Operation Manual

Jaguar 8.4

Next Generation, *Extreme-Performance*

Operation/ User Guide

Specifications:

1. VACUUM MOTORS:

- Twin ***Ultra-Tech Wind Tunnel*** **Vacuum Motors** with a built-in high-efficiency cooling system. Dual Stage 8.4 Lamb Ametec
- Strategic external air venting allows cooler running operation
- Highly efficient long life vacuum motors

2. PRESSURE PUMP:

- Large commercial dual capacitor drive motor
- Large capacity pump with exceptional high flow rate
- Adjustable up to **0-800** P.S.I. with fitted gauge
- Capability of cleaning hard floors as well as carpets!

3. AUTOMATIC FEATURES:

a) Auto Waste Water Pump-Out:

- High flow at up to 18 LPM
- Clog resistant pump.
- Superior vertical Lint Filter. Easily disassembled and reassembled for ease of thorough cleaning.

b) Auto Clean Water Fill:

- High flow rated at up to: 26 LPM
- Float controlled avoids over filling.
- Simple straight forward design.

c) Auto High Waste Water Level Float

- Reduces the chances of the waste tank over filling, thus reducing vacuum motor damage through water ingress.

4. TANKS:

- Solution:
  - 60 Litre Solution with baffled lid.
  - View-through design allows operator to see water level.
  - Handle also acts as a Hose and Cord carrier.
- Vacuum:
  - 56 Litre Recovery with air-flow optimised, directed baffled lid.
  - View-through design allows customer to see dirty recovery.

- Flow-through non-obstructed lint filters.
- Accommodates either 1 1/2", or 2" vacuum hose

5. DIMENSIONS:

- Weight: approx 42Kg. empty; balanced distribution.
- Measures: 34"h x 30"l x 18" w (86cm x 66cm x 46cm)

PLEASE READ this manual thoroughly before you operate your machine

Reading this manual should give you the confidence in operating the Jaguar 8.4 correctly and efficiently. If you feel that we have missed anything, please contact Solution Cornwall on 01209 204 343.
Important Note: Any warranty issued with this machine is valid only in the UK

Never forget that this is an industrial machine and you are responsible for its safe operation and the safety of others around it.

UNPACKING EQUIPMENT

Inspect to see that there is no exterior damage to packaging upon arrival. If so, please make Delivery Company aware and show them the specific damage.

When receiving machine during the winter months, the pump and all solution lines are drained prior to dispatch to avoid frost damage during shipment. Please allow the machine to achieve ambient room temperature before testing. You may also need to prime the pump. In this case, please refer to "PUMP PRIMING" further on in this manual on Page 6.

QUALITY CONTROL

Each system is carefully built by hand. Each and every component is thoroughly tested in our plant before, during and after full assembly. Prior to dispatch, the system is fully "wet" tested to eliminate any possible defects of any kind. We are proud to point out that your machine meets the exacting standards of CE approval.

VACUUM FLOATS

The vacuum floats should be fitted at ALL times, failure to do so may cause water ingress of the vacuum motors and WILL invalidate your warranty.

IMPORTANT! The lint filters at the top of the stack pipes must be inspected and cleared of lint/fluff after every single job. This will ensure that your vacuums are working at their optimum and will prevent your vacuum motors from burning out.

Installation of Vacuum Lid

IMPORTANT:
The air-flow slot situated in the front lid (inserted part) is to face towards the rear of the machine. The screws which are in place should help to avoid the lid being positioned incorrectly, so the screws should NEVER be removed. The consequences of the lid being placed incorrectly allows water to pass directly down the stack pipes, this WILL cause water ingress of the vacuum motors and damage them irreparably and WILL invalidate your 12 month warranty.

Toggle Switches

Note there are 4- toggle switches located at bottom front of machine base.
2 are colour coded Black = Vacuum Motors
2 are colour coded Red = for Pressure Pump and Auto-Dump.

(See diagram below)

INDICATOR LIGHTS

These lights are located below each toggle switch and serve a purpose. The light(s) will not go on if: (1) That particular circuit is not plugged into the wall outlet, (2) If that wall outlet is not live, (3) If the wall outlet fuse is blown, (4) or, if the toggle switch is not turned on.

PRESSURE REGULATOR (0-800 psi)

To increase flow rate/psi: Turn the regulator's adjustment knob clockwise (to the right).
To decrease flow rate/psi: Turn the regulator's adjustment knob anti-clockwise (to the left)

FRONT SOLUTION/CLEAN WATER TANK

CAUTION: Do not overfill; Risk of damage to vac motors and invalidating the warranty is possible, the solution tank holds more fluid than the recovery tank due to vacuum tubes.

There are two colour coded 5ft hoses within the solution tank. The blue hose with mesh filter on the end is the water feed hose that draws water to the pump, the yellow one is the flow return hose that re-circulates the solution when there is no demand at the wand. Always make sure there is sufficient water in the tank when you run the pump and that this filter is kept clean and clear. Avoid allowing the pump to run dry.

CAUTION! Avoid manoeuvring/lifting the machine when water is in either the solution, or waste tank. **ALWAYS EMPTY** the machine before travel/movement. Apart from H&S issues, failure to do so may cause water to splash down into electrical components and cause a potential hazard. Damage may also occur and if so, your warranty will be invalidated.

It is also not advisable to move the machine up the stairs due to jarring the components. Your machine has been designed to run long hose lengths to enable work on multiple floor levels whilst leaving the machine in one position, more importantly, liability and personal health risks in terms of one's back, arms and the possibility of falling down stairway. It is highly recommended to use additional hoses instead. Always lock machine in position whenever not in sight of Operator or whenever there are children present.

To empty the clean tank remove the yellow hose and put the end into a bucket and turn the pump on (the main one) this will empty the tank. or you can use the vacuum to suck the water out.

REAR WASTE/ RECOVERY TANK

The waste/recovery tank is designed to withstand extreme pressure that the Jaguar 8.4 produces. The shape of this tank is a pivotal key to our extremely high pressure system and should not be internally modified in any way. To do so will invalidate your warranty. The inside of the waste/recovery tank houses the two vacuum stack pipes which lead directly to the high performance vacuums. The two float chambers sit directly on top of the stack pipes. On the front of the machine there is a black waste gate valve positioned 1" from the base of the tank. The purpose is to allow you to drain the majority of the recovered water from the tank without causing dirt & debris to become lodged inside the gate valve or to re-circulate through the vacuum motors.

The drain outlet situated on the lower side of waste tank is for completely emptying the waste tank. We strongly recommend rinsing the waste tank on completion of every job. Simply unscrew the jubilee clip and remove the rubber bung. Then tilt the machine and place a bucket under the drain outlet and rinse walls clean. Always ensure that this bung and the associated jubilee clip is replaced and fully tightened before operating the unit.

PUMP

Your pump is rated at 0-800 psi. The longevity of the seals and plunger of the pump head, and indeed the pump head itself can be increased by following a few simple rules.
1) Never use a detergent or powdered based product in the solution tank. Also avoid using oxidisers (Solution Soluboost) through the pump head.
2) The only thing that should be allowed to pass through the pump head should be fresh water, (Not exceeding 60 degrees C) Solution Final Phase or Solution Natural Odour Neutraliser.
3) DO NOT allow the pump head to freeze.
4) Always relieve the built up pressure from the machine and the solution hoses when shutting down, by depressing the valve trigger on the wand. Failure to do so may cause excessive pressure on the pump motor and the pump may be unable to start up on the next job! This may cause a "humming sound" when you switch the pump on which may burn out the motor.

*****Please note that the "Pumptec" recommend the Plunger Kit and Seal Kit are renewed every 500 running hours.*****

PUMP PRIMING

To prime the pump and eradicate air locks, attach the solution hose to the high pressure solution outlet (13) and the male quick connect end to the female quick connect situated on top of the solution tank if fitted. If not, use a spare quick connect or an open ended hose) Ensure that there is enough water in the solution tank and the feed hose (blue) is submerged and the filter is clean/clear. Switch on the pump motor on (12) and allow a few minutes for the water to fill the system. A change in sound will be apparent when the pump is primed and a continuous flow should be present.

AUTO-DUMP

The auto dump pump is a 100psi Shurflo diaphragm pump. It is imperative that the filter within the waste tank is cleaned and fresh/clean water is flushed through the system after every job for it to work efficiently. DO NOT run the pump when the filter is removed and DO NOT remove the filter while there is dirty water in the waste tank. The pump IS NOT designed for solid materials.

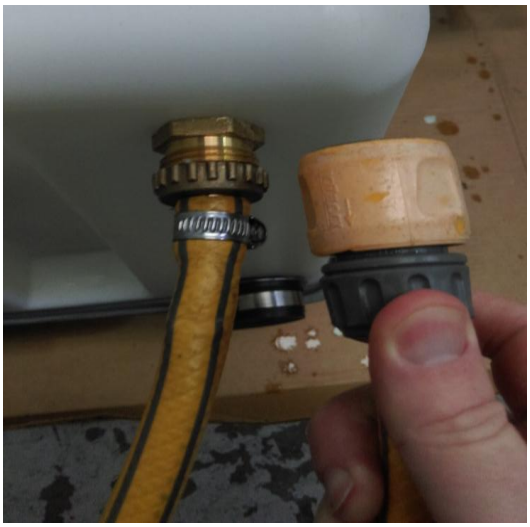
Please Note: The fitting at the front of the machine for the auto-dump requires a brass or plastic connector which can be bought at your local hardware store. It is usually best to use 2 or 3 rubber washers to ensure a good seal is achieved..

Auto Dump Flushing System

Please note that the green screw cap cover on the auto dump flushing system must be in.

place at all times during normal operation.

To use the Auto Flush just attach a normal hose (not supplied) connected to a tap. Turn on water supply and run auto dump pump to clean the filter.



AUTO HIGH WASTE WATER LEVEL SHUT OFF FLOAT

IMPORTANT! The float cut out WILL NOT activate with foam. It is strongly urged that "Solution Defoamer Concentrate" is used on every single job. Also, ensure that the float is clear of obstruction which may prevent it from operating correctly. Please be aware that vacuum motors that are damaged by foam/water ingress **ARE NOT** covered by warranty and will not be changed under warranty .

CASTERS & WHEELS

To ensure longevity of wheels, a certain amount of care should be taken. For example, regarding the rigid 10" wheels, they are made to go forward and/or backward only, NOT from side to side. If the hub is found to be cracked or bent (particularly around the internal-axle part, the chances are that the machine was dropped on its side with undue force. The same is true with swivel casters.
Always make sure that lint and debris do not collect around axles and regularly grease them to keep them in top working order.

IMPORTANT INFORMATION ABOUT "CLEANING AGENTS"

It is vitally important that you know what the ingredients are in your solutions. NEVER use solvents or oxidisers (Soluboost/SPM) in your machine as these will damage your pump & pump valves almost immediately. They will also damage wand valves and regulators. (Example of solvents are butyls, citrus cleaners etc) Harsh acid rinses are not recommended either.

The use of Chemicals/Solutions outside of the "Solution" range, used through your machine will invalidate your warranty for your Jaguar 8.4. Many powdered detergents can aggressively corrode the inside of the pump head, causing irreparable damage over a very short period of time. Solution (Cornwall) WILL NOT meet the cost to replace pump heads, seal kits and plunger kits, or vacuum motors damaged in this way.

WATER TEMPERATURE

Limit water temperatures to 60 degree centigrade when running water through the machine pump. Temperatures higher than this may deform pump seals, valves, wand valves and disconnects etc and may actually cause internal cavitations of the pump head. They could also reduce pump and other related components' service life, and will void warranties.

TROUBLE SHOOTING

LOSS OF VACUUM SUCTION

Take vacuum lid off and set aside. Remove both float vacuum shut-offs and set aside. Check that fluff/lint is not present on the filters. If not, switch on both vacuums and independently check each stack pipe to ascertain that a good suction is achieved. If there is no vacuum but you hear motor running, then it is possible that the internal hose fitting inside the machine has separated from the stack pipe or the vacuum motor itself.
1) Remove the waste tank via the 4 securing nuts from the base.
2) Inspect for unattached pipe to the underside of the stack pipe and also the vacuum motor. Reattach and reassemble the machine and test again.

PUMP PRESSURE PROBLEMS

If the pump is switched on and a constant flow of pressure at the wand is not achieved, it may be that the pump has been starved of water where the water has drained back out of the blue supply hose in the solution tank. This causes an air-lock. The simple solution is to ensure that the blue feed hose filter is clear of any debris and the hose is fully submerged in the solution tank. To rectify, attach an open ended male quick connect to the end of the solution hose and switch the pump on. As the pump runs, a pitch changed should be heard after a while. Once this happens and a good steady flow of water is achieved, switch the pump off and remove the male quick connect and carry on as normal.

Lime scale build up may also be a factor, especially in hard water areas ,simply running Solution Final Phase acidic rinse through the system helps remove any build-ups.

If this hasn't worked, there could either be a water "feed" problem which could mean there is a kink in the feed line within the machine, restricting the pump head of water. At worst, it could be that the pump needs a new plunger/seal kit which are readily available and are relatively easy to fit for a capable mechanic. We are always happy to supply and fit these for a nominal fee.

PUMP MOTOR NOT RUNNING

On removing both tanks from the base, check for loose or disconnected wires, check the toggle switch and connections that controls the pump. The motor may have burnt out because of wear or even an electrical spike in home or building. The pump motor may have become excessively wet from water spilling from above when the operator has filled the machine. The off-cam bearing on the motor shaft & pump plunger may require greasing.

***PLEASE NOTE that if you experience a problem with a motor or pump motor not running on a particular extension cord line (that had been running prior), ALWAYS check the outlet first. Did you trip a breaker? Is the electrical outlet worn and therefore not making contact with the machine plug end prongs? ***

We strongly recommend the use of RCD's or circuit breakers with all machinery

VACUUM MOTORS

It is imperative **NEVER** to allow water/foam to get into vacuum motors. Check your machine regularly for high levels of waste water, even when using the auto-dump feature and the high waste water level shut off, as both features are NOT infallible. If the worst *should* happen, immediate remedial action should be:

- ***Empty the waste/recovery tank.***
- ***Allow the vacuum motors to run for approximately 15 minutes to dry out.***
- ***Never spray "penetrates" or "inhibitors" into vacuum motors as they will seep through the electrical working of the motor and will damage them, thus voiding warranties.***
- ***Ensure that when not in use, the lid is NOT replaced on the waste tank, thus allowing the vacuum motors to "Breathe".***

PLEASE NOTE: Your warranty is void if you introduce penetrates (WD40) into the airflow of your machine. By its very nature, the oil will penetrate though the motor seal/bearing and into the motors armature (coils). This DOES cause irreparable damage and it is OBVIOUS when an operator has caused this sort of damage.

"DO NOT ADD WD40 OR SIMILAR PENETRATES TO THE INTAKE OF YOUR MACHINE"

AUTO-DUMP NOT WORKING

Check that the filter, situated in the waste tank is clear of lint/fluff. This should be taken out and cleaned after every job to achieve optimum performance. Please refer to page 6.

FOAMING PROBLEMS

If you are using an extremely foamy detergent, pre-spray or are cleaning a carpet that previously had been shampooed, you may find excessive foam in your vacuum tank. Foam will not activate the vacuum float valves or float switch (if fitted) and will blow through the motors and the exhaust. This should be avoided at all costs as it can cause irreparable damage to the motors.
Immediate remedial action upon drawing water/foam in through the motors is to dry-run the machine with the tank lid OFF, for at least 15 minutes. This however does not mean that the motors are out of danger of catastrophic failure. We highly recommend the use of **Solution Defoamer Concentrate** prior to cleaning and every time the waste tank is emptied.

TOGGLE SWITCH STUCK IN POSITION

The Machine toggle switches are extra heavy duty. Toggle switches are based on a simple theory and design. Therefore, if it is stuck in position, it indicates that the toggle is jammed. Replacement at the earliest opportunity is recommended.

How to Remove Pump/Motor

1) Remove solution and waste tanks via the 8 securing nuts from the base. 2) Remove the blue inlet hose and the black pressure hose from the pump 3) Disconnect the electrical wires at rear of pump motor. 4) Unscrew the two lock nuts that hold down the motor.

If your machine has a very high usage, it is advised that the operator inspects and greases the motor/pump off-centre cam bearing that is located at the end of the drive motor shaft. This is easily accessible by removing the pump head via the 4 bolts of the removed pump unit. Grease liberally with a quality lube/grease every 6-8 months. Then reassemble.

TOTAL AMP DRAW

Generator if desired: 5,500 *running* watt rated. (However, always check with the supplier)

POWER SPRAY System: This is the blue and yellow colour coded hoses in the solution tank. The Blue hose draws in the water; the Yellow hose re-circulates it back into the tank.

Options: (A) You can pull the yellow hose out to empty the water quickly from tank.

(B) Put both hoses into an external fresh water Aux. tank for greater capacity. (Just make sure you have an Aux. Recovery Tank of same or greater capacity. We only recommend Cross-American's in regards to design integrity and safety)

(C) You can put both hoses into a 5 gallon pail of pre-mix and pre-spray that material onto the carpeting using the Cross-American Power Spray Hand wand. (Note: Using this procedure may, at times, make system lose prime by pre-spray material draining back out of hose, thus causing air lock.)

NEVER USE A VOLATILE SOLVENT!

To Summarise:

During Carpet Cleaning:

1. Solution defoamer should be introduced initially and every time the waste tank is emptied.

2. Even if fitted with the manual float high level shut off and using the auto-dump facility, it is advised to check your machine periodically to ensure there are no over-filling or foaming issues in the waste tank.

3. Ensure that the waste gate valve is fully down.

4. Ensure that the waste tank bung jubilee clip is tight.

After EVERY job:

1. Rinse out the waste tank, being careful not to allow water into the stack pipes

2. Clean **ALL** filters (stack pipes and auto-dump) clear of debris and fluff/lint.

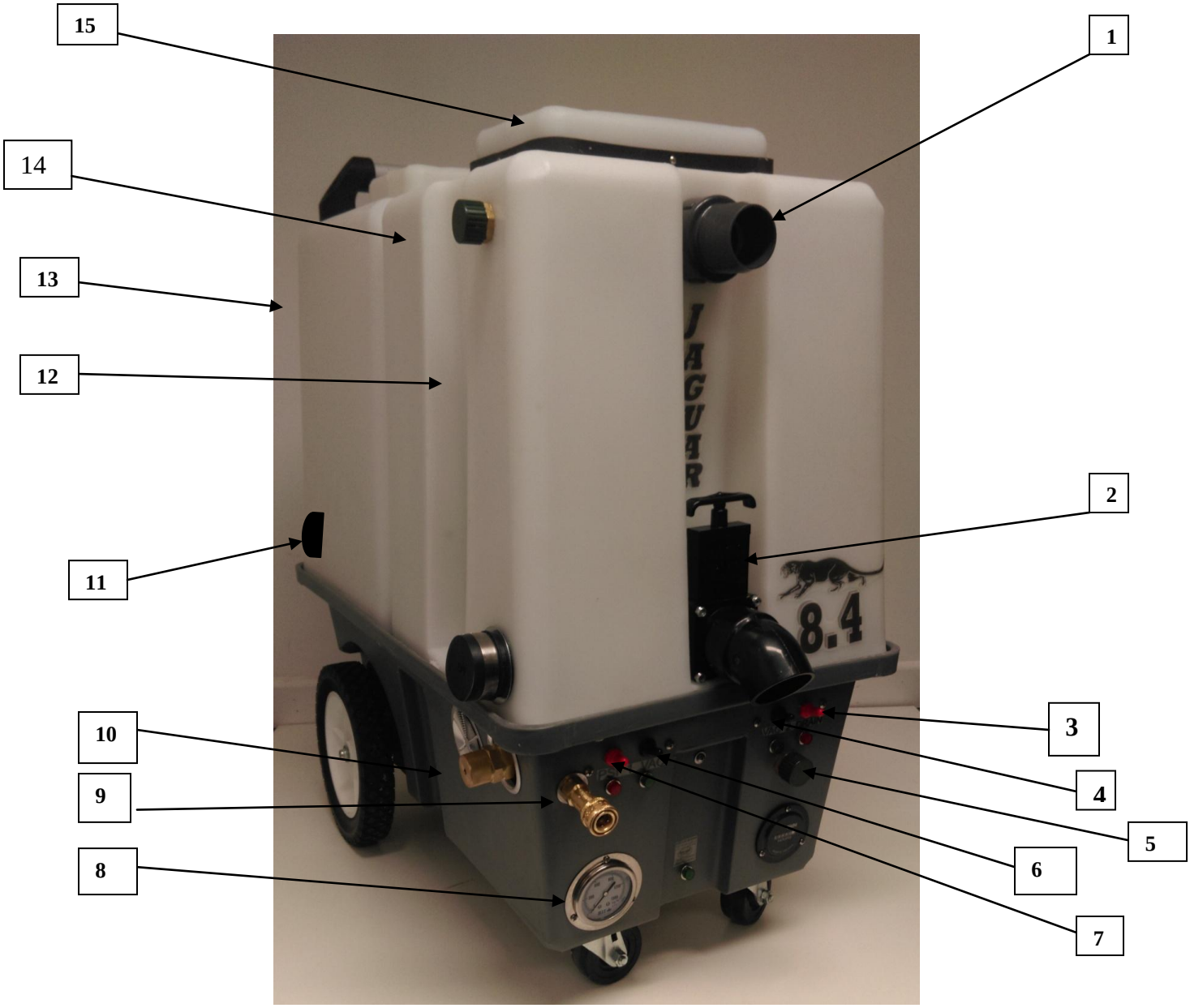
3. Remove the waste tank lid and rinse until thoroughly clean and free of lint and debris. Then place it on the *"**Solution"*** tank.

4. Run both motors for 3-5 minutes.

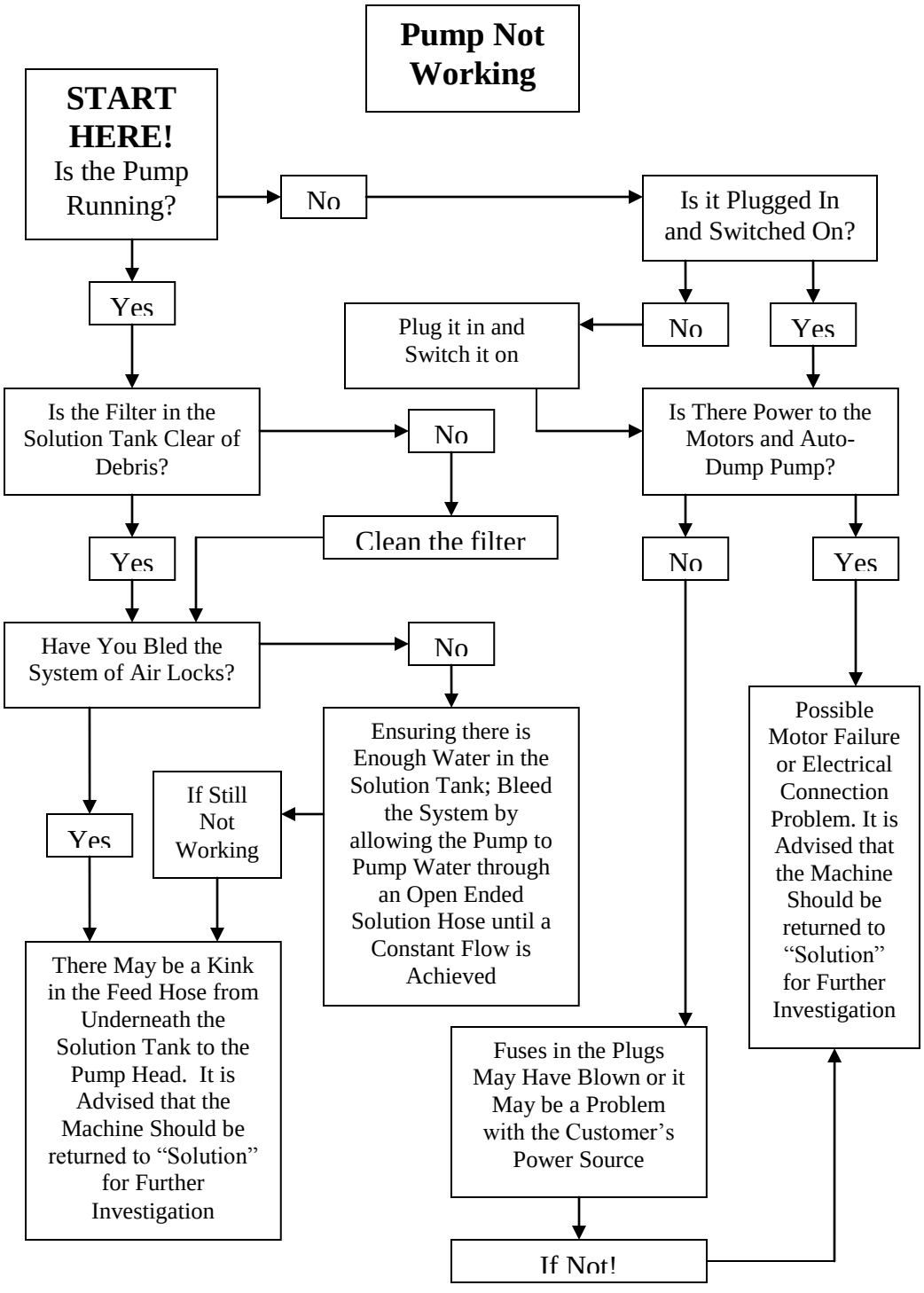
5. **DO NOT** put the waste tank lid back on the waste tank; this allows the motors to 'breath'

6. When not in use, store your machine in a dry and frost/humid free area.

Parts of a Jaguar 8.4



1) 2” Waste Inlet Port
2) Waste Gate Valve
3) Auto-Dump Toggle Switch
4) Vacuum #2 Toggle Switch
5) Auto-Dump Outlet
6) Vacuum Motor # 1 Toggle Switch
7) Solution Pump Toggle Switch
8) Pressure Gauge
9) High Pressure Solution Outlet
10) Pressure Regulator Valve
11) Side Bung
12) Waste Tank (56L)
13) Solution Tank (60L)
14) Auto Flush Inlet
15) Waste Tank Lid


Pump Not Working
START HERE! Is the Pump Running?
No
Is it Plugged In and Switched On?
Yes
No
Yes
Plug it in and Switch it on
Is the Filter in the Solution Tank Clear of Debris?
No
Is There Power to the Motors and Auto-Dump Pump?
Yes
Clean the filter
No
Yes
Have You Bled the System of Air Locks?
No
Possible Motor Failure or Electrical Connection Problem. It is Advised that the Machine Should be returned to "Solution" for Further Investigation
Yes
If Still Not Working
Ensuring there is Enough Water in the Solution Tank; Bleed the System by allowing the Pump to Pump Water through an Open Ended Solution Hose until a Constant Flow is Achieved
There May be a Kink in the Feed Hose from Underneath the Solution Tank to the Pump Head. It is Advised that the Machine Should be returned to "Solution" for Further Investigation
Fuses in the Plugs May Have Blown or it May be a Problem with the Customer's Power Source
If Not!