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Department of Transportation  
Federal Railroad Administration  
[FRA E.O. No. 2, Amendment 2]

Conditional Approval of Use of UTLX Tank Cars

EMERGENCY ORDER  
No. 2

On December 20, 1972, the Federal Railroad Administration (FRA) issued an emergency order under the authority of section 203 of the Federal Railroad Safety Act of 1970 (45 U.S.C. 432) which prohibited the further use by any railroad of certain tank cars numbered as follows: UTLX 83095-83184; UTLX 83267-83339; and UTLX 83341-83449 (37 F.R. 28311). Based on FRA investigations, these cars were found to have a structural inadequacy which results in cracks in the tank shell and the possible leakage of a dangerous material. The unsafe condition constituted an emergency situation involving a hazard of death or injury to persons which warranted the issuance of the emergency order. On February 9, 1973, FRA amended this order to allow movement of these cars in an empty condition to locations where they could be repaired and tested (Amendment 1; 38 F.R. 4529).

The Union Tank Car Company has developed a modification to correct the structural inadequacy which led to issuance of Emergency Order No. 2. This modification consists of the application of a large steel pad over the problem area,

newly designed stub-center sills, and "normalization" of the pad and sill metal to increase low temperature strength and toughness. It also devised and conducted a test program to determine whether the modified tank cars would retain their structural integrity in the railroad service environment. A modified car was instrumented with strain gauges placed in high stress areas identified by a brittle lacquer test and then squeeze tested at 1,000,000 pounds, impact tested at 1,500,000 pounds, and road tested for 1,300 miles. Although a fatigue analysis conducted by Union Tank Car Company found that the modified car should have a service life of about 40 years, FRA notes that some of the strain gages near the stub-center sill registered readings sufficiently high to indicate that the performance of the modified cars should be monitored to assure early detection of any further difficulties.

Accordingly, after carefully reviewing the test data and the fatigue analysis, I have determined that Emergency Order No. 2 should be amended as set forth below.

Effective 12:01 a.m.

Emergency Order No. 2 is hereby amended to permit use of the cars listed in the original order which have been modified and repaired in accordance with Association of American Railroads (AAR) Application No. C-737019, including revisions A-E, approved by the AAR Tank Car Committee on November 7, 1973, subject, however, to the following conditions:

1) Before being returned to rail service, each car must be -

(a) Inspected to assure that the modification has been made in accordance with the approved AAR application; and

(b) Stenciled "Modified-FRA E.O. 2" above each DOT specification number in letters at least 2 inches high:

2) The modified area of each car must be inspected by radiograph for cracks at least once between the initial 20,000 and 25,000 miles travelled by the car after it has been returned to rail service;

3) The modified area of 28 of these cars with car numbers ending in "0" or "5" must also be inspected by radiograph for cracks at least once between the initial 40,000 and 50,000 miles and again between the initial 65,000 and 75,000 miles, travelled by each car after it has been returned to rail service;

4) The modified area of at least 5 of the 28 cars inspected under condition 3 must be inspected by radiograph for cracks at least once between the initial 90,000 and 100,000 miles travelled by each car after it has been returned to rail service;

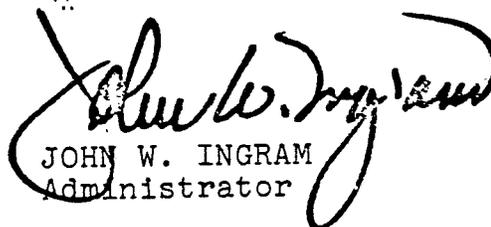
5) FRA must be furnished a written report of the findings of each inspection made under conditions 1(a), 2, 3 and 4, not later than 30 days after the date of each inspection;

6) FRA must be immediately notified in writing if any car subject to Emergency Order No. 2 shows any sign of cracking or evidence of excessive strain whether detected in inspections made under conditions 1(a), 2, 3 and 4, or otherwise.

Except as provided herein, Emergency Order No. 2, as amended, remains in effect in all other respects. The penalty provisions included as part of the original order apply with equal force to this amendment.

(Sec. 203, 84 Stat. 972, 45 U.S.C. 432; and §1.49(n) regulations of the Office of the Secretary of Transportation, 49 C.F.R. 1.49(n)).

Issued in Washington, D.C. on December 27, 1973.

  
JOHN W. INGRAM  
Administrator