

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

H-251

ISSUED: October 21, 1980

Forwarded to:

Honorable Edmund G. Brown, Jr.
Governor of California
Sacramento, California 95814

SAFETY RECOMMENDATION(S)

H-80-70 through -72

About 3:25 p.m., on April 23, 1980, a truck tractor was traveling north on California State Route 86, a two-lane rural highway, when its left front tire blew out. The tractor swerved to the left, crossed the centerline, and collided head-on with a southbound schoolbus transporting nine teenaged students. The busdriver and three students were killed; the truckdriver and six students were injured. 1/

The left front tire of the tractor blew out because earlier an impact injury damaged the tire cords and caused the tread to separate. Separation continued to erode and abrade the tire cords until the tire failed. Tread on the left front tire had also separated at a balance pad that had been placed inside the tire, but the tire did not fail in this area. Bulges in the tire at the two tread separations, rhythmic "slapping" sounds from the bulges, a bald spot produced by abnormal tread wear at the separation at the balance pad, and possibly vibrations in the steering system that the truckdriver had noticed about a week before the blow-out were obvious clues that the tire was inadequate and failing before the blow-out occurred. After the tractor tire failed, the truckdriver and busdriver had no opportunity to avoid a collision.

The truck company that owned and operated the tractor was an intrastate carrier and was, therefore, required to meet State of California motor carrier rules and regulations. Title 13, Section 1232A, of the California Administrative Code requires that the company have an organized preventive maintenance program. The B & J Trucking Company did not have such a program. Through the trip and periodic preventive inspections required by law, it should have been possible to detect the unsafe left front tire and remove it from service.

1/ For more detailed information about this accident read, Highway Accident Report: "B & J Trucking Company Truck Tractor/Coachella Valley Unified School District Schoolbus Collision, State Route 86, Coachella, California, April 23, 1980" (NTSB-HAR-80-6).

Six days before the accident, the tractor was inspected by California Commercial Vehicle Inspection specialists during a random inspection of commercial vehicles at the Banning, California, truck scale. However, the failing tire still went undetected. Except for a lenient standard relative to the minimum tread depth allowed on truck tires — 2/32 inch on the steering axle and no requirement for other axles — California's written inspection procedures for tires, wheels, and rims seemed adequate. With regard to tread depth standards, current research indicates that a minimum of 2/32 inch of tread depth is required on all truck tires to insure adequate traction in wet weather. 2/ Federal Motor Carrier Safety Regulation 343.75 for interstate carriers requires 4/32 inch of tread depth for tires mounted on the steering axle and 2/32 inch of tread depth for tires on all other axles. With the 4/32 inch requirement, this Federal regulation guarantees that truck tires that have exceeded 75 percent of their maximum service life and are more likely to have suffered abuse or injury, and therefore, subject to blow-outs, will not be placed on a steering axle where a blow-out is extremely difficult to control. California should revise its minimum tread depth requirements to match those required by Federal regulations.

In revising its tire inspection procedures and standards, the State of California should also consider incorporating additional guidance about tire wear patterns that might be symptomatic of tread or ply separation problems. These revised procedures should emphasize the need to examine for tire defects and overloading, regardless of tread depth.

The inspectors at the Banning truck scale either did not detect or did not react to a loose right rear brake chamber, an improper service air tank-to-foot brake air line hose repair, an excessive amount of oil leakage, or the unsafe tire on the tractor — areas that were to be examined during inspection. Such inadequate inspections should be avoided by the California Highway Patrol and it should take action to insure that such inadequate inspections are not repeated and do not affect the apparent general success of the Critical Items Inspection program. As part of any action taken, the Safety Board recommends that the State of California circulate the Coachella accident report, with its finding of the inadequate inspection of the truck, among California Commercial Vehicle inspectors.

The highway was not a causal factor in this accident. However, there was a high fatality rate on State Route 86. The Safety Board is aware that California is currently considering major highway construction improvements along State Route 86. The Safety Board conducted a preliminary analysis of accident statistics to determine if safety improvements more limited than major highway construction were feasible for State Route 86. This analysis indicated that there was a potential for developing a number of small-scale improvements — bridge replacement, alcohol enforcement, and daylight use of headlights — that would at least serve as interim safety improvements while longer-term major projects are under consideration.

As a result of its investigation of this accident, the National Transportation Safety Board recommends that the State of California:

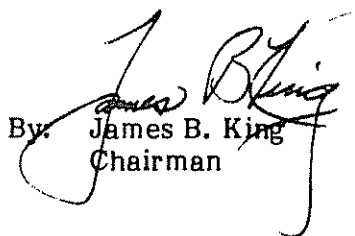
2/ "Influence of Tread Depth on Wet Skid Resistance of Tires," Albert Dijks, Delft University of Technology, presented at the Second International Skid Prevention Congress, 1977, and published in Transportation Research Record 621 of the Transportation Research Board.

Revise Section 1088 of the California Administrative Code to match the minimum tread depth requirements of the Federal Motor Carrier Safety Regulations, Section 343.75(b) and (c), which are more in keeping with tire standards recommended by current research. (Class II, Priority Action) (H-80-70)

Circulate the Coachella accident report, with its finding of the inadequate inspection of the truck, among California Commercial Vehicle inspectors. (Class I, Urgent Action) (H-80-71)

Investigate the potential for limited improvements along California State Route 86 between Coachella and Westmoreland, California, that will at least serve as interim safety improvements while longer-term improvements are under consideration. (Class I, Urgent Action) (H-80-72)

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


By. James B. King
Chairman

