

1 INSPECTION OF COMMERCIAL MOTOR VEHICLES

Post-Crash Inspection of Commercial Motor Vehicles

Probably one of the least desirable tasks of traffic crash investigation is the post-crash inspection of the vehicle. In the past, inspection of the vehicle has been one of those areas that has been given the least amount of attention. Much of the emphasis in the classroom has been placed upon the collection of the physical evidence and the application of the formulas while the post-crash inspection of the vehicle became almost a secondary subject as it related to physical evidence. This was not the intention of the instructor but only the result of pressure from providing a vast amount of information the student needed to absorb in a two-week period. Also, at the beginning levels of accident reconstruction, very little information is taught concerning occupant kinematics. Therefore, much of the inspection process has consisted of merely making observations and taking detailed notes of the vehicle's crush profile.

In commercial motor vehicle crash investigation, a more detailed inspection of the vehicle must be performed in order to determine, or eliminate, contributing factors of the traffic crash associated with the mechanical condition of the vehicle. Further, the operator of a commercial motor vehicle must perform a pre-trip and post-trip inspection of the vehicle and it is up to the investigator to ensure that these inspections were performed properly by the operator. Inspection of the vehicle by the investigator will allow the investigator to make a determination as to whether the overall condition of the vehicle would permit it to be safely operated on the highways.

It is understandable that it is nearly impossible for the investigator to conduct a thorough inspection of the vehicle at the traffic crash scene. Concern should be given first to caring for the injured and clearing of the roadway to prevent any further traffic crashes. It is, however, very important that the investigator take a moment to collect certain data from the driver before the driver is allowed to leave the scene of the traffic crash. Within the cab of the vehicle, the driver is required to carry the last vehicle inspection report that was completed on the vehicle. This report must to be completed at the end of each workday and signed prior to the start of the following workday. Understanding what the inspection requirements are for the driver, as set forth by the Federal Motor Carrier Safety Regulations, will help in the post-crash inspection.

A proper post-crash inspection of the vehicle will require a great deal of knowledge of the mechanical components of a commercial motor vehicle. The purpose of the inspection should be twofold:

1. To ensure that the driver properly conducted the end-of-workday inspection and did not operate the vehicle in an unsafe condition that would be deemed hazardous to the other motoring public

2. To determine, or eliminate, mechanical failure as a contributing factor in the traffic crash

To address the first purpose, it will be necessary for the investigator to obtain a copy of the last vehicle inspection report. This report will include a list of items that the driver is required to check to ensure that all are in a safe operating condition. Each of these items should be re-inspected during the post-crash inspection of the vehicle by the investigator. It may be that the driver was required to check for damage and cracks to the leaf springs on the drive axle but failed to properly do so because it may have been too much of an inconvenience to perform this part of the inspection. If the traffic crash was the result of failure of one of the springs, causing the vehicle to become dynamically unstable and roll over into the oncoming lane, it would be important to determine that the failure of the spring occurred over a period of time and should have been detected during the inspection of the vehicle. Likewise, it would be just as important to show that the spring suffered a sudden failure and was not detectable to the driver during the post-crash inspection.

The second purpose will most likely be of the greatest importance to the investigator. Often the investigator will be faced with testifying about this collision months after its occurrence. We are all aware how, with the passing of time, other factors can now be addressed that did not seem of importance at the time of the collision. In a frantic search to shift blame to the mechanical condition of the vehicle, as opposed to the improper driving of the operator, questions will be posed to the investigator about what was found during the post-crash inspection of the vehicle. It would be helpful to remember that this type of vehicle has a multitude of parts and pieces that can be addressed as possible failure points and it will best serve the investigator to address them at the time of the post-crash inspection. It is better to take the time and effort to conduct a proper inspection than not to have the answer at a later time and appear to have conducted a questionable investigation. Special note should be given to all aspects of the vehicle and the vehicle should be broken down into workable sections. Take special note of exhaust systems and the condition of the interior of the truck-tractor. Make sure that driver fatigue was not the result of carbon monoxide intrusion into the passenger compartment of the truck-tractor. A proper brake inspection should be conducted during the post-crash inspection and all the elements affecting the deceleration of the vehicle measured and documented. Be sure to collect and log any receipts found that may be of use in reconstructing the driver's hours of service log if it becomes necessary at a later date. Inspect the tires for proper tread depth and inflation. Determine the overall condition of each tire on the vehicle and ensure that not any one tire was carrying the entire vertical load at any one particular point.

It is sad to say that the inspection will mostly help prevent the operator from shifting blame to the mechanical condition of the vehicle, where the focus of attention often is during the courtroom proceeding. Many of the questions addressed to the investigator will be in reference to what the investigator did not do as opposed to what the investigator did do. Taking the extra time and making

the extra effort to properly conduct the post-crash inspection may save you a great deal of time and embarrassment at a later date.

Pre-Trip and Post-Trip Inspection

The driver of every commercial motor vehicle is required to conduct a pre-trip inspection of the vehicle and be satisfied with the inspection before the vehicle may be operated on the highway. Further, the driver is required to complete and sign an inspection form at the completion of each workday.

Post-Trip Inspection

396.11 Driver's vehicle inspection report(s)

1. Report required. Every motor carrier shall require its drivers to report, and every driver shall prepare a report in writing at the completion of each day's work on each vehicle operated and the report shall cover at least the following parts and accessories:
 - A. Service brakes including trailer brake connections
 - B. Parking (hand) brake
 - C. Steering mechanism
 - D. Lighting devices and reflectors
 - E. Tires
 - F. Horn
 - G. Windshield wipers
 - H. Rear vision mirrors
 - I. Coupling devices
 - J. Wheels and rims
 - K. Emergency equipment
2. Report content. The report shall identify the motor vehicle and list any defect or deficiency discovered by or reported to the driver which would affect safety of operation of the motor vehicle or result in its mechanical breakdown. If no defect or deficiency is discovered by or reported to the driver, the report(s) shall so indicate. In all instances, the driver shall sign the vehicle inspection report. On two-driver operations, only one driver