LEGISLATIVE BUDGET AND FINANCE COMMITTEE

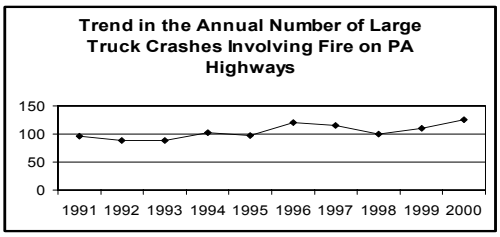
LB&FC Review of Large Truck Crashes Involving Fires on Pennsylvania Highways

Report Highlights

Background: During 2000, highway crashes involving at least one large truck on Pennsylvania highways claimed the lives of 183 persons and injured 6,070 others. Act 2002-229 directed the LB&FC to review a specific subcategory of these crashes—i.e., large truck crashes in which a fire was involved either before or as a result of the crash. For purposes of the study, a large truck is defined as a truck over 10,000 pounds gross vehicle weight rating.

Findings: (See pages S-1 through S-5.)

➢ *1. Trend Data*. Based on the "Pennsylvania Accident Record System, 1,045 large truck crashes involving fire, or an average of about 100 a year, occurred on Commonwealth highways during the ten-year period ending in Calendar Year 2000.



The 1,045 crashes of this type represent 1.4 percent of all large truck crashes during the period.

➢ *2. Fatal Crashes*. A total of 145, or 13.9 percent, of the 1,045 crashes were fatal crashes that resulted in 195 deaths. It is not possible from available records to determine the relationship fire had to these fatalities since a death resulting from a large truck crash involving fire might be attributable to causes other than the associated fire.

➢ *3. Injury Crashes*. A total of 175, or 16.7 percent of the 1,045 crashes, resulted in injuries to the vehicle occupants. These injury crashes contributed to a total of 424 injuries.

➢ *4. Property-Damage-Only Crashes*. Nearly 70 percent of the 1,045 large truck crashes with fire were property-damage only crashes, and a large number of these were non-collision events. Such a "crash" may occur, for example, if a large truck's brakes overheat and result in an on-board fire. While not necessarily resulting in a collision, this is a reportable accident and, if the vehicle is towed, is recorded as a crash involving fire. The primary contributing factor in most of these crashes was listed as "engine failure."

➢ *5. Large Truck Crash/Fire Involvement Rates*. The number of large trucks involved in crashes with fires per 100 million vehicle miles traveled (i.e., the crash involvement rate) in PA was essentially unchanged between 1991 and 2000 (1.23 in 2000 and 1.20 in 1991). PA's 2000 rate was slightly lower than the national average of 1.30.

➢ *6. Crash Causation*. As is the case for all motor vehicle crashes, no reliable PA or national database exists on the exact causes of large truck crashes involving fires. Studies currently ongoing at the federal level, including the "Large Truck Crash Causation Project," may provide improved understanding of such crashes.

➢ *7. Ongoing Truck Safety Efforts*. While not intended to deal uniquely with the issue of large truck crashes involving fires, ongoing truck safety programs, including PA's 2002 "Unified Truck Safety Strategy" and the Federal "Motor Carrier Safety Action Plan," include many objectives which, if successfully implemented, could contribute to the goal of reducing all large truck crashes, including those which involve fire.

➢ *8. Recent Research*. Recent research suggests that additional federal regulatory changes, especially to regulations relating to fuel systems and certain technology advancements that could be modified for use by the trucking industry (e.g., specialized fuel cell technology and on-board suppression systems), have the potential to reduce large truck crashes involving fire.

Recommendations: (See page S-6.)

The report recommends that PENNDOT:

(1) Report to the House and Senate Transportation Committees by September 30, 2003, on progress made in implementing PA's Unified Truck Safety Strategy. (2) Add a section to its annual crash report to provide statistical information and analysis on large truck crashes involving fire. (3) Consider adding information to its website concerning safe-driving techniques when in the proximity of large trucks. (4) Review the results and recommendations of the federal "Large Truck Causation Project" for applicability to PA.

For a full copy of the report, please call 717-783-1600 or e-mail us at info@lbfc.legis.state.pa.us

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