IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

- -

RANDALL BLUELL and HASTINGS MUTUAL INSURANCE CO.,

Plaintiffs,

v.

ALL AMERICAN HOMES, INC. and WESTCHESTER FIRE INSURANCE COMPANY,

Defendants.

OPINION AND ORDER

01-C-0538-C

- -

This is a civil action for monetary relief in which plaintiffs Randall Bluell and Hastings Mutual Insurance Co. contend that defendant All American Homes, Inc. was negligent and should be held strictly liable because the stiffener board of its modular home's roof was defective, causing the injuries plaintiff Bluell sustained during the course of his employment. In addition, plaintiff Bluell contends that defendant All American had a duty to instruct plaintiff's employer in the proper method for lifting the roof and to provide warnings that the stiffener board was inadequate and that construction workers should not stand under a roof while it is being raised. At the time of the accident, defendant

Westchester Fire Insurance Company insured defendant All American for negligence and products liability. Jurisdiction is present in this case. The parties are of diverse citizenship and the amount in controversy exceeds $75,000. See 28 U.S.C. § 1332 (a)(1).

Presently before the court are defendant All American's motion for summary judgment and its motion to exclude the expert testimony of Donald R. Buettner and Michael P. Ryer. Defendant Westchester has not joined in the motion; its liability stands or falls on All American's. (All further references to "defendant" will be to All American only.) Taking into consideration the undisputed physical facts in this case, I conclude that no reasonable jury could find that the accident was caused by the fact that the roof incorporated a stiffener board that may have become detached from the rafters before the roof fell. In addition, I find that no reasonable jury could find that defendant violated any duty to warn Creative Builders because (1) Creative Builders knew that if the lift-line angle exceeded 90 degrees the straps could pull off the rafters; (2) Creative Builders knew that the stiffener would not keep the straps on the rafters; and (3) the danger of standing under a roof while it is being raised is commonly known. Accordingly, I will grant defendant's motion for summary judgment. Because I am granting summary judgment in favor of defendant, I will deny defendant's motion to exclude plaintiffs' expert testimony as moot.

From the proposed findings of fact and the record, I find the following material facts to be undisputed.

UNDISPUTED FACTS

A. Parties

Plaintiff Randall Bluell is a Wisconsin resident. At the time of the accident, Creative Builders, Inc. employed plaintiff Bluell as a carpenter foreman. Plaintiff Hastings Mutual Insurance Co. is an insurance company with its principal place of business in Hastings, Michigan. Plaintiff Hastings insured Creative Builders, Inc., for workers' compensation. On July 22, 1999, plaintiff Bluell was injured on the job when a roof manufactured by defendant All American fell onto his leg while the roof was being raised into its upright position. As a result of the accident, plaintiff Hastings paid workers' compensation benefits to plaintiff Bluell.

Defendant All American Homes, Inc., more accurately known as All American Homes of Iowa, LLC, manufactures and distributes modular homes. Defendant All American is licensed to do business in Wisconsin, is organized under the laws of Iowa and has its principal place of business in Dyersville, Iowa. Defendant Westchester Fire Insurance Company is licensed to do business in Wisconsin and has its principal place of business in Roswell, Georgia.

B. Modular Homes

The home involved in this lawsuit is a modular 1-1/2 story Cape Cod. Modular

homes are constructed mostly in a factory and then transported over the road to the building site. The home at issue is 58 feet wide by 28 feet deep. It was shipped in two units on semi-trailers. Each unit measured approximately 58 feet wide, 14 feet deep and 11-1/2 feet high. The roof has a 10-to-12 pitch. Both roof sections measure approximately 60 feet by 19 feet.

To minimize the height of each unit of the house (the front half and back half) for transport, the roof is folded down. The roof is hinged at the eave and essentially lies flat against the top of the unit. Because the roof would overhang the semi-trailer when lying flat, it is hinged again (closer to the apex) and folded back on itself. The hinging reduces each roof section's shorter dimension by approximately five feet, that is, from 19 feet to 14 feet.

Each roof section is made up of 30 2" x 8" rafters. Because the upper portion of the roof has been folded back on itself, the ends of the rafters are exposed. Defendant attaches a "stiffener" to the ends of the exposed rafters. Although referred to as a "stiffener board," in fact, it is made up of a series of 2" by 6" boards that are placed end-to-end and nailed to the ends of the exposed rafters. The stiffener is not part of the structural design of the truss or house; it is used to prevent the roof from sagging while it is being raised into position.

C. Dealer Set

Defendant offers all of its dealers three set-up options: (1) a rough set; (2) a finished set; or (3) a dealer set. Under the first two options, defendant's employees lift the roof. In

such a case, defendant sends out its own crew, rents a crane, places the units on the foundation, raises the roofs and leaves the home watertight. Creative Builders chose the third alternative, in which defendant's only responsibility was to deliver the unit to the construction site. Creative Builders was responsible for the construction site, all of the workers, all equipment used (including the crane), the placement of the units on the foundation and the lifting of the roof.

Creative Builders has been in the construction business since 1988. At any one time, it has at least three ongoing construction projects (residential and commercial) and it has built an average of 12 to 15 homes a year. Since its inception, Creative Builders has sold eight modular homes that have been manufactured by defendant. Creative Builders performed a dealer set on seven of the eight homes, six of which were set prior to plaintiff's injury. Creative Builders acknowledges that in a dealer set, it is responsible for taking the home off the semi-trailer, setting it on the foundation and finishing the home to completion.

Michael Horak and Raymond Zipperer are co-shareholders of Creative Builders. They had defendant do the rough set of the first modular home Creative Builders purchased and they used that rough set as a learning experience. With that opportunity and Zipperer's experience in construction, they could set a modular home on their own. On at least one other dealer set, Creative Builders had defendant's employees "review things" with Horak and Zipperer. In a dealer set, defendant does not provide written instructions as to how the

roof assembly should be lifted. Defendant does not offer any training to builders regarding set-up procedures. It does not teach construction contractors how to conduct their business or instruct people how to become construction contractors.

Zipperer believes he used the same roof-lift procedure in this case that he had observed defendant use. At four points on the roof, Zipperer ran two-inch lift straps twice around the end of the rafter and once around the stiffener. He cinched down each 20 foot long lift strap by pulling the long end of the strap through the loop at the short end of the strap. Zipperer knew that the crane should be set back from the home so that it would pull the roof up at an angle rather than pulling it straight up. Zipperer tried to keep the lift-line square. Zipperer oriented the end of the boom over the edge of the home so as to maintain an angle of less than 90 degrees between the roof and the lift-line. Zipperer understood that the lift-line angle changes as the lift line is reeled in and the roof rises. Zipperer knew that if the crane boom was too high over the front edge of the unit as the roof is raised, the angle would increase and the straps would tend to pull off the rafters.

To raise the roof on the home at issue, Creative Builders rented a crane from Modern Crane Service of Onalaska. The crane operator, Gary Thill, has set about one All American modular home a week during the summer for the past 13 years. In operating the crane and raising the roof, Thill depended on hand signals given by Zipperer, who was the foreman. In raising the roof, Thill neither moved the boom up or down nor telescoped it in or out, but

rather simply reeled in the cable in response to a "line up" signal from Zipperer. Zipperer does not know the angle between the lift-line and the roof either when the roof was lying flat or when the roof was raised completely.

Just before the accident, Zipperer was on a step ladder and had signaled the crane operator to stop raising the roof. He was off the ladder and looking down at the floor when he heard wood crack and the roof falling. Zipperer does not know whether the lift straps pulled off the rafters before or after the stiffener broke.

Plaintiff Bluell did not see the lift-line angle or the roof separating from the lift straps. He believes the roof was "raised all the way," but was preoccupied with getting materials that were "tucked underneath the roof system." He did not hear anything before the collapse.

After the roof had fallen, the physical evidence showed that three of the four straps were tied to the stiffener, none of the four straps was attached to the rafters, none of the straps had broken, the stiffener had come off the rafters and the stiffener had broken in two places, at lift point three and between lift points two and three.

D. Expert Testimony

1. Plaintiffs' experts

Donald Buettner and Michael Ryer are plaintiffs' expert witnesses. Buettner is an engineer engaged primarily in structural engineering. Ryer is a structural engineer who works

in Buettner's firm. Ryer holds the following relevant opinions: (1) the 2" by 6" stiffener was inadequate for its intended use; and (2) fastening the stiffener to the end of each rafter with three 3-1/4 inch nails was not adequate to insure that the stiffener would not detach from the rafters while the roof was being lifted. Ryer did not do an analysis showing whether if the stiffener broke, it could cause the straps to pull off the rafters. Ryer does not believe that it is possible to do such an analysis with any level of certainty. Thus, in order to support the Zipperer's testimony, Ryer would have to speculate.

Ryer was asked the following questions in the context of what could transpire if the lift-line angle was less than 90 degrees:

> Q: All right. Assuming the strap is affixed to the rafters so that the strap chokes the rafters, you would agree that the failure of the stiffener wouldn't cause the straps to disconnect from the rafters?
>
> A: One would look at that from the angular position and statics and say possibly, no, and more than likely, no. If the stiffener breaks and causes a sudden movement of the roof system, it could cause the strap to potentially come off if the stiffener was broken and allowed the strap to come over the end. It could create a shock in the roof period to allow one of the cables to go slack for a brief period, could potentially. Is it likely? I don't have an opinion one way or another or not.
>
> Q: Is it fair at that point you enter into the realm of speculation?
>
> A: Exactly

Dep. of Michael Ryer, dkt. #53, at 31, lines 5-22.

Buettner's analysis of Ryer's computer data and calculations led him to three relevant

opinions regarding the accident: (1) the 2" by 6" stiffener had been overstressed during the lift; (2) because wood varies from piece to piece and because the stiffener was overstressed, the potential for failure was very high; and (3) defendant had not performed calculations on the stiffener and, thus, is not in a position to conclude whether the stiffener was safe. When defendant asked Buettner, "Is it fair to say that it's your opinion that the failure of the stiffener board without more can cause all four straps to pull of the rafters?" Buettner answered, "I don't know that." Dep. of Donald Buettner, dkt. #52, at 75-76. Buettner's analysis takes him to the point at which he understands the cause of the stiffener's failure, but not to the point of understanding why the roof fell.

2. Defendants' expert

Daniel Wojnowski is a civil and metallurgical engineer and defendant's expert witness. He specializes in the inspection and evaluation of distressed and failed structures and concomitant failure analysis. Wojnowski holds the following opinion: The only scientific explanation for the cause of the accident is that the lift straps pulled away from the rafters because the lift-line angle exceeded 90 degrees. If the lift-line angle is kept at less than 90 degrees, the load's magnitude and direction generated during the lift will always produce an inboard resultant load, that is, downward toward the eave. Such a loading condition makes it scientifically impossible for the straps to pull off the rafters even if the

stiffener breaks and disengages from the straps. Wojnowski's analysis is not dependent on the crane operator's testimony of the boom's location, but rather depends entirely on the laws of physics, basic geometry, forces and inboard and outboard loads as applied to the undisputed manner in which the straps were attached to the roof assembly and the post-accident physical evidence.

DISPUTED FACTS

The parties dispute the boom's location and, thus, the lift-line angle. According to Thill, the crane operator, it is his standard practice to extend the boom 88.4 feet (pursuant to a chart in the crane's cab), to raise the boom to an angle of approximately 60 to 65 degrees and to locate the crane itself approximately 30 feet from the center of the house. Notwithstanding this standard practice, Thill would raise or lower the boom as directed. According to Zipperer, the end of the boom was located approximately 30 feet over the front edge of the house.

OPINION

In a federal lawsuit based on diversity of citizenship, the court will apply the choice-of-law principles of the jurisdiction in which it sits to determine the substantive law that will apply. See Klaxon Co. v. Stentor Electric Manufacturing Co., 313 U. S. 487,

496-97 (1941). Therefore, Wisconsin's choice-of-law principles apply. Because the parties do not dispute that Wisconsin law applies and cite Wisconsin cases exclusively, Wisconsin law will apply.

Plaintiffs contend that defendant was negligent and should be held strictly liable because (1) the roof's stiffener board caused the roof to fall; and (2) defendant had a duty to instruct Creative Builders in the proper method of lifting the roof and to warn Creative Builders both that the stiffener board was inadequate and that workers should not stand under a roof while it is being raised.

A. Causation

Because plaintiffs are asserting claims of negligence and strict products liability, they must prove that defendant's modular home's roof was defective and that the defect caused plaintiff Bluell's injuries. See Rockweit v. Senecal, 197 Wis. 2d 409, 481, 541 N.W.2d 742, 747 (1995) (in negligence action, plaintiff must prove causal connection between conduct and injury); Dippel v. Sciano, 37 Wis. 2d 443, 460, 155 N.W.2d 55, 63 (1967) (in strict product liability action, plaintiff must prove that defect caused his injuries). Plaintiff's theory is that because the roof incorporated a stiffener, it was defective and caused the roof to fall.

The parties do not disagree that if the lift-line angle exceeds 90 degrees during a lift,

the straps could be pulled off the rafters, causing the roof to fall. They disagree only about the possibility of the roof's falling if the stiffener breaks but the lift-line angle never reaches or exceeds 90 degrees. In other words, plaintiffs argue that because Zipperer believes that he maintained a lift-line angle of less than 90 degrees and because the stiffener was found broken, the stiffener broke, which caused the straps to pull off the rafters, which, in turn, caused the roof to fall. Therefore, plaintiffs argue, it is a jury question whether the lift-line angle was less than 90 degrees, as Zipperer thinks it was, or greater than 90 degrees, as Thill's testimony indicates. Defendant argues that, even assuming the stiffener broke before the roof fell, the laws of physics and principles of geometry would keep the straps from pulling off the rafters so long as the lift-line angle never exceeded 90 degrees. Because plaintiffs are claiming that defendant's use of the stiffener made the roof design defective, they must prove that if the stiffener broke, it could have caused the roof to fall even if the lift-line angle were less than 90 degrees. The pivotal question is whether it is physically possible for the straps to pull off the rafters even if the stiffener broke first if the lift-line angle was less than 90 degrees. Although plaintiffs maintain that it is possible, I find their arguments unpersuasive for the following reasons.

First, Donald Buettner, plaintiffs' expert witness, conceded that he never analyzed how the roof could have fallen, so his testimony is not useful in answering this question. Second, the affidavit of Michael Ryer, plaintiffs' other expert, conflicts with his own

deposition testimony as to plaintiffs' theory of causation. Defendant argues that Ryer's affidavit should be disregarded because it contradicts his deposition testimony as to causation. I agree. See Russell v. Acme-Evans Co., 51 F.3d 64, 67 (7th Cir. 1995). Ryer stated in his deposition that if the lift-line angle was less than 90 degrees, he could only speculate whether the straps could have come off the rafters if the stiffener broke and caused a sudden movement in the roof system. See Dep. of Michael Ryer, dkt. #53, at 31, lines 10-22. However, in his affidavit, Ryer states that if the lift-line angle was *exactly* 90 degrees, the stiffener board's failure and sudden movement of the roof could have resulted in a redistribution and brief amplification of the forces in the remaining portions of the roof, which, in turn, could have caused the stiffener to twist, disengage and pull the straps off the rafters. See Aff. of Michael Ryer, dkt. #38, at 3. Parties cannot defend a summary judgment motion by "creating 'sham' issues of fact with affidavits that contradict their prior testimony." Bank of Illinois v. Allied Signal Safety Restraint Systems, 75 F.3d 1162, 1168 (7th Cir. 1996). This does not mean that subsequent affidavits may not be considered if they are offered to clarify ambiguous or confusing testimony or are based on newly discovered evidence. See id. at 1171-72. However, plaintiffs fail to explain how Ryer is able to reach his new conclusion as to causation without speculating. Although Ryer narrows the scenario in his affidavit to situations in which the lift-line angle is *exactly* 90 degrees (rather than *less than* 90 degrees as he testified in his deposition), he fails to explain why he changed

his assumptions regarding the lift-line angle. See Dep. of Michael Ryer, dkt. #53, 34-35 (according to his deposition testimony, Ryer based his analysis and opinions on a lift-line angle of less than 90 degrees).

The rule prohibiting the creation of false factual disputes must be applied with caution because it is the jury's role to resolve questions of credibility. See Allied Signal, 75 F.3d at 1169. However, Ryer's affidavit does not clarify his deposition testimony. Rather, his affidavit contradicts that testimony without addressing either the change in his assumptions (from less than 90 degrees to exactly 90 degrees) or, more important, why he would have had to resort to speculation as to causation when the lift-line angle was less than 90 degrees but could formulate a concrete opinion when that angle was exactly 90 degrees. Defendant characterizes Ryer's change of opinion in his affidavit as nothing more than "expert chicanery" and I tend to agree. In any event, because Ryer's affidavit contradicts his earlier deposition testimony without explanation, I will disregard the affidavit. See Russell, 51 F.3d at 67-68 ("Where deposition and affidavit are in conflict, the affidavit is to be disregarded unless it is demonstrable that the statement in the deposition was mistaken, perhaps because the question was phrased in a confusing manner or because a lapse of memory is in the circumstances a plausible explanation for the discrepancy.").

Plaintiffs argue that, in any event, no expert testimony is needed in this case because the issue of causation does not involve technical, scientific or medical matters beyond the

common knowledge or experience of jurors. See Cali v. Danek Medical, Inc., 24 F. Supp. 2d 941 (W.D. Wis. 1998). However, this argument is contradicted by plaintiffs' own engineering experts, who were unable to formulate an opinion about the cause of the accident if the lift-line angle was less than 90 degrees. For example, Buettner concedes that his analysis took him to the point of understanding the stiffener's failure but not to the point of understanding why the roof fell or, to be more accurate, why the straps pulled off the rafters. The fact that Buettner acknowledges that further analysis is required for him to understand why the straps pulled off the rafters indicates that the issue is not one to be tackled without some technical expertise. Moreover, the insights of defendant's expert, Daniel Wojnowski, regarding the laws of physics, basic geometry, forces, and inboard and outboard loads, encompass technical matters that are beyond the common knowledge or experience of jurors.

Notwithstanding plaintiffs' previous arguments, their theory of causation unravels completely under the "physical facts" rule. Under this doctrine, if a witness's testimony cannot be reconciled with the physical facts established by the evidence, the conflicting testimony must be disregarded. See Chart v. General Motors Corp., 80 Wis. 2d 91, 111, 258 N.W.2d 680, 688 (1977) (physical evidence must control because expert's testimony is in direct conflict with photographs); Corning v. Dec Aviation Corp., 50 Wis. 2d 441, 447, 184 N.W.2d 152, 156 (1971) ("accepting both the oral testimony and the undisputed

physical facts leaves the accident, not only unexplained, but unexplainable"); McCarthy v. Thompson, 256 Wis. 113, 115, 40 N.W. 560, 561 (1950) (new trial granted because verdict was against physical facts and supported only by oral testimony).

Plaintiffs note that the physical facts rule is applicable only if the physical facts are irrefutably established and permit only one inference. I agree. See Corning, 50 Wis. 2d at 447-48, 184 N.W.2d at 156 ("This court has held repeatedly that, where the physical facts are irrefutably established and permit of only one inference, oral testimony in direct conflict with such established facts will not support a verdict of a jury."). Plaintiffs contend that the physical facts doctrine is inapplicable in this case because the parties dispute the physical fact of the crane's position at the time of the accident. However, plaintiffs misapply the doctrine. The location of the crane's boom is in dispute only because of Zipperer's recollection regarding the lift-line angle. To clarify, the issue to be determined is whether Zipperer's testimony that the crane's lift-line angle was less than 90 degrees at the time of the accident is refuted by *other* undisputed physical facts. In this case, in which it is undisputed that lift-lines were attached to the roof assembly using a cinch knot and that the post-accident physical evidence showed that the rafters, straps or crane had not failed and in which the laws of physics establish that a lift-line angle of less than 90 degrees would always produce an inboard resultant load, that is, toward the eave, a factfinder could come to but one conclusion: Even if the stiffener broke first, the *only* way the straps could have

pulled off the rafters is if the lift-line angle had exceeded 90 degrees. See Zollman v. Symington Wayne Corp., 438 F.2d 28 (7th Cir.) (no probative value to testimony of witness that is opposed to laws of nature or which clearly in conflict with principles established by laws of science). In other words, the physical evidence is in direct conflict with Zipperer's testimony that the lift-line angle never reached or exceeded 90 degrees. (Although I am not determining the truth of the crane operator Thill's testimony, it is interesting to note that he testified to the boom's length (88.4 feet), angle of the boom (60 to 65 degrees) and the crane's location from the house (approximately 30 feet). According to defendant's expert Wojnowski, this testimony is consistent with a lift-line angle of more than 90 degrees.) Given the physical facts in this case, the inescapable conclusion is that the position of the crane's lift-line caused the accident, not the fact that the roof incorporated a stiffener that might have become detached from the rafters before the roof fell. Plaintiffs have failed to adduce any credible evidence to put this conclusion into dispute. Accordingly, I will grant defendants' motion for summary judgment as to plaintiff's negligence and strict liability claims because plaintiffs failed to show causation.

B. Duty to Warn

Plaintiffs argue that defendant had a duty to warn Creative Builders of the following: (1) the proper method to lift the roof; (2) the weakness or inadequacy of the stiffener board;

and (3) the danger to construction workers of standing under a roof while it is being raised.

Manufacturers have a duty to warn of dangers that they know or should know are associated with the proper use of their products. Strasser v. Tanstech Mobile Fleet Service, Inc., 236 Wis. 2d 435, 459, 613 N.W.2d 142, 154 (2000). This duty exists even if the product was designed properly. See id. However, "[a] warning is not necessary to satisfy the standard of ordinary care when the condition at issue is known to the user." Id. at 461, 613 N.W.2d at 155. In this case, it is undisputed that Zipperer knew that (1) if the lift-line angle exceeded 90 degrees the straps could pull off the rafters and (2) the stiffener would not keep the straps on the rafters. Defendant did not have a duty to warn plaintiff's employer of these known dangers.

As to plaintiffs' assertion that defendant had a duty to warn Creative Builders that construction workers should not stand under a roof while it is being raised, it is well established that manufacturers are not required to warn about commonly known dangers. See id. As Professor Prosser puts it, there is no duty to warn that "a knife or an ax will cut, a match will take fire, dynamite will explode, or a hammer may mash a finger." W. Prosser, Handbook of the Law of Torts 649 (4th ed. 1971). Without doubt, standing under a roof while it is being raised is a commonly known danger. Even if it were not commonly known to the general public, it is known to people in the construction industry. See Shawver v. Roberts Corp., 90 Wis. 2d 672, 686, 280 N.W.2d 226, 233 (1979) ("no duty to warn

members of a trade or profession about dangers generally known to that trade or profession"). Creative Builders has been in the construction business since 1988 and has built 12 to 15 homes a year. An experienced construction contractor such as Creative Builders should be well aware of the dangers of standing under a roof while it is being raised. Accordingly, defendant's motion for summary judgment will be granted in all respects.

ORDER

IT IS ORDERED that

1. Defendant All American Homes, Inc.'s motion for summary judgment is GRANTED; and

2. Defendant All American's motion to exclude the expert testimony of Donald R. Buettner and Michael P. Ryer is DENIED as moot.

Entered this 4th day of November, 2002.

BY THE COURT:

BARBARA B. CRABB
District Judge