

R-76817

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: November 1, 1979

Forwarded to:
Mr. John M. Sullivan
Administrator
Federal Railroad Administration
400 7th Street, S.W.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)
R-79-73

About 12:03 p.m., e.s.t., on April 20, 1979, National Railroad Passenger Corporation (Amtrak) passenger train No. 111, a Metroliner, consisting of an electric locomotive, five passenger cars, and one power car, which was being substituted for the standard Metroliner equipment, collided head-on with a Plasser track machine at Edison, New Jersey. The track machine was destroyed and the locomotive was damaged heavily. The lead truck of the passenger car behind the locomotive was derailed. Seventy-one persons were treated for minor injuries, and one passenger and one onboard attendant were admitted to the hospital. The property damage was about \$353,600. 1/

This accident occurred when the passenger train was permitted to enter a signaled block of track No. 3 that was occupied by the track machine. The track machine was not insulated; therefore, it could not shunt the track circuits and activate the signal system.

The track machine was being moved from Midway to Union, New Jersey, a distance of 21.5 miles, over main track No. 3 which is signaled for train operations in either direction. The movement required the track machine to enter the main track at Midway tower, pass County and Lincoln towers, and leave the main track at Union tower. Because the track machine could not activate the signal system, special arrangements were required for its movement. According to operating rules, before authority could be issued for the track machine to occupy the main track, the train dispatcher should have required all of the involved tower operators

1/ For more detailed information, read "Railroad Accident Report--National Railroad Passenger Corporation Head-End Collision of Train No. 111 and Plasser Track Machine Equipment, Edison, New Jersey, April 20, 1979, NTSB-RAR-79-10. "

to align the route and direction, to establish stop signals at each end of the route with intermediate proceed signals at intermediate locations, and to place protection devices on the controlling levers so that they could not be inadvertently changed until the movement was completed. After being advised that this was done, the train dispatcher then could issue the authority for the track machine's movement to all tower operators and the operator of the track machine.

In this case, the train dispatcher failed to have the route and directions aligned, the proper signals established, and the protection devices applied to the controlling levers. He only issued the authority for movement of the track machine to the tower operator at Midway and to the pilot of the machine. The tower operators at County and Lincoln had no authority for movement of the track machine and only knew of it from the preceding tower operator. In addition, the County tower operator permitted the track machine to continue on track No. 3 without having proper authority. When the track machine passed County, the tower operator requested the tower operator at Lincoln to establish an eastward direction on track No. 3 for the track machine, which he did. However, the Lincoln tower operator did not apply a protection device on the lever, and shortly thereafter, when informed of train No. 111's approach, he changed the directional lever to westward which permitted train No. 111 to proceed at an unrestricted speed on track No. 3. The operator realized his mistake when the train passed his tower, and he attempted unsuccessfully to radio to the engineer to stop, but train No. 111 had been permitted to depart from New York with an inoperative radio.

The Northeast Corridor is the heaviest traveled passenger route of the American Railroad System. In the area of the accident, Metroliners are permitted to travel at speeds of 110 mph. If train No. 111 had been provided with standard Metroliner equipment and had been moving at a speed of 110 mph when it collided with the heavy track machine, the accident could have been a catastrophe. If the radio on the locomotive had been operable, the accident may have been prevented. Therefore, as a result of this accident, the National Transportation Safety Board recommends that the Federal Railroad Administration:

Establish regulations that would require all trains operating on a main track to be equipped with an operable radio. (Class II, Priority Action) (R-79-73)

KING, Chairman, DRIVER, Vice Chairman, GOLDMAN, and BURSLEY, Members, concurred with the above recommendations. McADAMS, Member, did not participate.


By: James B. King
Chairman