

VORTEX

Global Suppliers to Ashtead Technology



Sub Sea Oil Absorption Tool

Introduction and assembly:

Please find included one Marine Guardian system which has been built specifically for the purpose of absorbing hydrocarbon based contaminants from dilution in water.

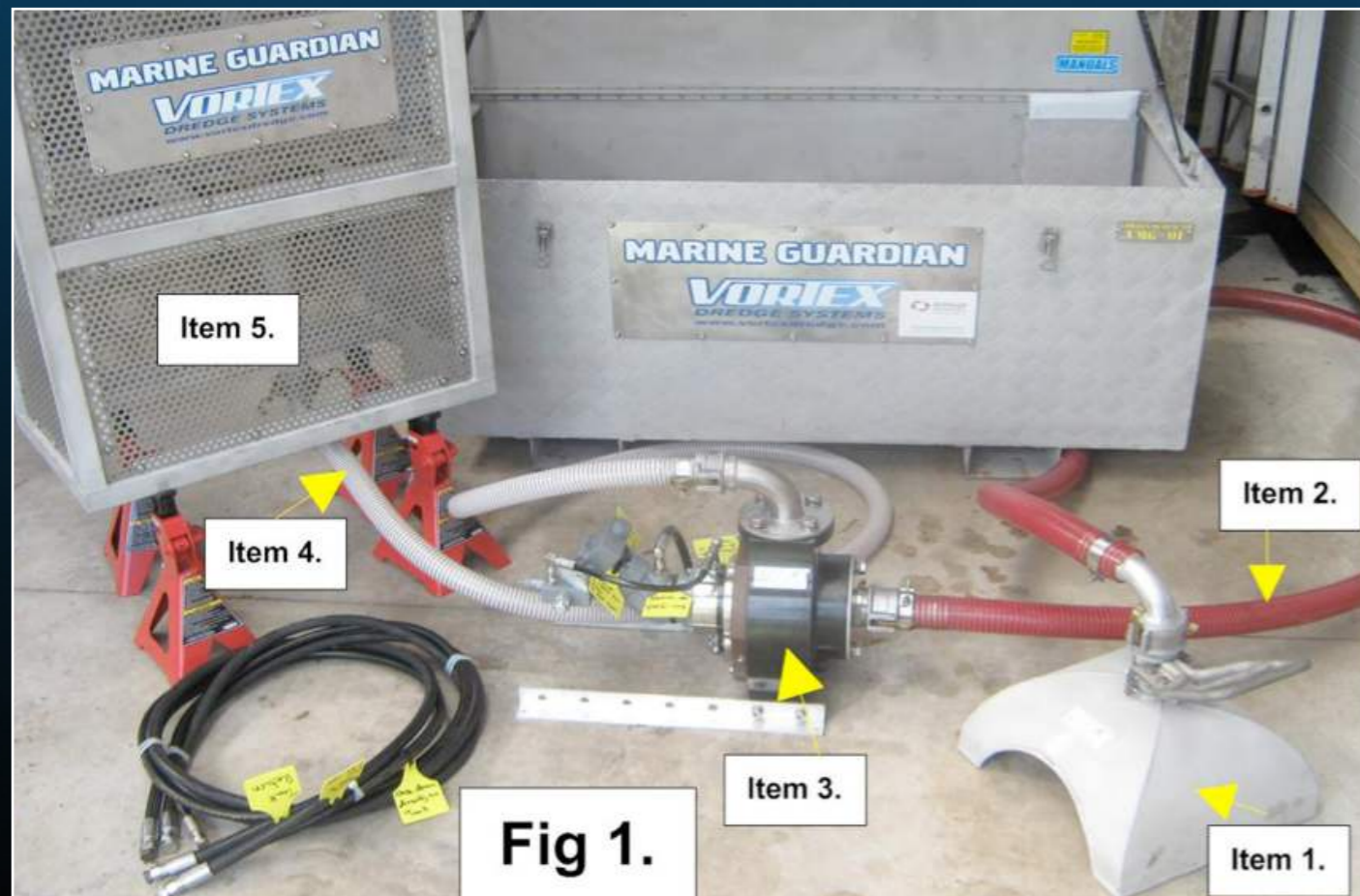
The funnel will need to be placed above the area of contamination so as to draw away contaminated water and pump it through the filter system. There is no known limitation to how much water can pumped through the filter system.

The Marine Guardian filter system has been seen to absorb 15 litres of EP80 oil at 50% filter saturation. These absorption rates may change depending on type and quantities of contaminants seen.

The water pump out put pressure is restricted to prevent over pressurisation of filter units.

Installation:

This kit will need assembly with included funnel **Item 1**, Inlet hose **Item 2**, Pump **Item 3**, Outlet hose **Item 4** and filter frame **Item 5**. So the kit looks like this **Fig 1**.



Installation continued:

Depending upon your installation, the filter frame may be required to mount vertically or horizontally as shown in these options. Orientation will not affect performance. Filter mounting brackets are supplied as shown.



You can orient the ROV handle on the funnel in which ever rotation suits your application.

Pump mounting brackets are also supplied **Item 9**. You can mount the outlet nozzle **Item 7** in which ever orientation suits your situation (over page).

The pressure reducing valve supplied **Item 6** is set to restrict hydraulic supply from the ROV to the specifications required. **Item 8** is the water pump inlet (over page).

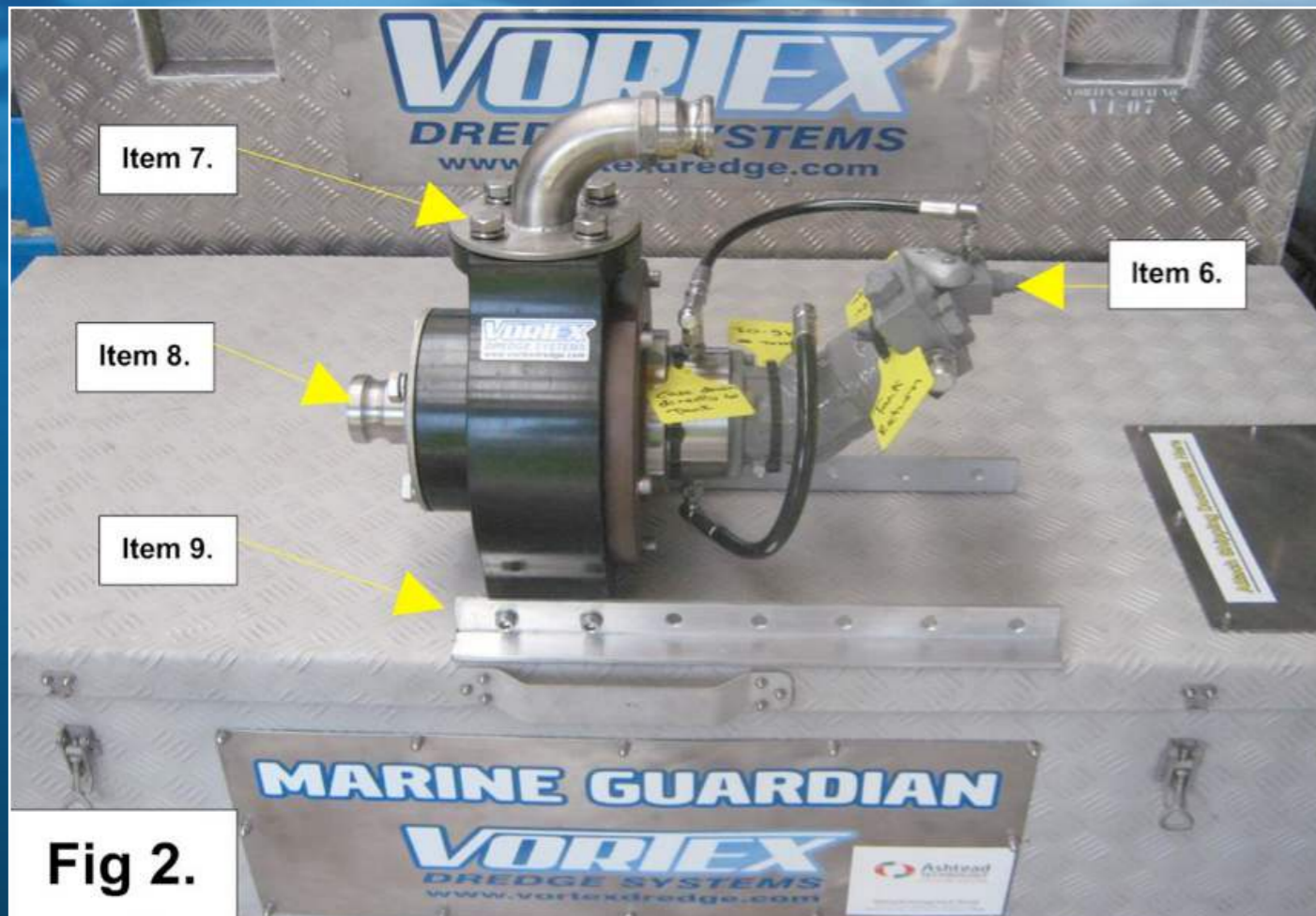


Fig 2.

Please package as shown:



Specifications:

Hydraulic requirement: Pressure = 1500 psi (103 bar)
Flow = 5.2 gpm (20 lpm)

- Pump Performance: Approximately 230 lpm pumped from funnel through filters
- Each filter tested to absorb 1.5 litres of EP80 oil at 50% filter saturation
- Weight of pump = 43kg in water
- Each filter gives approximately 7kg of buoyancy in water before flooding from dry
- Each filter gives approximately 0.5 kg of buoyancy in water when flooded with water
- Each filter weighs approximately 8 kg in air when flooded with water
- Each filter weighs approximately 2.4 kg in air after flooding with water and drained for 12 hours
- Each filter weighs approximately 1.5 kg in air when dry
- Any substance captured in the filters will be added to these weights
- Filter frame = 57 kg with filters dry
- 470mm (including mounting brackets) x 750mm (w) x 1150mm (h)

Inventory:

1. One filter frame complete with ten filter.
2. One pump with inlet and out let flanges.
3. One five meter long 2-inch Inlet hose with female cam locks.
4. One three meter long 1 1/2 outlet hose with female cam locks.
5. One suction funnel complete with multi fit ROV handle.
6. Two sets of 3 meter long hydraulic hoses - comprising -8 pressure, -8 return, -6 case drain.
7. Two Stainless steel ratchet ties.
8. Four M16 bolts nuts and washers for frame mounting brackets.

Servicing:

Supplied in the 4-inch dredge kits and riser pump kit are spare mechanical seal kit pump servicing manual and tools needed to change out the mechanical seal if need be.

Safety and disposal of filters:

Use correct PPE at all times when dealing with contaminants.
All used filters must be disposed of according to local, State and Government regulations. If in doubt, ask.

NOTE: Vortex International Ltd will not be held responsible for any damages occurring directly or indirectly from the use of this tool.



Joe Goodin - Managing Director

VORTEX International Ltd, 27 Parrs Road, RD1, New Plymouth, New Zealand
Tel/Fax: +64 (6) 753 8102, Mobile: + 64 (0) 27 688 5372, Email: joe@vortextdredge.com, www.vortextdredge.com



Spill Control NZ - Environmental Products

DDI: 0274 120 172, Ph: 0800 Spill NZ (774 556)
PO Box 17, 1064 Main South Rd, Oakura, New Plymouth, New Zealand