



Hodge Clemco Ltd

Breathing Air Filter Model CPF 20 & 40

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CPF-40 BREATHING AIR FILTER

1.0 Introduction

- 1.1. The CPF-40 filter is designed to remove mists (including oil mists), water vapour and particles down to 0.5 micron in size from breathing air supplied by a breathing air compressor. This unit is equipped with fittings to supply filtered air to two air fed blasting helmets.
- 1.2 Standard fittings include pressure regulator, pressure relief valve, outlet pressure Gauge, drain cock, two air inlet ports (one blanked off, the other with an inlet fitting) and a base bracket for free standing or wall mounting,.

WARNING: THIS FILTER UNIT DOES NOT REMOVE CARBON MONOXIDE.

2.0 INSTALLATION INSTRUCTIONS

- 2.1 Before installing the equipment check that the inlet fitting is in the more suitable inlet port. Interchange the inlet fitting and the blanking plug if necessary.
- 2.2 Ensure that both fittings are securely fitted and leak proof.
- 2.3 Using the 4 bolts and washers supplied, securely mount the base bracket onto the filter unit body in the preferred position (on the bottom lugs for free standing on the floor or side lugs for wall mounting). During operation the unit must be in the vertical upright position.
- 2.4 Ensure that the unit contains a filter element cartridge and it is correctly positioned within the filter in accordance with the indicator arrow.
- 2.5 Ensure that the 'O' ring on the underside of the cap is in good condition and correctly positioned.
- 2.6 Assemble the cap onto the filter body and securely tighten the 4 bolts to ensure a good seal.
- 2.7 Check all fittings are securely tightened.
- 2.8 Securely connect a breathing air supply hose to the outlet valve at the compressed air source ensuring that any gaskets required are in good condition and correctly positioned.

Note: The minimum bore requirement of the inlet supply hose will depend on length of hose, number of helmets being supplied with filtered air, and the helmet manufacturer's requirements for volume and pressure at the inlet to the helmet system. For supplying two helmets, it is recommended that the minimum bore of the compressed air supply hose is 3/4".

WARNING: UNDER NO CIRCUMSTANCES MUST THIS FILTER UNIT BE CONNECTED TO AN AIR SUPPLY GREATER THAN 110 PSI.

- 2.9 Securely take hold of the free end of the air hose, pointing it into a safe area, and gradually open the compressor outlet valve sufficiently to blow out any residual dirt/moisture.
- 2.10 Close the compressor outlet valve and securely connect the supply hose free end coupling to the inlet fitting on the filter unit ensuring that any seals/gaskets required are in good condition and correctly positioned.
- 2.11 Connect the filtered breathing air quality supply lines to the outlet connector/s on the filter cap and to the belt control/s of the helmet/s ensuring good seal at each connection.

Note: Reference should be made to the helmet manufacturer's Owner's Manual to establish the flow and pressure requirements for the helmet system, and the allowances made for pressure drop for the length and bore of the breathing air quality hose/s.

- 2.12 Ensure that the drain pet cock on the filter unit is closed and turn ON the compressed air supply to the filter unit and adjust the pressure regulator to the required pressure.
- 2.13 Generally check the unit and all hose connections for leaks and take corrective action if necessary.

WARNING: IT IS ESSENTIAL THAT ALL CONNECTIONS AND FITTINGS ARE SECURE. ESCAPING AIR CAN BE DANGEROUS AND WILL REDUCE THE EFFICIENCY OF SUPPLY TO THE HELMET SYSTEM/S.

- 2.14 Check that the requirements of pressure and flow are being achieved at the helmet system/s, and the filtered air is entering the helmet/s. (Refer to helmet manufacturer's instructions).
- 2.15 Turn OFF the compressed air supply valve at source.

3.0 OPERATING INSTRUCTIONS

- 3.1 Ensure that all hose connections are securely connected.
- 3.2 Check that the petcock drain tap on the base of the filter unit is CLOSED.
- 3.3 Turn ON the compressed air supply to the filter unit.

WARNING: UNDER NO CIRCUMSTANCES MUST THIS FILTER SYSTEM BE CONNECTED TO AN AIR SUPPLY OF GREATER PRESSURE THAN 110 PSI.

- 3.4 Ensure that the reading at the filter unit gauge meets the required pressure established in the Installation Instruction Section 2.11 to 2.14.
- 3.5 Open the pet cock to purge any accumulated moisture then securely close it.

Note: Dependent on the moisture content of the compressed air supply this operation may be necessary more frequently than the start of each operation. Excessive moisture must not be allowed to build up in the filter as this will affect volume flow and filtration efficiency.

- 3.6 Check that filtered air is entering the helmet/s.
- 3.7 Don the breathing air fed helmet system/s in accordance with the helmet manufacturer's instructions. Should the helmet safety window start misting up, it is an indication that insufficient volume of air is entering the helmet and that adjustments to the supply need to be carried out in accordance with the procedures in the Installation Instructions Section 2 of this manual.
- 3.8 Once the correct flow requirements have been achieved in the helmet system/s the work procedure can commence.

IMPORTANT NOTE: SHOULD THE WEARER DETECT ANY OBJECTIONABLE ODOURS OR THERE IS EXCESSIVE MOISTURE IN THE HELMET AIR SUPPLY OR THE PRESSURE GAUGE READING ON THE FILTER UNIT DROPS BELOW ESTABLISHED REQUIRED SETTING, THE FILTER ELEMENT/CARTRIDGE MUST BE REPLACED WITH A NEW ONE IMMEDIATELY. THE LIFE OF THE FILTER ELEMENT WILL DEPEND ON THE CONDITION OF THE AIR SUPPLY (OIL VAPOUR, MOISTURE ETC) AND THE VOLUME OF AIR FILTERED THROUGH IT (SEE SECTION 4).

4.0 Maintenance

Warning: BEFORE ANY MAINTENANCE WORK IS CARRIED OUT TO THIS EQUIPMENT THE COMPRESSED AIR SUPPLY MUST BE TURNED OFF, THE FILTER UNIT AND ALL HOSES DEPRESSUREISED AND THE COMPRESSED AIR

SUPPLY HOSE DISCONNECTED. MAINTENANCE WORK SHOULD ONLY BE CARRIED OUT BY SUITABLY TRAINED AND COMPETENT PERSONNEL

4.1 Maximum 4 Hours

- 4.1.1 Open the drain cock and purge the unit of moisture. This operation may be necessary at more frequent intervals depending on the moisture content in the compressed air supply and particularly in humid environmental conditions

4.2 3 Months

- 4.2.1 Remove the filter element/cartridge and replace with new one (observing the flow direction instruction on the element body), by first disconnecting the helmet breathing air line/s from the filter unit cap and undoing the 4 cap retaining bolts
- 4.2.2 Check the condition of the cap seal and replace with new one if there is evidence of deterioration. It is recommended that a record be kept of the filter replacement on page 8 of this manual

CPF40 Parts Identification List

ITEM	PART NO	DESCRIPTION	QTY
1	CPF 03575	AIR FILTER BODY	1
2	CPF 03547	AIR FILTER REPLACEMENT CARTRIDGE	1
3	CPF 03584	AIR FILTER TOP CAP	1
4	CPF 03559	GASKET	1
5	CPF 03515	1/2" WASHER	4
6	CPF 03511	1/2" HEX NUT	4
7	CPF 03561	'O' RING	1
8	CPF 03545	1/2" STUD	4
9	CPF 01909	1/4" PRESSURE RELIEF VALVE	1
10	CPF 01993	1/4" PETCOCK	1
11	CPF 0034	3/8" M & F TEE	1
12	CPF 03557	MOUNTING BRACKET	1
13	CPF 0041	3/8" SWIVEL UNION	1
14	CPF 0038	1" CLAW COUPLING C/W GASKET	1
15	CPF 0036	3/8" ADAPTOR NIPPLE	1
16	KB 11 B	1/8" BASE MOUNTED GAUGE	1
17	FAS M8 10B	M8 HEX HEAD SETSCREW	4
18	FAS M8 83B	M8 MUDWING WASHER	4
19	FAS M8 80B	M8 WASHER	4
20	FAS M8 90B	M8 HEX NUT	4
21	CPF 03532	1" PLUG	1
22	CPF 0037	3/8" PRESSURE REGULATOR	1
23	CPF 0004 B	3/8" MALE QUICK REL. COUPLER	2
24	CPF 0007	1/4" MALE COUPLER PLUG	2

FIG. 1



