

Lessons Learned from Accident Investigations

“Legal” Tire Tread Depths Contributed to Deadly Motorcoach Wreck

A motorcoach crash on a rain-soaked interstate highway in Texas, claiming 7 lives, has prompted the National Transportation Safety Board (NTSB) to again urge Federal highway regulators to update minimum acceptable tread depth requirements that have not changed since 1969.

The seriousness of outdated tread depth standards for larger vehicles is illustrated by an accident in which a motorcoach traveling on Interstate 35 near Hewitt, Texas, ran off the road, crossed the median, and collided with a van traveling in the oncoming lane. Heavy rain, fog, and haze in the area had reduced visibility at the time of the accident. The tread depth of the drive-axle tires was 2/32-inch, which is the legal limit, but did not provide enough tire safety.

As the motorcoach driver approached the crest of a hill, he noticed that traffic was stopping ahead for a previous accident. He began to brake and move from the right lane to the left lane to avoid the stopped cars, but another car moving into the left lane at the same time forced the bus driver to brake hard. The rear of the bus skidded and the driver lost control. Five motorcoach passengers, the van driver and one passenger were killed in the accident.

After conducting research at an independent laboratory, NTSB investigators took issue with the tire tread limit that allowed the motorcoach to stay in service. The recently released final report of the investigation said that the 2/32-inch minimum tread depth of the drive-axle tires, including the smaller tread depth on the left drive-axle tires, particularly in combination with the nearly new front tires, contributed to wheel lockup and the subsequent rotation of the motorcoach. The minimal friction available to the tires and on the roadway combined to cause the motorcoach to lose control when the driver attempted to maneuver to avoid stopped traffic.

To improve safety, the NTSB urged the Federal Highway Administration (FHWA) to conduct research on commercial vehicle tire and wet pavement surface interaction to determine minimum frictional quality standards for commercial tires on wet pavement. After the research is completed, the NTSB wants the FHWA to revise the tire requirements for commercial vehicles operating on wet pavement at highway speeds, and develop minimum acceptable pavement coefficients of friction and maximum permissible pavement rut depths as part of roadway maintenance requirements, as appropriate.

The NTSB also urged the National Highway Traffic Safety Administration (NHTSA) to conduct testing on the effects of differing tread depth for the steer and drive-axles. Once the testing is complete, the NTSB wants the Federal Motor Carrier Safety Administration to modify the tread depth requirements for each axle to reflect the results of the research.

This is not the first time the NTSB has issued recommendations on tread depth and roadway friction requirements. Almost 25 years ago, the NTSB asked NHTSA and the FHWA to take similar actions. They failed to do so and NTSB classified their inaction as “unacceptable.”

Numerous other safety issues were raised by the Hewitt accident, including sight distance and speed as they relate to roadway design, the need to better identify areas with a high risk of wet weather accidents and implement roadway improvements, road design and speed limits, motorcoach occupant protection, and motor carrier oversight.

For a complete copy of the accident report, visit the NTSB website at www.nts.gov.