

14. The signal system did not warn the engineer of train 4-C of the broken rail.
15. The derailed cars remained in line until the tightlock couplers broke from the twisting action of the rear cars as they started over the bank.
16. Amtrak train No. 4-C was being operated according to Santa Fe procedures as it approached the turnout on which it derailed.
17. The tracks were maintained as required by Federal Track Safety Standards for Class 5 track.
18. The manufacture of the closure rail conformed to the industry specifications, except for minor deviations.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of the accident was the broken closure rail of the turnout leading from the south main track to the siding. The insufficient strength of the track bolt and the apparent stressed condition of the rail contributed to the cause of the broken rail.

RECOMMENDATIONS

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The National Transportation Safety Board recommends that the Federal Railroad Administration:

1. Develop, together with the railroad industry, a turnout that will eliminate as many bolted track joints as possible for use in welded track territory and develop a rail connection that will eliminate stresses which contribute to rail failures or separations at the joint. (Recommendation R-75-1)
2. Promulgate regulations to establish minimum standards for the size and quality of all components used in the construction of track. (Recommendation R-75-2)
3. Promulgate regulations to require that all passenger-carrying railcars be provided with emergency exits and with emergency lights that will function when regular power is lost. (Recommendation R-75-3)

The National Transportation Safety Board further recommends that Amtrak:

4. Install windows in passenger-carrying railcars that can be removed from the outside of cars, and instruct appropriate

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railroad and emergency rescue personnel on the removal of the windows. (Recommendation R-75-4)

5. Require the installation of the latest practical crashworthiness features when rolling stock is renovated or when new cars and locomotives are purchased. (Recommendation R-75-5)

The Safety Board reiterates and reemphasizes the importance of the following recommendation made in a previous accident report to the Federal Railroad Administration which has not been fully implemented and is applicable to this accident:

Special Study Report NTSB-RSS-74-1, Broken Rails: A Major Cause of Train Accidents.

- "4. Study the factors that affect rail failures and develop criteria that will promote effective rail inspection procedures and regulations." (Recommendation No. R-74-4)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

/s/ JOHN H. REED
Chairman

/s/ FRANCIS H. McADAMS
Member

/s/ ISABEL A. BURGESS
Member

/s/ WILLIAM R. HALEY
Member

Louis M. Thayer, Member, did not participate in the adoption of this report.

February 5, 1975