight)

Temperature Range

Charging	+5°C to +40°C
Use	-5°C to +40°C
Storage	+5°C to +40°C

### ***Regulated airflow***

Initial:	210 l/min
Minimum:	150l/min

### ***Battery Charger***

Input	UK 230 ±10% VAC
Nominal Power Consumption	4W
No Load output	12VDC
Nominal output voltage @ 4.2 v	300 mA
IP 20 indoor use only	
CE EN 60335-1, 60335-2-29	

## **DECONTAMINATION RETURN PROCEDURE**

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IMPORTANT NOTICE: Helmet Integrated Systems Ltd cannot accept any respirator for service or repair unless the following information has been supplied separately externally attached to the packaging.

**WARNING: Never use a blow gun on any part of the respirator.**

Please use the returns form provided with your Respirator.

Name of company

Address

Telephone

Fax

Email

Contact Name

Type of business

Process Purelite Xstream used for

Serial Number of Respirator

Specific contaminant

- a) Name of
- b) Manufacturer of
- c) Brand name
- d) By-Product of a Process

Please provide Health and safety data sheet for contaminant.

Any known allergic reactions caused by the contaminant.

From whom the unit was purchased.

The date the unit was purchased.

Specific reason for return, please provide as much detail as possible.

- **Respirators without this information attached will be returned to source without any further action being taken.**
- **Respirators that have not been thoroughly decontaminated inside and out will be returned to source without any further action being taken.**

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