



Fleet Safety Manual

10.B.1 - MAINTENANCE OF LIFTING APPLIANCES AND CARGO HANDLING GEAR

1 PURPOSE

- a) To ensure the continued functionality, safety and reliability of the vessel's cargo gear by regular testing and inspection.
- b) To ensure all of the vessel's lifting appliances and associated gear is identified, inspected, tested and maintained in accordance with the [Canada Shipping Act \(CSA\) 2001- Cargo, Fumigation and Tackle Regulations](#).
- c) To ensure that all devices not defined as cargo gear in the [CSA - 2001 Cargo, Fumigation and Tackle Regulations](#) that are aboard the vessel and are capable of lifting (such as lifeboat davits and engineroom chain falls), or devices brought aboard the vessel by external parties for the purpose of lifting are subject to regular inspection.

2 RESPONSIBILITIES

2.1 SENIOR DECK OFFICER

- a) The Senior Deck Officer is responsible for ensuring that all cargo gear, lifting machinery, etc. are identified, certified and properly maintained aboard the vessel. The Senior Deck Officer is also responsible to maintain the proper records.

3 INSTRUCTION

3.1 CARGO GEAR

- a) Each vessel shall maintain a register listing each piece of cargo gear showing the date of the last test and the safe working load. This shall include all hoist, chain blocks, rope blocks, straps, eyebolts, shackles, etc. They shall all be marked or tagged with their safe working load.
- b) All cargo handling gear shall have written instructions for the inspections, testing and maintenance of that system.
- c) Any person operating any lifting machinery or power mobile equipment in a working area shall comply with every notice and sign applicable to the operation of the appliance or equipment placed in the working area.

- d) No materials handling equipment shall be used or operated with a load in excess of its safe working load.

3.2 LIFTING APPLIANCES

- a) All lifting appliances shall have a thorough examination annually by a competent person. They shall also be given a load test and thorough examination at least once every five (5) years.
- b) Chains made of malleable cast iron, also chains, rings, hooks, shackles, and swivels made of mild steel, and all pulley blocks shall be thoroughly examined once every twelve (12) months at a minimum.
- c) All wire ropes shall have a test certificate prior to being put into service. Every wire rope in service shall be thoroughly examined annually by a competent person or, every six (6) months if the rope passes over a drum or sheave. A competent person who thoroughly examines a wire rope shall annotate the register accordingly. If there is a broken wire, the wire rope shall be inspected by an expert person on the day of its intended use to determine if it is safe for use.
- d) Before being used and / or any time damage is suspected, the lifting machinery shall be visually inspected by the supervisor of the operations to ensure:
- Free rotation of sheaves
 - Wires free of excessive wear and damage
 - Hooks, shackles, pennants, and swivels free of excessive wear and damage
 - A lubrication routine shall be put in place and recorded; any defects or deficiencies are to be brought to the relevant supervisor's attention.
- e) Equipment not subject to the [CSA 2001- Cargo, Fumigation and Tackle Regulations](#), but used aboard for lifting and maintenance where the load can exceed 455 kg shall be inspected in the same manner as equipment subject to the [CSA 2001- Cargo, Fumigation and Tackle Regulations](#) and shall be entered in the *CCG Register of Lifting Appliances and Cargo Handling Gear*.
- f) Lifeboat and Rescue Boat Davits are subject to inspection and testing under the *Life Saving Equipment Regulations* – Procedure 10.B.2.
- g) All workboat and barge davits not covered in 3.2 (f) above shall be tested by a competent person to 125% of SWL before the davit is used for the first time and after replacement, modification or repair of any stress-bearing part, unless the part is mechanically detachable and has been tested and certified separately from the davit and at least once every five (5) years or in accordance with manufacturers specifications. The davit passes the test when the following conditions have all been met:
- the means provided on all winches to stop and hold the load in position are effective;
 - the mechanical brakes are in good condition, emergency stopping devices fitted on winches are effective; and
 - no defects or signs of permanent deformation are detected

- h) All workboat and barge davits not covered in 3.2 (f) above shall be thoroughly examined by a competent person at least once every year after it is tested. The davit passes examination when the following conditions have all been met:
- certificates have been issued for the loose gear used with the davit;
 - the parts that align and swivel under load are free;
 - the mechanical, electrical, gearing, hydraulic and pneumatic systems are in good working order;
 - parts are not affected by corrosion to the extent that they cannot be opened; and
 - no defects or signs of permanent deformation are detected.
- i) Inspections aboard Canadian Coast Guard (CCG) vessels are to be performed by a competent person. For the purposes of this procedure, a competent person is any person holding a certificate of competency as master, a chief mate, first class engineer or second class engineer or any responsible person having the experience necessary to allow him or her to carry out the work of inspections satisfactorily.

3.3 ACCOMMODATION LADDERS

- a) Thorough examination by a competent person at least once per year.
- b) A record of examination to be provided by the competent person, including measurements taken at intervals not exceeding five (5) years of any corrosion, deformation, or significant wear in structural or moving parts.
- c) This record shall be kept onboard the vessel in the appropriate section of the *CCG Register of Lifting Appliances and Cargo Handling Gear*.

3.4 RECORDS

- a) The *Canadian Coast Guard Register of Lifting Appliances and Cargo Handling Gear* shall be kept and maintained under the Senior Deck Officer's responsibility as per instructions inside the front cover.
- b) T2 or T3 certificates are to be attached to the register under the applicable equipment headings
- c) T4 certificates for all attached equipment currently in use are to be attached to the register under their respective headings and marked with their location.
- d) T4 certificates for gear taken out of use are to be removed from the register or clearly marked REMOVED FROM SERVICE if certificate applies to more than one item
- e) T4 certificates for loose equipment are to be attached to the register and marked e.g. spare 15t hook
- f) T5 certificates for wires are to be marked with the date they were put in service and location.
- g) T5 certificates that apply to more than one wire are to be copied, marked and attached to the register under the applicable heading. Certificates for wires taken out of service are to be removed from the register.
- h) This register shall be retained onboard for five (5) years after the most recent entry.

3.5 GENERAL

- a) When a spool or roll of wire rope is received on board, a T5 certificate shall accompany it. The spool or roll is to be marked with the certificate number.
- b) All cargo gear sent for testing shall be clearly marked before being shipped. When gear is returned from testing, or new gear received on board, the T4 certificate shall be checked to ensure gear can be clearly identified with appropriate certificate.
- c) If gear is transferred to another vessel a copy of the original T4 shall be sent with the shipping notice
- d) The Commanding Officer shall report any alteration in vessel's cargo gear upon production of the register to an inspector
- e) Any defective or suspect equipment shall be removed from use and tagged as such. If this equipment is beyond repair it shall be disposed of in the proper manner.

4 DOCUMENTATION

- Safe Working Load Markings
- Site-Specific Work Instructions and Checklists
- Records of Inspections
- CCG Register of Lifting Appliances and Cargo Gear
- T2, T3, T4, T5 Certificates
- CCG Fleet Guide - Tackle