

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

ANDREW FEDOR, : CIVIL ACTION
 : NO. 00-1232
Plaintiff, :
 :
v. :
 :
FREIGHTLINER, INC., et al. :
 :
Defendants. :
 :

M E M O R A N D U M

EDUARDO C. ROBRENO, J.

April 4, 2002

The instant case involves a claim of strict products liability brought under Pennsylvania law pursuant to Restatement (Second) of Torts § 402A.¹ The case arises from a fall allegedly sustained by plaintiff Andrew Fedor as he exited from the driver's side of a truck and from which he claims to have suffered injuries. The truck was designed by defendant Freightliner, Inc. ("Freightliner") and was leased by defendant Penske Truck Leasing Company ("Penske") to plaintiff's employer, non-party Highgrade Food Products ("Highgrade").

On the date of the accident, March 9, 1998, Mr. Fedor was driving from Philadelphia to Boston. Approximately four hours into the trip, Mr. Fedor pulled off the interstate in Connecticut to inspect the truck. The design of the truck

¹By agreement of the parties, this is the only claim remaining against both defendants. Plaintiff's negligence and breach of warranty claims were withdrawn.

consists of three steps which the driver shall use to enter and exit the truck: (1) the cabin step, (2) the top ladder step, and (3) the bottom ladder step. The facts regarding Mr. Fedor's accident are disputed. According to plaintiff, while holding the door handle, he slipped off the top ladder step as he was attempting to step from the top step to the bottom ladder step and fell to the ground landing on both feet. See Fedor Dep., 9/27/99, at 7-9. Defendants, relying on somewhat ambiguous language from a later deposition of Mr. Fedor, argue that he was stepping from the cabin step to the top ladder step and was not using the door handle when he slipped.² Plaintiff claims that he

² Mr. Fedor testified as follows:

A. Well, after the left foot was leaving the floor, coming down to the step, that's when I slipped, and that's when I let go of the steering wheel to grab around to get the door holder.

Q. Had it been your intent to grab the door or did you grab the door because you were slipping?

A. It was my intent to grab the door.

Q. Not because you were slipping?

A. No.

Q. Just that was what you intended to do?

A. That's what I intended to do.

Q. And you intended to put your left foot on the top step?

A. Yes.

Q. And what was it your intent to do after both your left foot and your right foot were on the top step?

A. Proceed with my right foot down on the bottom step.

Q. Your intent, then, was to move your right foot down to the bottom step?

slipped on fuel which had been spilled on the top step during the fueling of the truck. It is plaintiff's theory that the design of the truck's step system and the location of the fuel tank was defective and resulted in his fall which caused his injuries.

The parties conducted discovery and exchanged expert reports. Plaintiff now seeks to introduce the testimony of Dr. Stephen Wilcox and Mr. Glenn Frederick. Dr. Wilcox proposes to testify as to the defective design of the truck step system and the location of the fuel tank. The testimony of Mr. Frederick, challenged here, addresses the location of the fuel tank only. Presently before the court are two motions in limine filed by the defendants seeking to exclude, pursuant to Federal Rule of Evidence 702, the testimony of Dr. Wilcox's in its entirety and that of Mr. Frederick as it relates to the location of the truck's fuel port near the truck's steps. A hearing on the motions was held on January 24, 2002, and, thereafter, the parties submitted supplemental briefing on the issues of Dr. Wilcox's qualifications and methodology.

The court finds that Dr. Wilcox may not testify by way

A. Yes.

Q. And where would you move your left foot?

A. After the right foot got to the bottom step, the left foot would come down to the bottom.

Q. To the bottom step or to the ground?

A. To the step.

Fedor Dep., 11/28/00, at 86-87.

of opinion as to the subjects of surface friction and radius of the step edge because he lacks the qualification to proffer opinions on these subjects and has offered no discernable methodology upon which he based these opinions. The remainder of Dr. Wilcox's opinions concerning tread depth and clearance, step geometry, and the dimensions of the door handle are admissible under Rule 702. The court further finds that the proffered expert testimony of both Dr. Wilcox and Mr. Frederick regarding a design defect as to the location of the fuel port shall also be excluded because both opinions on this subject are not based on any discernable methodology nor would the opinions assist the trier of fact in this case.

I. Defendants' Motion in Limine to Preclude the Testimony of Dr. Stephen Wilcox as to Design Defects in the Truck's Step Ladder System.

Defendants seek to exclude the entirety of Dr. Wilcox's testimony arguing that Dr. Wilcox shall not testify by way of opinion for the following reasons: one, Dr. Wilcox is not qualified to offer the opinions and, two, the opinions are not based on any discernable methodology.³

³Defendants also argue that Dr. Wilcox did not devote adequate time analyzing and investigating before forming his opinion. He was retained on April 3, 2001 and submitted his initial report on April 5, 2001. Between those dates, Dr. Wilcox did not look at the truck or take any measurements or perform any tests; rather, he looked at photos of the truck. Although Dr. Wilcox later supplemented his opinions, the conclusions in the

A. Dr. Wilcox's Opinions

Dr. Wilcox submitted two reports containing six opinions on design defects in the step system and fuel tank on the truck operated by Mr. Fedor at the time of his accident. The opinions are as follows:

1. Surface friction. Dr. Wilcox's report states: "When I examined the step, the 'upper punches,' which were the only real mechanism for providing surface friction, were considerably worn, thus eroding their ability to keep the foot from sliding." At his deposition, Dr. Wilcox testified regarding this opinion as follows:

Q. Is it your opinion that the, quote, upper punches, closed quote, are the only real mechanism providing surface friction?

A. Yes.

Q. What is the basis of that opinion?

A. My understanding of the geometry of the step.

Q. Did you attempt to measure surface friction?

A. No.

Q. Did you undertake any investigation of truck steps to determine surface friction?

A. No.

Wilcox Dep., 10/11/01, at 110.

Q. Would the condition, material and design of the shoes worn by Mr. Fedor have an effect on whether the boot would slide or not?

initial report are the same as in his final report. However, there is no requirement as to the amount of time an expert must spend analyzing an issue before forming an opinion. Thus, defendants' argument goes to the weight of the evidence and is an issue for cross-examination.

A. Yes.
Q. What is the basis for the opinion?
A. The law of physics.
Q. That's it?
A. Well, there may be other things. That's all that comes to mind at the moment.
Q. What law of physics are you talking about?
A. Well, its just basic physics. If we're talking about slipperiness, it's a relationship between two surfaces.

Id. at 112-13.

2. Radius of the step edge: "The fact that the edge was rounded further decreased the 'purchase' offered by the step."⁴ When asked about this opinion during his deposition, Dr. Wilcox testified:

Q. What was the radius?
A. About half an inch, something like that, I believe.
Q. Did you measure it?
A. No.

Id. at 116.

Q. If the step had a sharp edge, would Mr. Fedor have slipped?
A. I don't believe he would have, no.
Q. And what is the basis for the opinion?
A. My judgment about the circumstances under which people slip.
Q. Is there any other basis for that opinion?
A. No.

Id. at 118.

3. Location of the fuel port. Dr. Wilcox's opinion

⁴Defendants note that this conclusion is at odds with the report submitted by plaintiff's other expert, Mr. Frederick who measured the co-efficient of friction on the step to be .5 and concluded that this is generally a safe figure.

with respect to the location of the fuel port states that "[t]he fuel port was right above the step, making it likely that diesel fuel would, at time, spill onto the steps, decreasing their surface friction."⁵ As to this opinion, Dr. Wilcox testified:

A. Its likely the diesel fuel will at times spill onto the steps. I don't know-I have no way of knowing anything beyond that.

Q. What is your basis for saying that it is likely that diesel fuel would at times spill onto the steps?

A. The location of the step in relation to the fuel port.

Q. What is the location of the step in relation to the fuel port?

A. Its right next to it basically.

Id. at 114.

Q. . . . What is your basis for saying that diesel fuel would decrease surface friction?

A. Common sense support by-subsequent to any report-supported by the measurements of Dove & Associates [plaintiff's other expert].

Q. Did you ever attempt to measure the amount of the decrease?

A. No, I didn't. That was what they did.

Id. at 115.

4. Tread depth and clearance. Dr. Wilcox's report states that:

According to my measurements, the step only afforded 8 in. of clearance from the outside of the top step to the fuel tank. This forced part of the foot to extend outboard of the step, decreasing the surface area in contact and forcing the user into a relatively unstable position. According to

⁵The issue location of the fuel port is also the subject of a separate motion in limine. See infra.

SAE data (J33 "Human Physical Dimensions"), the 50th percentile male shoe is 11.2 in. in length, leaving 3.2 in. of the shoe to protrude over the step for the average person. In fact, the clearance was less than that required for fixed ladders by OSHA, which require 7 in. from the centerline of a ladder to the rear surface. The OSHA clearance standard for fixed ladders is a reasonable standard and applicable to ladder steps on the truck.

Dr. Wilcox's deposition testimony concerning this opinion is as follows:

Q. What is the basis of your opinion that the tread depth and clearance is inadequate?

A. Well, that I take it as a goal to get-for the shoe to fit on the step. And, further, the - which is reinforced by the OSHA fixed ladder requirements.

Q. Is there any other basis for your opinion that the tread depth and clearance was inadequate?

A. My basis understanding of what makes a ladder safe and how people use ladders and steps.

Id. at 118-19.

5. Step geometry. On this subject, Dr. Wilcox opines that "[a]ccording to my measurements, the distance from the surface of the top step to the surface of the bottom step was 14 1/4 inches.⁶ This large step greatly increased the horizontal

⁶At his deposition, Dr. Wilcox admitted that he misread his notes when making his report and the number is actually 18 1/2 inches. Defendants argue that this error is further indication of the shoddiness and unreliability of Dr. Wilcox's reports. However, defendants' argument does not go to the admissibility, but rather the weight, of the evidence and is a proper subject for cross-examination.

force between the foot and the step surface, making a slip more likely."⁷

Q. Does the OSHA standard for ladders inform [this] opinion?

A. Well, a little bit, yeah. It wants them-it suggests that the rings of a ladder should be no greater than 12 inches. The standard for ordinary steps is 7 inches from surface to surface. So I think those two things give us a range of the appropriate dimensions for either stairways or steps.

Q. What is your basis for that opinion?

A. Well, in the case of stairways, the geometry of stairways, the appropriate geometry for stairways is derived from human anatomy, so that it turns out that the energy expenditure is greater if risers are lower than 7 inches or greater than 7 inches basically. So that's where the - and the number of falls goes up as the - as riser height diverges from 7 inches. And my assumption is that these kinds of guidelines that one finds like those in OSHA for 12 inches of ladder rungs, I know less about that, about where they're derived from, but my assumption is they're derived from similar considerations of analyzing the biomechanical characteristics of the user.

Id. at 129-130.

Q. So . . . you don't have a basis for an opinion as to how much more likely the fall was because of the distance between the

⁷Defendants argue that this opinion is irrelevant because Mr. Fedor was not trying to use the bottom step. At one deposition Mr. Fedor testified that his right foot was on the top step and his left foot was still on the floor of the cab, i.e. higher than his right foot. However, Mr. Fedor's deposition testimony on this issue is inconsistent because it appears that he also testified that he was attempting to move his foot from the top step to the bottom step. Thus, this issue goes to the weight of the expert's testimony depending on Mr. Fedor's testimony at trial, and is an issue for cross-examination.

steps?

A. Well, not in quantitative terms, no. I have a general sense that it would have been significantly more likely, but not beyond that.

Q. And what is the basis for your general sense?

A. That because I know the horizontal force decreases significantly, that, after all, is one of the important reasons why there are limits of - in various standards and recommendations for riser-to-riser - for riser height and ring-to-ring distance.

Id. at 136-37.

6. Door handle. At the time of the deposition, Dr. Wilcox added the position of the door handle as a defect in the step system because the handle was "8 or 9 inches back from what it should be."⁸ Id. at 149. In forming this opinion, Dr. Wilcox used a ladder as a model because the "ladder is stable and appropriate." Id. Dr. Wilcox also relied on the "general principle that you don't want to person leaning back. When you are using a step or a ladder, you don't want to lean back. It makes it - it increases the likelihood of a fall and requires a lot - extra strength, and its generally awkward and unstable." Id. at 150.

B. Dr. Wilcox's Qualifications

⁸Defendants also assert that Mr. Fedor did not have his hand on the door handle at the time he fell making the location of the door handle irrelevant. Again, Mr. Fedor's deposition testimony as to his use of the door handle is inconsistent; thus, this issue goes to the weight of the evidence, not its admissibility.

In making a determination as to whether an expert is qualified, the Third Circuit has stated that:

Rule 702 requires the witness to have "specialized knowledge" regarding the area of testimony. The basis of this specialized knowledge "can be practical experience as well as academic training and credentials." We have interpreted the specialized knowledge requirement liberally, and have stated that this policy of liberal admissibility of expert testimony "extends to the substantive as well as the formal qualifications of experts." However, "at a minimum, a proffered expert witness . . . must possess skill or knowledge greater than the average layman"

Elcock v. Kmart Corp., 233 F.3d 734, 741 (3d Cir. 2000) (quoting Waldorf v. Shuta, 142 F.3d 601, 625 (3d Cir. 1998)) (citations omitted). The Rule calls for a two step analysis. One, does the witness possess specialized knowledge? Two, is the knowledge relevant to the issue on which the witness seeks to testify?

In contending that Dr. Wilcox possesses "skill or knowledge greater than the average layman," plaintiff asserts that Dr. Wilcox is qualified to offer opinions in the areas of ergonomics/human factors, including biomechanics and anthropometry based on the following qualifications:⁹ (1) Dr. Wilcox's own unchallenged testimony that he has some experience

⁹ Dr. Wilcox defined "ergonomics/human factors" as the "application of knowledge about human beings to design problems." Dep. Trans., 1/23/02, at 8. Dr. Wilcox further testified that "biomechanics" is "the study of movement and posture of animals in general," id. at 8, and "anthropometry" is the "study of the shape and size of the human body." Id. at 9.

in the design of steps and access/egress systems; (2) he has a Ph.D. in experimental psychology with coursework in biomechanics; (3) he has worked and studied in the field of ergonomics/human factors for the past two decades; (4) he has been qualified as an expert in the field of human factors 40 to 50 times in the past four years regarding "issues of assumption of risk and comparative negligence as they relate to, e.g., human capabilities and limitations, warnings and instructions, design defects and design procedures"; and (5) he has taught in the field of human factors at three area colleges, including coursework in biomechanics and anthropometry. Moreover, according to Dr. Wilcox's resume, he has investigated "over 300 accidents including cases involving hazards, automobile accidents, and accidents with consumer products, commercial equipment, and industrial machinery."

In response, defendants assert, in essence, that whatever Dr. Wilcox's qualifications may be in general, they are not relevant to this case. Defendants note that Dr. Wilcox's academic training is in psychology; his Ph.D. is in the field of experimental psychology; and his thesis dealt with "reading, dyslexia and visual perception," and that he is not an engineer. In fact, his only training in engineering was during his freshman year of college; to underscore this point, defendants point out that Dr. Wilcox is not certified in any discipline of engineering

and has not sought to be so certified. Moreover, Dr. Wilcox has admitted that he: 1) never designed a tractor or tractor step system; 2) never participated in the design of a truck step system; 3) never designed any vehicle; 4) never designed or participated in the design of any vehicle step system; 5) never designed or participated in the design of a fuel tank system for a truck; 6) never designed or participated in the design of any ladder; 7) is not qualified to operate a tractor; 8) does not know what training is needed to operate a tractor; 9) has not reviewed the Operator's Manual for this truck which provides explicit instructions on how to exit the cab;¹⁰ 10) is not familiar with training given to either truck operators in general or to Mr. Fedor;¹¹ 11) he claims to have been an expert in about ten matters involving "truck steps," although he has only identified one. In short, according to defendants, Dr. Wilcox has none of the specific knowledge and qualifications required to testify by way of opinion in this case.

The court concludes that Dr. Wilcox satisfies the first prong of Rule 702 in that he possesses specialized knowledge. Although Dr. Wilcox did not obtain formal academic training in

¹⁰ According to Dr. Wilcox's reports, he reviewed the Operator's Manual for the truck, but when asked at a deposition whether he reviewed the instructions in the manual for exiting the truck, he answered no.

¹¹ Dr. Wilcox testified that on two occasions he participated in the design of step systems.

the field of human factors and ergonomics, Dr. Wilcox does possess "a degree in a field tangentially related to the one about which he testified." Elcock, 233 F.3d at 744 (degree in psychology tangentially related to vocational rehabilitation). See also Surace v. Caterpillar, Inc., No. CIV. A. 94-1422, 1995 WL 303895 (E.D. Pa. May 16, 1995) (expert with degree in psychology permitted to testify regarding field of human factors). Furthermore, Dr. Wilcox has experience in the field of human factors through his employment at Design Science in developing the design and safety of products and equipment, including specifically the design of steps and access/egress systems, an important issue in this case. Additionally, Dr. Wilcox has written on various aspects of ergonomics and human factors and claims without challenge to have kept abreast of the relevant literature in his field. While it is true that his experience with respect to design of stairs and truck step systems is limited, "[t]he language of Rule 702 and the accompanying advisory notes make clear that various kinds of 'knowledge, skill, experience, training or education,' Fed.R.Evid. 702, qualify an expert as such." In re Paoli, 916 F.2d at 855. See also Knight v. Otis Elevator Co., 596 F.2d 84 (3d Cir. 1979) (expert may testify that unguarded elevator button constitute a design defect despite that expert's lack of a specific background in the design and manufacture of elevators).

Thus, when his academic training is viewed together with his practical experience, the court finds that Dr. Wilcox has "substantially more knowledge than the average lay person regarding [human factors/ergonomics]." Waldorf, 142 F.3d at 627.

"Specialized knowledge" alone, however, is not sufficient to satisfy Rule 702. The Rule also requires the witness to have specialized knowledge relating to the area of testimony. Elcock, 233 F.3d at 741. In other words, the specialized knowledge must be relevant to the area of inquiry. In this case, Dr. Wilcox's knowledge and qualifications are limited to the area of human factors and ergonomics. Two of the areas in which Dr. Wilcox seeks to opine, surface friction (including the decrease in surface friction due to the alleged fuel spill) and radius of the step edge, are not areas which related to the field of human factors; rather, they involve the field of engineering and physics. Plaintiff has proffered scant evidence, namely minimal coursework many years ago while in college, that Dr. Wilcox has any experience or training in the field of engineering. Thus, as to these areas which relate to specialized knowledge of engineering and physics, the court finds that Dr. Wilcox is not qualified to testify by way of opinion. As to the remainder subjects of Dr. Wilcox's opinions, the court finds that Dr. Wilcox's qualifications on human factors and ergonomics "fall within Waldorf's outer bounds," Elcock, 233 F.3d

at 744, at the very least, and that he is qualified to testify by way of opinion as to tread depth and clearance, step geometry, and dimensions of the door handle.¹²

C. Dr. Wilcox's Methodology

Federal Rule of Evidence 702 provides that:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

¹²Defendant's reliance on Hamilton v. Emerson Electric Co., 133 F. Supp. 2d 360 (M.D. Pa. 2001), concerning the qualification of Dr. Wilcox in a case involving an allegedly defective miter saw, is misplaced. In Hamilton, the court found that "[j]udging by his curriculum vitae, Dr. Wilcox has extensive experience and acclaim in the area of human factors, and any testimony he might give about the tendencies of human machine operators is clearly within his expertise." Id. at 368. In qualifying Dr. Wilcox as an expert in Hamilton, the court relied on his experience in designing the safety of power woodworking tools and his eight years as a carpenter. Id. Defendants argue that because Dr. Wilcox does not have comparable experience in this case, he is not qualified to testify here. However, simply because Dr. Wilcox had experience relevant to testimony in one case but does not have the same quantum of experience relevant to the product at issue in another case, does not mean that he is not qualified in the other case. The applicable standard is whether Dr. Wilcox possesses knowledge greater than the average lay person, not whether he possesses the equivalent training and experience as in other cases where he has been qualified as an expert.

Fed. R. Evid. 702. In Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), the Supreme Court stated that Rule 702 "clearly contemplates some degree of regulation of the subjects about which an expert may testify." Id. at 589. The Court established a "gatekeeping role for the [trial] judge." Specifically, the trial judge must determine

. . . whether the expert is proposing to testify to (1) scientific knowledge¹³ that (2) will assist the trier of fact to understand or determine a fact in issue. This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.

Id. at 592-93. The proponent must satisfy this burden "by a preponderance of proof." Id. at 593. The Third Circuit has concluded that under Daubert, Rule 702 requires that the evidence be reliable and that it "fit," in that it must assist the trier of fact. See In re Paoli Railroad Yard PCB Litig., 35 F.3d 717, 742-43 (3d Cir. 1994).

Defendants argue that based on Dr. Wilcox's reports and own deposition testimony, his methodology as to each of his proposed opinions does not meet the Daubert/Paoli standard of reliability and

¹³Daubert has since been extended to the kind of "technical or other specialized knowledge," at issue here. See Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 (1999) ("We conclude that Daubert's general holding—setting forth the trial judge's general 'gatekeeping' obligation—applies not only to testimony based on 'scientific' knowledge, but also to testimony based on 'technical' and 'other specialized' knowledge.").

relevancy in that Dr. Wilcox's opinions are speculations based on general knowledge available to the jury, and thus would not assist the jury. Defendants also argue that the opinions should be excluded because the standard upon which many of the opinions are based, the OSHA standard for ladders, does not apply to step risers, as Dr. Wilcox admitted at his deposition.

Plaintiff responds that Dr. Wilcox's reasoning and methodology are valid because in formulating his opinion, he traversed the truck's access/egress system, read and considered the deposition testimony given by Mr. Fedor, examined Mr. Fedor's boots, took measurements of the truck's steps, and compared the information to various technical sources, including the OSHA standard for fixed ladders and The Stairway, by Templair, a biomechanics publication. Dr. Wilcox testified that in forming his opinion, he employed the same intellectual rigors that he would employ in his day-to-day human factors consulting practice for industry. He further testified that in both product design and accident construction, he will look at technical information about human factors and make design decisions regarding safety, and that this is the type of analysis that he performed in this case.

The court finds that Dr. Wilcox's opinions regarding surface friction and radius of the step edge should be excluded due

to lack of discernable methodology.¹⁴ In Oddi v. Ford Motor Co., 234 F.3d 135 (3d Cir. 2000), plaintiff proffered the testimony of an engineer as to design defects in defendants' product. The Third Circuit held that the district court properly excluded the expert's opinion for lack of discernable methodology because the expert's opinion performed no testing or analysis and his opinion "was based on nothing more than his training and years of experience as an engineer." Id.

Similarly, Dr. Wilcox's opinions as to surface friction (including increased surface friction due to fuel spillage)¹⁵ and radius of the step edge are, admittedly, based purely on Dr. Wilcox's speculation. While his speculation is informed by his training and experience in the area of ergonomics and human factors, Dr. Wilcox's opinions as to surface friction and step radius clearly lack any identifiable methodology which defendants could challenge. During his deposition, Dr. Wilcox stated that the bases of his opinion as to poor surface friction were his "understanding of the geometry of the step" and "basic physics." Dr. Wilcox admitted that he undertook no investigation to determine the surface friction on the steps. Regarding his opinion as to the radius of the step edge,

¹⁴ This is in addition to the court's earlier finding that Dr. Wilcox is not qualified to testify by way of opinion as to these subject matters.

¹⁵ Dr. Wilcox's opinion as to the location of the fuel port constituting a design defect is discussed below in relation to defendants' motion to exclude expert testimony on this subject.

Dr. Wilcox testified that the entire basis for his opinion was "basic physics. If we are talking about slipperiness, it's a relationship between two surface." There is no discernable methodology from which Dr. Wilcox draws his conclusions. Similarly, as to Dr. Wilcox's opinion that the fuel on the step would decrease the surface friction, it is not possible to discern how Dr. Wilcox reached his conclusion other than his use of "common sense" supported by the plaintiff's other expert report. Thus, in addition to the fact that Dr. Wilcox is not qualified to testify as to these areas, the court finds that Dr. Wilcox's methodology is unreliable and therefore his opinions as to surface friction and radius of the step edge would not "assist the trier of fact to understand the evidence or to determine a fact in issue" Fed. R. Evid. 702.

However, regarding to "tread depth and clearance," "step geometry" and "door handle," the court finds that Dr. Wilcox has offered a discernable methodology, albeit minimally so, against which his opinion may be tested. Specifically, Dr. Wilcox formed his opinions by comparing the OSHA standard for fixed ladders and ladders in general to the step structure at issue in this case. Although he admits that the OSHA standard does not apply to this structure per se, Dr. Wilcox, through his deposition testimony, has clearly explained the OSHA standards, the safety reasons for those standards and why defendants' failure to design the truck steps in

accordance with those standards created a defective situation. Thus, in light of this discernable methodology, together with his qualifications in the area of ergonomics, Dr. Wilcox's opinions as to "tread depth and clearance," "step geometry" and "door handle" are admissible.

Furthermore, the court finds that the defendants' vague criticisms regarding Dr. Wilcox's lack of scientific testing is unfounded because such scientific testing is not necessary, characteristic or useful in this case. Mr. Fedor's accident is not the unique sort of accident that lends itself to the scientific testing of the specific equipment that malfunctioned.¹⁶ Rather, this case requires the analysis of technical information about human beings that dictate a set of parameters on how design decisions should be made. See Surace, 1995 WL 303895, at *4 (in testifying as to an aspect of human factors, "[n]o peer review or testing is necessary in order to form an opinion based on the relevant facts and [the expert's] knowledge.").

II. Defendants' Motion in Limine to Preclude the Expert Testimony of Dr. Wilcox and Mr. Frederick of Design Defect as to Fuel Port Location.

Defendants seek to exclude the plaintiff's testimony of Mr. Glenn Frederick and Dr. Wilcox regarding the placement of the

¹⁶ In fact, the defense's ergonomic expert did not conduct any scientific tests in this case.

fuel port on the truck driven by Mr. Fedor at the time of his accident.¹⁷ Although the briefs do not provide many details about his credentials, Mr. Frederick is an engineer by trade. He also proposes to opine about improper placement of the "fuel fill" cap on the truck steps. His report states that the "design of these tractor steps create the potential for fuel contamination during normal fueling operation" and the "location of the fuel fill create[s] an unreasonable risk of injury to truck operators such as occurred to Mr. Fedor."

At his deposition, Mr. Frederick elaborated on his opinion as follows:

Q. What do you mean when you say there is, quote, high potential for contamination during fueling, closed quote?

A. Well, you've got to take your nozzle. It's got fuel under pressure behind it. You've got to run it over the top of the step going in and coming out. If you're a little lax or slow or just don't give a damn and you got fuel pouring out of the nozzle as you're going in and out, you really got a lot on the step.

Q. What studies have you made to determine whether the potential for that is high or low or nonexistent?

A. I haven't done any studies.

Q. What investigation have you made?

A. Just normal observance of people and what they do when they fuel vehicles.

Frederick Dep., at 120.

¹⁷ This motion includes the opinions of Mr. Glenn Frederick and Dr. Wilcox. Mr. Frederick also seeks to opine that the tractor steps "do not provide adequate traction when contaminated with diesel fuel." This opinion is not the subject of defendants' motion.

Q. Now, tell us, please, what testing helps you conclude that there could have been a light coating of diesel fuel on the steps to the truck?

A. The application of diesel fuel to aluminum, the exposure of the aluminum of the aluminum for a number of days to reasonably comparable weather conditions.

Id., at 133.

Q. So, quote, this coating would have resulted from fuel spillage during fueling of the truck on Friday [the day of the accident], period, closed quote.

A. Yes.

Q. What is the basis for saying that the truck was fueled on Friday?

A. Well, there is no factual basis for that. Let's just say that we made an assumption that the truck was run on Friday. Maybe it was run on Saturday and that the truck was fueled up for the Sunday morning run

Id., at 155.

Q. Did you conduct, as a part of your investigation, make any effort to determine why Mr. Fedor did not detect the diesel fuel on the step before he fell.

A. Good question. I don't know why he wouldn't have. You know, could be wind conditions. I don't know.

Q. Did you make any efforts to determine if there was any amount of diesel fuel on the step at the time that Mr. Fedor performed his required pretrip inspection why Mr. Fedor did not detect the diesel fuel on the step before he fell?

A. I have no idea.

Id., at 162.

Similarly, Dr. Wilcox's report states that "the fuel port was right above the steps, making it likely that diesel fuel would, at times, spill onto the steps, decreasing their surface friction."

At his deposition, Dr. Wilcox stated "my only opinion is that it's likely to happen. It's likely the diesel fuel will at time spill onto the steps. I don't know - I have no way of knowing anything beyond that." Wilcox Dep., 10/11/01, at 114.

The court finds that Mr. Frederick and Dr. Wilcox's opinions that the location of the fuel port on the truck is a design defect should be excluded. Neither expert points to any discernable methodology relied upon in forming their opinions that the location of the port, on its own, is a design defect. Moreover, neither expert has experience in the area of truck fuel tanks, and neither conducted any tests to conclude that over the course of many fuelings, the type of spill at issue in this case is likely to occur. See Frederick Dep., at 120 ("A. I haven't done any studies. Q. What investigations have you made? A. Just normal observance of people and what they do when the fuel vehicles.") Thus, there is no discernable methodology upon which the experts' conclusions as to the fuel port's location is based.

Additionally, both experts' opinions are based solely on intuition, albeit intuition grounded on generalized human experience, that if a gas pump nozzle has to pass over a step to get to the fueling port and the fueling port is very close to the step, it is likely that fuel would land on the step. The court finds that the jury is equipped to make such a determination. Generalized common sense does not rise to the level of expert opinion solely

because it is offered by someone with an academic pedigree. Thus, expert testimony regarding design defect as to the fuel port location will be excluded because it will not "assist the trier of fact to understand the evidence or to determine a fact in issue" Fed. R. Evid. 702.¹⁸

CONCLUSION

Based on the foregoing reasoning, the defendants' motion

¹⁸ Defendants argue that these opinions relating to the location of the fuel port and the potential for spillage during fueling are irrelevant and should be excluded because the opinion does not "fit" under the facts of the case. See Paoli, 35 F.3d at 743. Defendants maintain that because plaintiff has failed to prove when the truck was fueled, or that fuel was ever spilled on the steps during fueling, there is no bridge between the expert's opinions and the conclusion, rendering the opinion irrelevant. The expert testimony must be excluded because plaintiff has failed to show a factual basis to support it. See Sorenson v. Shaklee Corporation, 31 F.3d 638 (8th Cir. 1994) (excluding expert testimony on whether EtO, a harmful substance, could cause birth defects because plaintiff produced no evidence showing or providing a reliable inference that the alfalfa taken by the parents actually contained EtO); Heller v. Shaw Industries, Inc., 167 F.3d 146 (3d Cir. 1999) (excluding testimony that VOC's caused injury absent facts that carpet contained any VOC's).

The court finds defendants' argument unpersuasive in this case where there is a basis for the relevancy of the expert's testimony. First, no direct evidence that the truck was fueled is needed; a reasonable jury may infer that the truck was fueled or else it would not operate. Second, plaintiff testified in his deposition that after he fell, he leaned against the step with his hand and then immediately smelled gas on his hand. Reasonably inferred and direct evidence exists therefore that the truck was fueled and that there was a fuel on the step at the time of plaintiff's accident.

However, in any event, the court need not decide this issue because the court finds that the expert testimony should be excluded for other reasons.

in limine to exclude the testimony of Dr. Stephen Wilcox will be granted in part and denied in part. It will be granted to the extent that Dr. Wilcox's opinions as to surface friction (including any decrease in surface friction due to fuel spillage) and step edge are excluded. It will be denied to the extent that his opinions as to tread depth and clearance, step geometry and door handle are not excluded. Furthermore, defendants' motion to exclude expert testimony of Dr. Wilcox and Mr. Frederick of design defect as to "fuel port" location will be granted.

An appropriate order to follow.

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

ANDREW FEDOR, : CIVIL ACTION
 : NO. 00-1232
Plaintiff, :
 :
v. :
 :
FREIGHTLINER, INC., et al. :
 :
Defendants. :
 :

AND NOW, this **4th** day of **April, 2002**, based on the court's memorandum dated April 4, 2002, it is hereby **ORDERED** that:

1) Defendants' Motion in Limine to Preclude the Testimony of Plaintiff's Expert Stephen Wilcox (doc. no. 49) is **GRANTED IN PART** and **DENIED IN PART**;

2) It is **FURTHER ORDERED** that defendants' Motion to Exclude Expert Testimony of Design Defect as to "Fuel Port" Location (doc. no. 50) is **GRANTED**.

AND IT IS SO ORDERED.

EDUARDO C. ROBRENO, J.