

Standard Operating Procedure

Skimmer – Weir/Brush LWS



Equipment Description

This is a self-adjusting weir skimmer with a sump mounted positive displacement screw pump and optional brush adaptor, making a highly versatile unit able to recover most oil types in most conditions including open water.

Lamor Weir Skimmer unit is a high performance weir skimmer for offshore as well as harbour spills. The Weir Skimmer can be suction or pump model. In the pump model the heart of the skimmer system is the hydraulic driven pump unit, which is fitted to a skimmer body with Lamor designed weir lip. The skimmer can be equipped with different pump types: e.g. Lamor GT A 50, GT A 115 or a Lamor GT C pump. In the suction model the pump is not installed on the skimmer. The skimmer handles all types of oil spill from light diesel fuel to heavy crude oil mixed with debris. A special cutting knife and a grid net are fitted at the inlet of the pump. The hydraulic power is transferred to the skimmer via hydraulic hoses. Recovered oil is discharged from the skimmer up to the collecting tank through the transfer hose.

Technical Specification

	<u>Length</u>	<u>Width</u>	<u>Height</u>	<u>Mass</u>
Skimmer Head	2.2m	2.3m	0.79m	162kg
Power Pack	1.3m	1.0m	1.1m	640kg
Remote Control Unit	0.45m	0.50m	1.0m	100kg

Hydraulic fittings: Tema couplings

Power type: Diesel/Hydraulic

Discharge / hour: 30m³

Health and Safety



To safely operate this equipment 2 people are required.

Safe Operating Requirements

- Ensure adequate PPE is worn – as detailed above,
- All personnel are to be trained in the use of Skimmer – Weir / Brush LWS, or under the close supervision of a trained operator

- If required a Job Safety Analysis (JSA) to be conducted prior to work commencing. Identification of the following safety factors are critical, but not limited to:
 - o Manual Handling,
 - o Slips/Trips/Falls,
 - o Contamination/Decontamination.
- Ensure adequate Personal Protective Equipment (PPE) is worn –
 - o * Life jackets must be worn on or near water dependant on operation
- A communication plan must be decided upon to ensure clear and concise communication at all times
- Be aware of pinch points and ‘the bight’ between the vessel during deployment.
- A full safety brief must be conducted.
- All incidents, accidents and near misses must be reported as per AMOSC company policy.

Operational Instructions

Emergency shutdown

In the event that an emergency shutdown is required, the following measures should be taken:

- Shut down power pack immediately where safe to do so.
- Return the hydraulic flow control to “off” position.
- Close all isolation valves.
- Communicate according to the designated communications plan.

Pre-start checks

- Ensure that fuel and oil levels are checked on the power pack.
- Check the hydraulic hoses for damage or wear.
- Visually inspect the skimmer for damage or wear.
- If used, ensure that all lifting equipment is in test date and in good working condition.

Assembly

- Assemble the skimmer in the desired configuration according to oil type and sea conditions.
- Ensure that the hydraulic controls are in the “off/neutral” position and that the hydraulic flow controls are at the lowest setting.
- Lay out the hydraulic hoses and connect them to the power pack, hydraulic remote and the skimmer using a sorbent pad to catch any spilt hydraulic fluid.
- Ensure the locking rings on the hydraulic fittings are locked in place.

Note - the LWS Skimmer requires flow, return and case drain hydraulic hoses to complete the pump circuit. Failure to correctly connect all hoses may result in failure and extensive damage to the pump unit.

- Connect the discharge hose to the skimmer. Ensure the open end of the hose is able to be placed into the waste storage facility.
- Attach hose floats to all hydraulic and discharge hoses.

Final check – pre-deployment

- Prior to starting the engine, a final inspection of all assembled items needs to be carried out, including a check that all hydraulic hoses are connected and all locking rings secured.
- Ensure that the engine stop control is in the “run” position and start the engine.
- Pour a few litres of water into the skimmer to lubricate the pump
- Set the engine throttle at a fast idle and check the operation of all hydraulic functions.
- Stop the engine.

Caution Do not run the skimmer pump dry as this can cause extensive damage.

Operation

- Attach the lifting equipment to the skimmer.
- Lower the skimmer into the water using a suitable crane.

Note – Take care to ensure the hydraulic and discharge hoses don't get entangled during this process

- Ensure the hydraulic and discharge hoses are secured appropriately.
- Ensure the open end of the discharge hose is placed into or connected to suitable waste storage equipment.
- Once the skimmer has been deployed, start the engine and proceed with the operation.
- Once completed, stop the power pack, setting all controls to “stop/neutral” and pump the remaining fluid from discharge hoses. Note that hoses will still retain levels of fluid.
- Remove the skimmer from the water, minimising any secondary contamination.

Caution If the skimmer has been contaminated with oil, care must be exercised when retrieving it to avoid causing secondary contamination. Ground sheet/sorbent boom/bunded area should be used to mitigate this. If the skimmer is contaminated with oil, roll it onto a ground sheet, seal it and take it to a bunded cleaning station to be washed.

For use with brush attachment

- Using the hydraulic controls, start by running the brushes to fill the hopper with oil.
- Start the discharge pump and run it at a suitable speed to maximise the oil recovery rate.
- Run the brushes at a low speed, increasing the speed whilst observing to the point of highest efficiency.
- Adjust pump and brush speed as required.
- Once completed, stop the power pack, setting all controls to “stop/neutral” and pump the remaining fluid from discharge hoses. Note that the hoses will still retain levels of fluid.
- Remove the skimmer from the water, minimising any secondary contamination

Caution If the skimmer has been contaminated with oil, care must be exercised when retrieving it to avoid causing secondary contamination. Ground sheet/sorbent boom/bunded area should be used to mitigate this. If the skimmer is contaminated with oil, roll it onto a ground sheet, seal it and take it to a bunded cleaning station to be washed.

Post operation – Contaminated skimmer

- Establish a bunded cleaning station.
- Place the skimmer in the bunded cleaning station.
- Release all hydraulic pressure prior to the disconnection of the hydraulic hoses by manually moving the hydraulic levers.
- Disconnect hydraulic hose connections and fit dust covers. Ensure that spilt hydraulic fluid is captured.
- Drain all discharge hoses, flushing through to remove residual oil.
- Clean the skimmer with hot water. **DO NOT** use detergent on brush surfaces, this will reduce the recovery efficiency of oil on the brush surface. If required, diesel fuel can be used to assist with the cleaning of the skimmer.
- The skimmer is to be dry prior to maintenance inspection, re-stowage and storage
- Ensure the skimmer is returned to response ready condition.

Note - Maintenance of the skimmer is to be performed as listed below.

Post operation – Uncontaminated skimmer

- Release all hydraulic pressure prior to the disconnection of the hydraulic hoses by manually moving the hydraulic levers.
- Disconnect hydraulic hose connections and fit dust covers. Ensure that spilt hydraulic fluid is captured.
- The skimmer should be laid out, washed and flushed with fresh water. **DO NOT** use detergent on brush surfaces, this will reduce the recovery efficiency of oil on the brush surface. If required, diesel fuel can be used to assist with the cleaning of the skimmer.
- Drain all discharge hoses and flush through with fresh water.

- The skimmer is to be dry prior to maintenance inspection, re-stowage and storage.
- Ensure the skimmer is returned to response ready condition.

Note - Maintenance of the skimmer is to be performed as listed below.

Additional Information

Maintenance

- All maintenance and repairs are to be completed in accordance with either the manufacturer or AMOSC procedures.
- All equipment must be left in an operational condition when not in use.
- All defects must be repaired or the equipment is to be “tagged out” for maintenance and repair.

Related Documents

AMOSC HSSE Plan
PN08 - HSSE Policy
AMOSC JSA Template
PN 11 AMOSC Vehicle Use Policy (AMOSC Vehicle Checklist / AMOSC Load Assessment Checklist)
SOP 1001 Ops; Forklift Operations
SOP 1002 Ops; Loading and Securing of Cargo
SOP 1003 Ops; Transporting Equipment To/From Warehouse
SOP 2006 Eqt; Waste Storage Fastank
SOP 2006-1 Eqt; Waste Storage IBC

