

§ 180.505

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specification, has a signed test report, is marked to denote this passage, and is considered qualified for hazardous materials transportation under this subchapter.

Qualification of	Tests and inspections	§ 180.509 (*)
Tank	Visual Inspection	d
	Structural Integrity Inspection.	e
	Thickness Test: Note 1.	f
	Safety System Inspection.	h
Service Equipment ...	Service Equipment ...	k
Coating/lining	Internal Coatings and Linings.	i

NOTE 1: Subparagraph (f)(2) may require thickness tests at an interval different from the other items for qualification of the tank.

Railworthy, Railworthiness for a tank car means that the tank, service equipment, safety systems, and all other components covered by this subchapter conform to the HMR, and are otherwise suitable for continued service and capable of performing their intended function until their next qualification.

Reactive to the tank or service equipment means a material that, in contact with the inner shell of the tank, or with the service equipment, may react to produce heat, gases, and/or pressure which could substantially reduce the effectiveness of the packaging or the safety of its use.

Reinforced tank shell butt weld means the portion of a butt weld covered by a reinforcing pad.

Reinforcing pad means an attachment welded directly to the tank supporting major structural components for the purpose of preventing damage to the tank through fatigue, overstressing, denting, puncturing, or tearing.

Reliability means the quantified ability of an item or structure to operate without failure for the specified period of its design life or until its next qualification.

Representation means attesting through documenting, in writing or by marking on the tank (or jacket), that a tank car is qualified and railworthy. See also §§ 180.511 and 180.517(b).

Safety system means one or more of the following: Thermal protection systems, insulation systems, tank head puncture resistance systems, coupler

vertical restraint systems, and systems used to protect discontinuities (e.g., skid protection and protective housings) as required under this subchapter.

Service equipment means equipment used for loading and unloading (including an interior heating system), sampling, venting, vacuum relief, pressure relief, and measuring the amount of lading or the lading temperature.

Service equipment owner means the party responsible for bearing the cost of the maintenance of the service equipment.

Tank car owner means the person to whom a rail car's reporting marks are assigned, as listed in the Universal Machine Language Equipment Register (UMLER).

Tank car tank means the shell, heads, tank shell and head weld joints, attachment welds, sumps, nozzles, flanges, and all other components welded thereto that are either in contact with the lading or contain the lading.

[77 FR 37986, June 25, 2012, as amended at 81 FR 35546, June 2, 2016; 89 FR 52994, June 24, 2024]

§ 180.505 Quality assurance program.

The quality assurance program requirements of § 179.7 of this subchapter apply.

§ 180.507 Qualification of tank cars.

(a) Each tank car marked as meeting a "DOT" specification or any other tank car used for the transportation of a hazardous material must meet the requirements of this subchapter or the applicable specification to which the tank was constructed.

(b)(1) Tank cars prescribed in the following table are no longer authorized for construction but may remain in hazardous materials service provided they conform to all applicable safety requirements of this subchapter:

TABLE 1 TO PARAGRAPH (b)(1)

Specification prescribed in the current regulations	Other specifications permitted	Notes
105A200W	105A100W	1
105A200ALW	105A100ALW	1

NOTE 1 TO TABLE 1 TO PARAGRAPH (B)(1): Tanks built as Specification DOT 105A100W

or DOT 105A100ALW may be altered and converted to DOT 105A200W and DOT 105A200ALW, respectively.

(2) [Reserved]

(3) Specification DOT-113A175W, DOT-113C60W, DOT-113D60W, and DOT-113D120W tank cars may continue in use, but new construction is not authorized.

(4) Class DOT 105A and 105S tank cars used to transport hydrogen chloride, refrigerated liquid under the terms of DOT-E 3992 may continue in service, but new construction is not authorized.

(5) Specification DOT-103A-ALW, 103AW, 103ALW, 103ANW, 103BW, 103CW, 103DW, 103EW, and 104W tank cars may continue in use, but new construction is not authorized.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended at 68 FR 48572, Aug. 14, 2003; 77 FR 37987, June 25, 2012; 87 FR 79785, Dec. 27, 2022]

§ 180.509 Requirements for inspection and test of specification tank cars.

(a) *General.* Each tank car owner must ensure that a tank car facility:

(1) Inspects and tests each item according to the requirements specified in this section;

(2) Evaluates each item according to the acceptable results of inspections and tests specified in §180.511;

(3) Marks each tank car as specified in §180.515 that is qualified to transport hazardous materials;

(4) Prepares the documentation as required by §180.517 for each item qualified under this section. A copy of the documentation required by §180.517 must be sent to the owner as appropriate and according to the owner's instructions.

(b) *Conditions requiring qualification of tank cars.* Without regard to the quali-

fication compliance date requirements of any paragraph of this section, an owner of a tank car or an internal coating or lining must ensure an appropriate inspection and test according to the type of defect and the type of maintenance or repair performed if:

(1) The tank car shows evidence of abrasion, corrosion, cracks, dents, distortions, defects in welds, or any other condition that may make the tank car unsafe for transportation,

(2) The tank car was in an accident and shows evidence of damage to an extent that may adversely affect its capability to retain its contents or to otherwise remain railworthy.

(3) The tank bears evidence of damage caused by fire. (4) The Associate Administrator for Railroad Safety, FRA, requires it based on the existence of an objectively reasonable and articulable belief that a tank car or a class or design of tank cars may be in an unsafe operating condition.

(c) *Frequency of inspection and tests.* Each tank car shall have an inspection and test according to the requirements of this paragraph.

(1) For Class 107 tank cars and tank cars of riveted construction, the tank car must have a hydrostatic pressure test and visual inspection conforming to the requirements in effect prior to July 1, 1996, for the tank specification.

(2) For Class DOT 113 tank cars, see §173.319(e) of this subchapter.

(3) Fusion welded tank cars must be inspected and tested to be qualified and maintained in accordance with the following table. All qualification requirements need not be done at the same time or at the same facility.

FREQUENCY OF QUALIFICATION INSPECTION AND TESTS

Section 180.509 (*)	Description	Maximum interval
D	Visual inspection	10 years.
E	Structural integrity inspection	10 years.
F	Thickness test	See §180.509(f).
H	Safety Systems	10 years.
I	Internal coating or lining (for materials corrosive or reactive to the tank) (See definitions at § 180.503).	See § 180.509(i).
J	Leakage pressure test	After reassembly.
K	Service equipment (including pressure relief device)	See §180.509(k).

(d) *Visual inspection.* At a minimum, each tank car facility must visually in-

spect the tank externally and internally as follows: