

load lines, international convention on load lines



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UNITED STATES COAST GU...



USCG Load Line Regulations and Policies

(46 CFR parts 42--47) (46 USC chapter 51)

Overview

The principal Coast Guard office responsible for load line regulations and technical policy is the Naval Architecture Division (CG-ENG-2).

In general, most commercial U.S. vessels must have a valid load line certificate when venturing outside the U.S. Boundary Line (<https://dco.uscg.mil/CG-ENG-2/BoundaryLine/>), whether on a domestic or international voyage. Domestic voyages are coastwise, offshore, or high seas voyages that return directly to a U.S. port (*including "voyages to nowhere"*).

There are a few limited categories of vessels excluded from load line requirements. For example, small passenger vessels (i.e., less than 100 gross tons and inspected under Subchapter T) that only operate on domestic voyages are excluded. Refer to 46 USC 5102 for vessel applicability specifics.

What vessels are required to have a load line? (</Portals/9/DCO%20Documents/5p/5ps/Design%20and%20Engineering%20Standards/Naval%20Architecture%20Division/Load%20Lines/LL.US%20Vessels%20Reqd%20to%20have%20Load%20Lines.pdf?ver=2018-06-14-155644-530>)

IMPORTANT NOTE CONCERNING U.S. FISHING VESSELS: Prior to July 1st, 2013, all U.S. fishing vessels were statutorily excluded from domestic load line regulations, regardless of size or length (although some fishing vessels that also process their catch beyond certain stages are required to obtain load lines).

However, in 2012, Congress revoked that exclusion for new fishing vessels built on/after July 1st, 2013.

Consequently, U.S. fishing vessels built on/after 1 July 2013, that are 79 feet or longer, and that operate outside the Boundary Line, are required to have a load line.

Load line assignment includes pre-construction review and approval of plans by the assigning authority. Therefore, after 1 July 2013, fishing vessel designers/builders who intend to re-use construction plans for previously-built fishing vessels are cautioned that the plans might not comply with all load line requirements. If the owner intends to operate the new vessel outside the Boundary Line, then designers/builders are advised to submit the plans to the assigning authority in a timely fashion.

Existing fishing vessels (i.e., built before 1 July 2013) remain exempted from load lines for the time being. However, beginning on 1 January 2020, fishing vessels 25 years and older (or that undergo a major conversion prior to that date) will have to meet the requirements of an alternate load line compliance program to ensure their continued seaworthiness. The safety requirements for this alternate program will be developed in cooperation with the commercial fishing industry and established by future regulation. ("Built" for these purposes means the date on which the vessel's keel is laid, or the assembled weight of the vessel is at least 50 metric tons (49.1 long tons) or one percent of the estimated mass of all structural material, whichever is less.)

How is load line length measured? (<https://dco.uscg.mil/LLLength/>)

Where is the Boundary Line? (<https://dco.uscg.mil/CG-ENG-2/BoundaryLine/>)

Purpose of Load Line Assignment

The purpose of load line assignment is to ensure the seaworthiness of the intact (undamaged) vessel. This is accomplished by:

- Ensuring a robust hull that can withstand severe sea conditions
(i.e., structural design, construction, and maintenance)
- Ensuring weathertight & watertight integrity
(i.e., coamings; exposed doors, hatches, hull valves, etc, are in good working condition)
- Ensuring that the vessel has reserve buoyancy and is not overloaded
(by limiting the maximum loaded draft)
- Ensuring that the vessel has adequate stability for all loading & operating conditions
(by approved stability documentation & instructions)
- Ensuring rapid drainage of water on deck (boarding seas)
(by adequate arrangement of freeing ports in bulwarks)
- Ensuring safety of crew while working on deck
(by increased freeboard to reduce boarding seas, guardrails)
- Ensuring that modifications to vessel do not compromise seaworthiness
(modifications must be approved by LL assigning authority)
- Periodic inspections (afloat and dry docked) to verify that the above are properly maintained
(by LL assigning authority)

Obtaining a Load Line

International load line certificates are issued to vessels that meet the requirements of the IMO International Convention on Load Lines (ICLL); ICLL certificates are required on U.S. vessels that go on voyages to foreign ports or waters.

Domestic load line certificates are issued to vessels that meet the requirements of U.S. load line regulations (which are found in 46 CFR Subchapter E). With minor exceptions, the U.S. requirements for an unrestricted domestic load line (suitable for high seas voyages) are the same as the requirements for an international ICLL load line. For this reason, an ICLL certificate is acceptable in lieu of a domestic certificate.

Load line certificates (domestic or ICLL) are issued on behalf of the United States by the American Bureau of Shipping or one of several other USCG-approved classification societies. The choice of assigning authority is made by the vessel owner/operator. The Coast Guard itself does not issue load lines other than a "single voyage exemption certificate."

In order to be issued a load line (whether domestic or international ICLL), the vessel must be constructed to meet the load line requirements. This entails pre-construction review and approval of the vessel's design by the assigning authority. Surveyors then periodically visit the shipyard to verify that it is being constructed according to the approved design.

Upon completion of construction, the vessel is inclined so that its stability documents can be approved and issued. The freeboard assignment is calculated, and the load line marks are inscribed on the hull. Upon final verification that all of these steps have been properly accomplished, the vessel is issued a load line certificate.

A load line certificate is normally issued for a 5-year term, subject to annual "topside" surveys to verify that hatch covers, doors, vent covers, and other critical closures are in good working condition, and that there have not been any damage or unauthorized modifications that would compromise the vessel's seaworthiness. At the end of the 5-year term, the vessel must be dry docked to inspect the underwater hull, seachests and valves, etc, before a new certificate can be issued.

Load Line Enforcement and Violations

U.S. vessel owners and operators are subject to fines and penalties if a vessel is overloaded such that the load line marks are submerged, or the vessel is operated in violation of any restrictions on its certificate. Penalties are set forth in 46 USC 5116.

Foreign vessels in U.S. waters are required to have a valid international (ICLL) load line certificate. A foreign vessel may be detained in port if the Coast Guard determines that it is overloaded, or unseaworthy due to poor condition. The vessel won't be released to depart until the deficiencies have been corrected: excess cargo is offloaded, repairs have been made and a surveyor from the assigning authority has attended the vessel to confirm its compliance with ICLL regulations.

Origin of Load Lines

Historically, the concept of a load line evolved during the 1870s in Great Britain to guard against merchant ships being overloaded. Lloyd's Register established a minimum freeboard requirement for its classed ships, to ensure that a ship had good reserve buoyancy in heavy boarding seas. After considerable persuasive efforts by Samuel Plimsoll, Parliament extended the requirement to

all British merchant ships; thus was born the "Plimsoll mark." Originally, only British ships were required to have a load line, but in 1906, Parliament extended the requirement to include all foreign ships in British waters.

Consequently, similar load line requirements were individually adopted by other maritime nations, until they were internationally standardized in the Load Line Convention of 1930. The present International Convention on Load Lines (ICLL) was drawn up in 1966 and entered into force on July 21, 1968. It is periodically amended via the Load Line Protocol of 1988 (in force since February 3, 2000). The Convention and its Protocol are administered by the International Maritime Organization (IMO), a specialized agency of the United Nations. Vessels of countries signatory to the Convention are required to have an ICLL certificate for international voyages. As of May 2016, 161 countries (representing 98.5% of world tonnage) are signatory to the 1966 ICLL, and 103 countries (representing 95.3% of world tonnage) are signatory to the 1988 LL Protocol.

The United States is a signatory to both the original 1966 ICLL and the 1988 LL Protocol, and therefore U.S. vessels engaged on international voyages are subject to the Convention, as modified by the Protocol.

Load line regulations for U.S. vessels operating solely on domestic routes are developed by the Coast Guard, and reflect the less-severe operating environments of coastwise service. Special load line standards apply to vessels operating on certain coastwise routes and on the Great Lakes.

USCG Load Line Regulations and Policy Documents

46 CFR Subchapter E, "Load Lines" (parts 41 thru 47)

The current U.S. load line regulations (domestic and international) are found in 46 CFR Subchapter E, "Load Lines" (parts 42 thru 47) (<https://www.ecfr.gov/cgi-bin/text-idx?&tpl=/ecfrbrowse/Title46/46CsubchapE.tpl>).

The statutory basis for the regulations comes from chapter 51 of Title 46 of the U.S. Code (46 USC chapter 51). However, some of the CFR regulations have been superseded by the recodification of 46 USC in 1988, which revamped certain load line requirements (particularly vessel applicability and penalties for overloading). Therefore, until the CFR regulations are revised, 46 USC chapter 51 must also be consulted.

For international (ICLL) load lines, the CFR regulations incorporate the original requirements of the 1966 ICLL. However, the regulations have not yet updated with respect to recent ICLL revisions. Therefore, the ICLL Protocol must be consulted for the most-current international requirements.

Marine Safety Manual, Vol. IV, Chapter 6.F, "Load Lines"

This chapter of the Marine Safety Manual presents policies and guidance on various load line issues. However, this chapter has not been updated since 1990; therefore, the *"Load Line Policy Notes"* below must be consulted for later information. This volume of the MSM is posted [here](https://media.defense.gov/2017/Mar/29/2001723819/-1/-1/0/CIM_16000_9.PDF) (https://media.defense.gov/2017/Mar/29/2001723819/-1/-1/0/CIM_16000_9.PDF).

Marine Safety Manual, Vol. V, Chapter B11, "Load Line Violation Investigation"

This chapter of the Marine Safety Manual presents direction to Coast Guard officials on the investigation of suspected load line violations. This chapter was updated in April, 2008, and supersedes the previous investigation chapter. This volume of the MSM is posted at www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf (https://www.uscg.mil/directives/cim/16000-16999/CIM_16000_10A.pdf).

"Load Line Technical Manual"

The Load Line Technical Manual sets forth the technical procedures for evaluating, calculating and assigning international ICLL load lines, using USCG and ABS policies where the Convention leaves certain requirements "to the satisfaction of the Administration" or is open to interpretation. It covers USCG policy up to 1990.

"Load Line Technical Manual" (/CG-ENG-2/LLTM)

"Load Line Policy Notes"

The Load Line Policy Notes encompass all the current USCG load line policies that have evolved since the previous revision of the MSM Chapter 6.F and the LL Technical Manual. The Policy Notes also discuss the various domestic U.S. load line regimes (i.e., special service, Great Lakes, subdivision load lines for passenger vessels, etc.).

"Load Line Policy Notes" (*LLPN*) (/Portals/9/DCO Documents/5p/5ps/Design and Engineering Standards/Naval Architecture Division/Load Lines/LLPN.pdf?ver=2018-06-14-155644-780)

Load Line NVICs

A Navigation and Vessel Inspection Circular (NVIC) provides detailed guidance about the enforcement or compliance with a certain Federal marine safety regulations and Coast Guard marine safety programs. The full index of in-force NVICs is posted at www.uscg.mil/hq/cg5/nvic.

The following NVICs specifically pertain to load lines:

NVIC	Title
7-94 (/Portals/9/DCO%20Documents/5p/5ps/NVIC/1994/NVIC%207-94%20Full%20Version.pdf)	Guidance on the Passenger Vessel Safety Act of 1993
8-91 (/Portals/9/DCO%20Documents/5p/5ps/NVIC/1991/n8-91.pdf)	Initial & Subsequent Inspection of Uncertificated Offshore Supply Vessels, Including Liftboats

<p>1-88 (/Portals/9/DCO%20Documents/5p/5ps/NVIC/1988/n1-88.pdf)</p>	<p>International Load Line Certificates for Small Passenger Vessels Operating Within 20 Miles of the Mouth of a Harbor of Safe Refuge</p>
<p>1-88 (CH-1) (/Portals/9/DCO%20Documents/5p/5ps/NVIC/1988/n1-88ch1.pdf)</p>	<p>International Load Line Certificates for Small Passenger Vessels Operating Within 20 Miles of the Mouth of a Harbor of Safe Refuge (Change 1)</p>
<p>10-86 (/Portals/9/DCO%20Documents/5p/5ps/NVIC/1986/n10-86.pdf?ver=2017-07-13-103958-573)</p>	<p>Equivalence to Minimum Bow Height Requirements for Load Line Assignment</p>

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§ 5102. Application

(a) Except as provided in subsection (b) of this section, this chapter applies to the following:

- (1) a vessel of the United States,
- (2) a vessel on the navigable waters of the United States,
- (3) a vessel—
 - (A) owned by a citizen of the United States or a corporation established by or under the laws of the United States or a State; and
 - (B) not registered in a foreign country.
- (4) a public vessel of the United States,
- (5) a vessel otherwise subject to the jurisdiction of the United States.

(b) This chapter does not apply to the following:

- (1) a vessel of war,
- (2) a recreational vessel when operated only for pleasure,
- (3) a fishing vessel, unless the vessel is built after July 1, 2013,
- (4) a fish processing vessel of not more than 5,000 gross tons as measured under section 14502 of this title, or an alternate tonnage measured under section 14302 of this title as prescribed by the Secretary under section 14104 of this title that—
 - (A)(i) was constructed as a fish processing vessel before August 16, 1974; or
 - (ii) was converted for use as a fish processing vessel before January 1, 1983; and
 - (B) is not on a foreign voyage.
- (5) a fish tender vessel of not more than 500 gross tons as measured under section 14502 of this title, or an alternate tonnage measured under section 14302 of this title as prescribed by the Secretary under section 14104 of this title that—
 - (A)(i) was constructed, under construction, or under contract to be constructed as a fish tender vessel before January 1, 1980; or
 - (ii) was converted for use as a fish tender vessel before January 1, 1983; and
 - (B)(i) is not on a foreign voyage; or
 - (ii) is not engaged in the Aleutian trade (except a vessel in that trade assigned a load line at any time before June 1, 1992).
- (6) a vessel of the United States on a domestic voyage that does not cross the Boundary Line, except a voyage on the Great Lakes.

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(7) a vessel of less than 24 meters (79 feet) overall in length.

(8) a public vessel of the United States on a domestic voyage.

(9) a vessel excluded from the application of this chapter by an international agreement to which the United States Government is a party.

(10) an existing vessel of not more than 150 gross tons as measured under section 14502 of this title, or an alternate tonnage measured under section 14302 of this title as prescribed by the Secretary under section 14104 of this title that is on a domestic voyage.

(11) a small passenger vessel on a domestic voyage.

(12) a vessel of the working fleet of the Panama Canal Commission not on a foreign voyage.

(c) On application by the owner and after a survey under section 5105 of this title, the Secretary may assign load lines for a vessel excluded from the application of this chapter under subsection (b) of this section. A vessel assigned load lines under this subsection is subject to this chapter until the surrender of its load line certificate and the removal of its load line marks.

(d) This chapter does not affect an international agreement to which the Government is a party that is not in conflict with the International Convention on Load Lines currently in force for the United States.

(Pub. L. 99-509, title V, §5101(2), Oct. 21, 1986, 100 Stat. 1914; Pub. L. 101-595, title VI, §602(d), Nov. 16, 1990, 104 Stat. 2991; Pub. L. 104-324, title VII, §719, Oct. 19, 1996, 110 Stat. 3938; Pub. L. 107-295, title IV, §436(a), Nov. 25, 2002, 116 Stat. 2129; Pub. L. 111-281, title VI, §604(d)(1), Oct. 15, 2010, 124 Stat. 2965; Pub. L. 112-213, title III, §305(d)(1), Dec. 20, 2012, 126 Stat. 1565.)

HISTORICAL AND REVISION NOTES

Revised section 5102

Source: Section (U.S. Code) 46 App. U.S.C. 86b, 86c, 88.

a result of bilateral agreements, licen international law or other means, inclu deepwater port or outer continental she ties located in areas subject to the jur United States.

Section 5102(b) lists the specific exemp line requirements. The specific exem grouped as follows:

(a) Vessel type (ships of war, pleas ing vessels, small passenger vessels o ages);

(b) Area of operation (rivers, harbor etc.);

(c) Minimum size (length); and

(d) Treaty exclusions.

Clause (1) exempts vessels of war fro requirements.

Clause (2) exempts recreational vessel for pleasure from load line requirements.

Clause (3) exempts fishing vessels fro requirements.

Clauses (4) and (5) exempt certain ex essing and fish tender vessels not on a from load line requirements. The excep to those vessels not on international vo compliance with United States obligat International Load Line Convention.

Clause (6) exempts from load line r U.S. vessels operating on domestic voy Boundary Line, as defined in section 21 except vessels operating on the Great L.

Clause (7) exempts all vessels that a meters (79 feet) in length from load li whether on international or domestic vo

Clause (8) exempts from load line req public vessels that are on domestic voya

Clause (9) exempts from load line req vessels which have been excluded fro ments "by specific action of a treaty States." The only current treaty whic sels from load line requirements is the tween the United States of America an of Canada Concerning Load Lines (49 S entered into force on August 11, 1934.

Clause (10) exempts from load line r isting U.S. vessels that are under 150 g engaged on a domestic voyage. This i provision, continuing the existing exen vessels. Vessels built after January l marked with a load line, however, if t feet long and do not qualify for any o

Clause (11) exempts small passenger