



**ACCIDENT CAUSES WITH GEORGIA LOGGING TRACTOR-TRAILERS
NOW MIRROR OTHER HEAVY TRUCKS**

Trucks/Trucking: safety

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INTRODUCTION: In the early 1990s, Georgia saw increased regulation of logging truck safety from the state just as the federal government was stiffening requirements for commercial drivers. As a result of these regulations, and of the industry training programs that accompanied them, the incidence of mechanical failure as a contributing factor in logging vehicle accidents declined significantly. Today, the accident causes associated with logging vehicle accidents in Georgia closely resemble those of other heavy trucks, suggesting that future training of logging truck drivers should focus primarily on safety issues of interest to the general trucking community.

DATA AND ANALYSIS: We evaluated records from accidents involving all heavy trucks in Georgia between 1988 and 2004. Law enforcement officers who work the scene of highway accidents record these data. The Georgia Department of Motor Vehicle Safety Information enters information from these forms (DPS-523) into a computer database that it maintains. Our findings from the records for 1988-1996 were reported earlier (see FRA Technical Releases 92-R-68 and 96-R-51). We recently updated our statistics for 1997-2004 using funding from the National Timber Harvesting and Transportation Safety Foundation. These additional data gave us a complete record of truck accident statistics in Georgia for the entire 17-year period. We used these data to identify trends in accident factors and to compare factors associated with accidents before regulation (1988-1991) to those recorded in subsequent years.

RESULTS: The percentage of accidents in which a mechanical failure was involved dropped by half for logging tractor-trailers (from 10.9% to 4.8%) and by two-thirds for logging trucks (from 12.9% to 4.2%) in a comparison of the most recent four years (2000-2004) to the 1988-1991 period prior to increased regulation and training.

Nearly all wood delivered by truck to Georgia mills is hauled on a tractor-trailer; thus, we primarily focused on the record of these vehicles and changes in trends. Law officers may cite one or more factors that, in their judgment, have contributed to any accident they investigate. Specific types of mechanical failures have also declined sharply. Three potential failure items that are visually checked during roadside inspections—brakes, tires, and lights—have seen the most dramatic declines. Brake failure has dropped by 69%—from 6.51% to 1.60% of accidents—since 1991. Slick tires have also seen a decrease of nearly two-thirds, from 3.46% to 1.29% of accidents. We saw the most dramatic improvement in the area of truck lighting. Improper lights as a factor was cited only 0.42% of the time during the previous four years compared to 2.05% of accidents in 1988-1991—a reduction of 80%.

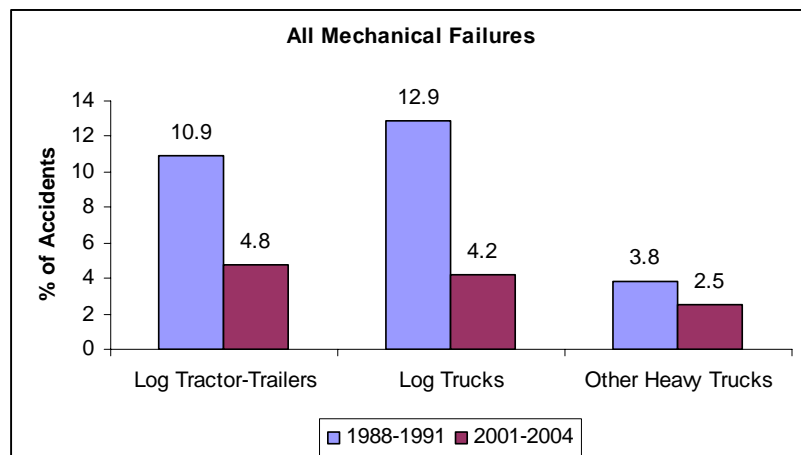


Fig. 1: Mechanical failure rates in heavy truck accidents in Georgia.

All three of these items—brakes, tires, and lights—are easily checked in a pre-trip walk-around by the driver, and these are high priority areas for inspection by law officers in random roadside inspections and during post-accident investigations. Similar but less dramatic improvements occurred in every other factor, including tire failure and steering failure. Driver impairment due to use of alcohol or drugs today

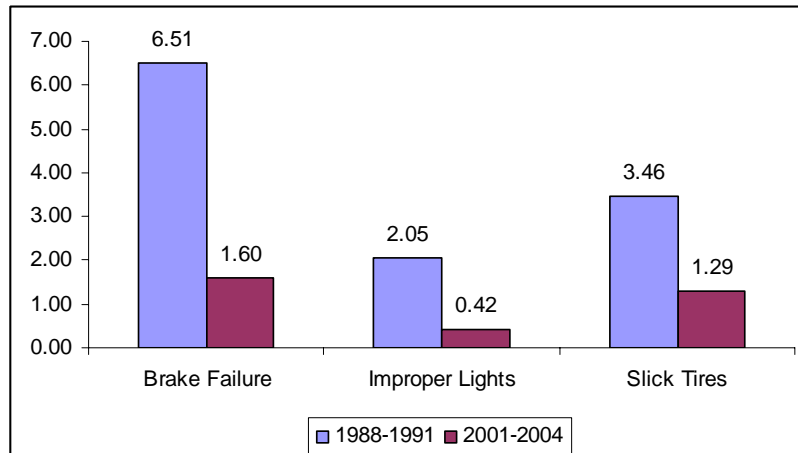


Fig. 2: Mechanical failure rates in logging tractor-trailer accidents in

occurs in fewer than 0.5% of accidents involving logging tractor-trailers, indicating that by no measure is substance abuse a widespread problem in truck safety today.

Between 1988 and 1991, mechanical failure was the most often cited contributing factor in accidents involving logging tractor-trailers, as shown in *Table 1*. During the most recent four years for which we have data, mechanical failure has fallen to being the seventh most cited contributing factor in logging

tractor-trailer accidents. Today, the contributing factors related to logging tractor-trailer accidents very closely mirror those of other heavy trucks. Three of the top four contributing factors (“following too close,” “misjudged clearance,” and “failed to yield”) fall into the same ranking for logging tractor-trailers and other heavy trucks. Differences in rankings seem logically explained by the differences in how these trucks operate. For example, logging tractor-trailers seldom have to back up except in the woods or on mill sites; thus, this factor is not often cited in accidents on public roads.

Table 1: Contributing factors in logging tractor-trailer accidents in Georgia during 1988-91 and 2000-04 compared to other heavy trucks during 2000-03 (# = rank, 1 = most cited).

Contributing Factor	Logging Tractor-Trailer		Other Heavy Trucks
	1988-1991	2000-2004	2000-2004
Mechanical Failure	1	7	
Misjudged Clearance	2	3	3
Too Fast for Conditions	3	6	
Failed to Yield	4	4	4
Following Too Close	5	1	1
Driver Lost Control	6	2	7
Improper Turn	7		6
Improper Lane Change		5	2
Improper Backing			5

Factors associated with logging vehicle accidents today in Georgia closely resemble those associated with heavy trucking accidents generally. Accident causes are now primarily related to driver decisions and behavior. Training should primarily focus on these areas and could effectively use materials for general truck drivers, since accident causes are so similar. The Georgia Forestry Association plans to follow-up this report with a shortcourse for logging vehicle drivers that will make use of general truck driver training materials along with the findings of this analysis.

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