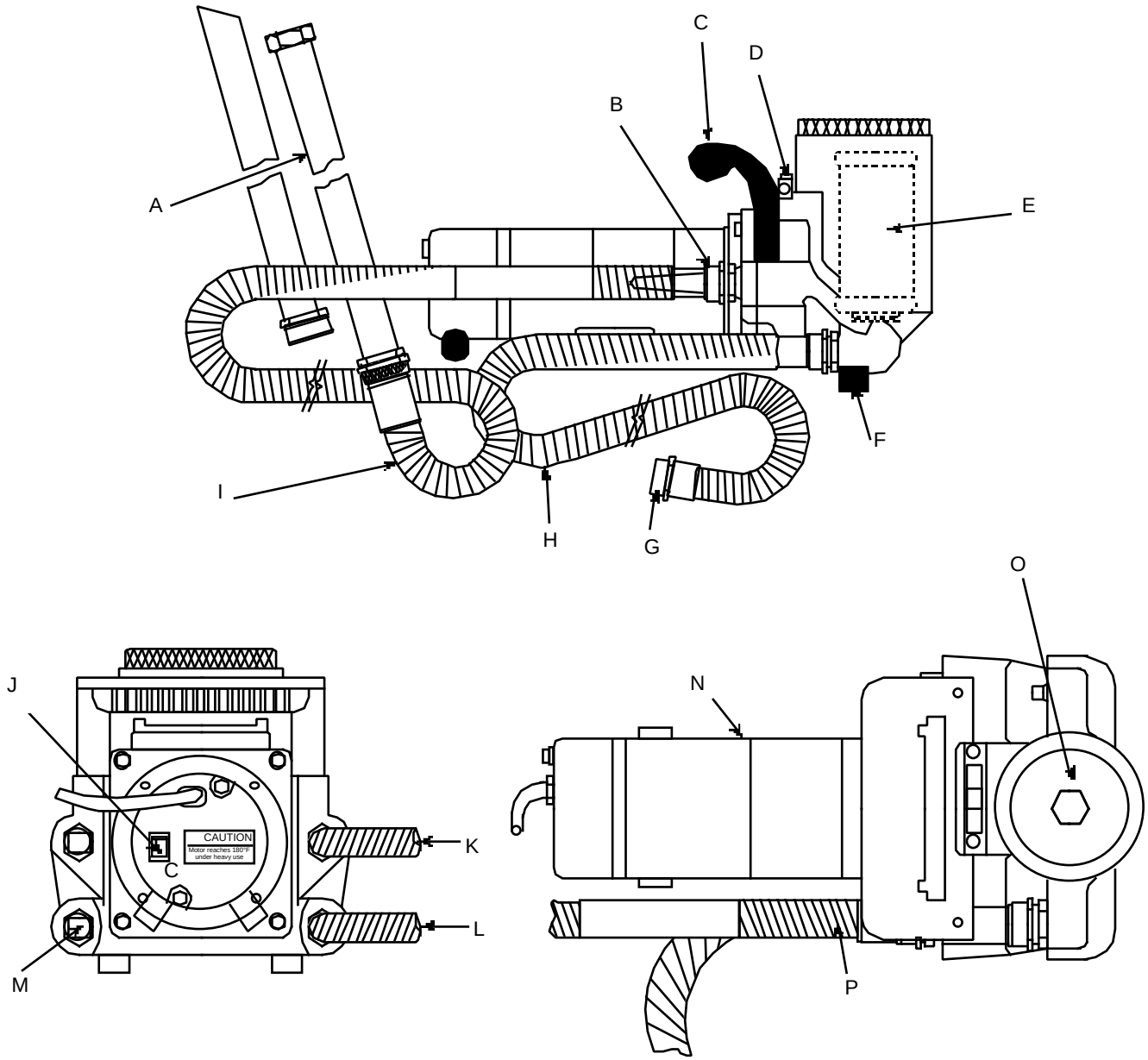
Portable Filtration System

Stock No. 193-5525

Figure 1.



A. $^{3}/_{4}$" lightweight wand assembly, 1m, fully extended length
B. Quick access zero leakage, $^{3}/_{4}$ – 11.5 NH garden hose connections
C. Non-conductive carrying handle
D. 1.7 bar differential visual indicator
E. Removable element
F. Vibration isolating rubber feet 4-pls
G. $^{3}/_{4}$ – 11.5 NH garden hose thread (outlet)
H. $^{3}/_{4}$" wire reinforced flexible outlet hose, 1.6m length
I. $^{3}/_{4}$" wire reinforced flexible inlet hose, 1.6m length
J. On/Off switch
K. Inlet
L. Outlet
M. Alternative customer exchangeable $^{1}/_{2}$ – 14 NPT inlet and outlet locations (plugged)
N. Motor is UL recognised and CSA listed
O. Element housing cover
P. Visible and easily cleanable inlet strainer

Please note: The portable filtration unit is supplied without an element fitted. A choice of replacement elements are available as separate items. See section on element servicing for fitting instructions.

Operation

A. Remove all shipping plugs from the hoses and fittings.

B. Ensure that a suitable element is fitted and that the element housing cover is fitted with its 'O' ring and that the cover is correctly screwed into place.
Excessive force is not required.

C. Ensure that the hoses are correctly fitted to the filter unit (see Figure 1).
The inlet, or suction hose should be fitted to the port nearest to the motor, marked with arrow
The outlet hose should be fitted to the port furthest from the motor, marked with arrow

D. Connect the wand assemblies if required.

E. Place the inlet hose/wand assembly into the fluid to be filtered and/or transferred. Place the outlet hose/wand assembly into a suitable fluid discharge container.

F. Connect the filter unit to the appropriate power supply and switch on the filter unit utilising the on/off switch at the rear of the unit (Figure 1).

G. If, during operation the 1.7 bar differential visual indicator (element condition monitor) Figure 1, moves into the red area, switch off the unit and change the element. (See element servicing section).

Please note: That if the filter unit is being used to pump fluid to a height of more than 2 metres, the indicator may move into the red area immediately. This is caused by the extra pressure generated and does not necessarily indicate that the element needs changing.

H. Upon completion of the operation, switch the filter unit off and disconnect from the power supply.

I. Withdraw the hoses from their respective fluid containers and drain them into a waste fluid vessel. To ensure 'No-mess' transportation, the inlet and outlet hose assemblies can be screwed together by removing the wand assembly.

Element servicing

A. Switch off the filter unit and isolate from the power supply.

B. Rotate the element housing cover anti-clockwise and remove.

C. Remove the dirty/contaminated element from the housing and dispose of. (Elements are non-cleanable). Ensure element housing is clean.

D. Place the new element in the housing, fitting the 'O' ring seal into the lower location hole.

E. Inspect the housing cover 'O' ring and replace if necessary.

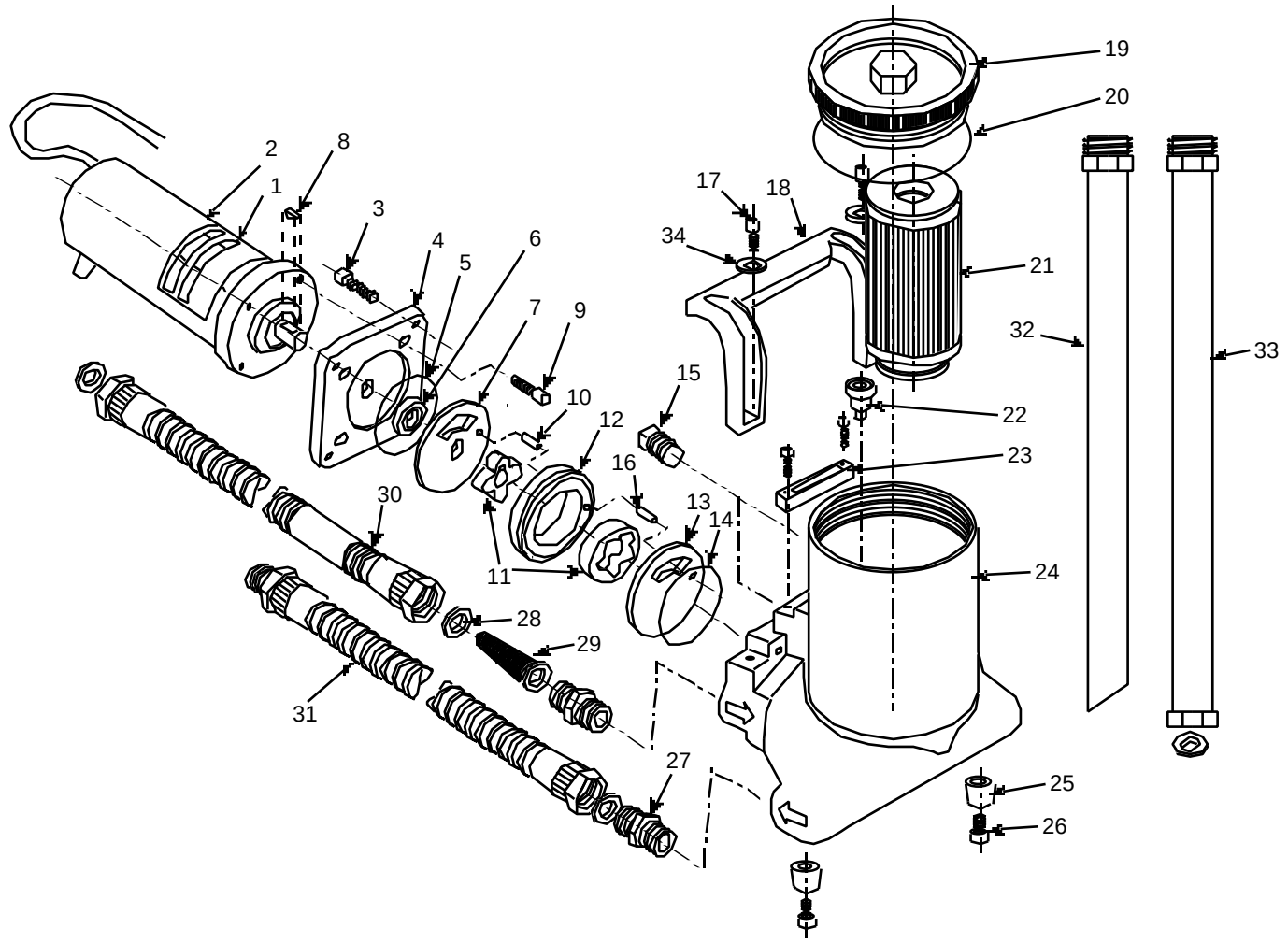
F. Replace the housing cover and hand-tighten.

Note: It is recommended the filter unit is cleaned and flushed between uses.

Technical specification

Maximum allowable operating pressure	3.5 bar
Flow capacity	Up to 15 litres/min
Visual element condition indicator	Differential pressure type set at 1.7 bar
Fluid compatibility	Petroleum based and water emulsions
Integral relief valve	Set at 3.5 bar for motor protection
Operating temperatures	Filter unit -20°C to +82°C Hose/wand -4°C to +50°C
Weight	10.6 kg
Electrical motor	1/4 hp at 2500 rpm 3A maximum 110V ⎓ single phase 50 Hz

Figure 2.



1. Label
2. Motor, 115 VAC
3. SHCS (4), ¼-20 x 1
4. Adapter plate
5. Housing ‘O’ ring
6. Polypak seal
7. Shadow plate
8. Woodruff key ⅛ x ⅜
9. SHCS (4), ¼-20 x ¾
10. Roll pin ⅛ x ¾
11. Geroter set
12. Geroter ring
13. Outlet plate
14. Geroter ‘O’ ring
15. Brass pipe plug (2), ½-14
16. Roll pin ⅛ x ⅝
17. SHCS (2), ¼-20 x ⅝
18. Handle
19. End cap
20. Cap ‘O’ ring
21. Element
22. Relief valve
23. Indicator
24. Housing
25. Rubber bumpers (2)
26. SHCS (2), ¼-20 x ½
27. Brass fitting (2)
28. Gasket (4)
29. Inlet screen
30. Inlet hose assembly
31. Outlet hose assembly
32. Wand crevice assembly
33. Wand adapter assembly
34. Washer (2)

Note: SHCS denotes “socket head cap screw”

Troubleshooting guide

Symptom	Problem	Solution
Does not start	ON/OFF switch	Turn switch on, replace if defective.
	No electrical power	Plug in the filter unit, check for tripped circuit breakers, check for blown fuses.
	Rectifier	Replace if defective.
	Motor overheated (77°C)	Allow motor to cool, thermal overload will automatically reset.
	Defective motor	Replace motor.
Does not start or erratic motor noise	Worn motor brushes	Replace motor brushes.
Intermittent start/stop operation	High viscosity fluids	High viscosity fluids can cause the motor to overheat and cycle intermittently.
	Worn motor brushes	Replace motor brushes.
	Defective motor	Replace motor.
Hot motor	Pumping under heavy load	It is normal, under a heavy pumping load, for the motor to reach 71°C.
	Defective motor	Replace motor if the motor shell temperature reaches greater than 77°C.
No flow or erratic pump noise	Filter housing not filled with oil	Allow the filter unit to run for a few seconds.
	Suction leak	Check tightness of inlet fittings and hoses. Check gaskets are in place and are not damaged. Check for kinks or restrictions in the inlet hose.
No suction	Blocked strainer	Clean or replace the inlet strainer as required.
Reduced oil flow	High viscosity fluids	High viscosity fluids can cause reduced flow, which is normal.
	Element dirty	Replace or clean element.
	Relief valve sticks or lodged open	Clean relief valve or replace if defective.
	Partially obstructed inlet or outlet hose	Clear the hose obstruction.
	Suction leak	Check tightness of inlet fittings and hose.
	Worn gears	Replace gear set.
Indicator moves to RED area	Element dirty	Replace or clean element.
	Oil extremely cold or viscous	Change element to coarser micron rating.
	Obstructed outlet	Clear outlet obstruction.
	Defective indicator	Replace indicator.
Indicator does not seem to move	No element	Install element.
	Defective indicator	Replace indicator.
Hoses discolour or become rigid	Fluid compatibility	Certain fluids, over time, will cause the hoses to discolour. This does not impair their, performance. But, some fluids will cause the hoses to become brittle, requiring replacement.
Oil formation under the unit	Defective shaft seal	Replace the motor shaft seal.