

Hogg Blasting & Finishing Equipment Ltd

Part of The Surface Finishing Equipment Group



Surface Finishing
Equipment Group

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Inspection and Maintenance of Air Visor Systems

Component:	Daily basic/visual checks:	Periodical inspection & maintenance:
Clearflow Filter System	Optional	Check for leaks. Drain filter bowls. Replace filter elements at end of service life.
Air Supply Hose	Check for condition of the hose. Check for leaks around, and the positive operation of, metal fittings.	Repeated in-depth inspection. Discard and replace if damaged.
Waistbelt Assembly	Check for general condition of the assembly. Check for leaks around, and the positive operation of, metal fittings. Check for condition of spray gun hose if fitted.	Repeated in-depth inspection. Replacement of personal carbon filter element at end of service life. Record any maintenance or replacement of components.
Air Tube & Diffuser	Check for the condition of the air tube and for leaks at the metal fitting. Check for the condition of the foam diffuser.	Repeated in-depth inspection. Discard and replace if damaged. Record any maintenance.
Browguard and harness	Check for the general condition and operation of the assembly.	Repeated in-depth inspection. Discard and replace if damaged. Record any maintenance.
Visor	Check for cracks and splits, or for signs of chemical degradation.	Repeated in-depth inspection. Discard and replace if damaged. Record any maintenance.
Face seal	Check for tears or splits in the foam or fabric components.	Repeated in-depth inspection. Discard and replace if damaged. Record any maintenance.
Disposable visor covers	Inspect or replace.	Replace.

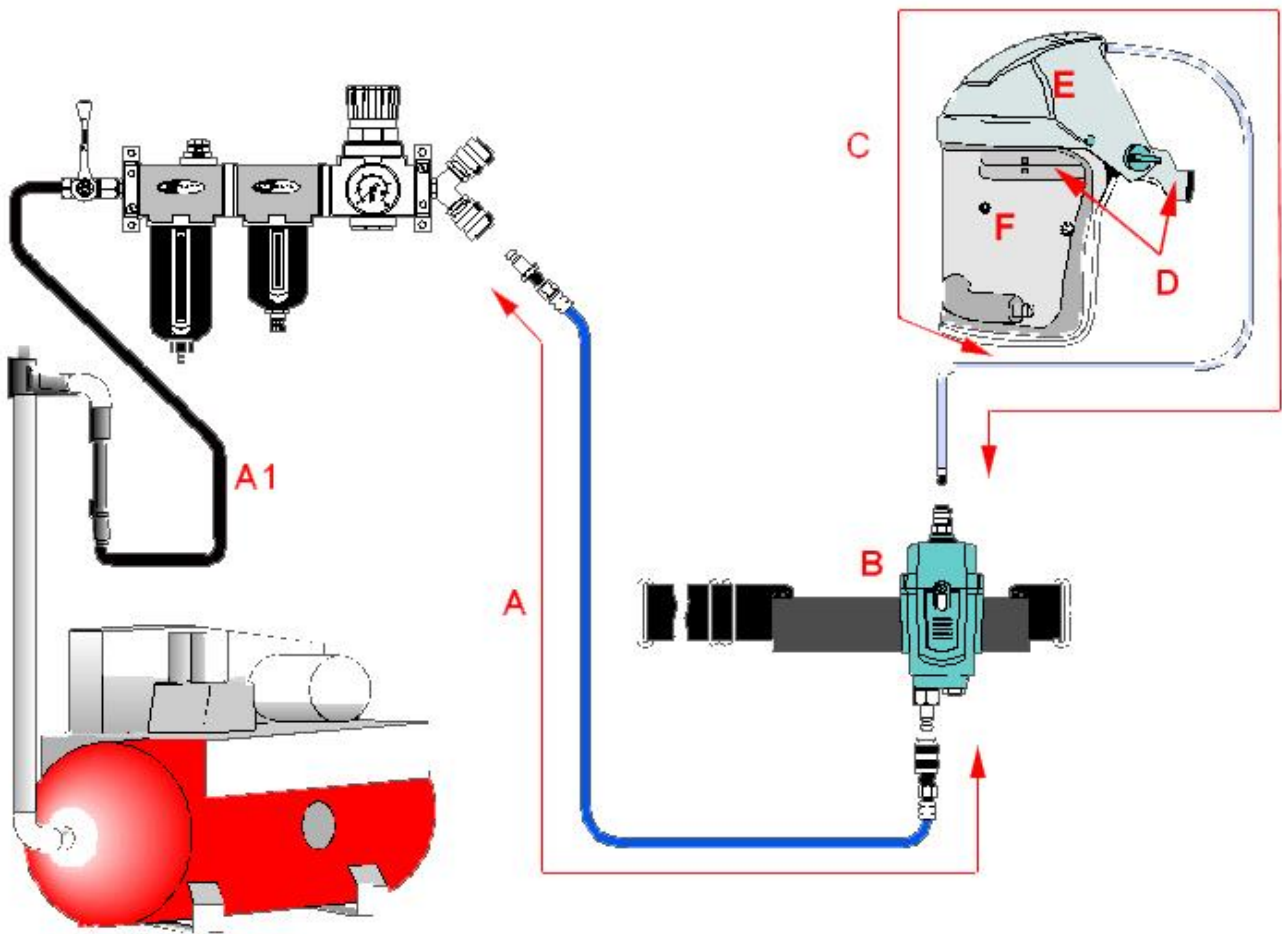
A sufficient stock of spare parts is advised on site so wearers can replace them as and when required.

Inspection and Maintenance of Airvisor Family Systems:

In order to comply with health and safety regulations it is important to inspect your respiratory system to ensure that it is safe for use. Some basic checks should be carried out on a daily basis, before each use – routine inspection and maintenance should be carried out at a pre-determined intervals, but at least once a month.

Details of the spare items to be purchased are shown like this example, along with details of how they are fitted:

The complete system layout:



Compressor and industrial pipework leading to working area:

This is not part of your personal protective equipment and its maintenance is a matter for the factory engineering department. It should be carried out regularly and in accordance with the manufacturer's written advice.

Clearflow filter system and any flexible tubing leading to it:

Again, these components are not part of your personal protective equipment – company policy will tell you who is responsible for their inspection and maintenance – the factory engineering department, or those who rely on them to supply clean air in the workplace.

The flexible tubing (A1) is used to reach from the fixed factory airline to a portable stand mounted filter system used in a remote working area.

It is recommended to carry out a visual check of the hose on a weekly basis – if there are any deep cuts or tears in the cover of the tubing it should be replaced.

Please note: This hose is working on the 'dirty' side of the Clearflow filter system so contamination such as bulk oil and water, from the factory airline system, might have gathered inside. It is important not to mix this tubing with the BlueLine Supply Hose (A), otherwise any such contamination might be flushed through the system and arrive directly within the components of your personal protective equipment.

Clearflow filter systems are available in three types, each of which can be wall mounted or supplied on a portable stand.

On a weekly basis checks should be made for any obvious signs of leakage in or around the filter system – any problems should be reported to the engineering department.

On a weekly basis the filter bowls of the system should be drained of any excess fluid that has gathered during use. This is done by deflecting the small nozzle at the bottom of each bowl. In some cases a small retaining collar must be loosened to allow this to take place.

Economy (25cfm = 710 l/min) and Standard (50 cfm = 1,420 l/min) systems each contain just one main coalescing filter element. These should be replaced after 1,000 hours of use in normal conditions, more often if the quality of the compressed air provided is poor.

Economy element = Ref. *** DCFS-0180 25 cfm replacement unit.**

Standard element = Ref. *** DCFS-0181 50 cfm replacement unit.**

Combination (45 cfm = 1,275 l/min) systems contain an additional carbon filter element. This should be replaced after 1,000 hours of use in normal conditions, more often if the quality of the compressed air provided is poor.

Carbon element = Ref. *** DCFS-0182 replacement unit.**

Filter elements are replaced with the isolating valve in the closed position and the system at atmospheric pressure – filter bowls are removed by moving them upwards and turning to the left – the bowl is now disengaged and can be removed. The old element is now exposed and can be unscrewed by turning it to the left. Installation of the new element etc. is achieved by following this simple routine in the reverse order.

On a daily basis ensure that the main regulator and dial gauge are set to give an output pressure which is suitable for the existing working conditions.

Air Supply Hose (A):

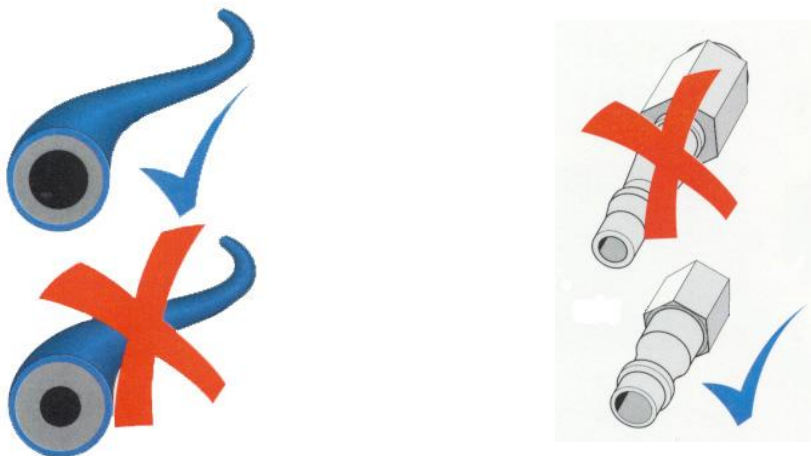
This is a very important part of your personal protective equipment system and its integrity is vital to the safe use of your respiratory equipment. It is recommended that certain basic/visual checks are made before each use.

Check for the general condition of the hose, if there are any deep cuts or tears in the cover of the BlueLine hose it should be replaced.

Check also for any obvious signs of leakage where the material of the PVC hose meets with the metal connectors at each end of the assembly. If in doubt do not use.

At each end of the hose assembly are High Flow quick release metal fittings.

Check their operation where they join to the Clearflow filter system, or to the waistbelt regulator unit (B) of your respirator. They should engage and lock on in a positive manner, without any signs of leakage at the connection.



Waistbelt unit (B) containing personal carbon filter and air flow regulator:

This unit contains a personal carbon filter element which removes any final traces of odour from within the system of hoses which deliver your air, and a regulator which ensures the supply of air to the headpiece is adequate and constant. It is recommended that certain basic/visual checks are made before each use.

For waistbelt style DAVW-1003 (as supplied within Chemical and Industrial kits):

Check for the general condition of the plastic housing and the webbing of the belt, replacement parts are available to correct damage through wear and tear

Check also for any obvious signs of leakage at the metal fittings. Any minor leaks can be simply cured by tightening the fittings gently with a spanner.

Check also for the operation of the miniature quick release fitting at the top of the waistbelt, where this makes the connection to the small diameter supply hose leading to the headpiece. This should engage and lock on in a positive manner, without any signs of leakage at the connection.

For waistbelt style DAVW-1001(as supplied within Paint Spraying kits):

This style of waistbelt carries an auxiliary take-off point, typically used for a spraygun hose. Additional checks must be made.

The operation of this extra connector should be checked as with the other High Flow fittings. The condition of the spray gun hose should also be checked. Any failure of this component (or its connection to the spraygun) can lead to a loss of pressure in the system and a consequent reduction in the level of protection offered by the respirator.

The personal carbon filter element should be changed after 1,000 hours of use OR if any odour is detected in use (the lifetime of the element might be reduced if there is excessive oil in the airline system and/or the waistbelt is not protected by the use of a Combination Clearflow filter system). The element is changed as follows.

Detach waistbelt from air supply, remove all connecting hoses and remove 3 fixing screws. Tilt forward and remove the regulator assembly and invert waistbelt to remove carbon cartridge. Fit 'O' seals to top and bottom of replacement cartridge. Slot into housing and relocate the black lug on the regulator assembly into the slot on the lower half of the waistbelt housing. Re-fit screws and reconnect to air supply. Check for air leaks.

Personal carbon element = Ref. 1B3400 DAVS-1404 replacement unit.

Air supply tube and diffuser (C):

This small diameter tube assembly delivers the air from the waistbelt to the headpiece, the condition of the diffuser is critical to the correct management of the air within the headpiece. It is recommended that certain basic/visual checks are made before each use.

Check that the joint between the tube and the metal plug (joining to the waistbelt) is in good condition and that there are no signs of leaks.

Check carefully the general condition of the tubing – there should be no signs of cracks or tears. If there is any damage the assembly should be replaced.

(Please note that exposure to solvents, typically in the paint spraying environment, may lead to a degradation of the plastic tubing through chemical action).

Check that the foam diffuser is in good condition, in the correct position, and is without any tears.

(The foam diffuser is a vital part of the respirator. **Never** use the respirator without a diffuser in place. In certain circumstances the respirator can become unsafe and may reduce the level of protection offered by the system).

The air tube and diffuser assembly is replaced by simply unclipping it from inside the Airvisor headpiece.

The replacement assembly is delivered with new clips as part of the basic specification.

Starting at the bottom left hand side of the headpiece the endmost clip is pressed into the pre-drilled hole, the next clip is fixed at the right hand side of the headpiece thus locating the diffuser. The remaining clips are pressed into the series of holes running up the right hand side of the visor, finally the tube is located in a notch at the back of the browguard. The replacement assembly is now ready for use.

(Please note that for standard Airvisor models the clips locate directly into the material of the visor blade, for Airvisor MV models the clips locate into the light blue plastic moulding which surrounds the visor).

Air tube and diffuser assembly = Ref. ** DAVS-1407 replacement unit.***

Respirator headpiece assembly (D, E & F):

The headpiece is a fundamental part of your respirator and its component parts should be kept in good condition so as to ensure the advertised level of protection. It is recommended that certain basic/visual checks are made before each use.

Airvisor (standard shape) - DAVK models:

Check the general condition of the browguard and frame assembly (D & E). Replace if there are any apparent cracks or heavy indents to the browguard as this may reduce the facial impact protection.

Check carefully for the condition of the clear visor blade (F) – replace if there are any cracks or splits in the material OR if there is any sign of chemical attack. The visor should also be replaced if surface scratches etc. sufficiently reduce your ability to work safely.

Check carefully for the condition of the foam face seal (F) – if there are any tears or splits the seal must be replaced.

(Please note that for DAVK style models the clear visor and the foam face seal are bonded together – if either is damaged the whole assembly must be changed).

The standard visor/seal assembly is mounted on the browguard by a peg at each top corner and two, snap lock wedges at the centre of the browguard.

Before removing the visor/seal it is necessary to remove the air tube and diffuser assembly (C). The visor/seal can now be removed by deflecting the middle part of the visor inwards, to disengage it from the snap lock wedges. The visor can now be rotated away from the browguard and removed from the corner pegs. The new visor is installed by following this simple routine in the reverse order, and the air tube and diffuser assembly reinstalled to complete the process.

Polycarbonate visor assembly = Ref. 1001670 DAVS-1402 replacement unit.

Acetate visor assembly = Ref. 1001671 DAVS-1403 replacement unit.

Disposable visor covers can be used to protect the main visor component from wear and tear, they should be used at all times to extend the working lifetime of the visor.

Ref. 1001732 DAF-9220/10 (pack of 10).

Ref. 1001731 DAF-9220/50 (pack of 50).

Airvisor MV - DMAK models:

Check the general condition of the browguard and frame assembly (D & E). Replace if there are any apparent cracks or heavy indents to the browguard as this may reduce the facial impact protection.

Check carefully for the condition of the clear visor blade (F) – replace if there are any cracks or splits in the material OR if there is any sign of chemical attack. The visor should also be replaced if surface scratches etc. sufficiently reduce your ability to work safely.

Check carefully for the condition of the fabric (or optional foam) face seal (F) – if there are any tears or splits the seal must be replaced.

(Please note that for DMAK style models the clear visor and the face seal are separate items – if either is damaged that item can be changed independently of the other).

The MV visor blade is mounted in a moulded frame and is fixed in place by tabs locating into slots in the moulding.

It is easily removed by pressing from inside the headpiece deflect the bottom of the visor outwards to disengage one of the bottom tabs in the chin guard, repeat for the other side. The visor can now be removed from the frame.

To install the new visor locate one of the long side tabs in position and work around towards the other side by feeding the top edge of the visor into the groove in the browguard, then locate the other long side tab. Finally locate the two bottom tabs into the chin guard slots. You may find this easier to do if you bend the visor gently by pressing outwards from the inside as you guide the tab into the slot.

Polycarbonate visor = Ref. 1B0900 DTVS-1503/5 replacement units (pack of 5).

Acetate visor = Ref. 1B1800 DTVS-1504/5 replacement units (pack of 5).

Disposable visor covers can be used to protect the main visor component from wear and tear, they should be used at all times to extend the working lifetime of the visor.

Ref. 1B1200 DTVS-1507/10 (pack of 10).

Ref. 1B1300 DTVS-1508/50 (pack of 50).

The MV style face seal is mounted on a 'U' shaped cassette which clips to the moulded frame of the chin guard, this makes it easy to change independently from the visor blade.

At the top of the seal, on each side, there are fabric strips which pass over the components of the headband and attach back on themselves using Velcro pads (please note their position to help understand the installation of the new pieces), undo these parts first. Then pull away the 'U' shaped cassette from the moulded frame.

Installation is the reverse of this simple routine. Align the new cassette with the moulded frame and starting from one top end feed the cassette onto frame – a notch at each top end of the 'U' is used to firmly locate the cassette, ensure that these are engaged. For the fabric strips please ensure that the free ends pass upwards inside the headband then fold downwards outside the headband, attaching back on themselves using the Velcro pads. (The optional foam seal is fitted in the same way – but in this instance there are no fabric/Velcro parts).

Fabric face seal cassette (standard) = Ref. 1B1500 DTVS-1510/5 (pack of 5).

Foam face seal cassette (optional) = Ref. 1B1400 DTVS-1509/5 (pack of 5).