



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

UNITED STATES DISTRICT COURT EASTERN DISTRICT OF MICHIGAN

SOUTHERN DIVISION PEYTON BOAZ, Plaintiff, Case Number 21-11386 v. Honorable David M. Lawson VITATOE AVIATION, LLC, Defendant. _____/ and RACHEL TREVINO MCCAMY, as Independent Administrator of the Estate of JULIE MARIE CASTANO BOAZ, Deceased, Plaintiff, Case Number 21-11602 v. Honorable David M. Lawson VITATOE AVIATION, LLC, Defendants. _____/ and TYLER G. BOAZ, as Independent Administrator of the Estate of GREGORY D. BOAZ, Deceased, Plaintiff, Case Number 21-11682 v. Honorable David M. Lawson VITATOE AVIATION, LLC, Defendants. _____/

ORDER DENYING MOTIONS TO EXCLUDE EXPERT

AND FOR SUMMARY JUDGMENT

- 2 - ORDER DENYING MOTIONS TO EXCLUDE EXPERT

AND FOR SUMMARY JUDGMENT On June 24, 2018, a single-engine Cessna crashed while on approach to the Coleman A. Young International Airport (Detroit City Airport) in Detroit, Michigan, killing the pilot and all but one passenger, who was seriously injured. The representatives of the deceased passengers and pilot and the surviving passenger each filed separate lawsuits against a variety of parties who handled the flight or maintained the aircraft. Those cases were consolidated for discovery. The respective plaintiffs have resolved their cases against all defendants except Vitatoe Aviation, LLC. Vitatoe now moves to exclude the respective plaintiffs' common liability expert and asks for summary judgment in all three cases. The Court heard oral argument on June 26, 2023. The record contains sufficient information to support the expert's opinions on fuel flow and landing gear maintenance to allow those opinions to be considered by a jury. There also is evidence in the record to create a fact question on whether Vitatoe's conduct was at least "a" proximate cause of the accident, despite its contention that a non-party's conduct broke the chain of causation. The Court will deny the motions to exclude Donald Sommer's opinion evidence and for summary judgment.

I. Facts and Proceedings Most of the circumstances of the fatal aircraft accident, aside from questions of causation, are undisputed for the purposes of the present motions, except as noted below.



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

A. The Accident On June 24, 2018, Gregory Boaz (deceased), with his wife, Julie Boaz (deceased), and 17- year-old son, plaintiff Peyton Boaz, departed Baytown Airport in Baytown, Texas in a Cessna P210N aircraft, registration number N3896P, flown by Gregory. Their destination was Detroit, Michigan, where Peyton's sister was playing in a volleyball tournament. After a fuel stop at West

- 3 - Memphis Municipal Airport in West Memphis, Arkansas, the aircraft continued en route to Michigan on a visual flight rules (VFR) flight plan. As the aircraft approached Detroit, Gregory contacted the local tower controller at the Detroit City Airport seeking a landing clearance. That controller was former defendant Steven Buford, who was employed by former defendant Midwest Air Traffic Control, Inc. (MATC). MATC provides air traffic control services from the local airport tower under a contract with the Federal Aviation Administration (FAA). At 7:48 p.m. local time, Buford cleared the Cessna to land on Runway 33. Runway 33/15 runs generally northwest to southeast, with the designation "33" (corresponding to compass heading 330 degrees) indicating an approach from the southeast on a northwesterly heading. When Boaz made his initial contact, the aircraft was flying at an altitude of 2,000 feet above Mean Sea Level (MSL). The elevation of the airport is 626 feet MSL. At 7:49 p.m., Boaz reported that the landing gear light in the aircraft was not illuminated, indicating a problem with the aircraft's retractable landing gear. By then, the airplane was at 1,500 feet MSL on a downwind leg for Runway 33, about to make a left-hand turn to the base leg and then to the final approach to the runway. At 7:50, Buford directed Boaz to overfly Runway 33 so that Buford could visually check the landing gear condition. After the flyover, Buford told Boaz that one of the main landing gear legs was not extended. Buford allegedly never dispatched emergency response resources and never asked Boaz about the aircraft's remaining fuel reserve. While still in communication, Boaz tried cycling the landing gear in an attempt to extend the malfunctioning gear leg. The aircraft climbed back to 2,000 feet and re-entered the traffic pattern, reversing direction to come around for a second approach to Runway 33. Boaz's attempt to lower the gear was unsuccessful, and he then asked for permission to land on the grass infield area to the west of Runway 33, or alternatively the grass infield east of

- 4 - the opposite heading Runway 15. Buford advised Boaz that he could not give clearance for a landing on the grass infield due to concerns about damaging the aircraft or runway lights and other airport fixtures in the grassy area. At 7:55 p.m., as the aircraft continued to circle with the gear still not deployed, it came into position for an approach to Runway 7 (a crossing runway on a roughly easterly heading that intersected at the approach end of Runway 33). However, at that time Buford asked Boaz if he could continue to circle while emergency vehicles were mobilized. Boaz never declared an emergency or reported minimum fuel. But at 7:56 p.m. Boaz informed the controller that the aircraft had just run out of fuel. Buford immediately cleared the Cessna to land on Runway 7, but by the time that clearance was given, Boaz's aircraft had circled back around to northeast of the Runway 15 threshold at an altitude of 1,900 feet MSL. The plaintiffs allege that from that position the airplane could have safely turned left and made a gliding approach without power to land on Runway 15 on a southeasterly heading. Buford did not change the landing clearance or clear the Cessna for a landing on any runway. The threshold of Runway 7 was at that point more than 1.6 miles west of the



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

aircraft's position, whereas the threshold of Runway 15 was just off the aircraft's left wing and less than half as distant. Boaz attempted to circle around for an approach on Runway 7, but the aircraft was unable to make the airport. The last radar return showed the Cessna at 800 feet MSL (less than 180 feet above ground level), and more than 4,400 feet from the threshold of Runway 7. The airplane crashed in a residential lot outside the airport area. After it came to rest, the airplane caught fire. Gregory Boaz and his wife Julie died in the fire. Plaintiff Peyton Boaz was severely burned but survived after a bystander used an axe to breach the aircraft fuselage, allowing him to escape.

- 5 - B. NTSB Investigation The National Transportation Safety Board conducted an investigation and issued a report of factual findings. See Aviation Accident Factual Report, ECF No. 61-2. The report noted that the Cessna P210N is a fixed-wing aircraft with retractable tricycle landing gear, a six-seat pressurized cabin, and a 90-gallon fuel capacity (89 gallons useable). Boaz's airplane had been modified under Vitatone Aviation Supplemental Type Certificate (STC) SA02918CH, which involved replacement of the standard engine and propeller with a higher performing Continental IO-550P engine using a turbo-normalized intake system and a Hartzell constant-speed propeller. Ibid. The NTSB report noted that the Vitatone STC specified that the pilot should adjust the engine fuel flow to a "lean of peak" setting for cruise flight, then monitor the cylinder head temperature (CHT) readings to ensure no cylinder exceeded 380 degrees. At the specified settings, the expected fuel flow was 17.6 gallons per hour (GPH). However, the NTSB noted that engine monitor data history showed that during recent flights Boaz had not operated the engine "lean of peak" while in cruise flight, but instead had used a "rich-of-peak" setting, with an indicated fuel flow of 21 GPH. Id. at PageID.1919. The report noted that the fuel flow was recorded at 21 GPH during the accident flight, and that the engine monitor had recorded 71.6 gallons fuel used during the flight when the fuel flow abruptly dropped to zero just before the crash. Ibid. The report also noted that the "downlock switch plunger" for the left main landing gear was found "bent and jammed in the closed position," and the plunger "did not contact the left gear leg when the gear was fully extended." Id. at 1921. Examination of the engine cylinders and crankcase noted some interior impact marks consistent with a previous logbook entry stating that an oil filler gauge rod had broken off from the oil filler cap and come into contact with connecting rods and the interior of the crankcase. However, the report concluded that there were no signs of

- 6 - abnormal operation of the engine during the accident flight, and no indications that the engine had any mechanical malfunction that would have inhibited normal operation. Id. at 1922.

C. Evidence on Causation The plaintiff's expert, Donald E. Sommer, P.E., prepared a report of his engineering analysis and conclusions about the causes of the accident. Donald Sommer Expert Report dated March 7, 2022, ECF No. 69-13. Sommer explained in his report that his methodology followed the widely accepted practices for accident investigation specified by the International Civil Aviation Organization (ICAO) in its Manual of Aircraft Investigation. Id. at PageID.2060. Sommer reviewed extensive materials relating to the accident including: (1) aircraft data, (2) maintenance manuals and logs, (3) manufacturer publications, (4) the NTSB investigation report, (5) radar and



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

flight path data recorded by air traffic control, (6) depositions and discovery materials produced by the defendants, (7) photographs of the accident scene and the aircraft, and (8) first responder reports relating to the accident. Sommer stated his principal conclusions as follows: (1) “maladjustment or improper condition of the main landing gear uplock system resulted in the left main landing gear leg failing to extend,” (2) during the most recent repair of the landing gear prior to the accident, which was conducted by former defendant AIR on April 27, 2018, the landing gear extension problem was not detected or fixed, and (3) former defendant Buford “exacerbated Boaz’s problem by not allowing him full access to the runways, not offering helpful suggestions[,] refusing to comply with pilot Boaz’s requests [and] ultimately sending him to a runway he could not make.” Id. at PageID.2061. Pertinent to the instant motions, Sommer expressed several specific conclusions about defendant Vitatoe’s involvement with the aircraft, which are discussed further below.

- 7 - 1. Fuel Injector Balancing Sommer opined that the engine replacement performed by defendant Vitatoe Aviation under its STC “did not have the cylinders properly balanced,” which “caused higher than normal fuel consumption.” Expert Report at PageID .2061. Sommer observed that the performance data included in Vitatoe’s Supplement to the Pilot Operating Handbook was questionable based on a disconnect between the statement that performance of the “modified aircraft is equal to and no less than the original performance,” which contradicted specified fuel flow figures for maximum performance climb indicating an expected fuel consumption of 35 to 37 GPH, significantly higher than the 25 GPH specified for a maximum performance climb with the stock engine. Id. at PageID.2056. Sommer noted that data recorded by the aircraft engine monitor during flights that occurred since Boaz’s purchase of the airplane indicated fuel consumption between 17.7 GPH and 21 GPH. Ibid. Sommer noted that the available engine monitor data did not include peak Exhaust Gas Temperature (EGT) readings. However, the data that was retrieved did include readings of CHT for individual cylinders, which revealed a range of readings from 270 degrees and below for cylinder #5 up to 350 degrees for #1. Id. at PageID.2057. Sommer observed that the Vitatoe STC “requires balancing of the fuel injectors,” and he opined that “the unbalanced condition of the engine during the accident flight is evident due to the wide spread of temperature readings between the six cylinders.” Ibid. Sommer also noted that an email about the aircraft sent by Larry Vitatoe in June 2014 discussed several problems noted during a test flight, which included: (1) wide variances in CHT readings, including variations in cylinder #1 up to 385 degrees “without any changes in settings,” (2) manifold pressure higher than STC specifications, and (3) fuel flow higher than STC specifications. Ibid.; see Email dated June 15, 2014, ECF No. 69-3, PageID.1926. Sommer further noted that, during five preceding flights Boaz took with the aircraft in 2018, the available data indicated an average fuel consumption of 19 GPH, lower than the 21 GPH that was

- 8 - recorded during the accident flight. Sommer opined that if the lower 19 GPH rate had been achieved during the accident flight, then the plane would have arrived at its destination with 30 minutes of fuel remaining. Id. at PageID.2058. Sommer reported that it could not be determined what fuel level the aircraft’s fuel gauges indicated at the time of the accident, but he opined that the fuel “gauges in single-engine Cessna aircraft are notoriously inaccurate and, therefore, engine cessation



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

may have been the first indication to Pilot Boaz of the critical nature of the fuel situation.” Id. at PageID.2059. In its motion to exclude Sommer’s testimony, the defendant highlights Sommer’s deposition testimony, where it contends Sommer backpedaled from the conclusion that Vitatoe’s June 2014 email reported that the fuel flow for the engine was out of balance. Sommer testified as follows:

Q. Okay. Where in this paragraph does it say, by Mr. Vitatoe, that the cylinders are out of balance? A. It does not say the cylinders are out of balance. It says he wants to review the balance test and consider using a leaner injector, and that the fuel flow is too high in the engine. Q. Right. So he’s saying we want to review the test data to determine if the cylinders are balanced or out of balance, right? A. And consider using a leaner injector in Cylinder Number 1. And he also said Cylinder Number 1 had anomalies during flight. Q. Well, he says here he’s going to look at the data and determine if it’s balanced or imbalanced. And if there’s an imbalance, he would consider using a leaner injector in Cylinder 1? A. That’s what he says. Q. Right. And do you know if that test was looked at and what that test showed? A. I do not know if it was looked at, and I do not know what it showed. Q. All right. A. Because I did not see any maintenance entry discussing that subsequent to this.

- 9 - Sommer dep., ECF No. 69-10, PageID.2004-05. The defendant also points to testimony by Larry Vitatoe that the STC for the engine modification does not specify that variances in CHT are used to determine whether fuel flow is balanced for the engine, but instead states that the aircraft is to be test flown and fuel consumption monitored with each cylinder in turn being operated at peak EGT, and that the engine is considered balanced when there is no more than 0.4 GPH variation when running with each cylinder in turn at its peak EGT. See Supplemental Type Certificate, ECF No. 69-14, PageID.2119. The defendant also points out that Sommer admitted at his deposition that he did not use EGT values to determine whether the fuel flow of the engine was balanced, but instead based his opinion on the CHT readings captured by the engine monitor during the accident flight. See Sommer dep., ECF No. 69-10, PageID.2014-15. The defendant also points to Larry Vitatoe’s testimony in which he insisted that a cylinder balance test would have been performed any time that a fuel injector was changed, as his June 2014 email indicated might be done in order to install a leaner injector in cylinder #1. Larry Vitatoe dep., ECF No. 69-1, PageID.1900. The defendant also points to testimony by the defendant’s aircraft mechanic, Robert Bobo, who said that when an aircraft is certified for return to service, that entry in the logbook constitutes a certification that it complied with all requirements of the STC, including proper injector balance. Robert Bobo dep., ECF No. 69-16, PageID.2145-46. The defendant additionally points to a maintenance logbook entry stating that on July 10, 2015, more than one year after Vitatoe test flew the aircraft and commented on the need to rebalance the cylinder fuel flow, the aircraft had a “prop strike” incident that required removal and reinstallation of the engine, which was performed by non-party Basin Aviation, in Midland, Texas. See Log Entry dated July 10, 2015, ECF No. 70-8, PageID.2298. The entry reads as follows:



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

- 10 - Installed this engine in N3896P following sudden stoppage inspections by Western Skyways. . . . Engine installed IAW [In Accordance With] Vitatoe Aviation STC#SA02918CH. . . . Verified full power fuel flows per STC. I certify that this Engine has been inspected in accordance with an Annual Inspection and it was determined to be in Airworthy Condition. Ibid. The author of the log entry has not been deposed, nor has any testimony been offered by anyone connected with Basin Aviation. Nevertheless, the defendant contends that the logbook entry establishes that the engine's fuel balance was last checked prior to the accident by Basin Aviation. Larry Vitatoe testified that his understanding of the logbook entry was that the fuel flow to the engine was verified according to the STC, which would have included verifying the fuel balance between cylinders as discussed above. Vitatoe dep., ECF No. 70-2, PageID.2228. However, as the plaintiff points out, Vitatoe admitted that he did not know what information Basin Aviation had or relied upon when completing the repair, and he was not aware if Basin had any contact with Vitatoe about the STC requirements. Ibid. In rebuttal, the plaintiffs highlight Vitatoe's deposition testimony in which he admitted that verifying the balance of fuel flows in the engine was an operation that only would be required as part of the initial STC installation, and that thereafter injector balance testing was not required either periodically or as part of an annual inspection, but only would be a procedure used "as a diagnostic tool" in case problems with the engine were observed in operation:

Q. And I asked you previously if the injector balance test is specifically called for in the annual inspection; and you said, you know, whatever is required is in the STC? A. Yeah. It's not — It's not — it's not required in an annual. Q. In your experience do you find that it is customary that an injector balance test is done as part of an annual or not? A. In my experience, in talking to other people, as well, no, it is not done as part of an annual.

- 11 - Q. In your experience talking to other people, what is the — the frequency or the common intervals in which injector balance tests are done on your STC? A. Typically, you would — we do it at the initial installation. It's required as that part. And then you would do it only as a diagnostic tool, when necessary, if there was a problem with the way the engine was operating. Q. And when you say "the way the engine is operating," that would be based upon operator observations of the engine performance as manifested in the JPI instrument? A. That's correct. Vitatoe dep., ECF No. 70-3, PageID.2228-29.

2. Calibration of the Engine Data Monitor Sommer did not discuss the functioning of the Engine Data Monitor (EDM) in his report. However, at his deposition he expressed additional views about that equipment. Sommer testified that in order for an EDM to provide accurate readings, it needs to be calibrated by programming into the device a "K-Factor," which adjusts its readings to correspond to observed actual fuel consumption. Sommer dep., ECF No. 69-10, PageID.1978-79. Sommer referred again to Larry Vitatoe's June 15, 2014 email about test flying the aircraft, in which Vitatoe wrote: "The [EDM] said that we burned 44.1 gallon[s] since last fill up. We will need to fill the tanks to readjust the K factor." Email dated June 15, 2014, ECF No. 69-3, PageID.1926. Sommer testified that he reviewed the aircraft maintenance logs and did not find any record that calibration of the EDM



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

ever was completed. He opined that such an operation should have been recorded in the logbook if it was done, but nothing indicated that it had been. Sommer dep. at PageID.1979-80. The defendant, in opposition, points to Vitatoe's testimony that the comment in his June 2014 email about needing to "readjust" the K Factor for the EDM was "misstated," and what he meant to say was that the K Factor should be "verified." Vitatoe dep. at PageID.1898.

- 12 - 3. Landing Gear Inspection Sommer observed that two checklists from the most recent annual inspection on the aircraft, which had been performed by Vitatoe Aviation in January 2018, "did not show any sign-offs for the inspection of the landing gear retraction system," and the check lists did not indicate that any functional test of the landing gear uplock system had been performed during the annual inspection. Id. at PageID.2055. Sommer testified at his deposition that, based on his 50 years of experience as an aircraft mechanic, it is universally understood that a mechanic performing an aircraft inspection is required to use a checklist to record all inspection tasks, and he said that any mechanic would know that putting a checkmark or initials beside a task on the checklist form is the proper way of recording work that actually was done. Donald Sommer dep., ECF No. 69-10, PageID.2022-23; see also 14 C.F.R. § 43.15(c)(1) ("Each person performing an annual or 100- hour inspection shall use a checklist while performing the inspection."). Sommer further testified that, in his opinion, the fact that cycling the landing gear to confirm proper operation had not been initialed on the checklist, while all of the other items were initialed, indicated that the landing gear's proper operation was not confirmed as required during the January 2018 annual inspection. Id. at PageID.2022. In opposition, the defendant points to testimony by the defendant's aircraft mechanic, Robert Bobo, who testified that it was common practice at Vitatoe Aviation for the checklist entries for landing gear inspections not to be checked off or initialed on completed annual inspection checklists, because the purpose of the checkoffs was to keep track of which tasks already had been performed over the course of a three to four day inspection process, and the landing gear always was checked last, meaning that after it was done there was no further need to track tasks completed. Robert Bobo dep., ECF No. 69-16, PageID.2151. Bobo also testified that the logbook signature

- 13 - certifying the aircraft for return to service would be the definitive indication that all required steps of the annual inspection had been performed. Id. at PageID.2155.

D. The Litigation The plaintiffs filed their complaints initially in the Wayne County, Michigan circuit court between early May and mid-June 2021. On August 10, 2023, after the cases were removed to federal court and reassigned to this Court, they were consolidated for all pretrial proceedings. The several defendants filed seventeen dispositive and expert witness motions. All of the defendants other than Vitatoe Aviation, LLC reached agreements to resolve the plaintiffs' claims against them, and their motions subsequently were dismissed as moot. Defendant Vitatoe remains as the lone defendant contesting liability.

II. Motion to Exclude Expert Witness Vitatoe does not challenge Sommer's qualifications or his method of accident investigation as a general matter, and there is no debate about the fact that the



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

methods of investigation prescribed by the ICAO's Manual of Accident Investigation comprise widely accepted principles in the field of aircraft accident diagnosis. It also is beyond debate that Sommer's 50 years of experience as a certified aircraft mechanic holding an Airframe & Powerplant (A&P) certification with Inspection Authorization (IA) amply qualifies him to opine about principles of aircraft engine and instrumentation operation and performance. Instead, Vitatoe contends that the record does not contain evidence that can support Sommer's conclusions about the fuel flow and landing gear issues. As a general matter, "expert" testimony consists of opinions or commentary grounded in "specialized knowledge," that is, knowledge that is "beyond the ken of the average juror." See *United States v. Rios*, 830 F.3d 403, 413 (6th Cir. 2016); see also Fed. R. Evid. 702. Such

- 14 - testimony is governed by Evidence Rule 702, which was modified in December 2000 to reflect the Supreme Court's emphasis in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), on the trial court's gate-keeping obligation to conduct a preliminary assessment of relevance and reliability whenever a witness testifies to an opinion based on specialized knowledge. Rule 702 states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case. The language added by the 2000 amendment — subparagraphs (b) through (d) — restates *Daubert*'s insistence on the requirements that an expert's opinion be based on a foundation grounded in the actual facts of the case, that the opinion is valid according to the discipline that furnished the base of special knowledge, and that the expert appropriately "fits" the facts of the case into the theories and methods he or she espouses. See *Daubert*, 509 U.S. at 591-93. "Rule 702 expressly contemplates that an expert may be qualified on the basis of experience." Fed. R. Evid. 702, advisory committee's note, 2000 amend. In fact, "[i]n certain fields, experience is the predominant, if not sole, basis for a great deal of reliable expert testimony." Fed. R. Evid. 702, advisory committee's note, 2000 amend.; see, e.g., *Wood v. Wal-Mart Stores East, LP*, 576 F. App'x 470, 472 (6th Cir. 2014) (holding that there was "ample reason" to conclude that a non-scientific expert's testimony was reliable and would assist the jury where witness had professional experience dealing with building codes as a commercial architect); *Surles ex rel.*

- 15 - *Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 296 (6th Cir. 2007) (holding that the district court properly admitted testimony from expert regarding experience designing driver's enclosures for transit buses). An expert witness's testimony also must be relevant and reliable. *United States v. LaVictor*, 848 F.3d 428, 441 (6th Cir. 2017) (citing *Daubert*, 509 U.S. at 589). However, the 2000 Amendments to Rule 702 did "not alter the venerable practice of using expert testimony to educate the factfinder on general principles." Fed. R. Evid. 702 Advisory Committee Notes to 2000 Amendments. Rule 702 allows an expert to "testify in the form of an opinion or otherwise" (emphasis



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

added), which means that the expert may share his or her special knowledge with the factfinder in areas that might extend beyond the information known to the average person. See, e.g., *Redmond v. United States*, 194 F. Supp. 3d 606, 615 (E.D. Mich. 2016) (stating that an expert's testimony could be helpful to the jury if the information is "beyond the ken of common knowledge") (citing *Berry v. City of Detroit*, 25 F.3d 1342, 1350 (6th Cir. 1994)). When an expert's testimony does not take the form of an opinion, but rather focuses on "educat[ing] the factfinder on general principles," application of the foundational elements in Rule 702 takes on a different cast. An expert witness's opinion also must be based on record facts "as opposed to, say, unsupported speculation." *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 530 (6th Cir. 2008) (citing Fed. R. Evid. 702 (explaining that expert testimony must be based on "sufficient facts or data" and the "product of reliable principles and methods")). However, "it is not an abuse of discretion to admit expert opinion based on allegedly erroneous facts when there is some support for those facts in the record." *In re Kirvan*, No. 21-1250, 2021 WL 4963363, at *5 (6th Cir. Oct. 26, 2021) (quotation marks and citation omitted).

- 16 - 1. Engine Fuel Flow Imbalance Turning to the defendant's specific criticisms of Sommer's report, Vitatoe first contends that there is "no factual support" for Sommer's opinion that the fuel flow to the engine cylinders was "imbalanced" at the time of the accident flight. However, that position overlooks the information in the record on which Sommer relied. First, Larry Vitatoe's June 2014 email indicated that there were wide variations in engine cylinder head temperature, which prompted him to write that the fuel injector balance should be checked and that a leaner injector for cylinder #1 may need to be installed. Second, Sommer found similar wide variations in CHT readings recorded by the EDM during the accident flight. He also noted that per-cylinder EGT readings similarly indicated variations between cylinders during the accident flight. Third, Sommer noted that the fuel consumption recorded during the accident flight exceeded the average level of fuel consumption of previous flights to a degree that could have caused premature fuel starvation compared with properly balanced fuel flow. Vitatoe argues that Sommer's reliance on CHT and EGT readings renders his opinion unfounded because the STC calls for different criteria to be used to achieve calibration of fuel flow balance at the initial installation of the STC engine modification. However, Vitatoe has not produced any evidence to undercut Sommer's testimony, based on his experience operating aircraft engines for more than 50 years, that variances in CHT and EGT readings are reliable indicators or symptoms of fuel flow imbalance, regardless of what technical criteria are specified in the STC to be used in achieving a proper balance. The defendant also argues that the "meaning" of Vitatoe's June 2014 email is disputed and that Sommer's opinion is not supported by the information therein because the email did not state that the cylinders were "unbalanced," and because Larry Vitatoe testified that he meant only that the fuel flow should be tested, not that it was in fact out of balance. "An expert's opinion, where based on assumed facts, must find some support for those

- 17 - assumptions in the record"; but "mere 'weaknesses in the factual basis of an expert witness' opinion . . . bear on the weight of the evidence rather than on its admissibility." *McLean v. 988011 Ontario, Ltd.*, 224 F.3d 797, 801 (6th Cir. 2000) (quoting *United States v. L.E. Cooke Co.*, 991 F.2d 336,



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

342 (6th Cir. 1993)). In his email, Vitatoe noted” (1) “fuel flow [was] higher than STC specifications,” (2) CHT readings ranged from 380 degrees to 300 degrees among the six engine cylinders, and (3) “Number one cylinder would vary from 370 to 385 without any changes in settings.” Based on those observations, Vitatoe wrote: “We might want to review the injector balance test and consider using a leaner injector in cylinder one.” Email dated June 15, 2014, ECF No. 69-3, PageID.1926. Those statements together certainly provide “some support” for Sommer’s opinion that the cylinder fuel flow was imbalanced in 2014. Moreover, Larry Vitatoe’s reliance in the email on CHT readings belies the defendant’s position that such data are not a reliable indicator of fuel flow imbalance. The fact that similar variations were recorded during the accident flight four years later lends sufficient support to Sommer’s conclusion that engine fuel flow remained imbalanced despite any adjustments that might have been made. Disputes about the significance of various data points bearing on the engine’s performance are distinctions that go to the weight of the evidence, not the admissibility of Sommer’s opinions. Similarly, disputes about the “meaning” of the email do not deprive Sommer’s opinion of all factual support, because his reading of Larry Vitatoe’s statements is facially reasonable. The defendant has produced no contrary expert opinion that Sommer’s application of general engineering principles to the facts that may be found from the record is categorically invalid, and his use of generally accepted principles of engineering analysis is sufficient to make his opinion reliable. See *Zuzula v. ABB Power T&D Co.*, 267 F.Supp.2d 703, 714 (E.D. Mich. 2003) (“[The expert] arrived at his conclusions that the DD module in Unit 14

- 18 - was defective by the application of general electrical and mechanical engineering principles, together with his conclusions which flowed from his investigation of the facts of the accident There is no suggestion that the engineering principles utilized by Professor Fagan in arriving at his conclusions were novel, unique, or not generally accepted by the engineering community.”). The defendant also criticizes Sommer for not ruling out as an alternative cause the fact that the pilot was running the engine in flight at a “rich of peak” setting rather than “lean of peak,” which could have caused the aircraft to overconsume fuel even if the cylinders properly were balanced. Again, however, the defendant cites a factual dispute as a basis for concluding that there is no actual support in the record for the opinions. These “criticisms directed at the propriety of the assumptions made by [the witness] merely impeach the factual basis of the opinion and not the reliability of [his] methods.” In *re FCA US LLC Monostable Elec. Gearshift Litig.*, 382 F. Supp. 3d 687, 698 (E.D. Mich. 2019). “Because the Court acts merely as a gatekeeper and not a factfinder, an expert whose methodology is otherwise reliable should not be excluded simply because the facts upon which his or her opinions are predicated are in dispute, unless those factual assumptions are ‘indisputably wrong.’” In *re MyFord Touch Consumer Litig.*, 291 F. Supp. 3d 936, 967 (N.D. Cal. 2018) (quoting *Guillory v. Domtar Indus. Inc.*, 95 F.3d 1320, 1331 (5th Cir. 1996)). Sommer’s assumed facts drawn from the 2014 email rely on a reasonable interpretation of the statements in that communication, and they are not “indisputably wrong” in the context of the record evidence that has been presented. “[I]t is not the role of the trial court to evaluate the correctness of facts underlying one expert’s testimony.” *Micro Chem., Inc. v. Lextron, Inc.*, 317 F.3d 1387, 1392 (Fed. Cir. 2003). “[T]he Advisory Committee note to Rule 702 is instructive in this regard: ‘When facts are in dispute, experts sometimes reach different



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

conclusions based on competing versions of the facts. The emphasis in the amendment on ‘sufficient facts or data’ is not

- 19 - intended to authorize a trial court to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other.” Ibid. “Indeed, as the Supreme Court stated in Daubert: ‘Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.’” Ibid. (emphasis added; quoting 509 U.S. at 595).

2. EDM Calibration The defendant also contends that the opinion that the EDM was not calibrated has “no factual support” because Larry Vitatoe testified that what he meant when he wrote his June 15, 2014 email was that the K-Factor should be “verified,” not that it was incorrect, and Sommer does not have expertise to opine about what the author of an email intended to communicate when he wrote the message. For similar reasons, however, Sommer’s opinion that the EDM may not have been calibrated properly at the time of the accident flight also finds sufficient support in the record. Larry Vitatoe’s 2014 email noted that “The [EDM] said we burned 44.1 gallons since last fill up,” and stated that “We will need to fill the tanks to readjust the K factor.” Email dated June 15, 2014, ECF No. 69-3, PageID.1926. Those statements, and Sommer’s common sense reading of them, provide some support for his opinion that the EDM was improperly calibrated in 2014. His observation that there were no maintenance logbook entries indicating that a recalibration was performed links up with his opinion that the EDM remained out of calibration in 2018, despite the observation in 2014 that it needed to be “readjusted.” The defendant, again, has produced no contrary expert opinion holding that it would not be expected that recalibration of a critical engine instrument like the EDM would be memorialized in a maintenance log entry. However, even if it had produced such a competing opinion, “[a]n expert’s testimony is not rendered unreliable by opposing expert testimony that contradicts it, because contradictory fact or opinion evidence merely establishes a fact dispute.” Dean v. United States, No. 19-10210, 2020 WL 3412264, at

- 20 - *5 (E.D. Mich. June 22, 2020) (citing Daubert, 509 U.S. at 595 (noting that such matters are best reserved for “[v]igorous cross-examination” and “presentation of contrary evidence” to the jury))).

3. Landing Gear Inspection On similar grounds, the defendant argues that there is no factual support for Sommer’s conclusion that Vitatoe failed to perform a landing gear inspection at the most recent annual inspection. But for similar reasons as those discussed above, there is sufficient support in the record for Sommer’s opinion that the landing gear operation was not checked during the defendant’s 2018 annual inspection of the accident aircraft. Sommer expressed the unremarkable opinion that the “use” of a checklist by an aircraft inspector, based on his experience and the applicable regulations, would require that items completed during an inspection be initialed or marked off as they were performed, and that the omission of such checkoffs, while numerous other items were marked off, indicated that the operations in dispute were not performed. The defendant has submitted testimony to the effect that it was “routine” for landing gear inspections not to be marked off during annual



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

inspection procedures conducted by the defendant. However, that testimony merely establishes a question of fact about the significance of the checklist as a foundation for Sommer's opinion, and as noted earlier, such a dispute does not render the opinion categorically inadmissible. Once again, the defendant has produced no contrary expert testimony calling into question Sommer's experience-based — and common sensical — pronouncements about what the "use" of a checklist commonly is construed to mean in his profession.

***** The defendant has not shown that the several discrete opinions challenged in the motion have "no factual support" in the record presented. The motion to exclude Sommer's opinion testimony, therefore will be denied.

- 21 - III. Motion for Summary Judgment The defendant argues that it is entitled to a judgment of dismissal as a matter of law because, if the challenge to Sommer's causation opinion is sustained, then the plaintiffs have no admissible evidence to establish causation. Based on the Court's ruling on that expert witness motion, that no longer is a viable argument. The defendant also contends, however, that it is "undisputed" that Basin Aviation's conduct during the presumed 2015 rebalancing (or failure to conduct a proper rebalancing) of the engine's fuel system when the engine was reinstalled after a prop strike incident is an intervening superseding cause of the fuel starvation, cutting off any potential liability for defendant Vitatoe. Summary judgment is appropriate "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). When reviewing the motion record, "[t]he court must view the evidence and draw all reasonable inferences in favor of the non-moving party, and determine 'whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law.'" *Alexander v. CareSource*, 576 F.3d 551, 557-58 (6th Cir. 2009) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251-52 (1986)). "The court need consider only the cited materials, but it may consider other materials in the record." Fed. R. Civ. P. 56(c)(3). The party bringing the summary judgment motion must inform the court of the basis for its motion and identify portions of the record that demonstrate that no material facts are genuinely in dispute. *Id.* at 558. (citing *Mt. Lebanon Pers. Care Home, Inc. v. Hoover Universal, Inc.*, 276 F.3d 845, 848 (6th Cir. 2002)). "Once that occurs, the party opposing the motion then may not 'rely on the hope that the trier of fact will disbelieve the movant's denial of a disputed fact' but must make

- 22 - an affirmative showing with proper evidence in order to defeat the motion." *Ibid.* (quoting *Street v. J.C. Bradford & Co.*, 886 F.2d 1472, 1479 (6th Cir. 1989)). The plaintiffs respond with two main arguments in opposition to the summary judgment motion. First, they contend that the logbook entry by Basin Aviation is inadmissible hearsay and therefore cannot support the motion. Second, they point out that no properly disclosed expert testimony has been proffered by the defendant concerning the meaning of the logbook entry or construction of the STC requirements, and they contend that Larry Vitatoe's testimony about the meaning of the logbook entry and what the STC would require upon "reinstallation" of the engine is putative expert testimony that was not



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

disclosed in any proper report under Civil Rule 26(a)(2).

A. Hearsay The defendant has made a sufficient showing to establish that a foundation for admissibility of the logbook entry could be laid at trial. It is well settled, of course, that at the summary- judgment stage, “[a] party may object that the material cited to support or dispute a fact cannot be presented in a form that would be admissible in evidence,” Fed. R. Civ. P. 56(c)(2), and “the substance must still comport with the rules of evidence, including the rules on hearsay,” *Shazor v. Pro. Transit Mgmt., Ltd.*, 744 F.3d 948, 960 (6th Cir. 2014). In its reply brief, the defendant makes a persuasive argument that the maintenance logbook entry written by Basin Aviation in 2015 would be admissible under the residual exception to the hearsay rule. See Fed. R. Evid 807. Other federal courts readily have found aircraft maintenance logbook entries to be admissible over a hearsay objection due to the strict regulations which govern their creation and preservation and thereby establish their trustworthiness. *Polaris PowerLED Techs., LLC v. Samsung Elecs. Am., Inc.*, 386 F. Supp. 3d 760, 763 (E.D. Tex. 2019) (holding that the “Maintenance Log has equivalent circumstantial guarantees of trustworthiness” because “[s]uch logs are required to be maintained

- 23 - by federal regulation”) (citing 14 C.F.R. §§ 43.9(a), 91.417, 91.419); see also *United States v. Saguil*, 600 F. App’x 945, 947 (5th Cir. 2015) (“Assuming, as the district court did, that the inscription is a hearsay statement, the inscription satisfies the residual exception. It has equivalent guarantees of trustworthiness as the guarantees of Federal Rules of Evidence 803 and 804 because such inscriptions are required by law, 19 U.S.C. § 1304(a), and false designations of origin give rise to civil liability, 15 U.S.C. § 1125.”). There are no peculiar circumstances in this case that would preclude the same finding of admissibility.

B. Interpretation of the Logbook Entry The plaintiffs’ second argument is more problematic for Vitatoe. Any testimony about what the Basin Aviation logbook entry signifies in terms of procedures that would have been followed to comply with the STC upon reinstallation of the aircraft engine amounts to expert opinions that never were disclosed properly as required by Federal Rule of Civil Procedure 26(a)(2). It is undisputed that the defendant never identified Larry Vitatoe as an expert witness and never produced any expert disclosure relating to his testimony. “Federal Rule of Civil Procedure 26(a)(2) requires a party to disclose, among other things, ‘any witnesses it may use at trial to present evidence under Federal Rule of Evidence 702, 703, or 705,’” and “[u]nder Federal Rule of Civil Procedure 37, if a party fails to properly disclose an expert witness pursuant to Rule 26, ‘the party is not allowed to use that . . . witness to supply evidence on a motion, at a hearing, or at a trial, unless the failure was substantially justified or is harmless.’” *Zitzow v. Auto-Owners Ins. Co.*, No. 22-5549, 2023 WL 2033792, at *8 (6th Cir. Feb. 16, 2023) (quoting Fed. R. Civ. P. 26(a)(2); Fed. R. Civ. P. 37(c)(1)). Therefore, any testimony by Vitatoe within the scope of Rule 702 cannot be used either at trial or at the summary judgment stage, unless the defendant shows that the failure

- 24 - to produce the required disclosure was substantially justified or harmless. The defendant has made no effort to make either showing here. The defendant argues that Vitatoe’s testimony about



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

the substance of the logbook entry and the technical requirements of the STC are merely matters of “fact” about which he testified on the basis of his personal knowledge of the STC requirements. In the alternative, it contends that Vitatoe’s testimony should be admissible as “lay opinion” testimony under Federal Rule of Evidence 701. Vitatoe’s testimony in this instance clearly lies within the ambit of Rule 702, not Rule 701, because it concerns matters informed by specialized knowledge or expertise that is beyond the mine run of ordinary experience. Vitatoe’s opinions, therefore, are inadmissible due to the failure to produce the required expert disclosure. The testimony also is not admissible in the alternative as “lay opinions,” and Vitatoe’s testimony does not qualify as merely factual because it embraces matters that admittedly are beyond his personal knowledge, and because the opinions are based on his “specialized knowledge.” See Fed. R. Evid 701(a), (c). “Federal Rule of Evidence 701 permits non-expert witnesses to testify ‘in the form of an opinion’ that is ‘(a) rationally based on the witness’s perception; (b) helpful to clearly understanding the witness’s testimony or determining a fact in issue; and (c) not based on scientific, technical, or other specialized knowledge within the scope of Rule 702.’” Zitzow, 2023 WL 2033792, at *8 (quoting Fed. R. Evid. 701). The foundational argument here founders on both the first and the third elements. First, Vitatoe’s testimony about the significance of the logbook entry and the scope of the tasks described in the entry is not based on any of Vitatoe’s individual “perceptions,” because it is undisputed that he had no personal involvement in the repair operation performed by Basin

- 25 - Aviation in 2015. “[T]he ‘foundational requirement of personal knowledge’ is satisfied when the witness was ‘privy to the details’ of the events in question.” *Figgins v. Advance Am. Cash Advance Centers of Michigan, Inc.*, 482 F. Supp. 2d 861, 867 (E.D. Mich. 2007) (quoting *Torres v. Cnty. of Oakland*, 758 F.2d 147, 150 (6th Cir. 1985)). Vitatoe conceded that he has no personal knowledge about the aircraft repair procedure that was performed by Basin Aviation in Texas in 2015. Any “lay opinion” by him about what that repair entailed therefore cannot be based on anything that he personally perceived. Moreover, he lacks authority to testify as a straight fact witness about the repair operation, because any such testimony would be beyond the scope of his personal knowledge. Fed. R. Evid. 602 (“A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter.”). Vitatoe is not competent to testify about any circumstances of the repair operation by Basin Aviation, either in the form of a lay opinion or otherwise. Second, Vitatoe’s interpretations of the substance of the logbook entry and the STC technical requirements plainly are matters governed by Rule 702, because they require extensive specialized knowledge that is well beyond common experience. See *GDC Technics, Ltd. v. Grace*, No. 15-488, 2017 WL 11025769, at *2 (W.D. Tex. Feb. 17, 2017) (“Grace’s qualifications meet the relatively low bar set by *Daubert* It is undisputed that Grace is the original creator, developer, and current owner of the Tailwind STC at the center of this lawsuit. Grace has also worked in the aircraft design and modification field since 1978 and served as a Designated Engineering Representative (‘DER’) to the FAA for approximately twenty years. A DER is by definition someone who possesses specialized or technical knowledge sufficient to approve or recommend approval of certain types of aircraft data to the FAA. Obviously, Grace will offer testimony on these topics as a fact witness. To the extent that the testimony requires Grace to



Boaz v. Buford et al

2023 | Cited 0 times | E.D. Michigan | July 11, 2023

- 26 - venture outside of events and issues about which he has clear personal knowledge, and into matters that would be objectionable unless offered by an expert, the Court finds that Grace is qualified to testify as an expert concerning the STC that he designed, created, applied for, and has maintained since 2002, as well as issues related to FAA regulation compliance.”). As discussed above, the plaintiff’s expert has established his expertise to testify about the significance of aircraft logbook entries and the requirements for those who keep them. The defendant, on the other hand, has made no effort to establish Vitatoe’s qualifications on the same topics, and in all events has not furnished a report required by the discovery rules. His opinion testimony about the significance of the Basin Aviation log entry therefore is inadmissible. Moreover, even if a foundation could be laid for admission of Vitatoe’s testimony, it would establish, at most, a question of fact about what operations Basin Aviation performed in 2015 and whether the “reinstallation” of the modified engine necessarily included (or under prevailing industry practices should have included) rebalancing of the engine fuel flow. At his deposition, Larry Vitatoe testified that balancing the engine’s fuel injectors is an operation that was mandated only during the initial STC installation — an operation that was performed exclusively by Vitatoe Aviation, not involving Basin Aviation. Vitatoe dep., ECF No. 70-3, PageID.2228-29. Vitatoe conceded that the fuel injector balance would not thereafter routinely be checked either during an annual inspection or otherwise on any periodic basis, unless the operator noted problems with the engine in operation, and then the rebalancing test would be used as a “diagnostic tool.” It is undisputed that Basin’s work comprised a reinstallation of the previously modified engine after it was removed and inspected by another non-party inspection entity, and the entry also indicates that an annual inspection was conducted. Nothing in the logbook entry suggests that Basin Aviation conducted an “initial installation” of the STC modification package when it

- 27 - reinstalled the existing modified engine. The entry indicates that Basin also conducted an annual inspection, but Larry Vitatoe conceded that fuel injector rebalancing would not have been a routine part of such an inspection. Based on the record as a whole, there is at least a substantial question of fact about whether the “requirements of the STC” would have mandated a test for fuel flow balancing upon “reinstallation” of an engine following removal for a safety inspection. The defendant is not entitled to summary dismissal as a matter of law.

IV. Conclusion There are sufficient facts in the record on which the plaintiffs’ expert witness Donald Sommer can base the opinions that the defendant challenges here. Even if the defendant has produced some evidence about the Basin Aviation repair operation, it is not so conclusive as to rule out as a matter of law a verdict that both Basin and Vitatoe contributed to the cause of the accident, or a finding that any cause of the alleged fuel flow imbalance was Vitatoe’s sole responsibility. The defendant has not presented a sufficient record to preclude a finding that its conduct was at least “a proximate cause” of the accident, or to establish beyond debate that the conduct of any non-party necessarily broke the chain of causation. Accordingly, it is ORDERED that the defendant’s motions in the consolidated cases to exclude Donald Sommer’s expert testimony (ECF No. 67) and for summary judgment (ECF No. 70) are DENIED. s/David M. Lawson DAVID M. LAWSON United States District Judge Dated: July 11, 2023

