

LSMC-rev2

## LSMC- Cleaning And Maintenance Instructions

- **Cleaning - Every 1000Hrs**
- **Inspection – Every 4000Hrs or at least EACH Year**

Scale build up on the resistors has an insulating and corrosive effect that causes the surface temperature to rise.

It is recommended that every 1000Hrs, the system is flushed with the “De-scaling Solution”. ( 3 packs are supplied with your unit) – Refer to Safedescaler info below.

The accumulated run time hours are displayed on the screen of the Smartload® controller. Failure to clean the system will breach the Limited Sephco Warranty.

### CLEANING PROCEDURE

1. Turn system “OFF” i.e. “ Disable Signal. Wait for cool-down to complete.
2. Close cocks at inlet and outlet of sea water line to the unit.
3. Remove filling cap. Care should be taken not to strain the plumbing when undoing the cap.
4. Open drain cock at the bottom end of the unit I and drain completely.
5. Close cock fully when completely drained.
6. Mix 1 container (approx. 1kg / 2lbs) of de-scaling powder in 40 Litres (10 Gal) of warm fresh water. Stir to dissolve powder completely.
7. Pour in through filler cap until the carbon vessel is full.
8. Replace filling cap
9. Leave to soak for approx. 10 hours or overnight.
10. When ready to re instate load bank, open the inlet and outlet cocks and turn the system on. i.e. “Enable”. Purging and flushing will take place and any sediment will disperse through the system and overboard.

### INSPECTION

It recommended that every 4000hrs or at least once per year the resistor flange assembly is removed and inspected.

Replace any damaged or corroded resistors, clean and re assemble.

To remove the flange the electrical connections have to be disconnected.

### GENERAL MAINTENANCE

When undertaking any maintenance on the system, the following points should be observed. In the design and assembly of the system, care has been taken to minimise the potential for galvanic action through electrolysis.

#### Important

- a. Only use the insulated bolts supplied with the flange and re-assemble with the Teflon washers making contact the carbon.
- b. Insure that the Hump Hose connections are used to isolate the system from the plumbing and electrical ground.
- c. Do not remove the rubber isolation mounts from the base of the vessel

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## **LSMC- Cleaning And Maintenance Instructions Cont.**

- d. Ensure the ½' Nylon nipple located at the drain cock, is used to isolate the drain connection from electrical ground.
- e. Do not unduly load or strain the carbon vessel.
- f. Do not damage the special coatings on the resistors and internal fittings.
- g. If altering or changing the plumbing, always support and hold the pipe connections to the vessel to avoid strain and dislodging the internal gaskets.

Refer to the operation manual for detailed instructions on use, settings and maintenance.

### **CARBON COMPOSITE VESSEL**

No maintenance is required however, if surface damage occurs, particularly internally, the damage should be repaired immediately.

Prepare the surface by thoroughly cleaning with a degreaser and then scuffing with 200 grit emery paper. Use 2- part vinyl- ester resin by brushing over the damaged area.

### **LSMC CLEANING AGENT SAFEDESCALER (DESCALENT F)**

SAFEDESCALER is 100% Sulphamic based acid, which is a food grade acid primarily used in cleaning products in the food industry.

LSMC marine load banks generally contain a small volume of water of approximately 40 Lts. The cleaning procedure using Safedescaler, mixed with fresh water, requires discharging after use. The direct discharge to overboard is acceptable, as the waste liquid will neutralize with equal amounts of sea water, alternatively the waste can be drained to the bilge tank.

#### **Neutralising before discharge**

Subject to the local regulations, if direct discharge as described above is not acceptable, the waste-water mix can be neutralised by adding an alkaline solution such as Caustic Soda.

The recommended cleaning agent is  
**SAFEDESCALER (DESCALENT F)**  
Available worldwide from stockists of:  
**UNISERVICE International S.A.**