



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

R-1021

Date: March 9, 1990

In reply refer to: R-90-1

Mr. Louis J. Gambaccini
Chief Operating Officer and General Manager
Southeastern Pennsylvania Transportation Authority
Sovereign Building
714 Market Street
Philadelphia, Pennsylvania 19106

About 0821, Wednesday, March 7, 1990, westbound Southeastern Pennsylvania Transportation Authority (SEPTA) commuter train 61 derailed at an interlocking near 31st and Chestnut Streets, after departing Philadelphia's 30th Street Station. The derailment occurred while train 61 was still in the tunnel, with derailed equipment striking support columns within the tunnel. The accident resulted in 3 passenger fatalities and about 95 persons injured, with several persons receiving critical injuries. Evacuation of the train took about five hours to complete.

Preliminary investigation of the accident indicated that a traction motor used for propulsion power on the third car of the train dropped low enough on its suspension system to contact the track structure. Markings found on the track structure indicate the traction motor dragged or skidded along the track structure about 1,555 feet, prior to striking the switches in the interlocking where the derailment occurred.

The National Transportation Safety Board's investigation into this accident involved inspection of similar SEPTA commuter rail equipment subsequent to the accident. Traction motor support systems were inspected on 19 other cars in SEPTA's fleet. Of the 76 traction motors on these 19 passenger cars, 27 traction motor support systems were found to have improper installations of the vertical support bolt and its locking nut and cotter pin assembly. The cotter pin was found to have been installed on top of the locking nut, rather than directly through the pre-drilled hole in the bolt and locking nut, in these 27 improper applications. These Budd-built passenger rail cars, as well as any other passenger rail cars that may have similar traction motor support systems, should not be returned to service until the proper inspections and repairs are made. An immediate inspection of all other passenger rail equipment that may have been subjected to similar improper installation in traction motor support systems should be made.

Therefore, the National Transportation Safety Board recommends that the Southeastern Pennsylvania Transportation Authority:

Immediately inspect the traction motor support systems of all applicable passenger cars to verify that the traction motors are properly installed including the vertical support bolt and its locking nut and cotter pin assembly for the systems and correct any discrepancies before returning those passenger cars to service. (Class I, Urgent Action) (R-90-1)

KOLSTAD, Chairman, COUGHLIN, Acting Vice Chairman, LAUBER and BURNETT, Members, concurred in this recommendation.

James L. Kolstad

By: James L. Kolstad
Chairman