

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: March 1, 1979

Forwarded to:

Mr. Richard Spence
President
Louisville and Nashville Railroad
Company
500 Water Street
Jacksonville, Florida 32202

SAFETY RECOMMENDATION(S)
R-79-3 and 4

About 10:25 p.m., on February 22, 1978, 23 cars of a Louisville and Nashville Railroad Company freight train derailed in Waverly, Tennessee. At 2:53 p.m., on February 24, 1978, a derailed tank car containing liquefied petroleum gas ruptured. The escaping gas ignited with an explosive force, and the ensuing fire resulted in deaths of 16 persons and injury to 43 others. Property damage was estimated at \$1,800,000.

The investigation disclosed that a broken wheel on the 17th car, which had been added to the train en route, first derailed about 6 miles before the point of the general derailment. The wheel contained evidence of above-normal heating which contributed to the wheel's cracking.

The Safety Board determined that a composition brakeshoe instead of a cast iron brakeshoe, standard to the car, was installed at the broken wheel location. A composition brakeshoe has a higher coefficient of friction than does a cast iron shoe and will produce more braking effort with the same braking force, which can result in excessive heat when installed on a car not designed for its use.

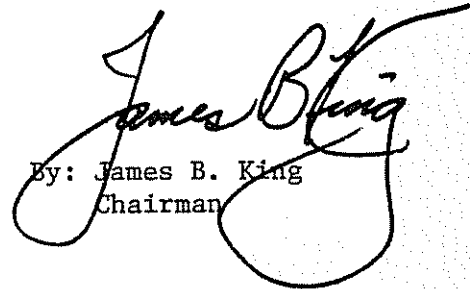
The Safety Board also determined that a hand brake had been left applied on this car when it was added to the train. The crewmembers did not make an air brake test of the train as required by the Power Brake Law 49 CFR 232, nor were they required to do so by L&N rule. If they had done so, the applied hand brake and the improperly applied brakeshoe may have been detected.

(2)

Therefore, the National Transportation Safety Board recommends that the Louisville and Nashville Railroad Company:

Correct its air brake special instructions to comply with the regulations of the Power Brake Law 49 CFR 232. (Class II, Priority Action) (R-79-3)

Determine that all freight cars are provided with the proper brakeshoes before they are dispatched in trains. (Class II, Priority Action) (R-79-4)



By: James B. King
Chairman

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