



Service manual

Read these Instructions before use

Introduction

Safety notes

Suction accessories

General care

Maintenance

Parts list

Technical data

Keep these 'Instructions' in a safe convenient place for future reference. Read in conjunction with the Publications detailed in Section 1.1.

Eschmann After Sales Service Department

The Eschmann After Sales Service Department is staffed and equipped to provide advice and assistance during normal office hours. To avoid delays when making enquires, please quote the Model and Serial Number of your Suction Unit which is shown on the Serial Number plate, the location of which is shown below. Please ensure you include all alpha and numeric digits of the Serial Number.



**Serial Number
Plate**

For further information visit www.eschmann.co.uk

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Overseas Customers

Contact your local distributor. In case of doubt contact Eschmann Equipment.

Patents and Trade marks

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"Eschmann Equipment" is a trading name of Eschmann Holdings Limited.

"VP35" is a trade mark of Eschmann Holdings Limited.

Patents : Patents Pending. (Application number 0124126.4)

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The information in this publication was correct at the time of going to print. The Company, however, reserves the right to modify or improve the equipment referred to.

NOTE: This Service Manual applies to Suction Units:

REF 82-201-66 2-Jar with Eschmann disposable suction liner system, 230V

REF 82-201-66-9999 2-Jar, with Eschmann suction jars, 230V

REF 82-201-31 2-Jar (traditional pattern), 230V

REF 82-201-80 Unit only with Receptal brackets, 230V

REF 82-201-74 2-Jar with Eschmann disposable suction liner system, 110V

REF 82-201-58 2-Jar (traditional pattern), 110V

with Serial Number V3? B 0 C 0000 or later for traditional pattern jars, or with Serial Number V3? C 0 C 0000 or later for Eschmann disposable suction liner system, where '?' indicates the model variant.

CE If the CE mark is affixed to the product, it indicates compliance with Council Directive
0473 93/42/EEC of 14 June 1993 concerning medical devices.

CE
0473

READ THIS SERVICE MANUAL BEFORE USE
Keep this Service Manual in a safe convenient place for future reference during cleaning and maintenance procedures.

SECTION	CONTENTS	PAGE
1.	INTRODUCTION	4
	General	4
	Pump and Motor	4
2.	SAFETY NOTES	5
3.	SUCTION ACCESSORIES	5
4.	GENERAL CARE	6
	Cleaning	6
	Sterilisation	6
	Suction unit disinfection	6
	Daily checks	6
5.	MAINTENANCE	7
	General	7
	Checking suction performance	7
	Checking pump oil	7
	Pump blade replacement and pump cleaning	8
	Exhaust filter/silencer replacement	8
	Fault diagnosis	10
6.	PARTS LIST	11
	Pump/Motor unit	11
	Suction unit	12
7.	TECHNICAL DATA	14
APPENDIX A	For units with traditional jar assemblies	15
APPENDIX B	For units with Eschmann Suction Jars	16
FIGURES	Fig.1 VP35 Mobile suction unit	4
	Fig.2 Pump motor assembly	7
	Fig.3 Pump and motor exploded view	9
	Fig.4 Pump rotor blade replacement	9
	Fig.5 VP35 Circuit diagram	9
	Fig.6 Oil lubricated vacuum pump - spares items	11
	Fig.7 VP35 Suction unit - identification for parts list	12
	Fig.8 Traditional jar and jar top assembly	15

1. INTRODUCTION

GENERAL

1.1 The VP35 is a high vacuum, high flow suction unit designed to conform with British and International Standards EN 60601-1:1990+A1:1993+A2:1995, ISO 10079-1:1991, BS 5724:Part 1:1979, IEC 601-1:1977, IEC 601-1-2:1993.

1.2 The suction unit can be supplied in three ways; either with a reusable jar and disposable liner system as illustrated below in Fig. 1, or with **Traditional Jars** (see appendix A), or with **Eschmann Suction Jars** (see Appendix B), or without jars and liners but incorporating brackets to receive 'Abbott Receptal' style disposable items.

PUMP AND MOTOR

1.3 The vacuum pump is an oil lubricated electrically driven pump/motor unit of the rotary vane type, with replaceable blades. The motor unit is designed to operate from the mains electrical supply (see serial plate for unit voltage).

1.4 The pump/motor unit, its associated pipework and electrical connections are all contained within a durable, hygienic plastic case. Controls are mounted on the top of the case and comprise an illuminated* on/off power switch, a vacuum control valve and gauge.

(* On later units the switch is not illuminated.)

1.5 A silencer unit in the pump exhaust line ensures that the pump operates with the minimum of noise, while the pump inlet is protected by an externally mounted sealed bacterial or combined hydrophobic/bacterial filter, both of which are disposable.

1.6 All the information necessary to maintain the VP35 portable suction unit in a serviceable condition will be found in this Service Manual.



Fig. 1 VP35 Mobile suction unit

2. SAFETY NOTES

When servicing or maintaining the ESCHMANN VP35 SUCTION UNIT, attention to the following points will prolong the life of the unit.

- | | |
|---|--|
| <p>DO clean and disinfect all suction equipment and the unit thoroughly after use.</p> <p>DO change the disposable filter after each day's use, or, IMMEDIATELY if wetted, or, after aspiration of infective fluids.</p> <p>DO unplug and/or isolate power lead before cleaning suction unit and when not in use.</p> <p>DO treat receiver jars carefully, avoiding mechanical or thermal shock.</p> <p>DO examine condition of jars, lids (including float function) and suction tubing regularly, replace if worn or damaged.</p> <p>DO keep 'sharps' away from liners.</p> | <p>DON'T start unit without removing the transit bolt and washer.</p> <p>DON'T use substitute accessories (see available parts list).</p> <p>DON'T continue to use unit, without attention, if vacuum or suction rate is low.</p> <p>DON'T use the mains lead or suction tubing as a tow rope, use the unit's handle.</p> <p>DON'T use phenols or solvent based disinfectants to clean receiver jar, use Savlon, Hibitane or similar (also see sections 4.1 - 4.3).</p> |
|---|--|

WARNING

The maintenance procedures described in this User Handbook should be made the responsibility of the engineer in charge of services in the hospital. If maintenance is neglected, suction performance could be found inadequate in an emergency situation. It is also recommended that if placed on standby for emergency duty the unit is tested by switching on, at regular intervals. Also consult the Instructions for Use for additional warnings on safe use and the disposal of potentially contaminated liquid, or solid, waste.

3. SUCTION ACCESSORIES

Filters (10, bacterial)	REF 82-961-68
Filters (10, hydrophobic/bacterial)	REF 82-961-85
Jar (traditional)	REF 82-901-13
Tapered connector	REF 82-923-88
Incineration box (pack of 25)	REF 82-923-96
Suction tubing 6.35mm i.d.	REF 82-929-14
Suction tubing (black) 12.7mm i.d.	REF 82-930-15
Suction tubing (clear) 12.7mm i.d.	REF 82-931-12
Disposable liner, standard bore 8.5mm (box of 25)	REF 82-923-57
Disposable liner, wide bore 12.5mm (box of 25)	REF 82-923-69
Disposable liner, Cascade, standard bore 8.5mm (box of 25)	REF 82-923-65
Critical measuring vessel (CMV) (box of 12)	REF 82-929-77
Jar for disposable liner	REF 82-923-61
Cascade connecting tube (box of 50)	REF 82-929-36
Pump oil	Part No.744092

For all other spare part information see the Parts Lists in section 6, Appendix A and Appendix B.

4. GENERAL CARE

CLEANING

WARNING

The equipment must be disconnected from the mains electrical supply prior to cleaning and disinfection.

4.1 The following routine should be carried out immediately after each period of use:

- i. Disposable filters must be changed after each day's use, or **IMMEDIATELY** if wetted, or after aspiration of infective fluids.
- ii. All components likely to be in contact with aspirated body fluids should be thoroughly cleaned and sterilized after use, or whenever it is suspected that infective fluids have been in contact with the unit.
- iii. The outside of the suction unit should be washed with hot (55°C) detergent solution, e.g. 0.1% Teepol or equivalent, rinsed with clean water, and wiped dry.
- iv. The jar inlet tube can be cleaned by removing the jar lid and flushing the tube through with water under pressure.
- v. In case of undue frothing, for example, moisture could be sucked past the cutoff valve. If wetting of the filter indicates that this has happened, the cutoff valve assembly must be disinfected.
- vi. Should the float cage, or rubber valve seat be damaged in any way, the complete cutoff valve assembly must be renewed.
- vii. Phenol based disinfectants and solvent-based liquids should not be used for cleaning receiver jars, use aqueous based liquids at all times.

STERILIZATION

CAUTION

To avoid cracking the jar by thermal shock, place it towards the rear of the autoclave shelf and open the door slowly. Do not use phenols or solvent based disinfectants to sterilise jars.

4.2 The jar lid assembly can be sterilized by all normal methods including high pressure autoclaving. The most suitable

method of sterilization for the jars is steam autoclaving, if chemical techniques are to be used only use aqueous based systems.

4.3 Jars and lids should be thoroughly cleaned before autoclaving and all traces of cleaning liquids removed by adequate rinsing in water. (Also see section 'vii' of section 4.1).

SUCTION UNIT DISINFECTION

4.4 The suction unit should be moved to a well-ventilated area designed and used as the disinfection area. Access to the area should be restricted to those people involved in the disinfection process. Initially the unit should be cleaned as detailed above [4.1-(iii)] and then disinfected as below:

- i. Wash down all surfaces and crevices with a 70% solution of industrial methylated spirit and water. Allow drying by evaporation at room temperature.
- ii. All infected or soiled cleaning materials should be disposed of safely and carefully, taking into account any National, Local or Hospital procedures covering the disposal of potentially contaminated waste.

DAILY CHECKS

4.5 To ensure the VP35 Suction Unit operates efficiently in an emergency, the following checks should be carried out daily:

- i. Check jar cutoff valve for free movement. If valve action is faulty, rectify or renew lid assembly.
- ii. Check jar for cracks or chips in rim. Renew if damaged. Renew rubber bung if hardened, split or damaged.
- iv. With suction unit switched 'on', vacuum control valve turned up to maximum and suction line blocked off, check reading on vacuum gauge moves quickly to at least 600mm Hg (atmosphere at 760mm Hg). Service unit if vacuum value low.

Note: Disposable filters, suction tubing, jars and disposable liners are relatively inexpensive items, and a stock of spares should always be readily available.

5. MAINTENANCE

WARNING

Maintenance of the vacuum pump/motor unit and associated components will necessitate removal of the suction unit cover. SWITCH OFF AND DISCONNECT electrical supply to suction unit before removing cover.

GENERAL

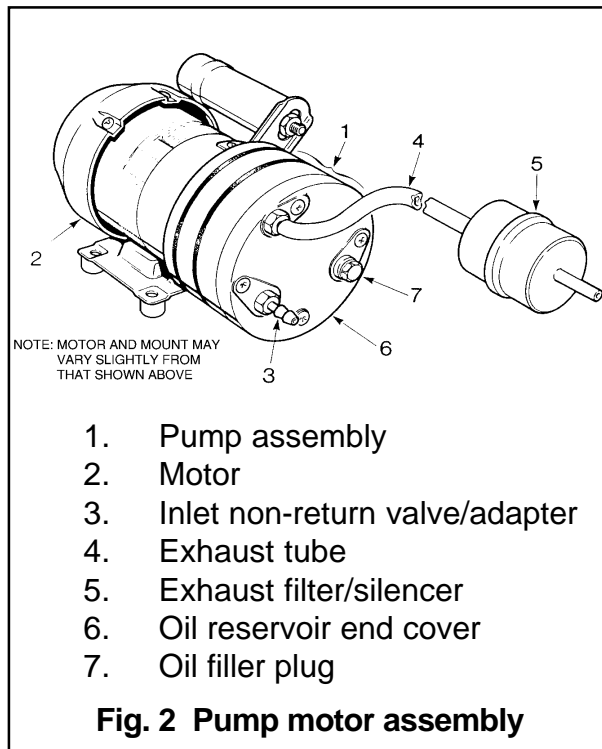
5.1 Apart from cleaning and filter replacement, the suction unit does not require frequent in-depth maintenance. The pump oil level and condition need only be checked after every 500 hours or 3 months, unless contamination is suspected - in which case the unit must be removed from service **immediately**, cleaned and replenished with fresh oil (see section 5.7). Also the pump rotor blades should be examined for wear every three months.

5.2 Should suction performance deteriorate, it is strongly recommended that an Eschmann service engineer be called to deal with the problem (see inside front cover for details). If this is not possible, then provided that a competent engineer is available, items such as blades, oil seal gasket, oil wick and exhaust filter/silencer can be examined and, if necessary, renewed by hospital equipment maintenance staff.

CHECKING SUCTION PERFORMANCE

5.3 If at any time suction performance is poor this can be due to an air leakage in the system (e.g. split tubing, poor connection, worn or ill-fitting jar lids, chipped jar rims), blockage of the disposable filter or exhaust filter/silencer, or wear in pump blades or stator.

5.4 If deterioration of suction performance is due to a blocked filter, the pump will still produce a satisfactory reading on the vacuum gauge, but if it is due to leakage in the system or mechanical wear the vacuum reading will also be poor. To check vacuum performance of the suction unit, block off the suction line by placing a finger over jar lid or liner inlet nozzle and check the reading



on vacuum gauge. Vacuum reading should be 600mm Hg (at least) (atmosphere at 760mm Hg) with vacuum control valve turned to maximum position.

Note: A low indicated vacuum could also be due to a faulty vacuum gauge. If there are no leaks and oil condition is satisfactory, check gauge before assuming pump mechanical failure.

CHECKING PUMP OIL

5.5 After 500 hours/3 months or if at any time pump performance deteriorates, proceed as follows:

- i. Switch off pump, remove oil filler plug (item 7, Fig. 2) and observe level and condition of pump oil.
- ii. If the level of the oil has fallen appreciably, add more of the high vacuum oil supplied until the oil reaches the oil filler hole, then install the oil filler plug securely. If the oil appears dirty or contaminated, the oil reservoir should be disassembled, cleaned out and replenished with fresh oil (see under 'Pump blade replacement and pump cleaning' section 5.7).

5. MAINTENANCE

5.6 After 12 months use, the pump oil reservoir should as a matter of routine servicing, be disassembled, cleaned and replenished with fresh oil.

PUMP BLADE REPLACEMENT and PUMP CLEANING

CAUTION

The pump oil reservoir (item 10, Fig. 3) and its front cover (item 1, Fig. 3) can be removed for cleaning and blade replacement purposes. Beyond this point, disassembly should only be undertaken by an Eschmann Service Engineer. If a situation occurs where this is necessary, in the absence of Eschmann personnel, advice should first be sought from Eschmann Equipment or their local representative.

5.7 To gain access to the pump/motor unit, disconnect the electrical supply to the unit and remove the suction unit top cover. In order to carry out pump disassembly the pump/motor unit must be removed from the suction unit baseboard by removing the fixing screws from the motor feet. Now refer to Fig. 3 and proceed as follows:

- i. Remove the oil filler plug (4) and drain all the oil from the pump.
- ii. Mark with a file the relative fixed positions of pump stator (12), oil reservoir (10) and end cover (1).
- iii. Release and extract the four long screws (8) from the oil reservoir end cover (1), then separate the end cover and oil reservoir from the pump stator.
- iv. Pump blades will eventually wear after a long period of use; the minimum root to tip dimension which a blade should be allowed to reach is 11mm (Fig. 4). Note the facing positions of the four pump blades then extract each one, examine it for wear or signs of damage and if replacement is necessary change all four blades at the same time (refer to Fig. 3). Clean out rotor slots then clean and

lubricate each blade with Eschmann 'Universal' high vacuum pump oil before inserting blades into their slots.

- v. If the oil was dirty or contaminated, thoroughly rinse-out the interior of the oil reservoir, the pump stator, the rotor slots and the inside face of the end cover. Use only disinfectant and warm water or mild organic solvents. When making up a disinfectant solution avoid the use of hypochlorites, which could damage the pump interior surfaces. If the pump interior has been badly contaminated, it may be necessary to carry out further disassembly in order to gain access to all internal surfaces; this should be the responsibility of an Eschmann Service engineer (see cautionary note above section 5.7). Rinse and dry all washed components thoroughly, before reassembling.
- vi. Apply a film of clean high vacuum pump oil to the stator bore, then reassemble the pump components, fitting a new cork gasket (9) and, if necessary, a new oil wick (11). Align oil reservoir (10) and end cover (1) with stator (12) by means of the file markings, insert the four long screws (8) and tighten them evenly and securely.
- vii. Finally, add a charge (25ml) of fresh oil to the oil reservoir, via the oil filler hole in the end cover, using Eschmann 'Universal' high vacuum pump oil (see spares list). Install the oil filler plug securely.

EXHAUST FILTER/SILENCER REPLACEMENT

5.8 The exhaust filter/silencer (item 7, Fig. 3) which serves the double purpose of arresting oil mist and reducing exhaust noise cannot be serviced. Whenever the pump is disassembled for cleaning or blade inspection, or if it is noted that the filter/silencer has become choked or fouled, it should be renewed as a complete item. If a filter/silencer is allowed to remain in this condition, this could also cause loss of flow.

5. MAINTENANCE

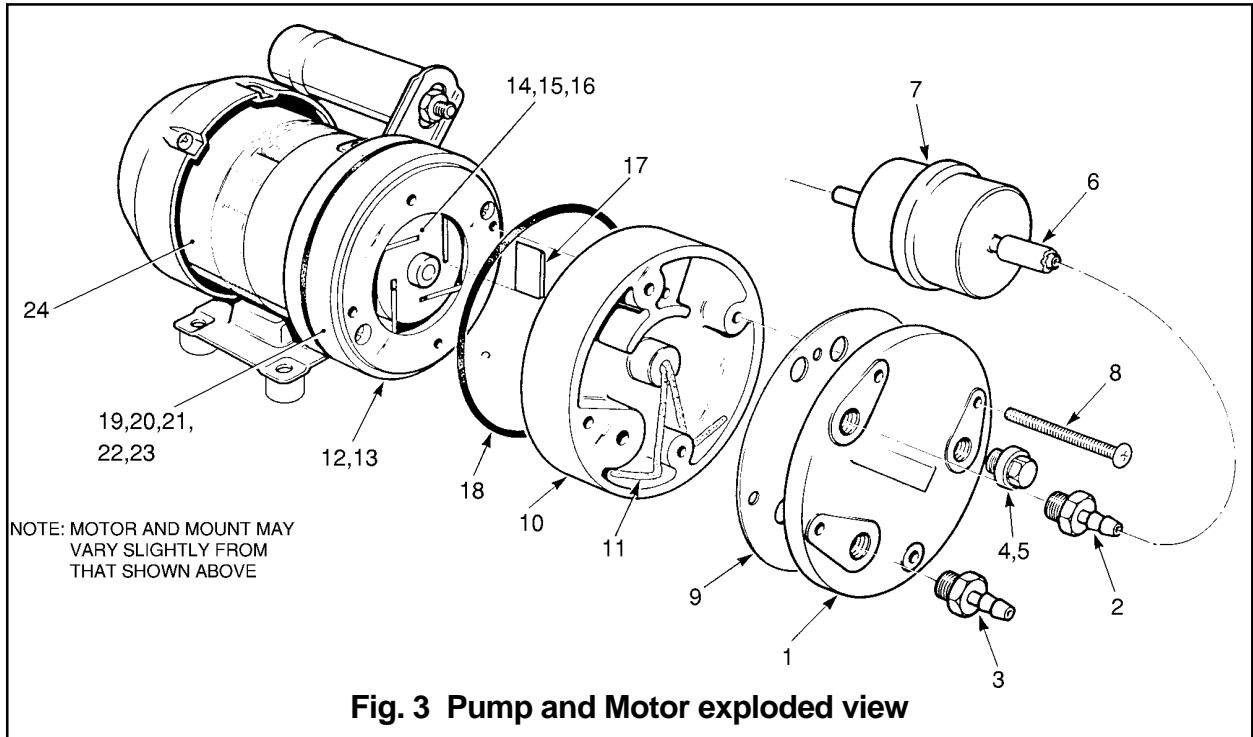


Fig. 3 Pump and Motor exploded view

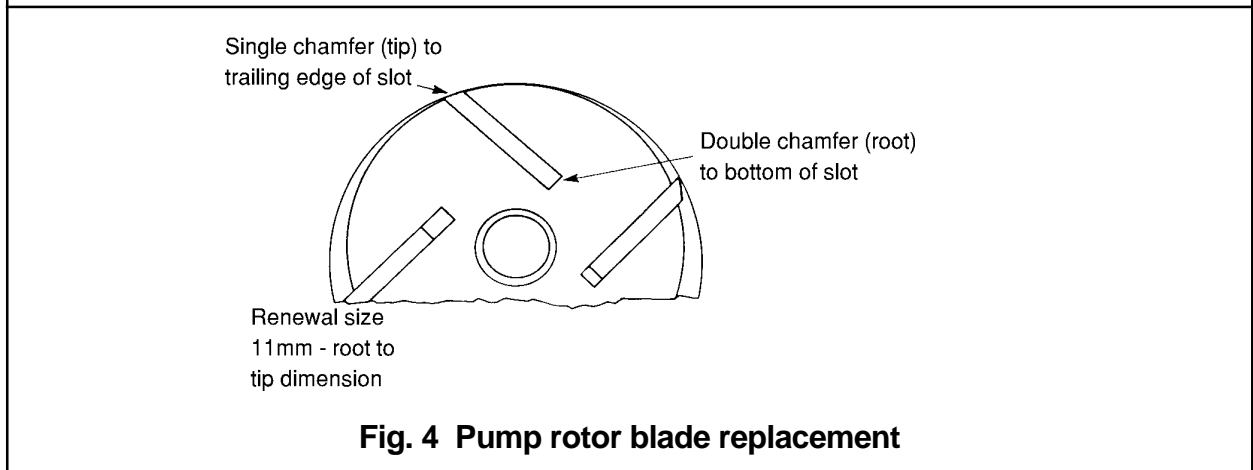


Fig. 4 Pump rotor blade replacement

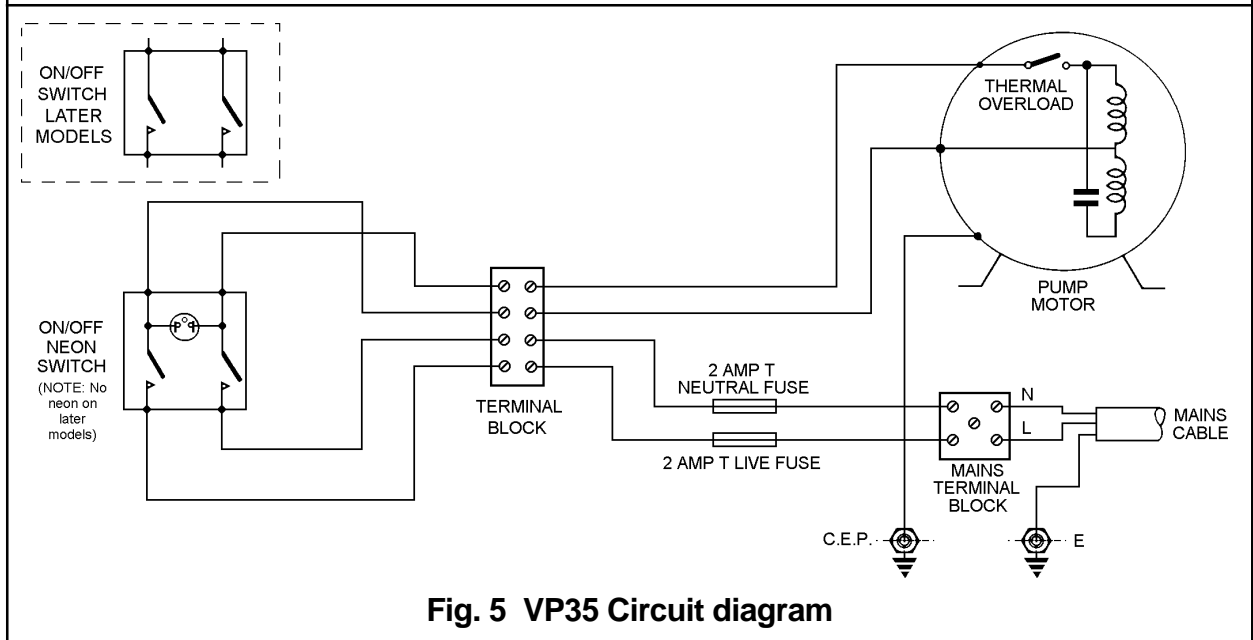


Fig. 5 VP35 Circuit diagram

5. MAINTENANCE

FAULT DIAGNOSIS

5.9 The following table lists faults, possible causes and remedies that can be rectified during maintenance procedures. Other faults and possible causes, with remedies that can be undertaken by the user, are dealt with in the suction units 'Instructions for Use'. Electrical faults should be traced and rectified in conjunction with circuit diagram (Fig.5). For any causes not listed and which cannot be resolved, please contact the Eschmann After Sales Service Department.

FAULT DIAGNOSIS CHART		
Fault	Possible Cause	Remedy
1. Total loss of suction (also see 3 below)	(a) Motor failure (b) Electrical wiring fault (c) Aspirated material in pump (pump seized)	(a) Renew pump/motor unit (b) Rectify as necessary (c) Strip and clean, or renew pump/motor
2. Vacuum gauge - no indication	(a) Loss of vacuum (b) Faulty gauge	(a) See (1) above (b) Renew gauge
3. No power (switch indicator lamp* fails to illuminate)	(a) Burnt-out fuse in mains plug or unit (b) Break in mains supply cable (c) Indicator lamp failed	(a) Check/replace fuses (b) Rectify or replace (c) Renew power switch
4. On switching pump off with inlet blocked - immediate loss of vacuum	(a) Failure of pump inlet non-return valve	(a) Replace valve
5. Oil collecting beneath oil reservoir	(a) Failure of oil seals/O-rings	(a) Renew
6. Oil mist escaping from exhaust outlet in filter/silencer unit	(a) Exhaust filter/silencer unit unserviceable or unit has been tipped over.	(a) Renew filter/silencer unit, check reservoir has not been overfilled.
7. Vacuum control valve not operating.	(a) Faulty valve	(a) Replace valve

* On later models the power switch does not incorporate an indicator lamp.

Note: A thermal overload switch, which is self-resetting, is incorporated to protect the motor in the event of pump seizure or excessive running temperatures. Should the overload switch operate to stop the motor it is essential to disconnect the electrical supply to the unit before attempting any form of maintenance.

6. PARTS LIST

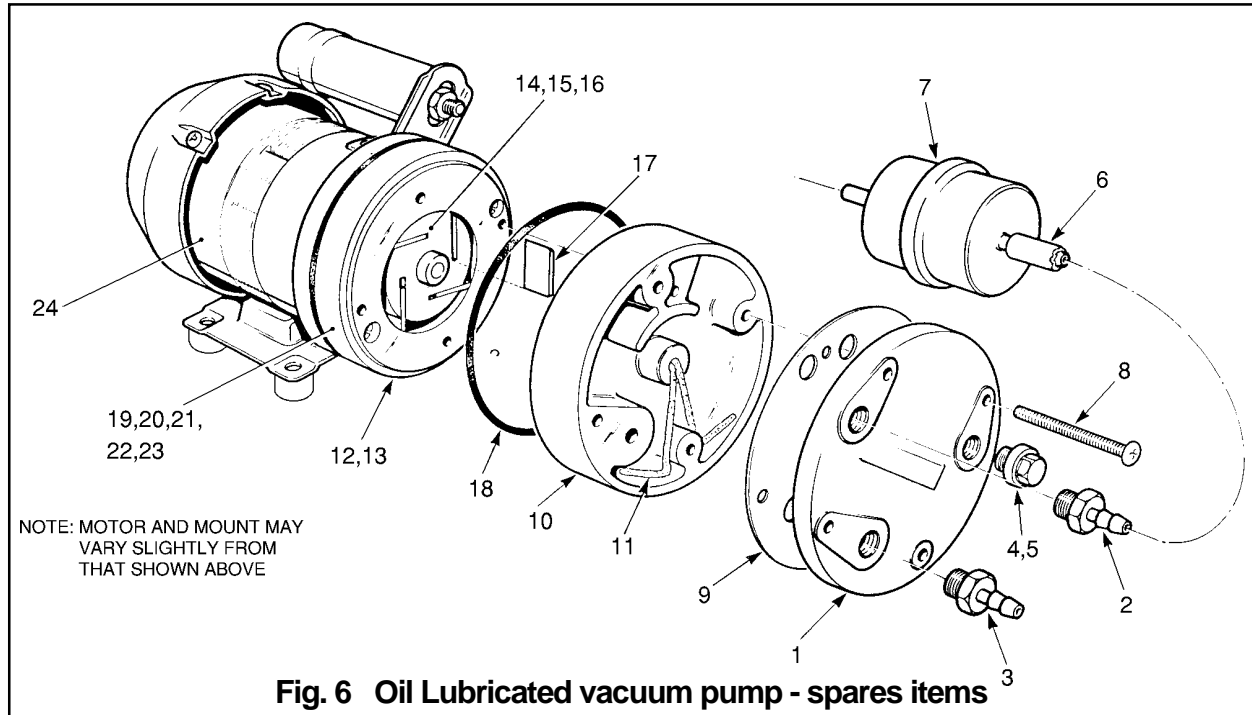
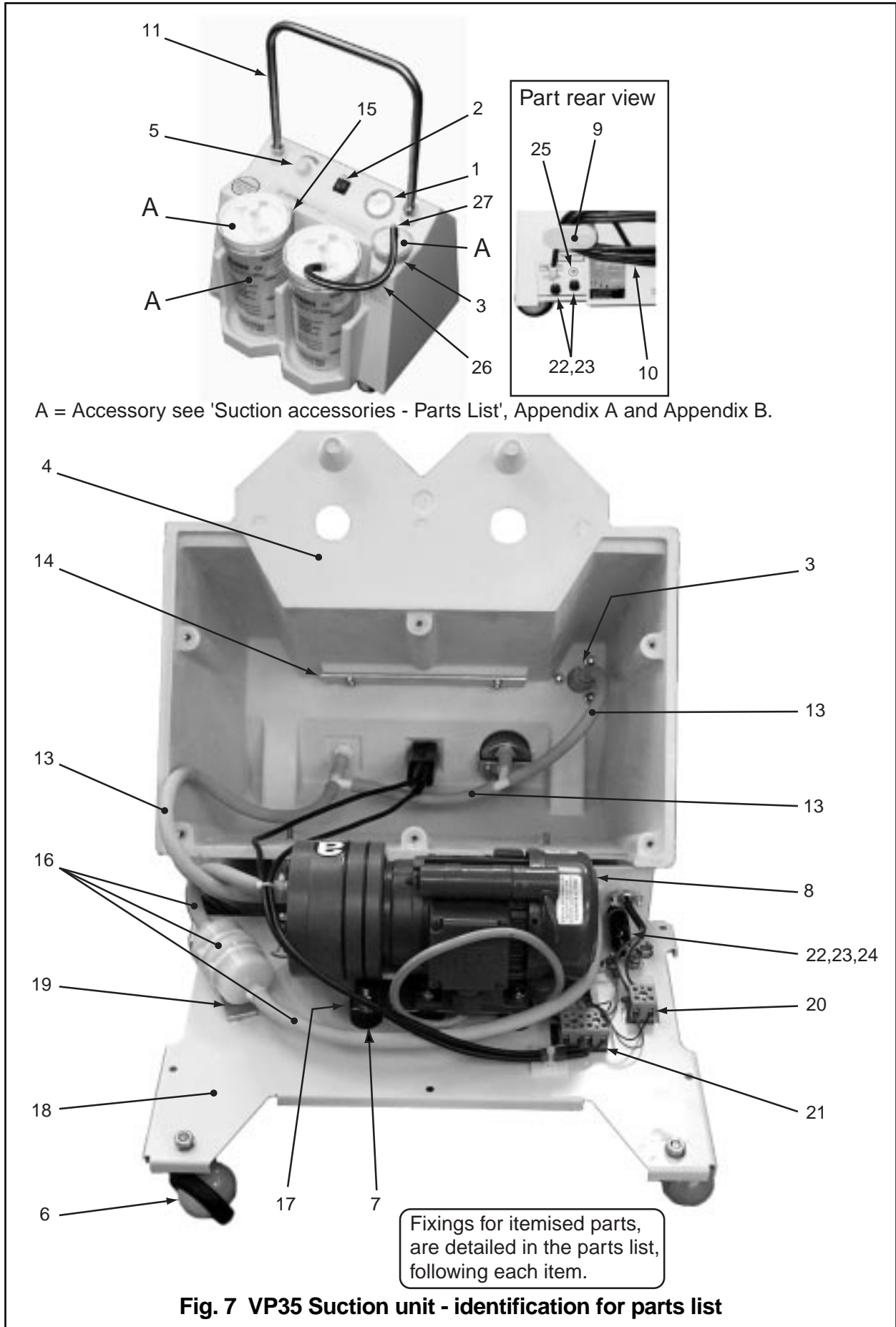


Fig. 6 Oil Lubricated vacuum pump - spares items

Fig. 6 Item No.	Part No.	Description	No. off	Recommended Spares #
-	733584	Pump/Motor Unit, lubricated (230V a.c.)	1	-
	or 733585	Pump/Motor Unit, lubricated (100/120V a.c.)	1	-
1	759241	. Cover, oil reservoir	1	-
2	759242	. Adapter, hose	1	-
3	759156	. Valve, non-return/adapter	1	-
4	640631	. Plug, 1/4-BSP	1	-
5	710794	. Washer, fibre	1	-
6	695026	. Hose, 1/4 in. i.d.	1	1
7	759243	. Filter/silencer unit, exhaust	1	1
8	710117	. Screw, pan hd. M5 x 60 long	4	-
9	759244	. Gasket, cork	1	1
10	759245	. Reservoir, oil	1	-
11	759246	. Wick, oil	1	1
12	759247	. Stator	1	-
13	710115	. Screw, pan hd., slotted, M4 x 20 long	2	-
-	-	. Rotor assembly	1	-
14	795248	. . Rotor	1	-
15	759153	. . Pad, brass	1	-
16	759158	. . Screw, skt, set, dog pt. M5 x 10 long	1	-
17	759249	. . Blade, fibre/resin	4	4
18	652326	. O-ring, 104.5 i.d. x 3.0 section	2	-
19	759250	. Plate, mounting	1	-
20	759161	. Screw, pan hd. slotted, M5 x 16 long	2	-
21	710763	. Washer, copper, M5 nom.	2	-
22	759251	. Joint, paper, mounting plate	1	-
23	759162	. Finger, felt	1	-
24	759238	. Motor 230V, a.c. 50/60Hz	1	-
	Miscellaneous			
	744092	Oil, high vacuum, Eschmann 'Universal' (500ml bottle)	1	1

The spares holding column indicates recommended spares for one unit of equipment for one year only.

6. PARTS LIST



6. PARTS LIST

Fig. 7 Item No.	Part No.	Description	No. Recommended off	Spares #
1	743077	Vacuum gauge and fixings	1	-
	743033	. Vacuum gauge clamp	1	-
2	696499	Mains switch, on/off, (illuminated on early units only)	1	-
3	695068	Mount, filter unit	1	-
	683821	. Filter mount locking rings	3	-
4	713114	Cabinet, moulded	1	-
	710151	. M6 x 10mm soc. hd. screw	6	-
5	712949	Valve, vacuum control	1	-
6	646935	Castor (set of four, 2 left and 2 right)	1 set	-
	710847	. M8 half-nut	4	-
	710703	. M8 washer	8	-
7	730031	Mount, AVA	6	-
	710702	. M6 plain washer	6	-
8	733584	Pump/motor unit 230V a.c.	1	-
or	733585	Pump/motor unit 100/120V a.c.	1	-
9	-	Reversible cleat for cable stowage comprising 2 of each:-		
	743081	.. Moulded arm	743082	.. Moulded boss
	709834	.. M6x40mm screw	693107	.. Special M6 washer
	710702	.. M6 plain washer	710882	.. M6 nut
	745189	.. Moulded insert	683184	.. Spring
10	744119	Cable, mains supply	5m	-
	696241	. Mains cable gland and clamp	1	-
	710734	. M3 shakeproof washer	2	-
11	743053	Handle with locking nuts	1	-
12	743072	Spanner for handle (not illustrated)	1	-
13	718517	Hose assembly complete, with 'T' connections	1	-
14	713632	Backing plate	1	-
15	713638	Mounting bracket, 'V' shaped	2	-
	710224	. M4 x 25mm soc. hd screw	4	-
16	718518	Exhaust filter/silencer assembly with hoses	1	1
17	713088	Motor mounting/transit plate	1	-
18	713601	Baseplate	1	-
19	743075	Exhaust filter support	1	-
20	696227	Terminal block 2-way (use insulation pad 713603)	1	-
	710133	. M3 x 20mm ch.hd. screw	1	-
21	696228	Terminal block 4-way (use insulation pad 713604)	1	-
	710133	. M3 x 20mm ch.hd. screw	2	-
22	744121	Neutral fuse holder (for fuse see Technical data)	1	-
23	744122	Live fuse holder (for fuse see Technical data)	1	-
24	697497	Fuse cover (boot)	2	-
25	695278	Exhaust nozzle	1	-
26	713654	Filter hose assembly	1	1
27	713582	Angled connector	1	5

Miscellaneous items and fixings used as required:-

606312	Cable tie base, self adhesive	670650	Screw retainer
695776	Cable tie, small	695777	Cable tie, large

Miscellaneous earth connections, cable assemblies and sleeving etc.:-

710841	M5 nut	709862	M5 plain washer
693640	Metway clamping washer	710802	M5 shakeproof washer
697395	Sleeving	710091	M5 x 10mm pan head screw
713218	Earth cable assembly	713127	Switch cable assembly

Miscellaneous items used on some models only:-

711481	Receptal holders	695233	2 litre jar pads
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The spares holding column indicates recommended spares for 1 unit of equipment for 1 year only.

7. TECHNICAL DATA

GENERAL

Equipment Type	Mobile, medical suction unit.	
Pump Type	High vacuum, high flow, oil lubricated rotary vane type, mains operated.	
Oil charge	25ml (approx.), Part No. 744092.	
Performance:		
Maximum airflow rate - 38 litre/min	Maximum vacuum - 600 mm Hg (80kPa)	
Electric motor	Totally enclosed, fan cooled, 90W. Duty Cycle continuous.	
Mains input (see Serial Number plate)	230V a.c. 50/60Hz, or 100/120V a.c. 50/60Hz	
Fuses (2 off) for 230V supply	T 2 A anti-surge (Part No. 696188)	
(2 off) for 100-120V supply	T 5 A anti-surge (Part No. 696775)	
Disposable Liner System:		
Disposable Liner	PVC fabrication with 100 ml graduations with integral handles, 'patient' and 'vacuum' connections.	
Overflow protection	Float type cutoff valve (if applicable).	
Capacity	1500ml (approx.) working volume.	
Disposal	By incineration.	
Overall dimensions:		
Height - 670 mm	Width - 440 mm	Depth - 410 mm
Net weight (typical)	12.4 kg	

SAFETY

Standards : EN 60601-1:1990+A1:1993+A2:1995, ISO 10079-1:1991,
BS 5724:Part 1:1979, IEC 601-1:1977


Classification : Class 1. Type BF Drip proof


Electromagnetic compatibility : IEC 601-1-2:1993

Filters: Sealed disposable Hydrophobic/bacterial type, designed to provide 100% pump protection against aqueous fluids, or, Sealed disposable Bacterial type.


CLASS Class 1 denotes that the equipment must be earthed via the protective conductor in the 3-core mains cable connected to a 3-pin plug.


EXPLANATION OF SYMBOLS

DRIP PROOF The symbol  (drip proof) indicates that the equipment will withstand a moderate quantity of water spilled from above the unit.

SAFETY CATEGORY The symbol  denotes that the equipment is in the category type BF, i.e. that it is manufactured to a safety standard commensurate with international regulations for medical electrical equipment incorporating floating patient applied parts.

SUPPLY The symbol  indicates that the equipment is for use on alternating current only.

VACUUM CONTROL The symbol  indicates that vacuum is increased by clockwise rotation of this control.

 This symbol denotes 'Single Use'

APPENDIX A

ADDITIONAL INSTRUCTIONS FOR UNITS WITH TRADITIONAL JAR ASSEMBLIES

INTRODUCTION

A1 This Appendix contains additional information for units with traditional jar assemblies.

DAILY CHECKS

A2 Additional checks (also see section 4.5) should be carried out on a daily basis as follows:

- i. Check condition of 'float valve rubber seat' (item 7, Fig. 8) in underside of jar bung, if it is torn, cracked or hardened, renew it.
- ii. Check jar rubber bungs for condition. If hardened, split or damaged, it is advisable to renew the complete jar top assembly.

CLEANING

A3 The following additional cleaning procedures (also see section 4.1) should be carried out after each period of use:

- i. Connector Block. Avoiding the use of phenol or xylenol based disinfectants, make up a disinfectant solution in accordance with manufacturer's instructions. Wearing protective gloves, immerse connector block in the disinfectant ensuring all internal bends and all uneven surfaces come into contact with the liquid for the required period of time. (**Note:** The 'rubber valve seat' in the jar bung is a moulded insert and should be removed for cleaning).

STERILISATION

A4 See section 4.

PARTS LIST

Fig.8 Item No.	Part No.	Description	No. off
1	744029	Connector block, anticonfusion c/w inlet nozzle, 6.5mm bore for standard use.	1
2	730010	Tube, rubber, antistatic, 12.7mm o.d. x 6.35mm i.d.	As reqd.
4	-	Jar, 2 litre, Traditional pattern, REF 82-901-13	2
5	712954	Jar top with inlet tube assembly for 2 litre jar	1
6	712956	. Bung, jar	1
7	733506	. Valve seat, rubber	1
8	712955	. Inlet tube	1
9	733589	. Float valve and cage assy.	1

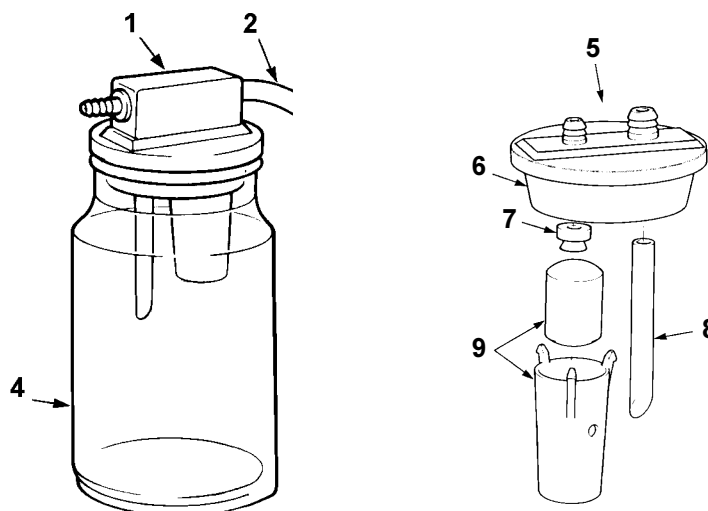
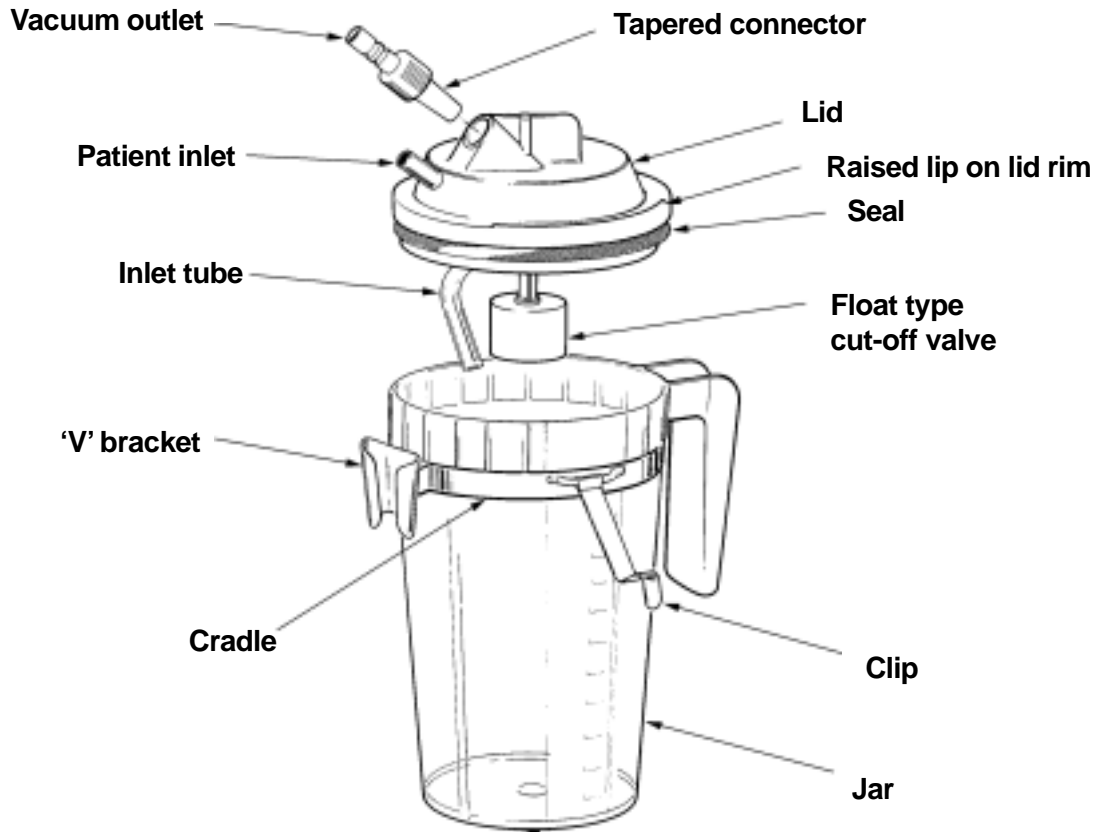


Fig. 8 Traditional jar and jar top assembly

APPENDIX B

ADDITIONAL PARTS FOR UNITS WITH ESCHMANN SUCTION JARS



AVAILABLE SPARES

The following spares are available:

Jar only	REF	82-923-10
Jar with cradle only	REF	82-923-29
Jar with lid & cradle	REF	82-923-02
Spare jar lid	REF	82-923-37
Spare cradle	REF	82-923-45
Tapered connector	REF	82-923-88

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