Ambic Equipment Ltd – TECHNICAL NOTE

AJS/2023-V – CONVERSION KIT - VITON

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RECOMMENDED REPLACEMENT PARTS
for AMBIC JETSTREAM / ATS SPRAYERS

When changing teat spray from an IODINE to a CHLORINE DIOXIDE-based chemical, IT IS ESSENTIAL THAT THE WHOLE SPRAYING SYSTEM IS THOROUGHLY FLUSHED OUT.

As there is an adverse chemical reaction between most Iodophor sprays and those based on Chlorine Dioxide, NEVER MIX THE TWO SPRAYS. We advise changing internal rubberware BEFORE using the new chemical.

In order to change the rubberware you will need to have various tools – pliers, screwdrivers, knife, hot air gun, large wrench/vice. Additionally having some PVC tubing, cable ties and silicone grease/fluid to hand would be useful.

The following procedure is recommended:-

A) FLUSH OUT OLD CHEMICAL – in order to completely purge the system you will need to turn the vacuum On/Off at least 3 times whilst repeating the actions below until both water coming from guns and left in container is clear:-

1. Turn Vacuum Supply OFF
2. Remove the existing drum of chemical and replace with container of water.
3. Turn Vacuum Supply ON
4. Open each spray gun in turn starting with the FAR END gun
5. Turn Vacuum Supply OFF

B) REPLACE OPERATIONAL RUBBER PARTS – Disconnect sprayer unit from vacuum supply (also pick-up pipe and guns), dismount from wall, remove front cover of casing and renew the following parts, sold as AJS/2023-V or grouped as:-

Relief Module Diaphragm Small	1 off	)		
Relief Module Diaphragm Large	1 off	} - Kit	AJS/2019-V	1 off
Relief Module Rubber Pad	1 off	)		
Small Pump Diaphragms			ATS/456-V	2 off

NOTE: The Removal of PVC tube from connectors requires either the use of a hot air gun, or wrapping in a cloth wetted with very hot water to soften it, or a knife to CAREFULLY cut the tube off. If tubing is cut off then it must be replaced with new tubing, of identical bore and length, which is warmed and pushed right over the barb of the connector.

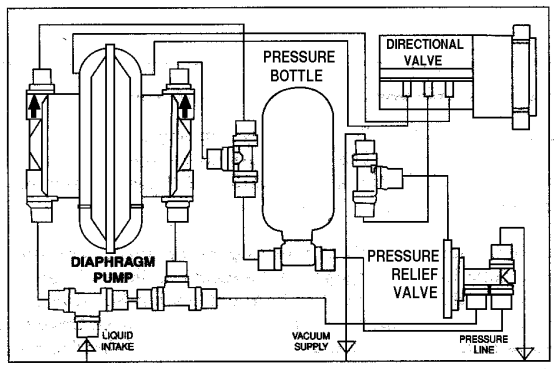

Fig. 1

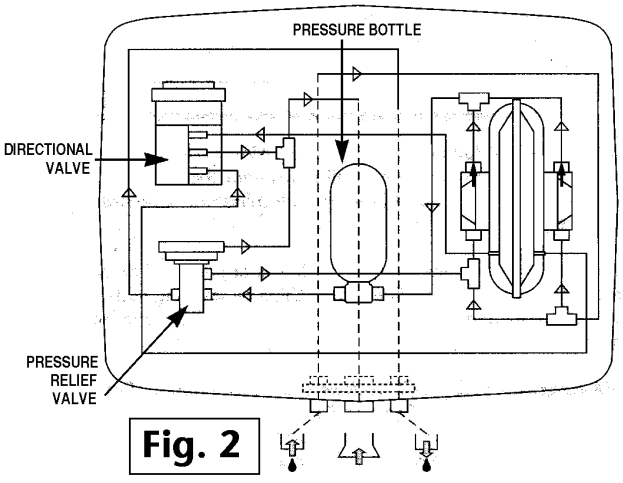

Fig. 2

For ATS units (older square boxes), the Pressure Relief Valve is located in the bottom Right-hand corner when wall mounted – see Fig. 1.
For JetStream™ units (post 1999), the Pressure Relief Valve is located in the bottom Left-hand corner when wall mounted – see Fig. 2.

B1) Pressure Relief Valve Parts

a) Remove the vacuum supply connection to the nipple on top (knurled circular section)
b) Unscrew the whole assembly to leave the lower half (with 3 pressure tubes connected).
c) The Relief Module is located within the lower half – lift it out, pull out the small rubber plug at its base and push the new plug into place. Replace module.
d) The top part contains the Small Diaphragm – prise the edge carefully from the plastic ridge and remove (take care not to damage plastic groove/ridge)
e) Reseat the new diaphragm carefully over the plastic ridge.
f) Unscrew the large knurled ring from the remainder of the top section and replace the Large Diaphragm.
g) Re-assemble Pressure Relief valve in reverse order.

B2) Small Pump Diaphragms

NOTE: Careful use of the heat gun is essential when it is used to soften the PVC tubing at the pump heads – excessive heat on the valve threads will cause them to melt.

For a JetStream™ unit –

a) Unscrew and remove the Pressure Bottle (in the centre of the rear casing)
b) Cut the nylon cable ties (if present) securing pump to case
c) pivot the pump assembly forward on the clips then remove by unclipping to the right .

[For an ATS unit –
pull the pump unit forward from out of the pipe clips holding it into the case.]

d) Unscrew nuts and disconnect the (4) PVC tubes where they enter the two pump heads
e) Disconnect the two vacuum supply tubes to the central section,
f) Remove the complete pump assembly from the case according to the appropriate instructions below:-

Service pump assembly as follows:-

1) Remove all 4 non-return valves by unscrewing – NOTE their position - INLET valves have a finer thread than OUTLET valves and have a plastic bar visible which retains the glass Ball in the valve. IF ANY VALVES ARE INCORRECT, PUMP WILL NOT WORK!
2) Using a suitably-adapted vice (and/or wrenches), unscrew each pump head (anticlockwise) to reveal the diaphragms.
3) Once both heads are removed, hold the diaphragms and rotate first the front one and then the rear one anti-clockwise to unscrew and remove.
4) Fit the new diaphragms, making sure that both are fully tightened by holding both and tightening one against the other (if insufficiently tightened, there is a danger of pumps knocking, or overstretching the diaphragms).
5) Smear the diaphragm edges with silicone grease/fluid before fitting the pump heads – make sure that both pump heads are fitted so that the Arrows will point to the top of the unit when re-mounted on the wall.
6) Warm to soften, then reconnect the PVC tubing (MAKE SURE TUBE PUSHES RIGHT OVER the BARB; DO NOT OVER-TIGHTEN THE KNURLED NUTS – finger-tight is usually sufficient) and then refit the pump assembly into the rear casing.
7) For JetStream™ units refit the Pressure Bottle making sure that the O-ring is in place in the bottle holder (at the bottom of the threaded section).

Remount the unit on the wall and carefully reconnect all pipes.

It is recommended that the unit is tested with water and checked for leaks (with spray guns both open and closed) before refitting the front casing and priming with the new teat disinfectant.