

Log R-109

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 6, 1977

Forwarded to:

Mr. Leonard Ronis
General Manager
The Greater Cleveland Regional Transit
Authority
1404 East Ninth Street
Cleveland, Ohio 44114

SAFETY RECOMMENDATION(S)

R-77- 26 and 27

The National Transportation Safety Board is investigating the head-on collision of two rapid transit trains of the Greater Cleveland Regional Transit Authority on the Shaker Heights Line near 92nd and Holton Streets, on July 8, 1977. The collision resulted in 57 injuries.

Trains are governed on this line by signals of an automatic block signal system. The double-track line is signalled for train movement in only one direction on each track. At the time of the accident, trains were operating in both directions on the south track because track work was being performed on the north track. This single-track operation was confined to the area between Pennsy Crossing and Shaker Square, a distance of approximately 3 miles. The single-car trains collided on a curve, approximately 1,500 feet east of the Pennsy Crossing crossover.

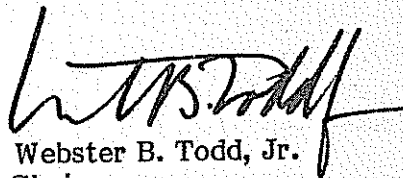
Preliminary investigation has revealed a serious deterioration in the effectiveness and maintenance of the signal system on this line. In the distance between Pennsy Crossing and Shaker Square, over 150 bond wires, which are used to connect the ends of the rails to insure electrical continuity of the signal system, were not connected on the south track. One of the signals displayed a "Red" aspect regardless of the block occupancy and at least one signal did not operate at all. Operators making repeated trips past such malfunctioning signals soon lose their respect for them and continued operation under these conditions encourages non-compliance with the signal system.

Although the Safety Board has not determined the cause of the collision on the Shaker Heights Line, the condition of the block signal system should be immediately corrected. Therefore, the National Transportation Safety Board recommends that the Greater Cleveland Regional Transit Authority:

Immediately inspect and repair the block signal system and implement procedures for its maintenance to insure that it continues to function as intended. (Class I, Urgent Followup) (R-77-26)

Until such time that the block signal system is repaired, establish a well-defined operational procedure which will insure the safe movement of all trains on the Shaker Heights Line. (Class I, Urgent Followup) (R-77-27)

TODD, Chairman, BAILEY, Vice Chairman, McADAMS, and HOGUE, Members, concurred in the above recommendations. HALEY, Member, did not participate.



By: Webster B. Todd, Jr.
Chairman