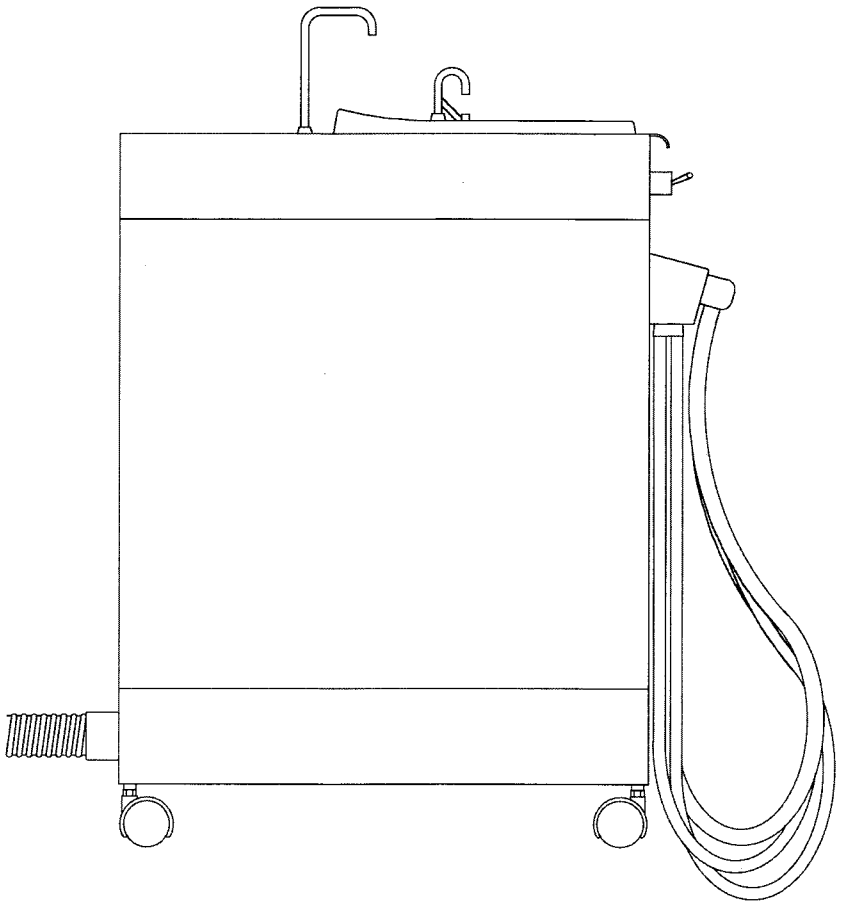
VARIDENT 80 ASPIRATOR

CE 0120

Part No. 23-1001 and 23-1001A From S/No. VA1907.05

OPERATING MANUAL



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CONTENTS

SECTION	TOPIC	PAGE
1)	**GENERAL NOTES**	1
1.1)	General safety notes	1
1.2)	Intended environment of use	1
1.3)	Electromagnetic environment	1
1.4	Disposal	2
1.5	Symbols and Warnings	2
1.6)	Servicing and Repairs	3
2)	**SPECIFICATIONS AND RATINGS**	3
3)	**DESCRIPTION**	4
4)	**FUNCTIONAL DESCRIPTION**	4
4.1)	Basic opperation	4
5)	**INSTALLATION**	5
5.1	Floor box services	5
5.2)	Services	5
5.3)	Assembling	5
6)	**TESTING**	6
7)	**OPERATING INSTRUCTIONS**	7
7.1)	Precautions	7
7.2)	Inentification of parts	7
7.2.1)	Swiching ON	8
7.3)	Mains fuses	8
7.4)	Attachment of Accesories	8
7.5)	Aspiration	9
7.6)	Solids filter	9
7.7)	Thermal protection	9
7.8)	Rinsing	9
7.9)	Tumbler filler	9
7.10)	Spittoon flush	9
8)	**HYGIENE, DISINFECTION & CLEANING**	10
8.1)	Caution	10
8.2)	Cleaning referances	10
8.2.1)	Surface cleaning	10
8.2.2)	Aspirator tips	10
8.2.3)	Suction hoses	10
8.2.4)	Syringe	10
8.3)	Daily care	11
8.3.1)	Flushing	11
8.3.2)	Bowl filter	11
8.3.3)	Spittoon bowl	11
8.3.4)	Suction canister	12
8.3.5)	Operating hoses	12
8.4)	Weekly care	13
8.5)	Monthly care	13
9)	**REPAIRS & SERVICING**	13
9.1)	General	13
9.2)	Control module	14
9.3)	Motor	14
9.4)	Bowl removal	14
9.5)	Top removal	14
9.6)	Replacing mains cable	14
10)	**TROUBLESHOOTING**	15
	POPULAR SPARE PARTS	16
	Fig. 1 VACUUM CIRCUIT	17
	PARTS DIAGRAMS	19-23
	OPTIONAL HAND SPITTOONS and ADAPTORS	24
	ANNEX 1	
	Electromagnetic environment	25

VARIDENT 80 DENTAL ASPIRATOR

1.) GENERAL NOTES

These operating instructions form an integral part of the unit. They must be kept close to the unit at all times. Precise observance of these instructions is a precondition for use of the unit for the intended purpose and for its correct operation.
New personnel must be made aware of the contents, and they should be passed on to future operating staff.

1.1) GENERAL SAFETY NOTES

The Tridac Varident 80 aspirator unit intended for use only in the practice of dentistry and for use only by trained dental personnel. Please note the following:

The suction tips are 'APPLIED PARTS' i.e they necessarily come into contact with the patient during normal use. The suction hoses could also come into contact with the patient during normal use, but are not considered as applied parts..

ALTERATION OR MODIFICATION OF THIS UNIT MAY IMPACT UPON IT'S SAFETY AND AFFECT ITS CONFORMITY TO THE STANDARDS TO WHICH IT IS BUILT.
WARNING:If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.

If any part of the enclosure(s) is dented or cracked following an impact, servicing is required before continued use.

DO NOT stand, sit or climb on this equipment. DO NOT lean against it.

Check all cables and connectors for damage before use and arrange repair of any defects before proceeding. Do not touch accessible electrical contacts or parts when the patient is present e.g. contacts of connectors, or the pins on the separator probe lead.

WARNING : to avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

1.2) INTENDED ENVIRONMENT OF USE

The units are intended to be installed in dental surgeries in domestic, commercial, and light industrial premises, clinics and hospital dental departments. These premises must be able to maintain an ambient temperature not exceeding 35C and relative humidity of 30% to 70%.
It must be confirmed that the floor of the installation site is capable of safely supporting the weight of the unit and any other dental equipment in the area.

The VARIDENT 80 is a semi-mobile dental aspirator designed to remove secretions from the oral cavity during general dental treatment and to reduce stray spray from dental instruments. It also provides a flushed spittoon bowl and water tumbler filler intended to provide a conveniently accessible mouthwash for the patient's use after treatment.

1.3) ELECTROMAGNETIC ENVIRONMENT

The VARIDENT 80 aspirator has been designed to satisfy the electromagnetic compatibility (EMC) requirements of international standard EN 60601-1-2. This means that it should operate within its intended environment of use without causing unacceptable deterioration in the performance of other electrical apparatus or appliances and that it should operate without unacceptable deterioration in its own performance as a result of the operation of such apparatus or appliances. Also see APPENDIX 1.

The dentist and/or dental nurse will always be present and the aspirator under their control when the patient is being treated. In the unlikely event of any change in performance of the aspirator they will be able to take appropriate action e.g. stop using the suction, or sit the patient up if suction has failed.

Should adverse effects be noted in the operation of the aspirator, or should it be suspected that operation of the unit is causing adverse effects in other electrical equipment as a result of EMC performance, try separating the affected equipment further, or plugging the other equipment into a different mains electrical outlet. If the situation cannot be remedied users should contact Tridac for guidance and advice.

Examples of adverse effects in the operation of the unit are uninvoked starting/stopping of the suction. Examples of adverse effects caused by electromagnetic emissions might be sound interference on radio reception or visible disturbances to picture quality of T.V., or video monitors. If such interference is suspected, it may be investigated by alternately stopping and restarting use of the aspirator and noting whether there is a direct relationship between the interference and its operation.

Do not stack other electronic equipment on top of the aspirator, for example, electro-surgery units, computer peripherals, as there is a risk of reciprocal interference. Similarly, avoid bringing other electrical equipment closely adjacent to the Aspirette.

Portable and mobile high frequency communications equipment (e.g mobile phones) may interfere with electro-medical equipment. To reduce the possibility, avoid using mobile devices in the vicinity of the aspirator unit. Ideally, do not use mobile devices in the dental treatment room.

The aspirator does not have electrical operating hoses, so these do not effect EMC performance. However, do not lengthen any umbilical or internal cables. Failure to observe this advice could result in an increase in electromagnetic emissions or a decrease in immunity.

1.4) DISPOSAL

Waste amalgam from the use of the treatment centre must be separated from waste water by an amalgam separator conforming to the current edition of BS EN ISO 11143. Collected waste must be disposed of via a registered hazardous waste collection service.

Also the hazardous waste service must be used for disposal of detritus from the spittoon bowl filter ("gold trap") and the suction solids filter in the canister. Similarly, waste cleaning cloths/wipes must be disposed of with clinical waste.

At the end of this products life it will be classified as **W**aste **E**lectrical and **E**lectronic **E**quipment and should be disposed of as such, separately from normal waste.
The equipment should be cleaned and disinfected before disposal.
To dispose of this equipment, you should contact your dealer in the first instance, who will normally take away the old product when installing new. Where this is not the case please contact Tridac for details and costs of direct take back arrangements. Tel 01923 242398, Fax 01923 250864, www.tridac.co.uk

1.5) SYMBOLS and WARNINGS

Used on the equipment.

CE mark according to EU Directive 93/43 for medical devices


Equipment: Class 1 Type B


Important information. MUST read user manual


Mandatory Action


Safety symbol used for CAUTION, WARNING or DANGER


Instruction Manual


Protective Earth


Waste Electrical and Electronic Equipment

1.6) SERVICING AND REPAIRS

Repairs and servicing should be entrusted to the supplier of the equipment who will have the appropriately qualified personnel to carry out such tasks. Should any difficulty be experienced in obtaining satisfactory service, users should contact Tridac for advice.ONLY USE TRIDAC REPLACEMENT PARTS.

Circuit diagrams and component part identification can be found in the rear of this manual for use by suitably qualified personnel. Repairers requiring assistance or guidance and advice on the repair of those parts deemed repairable.may contact Tridac by telephone on +44 (0)1923 242398, or write to the address given in the specifications section.

2) SPECIFICATION AND RATINGS

Manufacturer Tridac Ltd. Unit 13 The Wenta Business Centre, Colne Way, Watford, WD24 7ND ~~Unit1A Rectory Farm, Gade Valley Close, Kings Langley, Herts. WD4 8HG England~~

Model Reference	Varident 80 aspirator
Part Number	23 1001 and 23 1001A
Year of Manufacture	This is identified by the last two digits of the units serial number.
Weight	Gross 49kg Net 42kg
Transport and Storage	Unit and packaging may be transported and stored at 0 to 50 deg.C and relative humidity 30% to 95% and pressure of 500hPa to 1060hPa
Installation Type	Permanently installed
Classification (EN 60601-1)	Class 1. To avoid risk of electric shock this equipment must only be connected to a mains supply with protective earth.
Equipment type (EN 60601-1)	Type B
Anaesthetic Category	Not intended for use in an oxygen rich atmosphere. Not intended for use with flammable anaesthetics
Classification under Directive 93/42/EEC (Medical Devices):	Class IIa
Electricity Supply :	230 Volts
Phase	Single Phase
Frequency	50 Hz.
Electrical Ratings:-	
Total	5 Amps. Max.
Fuses :	
Mains input fuse (floor box)	5 Amps 250volts, 1" x 1/4" HBC to BS 1362
Vacuum motor fuse (4)	T5AH. 250V. 20 x 5mm ceramic. to IEC 60127-2
Electronic Control Module (7)	T125 mAL 250V. 20 x 5 mm, to IEC 60127-2 (Internal fuse)
Mode of operation :	Continuous, with intermittent loading. Note : intermittent loading applies when the suction hoses are occluded.
Suction :	Conditions: Unused operating hoses open. Suction control at max.
Max. Vacuum	-190 hPa.
Water Supply :	Minimum 1.4 bar (20 PSI) Maximum 6.9bar (100 PSI) Note : Water Bye Laws may require an anti siphon valve between the unit and supply.
Bowl flush air gap	Type A, >20 mm, within 15 deg. of vertical.
Regulator pressure	Factory set to 2.1 bar (30 PSI)
Air Supply	Only required if syringe fitted. Minimum 2.0 bar (30 PSI) Maximum 6.9 bar (100 PSI)
Waste connection	To 32 mm plastic pipe, to BS 5255. Note: ABS material is NOT suitable for waste pipes.

ACCESSORIES

Suction tips	Designed to accept suction tips of 16 mm and 11 mm diameter.
3in1 Syringe :	If fitted, a DCI autoclavable type is used.

3) DESCRIPTION

The Varident 80 is a self contained aspiration / spittoon unit intended for use in a dental surgery. It is designed to remove secretions from the oral cavity during general dental treatment and to reduce stray spray from dental instruments.
It also incorporates a rinsed spittoon bowl and a tumbler holder and filler, this provides convenient facilities for the patient to rinse out during and after treatment.
Water is brought to the aspirator through the service hose via the floor box. Some of the water is then regulated by means of a adjustable pressure regulator before passing to the tumbler control valve. The unregulated water goes directly to the bowl flush valve. Operating either of these valves will provide water to the tumbler or bowl flush.

The Varident 80 aspirator is suitable for use on either side of the dental chair, provided that the floor box can be suitably located.

4) FUNCTIONAL DESCRIPTION (Refer to fig 1)

4.1) Basic operation

The suction manifold provides 3 operating hoses, one large and two small, they are intended for use with 16 mm and 11 mm suction tips. An adaptor converting the large hose to the 11 mm size can be used to maximise air flow through medium sized tips (8 mm bore).
When any of the operating hoses (1) are lifted from its' hanger, a corresponding microswitch incorporated in the hanger block (see fig 2 item 9) is activated so as to cause the vacuum motor (6) to start up. This results in a partial vacuum being created in the separator (9).

The working ends of the operating hoses are subjected to normal atmospheric pressure in the surgery and so a flow of air is induced in the direction shown, due to the depression in the separator. Thus spray and secretions from the oral cavity are conveyed to the separator by this movement of air.

The separator (9) has a large cross sectional area relative to the manifold vacuum hose (3). Consequently, air flow speed is reduced on entry. However, due to the greater mass (and therefore momentum) of any liquid content in the incoming secretions, this continues to travel downwards and accumulates in the base of the separator. The remaining air content of the incoming flow is sucked through the vacuum motor, so as to maintain a constant depression. Any solids in the incoming air stream are separated out by the inlet filter (10)

To further prevent liquid carry over into the vacuum motor, the incoming secretions are introduced to the separator at a lower point than the vacuum motor connection (5) and the surface of accumulated liquids is maintained at a lower level by a level detector (11). The large gap between the surface of accumulated aspirate and the vacuum motor connection prevents unwanted pick-up.

Air flowing through the system ultimately passes through the vacuum motor, after which it is filtered by the exhaust filter (7). This prevents recirculation of any particles which have not been separated out and is effective down to 5 microns.

The separator includes a liquid level sensor to prevent over filling. If the maximum safe level is reached during operation, the vacuum motor will be shut down and the 'Separator Draining' lamp lit. The valve in the base of the separator will open, allowing the waste liquid to flow out and down the waste hose to the floor box. If the aspirator is fitted with an amalgam separator, it will flow through this first, before entering the waste hose.

In normal use, replacing the hoses in their hanger at the end of a procedure will shut down the motor. This will have the same effect as above, the light will come on and the valve will open automatically.

The spittoon rinse is operated by a toggle valve, acting directly on the water and incorporating devices to control water flow.
The tumbler filler is operated by a two position switch, pressing this in the upper position will initiate the electronic timer that controls the solenoid water valve. Pressing it in the lower position will provide a manual on-off operation, allowing small amounts to be added to the tumbler.
Water input is regulated so that splashing is reduced, and to help provide a consistent volume of water from the timer.

5.) INSTALLATION

Installation must be carried out by the supplier of the equipment who will have the necessary qualified and trained staff.
When the equipment is being installed in a surgery that may produce waste amalgam, an amalgam separator conforming to the current edition of BS EN ISO 11143 must be incorporated within the equipment or the waste water/suction line from it.
Collected waste must be disposed of via a registered hazardous waste collection service.

5.1) Floor Box Services

5.2) Services

Summary of services required

Air	30 psi. 2 kg/sq.cm, minimum (if syringe is fitted)
Water	20 psi. 1.4 kg/sq.cm, minimum.
Electrical supply	230 volts 50 Hz. 13 amp.
Waste outlet	32 mm dia. waste pipe is required. (NOTE: ABS material is NOT suitable for waste pipes).

NOTE: The mains supply to the equipment must be provided via a double pole **isolating** switch conforming to BS 1363-4 or IEC 61058-1 for creepage distance and air clearances for a mains transient voltage of 4kV. The most convenient location of this would be on the wall adjacent to the exit door.

Ensure that the required services are available in accordance with the specifications in section 2).
Refer to the floor box plan 85-1030 for recommendations on siting the services and for the positions and sizes of supply pipes. When choosing a suitable site for the services box, ascertain that the service hose is of sufficient length, so that no undue strain is put upon it with the aspirator at its maximum extended working position.

The electrical supply to the service box must conform to the standards required by the local electricity supply authority. Although the spittoon is rated at 5 Amps, the supply wiring must be rated at 13 Amps 230 V 50 Hz.

Electrical connection of the live and neutral wires of the supply cable must be made to the vacant 'Load' terminals of the switched connection unit in the services box, the live to the terminal marked 'L' and the neutral to the terminal marked 'N'. Connect the earth wiring to the terminal marked 'E' or with the symbol

Tie wires together where they enter the terminals to ensure that if a wire comes free, it is held in place by the adjacent wires and cannot contact other wires or parts.

Pipes should project a sufficient length above floor level and not be rigidly fixed until the Service Box is in a permanent position. The Service Box must not be fitted higher than the level on which the Aspirator is standing.

Note: The tumbler filler and bowl flush nozzles provide a twenty millimetre air gap which complies with U.K. local water supply Authorities.
CAUTION Clear any debris from supply pipes before connecting the aspirator: Flush water supply pipes at the service box.

5.3) Assembling

The casters are packed inside the machine to prevent damage in transit, and need fitting to the base. Using some suitable protection, lay the machine on its side and fit the casters in the threaded holes provided. It is important that the caster studs are tightened with a spanner to prevent damage occurring in use.

IF THE MACHINE BEING INSTALLED INCORPORATES A RASCH AMALGAM SEPARATOR, PROCEED AS FOLLOWS

Remove all loose parts within the aspirator, including the separator canister and lid.

Fit the front and rear separator supports, to the lower edges of the base. the hole pitches are different on each so will only fit one way.

Stand the Aspirator back in the upright position, remove the four screws that hold the stainless steel platform in place and remove it. Slide out the lower end of the vent tube from the slot in the platform support and remove it from the machine.

Hold the canister socket out of the way by hooking the tube into the now vacant slot.
Remove the cable tie used to hold the waste outlet connection during transit.

Remove the two sealing caps from the amalgam separator box, be sure to keep these in a safe place as they will be needed when removing the box in the future. Lower the filter box, connections uppermost, into the aspirator, sliding it to the right until it's located in the base.

Smear the outer '0' rings on the Amalgam separator with a little Silicone.
Unhook the socket from the side and fit to the small connector. Fit outlet TEE onto the larger connector.

Position the top of the vent tube through the hole in the upper support and slide the lower end back into the slot. Connect the vent and waste tubing to the TEE fitting and retain in place with the push-in fasteners through the holes in the side.

Refit the stainless steel platform and retain with the four screws.Replace the separator canister and lid, connecting the hoses from the manifold and motor.

Continue with the general installation as follows.

Fit the Tumbler Filler and bowl flush nozzles in position, place nozzle in socket and push home steadily making sure the anti rotating flat is fully engaged. To ease assembly smear silicone grease on the end of the nozzle.

TIP: When removing the nozzle, hold a finger over the end to prevent the water in the nozzle running out.

Unpack the set of operating hoses and insert the connector into the manifold (again, a little silicone grease on the connector will ease assembly), and hang the tip adaptors in their respective holders.

The motor is left disconnected as the cartridge has to be removed in order to take out the transit plugs. Undo the two screws holding the motor compartment cover in place and remove it together with the foam insert.

Pull out the motor cartridge and remove the transit plugs fitted top and bottom. Replace the motor cartridge in its housing making sure that its the right way up. Insert the three pin plug into the top left hand corner of the motor cartridge, replace the foam and refit the cover, retain with the two screws.

6) TESTING THE ASPIRATOR

Turn on water supply at the Service box. DO NOT SWITCH ON ELECTRICITY.

Turn on the water to the spittoon which is controlled by a toggle valve on the front panel and set this to the flow required.

Check all around for water leaks.

If leak-free, the electricity supply can now be switched on at the Service Box.

The Tumbler Filler is controlled by a Rocker Switch, also on the panel. Press this switch until all the air is excluded and water flows freely from the filler nozzle.

Check that the Tumbler Filler operates in both the manual and auto position.

Check that the removal and replacement of any one hose from its holder will start and stop the motor, and that the vacuum is infinitely variable by the large knob on the control panel.

The water level cut-out device must be checked on installation to see that it is working correctly. This can be done by placing the probes in a tumbler of water with the motor running and removing them when the motor switches off. Having checked this it must be ascertained that water in the separator drains away adequately.

IMPORTANT: When fitted with the RASCH amalgam separator, run clean water through the system until a steady flow is obtained from the outlet. This may take some time as its holds a lot of water. You may find it necessary to tilt the separator box to get rid of any air pockets. This will also allow you to check for leaks whilst still clean.

SPECIAL NOTE: Before leaving the surgery, make sure that the operator has the instruction manual and that they have had a full demonstration of the unit and fully understands it. Please also hand the registration of purchase form to the purchaser for their completion.

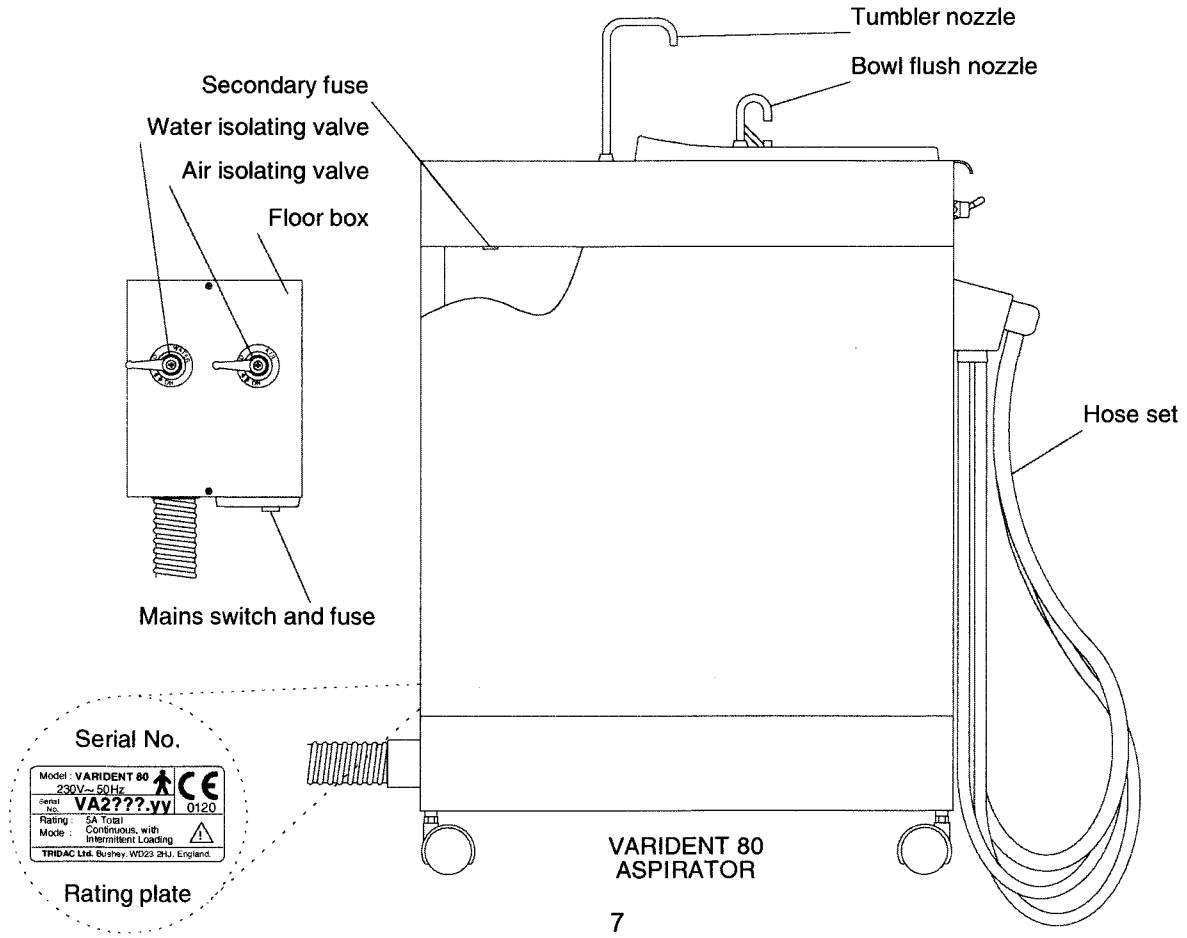
7) OPERATING INSTRUCTIONS

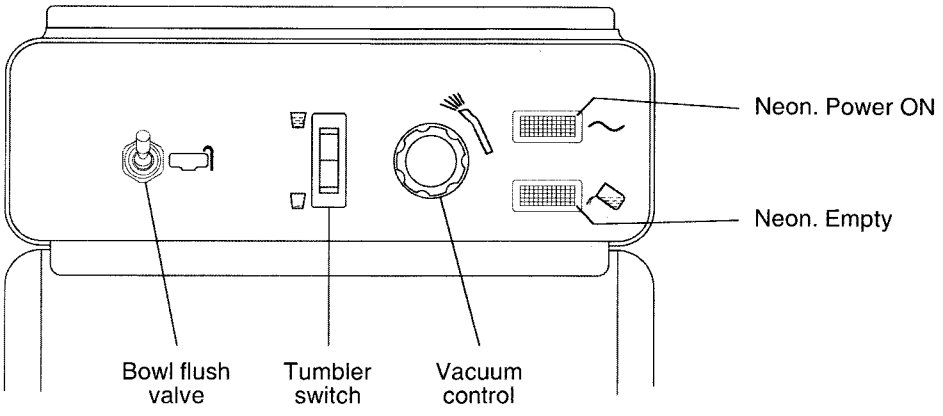
7.1) PRECAUTIONS

For the safety of staff and patients and to obtain the best performance and reliability from your Varident 80 these operating instructions should be read and observed. Some of the salient precautions are repeated below, with reference to the relevant section of the manual. To prevent unwanted movement of the aspirator, the casters are provided with brakes. Press down on the tabs of at least two casters to lock them and prevent movement.

ENSURE THE MOTOR CARTRIDGE AND CASTORS ARE INSTALLED CORRECTLY (5.3)
WEAR PROTECTIVE CLOTHING DURING CLEANING AND MAINTENANCE (8.1)
DISCONNECT THE ELECTRICAL SUPPLY BEFORE CLEANING AND MAINTENANCE (8.1)
DISCONNECT THE ELECTRICAL SUPPLY OVERNIGHT OR IF UNATTENDED (7.1)
DO NOT BLOCK OFF OPERATING HOSES (7.5)
DO NOT UNDULY RESTRICT OPERATING HOSES (7.5)
MAINTAIN THE SOLIDS FILTER FREQUENTLY (7.6) (8.3.4)
KEEP ALL AIRWAYS CLEAR (7.7)
DO NOT USE FOAMING CLEANSERS (8.3.1)
DO NOT USE WHERE FLAMMABLE GASES OR ANAESTHETICS ARE IN USE (4.1)
DO NOT USE THE MACHINE WITHOUT THE PROBE LEAD CONNECTED (7.5)

7.2) Identification of parts





7.2.1) Switching on the equipment

Switch on the equipment by means of the on/off mains switch located on the floor box. The amber indicator light adjacent to the switch will illuminate.

Immediately after switching on, the two neons on the aspirator control panel will be illuminated giving the following information:

GREEN When illuminated indicates that the mains supply is ON

AMBER When illuminated indicates that the separator is draining or has been drained and will extinguish on selection of a hose from the hanger block.

Note: When leaving the surgery always switch OFF the equipment at the mains **isolating** switch, this is usually located on a nearby wall for easy access.

7.3) Mains fuses

Caution: Isolate the mains electrical supply before attempting to change the fuse.

To change the mains fuse located on the floor box. Use a suitable small flat bladed screwdriver to prise out the fuse carrier and replace the fuse using a 5 Amps. 250 V 1" x 1/4" HBC to BS 1362. Part No. 10-1067
To change the mains fuse located above the separator canister, use a suitable flat bladed screwdriver and unscrew the fuse carrier. Pull out the fuse carrier and replace the fuse using a T5AH.250volts.5 x 20mm Ceramic fuse, part number 10-1368. Note, these are the only two user changeable fuses on the equipment.

7.4) Attachment of accessories

The Varident 80 is provided with one large and two small operating hoses. The desired tips and spittoon funnel should be attached to these with the motor switch off.

The operating hoses are intended for the following size accessories :

a) Large : to accept suction cannula (tips) and spittoon cups of 16 mm diameter connection shank.
b) Small : to accept suction cannula (tips) of 11 mm diameter connection shank.

The suction tips are simply a push fit into the cannula connectors.

Tip adaptor, part number 22 1231, allows 11 mm cannulas to fit the 16 mm hose. This can usefully increase flow through medium sized tips (8 mm). Furthermore, the larger suction hose is less prone to obstruction by solid particles like lumps of amalgam.

Tip adaptor, part number 60 1038, allows small diameter (6.0 mm to 1/4") disposable saliva ejector tips to be used on the small hoses, a sample of each adaptor is supplied with the Varident 80.

7.5) Aspiration

Removal of any hose from the holder will cause the motor to start, suction will be present at all three hoses at all times. This is necessary to give adequate cooling to the motor. The hoses are intentionally open ended and should **not be blocked off**, even when unused, or the suction motor may overheat.
If the large hose is throttled down with a 16 mm to 11 mm adaptor, the bore of at least one of the remaining small hoses should be maintained at not less than 8 mm, and the other not below 6 mm.

Replacing the hose or hoses will switch off the motor, removing the vacuum from the separator and allowing the waste to drain away.
If the aspirator is used for any length of time or a large volume of water is used, the level in the separator will rise until it reaches the level sensing probes, these will automatically switch the motor off which will be indicated by the amber neon on the control panel. The motor will remain switched off for a period of 3 - 5 seconds, which allows partial emptying of the separator giving time to continue working until it is convenient to stop for a longer period and allow the separator to drain completely. To do this replace hoses in their holders.

NEVER use the aspirator without the probe lead connected and in working order.
The aspiration speed may be varied by means of a solid state speed control, the knob being the larger of the two on the control panel.
DO NOT block off the suction hoses or restrict unduly, this could cause the suction motor to overheat.See(7.7)

7.6) Solids filter

A filter is included at the inlet port of the separator cover, to collect solid waste, such as amalgam and dentine particles. It is easily extracted for emptying and cleaning by pulling from the filter tube. It should be regularly checked and occasionally replaced, see section (8.3.4). A clogged filter will strangle the air flow to the motor.

7.7) Thermal protection

The suction motor cartridge is fitted with a thermal cut-out which will operate if the motor windings exceed their allowable temperature rise. Once operated, the motor will not restart until the winding temperature has fallen to the reset value. Because the motor has a large thermal mass, this could take tens of minutes.
Given a serviceable motor cartridge, shut down is only likely to occur if the aspirator air flow is unduly restricted. To prevent this, ensure that the separator inlet filter is regularly maintained, that the manifold and all hoses are clear and clean and that the precautions regarding restriction of the operating hoses are adhered to.

7.8) Rinsing

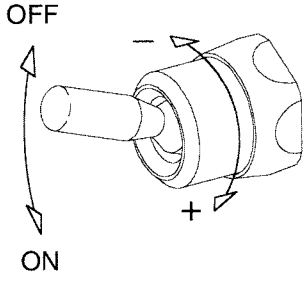
In normal use, it is frequently the case that only small quantities of secretions, such as spray and saliva, are aspirated. These secretions tend to be sticky and often contain fine particles of solids from drilling operations. When fanned by the high air flow rates occurring inside the suction tubings, the secretions tend to dry out, leaving stubborn deposits.
The internal condition of hoses and other parts contacted by aspirated secretions can be improved by keeping the internal bores rinsed. To do this, we recommend flushing used operating hoses after each patient, by aspirating a tumbler of water. See section (8.3.1) for hints on flushing.

7.9) Tumbler Filler

An automatic timed tumbler filler is fitted to this aspirator, with provision for manual operation. Both are operated by the same switch which has two separate operating positions.

The timer may be adjusted by means of a small spindle protruding downwards above the separator. Rotate anti-clockwise to increase, clockwise to decrease.

7.10) Spittoon Flush



The water to the Spittoon is controlled by an adjustable toggle valve with two separate controls.

ON/OFF OPERATION. Move toggle up or down.

To ADJUST FLOW. Rotate collar clockwise to increase anti-clockwise to decrease.

IMPORTANT:

When fitted with the RASCH amalgam separator, It is most important that clean water is used to flush through the separator immediately after each use, we suggest at least one litre is used each time. Doing this will help keep the separator clear and prevent it becoming clogged prematurely.

8) HYGIENE, DISINFECTION & CLEANING

8.1) Caution.

Always switch off the electrical supply to the unit when cleaning is undertaken, unless flushing of the suction is being carried out. Use the **Isolating Switch** which is usually located on an adjacent wall.

8.2) Cleaning references.

Recommended Detergent: Near neutral washing-up liquid, diluted. e.g." Fairy liquid".
Approved disinfectants:

1 "FD 366 sensitive' by Durr Dental AG
2 'Mikrozid AF' surface disinfectant, by Schulke & Mayr.
3) 'Mikrozid' alcohol free, by Schulke & Mayr.
4) 'Oratol plus' by Dürr Dental.(Please observe the distinction from standard Oratol)

When cleaning dental equipment, wear suitable protective clothing. This would include a face mask, eye protection and strong rubber gloves, household rather than surgical, as there is a danger that the latter could be easily split or punctured.

Keep water/solutions away from electrical devices
Use disposable, soft cloths for cleaning.

After carrying out any of the following, dispose of all used contaminated materials, i.e, cleaning cloths, barrier film etc as clinical waste.

8.2.1) Surface Cleaning: After each patient.
Cleaning of the unit's surfaces may be accomplished safely by wiping with a soft cloth, dampened with a mild detergent solution. Ensure that the cloth is squeezed out. DO NOT soak the unit. Dry the unit after cleaning.

Some patients may touch the bowl rim and it is therefore important to pay particular attention to this section of the spittoon bowl.
Aggressive detergent based products, such as proprietary / domestic floor cleaners may damage the surfaces and must be avoided. Also avoid abrasive cleaners, which will dull, and eventually thin, the surface coating.

The approved disinfectants may be used after cleaning. Use liquid products applied to a cloth - do not use spray application directly on to the unit. Do not use alcohol based cleaners on stainless steel.

Allow surfaces to dry completely before applying barrier protection. This is particularly important with self adhesive films - low tak adhesive mixed with alcohol, for example, may not remain low tak! Solvents can have a temporary adverse effect on even resistant paint surfaces, but the paint will recover when dried. Sealing the paint under a film before it dries could damage the surface.

8.2.2) Aspirator tips (cannulae). After each patient.

Reusable tips should be cleaned and sterilised after each patient.
Metal tips, if used, are normally chromium plated and may be sterilised many times without deterioration. The plastic spray interceptor (16 mm fitting) P/No. 60 1101 is also autoclavable but must be expected to deteriorate after fewer cycles.

Tips should be washed in a bowl of detergent and the bores brushed (see section 7.1). Use the size of brush, 70 1005 or 70 1006, appropriate to the bore of the tip. Reserve these brushes for tip cleaning only : do not use them for other jobs. Rinse the tips thoroughly after cleaning.
Once cleaned the tips can be autoclaved at temperatures up to 135C.

8.2.3) Suction Hoses After each patient.
The suction tubing and tip connector may be cleaned with a cloth dampened with detergent, then dried.
Once cleaned they may be wiped with approved disinfectants.

8.2.4) DCI Syringe After each patient.
This should be cleaned and disinfected in accordance with it's manufacturer's instructions.

8.3) Daily Care

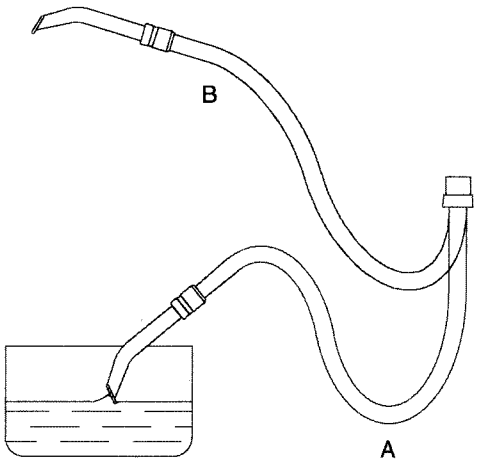
8.3.1) Flushing.

Aspiration equipment should be flushed at least once a day with a specialist NON FOAMING disinfectant cleaner as recommended in (8.2).

DO NOT USE DETTOL, TOILET CLEANSER or any CLEANERS that do NOT CONTAIN AN ANTI-FOAMING AGENT. These WILL DAMAGE your Aspirator. Also avoid bleach and cleaners based on aldehydes.
BEWARE: Not all non foaming cleaners live up to that claim!

Since freshly deposited secretions are easier to shift and disinfectants are less effective, or ineffective, on heavily soiled parts, we recommend carrying out a first flush with plain water. This is also much cheaper than specialist aspirator cleaners! Follow up with with the disinfectant product.

Make up 1.0 litre of the aspirator cleaner to the manufacturer's recommended dilution.
Suck the solution in equal quantity through each of the operating hoses that has been used. Do so by holding the suction tip only partially submerged, as indicated in the diagram. This allows a turbulent mixture of liquid and air to enter the tube, which gives a greater cleaning effect and longer exposure time.
Lift the hose occasionally to position B. This helps heavy sediments, like amalgam, to be flushed through. These might otherwise fail to be lifted from deep droops in the hose such as A.
Stop the suction as soon as the flushing solution has been used up, so that internal parts are wetted for 10 minutes or so to allow disinfectant action, without the drying effect of air flow. Then restart suction and briefly lift the hoses, as at B, to dispose of any remaining sediments. Now leave the suction on for a minute or so, to reduce any remaining liquid inside the manifold.



8.3.2) Spittoon Bowl Filter.

The filter should be emptied at least once a day. Lift the deflector dome and filter from the bowl, tip the contents into your contaminated waste receptacle.

The filter and deflector should be washed in detergent then rinsed, before replacing in the bowl. Trapped debris can be shifted from the mesh part by brushing from the outside.

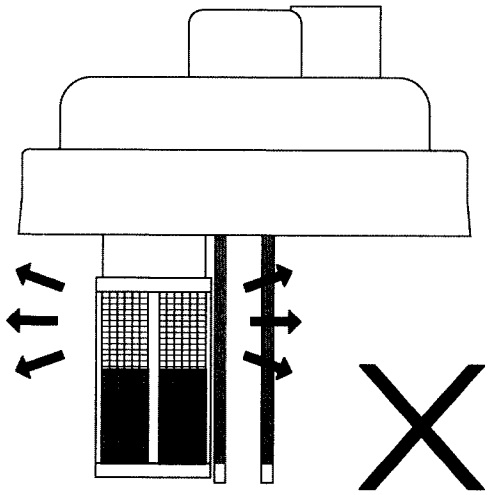
8.3.3) Spittoon Bowl.

The spittoon bowl is manufactured from metal and nickel plated which may be cleaned using mild domestic detergent solution. Avoid the use of abrasive cleansers which could dull the surface and eventually wear through the plating, also avoid bleach. Rinse the bowl thoroughly after cleaning to remove all traces of detergent and wipe the bowl dry after rinsing to achieve a lustrous finish.

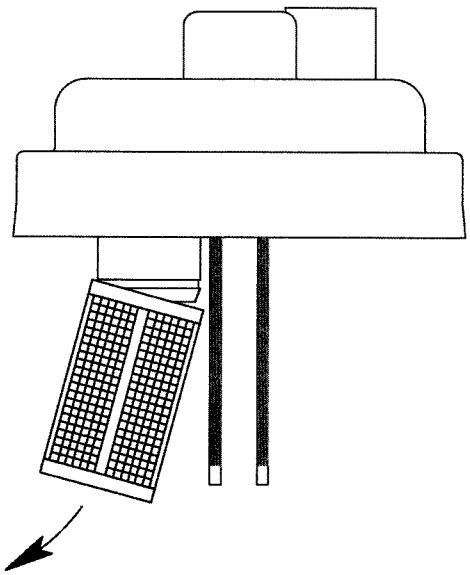
8.3.4) Suction Canister and filter.

Lift out the separator canister from it's socket and remove from the aspirator for cleaning. Remove the anti turbulence baffles from inside and clean all parts.
The filter at the inlet port of the separator cover, is easily extracted for emptying and cleaning by pulling sideways from the filter tube, tip the contents into your contaminated waste receptacle and clean before replacing.Trapped debris can be shifted from the mesh by brushing from the outside.
It should be regularly checked and occasionally replaced, a clogged filter will strangle the air flow to the motor.

Clean the separator cover and wipe over the probe rods with a cloth.
Apply a small amount of silicone grease to the 'O' rings on the separator valve before replacing it in it's socket.



A clogged filter will divert the incoming stream sideways with the danger of it being sucked into the motor.



To remove filter, pull sideways and downwards

8.3.5) Operating hoses.

These should be cleaned daily to maintain clean external and internal surface and free bores.

The operating hoses are supplied as combined hoses which are easily detached from the manifold. The manifold is fitted with an 'O' ring seal inside that grips the hose connector. The hoses are detached by pulling on the connector. Do not pull on the hose.

The hose connector and the manifold must be kept clean to ensure a seal when the hoses are refitted.

Hoses should be cleaned after the flushing operation described in section 8.3.1. They may be immersed in detergent solution for cleaning and should be cleared of debris at the tip connectors and manifold connector by using the brushes provided.
Subsequently they can be soaked in aspirator cleaner / disinfectant(4), if desired.

After cleaning, the hose connector should be smeared with a little silicone grease on the surface which enters the manifold, this will lubricate the 'O' ring that is located within the manifold. Do not over lubricate or the 'O' ring may lose its grip, wipe off excess from both parts if this occurs.

The other end of the hoses are fitted with tip connectors. These incorporate 'O' ring seals that grip attached suction tips and prevent leakage. Ensure that the bores are kept clear of deposits. If the 'O' rings become worn and lose their grip they should by replaced.

8.4) Weekly Care

i) Clean out the hose manifold with the brushes supplied after removing the hoses.

ii) Remove separator canister and clean. Do not use an abrasive cleaner.

The valve normally keeps itself clean but if you should find it necessary to dismantle it, remove the lower 'O' Ring and withdraw the retaining pin.

iii) Clean out the separator valve socket,

iv) Clean the separator cover (particularly around the probe rods) and its sealing ring.
Before replacing separator smear 'O' rings with Silicone grease.

8.5) Monthly Care in addition to the above.

i) Remove convoluted hose from separator to Manifold, remove any build up of deposits and clean.

ii) Remove the bacteriological filter situated below the motor, and wash in warm soapy water,rinse, then leave to dry overnight and replace. The arrow on the filter should point downwards.

9.) REPAIRS AND SERVICING

9.1) General

Provided the maintenance instructions described in section (8) are followed by the user, there is little need for third party routine servicing of the aspirator.

Note: Before presuming an electrical fault ensure that it does not exist purely due to a blown fuse

Repairs and servicing should be entrusted to the supplier of the equipment or appropriately qualified personnel to carry out such tasks. Should any difficulty be experienced in obtaining satisfactory service, users should contact Tridac for advice.

Circuit diagrams and component part identification can be found in the rear of this manual for use by suitably qualified personnel. Repairers requiring assistance or guidance and advice on the repair of those parts deemed repairable.may contact Tridac by telephone on +44 (0)1923 242398, or write to the address given in the specifications section.
ONLY USE TRIDAC REPLACEMENT PARTS.

The water pressure regulator should be checked annually and if it is not holding pressure your technician should replace the diaphragm and seating, using the appropriate repair kit. Tubing and fittings should be visually inspected for condition and leaks. Any faults should be rectified.

Replacement of the following 'O' rings annually will prevent problems arising from loss of seal :

Suction Manifold 'O' rings
Tip connector 'O' rings
Internal hoses 'O' rings
Separator valve 'O' rings

The suction motor is of a commutator type and must be serviced annually. Electrical safety must also be checked annually. It is often possible to include this as part of the normal Health and Safety checks which are required to be carried out on all the practice electrical equipment. Earth integrity should be confirmed and wiring inspected for physical condition, particularly where the umbilical leaves the floor box and where it enters the spittoon body.

9.2) Electronic Control Module: Pt. No: 22-1 432

The speed control, probe cut out, and tumbler timer, are all combined in the Electronic Control Module. This affords protection and ease of servicing as it is connected by plugs and sockets. To remove the Electronic Control Module, first remove the separator from the machine and place the separator cover to one side. Undo the two screws on the underside of the bulkhead that retain the control module, and allow it to hang down. Disconnect by pressing in the locking arms either side of the plug housing. To reconnect, line up the location lugs and press home until the locking arms engage.

9.3) Aspirator Motor: Pt. No: 20-1030.

WARNING. This could be hot, allow to cool before handling.

Should it be necessary to replace the motor, then this is a very simple operation and can be done easily as follows:
1. Switch off the power supply.
2. Remove the two screws holding the motor compartment cover3. Remove the front sound proofing insulation insert.
4. Remove the three pin plug from the motor cartridge.
5. Pull on the handle and remove the motor cartridge by drawing it towards you.
6. Replace with a new cartridge following the instructions that are supplied with it. In particular, make sure that both transit plugs are removed before fitting. Ensure that the cartridge is pushed firmly back into position with the connector located in the top left hand corner.

9.4) Spittoon Bowl Removal:

This will have to be done to gain access to the solenoid and to the rear of the control panel.

To do this, firstly isolate all services at the service box and release water pressure by opperating the bowl flush valve.
Remove the retaining fork on the underside of the bulkhead and remove the grey plastic waste socket from the neck of the bowl. The bowl assembly may now be lifted clear and moved to one side. If the bowl assembly is to be removed entirely detach the tubes to the flush nozzle and vent.

9.5) Top Cover Removal:

To gain access to the water heater and water regulator, etc. remove the spittoon bowl as discribed above. Disconnect the tumbler filler tube at the solenoid, they have push-in fittings. To remove the tube, depress the collar and then pull out the tube. To improve access, the rear panel of the aspirator may be removed after undoing the two screws inside.

Remove the five screws holding the top cover (two located along the front edge and three along the rear). Slide the top cover back (away from the control panel) approximately one inch, raise the end with the handle and draw forwards to remove.

9.6) Replacing Mains cable:

Should it be required to replace the mains electrical cable within the aspirator, the following procedure should help.
Isolate the electrical supply to the aspirator before the floor box. Remove the valve levers and cover from the floor box, and remove the clamp securing the cable, you can now disconnect the cable from the connection unit.

Remove the electronic control module, spittoon bowl and top cover as described in (9.2) (9.4) and (9.5)
Undo and remove the clamp holding the cable in the top section, together with any cable tie's you come across anddisconnect the mains cable a the terminal block.
Before removing the cable, we suggest the you attach the new cable to the old one, at the floor box, to help you pull the new cable through the service loom.When you have replaced the cable, fit new tags to the top end, use standard 1/4" Faston tags and insulators. Reconnect the cable at both ends, securing with the cable clamps a tie's as before. Note. Leave the earth conductor longer than the live and neutral wires so that it can not disconnect before them.
Refit all items removed and test for function and safety.

10) TROUBLESHOOTING

Reminder: Servicing should be entrusted to suitably qualified personnel.

The aspirator is a fairly simple product with few problems arising. The cause of any that do is usually evident.

Symptom: Continuous trickle or drip of water from the bowl flush nozzle

Cause: Bowl flush toggle valve seating worn or obstructed.

Diagnosis: Make sure that the adjusting collar is unscrewed and not causing the toggle to be partially operated.

Rectification: If the fault still persists, the toggle valve should be changed.

Symptom: Continuous trickle or drip of water from the tumbler filler nozzle.

Cause: Solenoid valve seating obstructed or damaged.

Rectification: Isolate the water supply at the floor box. Relieve pressure by operating the tumbler filler or bowl flush button, the pressure gauge, located above the motor housing, should now read zero.
Turn off the electrical supply.

Remove the bowl assembly as described above, see (9.4) to gain access to the solenoid.
Remove the plastic rivet retaining the solenoid to it's bracket and lift clear. Remove the three screws holding the solenoid coil to the body, and lift of the coil. Pull out the plunger housing taking care not to lose the spring and plunger.
Lift out the black rubber diaphragm and examine the seating face on the underside, this is the area around the central white plastic part. Remove any debris that is lodged there, reassemble and test. If the water still drips, the seating may be too damaged and you will need to replace the solenoid. The solenoid part number is 50-1093.

Symptom: Bowl flush water is no longer a smooth stream and is hitting the side of the flush tube.

Cause: This could be due to a build up of lime scale on the nozzle jet.

Rectification:

Descale the nozzle, you should then have a smooth flow of water.

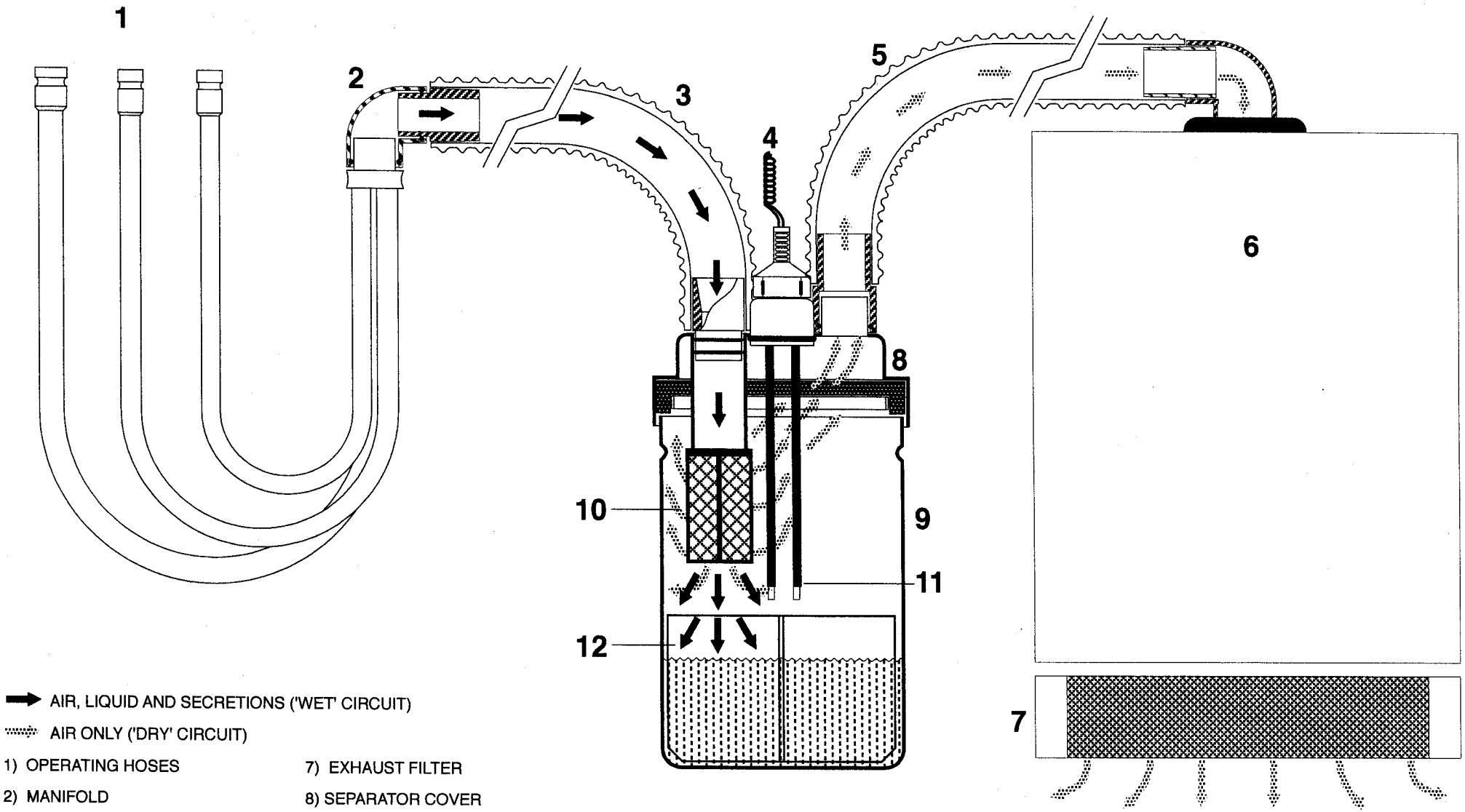
POPULAR SPARE PARTS

Part No.	Description	Qty. used	Comments
10-1067	Fuse. 5amp.250volts. 6.3 x 25.4mm Ceramic	1	Fitted to Floor box
10-1182	Fuse, T125ma.L. 250volts. 5 x 20mm Glass	1	Fitted inside control module
10-1368	Fuse, T5amp.H.250volts.5 x 20mm Ceramic	1	Mains power fuse
20-1030	Motor cartridge	1	
22-1004	Hose assy. Vacuum	1	Motor to Canister
22-1032	Canister and valve assy.	1	
22-1291	Operating hoses, set of 3	1	Includes manifold connector
22-1292	Hose assy. Vacuum	1	Manifold to Canister
30-1001	O ring	1	Upper ring on Canister valve
30-1002	O ring	1	Lower ring on Canister valve
30-1007	O ring	1	For large tip connector
30-1008	O ring	2	For small tip connector
30-1086	O ring	2	On hose to Canister
30-1110	O ring	3	For suction manifold elbow
30-1125	O ring	2	Located in nozzle sockets
35-1150	Foam filter element	1	Located under motor
45-1620	Bowl filter and deflector	1	For centre of spittoon bowl
50-1100	Amalgam separator box	1	Replacement if fitted
70-1095	Replacement filters	1 pkt	For Canister

ANCILLARY PARTS

22-1231	Tip adaptor reducer	A/R	To reduce large hose to small
22-1232	Tip adaptor enlarger	A/R	To increase small hose to large
60-1038	Tip adaptor for disposable tips	A/R	Fits small hose
60-1101	Spraysceptor	A/R	Large plastic tip
70-1005	Cleaning brush 16mm diameter	A/R	
70-1006	Cleaning brush 6mm diameter	A/R	
70-1138	Cleaning brush 25mm diameter	A/R	
60-1017	Hand spittoon (Not supplied. available option)	A/R	Fits large hose or tip enlarger

A/R = As required



AIR, LIQUID AND SECRETIONS ('WET' CIRCUIT)

AIR ONLY ('DRY' CIRCUIT)

1) OPERATING HOSES
2) MANIFOLD
3) VACUUM HOSE (MANIFOLD)
4) PROBE CONNECTOR
5) VACUUM HOSE (MOTOR)
6) VACUUM MOTOR/HOUSING
7) EXHAUST FILTER
8) SEPARATOR COVER
9) SEPARATOR
10) SEPARATOR INLET FILTER
11) LEVEL DETECTOR RODS (PROBE RODS)
12) ANTI-TURBULENCE BAFFLES

Fig. 1 VACUUM CIRCUIT

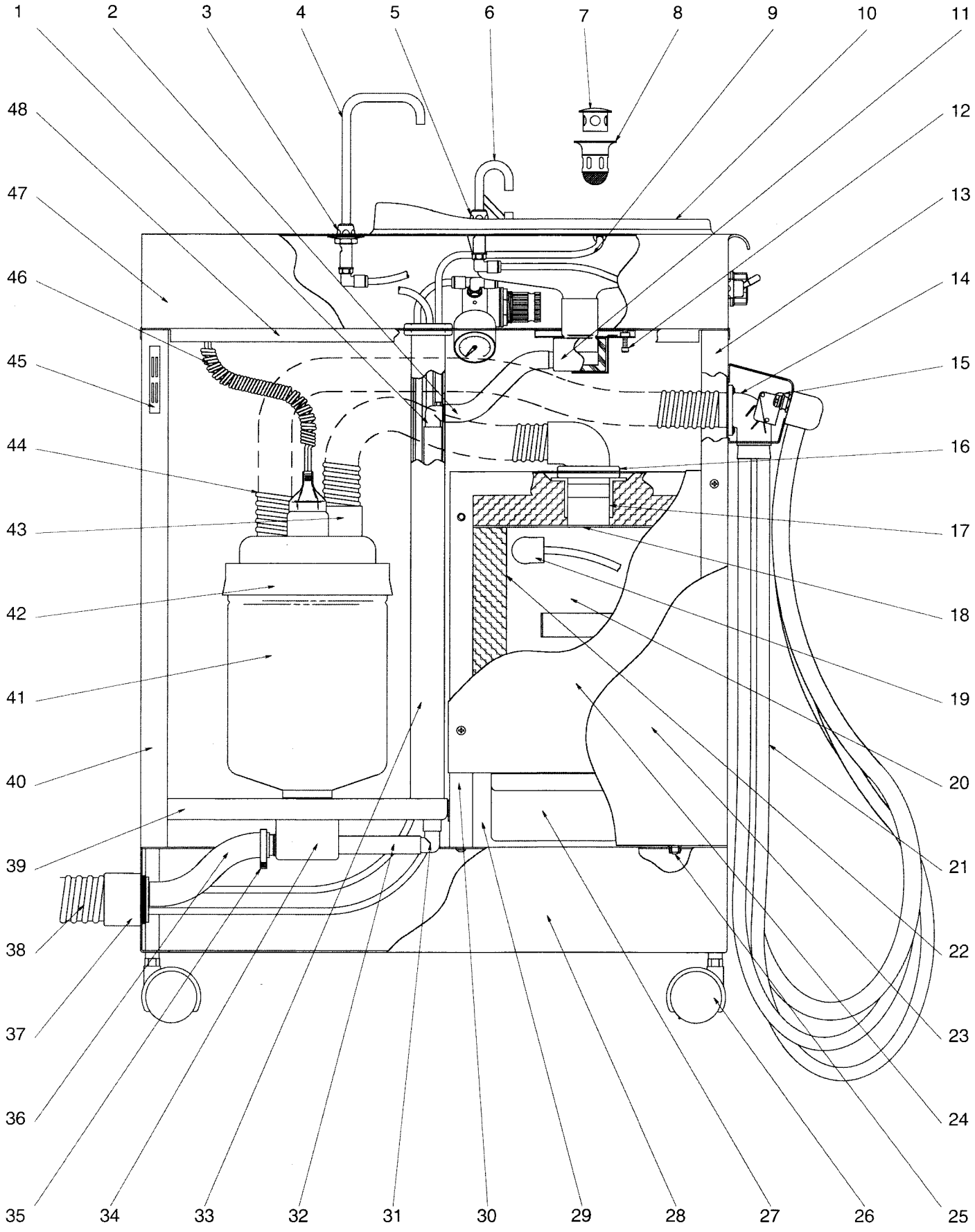
Issue 2 06 99

LEGEND for VARIDENT 80 PARTS DIAGRAM
front view.

Item	Part No.	Description
1	55-1197	Elbow. 12mm fitted with:-
	55-1055	Barb connector
2	32-1007	Waste hose. x 2.5 ft as std.
3	45-1518	Nozzle socket
	30-1125	"O" Ring
	55-1136	Elbow fitting
	25-1056	Disc spring
	65-1013	Nut. 1/4" B.S.P.
4	45-1521	Tumbler nozzle
5	Same items as 3 above	
6	22-1365	Bowl flush nozzle
7	} 45-1620	Bowl filter & deflector
8		
9	32-1089	Poly tube. 1/4" clear
10	22-1366	Bowl and surround assy
11	22-1464	Bowl socket assy
	30-1003	"O" Ring
12	40-1322	Bowl retainer
13	40-1271	Cabinet end panel
14	22-1280	Manifold assy
15	10-1036	Switches x 3
16	30-1035	Grommet
17	30-1046	Sealing sleeve
18	35-1018	Motor liners x 2
19	10-1050	Plug. 3 pin
20	20-1030	Motor cartridge
21	22-1291	Hose set. complete
22	35-1016	Insulating foam. set of 6
23	40-1269	Door panel x 2
24	40-1273	Motor compartment cover
25	35-1035	Door peg. x 2 per door
	35-1384	Bush x 4

Item	Part No.	Description
26	50-1045	Caster x 4
27	40-2116	Filter draw
	35-1150	Filter Element . replacement
28	40-1268	Base section
29	40-1275	Filter support
30	40-2049	Motor box section
31	55-1197	Elbow. 12mmØ
32	32-1007	Tube. 1/2"Ø
33	35-1124	Services tube
34	22-1512	Waste outlet assy
35	35-1135	Hose clamp
36	32-1008	Waste hose 3/4"Ø
37	35-1499	Hose connector
	30-1156	"O" Ring (used as retainer)
38	22-1376	Service hose assy complete
	32-1010	Outer hose only. 5 feet
39	40-2048	Separator platform
40	40-1270	Cabinet end section
41	22-1032	Separator assy. comprisses
	22-1058	Valve assembly
	45-1114	Canister
42	22-1112	separator cover assy.
	25-1061	Retaining band
	30-1042	Seal
	70-1095	Filter basket.(5/pkt)
43	22-1004	Hose assy. motor/sep.
44	22-1292	Hose assy. manifold/sep.
45	70-1012	Door magnet x 2
46	22-1295	Probe lead assy.
47	40-1283	Top cover
48	40-1280	Cabinet top section

PARTS DIAGRAM FOR VARIDENT 80 ASPIRATOR P/No. 23-1001
Front view.

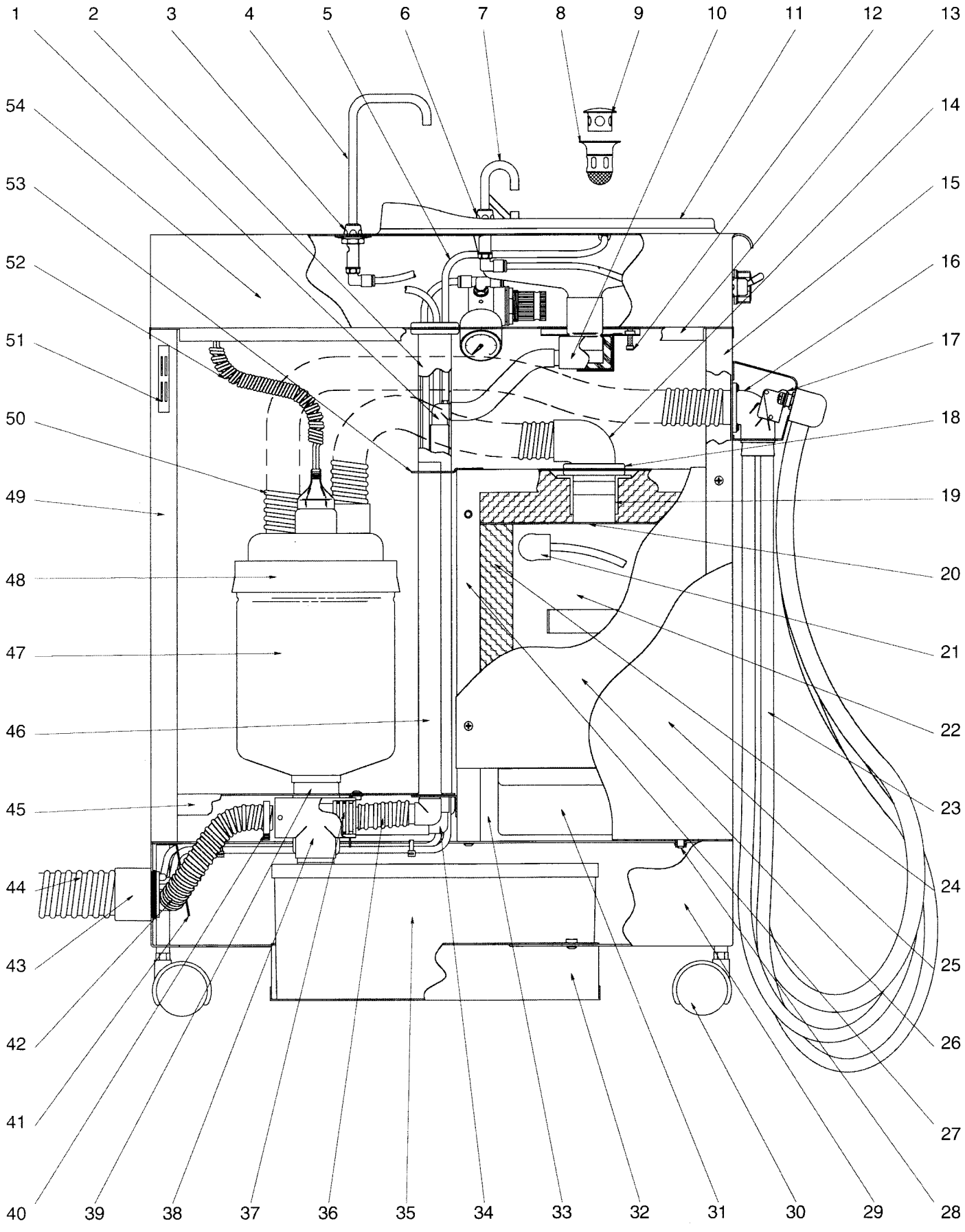


LEGEND for VARIDENT 80A PARTS DIAGRAM with built in AMALGAM SEPARATOR front view.

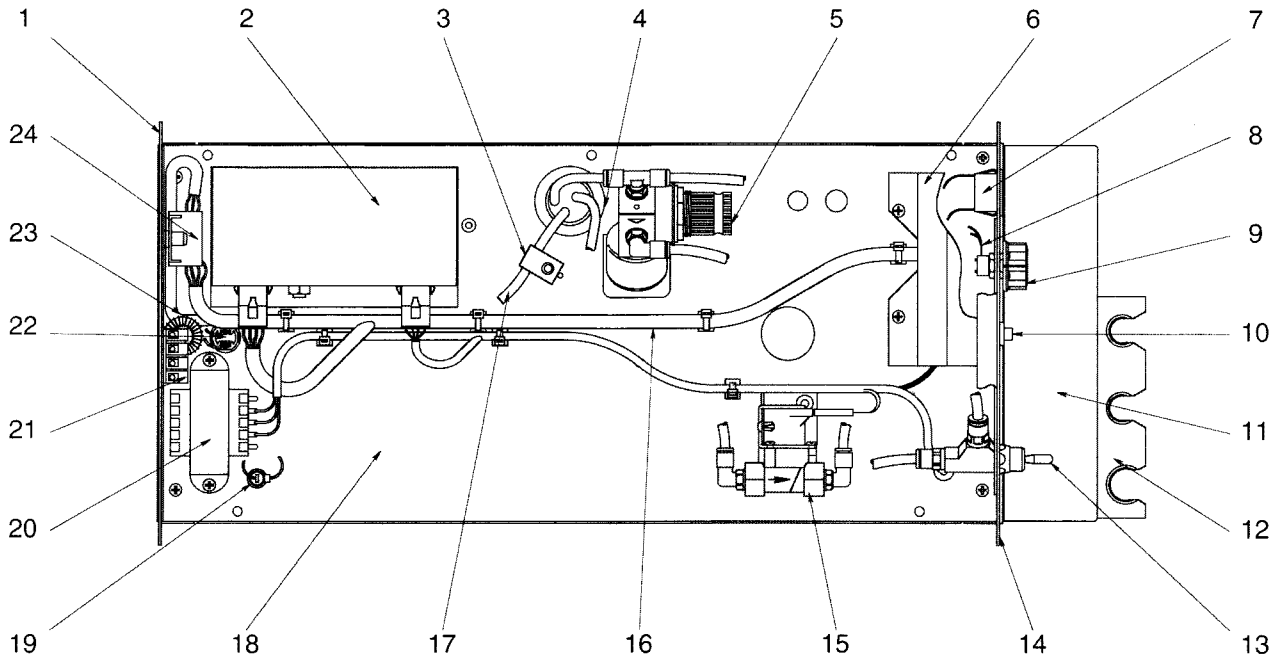
Item	Part No.	Description
1	55-1197	Elbow. 12mm.fitted with:-
	55-1055	Barb connector
2	35-1124	Services tube
3	45-1518	Nozzle socket
	30-1125	"O" Ring
	55-1136	Elbow fitting
	25-1056	Disc spring
	65-1013	Nut. 1/4" B.S.P.
4	45-1521	Tumbler nozzle
5	32-1089	Poly tube. 1/4" clear
6	Same items as 3 above	
7	22-1365	Bowl flush nozzle
8 }	45-1620	Bowl filter & deflector
9 }		
10	22-1366	Bowl and surround assy
11	22-1464	Bowl socket assy
	30-1003	"O" Ring
12	40-1322	Bowl retainer
	65-1292	Adjusting screw. M4 x 20
13	40-1280	Cabinet top section
14	22-1004	Hose assy. motor/sep.
15	40-1271	Cabinet end panel
16	22-1280	Manifold assy
17	10-1036	Switches x 3
18	30-1035	Grommet
19	30-1046	Sealing sleeve
20	35-1018	Motor liners x 2
21	10-1050	Plug. 3 pin
22	20-1030	Motor cartridge
23	22-1291	Hose set. complete
24	35-1016	Insulating foam. (set of 6)
25	40-1269	Door panel x 2
26	40-1273	Motor compartment cover
27	40-2049	Motor box section
28	35-1035	Door peg. x 2 per door
	35-1384	Bush x 4
29	40-1268	Base section

Item	Part No.	Description
30	50-1045	Caster x 4
31	40-2116	Filter draw
	35-1150	Filter Element. replacement
32	40-2053	Separator support. front
	40-2054	Separator support. rear
33	40-1275	Filter support
34	55-1197	Elbow. 12mmØ
35	50-1100	Amalgam separator cassette
36	32-1105	Waste hose. 20mmØ
37	35-1501	waste connector. x 2
	30-1158	"O" Ring. x 4
38	35-1518	Tee connector
40	35-1135	Hose clamp x 4
41	40-2060	Services deflector
42	32-1105	Waste hose. 20mmØ
	35-1135	Hose clamp
	55-1133	Waste elbow. 19mmØ
43	35-1499	Hose connector
	30-1156	"O" Ring (used as retainer)
44	22-1376	Service hose assy complete
	32-1010	Outer hose only. 5 feet
45	40-2048	Separator platform
	40-2064	Socket restainer
46	35-1517	Vent pipe
47	22-1032	Separator assy. comprisses
	22-1058	Valve assembly
	45-1114	Canister
48	22-1112	separator cover assy.
	25-1061	Retaining band
	30-1042	Seal
	70-1095	Filter basket. (5/pkt)
49	40-1270	Cabinet end section
50	22-1292	Hose assy. manifold/sep.
51	70-1012	Door magnet x 2
52	22-1295	Probe lead assy.
53	40-2065	Vent tube retainer
54	40-1283	Top cover

PARTS DIAGRAM FOR VARIDENT 80A ASPIRATOR P/No. 23-1001A
with built in AMALGAM SEPARATOR
Front view.

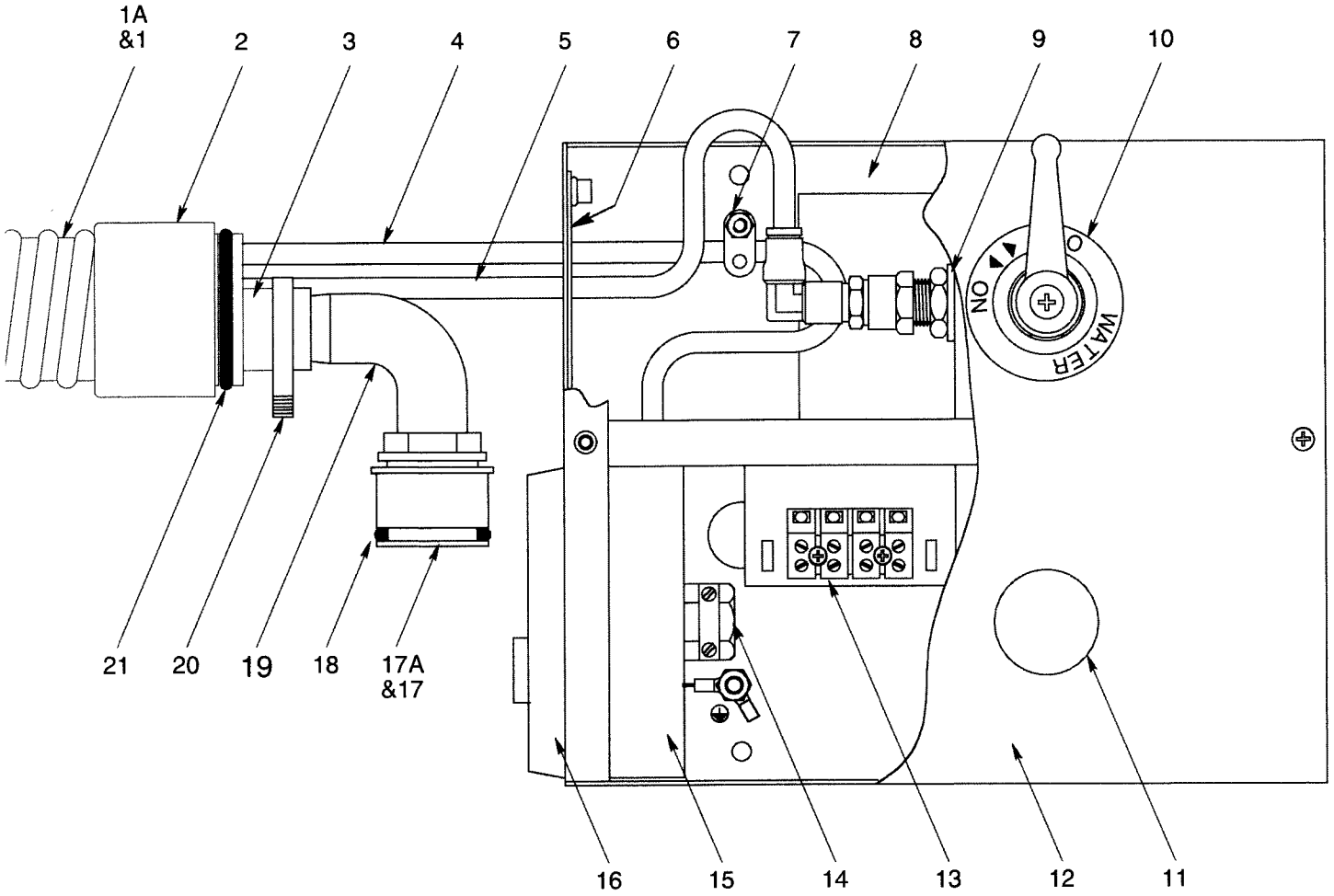


PARTS DIAGRAM FOR VARIDENT 80 ASPIRATOR P/No. 23-1001 & 23-1001A
Top view, less cover.



Item	Part No.	Description	Item	Part No.	Description
1	75-1062	Facia label	13	22-1327	Valve assy. comprisses
	40-1267	Facia panel		22-1303	Toggle valve
2	22-1432	Comtrol box, speed		55-1143	Straight fitting. x 2
3	15-1058	Cable cleat	14	75-1063	Controls label
4	30-1034	Grommet		40-1266	Controls panel
5	22-1370	Regulator assy. comprisses	15	22-1334	Solenoid assy. comprisses
	50-1077	Regulator		50-1042	Solenoid valve
	50-1003	Gauge		55-1136	Elbow fitting. x 2
	55-1136	Elbow fitting	16	22-1095	Wiring loom
	55-1137	Tee fitting	17	10-1151	Mains cable. 10ft long
6	40-1278	Cover panel	18	40-1280	Cabinet top section
7	10-1324	Neon indicator. Green	19	10-1123	Fuse holder
	10-1326	Neon indicator. Amber		10-1368	Fuse. T5AH 250V
8	10-1055	Potentiometer. speed cont.	20	10-1314	Transformer
9	10-1133	Knob	21	10-1167	Terminal block
10	10-1107	Switch. SPDT	22	10-1122	Terminal bushing
11	40-1282	Manifold housing	23	12-1109	Earth inductor
12	45-1101	Hanger block	24	10-1044	Terminal block

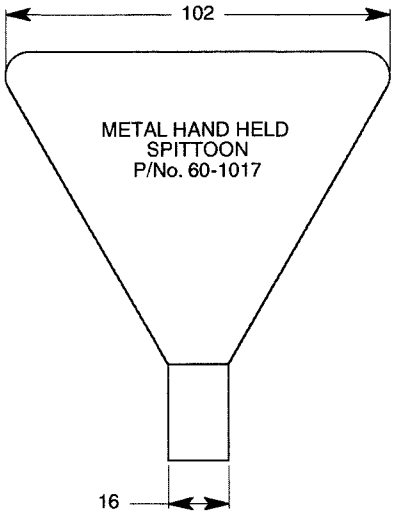
PARTS DIAGRAM for VARIDENT 80 FLOOR BOX. 22-1217



Item	Part No.	Description
1A	22 1376	Service hose assy
	Comprised of items 1 to 5 & 21	
1	32 1010	1.75" Ø hose x 5ft
2	35 1499	Hose connector (cuff)
3	32 1008	Waste hose 3/4"Ø x 5.5ft
4	15 1151	Mains cable x 10ft
5	32 1068	6mm Ø Nylon tube x 9ft
6	40-1629	Adaptor plate
7	15 1058	Cable clamp
8	40 1700	Service box base
9	22 1213	Ball valve assy
	50 1036	Ball valve
	55 1136	Elbow fitting. 6mm
10	75 1096	Water ON/OFF label

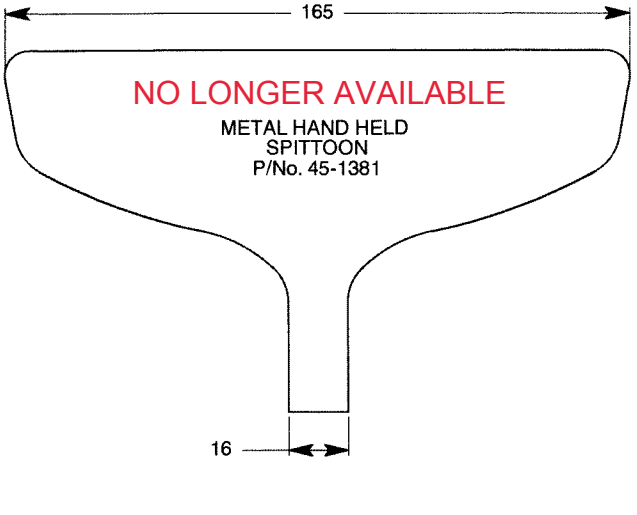
Item	Part No.	Description
11	35 1206	Blanking plug
12	40 1701	Service box cover
13	10 1167	Terminal block. 4way
14	10 1275	Cord grip
	10 1276	Retaining nut
15	10 1007	Surface box
16	10 1009	Switched connection unit
	10 1065	Fuse. 5amp ceramic
17A	22 1293	Waste elbow assy
	Comprised of items 17 to 20	
17	35 1304	Waste adaptor
18	30 1107	'O' Ring
19	55 1140	Elbow. 19/32mm
20	35 1135	Hose clamp
21	30 1156	'O' Ring. Cuff retainer

OPTIONAL HAND SPITTOONS, ASPIRATION TIPS AND ADAPTORS for use with the TRIDAC VARIDENT 80 aspirator or any EUROPEAN SIZED SUCTION SYSTEMS



TIP ENLARGER.
P/No. 22-1232

Use to adapt spittoons to small hoses

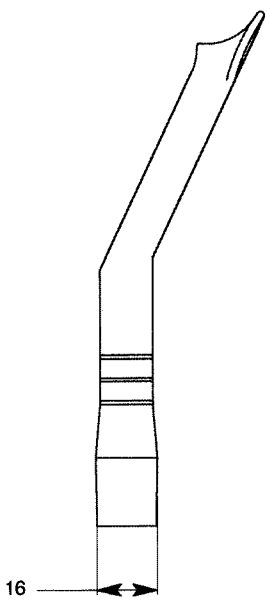


TIP REDUCER.
P/No. 22-1231

Use to allow smaller tips to fit large hose (more efficient)

TIP ADAPTOR.
P/No. 60-1038

Use to fit saliva ejector tips to small hoses



60-1101

70-1006

70-1005

70-1138

Annex 1

Varident 80 Electromagnetic environment

The varident 80 is intended for use in the electromagnetic environment specified below. The customer or the user of the Varident 80 should ensure that it is used in such an environment.		
RF emissions CISPR 11	Group 1	The Varident 80 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment
RF emissions CISPR 11	Class B	The Varident 80 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

The Varident 80 does not have Essential Performance and has not been tested for immunity to electromagnetic disturbances.