

## Port State control inspection common load line issues

---

A load line or water line are lines on the side of a ship's hull that show where a ship can be legally loaded to.

There is ship equipment related to the load line that ensures weathertight integrity, buoyancy, structure strength and crew protection for the safety of the ship, people and the environment.

Self-closing mechanisms on air-pipes that are not working are a common deficiency found during inspections.



Ballast tank vent on the deck of a ship has a hole.



Ballast tank head vent on a ship is rusted and not working.



Hatch securing not aligning

When checking load line components regularly and before an inspection, make sure to check:

- Tank air pipe closing arrangements work.
- Hatch securing arrangements work.
- Hatch sealing arrangements work.
- The structure of the ship is in good shape.

If any of these are found to be deficient, your ship may be detained.

## Common deficiency issues under MARPOL

---

These are the deficiencies for MARPOL that our inspectors have found.

### Oily water separator (OWS)

The OWS is designed with two main elements:

- the separator that separates oil and water
- the discharge monitoring device that measures the oil content of the discharged liquid.

An operational OWS is the evidence that we require to be reasonably certain that the ship complies with MARPOL.

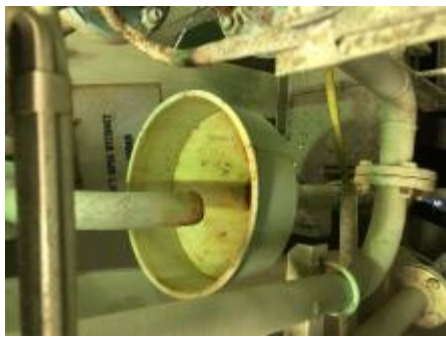
The permitted level for oil discharge is generally 15 parts per million oil in water—a concentration at which oil is not normally visible. If permitted oil content levels are exceeded, an alarm is triggered and the discharge is shut down.

When checking OWS regularly and before an AMSA inspection, make sure to check:

- all oil record book entries completed according to MARPOL
- OWS is working properly
- that there is no oil in the discharge
- the alarm and stopping device is operational.

If any of these are found to be deficient or your oil record book is not accurately filled out, your ship may be detained.

If clear grounds exist, our inspector may also ask for a section of piping after the monitor be removed for internal inspection.



### Sewage treatment plant (STP)

If a vessel is fitted with a STP it should be operational, but may not be in operation if the vessel is directing sewage to a designated sewage holding tank.

Our surveyors regularly find that the STP is not being operated correctly, often being turned on just before entering Australian waters and the plants that use bacteria to process the sewage do not have enough time to produce bacteria. Our inspectors have found internal chambers to be severely wasted, or valves incorrectly positioned so that raw sewage may be inadvertently discharged overboard.

When checking the STP regularly and before an inspection, make sure to check:

- that the ship's crew are familiar with the operation and maintenance of the treatment plant
- the treatment plant is operated as required by the manufacturer's instructions and in compliance with MARPOL
- the safety management system onboard includes the above steps for regular checks.

If any of these are found to be deficient, your ship may be detained.



## Fire fighting equipment

Deficient fire dampers are a leading cause of detention. The purpose of a fire damper is to be able to stop the flow of air into a space to help stop a fire in an emergency.

Common fire damper issues include:

- holes caused by corrosion and rust
- not closing at all or completely
- excessive effort required to open and close the damper.

If these issues are found, your ship will be detained until it is fixed.

Routine checks and maintenance must be done to make sure fan mechanism and attachment of discs/louvers to shafts are effective. When checking fire dampers regularly and before an inspection, make sure to check:

- they are properly marked open and closed
- the locking pins are free to be removed without excessive effort
- the operating handles are free to move without excessive force
- the operation is smooth and operates through the full range of motion.



Holes in fire damper



Fire damper stuck in closed position and it has been cut in half to let air escape.



Fire damper is rusty, stuck almost open and unable to move.

## Emergency generators

As with the communications equipment, the emergency source of power to other critical systems is very important.

As part of our standard port State control inspection, we will generally request a demonstration of the emergency generator. This will usually be simply a no-load, manual start or if fitted, **auto-start based on a simulated black-out condition**. The test requested will not impact upon shipboard operations. We find examples where either the generator will not start or if started, will not provide power as required.

When checking the emergency generators regularly and before an inspection, make sure to check:

- The generator starts and it is in good condition.
- The means of starting are working and in good condition.
- The required onboard crew are familiar with running the emergency power supplies.
- When running, that the generator supplies the right voltage and frequency.
- The safety management system onboard includes the above steps for regular checks.

**If any of these are found to be deficient, your ship may be detained.**

## Communication equipment

Ship radio systems are important tools for safe navigation and communication in an emergency.

When checking communication equipment regularly and before an inspection, make sure to check:

- The MF / HF DSC by making a test call and getting an answer—make a record of it.

- The VHF DSC by making a test call and getting an answer—make a record of it.
- The Inmarsat C system by sending a link test—make a record of it.
- The appropriate navarea is selected for reception of maritime safety information—and records are maintained.
- All communications can be properly operated on reserve power.
- All radios are installed properly and the power supply is in good condition.
- That operators are familiar with the equipment.
- The 406MHz emergency position indicating radio beacon is stored properly and regularly tested in case of emergency.

If any of these are found to be deficient, your ship may be detained

## FIRE MAIN ISOLATING VALVES

Fire main isolating valves are also an important component of the fire system and its operation will generally be checked during the inspection. Our inspector may test the engine room fire main isolating valve during the emergency fire pump test.

When maintaining and checking the emergency fire main isolating valve regularly and before an inspection, make sure to:

- test and check the condition of the fire hoses, nozzles and main
- test the fire pump and make sure it works without external priming (unless class approved)
- if fitted, test the fire pump priming system is working correctly.



Fire hose that is attached on a ship. It has holes and water is leaking out



Holes in the fire main of the ship are causing water to leak out

## Lifeboats

Lifeboats are essential for crew safety in an emergency. They must be checked and maintained regularly and before an inspection. Routine checks and maintenance must be done by properly trained crew members and following the manufacturer's instructions.

Our surveyors will require additional lashings before entering the lifeboat. Further information is in [Marine Notice 02/2014](#).

When checking lifeboats regularly and before an inspection, make sure to:

- Check the release system and interlock is set correctly.
- If fitted, check the indicators are clear and in correct position.
- Keep the instructions secured in the boat.
- Check the lifeboat's painter release is operable.
- Check the engine has enough fuel and is de-watered as necessary.
- Turn the lifeboat on and make sure there is no start delay.
- Test the propulsion allows it to go ahead and astern and that it can be steered in all directions.
- Keep the engine starting batteries maintained and in good condition.

Lifeboats may be found deficient if any of these cannot be properly demonstrated. If this happens, the ship will be detained until a lifeboat technician can fix it.

## Lifeboat hook and release systems

Most lifeboats in use have a hook and release system that are either:

- Off-load: the boat is floating and the weight must be off the hooks before they can be opened.
- On-load: the hooks can be opened with the load of equipment and people inside the boat.

Both types have to be regularly checked, maintained and used properly so that there is no risk that the lifeboat will fall from any height with people onboard.

## Hydrostatic override



## Interlock



The release levers may look to be in position and reset, but the deficiency occurs when each of the devices in the release system are not maintained in their original condition.

Morse cables (similar to brake cables on a bicycle) are common connections between the hydrostatic unit and the interlock, and also between the release lever(s) and the hooks.

Problems that can occur with the morse cable:

- Moisture can damage cables and cause rust.
- Loose or missing cable clamps can cause the morse cable to break.

These issues can cause:

- mechanisms to become stiff to operate and need excessive force
- one hook to release
- one hook to release before the other.



Interlock not in  
locked position