



Pre-arrival & departure checklist for engine officers

Spills Prevention, Preparedness & Response

Pre-arrival and departure testing for engine officers

There are international, federal, and state requirements for testing equipment prior to arriving or departing a port in Washington state.

For the engineering department, the International Safety Management (ISM) Code, the International Convention for Safety of Life at Sea (SOLAS), and the U.S. Code of Federal Regulations (CFR) require regular testing of critical equipment.

- ISM Code A10 requires maintenance of the ship and equipment,
- SOLAS Ch V Reg 26 requires steering gear testing and drills,
- 33 CFR 164.25 requires tests before entering or getting underway,
- 33 CFR 96.250 requires vessel maintenance procedures, and
- Washington Administrative Code (WAC) 317-31, Accepted Industry Standards, recommend a series of tests and inspections before a vessel enters or operates in state waters.

Why use checklists?

The human mind is well suited for creative thinking but it is not as well suited for repetitive tasks while subject to fatigue or distraction. Checklists are an invaluable safety management tool to prevent the details of a repetitive task, such as pre-arrival and departure checks, from being missed.

What makes good pre-arrival and departure checklists?

Good checklists are short, relevant, and easy to use. They should list tasks in a concise and logical manner. If a checklist is too long, redundant, or difficult to use, some tasks could be deliberately or accidentally skipped to complete the checklist on time. It may be helpful to have the person performing the task assist with creating the checklist to ensure that the checklist makes the process easier and not more cumbersome. Good pre-arrival and pre-departure checklists should:

- Include all required systems and equipment.
- Break lengthy tasks into logical sub-tasks.
- List tasks in a logical order and indicate which tasks to do first.
- Provide accurate information. If there is a need to deviate from the checklist, the whole process can lose legitimacy.

Benefits of pre-arrival and departure checklists include:

- Assurance that regulatory requirements are met and that the required tests are performed prior to operating a vessel in Washington.
- Ability to ensure tasks are completed by assigning pre-arrival and departure checklists by duty or station.
- Ability to keep track of completion of long repetitive tasks, allowing officers to focus on the task itself instead of the task list.

What engineering equipment must be tested and when?

These tests should be conducted within **12 hours** prior to entering or operating in Washington waters. Systems required to be tested under U.S. law are marked with an asterisk *.

STEERING GEAR*

Inspect the primary and secondary steering gear. Test the remote steering gear control system, each steering position on the bridge, rudder angle indicators, and alarms. Test for full movement of the rudder. Conduct emergency steering drill 48 hours prior to entry.

MAIN PROPULSION MACHINERY*

Test main propulsion machinery ahead and astern.

ELECTRICAL SYSTEMS*

Test standby and emergency generators to ensure they are functioning properly. You should maneuver with at least two diesel generators on line, with one in standby and ready for immediate service.

FUEL OIL SYSTEMS

Verify that primary and back-up fuel pumps are proven operational and the fuel oil settler and service tanks are filled with adequate, clean oil for the entire transit through state waters.

LUBE OIL SYSTEMS

Verify primary and back-up lube oil systems, including pumps, piping, valves, coolers, and switching mechanisms are operational.

OIL STRAINERS

Ensure that all fuel and lube oil strainers are cleaned and ready for use. Manually cycle automatic self-cleaning strainers prior to maneuvering.

COOLING WATER SYSTEMS

Verify all seawater and freshwater cooling, primary and backup circulating systems are operational. This includes pumps, lines, valves, coolers, and automatic and manual switching mechanisms. Ensure that seawater strainers are clean and high/low suctions used appropriately.

CONTROL/START AIR SYSTEMS

Verify control and starting air system tanks are full, all primary and back-up air compressors are operational, and condensate in both systems has been properly drained.

INTERNAL CONTROL COMMUNICATIONS AND ALARMS*

Test all internal vessel control communications and vessel control alarms.

EMERGENCY LIGHTING AND POWER*

Test all storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.

Additional Information

- Focus on Pre-arrival & Departure Checklists for Bridge Officers
- Spills Program vessel information: <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Guidance-for-oil-industry/Vessel-information>
- Gawande, Atul. The Checklist Manifesto: How To Get Things Done. Picador, 2010.



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To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at ecyadacoordinator@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341