LEAKAGE TEST
49 CFR, 180.407(h)

Manufacturer: _______________________________ Year: _______ DOT Spec: _______

Co.#: ___________________ Serial #: ___________________ Test Date: _____ / _____ / ______

Cargo Tank Insulated: ☐ YES ☐ NO  Lined: ☐ YES ☐ NO

<table>
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<tr>
<th>ITEM</th>
<th>REMARKS</th>
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<td>Tank Shell</td>
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<td>Tank Head</td>
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<td>Product Piping</td>
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<td>Tank Welds</td>
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</table>

MAWP or Design Pressure: _______________ x 80% = Test Pressure

Test Pressure Used: _______________ Tank in Dedicated Service? ☐ YES ☐ NO

Leak test performed under requirements of US EPA “Method 27” as contained within 40 CFR Part 60? ☐ YES ☐ NO

Test Pressure maintained for _______________ mins. (Must be held for at least 5 minutes)

Cargo tank returned to service: _____ / _____ / _____ Cargo tank withdrawn from service: _____ / _____ / _____

Inspector’s Name: ___________________________________ CT #: ___________

Inspector’s Address: ___________________________________________

I CERTIFY THAT THE INSPECTION NOTED ON THIS FORM WAS PERFORMED BY ME AND ALL REQUIRED ENTRIES WERE MADE CONCERNING OBSERVATIONS MADE DURING THIS INSPECTION.

________________________________________  __________________________
Inspector’s Signature                      Date

Owner or Authorized Representative’s Signature  __________________________
Date

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(h) Leakage test.

(1) Each cargo tank must be tested for leaks in accordance with §180.407(c). The leakage test must include testing product piping with all valves and accessories in place and operative, except that any venting devices set to discharge at less than the leakage test pressure must be removed or rendered inoperative during the test. All internal or external self-closing stop valves must be tested for leak tightness. Each cargo tank of a multi-cargo tank motor vehicle must be tested with adjacent cargo tanks empty and at atmospheric pressure. Test pressure must be maintained for at least 5 minutes. Cargo tanks in liquefied compressed gas service must be externally inspected for leaks during the leakage test. Suitable safeguards must be provided to protect personnel should a failure occur. Cargo tanks may be leakage tested with hazardous materials contained in the cargo tank during the test. Leakage test pressure must be no less than 80% of MAWP marked on the specification plate, except as follows:

(i) A cargo tank with an MAWP of 690 kPa (100 psig) or more may be leakage tested at its maximum normal operating pressure provided it is in dedicated service or services; or

(ii) An MC 330 or MC 331 cargo tank in dedicated liquefied petroleum gas service may be leakage tested at not less than 414 kPa (60 psig).

(iii) An operator of a specification MC 330 or MC 331 cargo tank, and a non-specification cargo tank authorized under §173.315(k) of this subchapter, equipped with a meter may check leak tightness of the internal self-closing stop valve by conducting a meter creep test. (See appendix B to Part 180.)

(iv) An MC 330 or MC 331 cargo tank in dedicated service for anhydrous ammonia may be leakage tested at not less than 414 kPa (60 psig).

(v) A non-specification cargo tank required by §173.8(d) of this subchapter to be leakage tested, must be leakage tested at not less than 16.6 kPa (2.4 psig), or as specified in 180.407(h)(2).

(2) Cargo tanks used to transport petroleum distillate fuels that are equipped with vapor collection equipment may be leak tested in accordance with the EPA’s “Method 27 – Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure – Vacuum Test,” as set forth in appendix A to 40 CFR Part 60. Test methods and procedures and maximum allowable pressure and vacuum changes are in 40 CFR 63.425(e). The hydrostatic test alternative, using liquid in EPA’s “Method 27 – Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test,” may not be used to satisfy the leak testing requirements of this paragraph. The test must be conducted using air.

(3) A cargo tank that fails to retain leakage test pressure may not be returned to service as a specification cargo tank, except under conditions specified in § 180.411(d).

(4) Cargo tanks used to transport petroleum distillate fuels that are equipped with vapor collection equipment may be leak tested in accordance with the EPA’s “Method 27 – Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure – Vacuum Test,” as set forth in appendix A to 40 CFR Part 60. Test methods and procedures and maximum allowable pressure and vacuum changes are in 40 CFR 63.425(e). The hydrostatic test alternative, using liquid in EPA’s “Method 27 – Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test,” may not be used to satisfy the leak testing requirements of this paragraph. The test must be conducted using air.

(5) The inspector must record the results of the leakage test as specified in § 180.417(b).
ACCEPTABLE RESULTS of TEST and INSPECTIONS  
(49 CFR, 180.411)

(a) **Corroded or abraded areas.**
   The minimum thickness may not be less than that prescribed in the applicable specifications.

(b) **Dents, cuts, digs, and gouges.**
   (See CGA Pamphlet C-6 for evaluation procedures.)
   
   (1) For dents at welds or that include a weld, the maximum allowable depth is ½ inch. For dents away from the welds, the maximum allowable depth is 1/10 of the greatest dimension of the dent, but in no case may the depth exceed one inch.
   
   (2) The minimum thickness remaining beneath a cut, dig, or gouge may not be less than that prescribed in the applicable specification.

(c) **Weld or structural defects.**
   Any cargo tank with a weld defect such as a crack, pinhole, or incomplete fusion, or a structural defect much be taken out of hazardous materials service until repaired.

(d) **Leakage**
   All sources of leakage must be properly repaired prior to returning a tank to hazardous materials service.

(e) **Relief valves.**
   Any pressure relief valve that fails to open and re-close at the prescribed pressure must be repaired or replaced.

(f) **Liner Integrity.**
   Any defect shown by the test must be properly repaired.

(g) **Pressure test.**
   Any tank that fails to meet the acceptance criteria found in the individual specification that applies must be properly repaired.