



INSTRUCTIONS FOR:

SMOKE DIAGNOSTIC TOOL- LEAK DETECTOR

MODEL No: **VS870.V2**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions and maintained properly, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to Instruction Manual



Wear Eye Protection



Wear Protective Gloves

1. SAFETY

1.1. PERSONAL PRECAUTIONS

- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current which is high enough to weld such items to the vehicle and cause severe burns.
- ✗ **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.
- ☐ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion. **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✗ **DO NOT** cross-connect unit to battery. Ensure positive (RED) clamp is to positive terminal and negative (BLACK) clamp is to negative terminal.

1.2. GENERAL SAFETY.

- ☐ **WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using this unit.
- ✓ Maintain this product in good working order and condition, take immediate action to repair or replace damaged parts.
- ✓ Use approved parts only. Unapproved parts may be dangerous and will invalidate the warranty.
- ✗ **DO NOT** use to perform a task for which it is not designed.
- ✗ **DO NOT** allow untrained persons to use the unit.
- ✗ **DO NOT** use when tired or under the influence of drugs, alcohol or intoxicating medication.
- ✗ **AVOID** direct inhalation of smoke.
- ☐ **WARNING! DO NOT** pollute the environment by allowing uncontrolled discharge of fluids.
- ✓ Keep children and unauthorised persons away from the work area.
- ✓ Keep work area clean and tidy and free from unrelated materials.
- ✓ Ensure the work area has adequate lighting.
- ✓ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery, and tie back long hair. A full range of personal safety equipment is available from your Sealey stockist.
- ☐ **WARNING! Unit may get HOT!**
- ✓ Power Supply: 12V dc.
- ✓ Maximum input pressure: 14psi (1bar).
- ✓ Use mineral oil (baby oil) **ONLY**.
- ☐ **DO NOT** remove filler cap when unit is **ON**.
- ✓ Keep unit upright at all times to avoid oil leaking out.
- ✓ When not in use, clean unit and store in a safe, dry, childproof location.

2. INTRODUCTION & SPECIFICATION

- Allows the technician to pinpoint all manner of system leaks including air intake, cooling, evaporation, fuel, exhaust and vacuum systems.
- Fast and simple to use, maximising earning potential.
- Features single button operation, flow control and auto power-off.
- Uses mineral oil and workshop air supply to generate smoke at low pressure whilst connected to a vehicle.
- System is clean and quick to use and connects to a 12V vehicle battery.
- Four rubber cones included.
- Mineral oil not included.



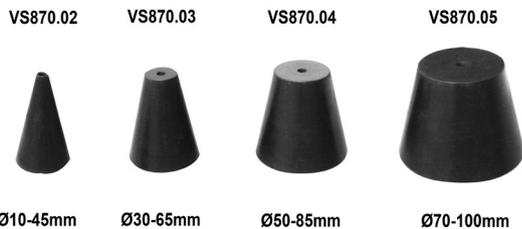
Specification

Model No:	VS870.V2
Rubber Cone Diameter:.....	10-45mm, 30-65mm, 50-85mm, 70-100mm
Power Supply:	12V dc
Air Supply:	14psi (1bar)
Oil Type:	Mineral (baby) oil
Oil Reservoir Capacity:.....	75ml
Heating Duration:.....	4¾ minutes
Hose Length:	2600mm
Power Lead Length:	4mtr
Machine Weight:.....	7.2kg
Smoke Output Pressure:.....	Approximately 1psi

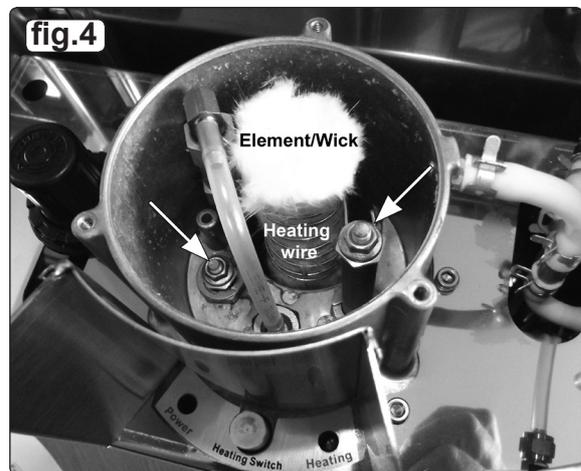
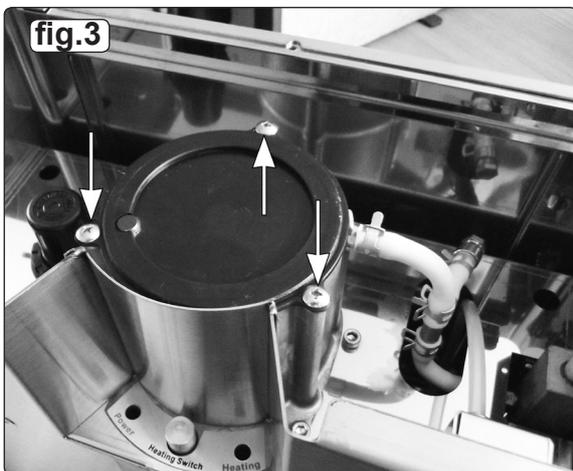
3. OPERATION

- WARNING:** Wear gloves to handle the fibreglass element/wick to guard against glass fibres penetrating the skin.
- 3.1** Before initial use, soak the fibreglass element/wick in mineral (baby) oil. Failure to carry this out will lead to the fibreglass element burning out immediately.
The fibreglass element is considered to be a consumable item and is not covered by warranty.
- 3.2** Take top off oil filler (fig.1) and fill with mineral based baby oil (maximum: 75ml). The sight glass on the right-hand side of the unit shows the oil level.
- 3.3** Connect to workshop air supply using the quick connector on the left-hand side of the unit (see fig.1). The inlet air pressure needs to be regulated to no more than 14psi (1bar).
- 3.4** Connect to 12V battery; green indicator light will show.
- 3.5** Press Heater Button on front of unit; red light will show indicating that the heater element is active. The heater element is timed to operate for 4¾ minutes, after which time it will switch off automatically.
- 3.6** **DO NOT** remove the oil filler cap whilst the unit is operating or is connected to an air supply as this will cause oil (which could be hot) to be forced from the filler neck.
- 3.7** From cold, the heater may need to be activated more than once to achieve the required temperature necessary for vaporisation.
- 3.8** Once smoke is starting to issue from the hose it may be necessary to temporarily increase the air flow using air flow control (fig.1). This will clear any excess oil.
- 3.9** The required volume of smoke can be achieved by adjusting the air flow rate, using the air flow control and gauge for reference.
- 3.10** The smoke produced can be used in many ways to indicate the presence of leaks in either pressure or vacuum systems. When smoke is introduced into the locality of the suspected leak, it will be carried by the flow of air either to or from the aperture, depending on the system. Observing the behaviour of the smoke will pinpoint the problem.
- 3.11** Alternatively, smoke can be introduced into ducting by unfastening one end of the duct and plugging with a suitable rubber cone from those included in the kit (see Fig.2). The hose from the machine can then be coupled to the bush in the cone and the duct filled with smoke. Any leak will be displayed by a jet of smoke coming from it.
- 3.12** The amount of smoke needed will vary with the capacity of the system being investigated.
- 3.13** If the smoke starts to dwindle, the heater element will need to be switched on for a further time.

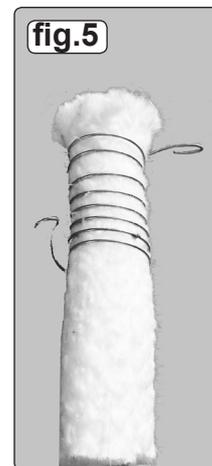
Fig.2 Rubber Cone Dimensions



4. MAINTENANCE



- 4.1. If the amount of smoke generated reduces over time, it may indicate that the fibreglass element/wick needs replacement.
- 4.2. The fibreglass element is considered to be a consumable item. The part number for the replacement is: VS870.01.
- 4.3. **Fibreglass element/wick replacement.**
 - 4.3.1. Soak replacement fibreglass element/wick in mineral (baby) oil before starting procedure.
 - 4.3.2. Remove the top cover by loosening the 5 retaining screws.
 - 4.3.3. Remove the 3 screws securing the heater chamber cover (arrowed in fig.3) and remove the cover.
 - 4.3.4. Remove the two 8mm nuts (arrowed in fig.4), releasing the heating wire which encloses the element/wick.
 - 4.3.5. Lift out the element/wick and carefully remove from the heating wire.
 - 4.3.6. Carefully push the element through the heating wire as in fig.5.
 - 4.3.7. Replace the wick/heating wire assembly. placing the heater wire terminals over the terminal posts and replacing the nuts (fig.4).
 - 4.3.8. Replace the heater chamber cover and top cover.



Parts support is available for this product. To obtain a parts listing and/or diagram, please log on to www.sealey.co.uk, email sales@sealey.co.uk or telephone 01284 757500



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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