

## **SEPARATOR MAINTENANCE GUIDE**

**The maintenance of the Separator is the responsibility of the Site Operative**

### **Generic Maintenance – All Types of Separator**

It is important to recognise that oil separators (formerly known as interceptors) require regular maintenance to avoid pollution incidents (see Environment Agency's PPG3 clause 7 and the European Standard EN858-2 clause 6). Separators should be inspected by experienced personnel every six months to determine;

- a. The depth of oil/ light liquid present
- b. The depth of sediment present

A log should be maintained detailing the above depths, inspection dates, replacement parts, repairs and any cleaning undertaken. This log should be made available to the authorities upon request.

- Once a separator has reached its maximum level of oil and or sediment it should be emptied by a waste management contractor. All chambers should be emptied evenly to balance the pressure on internal baffles. The use of warning signs and barriers around the open manholes is recommended.
- The supplied separators are not designed for man entry, however care must be taken whilst being emptied by suction tanker to ensure that damage is not caused to internal components such as filters, closure cartridges and alarm probes which can be situated directly below the manhole access.
- Disposal of the collected contaminants must be in accordance with Environmental Agency and Local authority guidelines.

NB: After emptying, the Separator must be immediately refilled with clean water – failure to do so can affect the unit's performance and may cause structural damage.

Separators should be subject to a full structural survey every five years to inspect the following; structural condition, water tightness of system, internal coatings and state of all inbuilt parts.

### **Class 1 Separators – units that incorporate Coalescing Filters (FRI inc. ACD. Bypass exc.ACD)**

Coalescing filters should be replaced at least once a year. If filters are not replaced on a regular basis the filter media will deteriorate and the separators performance will be affected. The filter cartridge should be removed from the separator and inspected on a six monthly basis to ensure that the foam and cartridge are in good condition, the filter does not have any tears and is tightly attached to the cartridge covering all flow holes in the support tube. If in any doubt, replace the filter.

NB: The Filter Cartridge should not be removed if the depth of oil/ light liquid exceeds 90% of the oil storage volume of the separator.

Following inspection the filter cartridge must be firmly pushed into its docking station and locked into place.

**Replacement of Filter Tube:**

- With the filter cartridge on a clean smooth surface, remove any lower support disk or cross-bar (immediately above the filter) and slide the tube from the support tube. Cutting the straps will assist this. Place the new filter tube over the support tube to the same position as the old one, ensuring that all flow holes in the support tube are covered properly by the filter
- Put two clamping straps (when supplied with replacement filter) over the filter tube 30mm from the top and bottom edges of the filter and tighten these straps very tightly
- Replace the cross-bar or support disk if fitted
- Fit the chamber back into the separator, push firmly down into docking station and clamp into place
- Check that water flows through the separator freely and replace the manhole cover

**Separators that incorporate Automatic Closure Devices (ACD)** (some units may also incorporate coalescing filters)

The ACD Cartridge should be removed for inspection every six months to ensure that the float is in good condition and can move unrestricted up and down the cartridge. The ball/disc should float in water and sink in oil – if this does not happen it should be replaced immediately. Check that the orifice of the docking station is free from sediment and debris.

NB: Do not attempt to remove the ACD cartridge if the oil/ light liquid level exceeds 90% of the oil storage volume of the separator

If the ACD Cartridge proves impossible to lift, the closure device has 'shut off' due to one of the following reasons:

- The separator is full of oil/ light liquid, and needs to be emptied.
- Poor maintenance. Once a waste management contractor has emptied the separator, the ACD cartridge should be removed for inspection. The cartridge should only be repositioned once the separator has been refilled with clean water.
- Poor installation. Before installation the ACD cartridge should be removed. During installation the separator should be filled with clean water. The ACD Cartridge should then be repositioned into its docking station and locked into place.

NB: An Automatic Closure Device can only be released from 'shut off' position once the separator has been emptied.

Automatic Closure Devices are not fitted in Bypass Separators

### **Separators incorporating Oil Level Alarm Systems**

Alarm systems should be tested and revalidated every six months. The oil level probe should be removed from the separator and cleaned to ensure that there is no debris attached that could affect its performance. Once cleaned the probe should be re-calibrated in the separator by a technician who is familiar with the system to ensure that the alarm will activate when the level of oil reaches 90% of the oil storage volume of the separator under static liquid conditions.

To test the condition of the alarm system press the 'Push Button', and the current status will be displayed via the LCD on the front of the unit.

- 'All Correct' indicates the levels within the separator are acceptable
- 'Excessive Oil' indicates that the unit is in alarm condition

The output relay is de-energised and the small internal piezo sounder is activated. The unit then asks the user, via the display, if they wish to accept/acknowledge the alarm. On doing so, the output relay energises, the sounder is muted and the display instructs the user to take the appropriate action e.g. empty the Separator.

It then prompts the user to press the accept push button in order to reset the alarm condition. The control rescans the probe sensors attached and presuming no alarm condition is detected 'All Correct' will display on the LCD. If the push button is pressed before the separator has been emptied, or it has been emptied but not refilled with water the control panel will reinstall the alarm condition.

NB: The output relay is de-energised on detection of any alarm condition or mains failure