



FRA-AIP 200203-B

REVIEW DATE: January 1, 2025

1. GRANTEE:

Union Tank Car Company
175 W. Jackson Blvd.
Suite 2100
Chicago, IL 60604

2. PURPOSE AND LIMITATION:

a. This approval authorizes the use of an alternative inspection and test procedure as allowed by 49 CFR 180.509(1) *Alternative inspection and test procedures*. (Referred to below as "Alternative Inspection Program.") This letter provides no relief from the Hazardous Materials Regulations (HMR) other than specifically stated herein. The most recent revision supersedes all previous revisions.

b. The damage tolerance analysis or service reliability assessment performed in the development of this Alternative Inspection Program only considered the hazards and risks associated with the transportation in commerce.

c. Unless otherwise stated herein, this approval consists of this Alternative Inspection Program authorization letter issued to UNION TANK CAR COMPANY.

d. This approval to use an Alternative Inspection Program is non-transferrable.

3. REGULATIONS AFFECTED: 49 CFR § 180.509(e) (1) (iii).

4. BASIS: This approval is based on the application of UNION TANK CAR COMPANY dated March 4, 2002 and revision request dated November 2, 2022, submitted in accordance with § 180.509(1).

5. INSPECTION AND TEST PROCEDURES:

a. Definitions

1. Service Reliability Assessment - the quantified ability of a tank car or component to remain railworthy. A service reliability assessment is developed from in-service data.

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

b. BENCHMARK TESTING - UNION TANK CAR COMPANY shall develop a sampling plan to measure the adequacy of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline with an approved Non-Destructive Testing (NDT) method at the time of manufacture. This does not provide any relief from the requirements of AAR MSRP Section C-III Appendix W. For tank cars lacking these measurements, UNION TANK CAR COMPANY shall perform the required 49 CFR 180.509(c) inspection and tests of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline at the time of the next qualification but not exceeding the maximum allowable interval given in 49 CFR 180.509(c) (3) or the maximum allowable interval permitted by an applicable approved Alternative Inspection Program. The sample size must be determined by following recognized industry sampling standards.

For non-UNION TANK CAR COMPANY built cars, at a minimum, separate benchmark testing must be developed for each underframe manufacturer, and for each different design, as needed.

c. DESIGN LEVEL OF RELIABILITY AND SAFETY - UNION TANK CAR COMPANY shall maintain an analysis (e.g., finite element analysis, damage-tolerance analysis, or service reliability assessment) that the structure will not develop defects that reduce the design level of safety and reliability or fail within its operational life or prior to the next required inspection. UNION TANK CAR COMPANY shall maintain all documentation used to make such determination at its principal place of business and make the data available to the Federal Railroad Administration (FRA) or

an authorized representative of the Department of Transportation upon request.

For non-UNION TANK CAR COMPANY built cars, at a minimum, a separate analysis must be maintained for each underframe manufacturer and for each different design, as needed.

d. SENSITIVITY AND RELIABILITY - UNION TANK CAR COMPANY shall develop and execute a sensitivity and reliability (POD) study to determine the level of reliability, sensitivity, and minimum detectable flaw size for the NDT methods and techniques used to maintain the design level of reliability and safety.

For non-Union Tank Car built cars, at a minimum, a separate POD study must be developed for each underframe manufacturer and for each different design, as needed.

e. CONTROL - UNION TANK CAR COMPANY shall perform the required inspection and test of tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline on a representative subgroup of the fleet covered by this Alternative Inspection Program approval based on the identified crack development and growth rate, utilization, and other factors to ensure continued applicability of this program. All tank cars in this sample must have benchmark testing as defined in section (b) above. These reports shall be made available to FRA or a designated representative of FRA upon request. The sample size must be determined by following recognized industry sampling standards.

For non-UNION TANK CAR COMPANY built cars, at a minimum, separate control sample groups must be developed for each underframe manufacturer and for each different design, as needed.

6. SPECIAL PROVISIONS:

a. A person who is not a holder of this approval who receives a package covered by this Alternative Inspection Program may reoffer it for transportation, provided no modification or change is made to the package or its contents, and it is reoffered for transportation in conformance with this approval and the HMR.

b. A copy of this approval shall be maintained at each

facility where the package is qualified and/or maintained.

c. Marking of each tank car is required and must meet the marking and labeling requirements of 49 CFR Part 172, Subparts D and E. The car must be identified by a stencil or decal placed above the tank car specification number. The stencil must have at least 1 1/2-inch high (38.1 mm) letters and numbers and display "FRA-AIP 200203." Additionally, the car must have the initial qualification year (QUALIFIED) and the next qualification year (DUE). This interval must be developed from the service reliability assessment. The marking must occur at the time of the next shopping by a tank car facility, not to exceed the maximum allowable interval given in 49 CFR 180.509(c)(3) or the maximum allowable interval permitted by an applicable approved Alternative Inspection Program.

7. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this approval and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq.

a. All terms and conditions prescribed in this approval and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

b. Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this approval must receive training on the requirements and conditions of this Alternative Inspection Program in addition to the training required by §§ 172.700 through 172.704.

c. No person may use or apply this Alternative Inspection Program, including the display of its number, when this approval has lapsed or is otherwise no longer in effect.

8. REPORTING REQUIREMENTS:

a. UNION TANK CAR COMPANY shall notify FRA's Associate Administrator for Railroad Safety, Chief Safety Officer, in writing no later than 30 days after any incident involving tank shell butt welds within 60.96 cm (2 feet) of the tank car's bottom longitudinal centerline conducted under terms of this Alternative Inspection Program.

b. UNION TANK CAR COMPANY shall report in writing to

FRA's Associate Administrator for Railroad Safety, Chief Safety Officer, no later than 30 days after notification of occurrence, instances of corrosion damage or tank failure not considered in the damage tolerance analysis or service reliability assessment that adversely affects tank shell butt welds within 60.96 cm (2 feet) of the bottom longitudinal centerline on any Tank Car subject to this Alternative Inspection Program.

c. UNION TANK CAR COMPANY shall maintain a list of tank cars by reporting mark and number operating under this approval to include the status of the above-required marking and shall report this list to the FRA every 5 years, or upon request.

d. UNION TANK CAR COMPANY shall report CONTROL results to the FRA every 5 years, or upon request.

9. LIMITATIONS:

a. If a tank car operating under this approval is transferred from UNION TANK CAR COMPANY to another Tank Car Owner, the tank car will no longer be subject to the relief granted under this approval, and all the above-required stenciling must be removed. The qualification due date must be changed to reflect the new Tank Car Owner's qualification interval in accordance with the new Tank Car Owner's qualification and maintenance program.

10. CANCELLATION

The FRA may rescind this approval for failure to comply with its terms.

Issued in Washington, D.C.:



December 12, 2023

Karl Alexy
Associate Administrator for Railroad Safety
Chief Safety Officer

Address all inquiries to Randy M Keltz Jr., Manager, Tank Car Safety Programs, Federal Railroad Administration, U.S. Department of Transportation, West Building, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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REVISION HISTORY		
REV	DATE	DESCRIPTION
	03/2002	Original approval
A	09/2020	Updated format; added review terms; added control conditions; added limitations;
B	12/2023	Add requirements for applying AIP to non-Union-built tank cars