

Lessons Learned from Accident Investigations

School Bus Extrication Training Urged for Emergency Responders

Emergency responders had problems getting passengers out of a school bus that fell off a bridge into a creek in Omaha, Nebraska. Rescuers lacked knowledge of school bus construction and extrication methods; when they discovered that their “Jaws of Life” device was too large to fit between the bus seats, they had to use hack saws to cut off seat legs that were entrapping victims. Firefighters, who attempted to poke holes in the roof with their pick axes, were hampered by the reinforced roof construction required for school buses. Three students and an adult chaperon died in the crash.

“The tragedy clearly points out that local and state emergency responders need school bus extrication training, not only in Omaha but across the country,” National Transportation Safety Board (NTSB) Chairman Ellen Engleman-Conners said. “It takes special training because methods for extricating passengers from school buses differ significantly from methods for extricating passengers from lighter vehicles.”

The crash occurred on Saturday, October 13, 2001, about 2 p.m. A 78-passenger school bus carrying 27 students and three adult chaperons from Seward High School was traveling home from a band competition in Omaha through what the NTSB called a “poorly designed” highway-bridge construction work zone on U.S. Route 6 in Omaha.

As the Seward bus entered the narrow work zone lane shift at the approach to a bridge over a creek, it encountered a 52-passenger motorcoach traveling in the opposite direction and carrying students from Norfolk High School to the same band competition. No collision occurred, but the bus carrying the Seward students struck a barrier on the right as it passed the motorcoach, steered to the left and then steered abruptly back to the right, striking the barrier again and a three-rail barrier between a guardrail and a concrete bridge railing.

The bus passed through the remains of the three-rail barrier, rode up onto the bridge's sidewall, and rolled 270 degrees clockwise as it fell about 49 feet, landing on its left side in a creek below the bridge. In addition to the four fatalities, the remaining passengers and the bus driver sustained injuries ranging from serious to minor. During its investigation, the NTSB uncovered numerous safety issues, including the need for emergency responder training.

Most students were still in the bus when emergency responders arrived at the scene after the crash. According to the incident commander, multiple passengers' arms and legs were trapped between the inside wall of the bus and the seats. A 14-year-old female passenger was ejected and was found trapped between the bus's left side and the muddy creek bed. A 16-year-old male and an 18-year-old female were pinned between the bottom of their seats and several seat cushions that came apart. The 14-year-old male who drowned was found facedown in the muddy water, trapped between the left side of the bus and a seatback.

In its accident report, the NTSB said rescue efforts would probably have proceeded more efficiently if rescuers had received school bus extrication training. Although this special training is not required, the NTSB urged national, State, and local fire and emergency response officials to get school bus extrication training which is available through courses and videos from a variety of vendors and equipment manufacturers.

“Unless we pay attention to all the lessons learned in this crash, we will continually repeat them and unnecessarily jeopardize lives,” Engleman-Conners said.

The NTSB said the probable cause was the failure of the Nebraska Department of Roads to recognize and correct the hazardous condition in the work zone created by the irregular geometry of the roadway, the narrow lane widths, and the speed limit.

Contributing to the accident, the NTSB said, was the accident bus driver's inability to maintain the bus within the lane due to the perceived or actual threat of a frontal collision with the approaching eastbound motorcoach and the accident bus driver's unfamiliarity with the accident vehicle.

For the complete accident report, visit the NTSB Web site at this address:
<http://www.nts.gov/publictn/2004/HAR0401.pdf>