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## I. Introduction

It is common for a defendant's liability to be less than crystal clear in an initial case call. Every attorney has handled a case that looked like a loser during the initial call, but turned out to be a very good case. For example, you get a call that indicates the client was involved in a crash with a semi-truck (bells and whistles go off); then you learn that the potential client ran into the tractor or trailer or pulled out in front of the truck (the bells and whistles go silent). Before you decline the case or concede that the client is completely at fault, look into a "conspicuity" theory. Conspicuity in that the client could not properly see the semi-truck or trailer; or that the semi-truck was illegally parked and obscured the view of your client.

This article will discuss theories of liability that are often overlooked such as a motor carrier's duty to comply with conspicuity requirements so its commercial vehicles can be seen at night; and the duty a truck driver owes to avoid parking in a dangerous location on the shoulder of a roadway.

If a trucking crash occurs at nighttime or in limited visibility, it should raise a red flag to screen the case for conspicuity claims. "Conspicuity" refers to a motorist's ability to perceive, identify and appreciate a truck's position and speed in the roadway, particularly at night. As used in this article, conspicuity also includes situations where the truck partially or completely blocks the view of the driver. Drivers cannot avoid

lurking dangers they cannot perceive. Potential conspicuity theories should also be explored in "under-ride cases" (i.e. where the vehicle rear ends a trailer; the under-ride bar does not perform as designed; and the occupants are injured because of the under-ride). These cases can be combined with a conspicuity theory to potentially lessen the negligence of the driver in rear-ending the trailer.

Conspicuity cases often look like "dogs" at first because our clients initially appear to be at fault, and crash reports often assign our clients 100 percent of the fault. Several studies and federal conspicuity regulations turn these cases from "dogs" into viable claims that end with good results for your clients



Effectiveness of reflective tape



Reflective tape difficult to see

# II. Decades of Conspicuity Studies Support that Commercial Vehicles' Lack of Conspicuity Cause Crashes and Deaths

Two 1970s studies conducted by the University of Michigan Highway Safety Research Institute noted the high frequency of nighttime crashes involving cars and semi-trucks because drivers did not perceive the presence of the tractor-trailer in time to avoid the collision.<sup>1,2</sup>

In the 1980s, NHTSA conducted a three-phase study that came to similar results. Phase I concluded that rear and side collisions involving tractor-trailers were more severe at night because drivers following tractor-trailers did not see the truck at all, misjudged the distance of the truck or perceived the truck's location too late.<sup>3</sup> Phase II identified that reflective

stripes with alternating colors outlining the side and rear perimeters of trailers was the most effective approach to making tractor-trailers more visible. Phase III concluded that reflective tape reduced conspicuity-related side crashes by 15 percent and reduced rear collisions by 25 percent.<sup>4</sup>

In 2001, NHTSA conducted a study that confirmed retroreflective tape and other conspicuity materials save lives. The study analyzed more than 10,000 crashes that occurred in Florida and Pennsylvania from 1997-99. The study estimated that retroreflective tape reduces rear impacts by 29 percent. It concluded that fully implemented visibility requirements for heavy trailers will prevent 7,800 crashes; 191 to 350 fatalities; and 3,100 to 5,000 injuries per year.<sup>5</sup>

### III. Conspicuity Regulations

In the early 1990s, the federal government, through the Federal Motor Carrier Safety Regulations (FMCSR), adopted conspicuity requirements for commercial vehicles and trailers manufactured after December 1, 1993, in order to reduce side and rear collisions that occur due to limited visibility in dark conditions. In 1999, the FMCSRs extended this requirement to trailers manufactured prior to December 1, 1993, which meet certain height and weight requirements.<sup>6</sup>

Federal requirements allow tractor-trailers

to use either reflex reflectors or red and white reflective tape. Manufacturers of the reflectors and reflective tape must be in compliance with Federal Motor Vehicle Safety Standard (FMVSS) 108.8

The regulations codify requirements for the placement and size of lamps and reflectors.<sup>9</sup> Reflective tape must cover the length of the rear of trailers. In addition, reflective tape must be included on all sides of the trailer, as close to the front and rear as practicable.<sup>10</sup> Tape on the sides does not have to be continuous along the entire length of the trailer, but in total, reflective material must span half of the trailer.<sup>11</sup> The upper corners of the trailer must also have reflective tape.<sup>12</sup>

The tape on the lower edge of the rear and sides of the trailer must be no higher than 60 inches above the roadway. If the tape is higher than 60 inches, there is a risk that motorists' headlight beams will not be high enough to reach the reflective materials, leaving motorists unable to perceive the location of the tractor-trailer.

# IV. Conspicuity Issues Remain and Cause Numerous Preventable Injuries and Deaths

In the real world, many motor carriers simply do not follow conspicuity requirements, while others allow dirt and mud to accumulate on the reflective material that diminishes its effectiveness. Finally, some operators use corrosive chemicals to wash

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the reflective tape, which causes the tape to fade, wear and lose its reflectivity.

Tractor-trailers encounter harsh conditions during all seasons and weather conditions. The accumulation of dirt and grime also diminish reflective materials' effectiveness and lead to conspicuity-related collisions. A 1981 study concluded that dirt and grime reduced reflected light on commercial trucks by 30 percent.<sup>13</sup> The University of Michigan conducted a more extensive study in 1992 and found that washed trailers lost 60 percent of reflectiveness on their rear, while the less-frequently washed trailers lost 90 percent of reflectivity. The results were even more drastic in the winter; the washed trailers lost 70 percent

of reflectivity on the rear, while the less regularly washed trailers lost 95 percent of reflective materials' effectiveness.14 About 30 percent of the 10,000 trailers considered in the study were "somewhat dirty."15 While clean tape reduces rear impact collisions by up to 53 percent, dirty tape only reduces collisions by 27

Reflective materials should be kept clean, but unfortunately many motor carriers use harmful materials that are counterproductive. Corrosive chemicals in cleaning supplies can diminish the conspicuity materials' reflectivity. Reputable reflective tape manufacturers instruct that the tape be flushed with water, then washed with a mild detergent solution and soft bristle brush or sponge. The manufacturers warn users not to use solvents to clean the sheeting surface; however, many trucking companies and commercial operators do not follow these warnings. As a result, the solvents diminish the illumination of the reflective tape and the tractor-trailers become hidden dangers to motorists driving in the dark.

## V. Semi-Trucks Causing Crashes When Parked on the Shoulder or Roadway

If a truck stops on a roadway or parks on a shoulder and is involved in a crash, the conspicuity issues discussed above are applicable, but also additional federal, state and local rules apply.

#### FMCSR 392.22:

Whenever a commercial motor vehicle is stopped on a highway or the shoulder of a highway for any cause other than the necessary traffic stops, the driver of the stopped commercial motor vehicle should immediately activate their vehicular hazard warning signal flashers and continue the flashing until the driver places their vehicle warning devices.

If the truck driver did not have their flashers activated and/or no warning devices such as emergency triangles or cones, a claim should be evaluated for violation of this federal regulation.

Most trucking companies have their own rules about not stopping on the roadway or shoulder; and procedures applicable when a driver has to stop...







#### The Danger of Parking on Highway Shoulders

Parking on highway shoulders and on the side of other roadways in non-emergency situations is prohibited in most states and local jurisdictions – for good reason. Vehicles parked on shoulders and similar areas significantly contribute to accidents resulting in injury and even death, and they're often preventable.

The Federal Motor Carrier Safety Regulations (FMCSR) prohibit non-emergency stops due to the severe hazard they present to commercial motor vehicle drivers and other motorists. When stopping or parking on the shoulder is unavoidable, such as a mechanical breakdown, make sure you're following ecessary safety precautions:

#### Parking

Avoid parking where you will block the view of stores, driveways, or the roadway. Do not park on the roadway, within 10 feet of the roadway, or on private property without ermission. Make sure that you are parked in a safe, legal spot. Our biggest problem with parking is in truck stops. The congestion in truck stops greatly increases the risk of having an accident. Try to avoid parking on the end of a row of trucks where someone could hit you as they make a turn. Dock areas are often as dangerous. Whenever parking or maneuvering your equipment, pay special attention to clearances. Stay as far away from other vehicles as possible.

Parking on the roadside, a highway, or shoulder can be extremely hazardous. The hazard comes from a combination of factors: The relatively high speed and small size of passing vehicles compared to a stopped tractor-trailer; The frequency of an automobile to drive or slide underneath (under ride) the semi-trailer; the potential of serious injury to the driver and occupants of all vehicles regardless of their size, in the event of a collision Additionally there is a lack of protection for any individual outside of stopped vehicles

It is C.R. England's policy that no driver should stop or park on any highway except in an

Although it is not always all possible, drivers should proceed to the next available exit and seek a safer location. It is not acceptable to stop on the highway off ramp. If there is an "emergency" circumstance, the vehicle should be parked as far off the highway as is safe and practical. Always activate hazard flashers immediately and place triangles out within ten minutes of the stop.

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"Don't be a Sitting Duck"

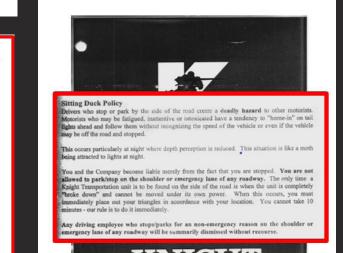
- Reason:
  Vehicle breakdown
  Driver sleeping
  Driver reading map
  Driver answering call of nature
  Driver updating log book

Result: Major collisions involving fatalities and enormous costs. D - 6



DON'T LET TRUCKS

(6) PROFESSIONALS NEVER STOP ON THE SIDE OF THE ROAD; THEY ARE NEVER A "SITTING DUCK." (7) PROFESSIONALS ALWAYS FIND A "SAFE HAVEN" TO PARK TO READ MESSAGES, CHECK THEIR DIRECTIONS, USE THEIR PHONES,



### VI. Key Takeaways

- Do not rush to decline a case solely because initial reports show your client was at fault.
- If your client crashed into a commercial vehicle, particularly at night, evaluate the case for conspicuity claims.
- Investigate other factors that limited your clients' visibility, particularly at night. If the tractor-trailer was parked on the shoulder or on the roadway, look to see if this obscured your client's vision.
- 1. Minahan, D.J. and O'Day, J., Car-Truck Fatal Accidents in Michigan and Texas, University of Michigan Highway Safety Research Institute, Report No. UM-

- HSRI-77-49, Ann Arbor, MI, 1977.
- 2. Green, P., et al., Accidents and the Nighttime Conspicuity of Trucks, University of Michigan Highway Safety Research Institute, Report NO. UM-HSRI-79-92, Ann Arbor, MI 1979.
- 3. Burger, W.J., et al. *Improved Commercial* Vehicle Conspicuity and Signalling Systems, Task I- Accident Analysis and Functional Requirements, NHTSA Report No. DOT HS 806 100, Washington, DC,
- 4. Preliminary Regulatory Evaluation Proposed Amendment to FMVSS No. 108 to Require Retroreflective Material on the Side and Rears of Heavy Trailers, NHTSA, Washington, DC, 1991.
- 5. The Effectiveness of Retroreflective Tape on Heavy Trailers, NHTSA Report No. DOT HS 809 222, Washing, D.C., 2001.
- 6. 49 CFR 393.13.
- 7. FMCSA's Conspicuity Requirements for Commercial Vehicles, NHTSA, DOT-MC-01-129, Washington, D.C.
- 8. 49 CFR 571.108.
- 9. 49 C.F.R. 393, subpart B; 49 CFR 393.11.
- 10. ld.
- 11. *ld*.
- 12. ld.
- 13. Ziedman, K., Burger, W.J., Smith, R.L., Mulholland, M.U., and Sharkey, T.J., (1981). Improved Commercial Vehicle Conspicuity and Signalling Systems; Task 11: Analysis, Experiments and Design Recommendations. Vector Enterprises, Inc., Santa Monica, CA. DOT-HS-806-098.

- 14. The Effectiveness of retroreflective Tape on Heavy Trailers, supra.
- 15. *ld*.
- 16. ld.

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