PUBLIC TRANSPORTATION SAFETY BOARD
ABBREVIATED BUS ACCIDENT REPORT

1. CASE#: 9130
2. PROPERTY NAME: MTA Bus Co.
3a. ACCIDENT TYPE: Motorcycle
3b. Accident Severity Index: 6.00
4a. DATE: October 3, 2006
4b. TIME: 4:02 p.m.
5. ACCIDENT LOCATION: 142nd Street at 115th Avenue
6. TOWN/CITY/BOROUGH: Flushing, NY
7. SUMMONS: No
8. BUS NUMBER: 5922
8a. YEAR: 1993
8b. MAKE: RTS
9. NUMBER OF INJURIES: 0
10. FATALITIES: 1
11. HOURS OF SERVICE: 5 hr 2 min in last 24 hrs/38 hrs 10 min in last 7 days
12. SYNOPSIS:

At approximately 4:02 p.m., MTA Bus Company (MTABC) bus #5922 traveling north on 142nd through the intersection with 115th Avenue when the bus driver heard a loud thump and a bus passenger yell “Oh my God”. The bus driver stopped and exited the bus to find a motorcycle and the body of the male rider in the street at the right rear of the bus. The bus driver returned to the bus and called for assistance. The motorcyclist was pronounced dead at the scene by responding Emergency Medical Service (EMS) personnel. There were no other reported injuries. The bus sustained slight damage and the motorcycle moderate damage attributed to the accident.

In the vicinity of the accident site 142nd Street is a 30 foot wide two-way north/south roadway accommodating one travel lane in each direction. Parking is permitted at both curbs. One Hundred Fifteenth Avenue is a 44 foot wide two-way east/west roadway divided by solid double yellow barrier pavement markings into one travel lane in each direction. Parking is permitted at both curbs. Both roadways are asphalt paved, straight, level and in good condition. The intersection is controlled by stop signs located on 142nd Street. At the time of the accident it was daylight, the weather was clear and the pavement was dry. The area speed limit was 30 mph.

Bus #5922 is a 1993 TMC RTS-04 transit type bus housed and maintained at the JFK Depot with a seating capacity of 45 passengers. A review of the bus records showed that Preventive Maintenance Inspections are performed at regular 4,000 mile intervals, the most recent was completed on August 21, 2006 and the bus had traveled 3,315 miles since then. The records also showed no safety or recurring defects in the 45 days prior to the accident. A post accident inspection of bus #5922 was conducted on October 4, 2006 by the combined staffs of the Public Transportation Safety Board (PTSB), MTA NYCT Office of System Safety (OSS), MTA NYCT Technical Services and MTABC. The inspection found no defects which could be considered a causative factor in the accident. The inspection did find damage to the bus in the form of a displaced lower trim piece located immediately in front of the rear doors; a structurally strong and reinforced area containing a section of the framework for the rear doors. In addition, the inspection found some smudges and rubs in the road film on the surface of the lower fiberglass body panels immediately in front of the rear doors which was attributed to the contact with the body of the motorcyclist. No blood or human matter was found on the body surfaces of the bus.
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Inspection of the undercarriage and tires of the bus found no evidence of the motorcyclist having been passed over or run over by the bus. Decelerometer tests were performed on the bus’ braking systems and showed stopping distances that met the standards for passenger vehicles of NYS DOT Regulations (Title 17 of NYCRR, Article 3, Part 720).

The bus driver was hired by the Green Bus Lines (GBL) on April 30, 2004 and completed the Green Bus Lines New Bus Operator Training Program. A review of the driver’s Department of Motor Vehicles records for the past three years showed no violations, convictions or suspensions. NYS Vehicle & Traffic Law, Article 19-A records were reviewed and found to be complete, in-order and up-to-date. A review of the driver’s GBL/MTABC accident record for the past three years showed four non-preventable collision accidents. A post accident Alco-Sensor test performed on the bus at the accident scene by the NYPD Accident Investigation Squad (AIS) was negative. Post accident drug and alcohol tests performed by MTABC upon the bus driver upon her release from the accident scene, 3 hours and 30 minutes from the time of the accident, were also negative.

In an interview the bus driver indicated that after coming to a full stop at the stop sign on northbound 142nd Street at the intersection with 115th Avenue she looked both ways and, seeing no approaching vehicles, proceeded to move into the intersection. The bus driver said that as she neared the far side of the intersection she heard, almost simultaneously, a loud thump and a passenger yell “Oh my God”. The driver further indicated that she stopped the bus and observed in the right side travel mirror a motorcycle lying on its side to the rear of the bus. The bus driver stated that she then secured and exited the bus, observed the apparently lifeless body of a male person lying in the street near the motorcycle, re-entered the bus and called for assistance. The bus driver further stated that she did not at any time observe the motorcycle or rider prior to finding them in the street by the bus.

The PTSB staff was unable to interview any of the witnesses provided by the MTABC, MTA NYCT OSS and NYPD AIS. All of the witnesses either declined to speak to the staff on the telephone or did not return requests to call the staff and an attempt to canvass the area around the accident scene by the PTSB staff to locate witnesses to the accident was met with hostility from area residents. The following written witness statements were provided to the staff by the MTABC, MTA NYCT and NYPD AIS:

- A female bus passenger seated in a forward facing window seat in front of the rear doors indicated that after stopping at the stop sign the bus driver entered the intersection. As the bus entered the intersection the passenger observed a motorcycle, about a half block away, moving toward the bus at a speed of 35-40 mph. The witness indicated that she did not believe that the motorcycle was going to have enough time to either pass in front of the bus or to safely stop. The witness said she believed the motorcyclist applied the brakes but the motorcycle fell to the roadway. The witness further indicated the bus was in the middle of the intersection when the motorcyclist collided (with a bang) and went underneath the side of the bus. The witness said that she yelled “Oh my God!” to the bus driver, that the bus driver did not immediately stop and that she did not feel a “bump” indicating that the wheels had run over the motorcyclist.
When the bus driver stopped, the witness said she exited with the bus driver to see what happened and observed the face down body of the male motorcyclist lying on the roadway with an apparent injury to the right side of his head.

- A male bus passenger, seated next to the female witness, indicated that he had observed a motorcycle try to make a right turn alongside the bus and then heard a loud bang on the side of the bus near where he was sitting.

- An off duty police officer traveling south on 142nd Ave. (opposite direction of the bus) indicated that he was slowing to stop for the stop sign at 115th St. He observed a bus make a full stop at the opposing stop sign and then enter the intersection. At the same time the motorist said that he observed a dirt bike, about mid block, traveling west on 115th St. doing a wheelie with only the rear wheel of the bike making contact with the roadway. The witness indicated that the motorcyclist brought the front wheel back to the pavement and locked up the rear wheel under apparent heavy braking. The witness further said that he observed the motorcycle fall to the pavement and the body of the motorcyclist slide under the bus where the motorcyclist was run over. (The PTSB staff finds only the first portion of this statement credible as the final seconds of the accident would most probably not have been visible to the witness, blocked by the body of the bus, due to his stated position on the roadway).

The motorcyclist was a 23 year old, 5’9”, 23 year old male weighing 163 lb. His driving abstract showed that he did not possess a valid motorcycle operator’s license and that his regular operator’s license showed four past convictions (operating w/o license twice, disobeyed traffic control device, no seat belt). The medical examiner’s report of autopsy listed the cause of death as “multiple blunt impact injuries of head and torso”. The report listed the motorcyclist’s injuries as multiple skull fractures; fractured ribs, spine, right femur and left humerus. The report also reported the motorcyclist’s face as “flattened” and the head as “distorted” from the numerous fractures.

The following information was provided to the PTSB staff by a local motorcycle dealer:

- The motorcycle involved in the accident was a red 2006 Honda CR85R weighing 151 lbs with a single cylinder two stroke (two cycle) engine displacing 85cc.
- The motorcycle was designed strictly for off-road racing and had no reflective material or lighting (headlight, signal lights, tail/brake lights) anywhere on its body.
- The motorcycle is equipped with front and rear disk brakes giving it exceptional stopping power.
- The engine is extremely powerful, also producing a great deal of torque, for its displacement giving the motorcycle the capability to reach speeds of 50-60 mph very quickly and was capable of pulling the front wheel off of the ground, “wheelie”, very easily and at almost any speed.
The motorcycle left a 67 foot rear wheel skid mark on the pavement and an apparent off set front wheel scuff mark of approximately 7 feet paralleling the end of the rear wheel skidmark. There were gouge and scrape marks on the pavement attributed to the motorcycle, measuring back from its point of final rest, of approximately 10-12 feet. There was gap between the end of the rear wheel skid mark and the beginning of the scrape/gouge marks measuring approximately 5-7 feet. Using accepted accident reconstruction formulas and the data collected from the accident scene, the PTSB staff calculated that the minimum speed of the motorcycle at the start of the rear wheel skid ranged from approximately 29 to 45 mph. The wide range of speeds is due to not knowing if the motorcyclist was using the front brake during the entire real wheel skid, just a portion of the skid or not at all.

The skidmarks, the gap between the skidmarks and the gouges/scrapes are consistent with the motorcycle having “highsided”. These articles explain how a motorcycle skidding with a locked rear wheel brake will begin to move broadside and eventually flip, with the rider with the bike also becoming airborne. The motorcycle and rider usually end up on the pavement together, often with serious or fatal injuries to the rider, skidding to final rest. The witness statement of the motorcycle trying to turn right just prior to the “bang” is also supportive of the motorcycle highsiding.

The NYPD AIS final report indicated that the right rear wheel of the bus pinched the top of the motorcyclist’s head causing the fatal injuries. The report also indicated that the helmet that separated from the motorcyclist was not DOT approved and had no chinstrap.

The MTA Bus Company defensive driving training emphasizes that traversing intersections is one of the most hazardous parts of driving the route faced by a bus driver. A great deal of that training is constant scanning for potential hazards and hazard assessment/recognition techniques.

Public Transportation Safety Board staff finds that the probable cause of this accident was the actions of the unlicensed motorcyclist, riding a non street worthy motorcycle in an unsafe manner and at an unsafe speed on a city street. These actions caused the motorcycle to “highside”, tossing the rider through the air, his helmet separated from his head and he went headfirst into the side of the bus in front of the rear doors causing his fatal injuries. Contributing to the accident was the failure of the bus driver to utilize her defensive driving training by failing to observe the motorcyclist in the street.

The MTA Bus Company rated the accident preventable on the part of the bus driver and demoted the driver to a non-safety sensitive position pending the result of disciplinary hearings.

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1 Article “Highside Dynamics” and “Brake Locked” by James R. Davis to be accessed via the internet at: www.msgroup.org/TIP001 and www.msgroup.org/TIP100 respectively.
Based on the action taken by the MTA Bus Company regarding this accident, the Public Transportation Safety Board staff makes no recommendation in this case.

INVESTIGATORS: Harry W. Gerham and Mikhail Palanker

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CHIEF, ACCIDENT INVESTIGATION SECTION  DATE

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DIRECTOR, PCSB, NYSDOT  DATE