

Log H-365A

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 26, 1983

Forwarded to:

Honorable Diane Steed
Administrator-Designate
National Highway Traffic Safety
Administration
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

H-83-44 and -45

About 5:40 a.m. on March 25, 1983, a Jonesboro School District schoolbus was traveling westbound on State Highway 214 near Newport, Arkansas. The schoolbus was transporting 31 high school students and 7 teachers from Jonesboro, Arkansas, to the Annual State Skills Olympics for vocational-technical students in Little Rock, Arkansas. As the schoolbus traveled through a relatively sharp right curve leading to a T-intersection with State Highway 18, it slid across the centerline onto the opposing lane's shoulder and through a stop sign; it continued to yaw and slide across Highway 18, where it overturned and struck the far edge of a roadside drainage ditch. The teacher-driver, 4 other teachers, and 4 students were killed, and 2 teachers and 27 students were injured. ^{1/}

The schoolbus was in poor mechanical condition when it was assigned to the activity trip on the afternoon before the accident. The brake, steering, and exhaust systems and the leaking rear-axle differential had been serviced within the last year and either had not been repaired properly or needed additional work. It is doubtful that the teacher-driver, the auto mechanics instructor, and the student who attempted to correct problems detected in the steering, brakes, exhaust system, and rear axle the evening before the trip knew the true nature of the vehicle's condition. A postaccident inspection indicated that these items needed major repairs. However, the Safety Board found no evidence to suggest that the mechanical condition of the schoolbus contributed to the accident.

A little over a month before the accident, the regular driver of the bus reported "mushy" brakes. The maintenance report stated that the brakes were checked and fluid added, but it did not give any other details. If the tire, wheel, and brake drum assemblies had been removed to examine the brake system components at that time, it is likely that all leaking wheel brake cylinders would have been replaced, that the improperly installed lower left front brake shoe would have been replaced, and that the brakes would have been adjusted.

^{1/} For more detailed information read Highway Accident Report—"Jonesboro School District Schoolbus Run-Off-Road and Overturn, State Highway 214 at State Highway 18, near Newport, Arkansas, March 25, 1983" (NTSB/HAR-83/03).

Despite two annual inspections and provisions for scheduled and unscheduled maintenance, the bus supplied by the Jonesboro School District was mechanically unsuitable for any long distance, high speed trip. The Jonesboro School District inspects and maintains its buses in accordance with the Federal requirements of Highway Safety Program Standard (HSPS) 17--Pupil Transportation Safety, issued by the National Highway Traffic Safety Administration (NHTSA), and in accordance with the guidelines of the "Program Manual" for implementing HSPS 17. However, the school district apparently does not have a procedure in place to determine if needed repairs have been performed adequately or if major repairs are required. HSPS 17 and the "Program Manual" for HSPS 17 also do not address the issue of the quality control of schoolbus repairs. The annual inspections required by State and Federal regulations probably would locate problems but would not necessarily define the extent of the problems. The Safety Board believes that properly inspected and repaired schoolbuses and adequate maintenance facilities are essential to the safe transportation of pupils. The Safety Board also believes that quality control procedures for schoolbus repairs should be instituted in State schoolbus maintenance programs and addressed in HSPS 17 and the "Program Manual" for HSPS 17.

Neither the Jonesboro School District nor the "Program Manual" of HSPS 17 specifically define the qualifications of schoolbus mechanics or address a continuing program to maintain or upgrade their skills. The mechanic for the Jonesboro School District complied with the general requirements stated in the "Program Manual" for HSPS 17 that mechanics have previous experience and that they attend annual State-approved training. The Safety Board believes that the poor mechanical condition of the schoolbus in this accident suggests that the existing Federal requirements for hiring and training schoolbus mechanics are inadequate.

The Safety Board conducted a telephone survey in August 1983 of the District of Columbia, 13 States, 2/ and 2 trade organizations 3/ on the subject of training, licensing, or certification of schoolbus mechanics. This information was gathered from State Directors of Public Transportation, student transportation contractors, and members of the State Highway Patrol. From the survey, it was apparent that the requirements for on-the-job training of schoolbus mechanics vary widely, that periodic training is unstructured, that the only formal training may involve certification to become a State vehicle inspector, and that programs for certification of proficiency in vehicle systems and components exist.

The Safety Board has investigated three school activity trip accidents 4/ involving buses in poor mechanical condition, and it believes that continued emphasis must be placed on providing buses that have been thoroughly inspected and are in good mechanical condition. Although there is no evidence to indicate that the Jonesboro School District was aware of the serious mechanical deficiencies of the schoolbus involved in this accident, the Safety Board believes that activity groups should be prevented from starting or continuing trips in mechanically unsafe vehicles.

2/ California, Florida, Iowa, Louisiana, Maine, Michigan, Minnesota, New Hampshire, New York, North Dakota, Pennsylvania, Texas, and Wisconsin.

3/ National Committee for Motor Fleet Supervisory Training and the National School Transportation Association.

4/ Highway Accident Reports--"Siskiyou Union High School District Schoolbus/Automobile Collision and Rollover, Interstate 5, Ashland, Oregon, May 9, 1975" (NTSB-HAR-76-1); "Student Transportation Lines, Inc., Charter Bus Climbing of Bridge Rail and Overturn, Near Martinez, California, May 21, 1976" (NTSB-HAR-77-2); "Overturn of a Ypsilanti, Michigan, Boys Club Bus, Interstate 75, Near Tifton, Georgia, April 11, 1978" (NTSB-HAR-79-2).

The only fire extinguisher on the bus was mounted near the driver and was relatively inaccessible after the accident. Students who looked for the fire extinguisher did not know where it was located. Fortunately, the engine compartment fire was small. Either it was extinguished by the passengers using dirt and water from the drainage ditch or it went out on its own. These findings indicate that schools should consider providing an additional fire extinguisher near the rear of the bus, posting signs in schoolbuses on the location and use of emergency equipment, and briefing all passengers about the location and use of emergency equipment, both periodically and before beginning special activity trips.

Therefore, the National Transportation Safety Board recommends that the National Highway Traffic Safety Administration:

Include in Highway Safety Program Standard (HSPS) 17--Pupil Transportation Safety and in the "Program Manual" for HSPS 17 the requirement that the States institute quality control procedures for schoolbus repairs to determine if needed repairs have been performed adequately or if major repairs are required. (Class II, Priority Action) (H-83-44)

Include in the "Program Manual" of Highway Safety Program Standard 17--Pupil Transportation Safety:

1. Specific, well-defined qualifications for hiring schoolbus mechanics;
2. Specific skill areas for schoolbus mechanics for which certification of proficiency is required;
3. A bibliography of available courses that can be attended or course curricula that can be used as an example to obtain certification of proficiency in the required skill areas;
4. A requirement to institute and enforce procedures to prevent school activity groups from organizing, beginning, or continuing trips in mechanically unsafe vehicles; and
5. Requirements to place fire extinguishers at the front and rear of schoolbuses, post signs in schoolbuses on the location and use of emergency equipment, and brief passengers on the location and use of emergency equipment, both periodically and before beginning activity trips.

(Class II, Priority Action) (H-83-45)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and ENGEN, Member, concurred in these recommendations. McADAMS and BURSLEY, Members, did not participate.


By: Jim Burnett
Chairman

