



National Transportation Safety Board

Washington, DC 20594

Highway Accident Brief

Accident No.: HWY-01-FH006
Accident Type: School bus run-off-the-road and rollover
Location: U.S. Route 191 at milepost 428
18 miles north of Ganado, Arizona
Date and Time November 3, 2000, about 10:00 a.m.
Vehicle: 1997 Blue Bird model type D school-activity bus
Certified to carry 52 high school to 75 elementary school passengers
Owner/Operator: Chinle Unified School District No. 24, Chinle, Arizona
School band competition trip
People on Board: Thirty-eight—driver and 37 passengers
Injuries: One fatal
Two serious and 35 minor

Accident Description

On November 3, 2000, about 9:15 a.m., a 1997 Blue Bird school-activity bus, owned and operated by Chinle Unified School District No. 24, departed Chinle High School, Chinle, Arizona, carrying the driver, the band director, 3 chaperones, and 33 students, on an 8-hour trip to Las Vegas, Nevada, for a school band competition.

The bus traveled southbound on U.S. Route 191, a two-way, two-lane, paved asphalt roadway running north and south. The 11.5-foot-wide lanes of the highway were divided by yellow-painted broken lines and bordered by 2-foot-wide unpaved shoulders. The southbound shoulder had a 12-percent downgrade slope starting at the roadway edge. The busdriver reported that he encountered light snow and fog, which required operating the windshield wipers. The fog created wet surface conditions on the roadway and dirt shoulder. Visibility ranged from 10 feet to 200 yards, and the busdriver said that he reduced his 65-mph speed to accommodate the conditions but was unaware of his speed at the time of the accident.

According to the busdriver, the trip proceeded normally until about 10:00 a.m., as the bus approached milepost 428, which was at the top of a 6,184-foot mesa. About that time, the band director approached the busdriver and offered him a snack, placing a bag of sunflower seeds on the dashboard. The busdriver stated that he briefly directed his attention from the roadway when the bag shifted, as if to fall, and that he grabbed for the bag, removing his right hand from the steering wheel. The bus was entering a 744-foot-long, 2-degree left curve when the busdriver was distracted by the slipping bag.

The busdriver recalled that the bus's right front tire left the roadway. (The bus traveled approximately 117 feet into the curve before departing the paved surface.) The busdriver told investigators that he steered to the right to avoid a metal detector post adjacent to the highway, and the bus suddenly leaned to the right on the slope descending from the right side. The busdriver said that as the bus inclined to the right, his body, although belted, slid and tilted to the

right on his seat. He explained that he tried to hold onto the steering wheel and brace himself with his right foot, but his foot slipped onto the accelerator pedal and inadvertently pressed the pedal to full throttle. The busdriver stated that the shoulder was soft and steep and that the softness caused the bus to roll over. The bus rolled to the right approximately 450 feet and traveled about 100 feet while overturning 1 1/4 turns; it came to rest on its right side about 550 feet from the point where it left the pavement.

To free the busdriver, the band director unbuckled the driver's three-point seat belt, which was jammed by the busdriver's weight; both exited the bus through the damaged windshield. Once outside, they led the students away from the bus and attempted to aid the injured. Bus occupants exited through the front windshield opening, both open roof hatch apertures, and the rear emergency window exit.

A chaperone and a student were partially ejected through broken windows on the right side and sustained fatal and serious injuries, respectively. (The chaperone was seated in row five on the bus's right side and the student in row five on the left side.) Another student was seriously injured; the other occupants of the bus received minor injuries.

Vehicle Damage

Deformation of the bus interior was primarily confined to the roof and right side. (See figure 1.) The roof was compressed down about 7 inches on the right side, and the occupant compartment was compressed inward about 8 inches vertically above the window bottoms. The windshield and back emergency exit window were broken.



Figure 1. View of interior damage looking aft.

The bus exterior sustained impact damage on the right side and the adjacent roof. The bus's right side was deformed inward about 8 inches along the roofline. The deformation began along the bottom of the window frames. Five of the 10 right-side windows and the boarding door were broken during the rollover sequence. (See figures 2 and 3.) On the left side, the most significant damage was below the floor area adjacent to the left-side emergency exit door. In addition, the first 3 of the 11 left-side windows were broken. The left-side emergency exit door was functional.



Figure 2. Right side view showing damage above bottom of window frames and along roofline.



Figure 3. Right side damage view showing boarding door and driver area.

The rear emergency roof hatch was transected (sheared off) along the hinge line. The front emergency roof hatch was compressed downward, and the hinge was damaged along the hinge line and hatch frame. The air conditioning unit was detached from the roof.

Busdriver Information

The 38-year-old busdriver held a valid Arizona class B commercial driver's license with a school bus endorsement issued in October 1997; he possessed a valid medical certificate issued in October 1999. His driving record indicated no violations. The busdriver began driving for the Chinle Unified School District No. 24 in September 1997.

The busdriver reported that he was in good health and took no prescription drugs at the time of the accident. According to the busdriver, he went to bed at 10:00 p.m. on November 2, 2000, and rose at 5:00 a.m. on November 3, 2000. During the 4 days prior to the accident, the busdriver maintained his regular rest schedule (10:00 p.m. to 5:00 a.m.) and his daily work routine (5:15 a.m. to 9:30 a.m. and 2:15 p.m. to 6:30 p.m.).

Probable Cause

The National Transportation Safety Board determines that the probable cause of this accident was the school bus driver's distraction, as he tried to prevent an object from falling off the dashboard. Contributing to the severity of the accident was the lack of a sufficient shoulder area adjacent to the roadway, which might have enabled the busdriver to recover control of the bus and to prevent the rollover.

Adopted August 21, 2002