PUBLIC TRANSPORTATION SAFETY BOARD
ABBREVIATED BUS ACCIDENT REPORT

1. CASE: 8994
2. PROPERTY NAME: MTA NYCT
3a. ACCIDENT TYPE: Mechanical Failure
3b. Accident Severity Index: 0.05
4a. DATE: June 23, 2006
4b. TIME: 11:34 am
5. ACCIDENT LOCATION: First Avenue at Saint Marks Place
6. TOWN/CITY/BOROUGH: Manhattan
7. SUMMONS: None
8. BUS NUMBER: 5357
8a. YEAR: 2000
8b. MAKE: New Flyer
9. NUMBER OF INJURIES: 1
10. FATALITIES: 0
11. HOURS OF SERVICE: 8 hrs and 6 min in last 24 hrs/61 hrs and 6 min in last 7 days
12. SYNOPSIS:

At approximately 11:34 am, MTA New York City Transit (NYCT) bus #5357 was standing in the bus stop on First Avenue at Saint Marks Place, when the bus driver deployed and fully lowered the wheelchair lift platform to the ground and (according to the driver’s statement) released the lift “lower” switch. Subsequently, a wheelchair passenger moved forward to board the platform and at that time the restraint barrier raised up from its down position, striking the customer’s feet. The passenger claimed injury to both legs, was transported to a local hospital, treated and released. The bus driver claimed a mechanical failure of the wheelchair lift. The bus sustained no damage.

In the vicinity of the accident site, First Avenue is a 72 foot wide, one-way northbound road, divided by white broken line pavement marking, accommodating five travel and two parking lanes. Saint Marks Place is a 32 foot wide, one-way eastbound road, accommodating one travel lane. Both roadways are straight, level and asphalt paved. The sidewalk in the bus stop area was uneven due to a fuel delivery receptacle protruding from below the sidewalk. Parking is permitted at the curbs. At the time of the accident it was daylight and the weather was dry and overcast.

Bus #5357 is a 2000 New Flyer articulated transit bus with a seating capacity of 62 passengers. A review of the bus records indicated that Preventive Maintenance Inspections (PMI) are performed at the 126th Street Depot at regular 3,000 mile intervals. The most recent PMI was completed on May 19, 2006. The bus traveled 2,012 miles at the time of the accident. The after accident investigation performed by the Public Transportation Safety Board (PTSB) and NYCT staff at the accident site was unable to duplicate the failure claimed to have been experienced by the bus driver. A full post accident inspection of bus #5357 was conducted on June 26, 2006. The inspection revealed that the main bundle pack harness was found improperly routed and lying on the top of the forward main lift cylinder and the ground sense switch. According to the DOB’s Technical Services, this condition could affect the proper operation of the ground sensor and barrier operation. After inspection the platform’s slave chains were adjusted to allow the lift to adjust itself to accommodate minor uneven pavement conditions. A review of the maintenance record for the last 45 days revealed that on June 20, 2006, the bus was involved in a collision with a truck during which the bus sustained damage in the area of the wheelchair lift. The records indicate that the bus maintainer was instructed to perform a full lift PMI, however, the record indicates that the lift was only cycled and deployed.
Additionally, several symptoms were identified in work orders, but not specified nor entered into MIDAS. Some hydraulic lines were found leaking and were repaired (tightened), the stow latch was lubricated, stow heights and floor cushion were adjusted and the bus was put in passenger service. At the time of the accident the bus had traveled 40 miles after the last repair. A 30 day monitoring program was initiated and, on June 27, 2006, the record shows that the wheelchair lift platform roadside barrier bridge sensor was adjusted. On June 29, 2006, a regular scheduled PMI was performed, and no specific concerns were noted. On July 20, 2006, another regular PMI was performed and several minor defects were noted and repaired. None of the repairs were related to the conditions stated by the bus operator as to the cause of the incident.

According to the wheelchair lift manufacturer, any movement of the curbside barrier is possible only when a function switch (“raise or lower”) is depressed. All lift functions stop whenever the switch is released (all manufacturers’ lifts are powered by a self contained hydraulic pump). Therefore, the curbside barrier could lower and raise only if the “lower” function switch was activated and if the lift is deployed on uneven ground and/or a load shift occurs on the bus. Under these conditions, the ground sensor cuts in and out causing the curbside barrier to move (up and down). Misadjusted slave or lift chains can also prevent a lift from fully touching the ground if an operator keeps his hand on the function switch while a passenger is still boarding or the bus shifts. The manufacturer’s Lift Operator Instruction recommends to have the operator’s hands off all switches while a passenger boards or leaves a lift platform.

The bus driver was hired by the MTA NYCT on August 31, 1992, and completed the standard “New Bus Operator Training Program”. A review of the bus driver’s Department of Motor Vehicles records for the last three years showed no violations or suspensions. New York State Vehicle and Traffic Law, Article 19-A records were complete and up to date. A review of the driver’s MTA NYCT record for the last three years revealed five preventable collision accidents: on 09/25/03 and on 11/18/04, resulting in a verbal warning, on 01/06/05 and 04/08/05, resulting in a reprimand and being placed in a performance monitoring list, and on 09/09/05, resulting in one day suspension. The bus operator was also involved in five non-preventable collision accidents. A post accident drug and alcohol test was not administered to the bus driver due to the nature of the accident.

In an interview with the PTSB staff the bus driver indicated that his bus was standing in the far side bus stop on First Avenue at Saint Marks Place when he deployed the wheelchair lift to the sidewalk, the curbside barrier did not stay in the flat position but moved up and down. He stowed the lift and deployed it again. After releasing the “lower” switch he said exited the seat and motioned to the customer to approach and board the platform. At that time he said the barrier suddenly moved up and struck the passenger on both feet, prior him to boarding the platform.

The Public Transportation Safety Board staff was unable to definitely determine the most probable cause of the accident. A potential cause of the accident was the failure of the bus driver to hold his hands off the operating switch while the passenger began boarding.
The MTA NYCT reviewed the accident on September 20, 2006, and found it to be non-preventable. The bus driver’s performance was evaluated as satisfactory and he was returned to passenger service.

In an attempt to eliminate the possibility of accidents during lift operation, MTA NYCT reissued on 11/08/06 an Updated Permanent Bulletin “Safe wheelchair lift operations” instructing drivers to release the switch before a passenger boards the lift.

INVESTIGATOR: Mikhail Palanker

CHIEF, ACCIDENT INVESTIGATION SECTION  

DATE

DIRECTOR, PCSB, NYSDOT  

DATE