

R-3372 E

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: August 31, 1981

Forwarded to:

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SAFETY RECOMMENDATION(S)

R-81-84 and -85

During the past 5 years, the National Transportation Safety Board has investigated nine accidents in which hot box detectors have identified an overheated journal bearing in a train, but appropriate or correct action was not taken to prevent the subsequent derailment of the trains. These accidents resulted in one injury to an employee and an estimated total of \$4,800,000 in property damage. Although the injury/fatality rate for these particular accidents was low, the accidents were preventable, and the Safety Board believes that the potential for serious or even catastrophic derailments is significant. 1/

Two of the accidents occurred on the trackage of the Burlington Northern Railroad. On May 28, 1979, a derailment occurred at Hanover, Illinois. The hot box detector indicated an overheated journal bearing on a wayside display. The traincrew correctly computed the location as the 57th car from the locomotive but failed to verify the presence of an overheated bearing. The train proceeded and subsequently derailed due to a broken journal on the 57th car from the locomotive.

At Cassville, Wisconsin, on August 20, 1980, the hot box detector on a wayside display identified the location of an overheated journal bearing. The traincrew incorrectly computed the location of the bearing on the train. When the crew inspected the train, they did not locate the overheated bearing; the train subsequently derailed due to a journal bearing failure. There were no crewmembers injured as a result of the derailment, but the estimated cost of the property damage was \$1,129,000.

These accidents occurred because of improper handling of the hot box detector data due to the absence of a clearly defined procedure for locating overheated journal bearings. Therefore, the National Transportation Safety Board recommends that the Burlington Northern Railroad:

1/ For more detailed information, read Special Investigation Report--"Recent Accident History of Hot Box Detector Data Management" (NTSB-SIR-81-1).