

**UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT**

VINCENT GRECO, et al.,
Plaintiffs,

v.

BROAN-NUTONE LLC,
Defendant.

No. 3:17-cv-953 (SRU)

**RULING ON MOTIONS TO PRECLUDE AND MOTIONS FOR SUMMARY
JUDGMENT**

Vincent and Judy Greco filed the instant suit against Broan-NuTone, LLC (“Broan-NuTone”) and A.O. Smith Corporation (“A.O. Smith”) (collectively, “Defendants”), alleging that a bathroom ventilation fan designed and manufactured by Defendants was defective and ignited a fire in a house that they were renting in Wallingford, Connecticut. Amica Mutual Insurance Company (“Amica”; together with Vincent and Judy Greco, “Plaintiffs”) subsequently filed an intervening complaint seeking to recover insurance payments that it made to its insured, the house’s owner, for damages caused by the fire.

Plaintiffs assert violations of the Connecticut Products Liability Act (“CPLA”), Conn. Gen. Stat. § 52-572m, et seq., and rest their claim on the following theories of liability: (i) strict liability in tort, (ii) failure to warn, (iii) breach of warranty, and (iv) negligence. Because Plaintiffs claim that direct evidence of a defect does not exist, they proceed under the malfunction theory—which permits the use of circumstantial evidence to establish a prima facie case of product liability—and rely on the testimony and opinion proffered by Joseph Cristino.

Currently before the court are Defendants’ motions to preclude Cristino as an expert (doc. nos. 92 and 96) and their motions for summary judgment (doc. nos. 93 and 95). For the reasons that follow, the motions are **granted**.

I. Standard of Review

A court shall grant summary judgment when the movant demonstrates that there is no genuine dispute with respect to any material fact and that the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a); *see also Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256 (1986). When reviewing a summary judgment motion, a court must construe the facts of record in the light most favorable to the nonmoving party and must resolve all ambiguities and draw all reasonable inferences against the moving party. *Anderson*, 477 U.S. at 255; *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986); *Adickes v. S.H. Kress & Co.*, 398 U.S. 144, 158–59 (1970).

When a motion for summary judgment is properly supported by documentary and testimonial evidence, however, the nonmoving party may not rest upon the mere allegations or denials of the pleadings and instead must present sufficient probative evidence to establish a genuine issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 327 (1986); *Colon v. Coughlin*, 58 F.3d 865, 872 (2d Cir. 1995). To present a “genuine” issue of material fact, there must be contradictory evidence “such that a reasonable jury could return a verdict for the non-moving party.” *Anderson*, 477 U.S. at 248. “Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” *Id.*

If the nonmoving party has failed to make a sufficient showing on an essential element of his case with respect to which he has the burden of proof at trial, then summary judgment is appropriate. *Celotex*, 477 U.S. at 322. In that instance, “there can be ‘no genuine issue as to any material fact,’ because a complete failure of proof concerning an essential element of the nonmoving party’s case necessarily renders all other facts immaterial.” *Id.* at 322–23; *accord Goenaga v. March of Dimes Birth Defects Found.*, 51 F.3d 14, 18 (2d Cir. 1995) (holding that a

movant's burden is satisfied if he can point to an absence of evidence to support an essential element of the nonmoving party's claim).

II. Background¹

In 2008, Peter DeGregorio purchased a single-family residence located at 78 Cooper Avenue in Wallingford, Connecticut. *See* Broan-NuTone's Local Rule 56(a)1 Statement of Undisputed Material Facts, Doc. No. 95-3, at ¶ 5. He rented the property to his stepson, Vincent Greco, Vincent's wife, Judy Greco, and their three children. *Id.* at ¶ 6. In 2008 or 2009, Vincent Greco purchased a ceiling exhaust fan, which was manufactured by Broan-NuTone, LLC. *Id.* at ¶¶ 7, 8. The fan's electric motor was manufactured by A.O. Smith. *Id.* at ¶ 8. A third party installed the fan in the home's bathroom in 2009. *Id.* at ¶ 7.

The Grecos used the fan regularly. *Id.* at ¶ 14. Judy Greco testified that the fan was also cleaned regularly. Judy Greco Trans., Doc. No. 95-11, at 95:19. The fan operated without any issues for roughly seven years after its installation. *See* A.O. Smith Local Rule 56(a)1 Statement of Undisputed Material Facts, Doc. No. 93-2, at ¶ 7.

In early April 2016, approximately one week before the fire, the fan began to make an intermittent noise, which Vincent Greco described as a humming noise. Doc. No. 93-2, at ¶ 7; Doc. No. 95-3, at ¶¶ 18, 19. The Grecos did not replace the motor after hearing the noise. Doc. No. 95-3, at ¶ 20. A few days later—two days before the fire—Vincent Greco used a vacuum to clean dust from the fan, holding the vacuum to the grille of the fan to suction out the dust. Doc. No. 95-3, at ¶ 19. After then, Judy Greco no longer heard a noise, and her children no longer complained of any noise. *Id.*

¹ The facts are drawn from the parties' Local Rule 56(a)1 and Local Rule 56(a)2 Statements. Unless otherwise indicated, Plaintiffs have agreed to the facts cited from Defendants' Local Rule 56(a)1 Statements.

In the early morning hours of April 13, 2016, a fire broke out in the house.² Doc. No. 95-3, at ¶¶ 1, 21. The Wallingford Fire Department arrived on the scene several minutes later. Pls.’ Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶ 2. The fire, as well as efforts to suppress the fire, damaged the house and some of its contents. Doc. No. 95-3, at ¶ 25.

The Wallingford Fire Marshal, Michael Gudelski, inspected the scene minutes after the fire was extinguished. Doc. No. 93-2, at ¶ 13. According to Gudelski’s report, “smoke and heat damage [was present] throughout the house with the lowest line of demarcation and the heaviest damage in the bathroom.” Pls.’ Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶ 5. Based on “burn patterns, lines of demarcation, fuel load(s) and area(s) of damage,” Gudelski concluded that the “area of origin” was the bathroom ceiling close to where the fan was mounted. *Id.*, at ¶ 6. Gudelski further concluded that the cause of the fire was “undetermined.” Doc. No. 93-2, at ¶ 14. That was the only investigation that took place before material was removed, disturbed, or cleaned by ServPro that evening. Doc. No. 93-2, at ¶¶ 15, 17.

A. Expert Reports

1. *Plaintiffs’ Experts*

On September 19, 2018, Amica filed expert disclosures for three proposed expert witnesses: Thomas Madigan (doc. no. 61), Joseph Cristino (doc. no. 62), and David MacConnell (doc. no. 63).³ Doc. No. 95-3, at ¶ 28.

² The Grecos were staying at a hotel the time of the fire because the house was undergoing renovations and the bathroom was being prepared for painting. Doc. No. 95-3, at ¶¶ 17, 22.

³ MacConnell was retained to opine about the loss. *See* Doc. No. 63, at 2. His opinion is therefore not relevant for purposes of the instant motions.

a. Joseph Cristino

Amica retained Cristino to perform an electrical examination in order to identify whether the cause of the fire was electrical in nature. Doc. No. 95-3, at ¶ 30. Because Cristino only investigated potential electrical causes, he did not conduct a “full fire cause investigation.” *Id.* at ¶ 31. Cristino submitted an expert report dated April 19, 2017 and was deposed on February 28, 2019. Doc. No. 93-2, at ¶¶ 21, 25.

Cristino’s investigation consisted of a site visit on April 25, 2016 and May 11, 2016, as well as participation in a March 10, 2017 laboratory examination of the evidence that was retrieved from the fire scene, which included parts of the bathroom ventilation fan and other items found in the bathroom. Pls. Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶¶ 8, 11, 13; Doc. No. 92-4, at 1 (Cristino’s Report). The purpose of the two site visits was to determine whether the ignition source was electrical in nature. Doc. No. 93-2, at ¶ 32. At the laboratory examination, Cristino focused on identifying whether a competent ignition source existed in the fan. *Id.* at ¶ 33.

Cristino posited that a mechanical failure in the fan assembly caused the fire. *See* Doc. No. 93-2, at ¶¶ 21, 23; Doc. No. 95-3, at ¶ 34; *see also* Doc. No. 92-4, at 12. Based primarily on striations that he observed on the fan’s rotor shaft, Cristino opined that the mechanical failure manifested in the form of the fan’s lower bearing losing its lubrication. Cristino Deposition Tr., Doc. No. 104-5, at 80:4–81:3, 87:8–12, 119:8–120:3; *see also* Doc. No. 92-4, at 9. As a result of that lost lubricity, the lower bearing seized on the shaft, which resulted in the bearing rotating within the lower bearing support in such a way that generated enough friction heat to initiate the fire. Cristino Deposition Tr., Doc. No. 95-15, at 80:4–81:3, 87:8–12; Doc. No. 93-2, at ¶¶ 24, 26.

Cristino elaborated in his deposition that the heat caused by the friction likely ignited lint and debris that he assumed was present in the fan. Doc. No. 93-2, at ¶ 48; Cristino Deposition Tr., Doc. No. 104-5, at 90:9–23. Cristino postulated that a temperature of 451 degrees Fahrenheit was needed to ignite any combustible material in the fan, and acknowledged that he did not know whether the fan’s motor had the capacity to generate enough friction and heat to reach that temperature. Doc. No. 95-3, at ¶¶ 35, 36; *see also* Cristino Deposition Tr., Doc. No. 104-5, at 88:2–18; 91–93.

Cristino further observed that the grill cover of the fan assembly showed signs of high temperature damage on the surface facing the fan motor assembly, whereas the surface generally facing the floor was “relatively free of high heat damage.” Doc. No. 92-4, at 9. According to Cristino, those patterns indicated that the heat source derived from within the fan rather than an external source. Pls. Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶ 17; *see also* Cristino Deposition Tr., Doc. No. 104-5, at 65:7–25. Moreover, Cristino stated that there were no signs that Plaintiffs had altered the fan in a way that could have caused the friction, which he then qualified by noting “but I don’t think you could say absolutely that, you know, something wasn’t altered.” Doc. No. 104-5, at 145:2–12. Cristino additionally reported that the circuit from which the bathroom fan had been powered was supplied from circuit #3, which was found in the “tripped” position—something a person cannot manipulate. Pls.’ Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶ 11; Doc. No. 104-5, at 46:13–17.

With respect to other possible causes, Cristino’s report provides that “it was not possible to identify if the bathroom fan had produced an electrical ignition source for the April 13th fire.” Doc. No. 92-4, at 2. Although he saw no evidence of electrical failure in the fan, Cristino could not rule out that possibility in light of several pieces that he stated were missing, such as (1) the

lower rotor shaft bearing, which was “not in place, nor was it identifiable or retrieved from the bathroom floor debris,” and (2) the lower bearing support. Pls. Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶¶ 14, 15; Doc. No. 104-5, at 60:8–20. Other competent electrical sources within the bathroom and the remainder of the residence were ruled out. Doc. No. 104-2, at ¶ 19; Cristino Deposition Trans., Doc. No. 104-5, at 123:17–20; Doc. No. 92-4, at 8 (“A close visual examination of the fan housing verified that neither the connection to the building wiring, nor the building wiring had produced any electrical fault activity.”).

b. Thomas Madigan

One day after the fire, on April 14, 2016, Fire Investigator Thomas Madigan conducted a site inspection, which was arranged by Amica. Pls. Local Rule 56(a)2 Statement of Additional Facts, Doc. No. 104-2, at ¶ 7. The investigation revealed that the greatest overhead damage was “localized to one ceiling bay which was later determined to be the location where a bathroom ceiling fan was situated.” *Id.* at ¶ 9. Heat and fire damage was also observed on the interior position of the grill cover of the fan, whereas the exterior face did not display discoloration or melting. *Id.* at ¶ 10.

Based on his investigation, as outlined in his report, Madigan concluded that the fire “originated at the bathroom ceiling in the immediate vicinity of where the Broan bathroom ceiling fan was located.” Doc. No. 95-7, at 11. His report further provides that “the cause of the fire has been attributed to the Broan bathroom ceiling fan,” and that “[t]he specifics with regards to the physical laboratory exam of the fan and other artifacts will be addressed by Mr. Cristino in a separate report.” *Id.*

2. *Defendants' Experts*

a. Lawrence Sacco

Broan-NuTone's expert, Lawrence Sacco, conducted testing on exemplar motors to test Cristino's hypothesis. Doc. No. 95-3, at ¶ 38; Doc. No. 95-20 (Sacco's Report). As elaborated in his report, his testing revealed that "simple pressure from a person's finger on the rotor shaft stopped the motor operation." Doc. No. 95-3, at ¶ 38; *see also* Doc. No. 95-20, at 23.

Sacco also performed a test in which he generated friction on the lower bearing of a fan's motor and studied the temperature of the heat that was generated by the friction. Doc. No. 95-3, at ¶ 38. The maximum temperature that he recorded was 77.9 degrees Celsius, or 172.22 degrees Fahrenheit. *Id.*; Doc. No. 95-20, at 27.

B. Procedural History

Vincent and Judy Greco brought the instant case on June 9, 2017. Compl., Doc. No. 1. The initial complaint asserted a product liability claim (Count 1), an implied warranty claim (Count 2), and negligence (Count 3) against Broan-NuTone. *Id.* An amended complaint was filed on August 3, 2017, and a second amended complaint—the operative complaint—was filed on October 24, 2017, which added A.O. Smith as a defendant.

The operative complaint sets forth two counts: (1) violations of the CPLA (Count 1) and (2) the malfunction theory of product liability (Count 2). Second Am. Compl., Doc. No. 21, at 3–7. Plaintiffs base those counts on the following theories of liability: (1) product liability; (2) implied warranty; and (3) negligence. *Id.*, at 1. They seek compensatory damages, actual damages, and attorneys' fees and costs. *Id.* at 8.

Amica subsequently filed an intervening complaint against Broan-NuTone and A.O. Smith, seeking to recover insurance benefits totaling \$144,254.18 that it paid to its insured, Peter

DeGregorio, because of the fire. *See* Intervening Compl., Doc. No. 47. Amica asserts a number of product liability theories of liability, including design defect, failure to warn, and breach of warranty. *See id.* at ¶¶ 23, 31. A.O. Smith and Broan-NuTone answered both complaints on July 17, 2018 and March 27, 2019, respectively. Doc. Nos. 53, 54, 82, 83.

Following the close of discovery, on July 31, 2019, Broan-NuTone and A.O. Smith moved for summary judgment on all counts. Doc. Nos. 93, 95. They also moved to preclude Cristino as an expert. Doc. Nos. 92, 96. At a hearing on the pending motions, I granted the motions for summary judgment with respect to Defendants’ failure to warn, breach of warranty, and negligence claims, absent objection, and took the remaining strict liability claim under advisement. Doc. No. 110. I also took under advisement the motions to preclude. *Id.*

III. Discussion

A. Motions to Preclude Cristino’s Opinion and Testimony

Defendants first seek to preclude Cristino’s opinion and testimony, arguing that Cristino has not satisfied the requirements articulated under Federal Rule of Evidence 702 and *Daubert*. *See generally* A.O. Smith Mot. to Preclude, Doc. No. 92; Broan-NuTone Mot. to Preclude, Doc. No. 96. I agree.

Rule 702 establishes a two-part reliability test. *Aidoo v. Cela*, 2018 WL 6435650, at *7 (D. Conn. Dec. 7, 2018) (citing Fed. R. Evid. 702). First, the proposed expert must be “qualified as an expert by knowledge, skill, experience, training, or education.”⁴ *Id.* Second, the expert’s testimony must satisfy four non-exhaustive factors: the testimony must (1) “offer scientific,

⁴ Defendants do not appear to dispute that Cristino is qualified, and I conclude that he is. Cristino is a licensed engineer in Connecticut who received a Bachelor of Science in Electrical Engineering degree from the University of Bridgeport, and is a member of multiple professional organizations such as the National Society of Professional Engineers and the National Fire Protection Association. Doc. No. 62-2. He has also testified at over 75 depositions or trials. *Id.*

technical, or specialized knowledge that will help the trier of fact determine a fact at issue;” (2) “be based on sufficient facts or data;” (3) “be the product of reliable principles and methods;” and (4) “have reliably derived from the application of those principles and methods to the facts of the case.” *Munn v. Hotchkiss Sch.*, 24 F. Supp. 3d 155, 202 (D. Conn. 2014), *aff’d*, 724 F. App’x 25 (2d Cir. 2018). In short, the opinion must be competent, relevant, and reliable. *Izzarelli v. R.J. Reynolds Tobacco Company*, 806 F. Supp. 2d 516, 531 (D. Conn. 2011), *vacated in part on other grounds*, 701 F. App’x 26 (2d Cir. 2017) (citations omitted). Expert opinions that are “speculative or conjectural” should be excluded. *Boucher v. U.S. Suzuki Motor Corp.*, 73 F.3d 18, 21 (2d Cir. 1996).

The party seeking to admit the witness bears the burden of demonstrating, by a preponderance of the evidence, that his or her testimony is admissible. *Izzarelli*, 806 F. Supp. 2d at 532 (internal citations omitted). “A minor flaw in an expert’s reasoning or a slight modification of an otherwise reliable method will not render an expert's opinion *per se* inadmissible.” *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002). Therefore, a court “should only exclude the evidence if the flaw is large enough that the expert lacks ‘good grounds’ for his or her conclusions.” *Id.* (internal citations omitted).

As discussed further below, because Cristino’s opinion, although relevant, is not sufficiently reliable, I conclude that his opinion and testimony do not pass muster under Rule 702.

a. Cristino’s Testimony Will Help the Jury Determine Causation and is Therefore Relevant.

Whether the opinion offers “scientific, technical, or specialized knowledge” that will “help the trier of fact determine a fact of issue” is principally a question of relevance. *Miller v. City of New London*, 2015 WL 2179773, at *2 (D. Conn. 2015). Evidence is relevant if it tends

to “make the existence of a fact that is of consequence in determining the action more probable or less probable.” *Id.* (citing Fed. R. Evid. 401). “Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” *Id.* (citing *Daubert*, 509 U.S. 579, 591).

“In any products liability action, under any theory of liability, ‘the plaintiff must plead and prove that the product was defective and that the defect was the proximate cause of the plaintiff’s injuries.’” *Bourke v. MAN Engines & Components, Inc.*, 303 F. Supp. 3d 227, 232 (D. Conn. 2018) (citing *Haesche v. Kissner*, 229 Conn. 213, 218 (1994)).

Because Plaintiffs allege that direct evidence of a defect is unavailable, as explained further below, they proceed under the malfunction theory. To prevail under the malfunction theory, Plaintiffs must establish that: “(1) the incident that caused the plaintiff’s harm was of a kind that ordinarily does not occur in the absence of a product defect, and (2) any defect most likely existed at the time the product left the manufacturer’s or seller’s control and was not the result of other reasonably possible causes not attributable to the manufacturer or seller.” *Metro. Prop. & Cas. Ins. Co. v. Deere & Co.*, 302 Conn. 123, 139–40 (2011). Courts in this district have construed that test to require “first, proof of the *existence* of a product failure attributable to the defendant; and second, a *causal connection* between that failure and the loss complained of.” *Ace Am. Ins. Co. v. Eaton Elec., Inc.*, 2015 WL 233032, at *6 (D. Conn. Jan. 16, 2015) (emphasis in original).

Here, although Defendants do not appear to dispute the relevance of Cristino’s opinion and testimony, I note at the outset that his opinion is pertinent to a determination of the fire’s underlying causes. For example, Cristino ruled out multiple possible ignition sources for the fire. In addition, Cristino’s testimony that the lower rotor shaft bearing and lower bearing support were missing helps resolve the question of why Plaintiffs cannot identify a defect in the

fan, and is therefore relevant to the consequential issue of whether plaintiffs can avail themselves of the malfunction theory in the first instance. For those reasons, I conclude that Cristino's testimony and opinion are relevant.

b. Cristino's Opinions Are Not Based on Sufficient Facts or Data.

As support for Cristino's theory that the fire derived from a mechanical failure in the fan, Plaintiffs rely on the following facts: (1) the "Area of Origin," according to Madigan, was the bathroom ceiling near where the fan was mounted; (2) the circuit from which the bathroom fan had been powered was supplied from a circuit found in the "tripped" position; (3) Cristino ruled out other items found in the bathroom as possible causes of the fire; (4) Cristino identified striations in the shaft, which were "consistent with the lower bearing having seized on the shaft;" and (5) the grill cover of the fan assembly displayed high temperature damage on the surface facing the fan motor assembly, while the surface normally facing the floor did not. Joint Mem. in Opp. to Defs.' Mots. to Preclude and Mots. for Summ. J., Doc. No. 104-1, at 26–29.

In my view, those facts do not render Cristino's opinion reliable. Perhaps most significantly, Cristino has not established that the fan motor was powerful enough to generate sufficient friction to ignite a fire. As he acknowledged during his deposition, Cristino did not perform any tests or calculations to corroborate his hypothesis that the motor could generate enough friction to reach 451 degrees Fahrenheit, the temperature that Cristino stated was required to ignite combustibles within the motor assembly. Doc. No. 95-3, at ¶¶ 35, 36. Cristino even failed to gather rudimentary information about the motor, such as the motor's RPM or wattage. Doc. No. 104-5, at 87:22–88:1.

Those deficiencies alone render Cristino's opinion unreliable. Generally speaking, "[t]he hallmark of th[e] reliability prong is the scientific method, *i.e.*, the generation of testable

hypotheses that are then subjected to the real-world crucible of experimentation, falsification/validation, and replication.” *Innis Arden Golf Club v. Pitney Bowes, Inc.*, 629 F. Supp. 2d 175, 188–89 (D. Conn. 2009) (internal citations omitted). For that reason, “[t]he failure to test a theory of causation can justify a trial court’s exclusion of the expert’s testimony.” *Brooks v. Outboard Marine Corp.*, 234 F.3d 89, 92 (2d Cir. 2000). The Second Circuit has therefore rejected expert testimony in design-defect cases that rested on theories that were not tested. *See, e.g., id.* (holding that the district court did not abuse its discretion in excluding the expert’s testimony, partly because the expert “never attempted to reconstruct the accident and test his theory”); *Lynch v. Trek Bicycle Corp.*, 374 F. App’x 204, 206 (2d Cir. 2010) (upholding the district court’s preclusion of expert testimony when the expert did not perform any testing and when the expert “repeatedly declined to offer any quantitative or scientifically-based testimony regarding his theory”).

Moreover, Cristino premises his theory on an assumption that lint or debris was present in the fan and served as the initial fuel, even though there is no evidence that the fan had carried any combustible material prior to or at the time of the fire. That speculation is fatal to his opinion. *Pugliano v. United States*, 315 F. Supp. 2d 197, 199 (D. Conn. 2004) (concluding that expert testimony was not admissible when it was a product of “subjective belief and unsupported speculation”); *see also Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002) (“[T]he *Daubert* requirement that the expert testify to scientific knowledge—conclusions supported by good grounds for each step in the analysis—means that any step that renders the analysis unreliable under the *Daubert* factors renders the expert’s testimony inadmissible.”) (internal citations and quotation marks omitted) (emphasis omitted).

The evidence in the record also indicates otherwise: Vincent Greco testified that he cleaned the fan with a vacuum two days before the fire—a fact with which Cristino did not appear familiar. Cristino Deposition Tr., Doc. No. 104-5, at 90:21–23 (responding “no” to the question of whether he investigated “how soon prior to the fire [the fan] had been cleaned”).

Even if combustible material was present in the fan, Cristino testified that he did not know for how long any debris or lint would need to be exposed to a temperature of 451 degrees before the fan could ignite. *Id.*, at 92:25–93:7. He also did not know how long it would take for the friction caused by the alleged mechanical defect to create enough heat to reach the ignition temperature. *Id.*, at 159:15–20. Moreover, Cristino conceded that any heat generated by a mechanical malfunction in the fan’s motor would cool down when the fan was turned off; the buildup of heat would start anew each time the fan was turned back on. *See id.*, at 158:9–17.

Cristino’s theory also relies on the diagonal striations that he observed on the rotor shaft, which he concludes proves that the lower bearing seized on the shaft. Cristino, however, did not compare the striations on the rotor shaft of the fan to any other fan’s rotor shaft to identify whether those striations were typical of a used and undamaged shaft. *Id.*, at 81:6–16; Doc. No. 93-2, at ¶ 37. Significantly, Cristino acknowledged that “some striations occur from normal wear in tear in shafts such as these.” *Id.*, at 81:4–7.

Cristino’s testimony that a comparison to another rotor shaft would not have been “meaningful” in any case “because we’ve got the upper bearing assembly to compare it to which didn’t have striations on it” is unconvincing because there is no evidence that an upper bearing assembly looks similar to the lower bearing. *Id.*, at 85:21–86:11.

Further, although he also testified that “normal shafts don’t wind up having bearing material adhered to them in the way that this one does,” *id.*, at 81:11–16, Cristino does not flesh

out the significance of that fact either in his deposition or report. And as outlined in his report, the striations—not any bearing material that adhered to the shaft—are what compelled Cristino to conclude that the rotor bearing had seized on the shaft. *See* Doc. No. 92-4, at 9.

Cristino’s opinion shares several additional shortcomings with the opinion that he offered in *Ace Am. Ins. Co. v. Eaton Elec., Inc.*, 2015 WL 233032 (D. Conn. Jan. 16, 2015), which the court ultimately rejected. That case involved a CPLA claim that arose from a fire that ignited allegedly because of a defective device called an “electric meter pan with circuit breakers,” where the plaintiffs likewise relied on the malfunction theory. *Id.* at 1, 4. Cristino, who was retained as the plaintiff’s expert, opined that the “cause of the events culminating in the fire . . . was a defect in Eaton’s meter enclosure which allowed the ingress of moisture into the enclosure,” and observed that the meter enclosure “should have been capable of preventing the ingress of moisture typically experienced in a New England winter.” *Id.* at 10, 12.

The court excluded that opinion from evidence, reasoning the opinion “is speculation, either unsupported by or contrary to evidence in the record.” *Id.* at 12. The court elaborated that there was “no evidence as to what the defect consisted of physically; how the defect (whatever it was) allowed ‘moisture’ to penetrate the cover of the meter enclosure, and in what quantity; what the moisture consisted of; where the moisture came from; when the ingress occurred; and how the moisture, once allowed ingress into the meter enclosure, succeeded in causing the short circuit in the circuit breaker. . . .” *Id.* at 13.

With respect to contrary evidence, the court highlighted how Cristino tested his theory by “immersing a replica of the device in a bucket of water, then freezing the water containing the device (to evoke, one imagines, the rigors of a Connecticut winter), and then testing the circuit breaker component—which worked perfectly well.” *Id.* at 13.

Again, here, Cristino has not identified a defect, nor has he explained how or why a defect could have caused the fan to lose lubricity. Cristino has also not articulated how long it would take for the friction caused by the alleged mechanical defect to build enough heat to reach ignition temperature. Relatedly, he has not presented any evidence regarding how much of the alleged lint and debris would need to be exposed to the 451-degree temperature before igniting or how long that process would take.

In addition, Broan-NuTone's expert, Lawrence Sacco, tested Cristino's theory on exemplar motors, and the results demonstrated that the motor could only produce enough friction to reach 172.22 degrees Fahrenheit, which is considerably less than 451 degrees Fahrenheit. Although Plaintiffs emphasize those tests were performed on new fans, they do not explain how that distinction is significant and have not offered any evidence to rebut the reliability of Sacco's tests.

In sum, because there is "too great an analytical gap between the data and the opinion proffered," I conclude that Cristino's theory is not supported by sufficient facts, as required by *Daubert* and its progeny. *General Electric Co. v. Joiner*, 522 U.S. 136, 146 (1997).

c. Cristino Did Not Apply a Reliable Standard in Developing His Theory.

In assessing whether a theory or technique is reliable, courts may weigh additional factors such as: (1) whether the theory or technique "has been or can be tested;" (2) whether it has been "subjected to peer review and publication;" (3) the "known or potential rate of error," and the "standards controlling the technique's operation;" and (4) whether a particular technique or theory has gained "general acceptance" in the scientific community. *See United States v. Williams*, 506 F.3d 151, 160 (2d Cir. 2007) (citing *Daubert*, 509 U.S. at 593–94).

Applying those factors to the present case, I conclude that Cristino's methodology does not meet the *Daubert* threshold. As a preliminary matter, Cristino has not articulated any particular principles or methodology that guided his analysis. Moreover, he has not: (1) established a known or potential rate of error for his friction theory; (2) subjected his theory to peer review or analysis; and (3) demonstrated general acceptance in the scientific community. To the contrary, Cristino admitted during his deposition that he could not point to any articles or studies supporting his conclusion. Doc. No. 104-5, at 125:6–16. Further, as discussed, his opinion was tested and disproved by Broan-NuTone's expert, Lawrence Sacco.

For the foregoing reasons, I conclude that Cristino's opinion and testimony fall short of what is required under *Daubert* and should be excluded. I therefore grant Defendants' motions to preclude, doc. nos. 92 and 96, for those reasons.

I further conclude that Plaintiffs cannot establish causation under the CPLA. Cristino's opinion and testimony is the only evidence that supports Plaintiffs' argument that a defect in the fan caused the fire. Because I have excluded Cristino as an expert, Plaintiffs cannot establish causation and their CPLA claims therefore cannot survive. *Valente v. Textron, Inc.*, 559 F. App'x 11, 14 (2d Cir. 2014) (“With Seluga's testimony properly excluded, the record is devoid of any evidence supporting Valente's theory that the golf car had a design defect or that such a design defect likely caused his accident.”).

Even if Cristino's testimony was admissible, for the reasons discussed below, I conclude that Plaintiffs' CPLA claim would still fail.

IV. Motions for Summary Judgment

A. The Connecticut Products Liability Act (“CPLA”)

The CPLA, Conn. Gen. Stat. § 52-572m, et seq., is the exclusive remedy for all product liability claims in Connecticut. Conn. Gen. Stat. § 52-572n(a). The statute displaces related common law causes of action and enables plaintiffs to bring a single cause of action based on the following theories: “[s]trict liability in tort; negligence; breach of warranty, express or implied; breach of or failure to discharge a duty to warn or instruct, whether negligent or innocent; [and] misrepresentation or nondisclosure, whether negligent or innocent.” *Id.* § 52-572m(b).

Plaintiffs raise the following theories of liability pursuant to the CPLA: (1) strict liability in tort, (2) failure to warn, (3) breach of warranty, and (4) negligence; Defendants have moved for summary judgment with respect to each theory. Because I previously granted the motions for summary judgment with respect to the latter three claims, I address below only the strict liability cause of action.

i. Strict Liability

“Strict liability claims under the CPLA can include theories of manufacturing defect, design defect, or state law ‘malfunction theory.’” *Karazin v. Wright Medical Technology, Inc.*, 2018 WL 4398250, at *3 (D. Conn. Sept. 14, 2018). To prevail under the doctrine of strict liability in tort, Plaintiffs must establish that: “(1) the defendant was engaged in the business of selling the product; (2) the product was in a defective condition unreasonably dangerous to the consumer or user; (3) the defect caused the injury for which compensation was sought; (4) the defect existed at the time of the sale; and (5) the product was expected to and did reach the consumer without substantial change in condition.” *Metro. Prop. & Cas. Ins. Co. v. Deere & Co.*, 302 Conn. 123, 131 (2011) (internal citations omitted).

Although most product liability claims are based on direct evidence of a particular product defect, Connecticut courts have allowed plaintiffs to proceed under a “malfunction theory” when such evidence is unavailable. *Id.* at 131–33. Under that theory, a plaintiff may “establish a prima facie product liability case on the basis of circumstantial evidence.” *Id.* at 133.

The Connecticut Supreme Court set forth the contours of the malfunction theory in its seminal decision, *Metropolitan Property and Cas. Ins. v. Deere & Co.*, 302 Conn. 123 (Aug. 16, 2011). The Court stressed the need for limitations to the theory in order to ensure that product liability cases proceed to trial only when the plaintiff’s evidence establishes “the probability, and not the mere possibility, that the plaintiff’s injury resulted from a product defect attributable to the manufacturer.” *Id.* at 139, 148. Toward that end, the Court held that, “when direct evidence of a specific defect is unavailable, a jury may rely on circumstantial evidence to infer that a product that malfunctioned was defective at the time it left the manufacturer’s or seller’s control if the plaintiff presents evidence establishing that[:]

- (1) the incident that caused the plaintiff’s harm was of a kind that ordinarily does not occur in the absence of a product defect, and
- (2) any defect most likely existed at the time the product left the manufacturer’s or seller’s control and was not the result of other reasonably possible causes not attributable to the manufacturer or seller.

Id. at 139–40.

A plaintiff may establish the elements through evidence such as “(1) the history and use of the particular product, (2) the manner in which the product malfunctioned, (3) similar malfunctions in similar products that may negate the possibility of other causes, (4) the age of the product in relation to its life expectancy, and (5) the most likely causes of the malfunction.” *Id.* at 140–41 (internal citations omitted). “If lay witnesses and common experience are not

sufficient to remove the case from the realm of speculation, the plaintiff will need to present expert testimony to establish a prima facie case.” *Id.*

Here, Plaintiffs rely on the malfunction theory to prove their CPLA claim. Defendants counter that the malfunction does not apply to this case and that the *Deere* factors have not been established in any event. As I discuss further below, although Plaintiffs may avail themselves of the malfunction theory, I conclude that, viewing the evidence in the light most favorable to Plaintiffs, a reasonable factfinder could not attribute any product defect to Defendants.

(i) Plaintiffs Have Presented Sufficient Evidence to Establish that the Malfunction Theory Applies in this Case.

The malfunction theory applies in cases in which a plaintiff “is unable to produce direct evidence of a defect because of the loss of essential components of the product.” *Id.* at 131–32. Courts have indicated that the malfunction doctrine therefore does not apply when the needed evidence is available for examination, and the plaintiffs failed to examine such evidence without explanation. *See Perez v. Toyota Motor Sales U.S.A., Inc.*, 2013 WL 3540508, at *2 (D. Conn. July 11, 2013) (noting that the malfunction doctrine may not apply when the plaintiffs, who were alleging that their car was defective, had not explained “why they ha[d] not retained an expert to examine the car which was available for defense expert evaluation”).

The parties here dispute whether critical components of the fan were available for inspection. Plaintiffs claim that the fan’s lower motor bearing and lower rotor support were missing, citing Cristino’s observations that the “lower rotor shaft bearing was not in place, nor was it identifiable or retrieved from the bathroom floor debris” and that the lower bearing support “most probably melted during the course of the fire.” Cristino Report, Doc. No. 92-4, at 8. Defendants, on the other hand, maintain the lower bearing was not missing, claiming that the bearing was instead “located in the fire debris” and that Cristino “labeled it in one of the

photographs he included in his file.” *See* Doc. No. 105, at 1, 4; *see also* Ex. A to Reply, Doc. No. 105-1, at 35–37.

At the outset, I note that the lower bearing and lower bearing support both serve as important pieces of evidence for Cristino’s theory. Cristino speculated that the fan’s lower bearing lost its lubricity, which caused the lower bearing to seize on the rotor shaft and resulted in the bearing rotating within the lower bearing support in such a way that generated enough friction heat to initiate the fire. Moreover, Defendants have not disputed Plaintiffs’ contention that evidence of the lower bearing support was unavailable. Construing all inferences in favor of Plaintiffs, I therefore conclude that a triable issue exists with respect to whether key components of the fan were missing. Accordingly, Plaintiffs have sufficiently demonstrated that the malfunction theory applies.

ii. Plaintiffs Have Presented Sufficient Evidence to Establish that the Fan was Defective and that its Defect Caused the Fire.

Evidence supporting the first element—that the incident that caused the plaintiff’s harm was of a kind that ordinarily does not occur in the absence of a product defect—“permits the trier of fact to infer that a plaintiff’s injury resulted from a defect in the product, rather than from some other cause of the accident, such as operator error.” *Deere*, 302 Conn. at 141 (internal citations omitted). “In most cases, the evidence easily will establish that a product malfunctioned as a result of a defect and thereby caused the plaintiff’s injury.” *Id.* Causation may also be “established with circumstantial evidence, such as difficulties with the product at or near the time of the accident. . . .” *Id.* at 141–42.

In *Deere*, the plaintiff’s insured owned a four-year-old lawn tractor, which had been sputtering and running roughly for several months. *Id.* at 126–27. After attempting to use the tractor one morning, the tractor’s primary user observed that the rough running was particularly

severe and parked the tractor in the garage. *Id.* The house caught on fire a few hours later. *Id.* at 127. The homeowners' insurer pursued a product liability action against the manufacturer of the tractor, alleging that the tractor contained a manufacturing defect that caused the fire. *Id.* at 125. The case proceeded to trial and the jury returned a verdict in the plaintiff's favor. *Id.*

Although the Connecticut Supreme Court reversed the judgment on appeal, the Court concluded that the jury could reasonably have found that the fire originated from the tractor's electrical system. *Id.* at 153–54. In so holding, the Court emphasized that the plaintiff's experts had testified that they ruled out other potential causes in the garage and that the burn patterns in the garage indicated that the tractor had caused the fire. *Id.* at 154. Moreover, the plaintiff's vehicle fire expert testified that he had ruled out all other potential sources of the fire within the tractor except for the tractor's electrical system. *Id.* The Court also concluded that there was a reasonable basis to find a defect “[b]ecause common experience informs us that a tractor's electrical system does not ordinarily ignite, especially when not in operation.” *Id.*

Here, Plaintiffs have presented sufficient evidence to rule out other reasonably possible sources for the fire. For instance, Cristino testified that he found no indications that Plaintiffs had altered the fan in a way that caused the friction. Moreover, Cristino examined competent electrical sources in the bathroom and the rest of the residence, and ruled out those items as potential causes. Lastly, Fire Marshall Madigan's investigation revealed that the overhead damage was localized to one area in the bathroom where a ceiling fan was situated.

I also conclude that Plaintiffs have presented sufficient evidence, viewed in the light most favorable to them, to establish that the fan was defective, because common experience suggests that a fan would not normally ignite. *See Liberty Mut. Ins. Co. v. Sears, Roebuck & Co.*, 35 Conn. Supp. 687, 691 (Super. Ct. 1979) (inferring television set was defective partly because

“television sets, in normal use, do not self-ignite”). For those reasons, I conclude that Plaintiffs can meet the first prong of the malfunction theory.

iii. There is Insufficient Evidence for a Reasonable Factfinder to Attribute Any Defect in the Product to Defendants.

Evidence with respect to the second element of the malfunction theory “supports an inference that the defect in the product existed when the product left the manufacturer’s control and was not introduced by any other reasonably possible cause outside of its control,” such as “the age of product, abuse or improper maintenance.” *Deere*, 302 Conn. at 142–43. Although a plaintiff “need not conclusively eliminate all possible causes of a product defect,” he or she must “present sufficient evidence to negate a reasonable possibility that something or someone besides the manufacturer caused the defect in a product.” *Id.* at 143.

“[T]he age of the product in relation to its life expectancy is another important factor that may weaken any inference that a product defect is attributable to the manufacturer.” *Id.* at 144. The reason being, “[w]hen a product malfunctions when it is new, the inference that the malfunction resulted from a defect attributable to the manufacturer is likely to be stronger than when the product is older because of the diminished possibility of other causes in the case of the newer product.” *Id.* at 144. Although the age of the product does not present an “absolute bar” to relief when the product has not outlived its expected lifespan, “[i]f a product is not new or nearly new when it allegedly malfunctioned, and the product functioned without problems indicative of a defect before the malfunction, the plaintiff must present some evidence to explain how the product could have operated without incident for a time and then have failed on this particular occasion.” *Id.* at 145–47. Without such evidence, “any link between the product failure and a defect attributable to the manufacturer is simply too attenuated to serve to establish liability on the part of the manufacturer.” *Id.* at 147 (internal citations omitted).

In *Deere*, the Supreme Court determined that the plaintiff's evidence was insufficient to satisfy that requirement. The Court noted that the tractor did not experience problems until after the homeowners took the tractor to a dealer for a tune-up; after that visit, the tractor's engine "ran unevenly, causing the tractor to kick, sputter and backfire." *Id.* at 151, 155. The Court further emphasized that the owners continued to use the tractor despite those problems. *Id.* at 155. Because the plaintiff could not negate the possibility of improper maintenance or use as causes of any defect, the court concluded that the plaintiff failed to eliminate other reasonably possible secondary causes. *Id.*

The *Deere* Court further concluded that the plaintiff failed to attribute the defect to the defendants because "the evidence established that the tractor was not new or nearly new when it malfunctioned," and because the plaintiff failed to explain "how the tractor could have had a defect in the electrical system when it left the defendant's manufacturing facilities yet function without problems for several years before failing," as required. *Id.* at 155–56.

Deere's reasoning applies here with even greater force. The fan operated without issue for seven years—nearly twice as long—and had been used regularly by the Grecos. Because the fan was therefore "not new or nearly new" when it malfunctioned, Plaintiffs must "present some evidence to explain how the product could have operated without incident for a time and then have failed on this particular occasion," which they have failed to do. *Id.* at 147. Accordingly, viewing the evidence in the light most favorable to Plaintiffs, no reasonable juror could attribute a defect in the product to Defendants.

For similar reasons, the case at bar is also analogous to *Perez v. Toyota Motor Sales U.S.A., Inc.*, 2013 WL 3540508 (D. Conn. July 11, 2013). There, a plaintiff brought a CPLA claim against car manufacturers after a car accident, alleging that that the vehicle was defective

under the malfunction theory. *See id.* at 1–2. Reasoning that the accident occurred at least eight years after the car was manufactured, and about four years after the car was purchased, the court concluded that the evidence was insufficient to establish a defect attributable to the defendants. *Id.* at 3.

Plaintiffs here argue that the fan was “new” on the grounds that (1) there is no evidence to suggest that the fan has been altered in any manner before the fire and (2) the fan was within its normal useful lifespan, which Plaintiffs assert was ten years. *See* Mem. in Opp. to Mot. for Summ. J., Doc. No. 104-1, at 18–19. As a preliminary matter, Plaintiffs cite to an internet blog for the proposition that the average life of a bathroom exhaust fan is ten years. *Id.* Because Plaintiffs are offering that statement to establish its truth, it constitutes inadmissible hearsay and therefore cannot support the existence of a genuine issue of material fact. *Raskin v. Wyatt Co.*, 125 F.3d 55, 66 (2d Cir. 1997) (“[O]nly admissible evidence need be considered by the trial court in ruling on a motion for summary judgment.”) (internal citations omitted).

More fundamentally, even if the fan’s life expectancy had not yet expired by the time of the fire, Plaintiffs cite to no authority for their proposition that “a product within its normal life cycle, that has not been manipulated or altered in any way since the time it left a defendant’s control, is ‘new,’ or at a bare minimum, the same exact product placed in the stream of commerce.” Mem. in Opp. to Mot. for Summ. J., Doc. No. 104-1, at 19. The *Deere* Court determined that the tractor was “not new or nearly new” when it malfunctioned without any mention of the tractor’s life expectancy or the plaintiff’s possible misuse of the tractor. *Deere*, 302 Conn. at 156. Moreover, at seven years old, the fan was nearing the end of its supposed life expectancy of ten years.

V. Conclusions

For the foregoing reasons, I **grant** Defendants' motions to preclude (doc. nos. 92, 96) and **grant** Defendants' motions for summary judgment (doc. nos. 93, 95). The Clerk is directed to enter judgment in favor of Defendants and close the case.

So ordered.

Dated at Bridgeport, Connecticut, this 4th day of March 2020.

/s/ STEFAN R. UNDERHILL
Stefan R. Underhill
United States District Judge