

## Cargo Tanks: Inspections and Tests

### Description:

Cargo tanks used for transporting LP-gases must be tested and inspected by U.S. DOT Registered Inspectors. A pressure tests (hydrostatic tests), and internal inspection, for cargo tanks equipped with manways, must be performed every 5 years after the manufacturer's original test. External visual inspections and leakage inspections must be performed annually after the cargo tank manufacturer's original test.

### Regulatory Reference

49 CFR § 171.8	Definitions [Design Certifying Engineer and Registered Inspector]
49 CFR § 173.315(k)	[Requirements for continued use of a non-specification cargo tank]
49 CFR § 180.407	Requirements for test and inspection of specification cargo tanks
49 CFR § 180.409	Minimum qualifications for inspectors and testers
49 CFR § 180.411	Acceptable results of tests and inspections

### Applies to:

U.S. DOT cargo tank testing and inspection requirements apply to all cargo tanks used to transport LP-gas.

### General Requirements:

- (1) A cargo tank may not be filled, offered for transportation, or transported after the due date of a required test or inspection unless the required tests and inspections are successfully completed. The person performing or witnessing the test or inspection must meet the requirements for U.S. DOT Registered Inspectors listed in 49 CFR § 180.409.

- (2) Test and Inspection Requirements for MC 330 and MC 331 Cargo Tanks

Test or Inspection Type	Inspection or Test Interval (After Manufacturer's Original Test Date)
External Visual Inspection	1 year
Leakage Test	1 year
Pressure Test (Hydrostatic)	5 years
Internal Visual Inspection (if tank equipped with a manhole)	5 years

- (3) Non-Specification cargo tanks operated in intrastate service under the provisions of 49 CFR 173.315(k) must be tested and inspected as required for MC 330 and MC 331 specification cargo tanks as shown in the chart in the previous paragraph. (See Compliance Guide DOT No. 8)

- (4) *Registered Inspector* means a person registered with the Department in accordance with subpart F of 49 CFR 107 who has the knowledge and ability to determine whether a cargo tank conforms with the applicable DOT specification. In addition, Registered Inspector means a person who meets, at a minimum, any one of the following:
- (a) Has an engineering degree and one year of work experience.
  - (b) Has an associate degree in engineering and two years of work experience.
  - (c) Has a high school diploma or General Equivalency Diploma) and three years of work experience.
  - (d) Has at least three years experience in performing the duties of a Registered Inspector by September 1, 1991, and was registered with the Department by December 31, 1995.
- (5) The month and year and inspection type must be marked on the cargo tank for the most recent cargo tank test or inspection.
- (6) All required cargo tank tests and inspections must be documented and certified by the Registered Inspector. Test and inspection records must be retained in the files of the cargo tank owner/operator.
- (7) A cargo tank, which fails a prescribed test or inspection, must:
- (a) Be repaired and retested in accordance with §180.413 (repairs must be done by a U.S. DOT registered repair facility holding a valid National Board Certificate of Authorization for the use of the National Board "R" stamp); or
  - (b) Be removed from hazardous materials service and the specification plate removed, obliterated or covered in a secure manner.
- (8) Without regard to scheduled cargo tank test and inspection requirements, a cargo tank must be tested and inspected prior to further use if:
- (a) The cargo tank shows evidence of bad dents, corroded or abraded areas, leakage, or any other condition that might render it unsafe for transportation service.
  - (b) The cargo tank has been in an accident and has been damaged to an extent that may adversely affect its lading retention capability.
  - (c) The cargo tank has been out of hazardous materials transportation service for a period of one year or more. Each cargo tank that has been out of hazardous materials transportation service for a period of one year or more must be pressure tested in accordance with §180.407(g) prior to further use.
  - (d) The cargo tank has been modified from its original design specification.
  - (e) The U.S. Department of Transportation so requires based on the existence of probable cause that the cargo tank is in an unsafe operating condition.

### **Training Requirements:**

U.S. DOT registered inspectors must have specific training as shown above that qualifies them to perform required tests and inspections. There are no specific training requirements regarding cargo tank inspection and testing for most propane industry employees; however, the testing and

inspection requirements and associated cargo tank markings should be included in the initial hazmat employee training for drivers, supervisors, managers, and other employees whose specific functions include cargo tank inspection, record keeping, fleet management, and other similar duties.

### **Maintenance and Review**

Many operating companies maintain a cargo tank inspection and testing calendar, and schedule tests and inspections for months outside of the peak delivery season. Cargo tank files should be periodically examined to verify that required tests and inspections are properly documented. Documentation should also include the qualifications of U.S. DOT Registered Inspectors. Manager, supervisors and employees should be trained to monitor inspection and test dates, markings, and circumstances that would trigger tests or inspections outside of the regular schedule.

### **Additional Information and Resources**

*Propane Delivery*, Certification Area 2.0, Certified Employee Training Program, National Propane Gas Association, Lisle, IL

*Initial OSHA and DOT Training: For the Handling and Transport of Hazardous Materials*, Propane Education and Research Council, Washington, DC