

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 29, 1978

Forwarded to:
G. M. Young
President
Ryder Truck Rental, Inc.
3600 Northwest 82nd Avenue
Miami, Florida 33166

SAFETY RECOMMENDATION(S)
H-78-70

About 9:30 a.m., e.d.t., on January 25, 1978, a tractor-semitrailer (truck) transporting 43,000 lbs of feldspar departed Spruce Pine, North Carolina, en route to Spartanburg, South Carolina. This was the final leg of a 1,400-mile trip that had originated at Spartanburg on January 22. Before leaving Spruce Pine, the driver, the sole occupant of the truck, conducted a pre-trip inspection of the truck brakes by bringing the truck to a stop from a slow roll using the trailer brake only. He then performed a similar test with all service brakes. Satisfied with the operating condition of the equipment, the truckdriver departed. 1/

About 10:00 a.m., after the truck had traveled about 10 miles it began to descend a 4-mile-long, steep winding grade on North Carolina Route 226, near Marion, North Carolina. The driver stated that he began descending the grade at 20 to 25 mph, and after driving through the first few curves he looked through his rearview mirror and noticed that the trailer brakes were smoking. He tried to slow the vehicle and intended to pull off the road, but the brakes were not effective and the truck began to accelerate. He then intended to stop the truck by scraping it against the steep vertical cut on the east side of the road. After the truckdriver steered across the centerline into the northbound lane, it collided headon with a pickup truck.

A passenger in the pickup truck was killed, and both drivers and the second passenger in the pickup were injured.

1/ For more detailed information read "Kohler Company Tractor-Semitrailer/ Pickup Truck Collision, U.S. Route 226, Near Marion, North Carolina, January 25, 1978." The report will be available after October 15, 1978.

The truck was a 1977 GMC tractor owned by Ryder Truck Rental and leased to Kohler Company of Spartanburg, South Carolina, and a 1972 Fruehauf van-type trailer owned by Kohler Company. Ryder Truck Rental provided maintenance for both the tractor and trailer.

Although records of the tractors' last preventive maintenance inspection, at 58,277 miles, indicated that the brakes were found to be "OK" and that no brake adjustments were made, the brakes were found to be seriously out of adjustment after the accident -- only 4,057 miles after the inspection.

The tractor brake linings were original equipment and when new were 24/32 inch thick; when inspected after the accident, they were 18/32 inch thick. About 6/32 inch had worn off in 62,334 miles -- an average of .0003 inch brake wear per 100 miles.

According to the vehicle manufacturer, the ratio of brake chamber push rod stroke to brake lining wear is 25 to 1. Therefore, based on this relationship and the wear rate, the probable brake chamber push rod stroke at the time of last inspection can be calculated. These calculations indicate that at the time of last inspection the brake chamber push rod stroke at all tractor wheels was at, or beyond, the recommended maximum stroke at which the brakes should be readjusted.

According to records, on December 29, 1977, the trailer brake linings were inspected and the brakes adjusted. Since the operating mileage of the trailer cannot be determined, the mileage traveled from the time of the last brake adjustment to the crash was estimated to be 7,500 miles by comparing it to the average tractor mileage. Computations similar to those performed for the tractor suggest that the trailer brakes may not have been adjusted on December 29, 1977, as the records indicate, or that the adjustments were not properly made.

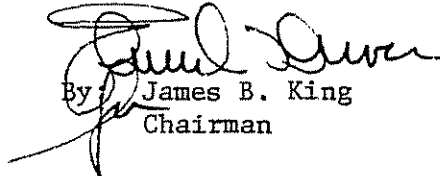
The Safety Board, therefore, concludes that both the tractor and semitrailer were put into service after their last maintenance inspection with brakes in need of adjustment.

The Ryder Truck Rental maintenance program, dated January 15, 1977, does not include a requirement for adjusting brakes at each preventive maintenance inspection.

Therefore, to prevent the recurrence of this type of accident, the National Transportation Safety Board recommends that Ryder Truck Rental:

Amend its maintenance program relative to brake adjustment by requiring an adjustment at least at each preventive maintenance inspection. (Class I, Urgent Action) (H-78-70)

KING, Chairman, McADAMS, HOGUE, and DRIVER, Members, concurred in the above recommendation.


By James B. King
Chairman