

## Oily Water Separator (OWS)

The normal procedure is to have bilges pumped into the Oily Waste Tank 7 Stb, and then pumped ashore by an appropriate contractor, or overboard using the Oily Water Separator (OWS). Please consider using water sparingly in carrying out your daily work. Sources, causing an accumulation in the bilge, needs to be identified and rectified as soon as possible.

We are required to have a working Oily Water Separator (OWS) which includes the Oil Content Meter (OCM) and all engineers should be familiar with its operation and maintenance. We have operators / maintenance manuals for both the OWS and OCM and you are encouraged to familiarize yourself with them.

The oil content of the effluent being discharge overboard must be less than 5 ppm in fresh water, 15 ppm in salt water. All activities with this unit is recorded by a data logger function, they must also be recorded in the ship's official TC Oil Record Book, Part I this includes, maintenance and repairs.

### Prior to OWS operations

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Check with Chief Engineer for operational guidance

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Check with bridge, record position & time

Overboard discharges can only be made with the vessel underway.

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### Starting the OWS

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Turn on main power switch

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Check OWS strainers

Suction strainer before pump

Discharge strainer at top of unit

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Align valves

Full open OWS suction valve; usually from Oily Water Settling Tank, 7 Stb on manifold

Crack open pump discharge valve 2 turns

Crack open OB line valve to tank (recirc. using rubber hose) two turns, insert rubber hose into sounding pipe, keep OB hull valve closed

Full open FW line main valve, and FW to OCM

Crack open OCM sample in / out ball valves halfway

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Prime / Purge OWS Using *BilgeMon* OCM control

Select "+", x2

Select "Clean & Test",

Select "enter",

Select "+", x2

Select "test output",

Select "enter"

Select "water", water valve will open 10 seconds, repeat as many times as needed

Purge air from OWS by using vent ball valve on top of unit, until water comes out, then close

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Clean OCM sensor

Close sample inlet and outlet valves

Unscrew nylon cap of sensor, insert cleaning brush, move rigorously 10 seconds

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Start OWS using "System" switch to "ON"

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## Oily Water Separator (OWS)

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### Adjust flow of pump

Screw down on pump discharge valve to 5 gal / minute

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### Adjust OWS unit pressure (Prepolisher gauge)

Screw down on OB valves (Tk return, or OB) to maintain 30-45 PSI pressure

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### Adjust flow through OCM for proper reading (Sample Inlet Gauge)

Sample is under vacuum; to maintain a slight positive pressure (5-10 PSI) as seen on sample pressure gauge, close sample discharge valve.

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### Check OCM for ppm status & alarms function

When ppm is below 5 / 15ppm and alarm settings are off, discharge is going "overboard". Check rubber hose at sounding pipe 7Stb to confirm.  
Confirm alarm on Techsol alarm panel

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### Open Overboard valve

When satisfied of, crack open OB valve, close OB to Tk valve; keep pressure on system to push sample through OCM sensor

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### During operation

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#### Monitor level of source (bilge or oily water tank)

Do not run unit dry

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#### Check media filter, backflush if necessary

If flow indication is low, but OWS pressure is high, media filter needs to be back flushed using the two, three way valves, for five minutes, turn them simultaneously

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### Verifying OCM, and valve functions

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#### With unit running in normal operating condition

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#### Close sample inlet and outlet valves

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#### Test OCM sensor

Unscrew nylon cap of sensor  
Insert cleaning brush, oil content displayed will go to 30+ and alarm, stop overboard discharge; verified by observing flow at rubber hose to 7 Stb sounding tube (OB)

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**Some things to keep in mind with our particular system: Frequent oil discharge cycles, which is automatically done, is typically not normal.**

- It may indicate an excessive flow through unit - sucking in air,
- loose strainer
- or closed suction valve.

Due to long period between operations, some valves may stick close or open, gentle persuasion might be necessary. "Exercising" solenoid valves using "Test" function of the BilgeMon is also beneficial.

Due to varying piping sizes use in installation, care and close attention when starting / setting up unit is needed, but once a steady operation is achieved, smooth, "alarm less" operation is normal. Another words, it's a bit of an art form to set up.

## Oily Water Separator (OWS)

### Stopping the OWS

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Stop OWS using "System" switch to "OFF"

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Prime / Purge OWS Using *BilgeMon* OCM control

Select "+", x2

Select "Clean & Test",

Select "enter",

Select "+", x2

Select "test output",

Select "enter"

Select "water", water valve will open 10 seconds, repeat as many times as needed

Purge air from OWS by using vent ball valve on top of unit, until water comes out, then close

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Close all valves opened for operation

Close overboard valve, and lock

Close OWS suction valve at manifold

Close pump discharge valve

Close FW valves to unit and OCM

Close 2 sample valves

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Turn off main power switch

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Record position and time from bridge

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Make Oil Record Book entry

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