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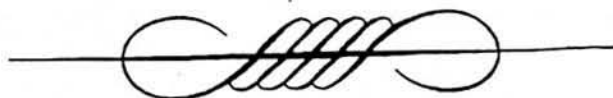
RCAMV Remote Control Abrasive Metering Valve

SOM30 Date of issue: 13.03.91 Manual no:TS.OM/16B

Owner's Manual

Machinery Directive

(89/392/EEC amended by 91/368/EEC, 93/44/EEC and 93/68/EEC)



EC Declaration of Incorporation

We, **HODGE CLEMCO LTD** declare that the Abrasive Metering Valves (RCAMV) which are manufactured by ourselves, when installed and used in accordance with the owners manual provided, conform with the essential health and safety requirements of the Machinery Directive.

A handwritten signature in black ink, appearing to read "D. Jate".

Engineering Manager

A handwritten signature in black ink, appearing to read "MAG".

Managing Director



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RCAMV REMOTE CONTROL ABRASIVE METERING VALVE

WARNING:- THE MAXIMUM RECOMMENDED WORKING PRESSURE OF THIS SYSTEM IS 110 P.S.I. UNDER NO CIRCUMSTANCES MUST IT BE CONNECTED TO A SUPPLY OF GREATER PRESSURE.

1.0. SETTING UP INSTRUCTIONS

(To be used in conjunction with the blastmachine Owner's Manual).

1.1. Start the compressor and run for 5 to 10 minutes to allow it to reach operating temperature.

1.2. Connect a suitable length of air hose to the compressed air supply outlet valve.

1.3. Carefully turn ON the air sufficient to purge any dirt or moisture from the air hose.

1.4. Turn OFF the air supply.

1.5. Connect the air hose to the blast cleaning machine inlet.

WARNING: IT IS ESSENTIAL THAT THE AIR HOSE COUPLINGS ARE SECURE AND THAT ANY SEALING GASKETS THAT ARE REQUIRED ARE IN POSITION. ESCAPING AIR CAN BE A DANGER AND WILL REDUCE THE EFFICIENCY OF THE OPERATION.

1.6. Connect the short lengths of hose to the RMS-100 valve and to the RCAMV and manifold bracket as detailed in figure 1.

1.7. Connect suitable lengths of twin 1/4" i.d. air hose, colour coded red and yellow to the matching connections on the manifold bracket and the deadman's handle.

1.8. Connect a suitable length of 1/4" i.d. air hose, colour coded blue to nipple (F) on the RCAMV valve and connector (H) on the deadman's handle.

1.9. Check that the coupling gasket is in position in the coupling on the blast cleaning machine.

1.10. Connect requisite number of coupled lengths of blast hose to the coupling ensuring that all coupling gaskets are in good condition and in place.

1.11. Secure ALL couplings with split pins through matching holes provided in the coupling flanges (or by the wire retaining mechanisms if incorporated into the couplings).

1.12. Select suitable nozzle and secure to nozzle holder, after checking that the nozzle gasket is in place and in good condition.

1.13. Secure the deadman's handle to the nozzle end of the blast hose and check that the rubber insert is in position. Tape the three air hoses to the blast hose at short intervals, with the hose ties provided.

NOTE. It is important to follow the colour coding as shown in fig.1.

OPERATORS PROTECTIVE EQUIPMENT INSTRUCTIONS - TO BE USED IN CONJUNCTION WITH THOSE ISSUED WITH PROTECTIVE EQUIPMENT.

1.14. Connect suitable lengths of air hose between the helmet system and the outlet connection of the selected air filtration system. Connect suitable lengths of air hose between the inlet connection of the filtration system and coupling on the manifold bracket.

1.15. Fully open the air control tap (RCAMV-12) on the rear of the manifold bracket.

1.16. The operator can now adjust the air supply to the helmet at the filter unit to achieve the flow requirements laid down in the helmet manufacturer's Owner's Manual.

NOTE. It is essential that all connections on the helmet air lines are secure, and under NO circumstances must the helmet be worn until the air supply has been turned on and found to be entering the helmet. (See manufacturer's instructions).

WARNING: THE RECOMMENDED WORKING PRESSURE OF THIS VALVE IS 110 P.S.I. UNDER NO CIRCUMSTANCES MUST IT BE CONNECTED TO AN AIR SUPPLY OF GREATER PRESSURE.

1.17. Check that the deadman's handle is in the open position and that the sleeve valve (H) is in the OFF position. (see Fig.1.).

1.18. Close petcock (RM-9) on the RMS-100 valve.

1.19. Turn ON air at the compressor.

1.20. Where a manual moisture separator is fitted, adjust the drain valve to give a constant bleed off of air/vapour from the bottom of the filter.

1.21. Adjust the RCAMV control knob (handwheel) by rotating it anticlockwise three quarters of a turn from the closed position.

NOTE: Further adjustment may be necessary to achieve optimum efficiency see 2.5.

1.22. The operator must take secure hold of the blast hose and nozzle holder and at all times direct the nozzle at the work surface.

1.23. Pressurise the machine by closing the deadman's handle. The pop-up valve will then close against the sealing ring. Air will then pass through the nozzle.

1.24. By sliding the sleeve valve (H) back to the ON position, the remote control abrasive metering valve will open. Moving the sleeve forward will close it. A slight brief discharge of air will be felt from the exhaust ports of the sleeve valve when moved to the OFF position.

1.25. Depressurise the machine by either:
 a) Releasing the deadman's handle
 or
 b) Opening the petcock (RM-9) on the RMS 100 valve.

The pop up valve will then fall.

N.B. Operation (b) above will depressurise the machine in an emergency even if the deadman's handle is closed.

1.26. Open the petcock (RM-9) on RMS-100 valve which renders the machine inoperable at the deadman's handle.

1.27. Fill the machine through the filler hole in the centre of the concave head with the selected abrasive.

IMPORTANT. Do not overfill otherwise the abrasive will restrict the movement and sealing of the pop-up valve.

2.0. OPERATING INSTRUCTIONS

(To be used in conjunction with the blast machine Owner's Manual).

2.1. Close petcock (RM-9).

2.2. Close RCAMV by moving sleeve valve (H) forward.

2.3. Pressurise the machine by closing the deadman's handle. The pop-up valve will then close against the sealing ring. Air will then pass through the nozzle.

2.4. Open RCAMV by moving sleeve valve (H) back. Air and abrasive will then pass through the nozzle.

2.5. The abrasive volume is controlled by adjusting the control knob (handwheel) on the RCAMV valve. When the correct volume of abrasive has been established, the adjusting screw can be locked in position by tightening the lock nut against the valve body.

IMPORTANT. To avoid unnecessary wear between the adjustment screw and the piston, the adjustment of abrasive flow must only be carried out with the valve in the closed position. (Sleeve valve (H) in the OFF position.

2.6. Should the abrasive flow become intermittent or irregular, quick closing and opening of the choke valve will usually correct the flow.

2.7. When the work is completed or the machine requires refilling with abrasive, depressurise by either:

- a) Releasing the deadman's handle
or
- b) Opening the petcock (RM-9) on the RMS-100 valve.

The pop-up valve will then fall allowing access to the filling hole.

N.B. Operation (b) above will depressurise the machine in an emergency even if the deadman's handle is closed.

2.8. Turn OFF air at the compressor when work is completed.

WARNING: THE POT TENDER MUST ALWAYS OPEN THE PETCOCK (RM-9) ON THE RMS-100 VALVE BEFORE REFILLING THE MACHINE TO AVOID ACCIDENTAL PRESSURISATION TAKING PLACE DURING THE OPERATION.

Always ensure that signals arranged between the pot tender and blaster are fully understood.

Always turn off the air compressor if the machine is left unattended.

3.0. COMPRESSED AIR SUPPLY

3.1. The volume of air required will depend upon the size of the nozzle being used and nozzle pressure required. See air flow chart.

3.2. For steel cleaning, a nozzle pressure of 100 p.s.i. (7kg/cm²) or as near as practically possible will give the best rate of cleaning.

3.3. For stone cleaning, a lower pressure is usually required relative to the type of stone being cleaned.

The air volume figures in the table represent air content in the abrasive blast stream and **not** free air only.

NOZZLE ORIFICE	NOZZLE PRESSURE - P.S.I.								
	20	30	40	50	60	70	80	90	100
1/4"	25.4	32.8	40.2	47	54	61	68	74	81
5/16"	39.8	51.3	62.8	77	89	101	113	126	137
3/8"	59.4	76.5	94.1	108	126	143	161	173	196
7/16"	80.8	104.1	127.6	147	170	194	217	240	254
1/2"	105.8	136.1	166.3	195	224	252	280	309	338

4.0. ABRASIVES

All types of re-usable and expendable abrasives can be used in a machine fitted with the Clemco Remote Control Abrasive Metering Valve.

It is essential that the abrasive is in a dry and flowable condition.

Always expel all residual abrasive from within the machine if leaving it unused overnight or for long periods. This will prevent unnecessary blockages occurring due to condensation within the machine.

The use of a sieve and pot cover is recommended.

5.0. MAINTENANCE

WARNING: NO MAINTENANCE IS TO BE CARRIED OUT TO A BLAST CLEANING MACHINE UNTIL THE COMPRESSED AIR SUPPLY HAS BEEN DISCONNECTED AND ALL HOSES HAVE BEEN PURGED OF PRESSURE.

5.1. DAILY

5.1.1. Check control hoses and couplings for leaks and signs of wear or damage. Replace with new if necessary.

5.2. WEEKLY (40 Hours usage)

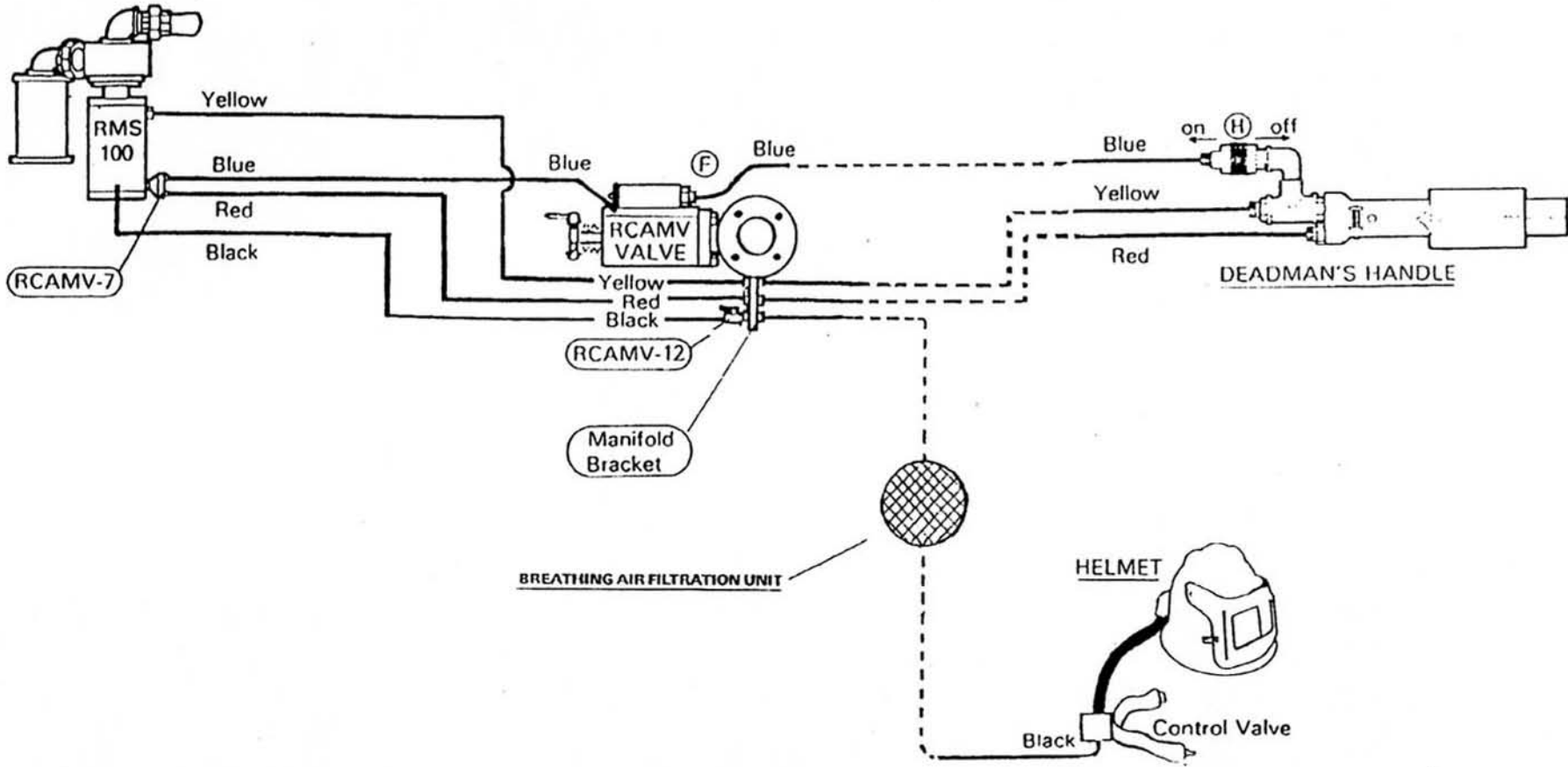
5.2.1. Check rubber sleeve for signs of wear and replace with new if required.

5.3. MONTHLY (160 Hours)

5.3.1. Check flanged tee and adjacent nipples for signs of wear and replace with new if necessary.

5.3.2. Check condition of nipple between upper flange and cone outlet at base of machine and replace with new if showing signs of wear.

For blast cleaning replacement parts refer to the Owner's Manual supplied with the blast machine.



SCHEMATIC LAYOUT FOR RCAMV REMOTE CONTROL

Fig. 1

Fig. 2

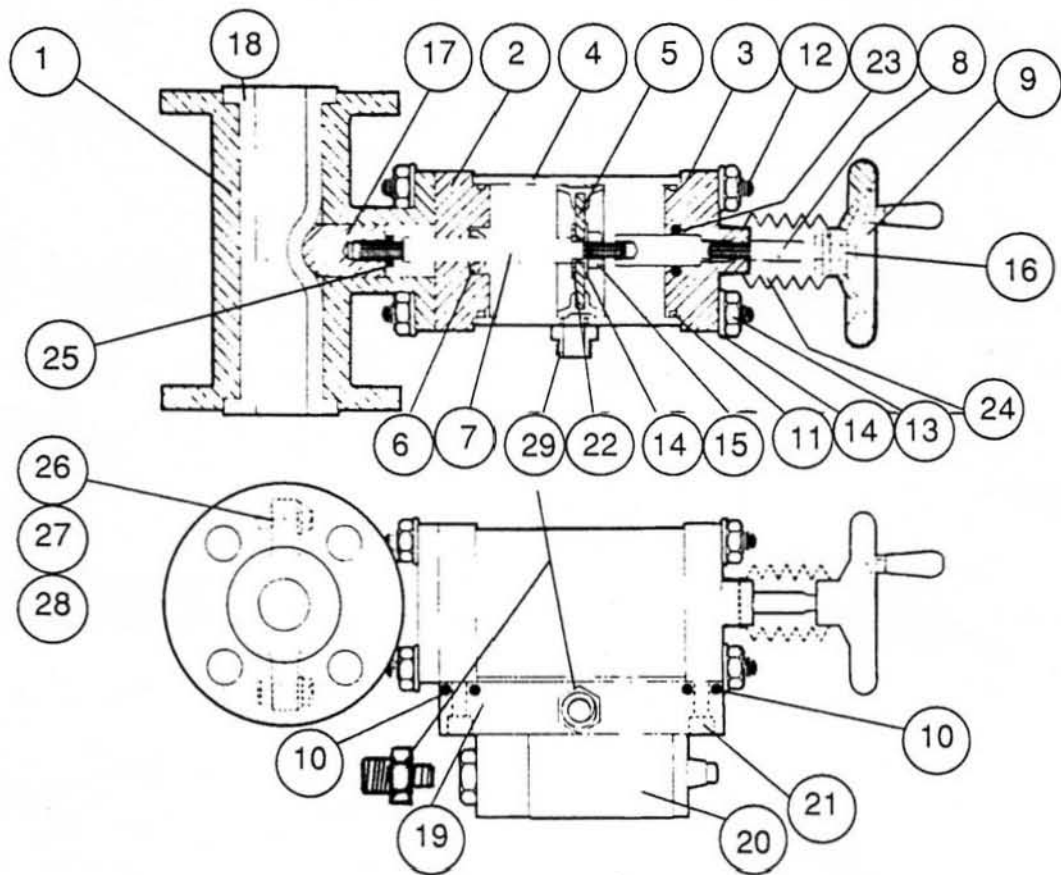
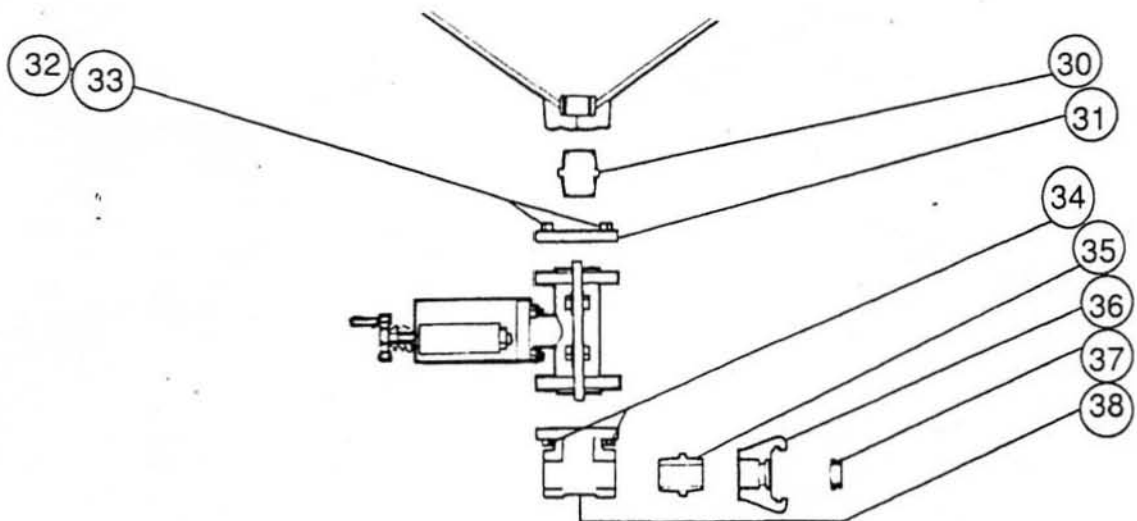


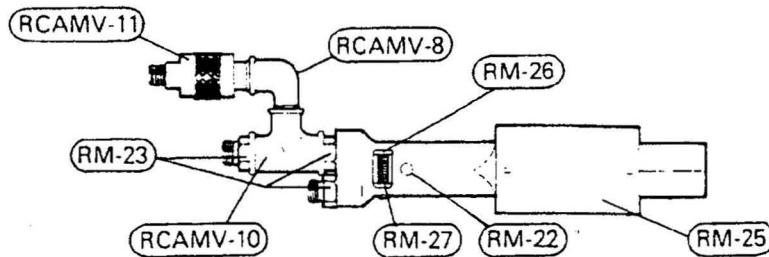
Fig. 3



PARTS IDENTIFICATION LIST

ITEM	PART No	DESCRIPTION	QTY
1.	RCAMV 15	VALVE BODY	1
2.	RCAMV 16	FRONT END CAP	1
3.	RCAMV 17	REAR END CAP	1
4.	RCAMV 18	CYLINDER	1
5.	RCAMV 19	PISTON ASSEMBLY	1
6.	RCAMV 20	PISTON ROD SEAL	1
7.	RCAMV 21	PISTON ROD	1
8.	RCAMV 22	ADJUSTING SCREW	1
9.	SGV 13	HAND WHEEL	1
10.	RCAMV 24	'O' RING SEAL	2
11.	RCAMV 25	'O' RING SEAL	2
12.	RCAMV 26	CYLINDER TIE ROD	4
13.	FAS M8 90B	M8 NUT	8
14.	FAS M8 80B	M8 WASHER	9
15.	FAS M8 95B	M8 LOCKNUT	1
16.	SGV 12	DOWEL PIN	1
17.	SGV 7	NODE	1
18.	SGV 3	RUBBER LINER	1
19.	RCAMV 32	MANIFOLD	1
20.	RCAMV 33C	CONTROL VALVE	1
21.	FAS M6 34	SOCKET SCREW	4
22.	RCAMV 35	PISTON BUSH	1
23.	RCAMV 39	'O' RING SEAL	1
24.	SGV 16	GAITER	1
25.	FAS M10 95B	M10 LOCKNUT	1
26.	FAS M8 33	SOCKET SCREW	4
27.	FAS M8 80	M8 WASHER	4
28.	FAS M8 90	M8 NUT	4
29.	RCAMV 9	1/4" X 1/8" ADAPTER	3
30.	P8A 6S	F.S. NIPPLE	1
31.	SGV-2	UPPER FLANGE	1
32.	FAS 8BSW 3	BOLT	4
33.	FAS 8BSW 90	NUT	4
34.	FAS 8BSW 11	SETSCREW	4
35.	P8A	F.S. NIPPLE	1
36.	P9	COUPLING	1
37.	CG-1	COUPLING GASKET	1
38.	RCAMV-2	LOWER FLANGE AND TEE	1

RCAMV 6 DEADMAN'S HANDLE



RCAMV 8	1/4" M/F ELBOW	RM 23	1/4" X 1/4" ADAPTORS
RCAMV 10	1/4" TEE	RM 25	HANDLE BLADE
RCAMV 11	SLEEVE VALVE	RM 26	HANDLE PIN
RM 22	RUBBER INSERT	RM 27	HANDLE SPRING

