

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: April 24, 1978

Forwarded to:

Honorable Brock Adams
Secretary
Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

R-78-19 through 22

The National Transportation Safety Board concluded on April 6, 1978, a 3-day en banc hearing on railroad derailments and the carriage of hazardous materials. The hearing was prompted by the increasing number of derailments nationwide, especially those involving the release of hazardous materials from DOT 112A/114A "jumbo" tank cars. Forty-eight witnesses from the railroad industry, tank car builders and operators, shippers, other Federal agencies, and the public testified at the hearing.

Evidence developed at the hearing indicated a consensus on the two questions of whether the cars should be made safe, and what safeguards are needed.

There is no question that jumbo tank cars need to be made safer. The jumbo tank cars were designed and certified by an interlocking group of business interests who manufacture, buy, sell, and use tank cars. However, witnesses from the Federal Railroad Administration, shippers, and tank car companies testified that the design of the jumbo tank cars did not represent a safety increase commensurate with their 200-percent increase in product capacity over that of older tank cars.

There also appears to be no question concerning what safeguards are needed for these jumbo cars. All parties to the hearing generally agreed that the combination of headshields and shelf couplers is the most important single step that can be taken at this moment to reduce the danger from hazardous materials. In 1969, industry recognized the need for safer tank cars by forming a research committee. In 1971, the committee recommended headshields; in 1972, it recommended shelf couplers. In 1974, the DOT published regulations requiring headshields by December 1977. Practically none were installed under that regulation; however in 1975, after more research, the DOT, the Association of American Railroads, and the Railway Progress Institute jointly agreed that a combination of headshields and shelf couplers provided the best protection. Today we have a headshield and shelf coupler regulation, but are facing a 4-year delay of its complete implementation.

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The only question still unanswered after the hearing is: When will these cars be made safer? Here there has not been a consensus. The Safety Board said before the hearing that headshields and shelf couplers should be installed according to a timetable that reflects a sense of urgency. The evidence developed during the hearing has confirmed the correctness of this statement.

The early installation of these safeguards is technically possible. The Safety Board demonstrated that a shelf coupler can be installed in 7 1/2 minutes while a headshield can be installed in 93 minutes. Testimony revealed that there are more than 100 private repair shops, in addition to the railroad shops, where the safeguards can be installed, and that labor was ready and able to do the work.

Testimony indicated that early installation of these safeguards is also financially feasible. One of the most important facts developed was that 98 percent of tank cars are owned not by the financially hard-pressed railroads, but by large corporations and wealthy individuals who have purchased the cars for investment and tax advantages. The \$2,000 per car that is required to make the cars safe now is well within these investors' financial capabilities -- the 11 largest tank car operators had more than \$50 billion in revenues last year. The total cost of headshields and shelf couplers for the 20,000 jumbo tank cars now in service, if amortized over 20 years, equates to \$9 per car per month.

If head shields and shelf couplers are not installed, the risks of future catastrophes will continue to be borne by the people who live and work near the railroad. The Safety Board believes the time has come for the industry to assume the costs of the products they manufacture, sell and ship.

Evidence at the hearing indicated that because tank car owners do not now bear the costs of accidents, they have no incentive to make their cars safe. The Safety Board believes that the Department of Transportation, in cooperation with the responsible regulatory agencies, should work to devise strategies to make safety profitable.

Therefore, the National Transportation Safety Board recommends that the Department of Transportation:

Require that shelf couplers be installed on all DOT 112A/114A jumbo tank cars no later than December 25, 1978. (Class I, Urgent Action) (R-78-19).

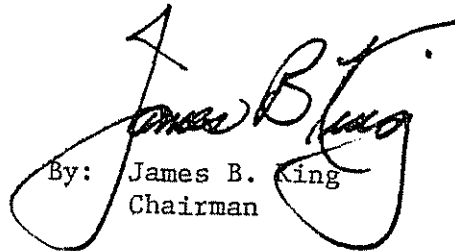
(3)

Require that approved headshields be installed on all DOT 112A/114A tank cars by December 25, 1978. (Class I, Urgent Action) (R-78-20).

Require that thermal insulation be installed as soon as possible, but in no event later than the original deadline of January 1, 1982, contained in the Materials Transportation Bureau's Docket HM-144. (Class II, Priority Action) (R-78-21).

Assist the responsible Federal regulatory agencies to develop economic regulations that provide a strong economic incentive to install tank car safeguards quickly and a strong economic disincentive for delay. (Class I, Urgent Action) (R-78-22).

KING, Chairman, McADAMS, HOGUE, and DRIVER, Members, concurred in the above recommendations.


By: James B. King
Chairman