

# **APPENDIX**

## TABLE OF CONTENTS

Appendix A:	Court of appeals opinion, Oct. 25, 2018 .....	1a
Appendix B:	Court of appeals order, Dec. 11, 2018 .....	45a
Appendix C	District court memorandum opinion, Aug. 3, 2017 .....	47a
Appendix D:	District court order granting summary judgment, Aug. 3, 2017 .....	155a
Appendix E:	District court order granting reconsideration, Aug. 3, 2017 .....	157a
Appendix F:	Court of appeals opinion, Apr. 19, 2016 .....	163a
Appendix G:	Court of appeals order, June 7, 2016 .....	217a
Appendix H:	District court opinion, Sept. 10, 2014 .....	219a
Appendix I:	District court opinion, Aug. 13, 2010 .....	275a
Appendix J:	Statutory provisions .....	297a

**APPENDIX A**

**UNITED STATES COURT OF APPEALS  
FOR THE THIRD CIRCUIT**

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No. 17-3006

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JILL SIKKELEE, Individually and as Personal Representative of the Estate of David Sikkelee, deceased,  
Appellant

v.

PRECISION AIRMOTIVE CORPORATION; PRECISION AIRMOTIVE LLC, Individually and as Successor-In-Interest to Precision Airmotive Corporation;  
BURNS INTERNATIONAL SERVICES CORPORATION, Individually and as Successor-In-Interest to Borg-Warner Corporation, and Marvel-Schebler, a Division of Borg-Warner Corporation; TEXTRON LYCOMING RECIPROCATING ENGINE DIVISION, A Division of Avco Corporation; AVCO CORPORATION;  
KELLY AEROSPACE, INC., Individually and Joint Venturer and a Successor-In-Interest; KELLY AEROSPACE POWER SYSTEMS, INC., Individually and as Joint Venturer and Successor-In-Interest also known as Electrosystems, Inc. also known as Confuel Inc.; ELECTROSYSTEMS, INC., Individually and as Joint Venturer and as Successor-In-Interest also known as Consolidated Fuel Systems, Inc. also known as Confuel, Inc.; CONSOLIDATED FUEL SYSTEMS, INC., also known as Confuel, Inc.

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APPEAL FROM THE UNITED STATES DISTRICT  
COURT FOR THE MIDDLE DISTRICT  
OF PENNSYLVANIA  
(D.C. No. 4-07-cv-00886)  
District Judge: Hon. Matthew W. Brann  
Argued: July 11, 2018

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Before: SHWARTZ, ROTH, and RENDELL, Circuit  
Judges.

Filed: July 11, 2018

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**OPINION**

SHWARTZ, Circuit Judge.

David Sikkelee died in a plane crash, and his wife, Plaintiff Jill Sikkelee, brought state-law strict liability and negligence claims against the engine’s manufacturer, AVCO Corporation, and its Textron Lycoming Reciprocating Engine Division (“Lycoming”), among other defendants. Sikkelee alleges that the engine has a design defect. We previously held that Sikkelee’s state-law claims are not barred based on the doctrine of field preemption, but we remanded to allow the District Court to consider whether they are barred under conflict preemption. *Sikkelee v. Precision Airmotive Corp. (Sikkelee II)*, 822 F.3d 680 (3d Cir. 2016), cert. denied, *AVCO Corp. v. Sikkelee*, 137 S. Ct. 495 (2016). The District Court concluded the claims are conflict-preempted and that, even if they were not, Lycoming is entitled to summary judgment on Sikkelee’s strict liability and negligence claims based on

Pennsylvania law. *Sikkelee v. AVCO Corp. (Sikkelee III)*, 268 F. Supp. 3d 660 (M.D. Pa. 2017). The Court also revisited an earlier ruling and granted summary judgment in favor of Lycoming on Sikkelee’s claim that Lycoming violated 14 C.F.R. § 21.3 because it failed to notify the Federal Aviation Administration (“FAA”) of the alleged defect. *Sikkelee v. AVCO Corp. (Sikkelee IV)*, No. 4:07-CV-00886, 2017 WL 3310953 (M.D. Pa. Aug. 3, 2017)

We conclude that the District Court erred in concluding Sikkelee’s claims are conflict-preempted because Lycoming has not produced clear evidence that the FAA would not have allowed it to change the engine’s design as set forth in the type certificate. The Court also erred in granting Lycoming summary judgment on Sikkelee’s strict liability and negligence claims because there are genuine disputes of material fact concerning, among other things, causation. However, it properly granted summary judgment on her failure-to-notify-the-FAA claim. Thus, we will reverse the Court’s order granting summary judgment on conflict-preemption and state-law grounds, affirm its order granting Lycoming’s motion for reconsideration on the failure-to-notify claim, and remand for further proceedings.

## I.

### A.<sup>1</sup>

In July 2005, David Sikkelee was piloting a Cessna 172N aircraft (the “Cessna” or “aircraft”) when it crashed

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<sup>1</sup> Because the parties do not dispute the relevant factual, statutory, or regulatory backgrounds, we draw largely from our prior opinion in this case, *Sikkelee II*, 822 F.3d 680, and the District Court’s opinion, *Sikkelee III*, 268 F. Supp. 3d 660.

shortly after taking off from Transylvania County Airport in Brevard, North Carolina. He was killed in the crash. At that time, the aircraft had a Textron Lycoming O-320-D2C engine (the “engine”). Sikkelee alleges the aircraft lost power and crashed due to a defect in the design of the engine and its carburetor—which, when working properly, regulates the mixture of fuel and air entering the engine’s cylinders.

In 1966, the FAA issued Lycoming a type certificate for the engine. A type certificate certifies that the design of the aircraft or its part performs properly and satisfies federal aviation regulations. Lycoming’s engine’s type certificate included approval of an MA-4SPA carburetor, which was manufactured by a different company, Marvel-Schebler. The MA-4SPA carburetor consists of two halves—the float bowl, on bottom, which contains fuel, and the throttle body, on top, which meters the flow of air and fuel to the cylinders—and the two halves are joined by four hex-head bolts and lock-tab washers. The FAA initially required safety wire to be used to prevent the bolts on MA-4SPA carburetors from loosening. 29 Fed. Reg. 16,317, 16,318 (Dec. 5, 1964). Lycoming asked the agency to remove that requirement and instead allow the use of hex screws and lock tabs, and the agency permitted it to do so. Lycoming implemented the change with an engineering change order, which was signed by Lycoming’s Designated Engineering Representative (“DER”).<sup>2</sup> The

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<sup>2</sup> The FAA may delegate to certain qualified persons—designated engineering representatives (“DERs”)—the authority to conduct examinations, testing, and inspections necessary to issue a certificate, and to issue a certificate. 49 U.S.C. § 44702(d)(1); see 14 C.F.R. §§ 183.1, 183.13, 183.15, 183.29 (designation of DERs and termination of such designation); FAA Order 8110.37F, Designated Engineering Representative (DER) Handbook (2017); *see also Steen-*

company subsequently included the lock tab washer in its design and maintenance instructions.

Lycoming manufactured the engine at issue here in 1969 in Pennsylvania and shipped it to an aircraft company in England the same year. At that time, it was equipped with a Marvel-Schebler MA-4SPA carburetor.

Lycoming has been aware the carburetor's screws were not completely effective in holding together the float bowl and throttle body. The FAA sent Lycoming a letter in 1971, listing sixteen incidents of the screws on the Marvel-Schebler carburetor loosening. The FAA sent another letter in 1972 referring to these incidents again and met with Lycoming representatives to advise the company that reports of loosening screws were still being received. Indeed, by that time, the FAA had forwarded to Lycoming forty-five "Malfunction or Defect Reports on this subject." App. 557. The agency requested Lycoming to "review these reports and provide comments to this office

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*holdt v. FAA*, 314 F.3d 633, 634-35 (D.C. Cir. 2003) (discussing appointment and designation of DERs and the FAA's oversight of DERs). DERs are typically members of the private sector and employees of aircraft manufacturers, *see United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 807 (1984); FAA, Order 8110.37F, at 2-1 to 2-2, but their specific roles, authorizations, and responsibilities are established by agreement between the DER and the FAA office responsible for supervising the DER, FAA, Order 8110.37F, at 2-2, app. C at C-1. In determining whether a manufacturer meets the requirements for a type certificate, a DER must follow the same procedures an FAA engineer must follow. *See* 14 C.F.R. § 183.29(e); FAA, Order 8110.37F, at 2-1. DERs may approve minor design changes and, if specifically authorized, also may approve major changes. FAA, Order 8110.37F, at 2-2, 4-4; *see infra* at 19.

as to any action you may propose that will help in alleviating this problem.” *Id.* The same year, the FAA also issued a memorandum stating that “Marvel Schebler carburetors are a part of the engine type design and are not approved separately. The type certificate holder is responsible for the type design and also the correction of service problems.” App. 579.

Lycoming responded to these reports in 1973 with Service Bulletin 366 (“SB366”). SB366 acknowledged that “[i]nstances have been reported of leakage through the gasket between the bowl assembly and throttle body of the carburetor, evidenced by fuel stains in the area of the leak. Leakage of this type is accompanied by loose screws that attach the bowl and throttle body.” App. 567. Lycoming advised that during inspection, the screws should be checked for tightness, and if there appeared to be leakage and the screws were loose, the bowl should be removed, the gasket should be replaced, and the screws should be retightened.<sup>3</sup>

Service records show that the problem persisted. Owners and mechanics reported to Lycoming loose screws, leaking carburetors, and poor engine performance. In 2004, Precision Airmotive LLC (“Precision”), which acquired the Marvel-Schebler carburetor line, wrote Lycoming two letters regarding the carburetor’s screws and leaking. As described in its first letter, in reviewing the FAA’s service difficulty report database, Precision “identified a trend”: “[o]ne of the items that has been reported on multiple occasions is loose bowl to body

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<sup>3</sup> Between 2003 and 2008, Lycoming discussed internally how to revise SB366. An updated bulletin (“SB366A”) was issued in 2007, again recommending, during inspection, to ensure the screws are tight and, if they are loose, to replace the gasket and retighten them.



attach screws on the MA-4SPA model carburetor,” and “a significant percentage of the incidents were on the Cessna 172 aircraft,” App. 581, the type of aircraft Sikkelee was flying. Precision identified no such trends with other carburetor models, or with the MA-4SPA on other aircraft. In its next letter, Precision confirmed the same trend and, although reports of loose bowl screws had not increased since the 1970s, “there continue[d] to be reports of loose screws on certain carburetors, particularly those used on O-320 engines in Cessna 172 aircraft.” App. 582. Precision recommended that Lycoming identify the circumstances that allowed screws to loosen and “evaluate[ ]” “the pros and cons of a different attachment system.” App. 583.

The engine in Sikkelee’s plane was in storage until 1998, when it was installed into the Cessna in accordance with the type certificate.<sup>4</sup> The engine was removed from the aircraft in 2004, after the aircraft was struck by lightning, and defendant Triad Aviation, Inc. overhauled the engine. As part of the overhaul, defendants Kelly Aerospace, Inc. and Kelly Aerospace Power Systems, Inc. (together, “Kelly”) “completely rebuilt or overhauled” the carburetor and shipped it back to Triad for installation. App. 616. Kelly held both an FAA repair station certificate, which permitted Kelly to overhaul Marvin-Schebler carburetors, and a parts manufacturer approval (“PMA”) from the FAA, which permitted Kelly to manufacture certain carburetor replacement parts. The carburetor was rebuilt with a combination of parts. It appears one-half was manufactured by Marvel-Schebler in the 1960s and one-half by Marvel-Schebler in the 1970s, and Kelly used its own aftermarket parts to join the two components. Kelly performed this work in accordance with the service

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<sup>4</sup> Lycoming did not install the engine.

manual and bulletins Lycoming and Precision had issued, such as SB366, which recommended that the technician detach the two halves of the carburetor, replace the gasket, and reassemble the carburetor using new lock tabs. The carburetor as overhauled had the same design as the original carburetor.

The plane was placed back into service, and in July 2005, David Sikkelee rented it. The Cessna crashed shortly after takeoff. David Sikkelee was killed, and his brother, who was a passenger, sustained severe injuries but survived. Sikkelee asserts that the crash was the result of the carburetor's faulty design for attaching the float bowl and throttle body. She alleges that vibrations from the engine loosened the bolts holding the float bowl and throttle body together, which allowed fuel to leak out of the carburetor into the engine and caused the Cessna to crash.

## B.

In 2007, Sikkelee filed a wrongful-death and survival action against Lycoming, Kelly, and other defendants in the United States District Court for the Middle District of Pennsylvania. She asserted several Pennsylvania state-law claims, including for strict liability and negligence, and in 2010, the District Court granted defendants' motion for judgment on the pleadings, holding that her claims fell within the preempted field of air safety described in *Abdullah v. American Airlines, Inc.*, 181 F.3d 363 (3d Cir. 1999). *Sikkelee v. Precision Airmotive Corp.*, 731 F. Supp. 2d 429 (M.D. Pa. 2010). Sikkelee then filed an amended complaint, asserting state law claims but incorporating federal standards of care by alleging violations of several FAA regulations. After motion practice

and settling her claims with Kelly, Sikkelee narrowed her claims against Lycoming to strict liability, negligence, and failure to warn, relying on 14 C.F.R. § 21.3. Just before trial, the Court expressed concern that the federal standards of care did not allow the Court to formulate intelligible or practical legal standards. It ordered Sikkelee to submit further briefing on the appropriate standard of care, and subsequently invited Lycoming to file a motion for summary judgment.

The District Court granted Lycoming partial summary judgment on the ground that the FAA's issuance of a type certificate for the engine meant that the federal standard of care had been satisfied. The Court denied summary judgment on Sikkelee's failure-to-warn claims, which were based on Lycoming's alleged violation of 14 C.F.R. § 21.3 for failure to "report any failure, malfunction, or defect in any product, part, process, or article" that Lycoming made. *Sikkelee v. Precision Airmotive Corp.* (*Sikkelee I*), 45 F. Supp. 3d 431, 459-60 (M.D. Pa. 2014). The District Court certified its order for immediate appeal to address "the reach of *Abdullah* and the scope of preemption in the airlines industry." *Sikkelee II*, 822 F.3d at 687.

We granted interlocutory review and held field preemption does not apply to state-law aircraft products liability claims because (1) "the Federal Aviation Act, the General Aviation Revitalization Act of 1994, and the regulations promulgated by the [FAA] reflect that Congress did not intend to preempt aircraft products liability claims in a categorical way," *Id.* at 683; (2) "Congress has not created a federal standard of care for persons injured by defective airplanes," *Id.* at 696; and (3) "the type certification process cannot as a categorical matter displace the

need for compliance in this context with state standards of care,” *Id.* Thus, aircraft products liability cases like Sikkelee’s may proceed using a state standard of care, “subject to traditional principles of conflict preemption, including in connection with the specifications expressly set forth in a given type certificate.” *Id.* at 683. We therefore vacated the grant of summary judgment in Lycoming’s favor and remanded for further proceedings. *Id.* at 683, 709.

Lycoming again moved for summary judgment, asserting Sikkelee’s claims are subject to conflict preemption and would, in any event, fail under Pennsylvania law. The District Court granted Lycoming’s motions, concluding (1) Sikkelee’s claims were conflict preempted because FAA regulations made it impossible for Lycoming to unilaterally implement the design changes Pennsylvania law allegedly would have required, *Sikkelee III*, 268 F. Supp. 3d at 692-709, and (2) there was no genuine dispute of material fact as to either her negligence or strict liability claims, *Id.* at 709-15. The District Court also reconsidered its earlier summary judgment order, *Sikkelee I*, 45 F. Supp. 3d at 435, and granted summary judgment to Lycoming on Sikkelee’s claim that Lycoming violated 14 C.F.R. § 21.3. *Sikkelee IV*, 2017 WL 3310953, at \*2-3.

Sikkelee appeals.

## II.<sup>5</sup>

### A.

We exercise plenary review of the District Court’s orders granting summary judgment. *Sikkelee II*, 822 F.3d

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<sup>5</sup> The District Court had jurisdiction pursuant to 28 U.S.C. § 1332(a). We have jurisdiction pursuant to 28 U.S.C. § 1291.

at 687. We apply the same standard as the District Court, viewing facts and drawing all reasonable inferences in the non-movant’s favor. *Hugh v. Butler Cty. Family YMCA*, 418 F.3d 265, 266-67 (3d Cir. 2005). Summary judgment is appropriate where “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).

We also review questions of preemption de novo. *Sikkelee II*, 822 F.3d at 687. Preemption is an affirmative defense on which Lycoming bears the burden of production and persuasion. *In re Vehicle Carrier Servs. Antitrust Litig.*, 846 F.3d 71, 84 (3d Cir. 2017); *El v. Se. Pa. Transp. Auth.*, 479 F.3d 232, 237 & n.6 (3d Cir. 2007).

## B.

Lycoming asserts Sikkelee’s claims are conflict-preempted under the doctrine of impossibility preemption because it “cannot independently do under federal law what state law requires.” Appellee’s Br. at 38. It also argues that Sikkelee’s claims fail as a matter of Pennsylvania law and the District Court properly granted summary judgment on her § 21.3 claim. We will first address Lycoming’s preemption defense.

### 1.

The doctrine of preemption has constitutional roots in the Supremacy Clause, which provides that “the Laws of the United States . . . shall be the supreme Law of the Land . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.” U.S. Const. art. VI, cl. 2. Congress thus has the power to preempt state law. *Arizona v. United States*, 567 U.S. 387, 399 (2012). We are nevertheless mindful that the federal and state

governments “possess concurrent sovereignty” in some areas. *Sikkelee II*, 822 F.3d at 687. For example, we assume “that the historic police powers of the States were not to be superseded by [a] [f]ederal [a]ct unless that was the clear and manifest purpose of Congress.” *Id.* (quoting *Wyeth v. Levine*, 555 U.S. 555, 565 (2009)). This presumption against preemption applies in the context of aviation products liability law. *Id.* at 690-92, 707-08.

There are several types of preemption: express and implied, and within implied, field and conflict. Express preemption has not been asserted and, in *Sikkelee II*, we held Congress has not preempted the field of state-law design- and manufacturing-defect claims concerning aircraft products, *Id.* at 683.<sup>6</sup> We did not, however, decide whether conflict preemption bars *Sikkelee*’s claims. *See Id.* at 683, 695, 702, 709.

There are two types of conflict preemption: (1) impossibility preemption, where compliance with both federal and state duties is impossible; and (2) obstacle preemption, where compliance with both laws is possible, but state law poses an obstacle to the full achievement of federal purposes. *In re Vehicle Carrier Servs.*, 846 F.3d at 84.

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<sup>6</sup> We concluded the Federal Aviation Act and related regulations “do not indicate a clear and manifest congressional intent to preempt state law products liability claims; Congress has not created a federal standard of care for persons injured by defective airplanes; and the type certification process cannot as a categorical matter displace the need for compliance in this context with state standards of care.” *Sikkelee II*, 822 F.3d at 696. We also held the General Aviation Revitalization Act of 1994 (“GARA”), Pub. L. No. 103-298, 108 Stat. 1552 (codified at 49 U.S.C. § 40101 note), does not express any such congressional intent. *Sikkelee II*, 822 F.3d at 696-99.

Lycoming argues Sikkelee’s claims are barred under impossibility preemption.<sup>7</sup> “The question for ‘impossibility’ [preemption] is whether the private party could independently do under federal law what state law requires of it.” *PLIVA, Inc. v. Mensing*, 564 U.S. 604, 620 (2011).

## 2.

“Pre-emption analysis requires us to compare federal and state law. We therefore begin by identifying the state tort duties and federal . . . requirements applicable to” Lycoming. *Id.* at 611. Under Pennsylvania law, a seller may be liable in strict liability and negligence for injuries caused by its defective products. The test for strict liability is set forth in the Restatement (Second) of Torts § 402A (1965). *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 351, 384-433 (Pa. 2014).<sup>8</sup> This requires a plaintiff to prove: “(1) that the product was defective; (2) that the defect was

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<sup>7</sup> Because preemption is an affirmative defense, we examine only the defense asserted before us. *In re Vehicle Carrier Servs.*, 846 F.3d at 84.

<sup>8</sup> Section 402A provides:

- (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
  - (a) the seller is engaged in the business of selling such a product, and
  - (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
- (2) The rule stated in Subsection (1) applies although
  - (a) the seller has exercised all possible care in the preparation and sale of his product, and
  - (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.

Restatement (Second) of Torts § 402A.

a proximate cause of the plaintiff's injuries; and (3) that the defect causing the injury existed at the time the product left the seller's hands." *Pavlik v. Lane Ltd./Tobacco Exps. Int'l*, 135 F.3d 876, 881 (3d Cir. 1998) (citing *Davis v. Berwind Corp.*, 690 A.2d 186, 190 (Pa. 1997)). A plaintiff may prove a "defective condition" exists by showing either "(1) the danger is unknowable and unacceptable to the average or ordinary consumer" (the "consumer expectations standard"), or "(2) a reasonable person would conclude that the probability and seriousness of harm caused by the product outweigh the burden or costs of taking precautions" (the "risk-utility standard"). *Tincher*, 104 A.3d at 335, 387, 389.

Pennsylvania law also recognizes a negligence cause of action for products liability. See *Tincher*, 104 A.3d at 383-84; *Phillips v. Cricket Lighters*, 841 A.2d 1000, 1008 (Pa. 2003). To maintain such a claim, a plaintiff must demonstrate "[1] that the defendant had a duty to conform to a certain standard of conduct; [2] that the defendant breached that duty; [3] that such breach caused the injury in question; and [4] actual loss or damage." *Phillips*, 841 A.2d at 1008 (citation and internal quotation marks omitted).

Sikkelee argues that Lycoming's design for affixing the carburetor parts was defective and that, under Pennsylvania law, Lycoming would be liable for failing to use a different design. Specifically, she asserts that Lycoming should have used safety wire to secure the bolts that attach the float bowl and throttle body.

### 3.

We next examine the federal regulations applicable to the design of aircraft products. Congress has imposed



federal oversight of certain aspects of aviation. *Sikkelee II*, 822 F.3d at 684. The 1958 Federal Aviation Act consolidated regulatory authority in a single entity, the FAA, and adopted the earlier statutory framework for the promulgation of minimum standards for design safety and the process for the issuance of certificates that indicated compliance with those regulations. *Id.* Under federal law, an aviation-products manufacturer must obtain a type certificate from the FAA. 49 U.S.C. § 44704(a); 14 C.F.R. § 21.31; *Sikkelee II*, 822 F.3d at 684. “[A] type certificate . . . certifies that a new design for an aircraft or aircraft part performs properly and meets the safety standards defined in aviation regulations, 49 U.S.C. § 44704(a); 14 C.F.R. § 21.31.” *Sikkelee II*, 822 F.3d at 684 (emphasis omitted).<sup>9</sup> If the FAA determines that a product “is properly designed and manufactured, performs properly, and meets the regulations and minimum standards prescribed under [49 U.S.C. §] 44701(a),” it issues a type certificate. *Sikkelee II*, 822 F.3d at 684 (alteration in original) (quoting 49 U.S.C. § 44704(a)(1); *see also* 14 C.F.R. § 21.21. A type certificate includes

the type design, which outlines the detailed specifications, dimensions, and materials used for a given product; the product’s operating limitations;

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<sup>9</sup> The FAA also issues

production certificate[s], which certif[y] that a duplicate part produced for a particular plane will conform to the design in the type certificate, 49 U.S.C. § 44704(c); 14 C.F.R. § 21.137. Before a new aircraft may legally fly, it must also receive . . . an airworthiness certificate, which certifies that the plane and its component parts conform to its type certificate and are in condition for safe operation. 49 U.S.C. §§ 44704(d), 44711(a)(1).

*Sikkelee II*, 822 F.3d at 684 (emphasis omitted).

a “certificate data sheet,” which denotes the conditions and limitations necessary to meet airworthiness requirements; and any other conditions or limitations prescribed under FAA regulations.

*Sikkelee II*, 822 F.3d at 684 (citing 14 C.F.R. §§ 21.31, 21.41; FAA, Order 8110.4C, change 5, Type Certification, ch. 3-3(a) (2011)). A type certificate remains in effect “until surrendered, suspended, revoked, or a termination date is otherwise established by the FAA.” *Id.* at 685 (quoting 14 C.F.R. § 21.51).

A manufacturer generally must make the product in accordance with that certificate. A manufacturer may make a “minor” change through “a pertinent ‘method acceptable to the FAA.’” *Id.* (quoting 14 C.F.R. § 21.95). A minor change “is one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product.” 14 C.F.R. § 21.93(a). All other changes are “major” changes. *Id.*; *see also Sikkelee II*, 822 F.3d at 703 n.21; 14 C.F.R. pt. 43, app. A (listing major alterations and repairs). Major changes require advance FAA approval and issuance of an amended or supplemental type certificate. 49 U.S.C. § 44704(b); *Sikkelee II*, 822 F.3d at 685, 703 n.21; 14 C.F.R. §§ 21.97; FAA Order 8110.4C, change 1, Type Certification, ch. 4-1(a), 4-2 (2011). A DER may approve minor changes and, with specific authorization, may approve major changes. FAA, Order 8110.37F at 2-2, 4-4; *see supra* note 2.

The FAA also regulates aftermarket parts. A manufacturer seeking to make replacement parts generally must obtain a PMA, which allows the manufacturer to

produce replacement parts for use on certificated products. *See* 14 C.F.R. §§ 21.8, 21.9, 21.303(a). A PMA holder may manufacture aftermarket parts, but must do so in accordance with the type certificate for the product, and must follow the same procedures as the type certificate holder. 14 C.F.R. §§ 21.8, 21.9, 21.303(a), 21.319; FAA Order 8120.22A, Production Approval Process, ch. 4-5, at 4-7 to 4-8 (2016). The manufacturer may obtain a PMA by showing (1) its product is identical to the certificated product, through evidence of a licensing agreement; (2) its product is identical to the certificated product, without a licensing agreement; or (3) tests and computations showing that its product meets airworthiness requirements. *See* 14 C.F.R. § 21.303; FAA, Order 8120.22A, 4-7 to 4-8. The process for changing a PMA design is the same as that for certificated designs; changes are classified as “major” and “minor,” and major changes must receive FAA approval before they can be included in the design, while minor changes can be approved using a method acceptable to the FAA. 14 C.F.R. § 21.319. At oral argument, the parties agreed that Sikkelee’s proposed change to the carburetor’s design would be a minor change.<sup>10</sup> We need not decide whether the change would be minor or major because, either way, there is no impossibility preemption here.

## 4.

Lycoming asks us to affirm the District Court’s ruling on impossibility preemption because its FAA-approved type certificate precludes it from unilaterally changing its

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<sup>10</sup> Although we disagree with our dissenting colleague’s characterization of the concession concerning whether the change here would be minor, Dissent at 12, we agree that the distinction is irrelevant to the preemption issue before us.

design, and thus it could not simultaneously comply with federal and state law, where state law would require it to adopt a different design. Lycoming relies primarily on *PLIVA, Inc. v. Mensing*, 564 U.S. 604 (2011), and *Mutual Pharmaceutical Co. v. Bartlett*, 570 U.S. 472 (2013). In contrast, Sikkelee relies on the impossibility preemption standard articulated in *Wyeth v. Levine*, 555 U.S. 555 (2009). To understand the relevance of these cases, some background is required.

All three of these cases concerned tort claims relating to warning labels provided in connection with pharmaceutical drugs. *PLIVA* and *Bartlett* involved claims against generic drug manufacturers. Under federal law, a generic drug manufacturer may produce a drug that is identical to one made by a brand-name manufacturer, but when it receives permission to do so, it must use the same FDA-approved design and warning labels as the brand-name manufacturer. See *Bartlett*, 570 U.S. at 483-84, 486; *PLIVA*, 564 U.S. at 612-13, 612 n.2. This is because the generic manufacturer is given the opportunity to market its product without performing the same comprehensive testing as the brand-name manufacturer performed on its product, with the idea being that such examination is not needed if the products and warnings are identical. See, e.g., *In re Wellbutrin XL Antitrust Litig. Indirect Purchaser Class*, 868 F.3d 132, 143-44 (3d Cir. 2017); *In re Fosamax (Alendronate Sodium) Prods. Liab. Litig. (No. II)*, 751 F.3d 150, 153 (3d Cir. 2014). Thus, both the products and the warnings must be identical.

*PLIVA* involved state-law failure-to-warn claims against manufacturers of a generic drug. 564 U.S. at 608-09, 611-12. Generic drug manufacturers are required, under the Food, Drug, and Cosmetic Act (the “FDCA”) and

FDA regulations, to use labels that match those of the brand-name manufacturers, and these generic drug manufacturers may not “independently chang[e]” their labels. *Id.* at 618. Assuming state law required a different label, the Supreme Court concluded federal law did not permit the generic company to do what state law required—provide a different, stronger label, *Id.* at 617-18—and thus, it was impossible for the generic company to change the warnings, *Id.* at 618.

The Supreme Court reached the same conclusion in *Bartlett*, where the manufacturer of a generic drug was sued for an alleged design defect. 570 U.S. at 475. In *Bartlett*, the Court held redesign was not possible because “the FDCA requires a generic drug to have the same active ingredients, route of administration, dosage form, strength, and labeling as the brand-name drug on which it is based.” *Id.* at 483-84. As a result, the Court concluded “state-law design-defect claims like New Hampshire’s that place a duty on manufacturers to render a drug safer by either altering its composition or altering its labeling are in conflict with federal laws that prohibit manufacturers from unilaterally altering drug composition or labeling.” *Id.* at 490. Thus, in both cases, the state-law claims were conflict-preempted because it would be impossible to comply with the federally mandated label and the modified label purportedly required by state law. *Id.* at 486-87, 490; *PLIVA*, 564 U.S. at 618, 624.

Lycoming argues that it—like the generic drug manufacturers in those cases—cannot unilaterally change the FAA-approved design in the type certificate without FAA approval, and thus, it cannot both comply with federal law and do what Sikkelee claims state law requires it to do. Similarly, Lycoming asserts Kelly could not unilaterally

alter the carburetor's design because, as a PMA holder, it was obliged to follow the design as set forth in Lycoming's type certificate.

We are not persuaded. In *PLIVA* and *Bartlett*, the defendant generic manufacturers were obligated to use the design and labeling of their brand-name counterparts. Lycoming is not in that position. As discussed above, the Federal Aviation Act and FAA regulations require FAA approval of a type certificate and changes to it. Lycoming, however, is not stuck with the design initially adopted and approved in a type certificate. Indeed, Lycoming has made numerous changes to the type certificate for its O-320 engine, which the FAA approved in short order. As to the carburetor specifically, Lycoming was in communication with the FAA about its design, sought to change the requirement that safety wires be used, and obtained FAA permission to use hex screws and lock tab washers instead.

This case therefore is more like *Wyeth*, where the preemption defense failed. In *Wyeth*, the Supreme Court concluded the plaintiff's state-law failure-to-warn claim against a brand-name drug manufacturer was not preempted because a "changes being effected ['CBE']" regulation permitted it to change a label to strengthen a warning upon filing a supplemental application with the FDA, and the brand-name manufacturer did not need to wait for agency approval. 555 U.S. at 568. Thus, "absent clear evidence that the FDA would not have approved a change to [the drug's] label, [the Court could] not conclude that it was impossible for Wyeth to comply with both federal and state requirements." *Id.* at 571.

The principles of *Wyeth* apply here. The nature of FAA regulations and Lycoming’s interactions with the FAA—including the changes it has made to its type certificate—demonstrate that Lycoming could have—indeed it had—adjusted its design. Thus, Lycoming is in a position more akin to that of the brand-name manufacturer in *Wyeth* than that of the generic manufacturers in *PLIVA* and *Bartlett*, who were unable to deviate from the brand-name manufacturers’ labels.<sup>11</sup> For Lycoming to be entitled to an impossibility-preemption defense, it must present “clear evidence that the [FAA] would not have approved a change.” *Wyeth*, 555 U.S. at 571.<sup>12</sup> This it cannot do.

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<sup>11</sup> Our dissenting colleague encourages us to read “the Supreme Court’s impossibility decisions in concert,” Dissent at 15. We have done so and have considered how the principles in *Wyeth*, *PLIVA*, and *Bartlett* apply to the FAA regulatory scheme. Unlike the generic manufacturers in *PLIVA* and *Bartlett*, who must accept without modification, the brand-names’ approved design, Lycoming had the freedom to request changes to its type certificate to change its design, just like a brand-name manufacturer. Although the FAA does not explicitly have a CBE-type process that allows the certificate holder to make a change before obtaining approval, the FAA allows the certificate holder to request permission to make a minor or major change.

<sup>12</sup> Sikkelee “propose[s] the following rule: When a defendant can implement a change or alteration to a design, product, or article without first seeking approval from an employee of the FAA, a state-law claim requiring that change is not preempted unless the defendant proves with clear evidence that the FAA would reject the change or alteration.” Appellant’s Br. at 22-23, 34. She thus proposes a rule based on approval by an actual employee of the FAA. Sikkelee argues that any DER-approved changes do not involve FAA approval because DERs are not FAA employees (and can be employees of the manufacturers themselves): “[w]hile the DER represents the government, he is emphatically not the government, and that defeats impossibility.” Appellant’s Br. at 35; *see also id.* at 23, 33-36.

There is no evidence in the record showing that the FAA would not have approved a change to the carburetor's screws or attachment system. To the contrary, viewing the record in the light most favorable to the non-movant, it shows that the FAA likely would have approved a change, which also would have meant Kelly would not have used the same allegedly defective design when it overhauled and reinstalled the carburetor in 2004. The FAA was aware, as its correspondence with Lycoming shows, that the carburetor's screws loosened in some cases and caused fuel to leak. As a result, the FAA asked Lycoming to review the malfunction or defect service reports of loosening screws "and provide comments to this office as to any action you may propose that will help in alleviating this problem." App. 557. The FAA also reminded Lycoming that "Marvel Schebler carburetors are a part of the engine type design and are not approved separately. The type certificate holder is responsible for the type design and also the correction of service problems." App. 579. This shows that the FAA wanted Lycoming to address the situation. Moreover, the FAA had previously required the use of safety wire, the very design change Sikkelee alleges would have cured the defect. Based on this record, the FAA likely would have approved a proposed change to the attachment system. Thus, it was not

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We decline to adopt the rule Sikkelee proposes. As we have noted, *see supra* n.2, DERs are agents of the FAA, and so their involvement does not mean the FAA has not approved a design. Second, to the extent she is arguing FAA approval provides no guarantee of safety because the agency delegates much of its certification work to DERs, we have rejected that argument and noted that the involvement of DERs in the certification- and change-approval process alone cannot defeat conflict preemption. *Sikkelee II*, 822 F.3d at 708.



“impossible” for Lycoming to change its allegedly defective design, and Lycoming’s conflict-preemption defense fails.

In addition, allowing state-law claims to proceed in this context complements, rather than conflicts with, the federal scheme. See *Fellner v. Tri-Union Seafoods, L.L.C.*, 539 F.3d 237, 249 (3d Cir. 2008) (“[S]tate tort law and other similar state remedial actions are often deemed complementary to federal regulatory regimes, and this appears to be such a case.”). “[T]he regulations are framed in terms of standards to acquire FAA approvals and certificates—and not as standards governing manufacturing generally,” which indicates “that the acquisition of a type certificate is merely a baseline requirement.” *Sikkelee II*, 822 F.3d at 694. Thus, “in the manufacturing context, the statutory language indicating that these are ‘minimum standards,’ means what it says.” *Id.* (internal citation omitted) (quoting 49 U.S.C. § 44701). State-law claims, such as Sikkelee’s, supplement the federal scheme and further its central purpose: safe aircrafts.<sup>13</sup>

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<sup>13</sup> The FAA, in its brief submitted to our Court in connection with the last appeal, asserts the FAA’s express approval of an aircraft or part design would preempt, under conflict preemption principles, a plaintiff’s state tort suit arguing for an alternative design. App. 1183. We noted the FAA’s position that “to the extent that the FAA has not made an affirmative determination with respect to the challenged design aspect, and the agency has left that design aspect to the manufacturer’s discretion, the claim would not be preempted.” *Sikkelee*, 822 F.3d at 702 (quoting FAA Letter Br. at 11; App. 1184). We concluded:

A type certificate thus would not create such a conflict in the FAA’s view where unilateral changes are permissible without preapproval or where an allegation of negligence arises after the issuance of a type certificate, such as claims related to . . .

Moreover, “immuniz[ing] aircraft and aviation component part manufacturers from liability for their defective product designs” is “inconsistent with the [Federal Aviation] Act and its goal of fostering aviation safety.” Amicus Am. Ass’n for Justice Br. at 4-5. A manufacturer would have little incentive to correct problems with its plane or parts if it could rely on a type certificate to avoid liability. This would undermine both the goal of the federal regulatory regime and the interests of states in ensuring the safety of their residents.<sup>14</sup>

For these reasons, the District Court erred in holding Sikkelee’s claims were conflict-preempted and granting Lycoming summary judgment on that basis.

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issuance of service bulletins to correct an issue that has come to the manufacturer’s attention . . . .

*Id.* at 702 n.19 (citing FAA Letter Br. at 10-11, 12-13 n.2; App. 1183-86). That is precisely the situation here: Lycoming was aware the carburetor’s screws could and did come loose on numerous occasions, leading to fuel leaks—in the Cessna 172 in particular—and Lycoming issued service bulletins in an apparent attempt to address the issue (but did not change the design). Thus, our conclusion that Sikkelee’s claims are not preempted is consistent with the FAA’s position on the impact of state law on the federal regulatory scheme.

<sup>14</sup> Our dissenting colleague opines that preemption applies because the regulatory scheme does not allow a certificate holder to unilaterally make a change, even though they could request permission to do so. Taking this view to its logical conclusion means that certificate holders could be aware of conditions that threaten safety or airworthiness and not be required to take any action to address those conditions. This approach would insulate the certificate holder from liability and leave those injured without a remedy.

## C.

We next address Sikkelee's state-law strict liability and negligence claims and conclude Lycoming is not entitled to summary judgment on them.

Sikkelee asserts Lycoming's engine design is defective, Lycoming knew about the problem and failed to correct it, and the engine's defect proximately caused David Sikkelee's death. She further argues the engine's condition did not substantially change between 1969 and the crash, and any changes that did occur were reasonably foreseeable. She also argues that Lycoming is liable for defects in the overhauled carburetor because manufacturers can be liable for defects in aftermarket parts installed on their products. Lycoming disputes Sikkelee's arguments as to causation, substantial change, foreseeability, and negligence, and argues that it cannot be held liable because it was not in the replacement carburetor's chain of distribution.

The District Court should have permitted Sikkelee's strict liability and negligence claims to be decided by the jury. Pennsylvania law provides that whether a product is defective "is a question of fact ordinarily submitted for determination to the finder of fact; the question is removed from the jury's consideration only where it is clear that reasonable minds could not differ on the issue." *Tincher*, 104 A.3d at 335. Similarly, the issues of proximate causation, whether a change to the product was substantial, and whether that change was reasonably foreseeable, are generally for the jury. *Merriweather v. E.W. Bliss Co.*, 636 F.2d 42, 44-45 (3d Cir. 1980); *Hamil v. Bashline*, 392 A.2d 1280, 1287-88 (Pa. 1978); *D'Antona v. Hampton Grinding Wheel Co.*, 310 A.2d 307, 310 (Pa. Super. Ct. 1973).

Here, the record indicates that reasonable minds could differ on these issues. For example, there is a genuine dispute of material fact as to causation. Sikkelee’s experts posit the carburetor—due to its loosening screws and fuel leakage—caused the engine to fail and the plane to crash, while Lycoming’s experts dispute Sikkelee’s experts’ conclusions. Moreover, contrary to Lycoming’s argument, there are circumstances in which a manufacturer can be held liable for a component part that caused a plaintiff’s injury, even when the part was made by a different entity, and particularly when that entity was required to follow the manufacturer’s design. *See D’Antona*, 310 A.2d at 309-10 (holding that “appellant’s averment that a defective condition in [the] machine caused the wheel to explode sufficiently states a cause of action against [defendant] despite the fact that the explosion occurred in a component part manufactured by someone else”); *see also Pridgen v. Parker Hannifin Corp.*, 916 A.2d 619, 623 (Pa. 2007) (“[W]e agree with [plaintiffs’] observation that [defendants, including Lycoming] sit at the top of the aviation food chain with respect to all components comprising the type certificated engine. Thus, in the absence of GARA repose, [defendants] might indeed be liable for design defects in replacement parts and/or the aircraft systems within which such components function.” (citation and internal quotation marks omitted)).

Therefore, the District Court erred in granting Lycoming summary judgment on Sikkelee’s state-law claims.<sup>15</sup>

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<sup>15</sup> We note the District Court made repeated reference to Sikkelee’s \$2 million settlement with Kelly. *Sikkelee III*, 268 F. Supp. 3d at 690, 709, 717. The settlement with Kelly is irrelevant to any of the legal issues presented here, and we hope the District Court’s analysis and tone were not influenced by it. *See, e.g., id.* at 717 (stating that

**D.**

Finally, Sikkelee argues the District Court erred in granting Lycoming summary judgment on her failure-to-notify-the-FAA claim, based on 14 C.F.R. § 21.3. That provision provides that “[t]he holder of a type certificate (including amended or supplemental type certificates), a PMA, or a TSO [technical standard order] authorization, or the licensee of a type certificate must report any failure, malfunction, or defect in any product or article manufactured by it that it determines has resulted in any of the occurrences listed in paragraph (c) of this section.” 14 C.F.R. § 21.3(a). Paragraph (c) includes situations that fit the alleged defect and carburetor malfunction here. *Id.* § 21.3(c)(1)-(2), (6), (10). Sikkelee argues Lycoming failed to comply with this regulation, and the FAA would have taken corrective action if Lycoming had complied.

Lycoming is entitled to summary judgment on this claim. Sikkelee has attempted to use a federal duty and standard of care as the basis for this state-law negligence claim. *See* Reply Br. at 17 (“Lycoming is liable in negligence for failing to report known product defects to the FAA.”). However, as we held in *Sikkelee II*, “Congress has not created a federal standard of care for persons injured by defective airplanes.” 822 F.3d at 696; *cf. Buckman Co. v. Plaintiffs’ Legal Comm.*, 531 U.S. 341, 348, 353 (2001) (holding state-law fraud-on-the-FDA claims were impliedly preempted by federal law, and noting that “were plaintiffs to maintain their fraud-on-the-agency claims here, they would not be relying on traditional state tort law which had predated the federal enactments in

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because of this settlement, “sympathy for unrealized pecuniary losses is not in order for the Plaintiff here”).

question[ ]. On the contrary, the existence of these federal enactments is a critical element in their case”). The District Court therefore properly granted summary judgment to Lycoming on this claim.

### III

For the foregoing reasons, we will reverse the District Court’s order granting Lycoming summary judgment on Sikkelee’s state-law claims, affirm the Court’s order granting Lycoming’s motion for reconsideration on Sikkelee’s failure-to-warn-the-FAA claim, and remand for further proceedings.

ROTH, dissenting in part.

The Majority holds that Sikkelee’s claims against Lycoming are not conflict preempted. Applying the Supreme Court’s decision in *Wyeth v. Levine*,<sup>1</sup> the Majority concludes that, because Lycoming has not produced clear evidence that the FAA would have prevented Lycoming from implementing certain design changes to the engine, it was not impossible for Lycoming to unilaterally implement the design changes allegedly required under Pennsylvania law.

The Majority errs in two key ways. First, the Majority takes a piecemeal approach to the Supreme Court’s impossibility preemption precedents, without considering it in the aggregate. Second, the Majority misframes the applicable regulatory regime, which requires prior FAA approval for all changes, major and minor.

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<sup>1</sup> 555 U.S. 555 (2009).

Without disregarding *Wyeth*, I find that, given the nature of the regulatory regime at issue, the Supreme Court's subsequent decisions in *PLIVA, Inc. v. Mensing*<sup>2</sup> and *Mutual Pharmaceutical Co. v. Bartlett*<sup>3</sup> are controlling. In short, applicable FAA regulations prohibited Lycoming from implementing the allegedly required change without some form of prior FAA approval. As a result, under the Supreme Court's conflict preemption precedents, compliance with state law would have been impossible. I therefore respectfully dissent from the portion of the Majority opinion that holds that Sikkelee's claims are not conflict preempted.<sup>4</sup>

## I.

The Majority and all parties to this appeal agree that the Supreme Court's recent decisions in *Wyeth*, *PLIVA*, and *Bartlett* set out the governing standards for impossibility preemption. Although the Majority opinion cogently summarizes those decisions, it fails to consider their combined import. Together, those decisions present a cohesive standard: when federal regulations prevent a manufacturer from altering its product without prior agency approval, design defect claims are preempted; when federal regulations allow a manufacturer to independently alter its product without such prior approval, design defect

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<sup>2</sup> 564 U.S. 604 (2011).

<sup>3</sup> 570 U.S. 472 (2013).

<sup>4</sup> I agree with my colleagues that the District Court correctly granted summary judgment in favor of Lycoming on Sikkelee's failure-to-notify-the-FAA claim based on 14 C.F.R. § 21.3. I therefore join Part II.D of the Majority opinion. In addition, I reach the question of preemption in this Dissent because I agree with my colleagues that there are disputed issues of material fact that would preclude summary judgment on the merits of Sikkelee's state-law tort claims.

claims ordinarily are not preempted. Revisiting *Wyeth*, *PLIVA*, and *Bartlett* shows why that is the applicable standard.

In *Wyeth*, the plaintiff suffered serious injury after receiving an intravenous administration of the brand-name drug Phenergan, through a method known as “IV push.” The drug’s FDA-approved label included a general warning about the risks involved in IV administration but did not specifically instruct physicians to use the safer “IV drip” method instead of the riskier “IV push” method.<sup>5</sup> The plaintiff brought state-law claims for negligence and strict liability against the drug maker, Wyeth, premised upon Wyeth’s failure to include on the label a more specific warning about the dangers of IV push administration. Wyeth argued that the plaintiff’s claims were conflict preempted because the FDA had approved Phenergan’s label, and FDA regulations generally forbid drug makers from altering an approved label, rendering it impossible for Wyeth to comply with its state-law duty to enhance the label. The Supreme Court, however, rejected Wyeth’s conflict preemption defense because an exception in the FDA regulations, the so-called “changes being effected” (CBE) exception,<sup>6</sup> allowed drug makers to unilaterally add warnings to their labels, subject to the FDA’s authority to subsequently rescind or modify such changes.<sup>7</sup> Setting out the rule now applied by the Majority in this case, the Court held that “absent clear evidence that the FDA would not have approved a change to Phenergan’s label,

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<sup>5</sup> *Wyeth*, 555 U.S. at 559-60.

<sup>6</sup> 21 C.F.R. § 314.70(c)(6)(iii).

<sup>7</sup> *Wyeth*, 555 U.S. at 568-71.



we will not conclude that it was impossible for Wyeth to comply with both federal and state requirements.”<sup>8</sup>

The Supreme Court returned to conflict preemption two years later in *PLIVA*.<sup>9</sup> *PLIVA* involved a set of facts generally similar to those of *Wyeth*: Plaintiffs took Defendant’s drug, suffered an injury, and brought state-law tort claims against Defendant premised upon Defendant’s failure to include a sufficient warning on the drug’s label.<sup>10</sup> The Court, however, noted a key distinction from *Wyeth* with regard to the applicable federal regulations. The drug at issue in *PLIVA* was a generic, and FDA regulations required that generic drugs bear the exact same warning label as their brand-name equivalent.<sup>11</sup> The regulations for generic drugs included no exception comparable to the CBE provision that allowed brand-name makers to unilaterally alter their warning label.<sup>12</sup> Notably, however, the Court did not find that generic drug makers were incapable of ever making their warning labels safer. Instead, relying on the representations of the FDA as amicus, the Court assumed that generic drug makers “could have proposed—indeed, were required to propose—stronger warning labels to the [FDA] if they believed such warnings were needed” and that “[i]f the FDA had agreed that a label change was necessary, it would have worked with the brand-name manufacturer to create a new label for both the brand-name and generic drug.”<sup>13</sup>

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<sup>8</sup> *Id.* at 571.

<sup>9</sup> 564 U.S. 604.

<sup>10</sup> *Id.* at 609-10.

<sup>11</sup> *Id.* at 613.

<sup>12</sup> *See id.* at 614-15.

<sup>13</sup> *Id.* at 616 (emphasis added).

Despite this duty, the Court concluded that, for purposes of conflict preemption, such a regulatory regime rendered it impossible for the generic manufacturer to simultaneously comply with state tort law and the federal regulatory requirement without prior agency approval. The Court explained that “[t]he question for ‘impossibility’ is whether the private party could *independently* do under federal law what state law requires of it.”<sup>14</sup> There, the drug maker could not. The Court specifically noted that the drug maker would not have satisfied its state law duties by proposing changes to the label or otherwise engaging in dialogue with the FDA. Rather, “[s]tate law demanded a safer label; it did not instruct the Manufacturers to communicate with the FDA about the possibility of a safer label.”<sup>15</sup>

*PLIVA* concludes with a clear standard: “[W]hen a party cannot satisfy its state duties without the Federal Government’s special permission and assistance, which is dependent on the exercise of judgment by a federal agency, that party cannot independently satisfy those state duties for pre-emption purposes.”<sup>16</sup> In the Supreme Court’s words, “*Wyeth* is not to the contrary.”<sup>17</sup> That is so because the CBE regulation “applicable to *Wyeth* allowed the company, of its own volition, to strengthen its label in compliance with its state tort duty.”<sup>18</sup>

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<sup>14</sup> *Id.* at 620 (emphasis added).

<sup>15</sup> *Id.* at 619.

<sup>16</sup> *Id.* at 623-24.

<sup>17</sup> *Id.* at 624.

<sup>18</sup> *Id.*

Finally, in *Mutual Pharmaceutical Co. v. Bartlett*,<sup>19</sup> the Supreme Court reaffirmed and further clarified its conflict preemption analysis. *Bartlett*, like *PLIVA*, began as a state-law tort suit against a generic drug manufacturer whose product had injured the plaintiff. The federal regulatory scheme was the same. The key factual distinction was that, in *Bartlett*, the plaintiff's state-law claims alleged a design defect, not merely a failure to warn.<sup>20</sup> The plaintiff argued—and the First Circuit had held—that such claims were not preempted because the drug manufacturer could comply with both state and federal law by simply choosing not to make the drug at all.<sup>21</sup> The Supreme Court rejected this line of reasoning. The Court noted that preemption doctrine “presume[s] that an actor seeking to satisfy both his federal- and state-law obligations is not required to cease acting altogether in order to avoid liability.”<sup>22</sup> The Court concluded that the drug maker could have satisfied its duty under state law only by altering the drug's composition or its label. Because federal regulation did not allow the drug maker to implement either of these measures without prior FDA approval, the state-law design defect claim was preempted.<sup>23</sup>

Distilled to their essence, the Supreme Court's recent conflict preemption decisions present a guiding principle: When a manufacturer operating in a federally regulated industry has a means of altering its product independently and without prior agency approval—such as a

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<sup>19</sup> 570 U.S. 472.

<sup>20</sup> *Id.* at 479.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at 488.

<sup>23</sup> *Id.* at 491-92.

brand-name drug manufacturer who may implement labeling alterations via the CBE process—state-law claims against the manufacturer alleging a tortious failure to make those alterations ordinarily are not preempted; but, when federal regulations prohibit a manufacturer from altering its product without prior agency approval, state-law claims imposing a duty to make a different, safer product are preempted. Crucially, the question is not whether a manufacturer may ever alter its product under the applicable federal regulatory scheme. Rather, the question is whether a manufacturer may do so without prior agency approval. Thus, despite being decided after *Wyeth*, *PLIVA* and *Bartlett* are more logically understood as setting the general standard for impossibility preemption in cases involving an industry subject to thorough federal regulation prohibiting independent changes to an agency-approved product. By contrast, the clear evidence standard announced in *Wyeth* applies only if the regulatory regime includes an exception, such as the CBE process, allowing manufacturers to independently implement design changes without prior agency approval.

The Third Circuit’s recent decision in *In re Fosamax*<sup>24</sup> reflects a faithful application of this principle. *Fosamax*, like *Wyeth*, was a state-law action against a brand-name drug maker who could have unilaterally updated its warning label by availing itself of the CBE exception. Applying *Wyeth*, the Third Circuit held that “the mere availability of a CBE label amendment” could, but “would not always[,] defeat a manufacturer’s preemption defense, because the FDA retains authority to reject labeling

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<sup>24</sup> *In re Fosamax (Alendronate Sodium) Prods. Liab. Litig.*, 852 F.3d 268 (3d Cir. 2017), cert. granted sub nom. *Merck Sharp & Dohme Corp. v. Albrecht*, No. 17-290, 2018 WL 3148288 (U.S. June 28, 2018).

changes.”<sup>25</sup> The Court concluded that “where there is ‘clear evidence that the FDA would not have approved a change’ to the label, federal law preempts state-law claims premised on the manufacturer’s failure to make that change.”<sup>26</sup> Because the drug maker could have unilaterally implemented labeling changes via the CBE exception and had not offered clear evidence that the FDA would have subsequently rejected the proposed label amendment, this Court held that the drug maker’s impossibility preemption defense failed. Accordingly, *Fosamax* is entirely consistent with the core principle we derive from *Wyeth*, *PLIVA*, and *Bartlett*.

## II.

With the Supreme Court’s impossibility preemption framework squarely in focus, I turn to the applicable federal regulatory regime, which prohibited Lycoming from making changes to its engine without first obtaining FAA approval. The Federal Aviation Act of 1958 (the Act)<sup>27</sup> established the FAA and empowered it to promulgate and enforce safety regulations in the field of civil aeronautics. Thus, FAA regulations and the Act itself prescribe the operative safety standards for the manufacture of airplanes and their components, including aircraft engines. For an aircraft engine manufacturer who wishes to produce a particular model of engine, the first step in the regulatory process is obtaining a “type certificate” from the FAA to confirm compliance with applicable safety standards.<sup>28</sup>

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<sup>25</sup> *Id.* at 283.

<sup>26</sup> *Id.* (quoting *Wyeth*, 555 U.S. at 571).

<sup>27</sup> Pub. L. No. 85-726, 72 Stat. 731.

<sup>28</sup> *See* 49 U.S.C. § 44704(a); 14 C.F.R. § 21.21.

With limited exceptions not applicable here, a manufacturer cannot produce an aircraft engine unless a type certificate for that specific engine design has been obtained by the manufacturer or an entity with whom the manufacturer has a licensing agreement.<sup>29</sup> When applying for a type certificate, an engine manufacturer is required to submit, among other things, “a description of the engine design features, the engine operating characteristics, and the proposed engine operating limitations,”<sup>30</sup> as well as “the type design, test reports, and computations necessary to show that the product to be certificated [sic] meets the applicable airworthiness . . . requirements.”<sup>31</sup> The “type design” portion of the application “outlines the detailed specifications, dimensions, and materials used for a given product.”<sup>32</sup> This Court has previously described the type certification process as “intensive and painstaking.”<sup>33</sup> The issuance of a type certificate by the FAA represents the FAA’s “find[ing] that the . . . aircraft engine . . . is properly designed and manufactured, performs properly, and meets the regulations and minimum standards prescribed under [the Act].”<sup>34</sup>

As the Majority acknowledges, once the FAA has approved a particular engine design and issued a type certificate, the engine manufacturer must continue to manu-

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<sup>29</sup> See 14 C.F.R. § 21.6.

<sup>30</sup> 14 C.F.R. § 21.15.

<sup>31</sup> 14 C.F.R. § 21.21(b).

<sup>32</sup> *Sikkelee v. Precision Airmotive Corp.*, 822 F.3d 680, 684 (3d Cir. 2016).

<sup>33</sup> *Id.*

<sup>34</sup> 49 U.S.C. § 44704(a)(1).

facture the engine in compliance with the type certificate.<sup>35</sup> The manufacturer may not make changes to the engine design without FAA approval.<sup>36</sup> Federal regulations divide possible changes to an engine model into two categories: “major changes” and “minor changes.”<sup>37</sup>

A minor change is “one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product,”<sup>38</sup> and thus “may be approved under a method acceptable to the FAA.”<sup>39</sup> One of these methods is to receive approval from an individual engineering expert who has been certified by the FAA as a Designated Engineering Representative (DER). DERs may be hired by a manufacturer, but their authority to approve minor changes exists solely as the result of a delegation of authority by the FAA, as allowed under the Act.<sup>40</sup> DERs act “within limits prescribed by and under the general supervision of the [FAA] Administrator,”<sup>41</sup> and their decisions may be appealed to the Administrator or reconsidered by the Administrator at his or her own initiative.<sup>42</sup> As the Majority correctly notes, “DERs are agents of the FAA, and so their involvement does not

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<sup>35</sup> Maj. Op. at 19.

<sup>36</sup> See 14 C.F.R. §§ 21.95, 21.97 (requiring FAA approval for both minor and major changes).

<sup>37</sup> 14 C.F.R. § 21.93.

<sup>38</sup> *Id.*

<sup>39</sup> 14 C.F.R. § 21.95.

<sup>40</sup> See 49 U.S.C. § 44702(d).

<sup>41</sup> 14 C.F.R. § 183.29.

<sup>42</sup> 49 U.S.C. § 44702(d)(3).

mean the FAA has not approved a design.”<sup>43</sup> Accordingly, DER approval is a form of FAA approval. Although the applicable regulations, including the availability of DERs, provide manufacturers with flexibility when seeking to implement minor changes, neither federal regulations nor any other authority cited by the Majority or by Sikkelee supports the conclusion that a manufacturer may actually implement a minor change prior to receiving FAA approval.<sup>44</sup>

All changes that are not minor are classified as major.<sup>45</sup> A manufacturer seeking to implement a major change must first obtain a new or supplemental type certificate from the FAA.<sup>46</sup> A manufacturer applying for approval of a major change must “[p]rovide substantiating data and necessary descriptive data for inclusion in the type design” and must show that the proposed change complies with all FAA regulations.<sup>47</sup> As such, it is clear that major changes require prior FAA approval. Aside from major and minor changes, FAA regulations provide no other means through which an original manufacturer can implement changes to the design of a type certified product.<sup>48</sup> In other words, in the field of safety regulation

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<sup>43</sup> Maj. Op. at 25 n.12.

<sup>44</sup> Sikkelee argues that prior DER approval provides manufacturers with such an avenue, because DER approval is not actually FAA approval. Appellant’s Br. at 33. As noted above, all three members of this Panel reject that argument.

<sup>45</sup> 14 C.F.R. § 21.93.

<sup>46</sup> 14 C.F.R. § 21.113.

<sup>47</sup> 14 C.F.R. § 21.97.

<sup>48</sup> As correctly summarized in the Majority opinion, additional FAA regulations govern changes to airplane parts made by after-market parts manufacturers who hold an FAA-issued PMA. Maj.



of civil aeronautics, there is no CBE process for a manufacturer to effect changes to a type certificate prior to FAA approval of that change.

Moreover, concerning major versus minor changes, the Majority asserts that, at oral argument, both parties agreed that Sikkelee's proposed change to the carburetor would be a minor change.<sup>49</sup> In fact, the parties were not in such perfect agreement. Lycoming's precise position at oral argument was that, while Lycoming viewed the proposed change as having no impact on airworthiness and thus as minor, Sikkelee's theory of tort liability inherently required the conclusion that the change was major.<sup>50</sup> I find Lycoming's argument persuasive and note the inherent tension in Sikkelee's position that a proposed change could have prevented the crash but, at the same time, should be considered minor, *i.e.*, having no impact on airworthiness. However, the question need not be resolved. Sikkelee's claims are preempted regardless of whether the proposed change is classified as minor or major because, as we have explained, both processes require prior FAA approval before they are implemented.

### III.

As a result of this comprehensive regulatory scheme, Sikkelee's strict liability and negligence claims against

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Op. at 20. These regulations are not directly applicable to an original manufacturer such as Lycoming.

<sup>49</sup> Maj. Op. at 20-21.

<sup>50</sup> See Oral Arg. Audio Recording at 32:25-48, available at [http://www2.ca3.uscourts.gov/oralargument/audio/173006\\_Sikkelee.Precision-Airmotive.mp3](http://www2.ca3.uscourts.gov/oralargument/audio/173006_Sikkelee.Precision-Airmotive.mp3).

Lycoming are conflict preempted. Lycoming, as the original manufacturer of and type certificate holder for the O-320-D2C engine (the Engine), had two paths through which it could lawfully implement changes to the Engine's design: the minor change process for changes having no appreciable impact on the airworthiness of the Engine, or the major change process for all other changes. As outlined above, both paths would have required prior FAA approval before Lycoming could implement a proposed change. No exception akin to the CBE process in *Wyeth* applied here. Accordingly, the regulatory regime places this case squarely in the realm of *PLIVA* and *Bartlett*.

That result is readily apparent when we consider the question of impossibility in the precise language provided by the Supreme Court: Could Lycoming independently do under federal law what state law required of it,<sup>51</sup> *i.e.*, alter the design of the carburetor's fastening mechanism from lock-tab washers to safety wire? Under the applicable FAA regulations, the answer to that fundamental question is clearly no, regardless of whether such a change would have been minor or major. *PLIVA* and *Bartlett* instruct that that answer is sufficient to find conflict between Lycoming's state and federal duties, and thus to create impossibility preemption. We must go no further. We should not inquire into the likelihood that the FAA might have approved a proposed change.<sup>52</sup>

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<sup>51</sup> *Cf. PLIVA*, 564 U.S. at 620.

<sup>52</sup> *PLIVA*, 564 U.S. at 623 (“[P]re-emption analysis should not involve speculation about ways in which federal agency and third-party actions could potentially reconcile federal duties with conflicting state duties. When the ‘ordinary meaning’ of federal law blocks a private party from independently accomplishing what state law requires, that party Maj. Op. at 24 n.11. has established pre-emption.”).

The Majority disagrees, finding that *Wyeth* provides the applicable standard and that we must thus consider whether Lycoming offered sufficient evidence that the FAA would have rejected the proposed change. But, in support of its application of *Wyeth*, the Majority fails to identify any provision in the federal regulations that would have allowed Lycoming to independently implement the proposed change without prior FAA approval. Quite the contrary, the Majority candidly acknowledges that the FAA does not have a CBE-type process.<sup>53</sup> That should be the end of our *Wyeth* inquiry. But instead, the Majority relies on “the nature of FAA regulations and Lycoming’s interactions with the FAA” to support its conclusion that Lycoming “could have . . . adjusted its design” and that *Wyeth*’s standard should thus apply.<sup>54</sup> In particular, the Majority points out that Lycoming has amended its type certificate for the O-320 engine a number of times over the years and that Lycoming had been “in communication with the FAA” about the carburetor design and reports of loose bolts.<sup>55</sup>

I take no issue with those statements to the extent that they are simply factual assertions.<sup>56</sup> But the Majority errs in concluding that those facts establish that *Wyeth* alone supplies the applicable standard for conflict preemption analysis in this case. Reading the Supreme Court’s impossibility preemption decisions in concert, the key initial

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<sup>53</sup> Maj. Op. at 24 n.11.

<sup>54</sup> Maj. Op. at 24.

<sup>55</sup> Maj. Op. at 23.

<sup>56</sup> It bears noting that nothing in the record suggests these amendments occurred without prior FAA approval. *See* J.A. 561. *See also* J.A. 559-61 re list of applications for and revised type certificates issued by FAA for the Engine.

question for impossibility is not whether a manufacturer has engaged in dialogue with a federal agency regarding possible design changes or even whether the agency might ultimately approve a proposed change at the conclusion of such dialogue. Rather, as previously stated, we must start with the question whether the manufacturer could have implemented the change independently, *i.e.*, without prior agency approval. This issue was, in fact, addressed in *PLIVA*, where the Supreme Court expressly contemplated whether a preemption defense was foreclosed by the type of manufacturer-agency dialogue that the Majority now relies upon. There, the Court assumed that a generic drug maker had a duty to warn the FDA of safety problems and could have proposed and asked the FDA to approve a new warning label for both the generic and brand-name drug.<sup>57</sup> But that fact did not defeat preemption or even trigger the *Wyeth* inquiry because the manufacturer still could not independently implement the proposed change without prior agency approval.<sup>58</sup> The case here is similar.

Likewise, the Majority may well be correct that “the FAA wanted Lycoming to address the situation”<sup>59</sup> of loosening bolts in the Engine’s carburetor. But that alone does not negate impossibility, because nothing in the record or FAA regulations suggests that Lycoming could have implemented any design changes without prior FAA approval. On the contrary, the natural reading of the regulations is that FAA approval is required for any change,

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<sup>57</sup> *PLIVA*, 564 U.S. at 616-17.

<sup>58</sup> *Id.* at 619-20.

<sup>59</sup> Maj. Op. at 26.

major or minor.<sup>60</sup> In fact, it would be logical to infer that Lycoming and the FAA engaged in dialogue about bolt-loosening precisely because both parties recognized that FAA approval would be required before Lycoming could implement any remedial design change. That Lycoming “has made numerous changes to the type certificate for its O-320 engine”<sup>61</sup> also does not alter the impossibility analysis. As outlined above, changes to a type certificate, whether minor or major, require prior FAA approval, and the record reflects such approval for the other changes that Lycoming made.<sup>62</sup>

Ultimately, although this case involves a detailed regulatory regime governing a complex industry, the correct result of this appeal is dictated by a few key facts. Under FAA regulations, Lycoming, as the original manufacturer of and type certificate holder for the Engine, had two means of implementing changes to its design—the major change process and the minor change process. The plain language of the regulations and the record in this case show that, under either process, some form of FAA approval would have been required before Lycoming could have implemented the design change proposed by Sikkelee. Thus, the answer to the fundamental question of impossibility preemption—could Lycoming independently do under federal law what state law allegedly required of it—is clearly no. The Supreme Court instructs

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<sup>60</sup> *See supra* section II.

<sup>61</sup> Maj. Op. at 23.

<sup>62</sup> J.A. 559-61 (Type Certificate Data Sheet No. E-274) (listing applications for and issuance of new or revised type certificates for O-320 engine models between 1952 and 2003).

that such an answer supports a finding of impossibility preemption and requires that our inquiry go no further.

#### IV.

For the reasons stated above, I conclude that the Majority has erred by relying upon *Wyeth* in isolation and by expanding its inquiry to consider whether Lycoming presented clear evidence that the FAA would not have approved the design change now proposed by Sikkelee. FAA regulations prohibited Lycoming from independently implementing changes to the design of the Engine without prior FAA approval. As such, pursuant to *PLIVA* and *Bartlett*, Lycoming has established a valid impossibility preemption defense. I therefore respectfully dissent in part from the Majority opinion and would affirm the judgment of the District Court.

**APPENDIX B**

UNITED STATES COURT OF APPEALS  
FOR THE THIRD CIRCUIT

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No. 17-3006

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JILL SIKKELEE, individually and as personal representative of the estate of David Sikkelee, deceased,  
Appellant

v.

PRECISION AIRMOTIVE CORPORATION; PRECISION AIRMOTIVE LLC, individually and as Successor-in-Interest to Precision Airmotive Corporation; BURNS INTERNATIONAL SERVICES CORPORATION, individually and as Successor-in-Interest to Borg-Warner Corporation, and Marvel-Schebler, a Division of Borg-Warner Corporation; TEXTRON LYCOMING RECIPROCATING ENGINE DIVISION, a Division of Avco Corporation; AVCO CORPORATION; KELLY AEROSPACE, INC., individually and Joint Venturer and as Successor-in-Interest; KELLY AEROSPACE POWER SYSTEMS, INC., individually and as Joint Venturer and Successor-in-Interest, also known as Electrosystems, Inc., also known as Confuel, Inc.; ELECTROSYSTEMS, INC., individually and as Joint Venturer and as Successor-in-Interest, also known as Consolidated Fuel Systems, Inc., also known as Confuel, Inc.; CONSOLIDATED FUEL SYSTEMS, INC., also known as Confuel, Inc.

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(M.D. Pa. No. 4-07-cv-00886)

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SUR PETITION FOR PANEL REHEARING

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Present: SHWARTZ, ROTH, and RENDELL, Circuit Judges.

The petition for rehearing filed by Appellees in the above-entitled case having been submitted to the judges who participated in the decision of this Court, it is hereby ORDERED that the petition for rehearing by the panel is denied.

BY THE COURT,

s/Patty Shwartz  
Circuit Judge

Dated: December 11, 2018

Lmr/cc: David I. Katzman  
Tejinder Singh  
Amy M. Saharia  
Kannon K. Shanmugam  
Catherine B. Slavin  
Jeffrey R. White  
Daryl E. Christopher  
Lauren L. Haertlein



**APPENDIX C**

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

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JILL SIKKELEE, Individually and as Personal Representative of the ESTATE OF DAVID SIKKELEE,  
deceased,  
Plaintiff,

v.

AVCO CORPORATION, *et al.*,  
Defendants.

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No. 4:07-CV-00886

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Filed: August 3, 2017

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**MEMORANDUM OPINION**

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BRANN, United States District Judge.

A weightless innocence so often attends our daydreams of flight. As the American aviator John Gillespie Magee, Jr., loftily described it, pilots “dance[ ] the skies on laughter-silvered wings,” soaring “high in the sunlit silence.”<sup>1</sup> Sadly, it would seem that Magee’s “high untrespassed sanctity of space” must belong to a universe far

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<sup>1</sup> John Gillespie Magee, Jr., “High Flight” (1941).

away from the dark origins and convoluted history of this case.

Initiated in 2007, two years after David Sikkelee, Jr., died in a fiery plane crash, the instant litigation has charted an eventful path full of intricate factual, legal, and regulatory detours. At its core is an allegation by the Plaintiff that her deceased husband's plane lost power when screws that held the engine's carburetor together came loose. AVCO Corporation's Lycoming Engine division (hereinafter "Lycoming"), who filed the two pending motions, did not manufacture or install the carburetor that powered the aircraft on that fateful day.

In January 2013, the matter was reassigned to me, and in September 2014, relying upon *Abdullah v. American Airlines, Inc.* 181 F.3d 363 (3d Cir. 1999), I held that Plaintiff's state tort claims against Lycoming were field preempted by Federal Aviation Administration (FAA) regulations. *Sikkelee v. Precision Airmotive Corp.*, 45 F. Supp. 3d 431 (M.D. Pa. 2014). In April 2016, during the ensuing interlocutory appeal, the United States Court of Appeals for the Third Circuit repudiated *Abdullah's* breadth but instructed me to consider whether Plaintiff's state law claims might nevertheless be conflict preempted. *Sikkelee v. Precision Airmotive Corp.*, 822 F.3d 680 (3d Cir. 2016). Thereafter, in November 2016, the Supreme Court of the United States denied Lycoming's petition for a writ of certiorari. *AVCO Corp. v. Sikkelee*, 137 S. Ct. 495 (2016).

On remand, Lycoming has submitted two new motions for summary judgment. One motion challenges the extent of Lycoming's liability for third-party modifications; the other sounds in recent conflict preemption jurisprudence.

I conducted oral argument on May 19, 2017 and received supplemental briefing.

Lycoming has on numerous occasions vociferously challenged a prior decision in this case that exposed it to liability for subsequent modifications made by an after-market parts manufacturer. That holding was reached by my colleague, the Honorable John E. Jones III, to whom this matter was originally assigned. In particular, Judge Jones concluded that Lycoming, a type certificate holder, could be held liable for modifications made by the third-party manufacturer who overhauled the engine's carburetor. In Judge Jones's view, "while Lycoming's hands were not physically present in the plant during the manufacture or in the shop during the overhaul, its invisible hands were undeniably present." ECF No. 299 at 17.

Although I have previously expressed skepticism at this holding, it is evident now, with the benefit of thorough argument, that this expanded notion of liability is unsupported by the law and is partially responsible for sending this litigation into an academic tailspin. One might say that since I was first assigned to this matter, "I have acquired new wisdom . . . or, to put it more critically, have discarded old ignorance." *Ring v. Arizona*, 536 U.S. 584, 611 (2002) (Scalia, J., concurring). Now having gained familiarity with the applicable regulations, the FAA approvals, and the production history at issue here, I must conclude that Lycoming's connection to the allegedly defective component was too far removed to subject it to tort liability. Indeed, the third-party manufacturer, without Lycoming's knowledge or approval, acted pursuant to its own aftermarket parts agreement when it overhauled the carburetor in a manner that Lycoming could never have

foreseen. Summary judgment is warranted on that ground alone.

Further, by arguing that those subsequent carburetor modifications were attributable to Lycoming because the third-party manufacturer was bound by regulation to follow the type certificate holder's designs, Plaintiff has chanced upon a second reason why her claims must fail: they are conflict preempted. Because it was impossible for Lycoming and the aftermarket parts manufacturer to unilaterally comply with both state tort law and federal regulations, as in *Mutual Pharmaceutical Co. v. Bartlett*, 133 S. Ct. 2466 (2013), and *PLIVA, Inc. v. Mensing*, 564 U.S. 604 (2011), I will grant summary judgment in Lycoming's favor on this independent ground.

## I. BACKGROUND

As the late Honorable Robert H. Jackson, Associate Justice of the Supreme Court, once remarked, "Planes do not wander about in the sky like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel and under an intricate system of federal commands." *Northwest Airlines v. State of Minnesota*, 322 U.S. 292, 303 (1944). Justice Jackson's observation sprang from "the national responsibility for regulating air commerce" and reinforced the notion that the "air is too precious as an open highway to permit it to be owned" by local interests. *Id.* "Local exactions and barriers to free transit in the air would neutralize its indifference to space and its conquest of time." *Id.*

Nearly three-quarters of a century later, Justice Jackson's prescient concerns about an excessively splintered airway regulatory system ring just as true. Indeed, those

animating federalist principles are precisely why Congress has established an administration whose sole mission is to assure the safety of our nation's skies. This background section examines the FAA's intricate framework of regulations, a fraction of whose existence Justice Jackson could only imagine in 1944. It then connects those regulations to the narrative of this case.

**A. In 1958, Congress Creates The Federal Aviation Agency And Bestows Upon It Dominion Over The Skies.**

Congress passed the Federal Aviation Act of 1958 to regulate aviation in a way that would “best foster its development and safety” and would ensure the “safe and efficient use of the airspace.” 85 Pub. L. No. 726, 72 Stat. 731. The Act created the position of an Administrator who would be appointed by the president to head the agency. 49 U.S.C. §§ 106(b). As part of his official role, the Administrator must prescribe, among other regulations, minimum standards for the design, construction, inspection, and overhauling of aircraft and their engines. *Id.* § 44701(a)(1)–(2).

Concerned with a lack of coordination amongst our nation's transportation systems, President Lyndon B. Johnson worked jointly with Congress to create the Department of Transportation (DOT) in 1967, at which time the Federal Aviation Agency was renamed the Federal Aviation Administration (FAA) and brought within the DOT's purview. *See A Brief History of the FAA.*<sup>2</sup> Since that time, the FAA has continued to fulfill its regulatory mission, and today, its nearly 50,000 employees make it the largest

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<sup>2</sup> [https://www.faa.gov/about/history/brief\\_history/](https://www.faa.gov/about/history/brief_history/).

subdivision within the DOT. *See FACT SHEET*.<sup>3</sup> Recent estimates suggest that more than 1.7 million passengers board a flight in the United States every day, and the FAA oversees more than 50 million commercial, military, and general aviation flights per year. *See id.*

Acting on the powers vested in it by Congress through the Federal Aviation Act and corresponding grants, the FAA has littered the books with a maze of regulations not readily traversed by most laypersons. Like other parallel regulatory regimes that have exposed state tort claims to conflict preemption defenses, *Mutual Pharmaceutical Co. v. Bartlett*, 133 S. Ct. 2466 (2013) (FDA drug regulations); *PLIVA, Inc. v. Mensing*, 564 U.S. 604 (2011) (same), the FAA's regulations are highly particularized, govern nearly every aspect of the regulated field, and are born from the twin aims of ensuring the safety of consumers and protecting the public. *See, e.g., Elsworth v. Beech Aircraft Corp.*, 691 P.2d 630, 636 (Cal. 1984) (FAA regulations protect not only "those who fly in airplanes" but also anyone "affected by their flight").

The FAA's regulations, found at Title 14 of the Code of Federal Regulations, are divided into three volumes, sixty-eight parts, and thousands more detailed subparts. *See Overview—Title 14 of the Code of Federal Regulations*, at 12–1.<sup>4</sup> Volume I contains those FAA regulations governing definitions (Parts 1 & 3); procedure (Parts 11, 13, 14, 15, 16, & 17); and aircrafts (Parts 21, 23, 25, 27, 29, 31, 33, 34, 35, 36, 39, 43, 45, 47 & 49). Volume II contains

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<sup>3</sup> [https://www.faa.gov/news/press\\_releases/news\\_story.cfm?newsID=12903](https://www.faa.gov/news/press_releases/news_story.cfm?newsID=12903).

<sup>4</sup> [https://www.faa.gov/regulations\\_policies/handbooks\\_manuals/aircraft/amt\\_handbook/media/FAA-8083-30\\_Ch12.pdf](https://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/amt_handbook/media/FAA-8083-30_Ch12.pdf).

the regulations governing airmen (Parts 61, 63, 65, & 67); airspace (Parts 71, 73, & 77); air traffic and operation (Parts 91, 93, 95, 97, 99, 101, 103, & 105); and air carriers (Parts 119, 121, 125, 129, 133, 135, 136, 137, & 139). Volume III covers flight schools (Parts 141, 142, 145 & 147); airports (Parts 150, 151, 152, 155, 156, 157, 158, 161, & 169); navigational facilities (Parts 170 & 171); administrative regulations (Parts 183, 185, 187, 189, & 193); and insurance (Part 198). *Id.* at 12–2. In fact, the FAA typically only assigns odd numbers to its major batches of regulations in order to leave room for new regulations that will eventually fill in the even-numbered gaps. *See id.* at 12–3.

According to an FAA letter brief submitted to the Third Circuit in this case, the FAA has instituted a three-stage process to ensure that all new aircrafts components comply with established design standards. *See* FAA Ltr. Br., ECF No. 534-1, at 4 (hereinafter “FAA Ltr. Br.”). These three steps are: (1) type certification; (2) production certification; and (3) airworthiness certification. For the purpose of resolving the pending motions, I will review the pertinent regulations with an emphasis on those comprising type certification. Then, I will discuss how a type certificate might be amended and how aftermarket manufacturers who do not possess the type certificate nevertheless may produce replacement parts by way of a “Parts Manufacturer Approval.” Finally, I will explain how those regulations apply to this dispute.

**B. Obtaining A Type Certificate Is An Onerous Process Requiring Numerous Submissions That Precisely Detail The Specifications Of The Proposed Aircraft, Its Engine, And Related Components.**

The first step in production requires a manufacturer who wishes to produce a new aircraft, aircraft engine, or propeller to obtain a “type certificate.” A type certificate confirms that the aircraft or its component is properly designed and manufactured, and satisfies all applicable regulatory standards. *See id.* *See also* 49 U.S.C. § 44704(a); 14 C.F.R. § 21.21. A manufacturer must obtain a type certificate before producing a new aircraft or engine, unless a type certificate already exists for the precise design or it has a licensing agreement to produce the aircraft or engine with the type certificate holder. 14 C.F.R. § 21.6.

All type certificate applications are required to be completed on a form and in a manner prescribed by the FAA. *Id.* § 21.15. They are submitted to the appropriate aircraft certification office and must be accompanied by a three-view drawing of the aircraft, available preliminary basic data, a description of the engine design features, the engine operating characteristics, and the proposed engine operating limitations. *Id.* § 21.15. A type certificate application must demonstrate compliance with all applicable regulatory requirements, must provide the FAA the means by which such compliance has been shown, and must also supply a statement certifying as much. *Id.* § 21.20.

An applicant may not obtain a type certificate unless the FAA Administrator expressly finds that the proposed aircraft, aircraft engine, propeller, or appliance is



“properly designed and manufactured, performs properly, and meets the regulations and minimum standards.” 49 U.S.C. § 44704(a). Indeed, 14 C.F.R. § 21.21 (entitled “Issue of type certificate: normal, utility, acrobatic, commuter, and transport category aircraft; manned free balloons; special classes of aircraft; aircraft engines; propellers”) instructs applicants as follows:

An applicant is entitled to a type certificate for an aircraft in the normal, utility, acrobatic, commuter, or transport category, or for a manned free balloon, special class of aircraft, or an aircraft engine or propeller, if—

...

- (b) The applicant submits the type design, test reports, and computations necessary to show that the product to be certificated meets the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements of this subchapter and any special conditions prescribed by the FAA, and the FAA finds—
  - (1) Upon examination of the type design, and after completing all tests and inspections, that the type design and the product meet the applicable noise, fuel venting, and emissions requirements of this subchapter, and further finds that they meet the applicable airworthiness requirements of this subchapter or that any airworthiness provisions not complied with are com-

pensated for by factors that provide an equivalent level of safety; and

- (2) For an aircraft, that no feature or characteristic makes it unsafe for the category in which certification is requested.

As that regulation makes clear, the FAA must receive a number of submissions, including the type design, test reports, and computations that show that the product for which certification is sought meets all applicable regulatory standards. This process is often “intensive and painstaking”: a commercial aircraft manufacturer seeking a new type certificated aircraft might submit 300,000 drawings, 2,000 engineering reports, and 200 other reports in addition to completing approximately 80 ground tests and 1,600 hours of flight tests. *Sikkelee*, 822 F.3d at 684–85 (citing *United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 805 n. 7 (1984)).

The “type design” portion of the type certificate application is governed by 14 C.F.R. § 21.31. Under that regulation, the type design must consist of: (1) drawings and specifications; (2) structural information on materials and dimensions; (3) a showing of continued airworthiness; (4) inspection and preventative maintenance programs; and (5) any other information relevant to airworthiness, noise, fuel venting, and emissions determinations. In addition, the type certificate applicant must submit to the FAA a statement confirming that the manufactured aircraft engine or propeller presented for certification in fact conforms to its submitted type design. *Id.* § 21.53(a).

The concept of “airworthiness” as the type design regulation refers to it, is explained in greater detail at 14 C.F.R. § 23 for aircrafts and at 14 C.F.R. § 33 for aircraft engines. For instance, § 21.23 (aircrafts) contains subparts on flight (§§ 23.21–23.255); structure (§§ 23.301–23.575); design and construction (§§ 23.601–23.871); powerplant (§§ 23.901–23.1203); equipment (§§ 23.1301–23.1461); and operating limitations and information (§§ 23.1501–23.1589).

As to an engine specifically, the airworthiness regulations require that its materials be established on the basis of experience or tests and conform to approved specifications that ensure their strength and continued durability. *Id.* § 33.15. A separate regulation provides that an engine’s design and construction “must minimize the development of an unsafe condition of the engine between overhaul periods.” *Id.* § 33.19(a). Other regulations governing engine construction in general pertain to engine mounting attachments (§ 33.23) and engine instrument connections (§ 33.29).

Fueling mechanism are regulated in part by 14 C.F.R. § 33.35(a), which requires that a reciprocating or piston engine’s fuel injection system “be designed and constructed to supply an appropriate mixture of fuel to the cylinders throughout the complete operating range of the engine under all flight and atmospheric conditions.” One regulation in that subpart also requires that the engine be designed and constructed in such a way that avoids excessive stress or vibrations. *Id.* § 33.33. Another regulation also governs an engine’s lubrication system. *Id.* § 33.39.

In addition to the type design and its components, all type certificate applicants must permit the FAA to conduct any necessary inspections, flight tests, and ground

tests necessary to show that the proposed product satisfies all applicable regulations. *Id.* § 21.33. These inspections ensure, among other things, that (1) the proposed product complies with the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements; (2) materials and products conform to the specifications in the type design; (3) parts of the products conform to the drawings in the type design; and (4) the manufacturing processes, construction and assembly conform to those specified in the type design. *Id.* § 21.33(b).

Once the applicable ground tests and compliance are completed, the applicant must conduct flight tests to determine whether there is reasonable assurance that the aircraft, its components, and its equipment are reliable and functioning properly. *Id.* § 21.35(b)(2). Such tests require upwards of 150 to 300 hours of flight time, depending upon whether the particular engine type was already incorporated in an earlier type certificated aircraft. *Id.* § 21.35(f)(1)–(2). By regulation, these flight tests must be conducted by a certified pilot. *Id.* § 21.37. The applicant must also submit all reports regarding calibration of testing instruments and allow the FAA to audit the accuracy of those reports. *Id.* § 21.39.

Importantly, every type certificate “is considered to include” the type design, the operating limitations, the certificate data sheet, and other applicable specifications submitted thereto. *Id.* § 21.41.

The type certificate data sheet, which § 21.41 explicitly incorporates into the type certificate itself, has been defined in various FAA orders as “the part of the type certificate documenting the conditions and limitations necessary to meet certification airworthiness requirements.”

See FAA Order 8110.4C, *Type Certification*, at 68 (hereinafter “FAA Type Certification Order”).<sup>5</sup> The type certificate data sheet “provid[es] a concise definition of the configuration of a type-certificated product” and “is necessary to enable any person to easily find information about a specific product.” *Id.* In other words, it “records the type certification data of a product (such as control surface movement limits, operating limitations, placards, and weight and balance) that may also be available in the flight manual or maintenance manual in accordance with FAA Order 8110.4.” See FAA Order 8110.121, *Type Certificate Data Sheet Notes*, at 2 (hereinafter “FAA TCDS Order”).<sup>6</sup> Although 14 C.F.R. § 21.41 does not separate the type certificate data sheet into a main section and a notes section, the FAA has elected to do so for clarification and standardization purposes. *Id.*

A type certificate remains effective until it is surrendered, suspended, revoked, or a termination date set by the FAA has passed. *Id.* § 21.51. Holders of type certificates and other related production authorizations have a continuing duty to report known defects, failures, and malfunctions to the extent that they result in any of a number of enumerated occurrences. *Id.* § 21.3.

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<sup>5</sup> [https://www.faa.gov/documentLibrary/media/Order/FAA\\_Order\\_8110\\_4C\\_Chg\\_6.pdf](https://www.faa.gov/documentLibrary/media/Order/FAA_Order_8110_4C_Chg_6.pdf).

<sup>6</sup> [https://www.faa.gov/documentLibrary/media/Order/FAA\\_Order\\_8110\\_121.pdf](https://www.faa.gov/documentLibrary/media/Order/FAA_Order_8110_121.pdf).

**C. A Type Certificate Holder May Not Independently Change A Type Certificate’s Type Design Details Without First Obtaining FAA Approval.**

A type certificate holder may not implement type design changes absent the FAA first explicitly approving such modifications. Command of several of the regulations’ terms of art is required to see why this is so. The FAA has set forth two types of modifications relevant here: (1) alterations and (2) type design changes.<sup>7</sup> The regulations conceive of type design changes as a specific subset of alterations that would modify the type design. Recall that the regulations make clear that the “type design” includes all pertinent drawings and specifications necessary to define the configuration and the design features of the product; information on dimensions, materials, and processes necessary to define the structural strength of the product; and the required airworthiness criteria. 14 C.F.R. § 21.31.

To add an additional layer of classification, the regulations also define all alterations and type design changes as “major” or “minor.” The definition of a major alteration

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<sup>7</sup> The regulations name a third category: “repairs,” which mirror alterations. However, because Plaintiff’s proposed modifications constitute alterations and not repairs, I focus on the former. *See* FAA Order 8110.37E, *Designated Engineering Representative (DER) Handbook*, <https://www.faa.gov/documentLibrary/media/Order/8110.37E.pdf>, at 27 (hereinafter “FAA DER Handbook”). (“A *repair* is the restoration of a damaged product or article accomplished in such a manner and using material of such quality that its restored condition will be at least equal to its original or properly altered condition. . . . An *alteration* is the modification of an aircraft from one sound state to another sound state; the aircraft meets the applicable airworthiness standards both before and after the modification.”).

is not coextensive with that of a major type design. Consequently, a major alteration need not also be a major type design change. This background is important because the particular form of FAA approval necessary depends upon whether the proposed modification is a major or minor alteration and on whether it constitutes a major or minor type design change (if it constitutes a type design change at all).

To be clear from the outset, the regulations and the FAA's interpretation of its own regulations make explicit that FAA approval is required to implement all type design changes, regardless of whether they are major or minor. As the FAA has previously explained to our Court of Appeals during this litigation, "Certain 'minor' changes, defined by regulation, may not require an amended or supplemental type certificate, but are still subject to approval by the FAA." FAA Ltr. Br. at 5 (citing 14 C.F.R. § 21.95). "[N]o matter what role a manufacturer plays in the type-certification process, the decision to approve the type design ultimately rests with the FAA." FAA Ltr. Br. at 15. "This is true even for 'minor' type design changes, 14 C.F.R. § 21.93(a), which are approved under a method acceptable to the FAA." *Id.* Thus, as I will discuss more fully herein, to the extent that Plaintiff's tort claims are premised on a modification that would have constituted a type design change, her tort claims fail on conflict preemption grounds.

I note that the FAA's interpretation of its own regulations, as provided in the cited Letter Brief, is not plainly erroneous or inconsistent with the regulations' text. *See Auer v. Robbins*, 519 U.S. 452 (1997). To begin with, 14 C.F.R. § 21.93(a) provides that a "minor change" has no appreciable effect on the weight, balance, structural

strength, reliability, operational characteristics, or other characteristics of the aircraft.<sup>8</sup> All other changes are major changes. *Id.* The regulations further clarify that major changes in type design require submission all substantiating and descriptive data for inclusion in the type design and compliance statement, all of which is subject to FAA approval. 14 C.F.R. § 21.97.<sup>9</sup>

Minor type design changes may be approved “under a method acceptable to the FAA.” 14 C.F.R. § 21.95. The FAA has clarified that implementation of minor type design changes still requires FAA approval. FAA Ltr. Br. at 5, 15. This is true in part because not only must the applicant choose a method acceptable to the FAA to effectuate minor type design changes, but “at a minimum,” such minor changes also must be “recorded in the descriptive

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<sup>8</sup> The regulations do not define “appreciable.” I note that Merriam-Webster defines the term as “capable of being perceived or measured.”

<sup>9</sup> A manufacturer must obtain a new type certificate when it proposes any change in design, power, thrust, or weight that is so extensive that the FAA believes a substantially renewed investigation of compliance is required. 14 C.F.R. § 21.19. The same is true of type design changes that appreciably affect those factors. *Id.* § 21.93(a). Such changes may be implemented via the issuance of an amended or supplemental type certificate. *Id.* § 21.113(a). If a manufacturer does not hold the type certificate for a product but wishes to alter that product by introducing a major change in type design that does not require an application for a new type certificate under § 21.19, that person must apply to the appropriate aircraft certification office for a supplemental type certificate. *Id.* §§ 21.85; 21.113(b). Consequently, “[e]ven where a manufacturer identifies and reports a defect, it may not unilaterally make a major change to its preapproved design; instead, the FAA must either preapprove such a change or issue an airworthiness directive that provides legally enforceable instructions to make the product safe.” *Sikkelee*, 822 F.3d at 704 n.21.



data, with the FAA and the applicant determining an acceptable process for approving the data supporting the type design changes.” FAA DER Handbook at 12. The FAA’s interpretation of its own regulations thus makes clear that even though major type design changes often require more formalized methods of review, minor type design changes still must be approved before their implementation—albeit through more informal means as appropriate.

Relatedly, major and minor alterations are defined at 14 C.F.R. § 1.1. A major alteration is any alteration not listed in the aircraft, aircraft engine, or propeller specifications that (1) might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or that (2) is not performed according to accepted practices or cannot be performed by elementary operations. *Id.* All other alterations are minor alterations. *Id.* Appendix A to 14 C.F.R. § 43 provides as follows:

**(a) Major Alterations—**

...

- (2) Powerplant major alterations. The following alterations of a powerplant when not listed in the engine specifications issued by the FAA, are powerplant major alterations:
  - (i) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine

parts which requires extensive rework and testing of the engine.

- (ii) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the Administrator.
- (iii) Installation of an accessory which is not approved for the engine.
- (iv) Removal of accessories that are listed as required equipment on the aircraft or engine specification.
- (v) Installation of structural parts other than the type of parts approved for the installation.
- (vi) Conversions of any sort for the purpose of using fuel of a rating or grade other than that listed in the engine specifications.

When a type certificate holder makes a major alteration or delegates implementation of a major alteration to an authorized party, the alteration must be completed “in accordance with technical data approved by the Administrator.” *Id.* § 379(b). The same requirement applies to certificated repair stations who perform major alterations. *Id.* § 145.201(c)(2). “Approved data” used to make major alterations means data approved by the FAA or any person to whom the FAA has delegated its authority as to the alteration. FAA Order 8300.16 CHG 1, at 13 (hereinafter

“FAA Data Approval Order”).<sup>10</sup> “All data used to substantiate a major repair or alteration, regardless of the source, must be approved before being used.” *Id.* at 13–14.

In contrast, to perform minor alterations, the applicant or an authorized third-party performs the alteration using data “acceptable to the FAA” and must document it in maintenance records. *Id.* at 1. “Acceptable data” means data acceptable to the FAA. *Id.* at 13. Although acceptable data does not “necessarily require FAA review and acceptance prior to” use, the authorized party must be able to demonstrate that the data “meets all applicable regulatory requirements,” and the FAA may challenge that data in a subsequent enforcement action. *Id.*

In that same Order describing the types of data necessary for major versus minor alterations, the FAA explained:

The use of the term(s) major and minor are sometimes inappropriately applied or misunderstood. A major change in type design can be approved only by an ACO as an amended type certificate (TC) or supplemental type certificate (STC). A major alteration requires the use of FAA-approved technical data. Minor alterations only require data that is acceptable to the FAA. During an evaluation, an anticipated major alteration may be subsequently classified as a major change in type design, and thus would require application for an amended TC or STC.

*Id.* at 1.

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<sup>10</sup> [https://www.faa.gov/documentLibrary/media/Order/8300\\_16\\_CHG\\_1.pdf](https://www.faa.gov/documentLibrary/media/Order/8300_16_CHG_1.pdf).

The following flowchart supplied by the FAA on page 5 of its Data Approval Order assists in visualizing a manufacturer's regulatory burden when it seeks to implement an alteration:

**Figure 1. Alterations Flowchart**

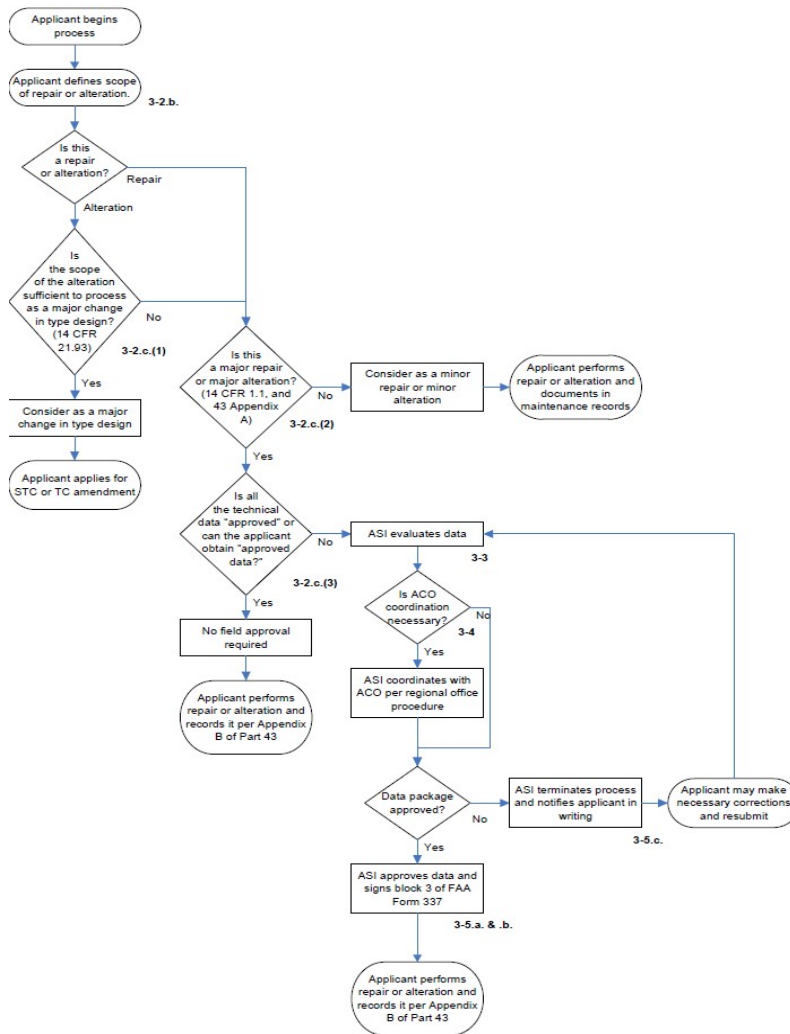


Table 1 below, categorizes the changes and regulatory burdens outlined by the regulations and the FAA's flowchart:

**Table 1. Regulatory Burden by Modification Type**

<b>Proposed Modification</b>		<b>Regulatory Burden</b>	<b>Source</b>
<b>Major Alterations/Repairs</b>	<b>Major Type Design Change</b>	must submit all substantiating and descriptive data for inclusion in the type design and compliance statement; subject to FAA approval	14 C.F.R.§ 21.97
	<b>Minor Type Design Change</b>	may be approved under a method acceptable to the FAA; subject to FAA approval; requires the submission of "approved data"	14 C.F.R.§ 21.95 FAA Ltr. Br. At 5, 15 14 C.F.R.§ 121.379(b) 14 C.F.R.§ 145.201(c)(2)
	<b>No Type Design Change</b>	Requires the submission of "approved data"	14 C.F.R.§ 121.379 14 C.F.R.§ 145.201(c)(2)
<b>Minor Alterations/Repairs</b>	<b>Major Type Design Change</b>	must submit all substantiating and descriptive data for inclusion in the type design and compliance statement; subject to FAA approval	14 C.F.R.§ 21.97
	<b>Minor Type Design Change</b>	may be approved under a method acceptable to the FAA; subject to FAA approval	14 C.F.R.§ 21.95 FAA Ltr. Br. at 5, 15
	<b>No Type Design Change</b>	applicant performs repairs and documents in maintenance records using data "acceptable to the FAA"	FAA Order 8300.16 at 1

To summarize, FAA approval is required for any major or minor changes to an article's type design, as well as for any major alteration. A major alteration is one that "might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness,"

**D. Designated Engineering Representatives (DERs) Pose No Issue As To Conflict Preemption Because At All Times, DERs Act Within The Scope Of Their FAA Delegation And Ensure That FAA Regulations Are Followed.**

Recall that minor type design changes may be approved "under a method acceptable to the FAA." 14 C.F.R. § 21.95. One such method requires obtaining approval from an FAA designated engineering representative (DER). Plaintiff has suggested that changes implemented by way of DER approval would not be conflict preempted because some DERs may nominally be hired by private aircraft manufacturers. That argument is unavailing, however, because the FAA delegates to its DERs the power to approve modifications and otherwise act on the Administration's own behalf. Further, DER approval would likely have been insufficient to implement the proposed changes complained of here.

Section 44702(d) of the Federal Aviation Act (entitled "Delegation"), sets forth the authority for the FAA to empanel DERs to act as surrogates of the Administration, subject at all times to its regulations. That Section provides as follows:

- (1) Subject to regulations, supervision, and review the Administrator may prescribe, the Administrator may delegate to a qualified private person,

or to an employee under the supervision of that person, a matter related to—

- (A) the examination, testing, and inspection necessary to issue a certificate under this chapter; and
- (B) issuing the certificate.

The FAA exercises significant control over its DERs in the performance of their official duties. For instance, DERs are typically designated to serve one-year terms, capable of renewal for additional one-year periods at the FAA's discretion. *See Steenholdt v. FAA*, 314 F.3d 633, 635 (D.C. Cir. 2003) (Sentelle, J.) (citing 14 C.F.R. § 183.15). Moreover, a DER's designation may be rescinded should the FAA find that the DER has not properly performed his or her duties, is no longer necessary, or "for any reason the Administrator considers appropriate." 14 C.F.R. § 183.15; 49 U.S.C. § 44702(d)(2). In fact, the United States Court of Appeals for the District of Columbia Circuit has held that there are "no constraints" on the FAA's power to rescind a DER's official designation and that such a decision is not substantively reviewable under the Administrative Procedures Act. *Steenholdt*, 314 F.3d at 639.

Any decision by a DER may be appealed to the FAA. *Id.* § 44702(d)(3), and the FAA may, "on the Administrator's own initiative," reconsider a DER decision at any time. If the FAA believes that the DER's decision was "unreasonable or unwarranted," it can modify or reverse it *in toto*. *Id.*

A corresponding regulation, 14 C.F.R. § 183.29(a), explicitly provides that a DER may approve structural engineering information and other structural considerations only when he or she determines that the revisions comply with all applicable FAA regulations. At all times, the DER acts “within limits prescribed by and under the general supervision of the Administrator.” *Id.* As the FAA’s official DER Handbook explains, “Specific roles, authorized areas, and responsibilities of a DER are established by an agreement between the [FAA’s Air Craft Certification Office (ACO)] and the DER at the initial appointment of a DER, and, may be further limited for specific FAA projects.” FAA DER Handbook at 6. Moreover, DERs can only “find compliance” on behalf of the FAA “in the delegated functions and authorized areas for which they were appointed.” *Id.* at 11. The FAA also “retains authority and responsibility for establishing the certification basis” in such a way that “limits the data that a DER can approve.” *Id.* at 12.

That same Handbook characterizes the delegatory relationship between the FAA and its DERs as follows:

Title 49, United States Code, Section 44704 (49 U.S.C. § 44704) empowers the Administrator to issue type certificates (TC) for aircraft, aircraft engines, and propellers, and to specify regulations as applicable to the type certification function. Section 44702(d) authorizes the Administrator to delegate to a qualified private person, or to an employee under the supervision of that person, a matter related to the examination, testing, and inspection necessary to the issuance of such certificates. Delegations are limited in scope: all requirements,



policy, direction, and interpretations remain with the Administrator.

*Id.* at 6. Further, any DER “must follow the same procedures that an FAA engineer must follow when performing compliance finding functions, such as those appearing in Order 8110.4, Type Certification, Order 8110.42, Parts Manufacturer Approval Procedures, and Order 8110.54, Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents.” *Id.* The DER Manual explains that FAA pre-authorization is required “before exercising authority on any certification project,” and in all cases, the DER “must follow FAA policy in determining compliance with pertinent regulations.” *Id.* at 21.

According to the DER Handbook, major changes require specific DER authorization. FAA DER Handbook at 24. However, the FAA “may approve minor changes in type design under a method acceptable to the Administrator, per 14 CFR § 21.95.” *Id.* This method may include approval by a DER.” *Id.* Thus, even where a manufacturer believes that a proposed change is a minor one, it cannot take independent action to make that change—its implementation instead depends upon the DER’s approval and still remains subject to the FAA’s broad oversight at several junctures. This is consistent with the FAA’s interpretation of its own regulations. FAA Ltr. Br. at 5, 15.

Although the applicant may suggest to the DER whether it believes a type design change is major or minor, “the FAA retains final approval of that decision, and it cannot be delegated.” *Id.* at 12. To that end, the DER is not authorized to interpret FAA regulations. *Id.* Instead it “must be guided by” the FAA’s “existing policies, procedures, specifications, processes, and standards.” *Id.* In

addition, not only must the applicant choose a method acceptable to the FAA to effectuate minor changes, but “at a minimum,” minor changes also must be “recorded in the descriptive data, with the FAA and the applicant determining an acceptable process for approving the data supporting the type design changes.” *Id.*

The United States Court of Appeals for the Fifth Circuit has described DERs as “independent contractors” of the FAA, who although hired by the private aircraft industry to inspect private airplanes, may only approve modifications within their delegated authority by first ensuring that the changes would comply with the regulations. *Ligon v. LaHood*, 614 F.3d 150, 152 (5th Cir. 2010). “Stated differently, the DER process enables the FAA to appoint qualified private individuals to perform examinations, tests, and inspections required to determine compliance with FAA airworthiness regulations,” ensuring “that private industry clients who hire the DER are in compliance with FAA regulations for airworthiness standards.” *Jones v. LaHood*, 667 F. Supp. 2d 714, 715 (N.D. Tex. 2009), *aff’d sub nom. Jones v. United States*, 625 F.3d 827 (5th Cir. 2010). *See also Leica Geosystems, Inc. v. L.W.S. Leasing, Inc.*, 872 F. Supp. 2d 1191, 1195 (D. Colo. 2012) (explaining that a DER “works as a special liaison” between the FAA and private repair stations “to ensure that the modification is in compliance with FAA regulations”).

The Supreme Court has cast the surrogacy relationship between the FAA and its DER designees in the following light:

With fewer than 400 engineers, the FAA obviously cannot complete this elaborate compliance review

process alone. Accordingly, 49 U.S.C. § 1355 authorizes the Secretary to delegate certain inspection and certification responsibilities to properly qualified private persons. By regulation, the Secretary has provided for the appointment of private individuals to serve as designated engineering representatives to assist in the FAA certification process. 14 CFR § 183.29 (1984). These representatives are typically employees of aircraft manufacturers who possess detailed knowledge of an aircraft's design based upon their day-to-day involvement in its development. The representatives act as surrogates of the FAA in examining, inspecting, and testing aircraft for purposes of certification. 14 CFR § 183.1 (1984). In determining whether an aircraft complies with FAA regulations, they are guided by the same requirements, instructions, and procedures as FAA employees. FAA employees may briefly review the reports and other data submitted by representatives before certifying a subject aircraft.

*United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 807 (1984) (internal citations omitted).

As such, I note that a DER serves as a functional extension of the FAA, working to make the Administration's approval process more efficient—not to lower the applicable regulatory standards. As the FAA has explained, the DER's purpose is to “expedit[e] accomplishment of required demonstrations of compliance with applicable airworthiness standards” and to “reduce or eliminate delays in obtaining required certifications.” *Designated Airworthiness Representatives*, 48 Fed. Reg. 16176.

Neither is it significant that DERs may at times be nominally employed third-party aviation entities when they perform the regulatory role that the FAA has delegated them. “The FAA has stated that ‘when performing a delegated function, designees are legally distinct from and act independent of the organizations that employ them.’” *Swanstrom v. Teledyne Cont’l Motors, Inc.*, 531 F. Supp. 2d 1325, 1333 (S.D. Ala. 2008) (quoting *Establishment of Organization Designation Authorization Program*, 70 Fed. Reg. 59932, 59933 (Oct. 13, 2005)). In fact, the district court in *Swanstrom* described DERs as being “subject to administrative regulations by the FAA” and perhaps capable of being classified as “persons acting under a federal officer” for the purposes of federal removal jurisdiction. 531 F. Supp. 2d at 1332. Moreover, a failure by a DER to fulfill his obligations for the continued maintenance of FAA certification is “a failure as a DER, not as an individual airman.” *Duchek v. Nat’l Transp. Safety Bd.*, 364 F.3d 311, 316 (D.C. Cir. 2004). *See also Marcy v. FAA*, 936 F.2d 583 (10th Cir. 1991) (upholding substantive reasonableness of FAA’s decision not to renew DER’s commission when DER “exceeded the bounds of his authority in violation of agency regulations” by “continu[ing] to insist upon his own interpretation of the appropriate regulations”).

Further, the law is clear that courts must prioritize functional realities over cursory labels when analyzing employment or delegation relationships. In determining upon whose behalf an individual performs his work, “economic reality rather than technical concepts is to be the test.” *In re Enterprise Rent-A-Car Wage & Hour Employment Practices Litig.*, 683 F.3d 462, 467 (3d Cir. 2012) (Garth, J.). Thus, courts in the Third Circuit’s vicinage

must examine “the totality of the circumstances to determine the economic realities of the relationship” between two entities. *Jochim v. Jean Madeline Education Center of Cosmetology, Inc.*, 98 F. Supp. 3d 750, 757 (E.D. Pa. 2015).

These authorities thus point to one conclusion: DER approval is not independently undertaken by a private manufacturer unconstrained by FAA regulations. Rather, it is a type of delegated approval that will only be granted when compliance with the pertinent regulations is adequately shown, and the DER has acted within the scope of the Administration’s delegation.

**E. Parts Manufacturer Approval (PMA) Holders Who Submit Their Own Tests And Computations To The FAA Are Not Legally Bound By The Type Certificate Holder’s Design Decisions. Instead, Market Forces Incentivize Them To Produce Replacement Parts Sufficiently Close To Those Approved In The Type Certificate.**

In general, aircraft replacement components may not be produced except under the original type certificate or a production agreement, such as a Parts Manufacturer Approval (PMA). 14 C.F.R. §§ 21.8; 21.9(a)–(b). A type certificate may also be transferred or made available to third parties by way of a licensing agreement. 21 C.F.R. § 21.47(a). In that case, the type certificate holder must provide to the other party to the licensing agreement a formal written agreement acceptable to the FAA. *Id.* § 21.55. Lycoming had no licensing agreement with its co-defendants regarding the subject carburetor. Instead, the

co-defendants produced that part independently according to a separate agreement that they had reached with the FAA to which Lycoming was not a party.

Make no mistake about it: type certificate holders and PMA holders are not entities who sit at different stages of a unified supply chain. To the extent that earlier decisions of this Court have imputed as much, those decisions gave analysis of this relationship much too short shrift. To the contrary, type certificate holders and PMA holders are competitors, as are most original equipment manufacturers (OEMs) relative to their aftermarket counterparts. The hallmark of any such economic relationship is the trade-off between the quality of imitations and price savings. As it were, OEMs like type certificate holders were quick to disparage the quality of PMA parts when they were first authorized to sell aftermarket products. In fact, an early FAA Special Airworthiness Information Bulletin rebuked one OEM's attempt to analogize PMA holders to second-rate Elvis impersonators. *See* FAA SAIB: NE-08-40.<sup>11</sup> Tellingly, the FAA wrote the following in that very same bulletin: "The FAA understands that the [type certificate] holder has no knowledge or data about the PMA and STC parts installed in the product and, therefore, can only assess the airworthiness and systems effects of their parts installed in the product."

This strict dichotomy between OEMs like type certificate holders and aftermarket part producers like PMA holders is further illustrated by the regulations. Specifically, the first regulation in the subpart on PMAs makes

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<sup>11</sup> [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgSAIB.nsf/dc7bd4f27e5f107486257221005f069d/af4cd7d303d7ba628625749f006afbc7/\\$FILE/NE-08-40.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSAIB.nsf/dc7bd4f27e5f107486257221005f069d/af4cd7d303d7ba628625749f006afbc7/$FILE/NE-08-40.pdf).

clear that the section governs only the procedures for obtaining a PMA and the duties of PMA holders—it does not apply to the type certification process discussed above. 14 C.F.R. § 21.301.

Third-party manufacturers seeking PMA approval typically must obtain it by satisfying one of three methods: (1) identity with a licensing agreement; (2) identity without a licensing agreement; or (3) tests and computations. FAA Order 8120.22A, *Production Approval Process*, at 4-7–4-8 (hereinafter “PMA Order”).<sup>12</sup> The parties do not dispute that the PMA relevant to the pending motions was obtained by the tests and computations method. This is a particularly compelling fact when considering the extent of Lycoming’s liability for subsequent modifications, as the tests and computations method is the type of approval that relies least upon demonstrating an identity of structure between the type certificate holder’s article and the article for which the PMA is sought.

In the context of the PMA process, “identity” is a strict notion. It requires that the PMA applicant “show[ ] that the design of the article is identical to the design of an article that is covered under a type certificate.” 14 C.F.R. § 21.303(4). An applicant seeking approval by way of identity must certify that the proposed design “is identical in all respects” to the already-approved design. PMA Order at 4–8. That certification must be supported by data. *Id.* Further, identity with an existing PMA is insufficient to obtain approval for a subsequent PMA. *Id.* The previously approved design from which identity is

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<sup>12</sup> [https://www.faa.gov/documentLibrary/media/Order/FAA\\_Order\\_8120\\_22A.pdf](https://www.faa.gov/documentLibrary/media/Order/FAA_Order_8120_22A.pdf).

measured must have received type certification or an equivalent approval. *Id.*

Absent such a showing, the applicant must submit test reports and computations showing that the design of the article meets the applicable airworthiness requirements. *Id.* When a PMA applicant selects the tests and computations route, it must submit a “data package” indicating that “all design, materials, processes, test specifications, system compatibility, and interchangeability are supported by an appropriate test and substantiation plan for FAA review and approval.” *Id.* A tests and computations application must contain: (1) a compliance checklist as to the regulatory requirements; (2) test reports and computations; (3) a safety assessment; and (4) a continued operation safety plan. *See* FAA Advisory Circular 21.303-4, at 5 (hereinafter “PMA Advisory Circular”).<sup>13</sup>

The test reports and computations must “show that an article’s design meets the applicable airworthiness requirements of its respective product.” *Id.* at 7. Although the scope and rigor of each test may vary, the FAA requires that they at least include: (1) a safety assessment that characterizes the nature of the article and its effect on safety; (2) computations that show regulatory compliance or substantiate the comparative analysis; and (3) test results that show direct regulatory compliance or verify the comparative analyses. *Id.* At all times, the focus is on the proposed articles “purpose, physical characteristics,

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<sup>13</sup> [https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_21.303-4.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_21.303-4.pdf).



interfaces with its product, and not its failure modes impact safety.” *Id.*<sup>14</sup>

All of these tests are completed and summarized by the PMA applicant, not by the type certificate holder. *Id.* Indeed, the type certificate holder has no place in the PMA process. As counsel for Plaintiff, Tejinder Singh, Esquire, explained at oral argument, the relationship between a PMA article and a type-certificated one is primarily that of imitation motivated by economic incentives. As Mr. Singh described, “[T]he reason that [the PMA holder] designs things the way it does is not so much that the FAA . . . created a design for it to follow. It is that it wants to produce parts for use on [the type certificate holder’s] engines. Right. That’s its economic motivation.” Tr. of May

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<sup>14</sup> In an eleventh-hour argument, Plaintiff contended in supplemental briefing that the PMA holder in this case may have been exempted from obtaining FAA approval because it qualified as an FAA-certified “repair station.” This argument is unavailing for several reasons. First, the facts reveal that the subject carburetor overhaul discussed more fully herein was accomplished by virtue of the manufacturer’s status as a PMA holder, not in its capacity as a repair station as Plaintiff’s *post hoc* characterization might suggest. Second, no evidence in the record suggests that the carburetor overhaul would have qualified as a “repair” as the FAA regulations define that term, rather than as an “alteration.” To the contrary, it appears that the overhaul process began with the subject engine in an airworthy state. Third, FAA repair stations, similar to DERs, are bound by the scope of their FAA designation, and Plaintiff has presented no evidence that the FAA would have permitted this particular aftermarket manufacturer to institute such a change in engine design that would have allegedly had a significant impact on reliability and airworthiness under the guise of a “repair.” Finally, the record is silent as to when precisely this PMA holder became an FAA-certified repair station and whether that designation was active at the time of the 2004 overhaul.

19, 2017 Oral Arg., ECF No. 562, at 138:22–25 (hereinafter “May 2017 Tr.”). “The reason that manufacturers like [the PMA holder] get in the position they’re in is because they just to sell parts for these engines,” he continued. “[T]hey follow the OEM design as closely as possible.” *Id.* at 139:09–12.

In response to my follow-up question “So you are saying out of their own free will that they would follow the type certificate design? Not a mandate from someone?” Mr. Singh answered, “Well, it’s not their own—so the reason they seek the approval they seek, yes, is to conform to the type certificate and design. Yeah, that’s a decision they make.” *Id.* Mr. Singh would go on to explain:

[T]hat’s not how the PMA business works. If you want to make parts to put on [type-certificated] engines, you mimic the design as closely as possible. Right?

You may not want to have to source your parts from [the type certificate holder]. You may want to get them yourself cheaper. You may want to sell them to whoever [*sic*] you want to sell them to. All of that, as a matter of economics, makes perfect sense.

*Id.* at 101:19–25.

“Only the FAA or an [Organization Designation Authorization (ODA)] can issue PMA. DERs do not issue PMAs, but support the FAA approval process with findings within their limitations.” In addition, “a DER may only recommend approval within the scope of their authority for critical parts.” *Id.* FAA Order 8110.42D, *Parts Manufacturer Approval Procedures*, at 3–2 (hereinafter

“FAA PMA Procedures”).<sup>15</sup> A “critical part” is typically one “for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations section of a manufacturer’s maintenance manual or Instructions for Continued Airworthiness.” 14 C.F.R. § 45.15(c).

Further, Appendix A to the FAA’s DER Handbook (entitled “Limitations on DER Functions”) specifically states that “The following items are approved or issued only by the FAA: . . . (d) TCs, PMAs, . . . .” A provision in the Handbook directly reference the list of functions reserved to the FAA states: “[W]e generally reserve for ourselves the approval of items listed in appendix A, paragraph 2. If we do delegate, we should do it carefully and consistently as follows: . . . (4) PMA Design Approvals. A DER may make findings of identity or findings of compliance to the airworthiness requirements by test and computation that contribute to PMA design approvals, within the scope of delegation from the project ACO. The DER must be specifically authorized to make a finding of identity by the managing ACO.”

The process for implementing design changes to a PMA tracks those for type certificates and type design changes. In particular, 14 C.F.R. § 21.319(a) defines a “minor change” to a PMA as “one that has no appreciable effect” on its basis for approval. All other design changes are “major changes.” *Id.* For major changes, the PMA holder “must obtain FAA approval” before including the change in a renewed design. *Id.* 21.319(b). Minor changes to the basic design of a PMA “may be approved using a

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<sup>15</sup> <https://www.faa.gov/documentLibrary/media/Order/8110.42D.pdf>.

method acceptable to the FAA.” *Id.* Recall that “a method acceptable to the FAA” is the same language that the FAA has previously interpreted in this case to require FAA approval before independent action can be taken. FAA Ltr. Br. at 5, 15. The scope of a DER’s authority to implement post-PMA major repairs or alterations is limited in the same way as his authority to make those repairs and alterations to type certificates. FAA DER Handbook at 27.

**F. The Subject Engine Leaves Lycoming’s Hands In 1969, Only To Be Placed In Storage And Lost To Time.**

With that regulatory background in mind, I now turn to the operative facts of this case. The engine at issue, Lycoming model O-320-D2C, serial number L-6540-39A, was manufactured on August 13, 1969 by Lycoming Engines in Williamsport, Lycoming County, Pennsylvania. Expert Report of W. Jeffrey Edwards, ECF No. 384-1, at 57 (hereinafter “Edwards Report”). The engine was FAA certified under Lycoming’s E-274 Type Certificate on May 2, 1966.

On September 4, 1969, shortly after Neil Armstrong walked on the moon, Lycoming shipped the engine at the heart of this dispute to Beagle Aircraft, Ltd., a British aircraft manufacturer. Declaration of James R. Stabley, ECF No. 221-1, ¶ 3 (hereinafter “Stabley Decl.”). Beagle apparently planned to install the engine in a small, single-engine model known as the Beagle Pup. Edwards Report at 57-58; May Tr. at 45:18-21. However, for reasons unknown to the parties and likely lost to history, the engine was diverted to permanent storage before it ever was installed on any aircraft whatsoever. Edwards Report at

57–58; Stabley Report at 4. According to Mr. Edwards’s report, Beagle was dissolved late in 1969 and its assets were liquidated. Edwards Report at 57.

Lycoming has no record of the engine ever being returned to its factory for service after the original September 4, 1969 shipment. Stabley Decl. ¶ 6. In fact, the “Received for Repairs” section of Lycoming’s internal engine record form for the engine is entirely blank for that time period. ECF No. 221-1 Ex. A. Moreover, the parties suspect that the individual who signed certain of the earliest available records has either since died or has become *non compos mentis*. May 2017 Tr. at 10:14–19. Lycoming maintained no further records of the subject engine until after the accident was reported—it did not know where the engine was or even that it still existed.

At the time Lycoming manufactured and shipped the engine to Beagle in 1969, the engine was equipped with a Marvel-Schebler model MA-4SPA, setting 10-3678-32, carburetor with serial number A-25-15850. Stabley Decl. ¶ 4. The carburetor is critical to ensuring that the engine itself generates sufficient power for the aircraft, as the carburetor is responsible for delivering the appropriate mix of air and fuel for combustion in the engine. The specific workings of this carburetor are explained more fully herein.

**G. In 1998, After 29 Years In Storage, The Subject Engine Is Removed, Maintenance Is Performed, And The Engine Is Installed On An Aircraft For The First Time, Which Aircraft Did Not Even Exist In 1969.**

On September 1, 1998, the subject engine was removed from storage. Edwards Report at 59. One additional expert report submitted in this case points out that during this period of long-term storage, the engine at least twice would have missed its scheduled 12-year overhaul date and therefore would not be in compliance with Lycoming's service instructions. Expert Report of James R. Stabley, ECF No. 381-1, at 7 (hereinafter "Stabley Report"). The following maintenance was performed in 1998 as recorded in the engine's logbook:

- (a) "Removed 4 cylinders and prop flange crankshaft plug, inspection found new condition";
- (b) "Replaced cylinders using new Lycoming original kits";
- (c) "Replaced Prop Flange Bushings with new";
- (d) "Replaced Magnetos with Slick mag and harness kit";
- (e) "Install serviceable Alt Motorcraft 00 FF 103000 OH 1-23-95";
- (f) "Install new OH carb 10-5135 SN CK-611739"; and
- (g) "Installed new Lycoming Alt drive belt, new Champion REM40E plugs."

Edwards Report at 59.

By October 16, 1998, the engine was installed on a 1976 Cessna 172N bearing registration N73747 after a previous engine was removed from that same plane. *Id.* All of the maintenance work and reinstallation was performed by a third-party and not by Lycoming. *See id.* at 58–59. In fact, at that time, the engine was not even type certificated for installation in the 1976 Cessna 172N, presumably because the Cessna 172N did not exist at the time Lycoming obtained the original type certificate for its engine. *Id.* *See also* Tr. of Nov. 13, 2013 Fed. R. Evid. 104 Hr’g, ECF No. 459, at 229:19–21 (hereinafter “Nov. 2013 Tr.”); May 2017 Tr. at 22:13–18.

An exemplar of a Cessna 172N taken from Mr. Edwards’s Report is depicted below:

**Figure 2. Cessna 172N Exemplar**



All told, after having been left in storage for nearly three decades, the engine was removed, maintenance was performed, and it was installed on an aircraft for which it was not originally certified and for which supplemental approval was required. The owner of the Cessna at that time was listed as LaGrange Machine Shop, Inc., whose business address was 1706 Shorewood Drive, LaGrange, GA 30240. *See* ECF No. 234-1 at 6–7. Based on that same hoary 1998 maintenance record, the individual who performed the maintenance on behalf of LaGrange appears to be James O. Perry. *Id.* Nothing in the record indicates the LaGrange or Mr. Perry bore any relationship to Lycoming whatsoever. Until this litigation commenced, Lycoming likely never knew either existed.

Because the engine was not type certificated for installation on a Cessna 172N, Mr. Perry was required to submit an FAA Major Alteration Form 337, dated December 1, 1998. *See* ECF No. 234-1 at 6–7. That alteration was field approved by Peter J. Van Leeuwen, acting within the scope of his FAA inspection authorization. *See id.* at 6.<sup>16</sup> On the approval form, Mr. Van Leeuwen’s address is the same as LaGrange’s above.

Mr. Edwards’s report also suggests that the October 1998 installation did not comply with Lycoming Service Instruction 1009AM regarding overhaul periodicity and failed to address several outstanding airworthiness directives. Edwards Report at 59. This is “consistent with substandard maintenance,” Mr. Edwards wrote, as the aircraft was operated while not airworthy between October

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<sup>16</sup> “Field approval” is a method by which the FAA grants one-time approval for technical data used to accomplish a major repair or a major alteration on a single aircraft. FAA Data Approval Order at 3.



1998 and December 1998, and again between December 1998 and August 2004. *Id.*

According to Mr. Edwards, the reason that the engine required such immediate repair in December 1998 after its October 1998 installation was because it sustained a broken lifter body component after being placed into service for just 12.3 hours. *Id.* at 60. According to his report, “The engine had significant problems due to corrosion from its long-term storage, necessitating a complete disassembly and inspection.” *Id.*

**H. The Subject Aircraft Is Struck By Lightning, After Which Time And Without Lycoming’s Approval Or Knowledge, Kelly Aerospace Overhauls The Subject Carburetor And Replaces It With An Aftermarket Conglomerate, Pursuant To An Independent, Third-Party PMA From The FAA.**

In July 2004, the engine was removed after the aircraft was struck by lightning. Stabley Report at 4; Edwards Report at 61. The record is unclear as to whether the strike occurred while the aircraft was grounded or in flight and whether the aircraft was activated at the time of the strike. Nevertheless, from December 1998 until the July 2004 lightning strike, the aircraft flew for 1,262.6 problem-free hours. Stabley Report at 4; Edwards Report at 61.

At that time and while the engine was removed for inspection, Triad Aviation, Inc., overhauled the entire engine. Stabley Report at 4; Edwards Report at 62. During the overhaul, Triad removed the carburetor itself from the engine and sent it to Kelly Aerospace Power Systems to be overhauled separately. Kelly’s principal place of

business was Alabama. Second Am. Compl., ECF No. 205, at ¶ 4.

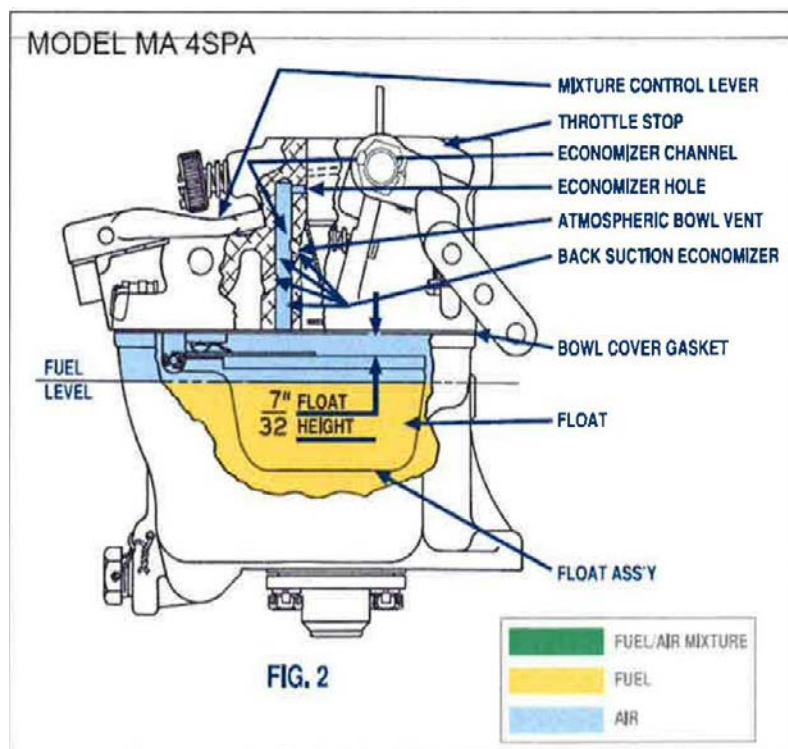
Under 14 C.F.R. § 43.2, “overhaul” is a regulatory term of art, which describes the process by which a component, using methods, techniques, and practices acceptable to the FAA, has been disassembled, cleaned, inspected, repaired as necessary, and reassembled. Overhaul methods must be conducted in accordance with FAA-approved standards and technical data, and adequately documented. *Id.* Component overhauls, for instance, follow a sort of Humpty-Dumpty process, whereby the components are disassembled and all of the internal parts are separated, repaired, or replaced, at which point the overhauling entity endeavors to put all of the pieces back together again. *See* Defendant Kelly’s Revised Responses to Lycoming’s Request for Admission, ECF No. 221-2 (hereinafter “Kelly Admissions”).

As discussed earlier, the carburetor is the engine component that meters the air-fuel mixture supplied to the engine so that the combustion process functions efficiently and powers the engine accordingly. During the November 2013 Rule 104 Hearing before this Court, Plaintiff’s expert, Donald E. Sommer, explained the significance of the carburetor to an aircraft engine, as well as how a carburetor like the one at issue typically functions. Sitting upright, the bottom of the carburetor connects to the air box from which it receives air, and the top of the carburetor connects to the engine into which it supplies metered air. Nov. 2013 Tr. at 22:20–23:04.

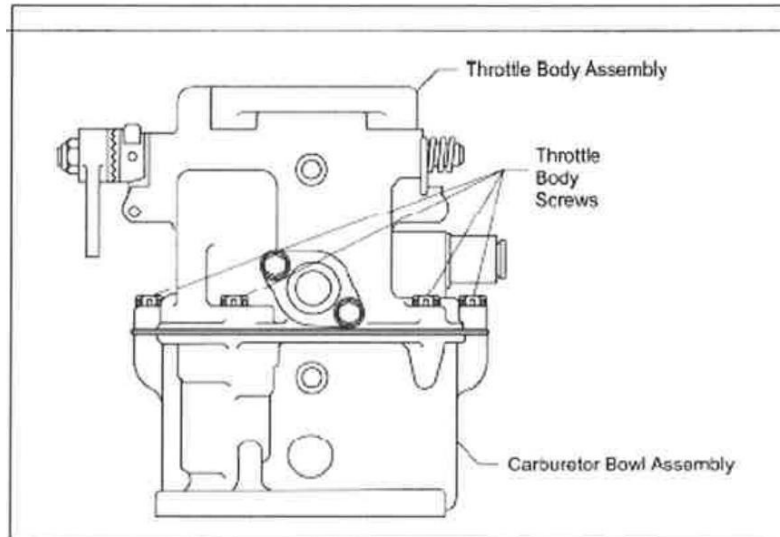
The bottom of the carburetor is called the float bowl because it is a bowl-shaped compartment that contains the fuel. *Id.* at 23:05–08. The top half of the carburetor is

known as the throttle body because it contains the throttle, the device that meters the flow of air and fuel to the engine. *Id.* at 23:08–11. The two parts parts—the float bowl and the throttle body—connected by four hex head screws and bolts. *Id.* at 23:11–13. Two schematics from Mr. Sommer’s report are depicted below for reference:

**Figure 3. MA-4SPA Carburetor Operational Schematic**



**Figure 4. MA-4SPA Carburetor Throttle Body Screws Schematic**

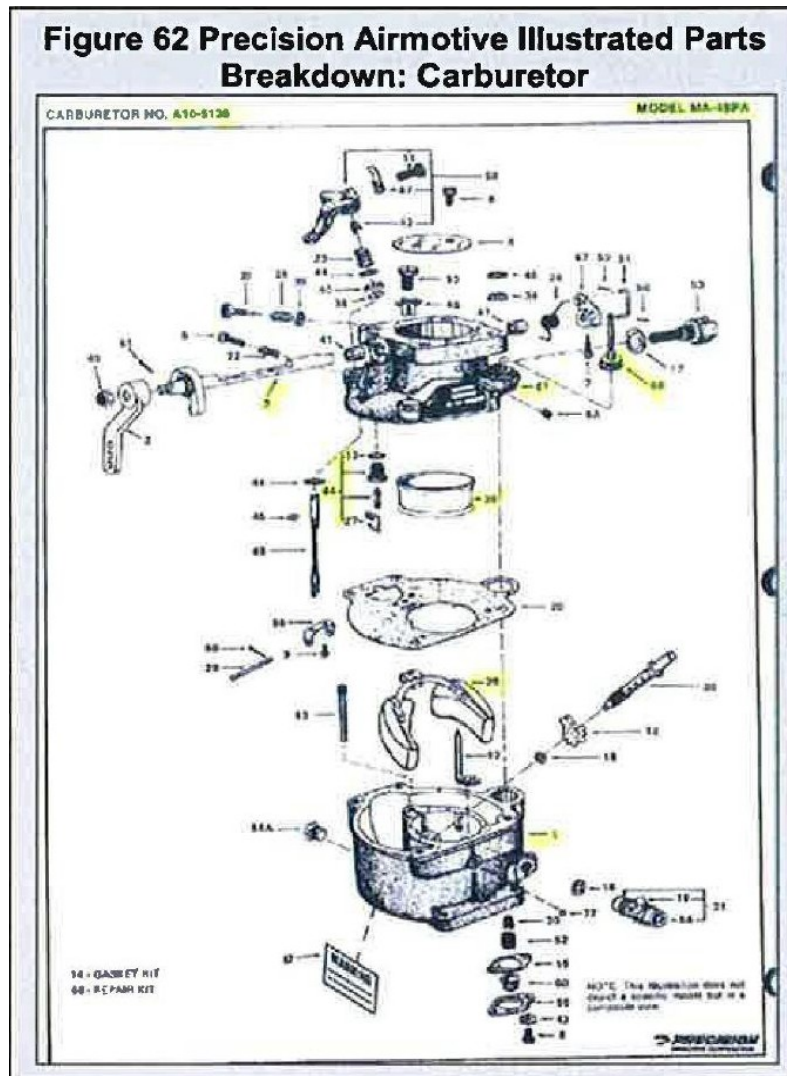


According to Mr. Sommer, it is very important that the carburetor regulate how much air passes through it, because the metered fuel should emerge as a fine mist or spray. *Id.* at 24:17–20. If the fuel is emitted in globules or large droplets, however, the engine will not be able to burn it efficiently, and the aircraft’s horsepower will be minimal. *Id.* at 24:20–25. Eventually, if the fuel content in the mixture is continuously concentrated rather than finely dispersed, the engine may even cease to run. *Id.* at 24:25–25:01.

In between the float bowl and the throttle body is a gasket that permits an airtight seal. *Id.* at 28:02–04. That gasket is held in place by four bolts and lock washers that connect the throttle body to the float bowl. *Id.* at 28:05–06. The bolt has a screw slot, but it also features a hexed head, so that it can be installed either by a screwdriver or a wrench. *Id.* at 29:16–19. When a mechanic fastens the

system together after a repair or overhaul, he or she would take the bolt, drop it into the lock washer holes, drop the bolts into the throttle body holes, put the throttle body on top of the float bowl, and screw the bolts into the threaded holes featured on the float bowl. *Id.* at 29:19–23. A corresponding photo from Mr. Edward’s report depicts not only this portion of the MA-4SPA carburetor fastening process, but also the entire carburetor reconstruction:

**Figure 5. MA-4SPA Carburetor Bolt Fastening Schematic**



With those visuals in mind, I now turn the precise facts of Kelly's 2004 overhaul of the subject carburetor. This is

an important juncture in the engine's history, because although Plaintiff alleges that faulty carburetor screws caused the plain to lose power, the original MA-4SPA carburetor shipped by Lycoming with the original in 1969 was entirely gutted and replaced by Kelly during the overhaul. Somewhat remarkably, that fact is undisputed (and has been) through the pendency of this litigation. Indeed, Judge Jones, in a 2012 decision, memorialized those admissions as follows:

- “Plaintiff admits that the carburetor that was installed on the Cessna 172N was not the same carburetor that Lycoming shipped with the engine in 1969.”
- “Plaintiff does not dispute, that the Kelly Defendants manufactured, replaced, and shipped the carburetor and its component parts.”
- “Plaintiff admits that Lycoming's hands did not physically touch the carburetor.”

ECF No. 299 at 8, 13, 15.

It is also admitted that Triad shipped the carburetor from North Carolina to Kelly for overhaul. Kelly Admissions ¶ 5. Kelly overhauled the carburetor on or about August 3–5, 2004 using a throttle body and float bowl from Kelly's own core parts bank. *Id.* ¶ 6. Kelly also manufactured the pump plunger, the valve and seat assembly, the single piece venturi, and the throttle shaft, and used them to rebuild the carburetor during the overhaul. *Id.* ¶ 13–14.

An important facet of Kelly's overhaul of the subject was its selection of parts comprising the float bowl (bot-

tom) and throttle body (top) of the carburetor. In particular, Kelly admitted that the physical manufacturing of the float bowl was performed by an outside vendor. *Id.* ¶ 16. Subsequent discovery has suggested that one half of the carburetor was likely manufactured by Marvel-Schebler in the 1960s because it was painted black, a practice the company stopped in that decade. May Tr. at 16:09–14. *See also* Stabley Report at 8. Another Defendant produced a record showing that the other half of the carburetor was manufactured in the 1970s. May Tr. at 16:14–15. Then, Kelly used its own aftermarket parts to fasten the two halves together. *Id.* at 16–20. In essence, Kelly created what counsel for Defendant, Catherine Slavin, Esquire, termed “a Frankenstein’s monster”—literally melding together two distinct aftermarket carburetor halves produced in subsequent decades before adjoining those two halves with a third set of parts from a different aftermarket parts manufacturer. May Tr. at 16:09–20; 84:15–16.

Lycoming was not involved with 2004 overhaul in any way. It had no practical control over how Kelly overhauled the engine, and at no time did it instruct Kelly to use the parts that Kelly ultimately selected. In fact, we now know that Lycoming was not even aware that one of its engines had been placed on this specific Cessna aircraft, never mind having had its carburetor overhauled in such a hodgepodge manner, until after the accident occurred in the summer of 2005.

To the contrary, when Kelly overhauled the plane, it acted pursuant to a separate PMA that it had obtained from the FAA. Lycoming was not party to that PMA, and Kelly at no time had a licensing agreement with Lycoming. Instead, Kelly obtained its PMA by way of the tests and computations avenue, having run its own tests



on its parts and having submitted its own proposed designs and its own supporting data. To the extent that Kelly's parts were similar to Lycoming's, it was because Kelly consciously decided as much, not because its hand was forced by Lycoming.

As Mr. Sommer, Plaintiff's own expert, testified at the Rule 104 hearing, Kelly obtained its PMA "by going to the FAA and showing that their [*sic*] parts were similar in fit, form, and function and preparing an application and receiving approval." Nov. 2013 Tr. at 127:11–15. Mr. Sommer explained that Lycoming itself could not have even sold the engine with aftermarket Kelly parts, as it stood in its post-overhaul form. *Id.* at 127:20–24. "Kelly is not included in the Cessna 172 Lycoming type certification. So it can't come out of the factory." *Id.* at 127:23–24. In fact, Kelly did not obtain FAA approval to implement the subject PMA parts until the 1980s, well after Lycoming had released the engine into the stream of commerce. Nov. 2013 Tr. at 128:03–09. Thus, to the extent that Kelly's independent designs and configurations resembled Lycoming's, it was because, as Mr. Singh explained at oral argument, Kelly freely chose to model its parts after the type certificate holder's, not because Lycoming controlled or coerced Kelly to do as much. To the contrary, it appears highly disadvantageous from a type certificate holder's point of view for comparable aftermarket replacement parts to be available at all, let alone at lower price points.

During the July 2004 engine overhaul, Plaintiff alleges that the Defendants complied with a service bulletin previously issued by Lycoming, known as Service Bulletin 366. That bulletin was broadly issued on September 14, 1973 to any and all parts manufacturers or end users who

might be responsible for securing maintenance on “All AVCO Lycoming engines equipped with Marvel-Schebler carburetors.” ECF No. 234-10 at 2. The Bulletin consists of three short paragraphs, together approximately one-half page in length.

The Bulletin is written generally and provides no direct guidance for the particular parts or methods eventually employed 31 years later by Kelly. *See id.* Instead it merely notifies recipients that if leaking is evident or the screws are loose, the carburetor may be disassembled so that the gasket may be replaced and the screws retightened. *Id.* Further, it makes no mention of the types of components or the designs that should be used when an aftermarket parts manufacturer seeks a PMA pertaining to the carburetor. *See id.*

**I. The Carburetor Is Reinstalled In The Engine, The Engine Is Reinstalled In The Aircraft, And After Just 400 Hours Of Flight Time, The Aircraft Crashes With An Inexperienced Pilot In Command.**

The plane was placed back into service on September 9, 2004, and the plane was flown for just under 400 additional hours when, on Sunday, July 10, 2005, it crashed near the rural Transylvania County Airport in Brevard, North Carolina. Edwards Report at 5, 65–66. Just after take-off, the plane collided with the ground and caught fire. *Id.* at 5. Prior to the August 2004 overhaul, the plane had flown for at least 1,200 hours. *Id.* at 66. The last annual inspection occurred on February 4, 2005, approximately 200 hours after the overhaul. *Id.* The last known maintenance occurred on June 20, 2005, at which time

work was performed on the carburetor within a few inches of the subject carburetor body-to-bowl screws. *Id.*

The plane was registered to a private owner, Randall F. Winchester of Greenville Aviation, a full-service pilot training center. *Id.* at 56. At the time of the crash, it was being flown by pilot David Sikkelee, Jr., with his brother Craig Sikkelee riding along as a passenger. *Id.* at 5–7. The pair was purportedly on a business trip. *Id.* at 1. David Sikkelee sustained fatal injuries in the crash, while Craig Sikkelee received serious injuries but survived. *Id.*

David Sikkelee's pilot history was reconstructed from existing records, including FAA records on file at the FAA record center in Oklahoma City, Oklahoma, as his pilot logbook was damaged by the post-crash fire. *Id.* 7–8. In 2004, Mr. Sikkelee received an FAA private pilot single-engine land certificate, the lowest pilot certificate that allows one to act as a pilot in command carrying passengers in this class of aircraft. *Id.* at 8. According to the certification records, Mr. Sikkelee had approximately 50 total hours of certifying flight time and 14 hours as a pilot in command, none of which were accumulated in a Cessna 172N. *Id.* The certifying instructor apparently only spent a total of 3.9 hours with Mr. Sikkelee. *Id.* Further, although Mr. Sikkelee reported 68 total hours of flight time, with 4 hours in the six months preceding the accident, Mr. Edwards believes that an analysis of Mr. Sikkelee's rental and FAA certificate records revealed that he had only 55 hours of total flight time, 2.5 of which occurred in the preceding six months. *Id.* Prior to the day of the accident, Mr. Sikkelee had flown a Cessna 172 model aircraft for just 1.8 total hours. *Id.* Altogether, he had flown for approximately 5.6 hours in the year before the accident and not all in the preceding 60 days. *Id.* at 8–9.

This lawsuit was filed in 2007, in which Plaintiff alleges that the throttle body to float bowl screws had come loose and caused the engine to lose power. Lycoming contends that the screws were not defective and that the accident was likely caused by pilot inexperience, a botched 2004 overhaul, or any number of chance occurrences for which it was not legally responsible. As one of the Lycoming's experts reminded:

When an aircraft crashes, there may be any one of a thousand and one reasons why it did so. The overall task confronting the investigator is one of initiating a program aimed specifically at eliminating those possibilities which could not conceivably have been involved under the particular circumstances.

Expert Report of Thomas W. Eagar, ECF No. 489-2, at 4 (quoting FAA *Aircraft Accident Investigator's Desk Reference Guide* (1991)).

In 2010, the Plaintiff entered into a settlement agreement with Kelly, who overhauled the carburetor in 2004. Kelly agreed to pay Plaintiff \$2 million for the injuries suffered by her decedent in connection with the 2004 crash. ECF No. 145-46.

In 2014, I held that Plaintiff's claims against Lycoming were field preempted. In 2016, our Court of Appeals reversed that determination with instructions that I consider conflict preemption on remand.<sup>17</sup> I now hold that Lycoming is entitled to summary judgment.

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<sup>17</sup> Specifically, our Court of Appeals instructed me as follows:

## II. LAW<sup>18</sup>

“One of the principal purposes of the summary judgment rule is to isolate and dispose of factually unsupported claims or defenses, and we think it should be interpreted in a way that allows it to accomplish this purpose.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323–24, 106 (1986). Summary judgment is appropriate where “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). “Facts that could alter the outcome are ‘material facts,’ and disputes are ‘genuine’ if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct.” *Clark v. Modern Grp. Ltd.*,

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We have no need here to demarcate the boundaries of those tort suits that will be preempted as a result of a conflict between state law and a given type certificate, nor which FAA documents incorporated by reference in a type certificate might give rise to such a conflict. While the parties responded to the FAA’s submission by arguing for the first time in supplemental submissions whether the alleged design defect at issue in this case is a design aspect that was expressly incorporated into the type certificate for the Textron Lycoming O–320–D2C engine and what significance that might have for conflict preemption, we will leave those issues for the District Court to consider on remand.

*Sikkelee*, 822 F.3d at 702.

<sup>18</sup> Plaintiff suggests that the instant motions should be assessed using the standard for reconsideration. I disagree. The Third Circuit supplied explicit instructions for me to revisit these issues on remand. Regardless, even if viewed through the lens of reconsideration, changes in the applicable legal principles starting with *Tincher v. Omega Flex, Inc.*, 104 A.3d 328 (Pa. 2014), as well as what appear to be earlier errors applying that law, both justify my conclusions.

9 F.3d 321, 326 (3d Cir. 1993) (Hutchinson, J.) (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) and *Celotex*, 477 U.S. at 322).

“A defendant meets this standard when there is an absence of evidence that rationally supports the plaintiff’s case.” *Clark*, 9 F.3d at 326. “A plaintiff, on the other hand, must point to admissible evidence that would be sufficient to show all elements of a *prima facie* case under applicable substantive law.” *Id.*

“[T]he inquiry involved in a ruling on a motion for summary judgment or for a directed verdict necessarily implicates the substantive evidentiary standard of proof that would apply at the trial on the merits.” *Liberty Lobby, Inc.*, 477 U.S. at 252. Thus, “[i]f the defendant in a run-of-the-mill civil case moves for summary judgment or for a directed verdict based on the lack of proof of a material fact, the judge must ask himself not whether he thinks the evidence unmistakably favors one side or the other but whether a fair-minded jury could return a verdict for the plaintiff on the evidence presented.” *Id.* “The mere existence of a scintilla of evidence in support of the plaintiff’s position will be insufficient; there must be evidence on which the jury could reasonably find for the plaintiff.” *Id.* “The judge’s inquiry, therefore, unavoidably asks . . . ‘whether there is [evidence] upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the onus of proof is imposed.’” *Id.* (quoting *Schuylkill & Dauphin Imp. Co. v. Munson*, 81 U.S. 442, 447 (1871)). Summary judgment therefore is “where the rubber meets the road” for a plaintiff, as the evidentiary record at trial, by rule, will typically never surpass that which was compiled during the course of discovery.

“[A] party seeking summary judgment always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, which it believes demonstrate the absence of a genuine issue of material fact.” *Celotex*, 477 U.S. at 323 (internal quotations omitted). “[R]egardless of whether the moving party accompanies its summary judgment motion with affidavits, the motion may, and should, be granted so long as whatever is before the district court demonstrates that the standard for the entry of summary judgment, as set forth in Rule 56(c), is satisfied.” *Id.*

Where the movant properly supports his motion, the nonmoving party, to avoid summary judgment, must answer by setting forth “genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be resolved in favor of either party.” *Liberty Lobby*, 477 U.S. at 250. For movants and non-movants alike, the assertion “that a fact cannot be or is genuinely disputed” must be supported by: (i) “citing to particular parts of materials in the record” that go beyond “mere allegations”; (ii) “showing that the materials cited do not establish the absence or presence of a genuine dispute”; or (iii) “showing . . . that an adverse party cannot produce admissible evidence to support the fact.” Fed. R. Civ. P. 56(c)(1).

“When opposing summary judgment, the non-movant may not rest upon mere allegations, but rather must ‘identify those facts of record which would contradict the facts identified by the movant.’” *Port Auth. of N.Y. and N.J. v. Affiliated FM Ins. Co.*, 311 F.3d 226, 233 (3d Cir. 2002) (Weis, J.). Moreover, “[i]f a party fails to properly support

an assertion of fact or fails to properly address another party's assertion of fact as required by Rule 56(c), the court may . . . consider the fact undisputed for purposes of the motion." Fed. R. Civ. P. 56(e)(2). On motion for summary judgment, "[t]he court need consider only the cited materials, but it may consider other materials in the record." Fed. R. Civ. P. 56(c)(3).

"[A]t the summary judgment stage the judge's function is not himself to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for trial." *Liberty Lobby*, 477 U.S. at 249. "[T]here is no issue for trial unless there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party." *Id.* "If the evidence is merely colorable . . . or is not significantly probative, summary judgment may be granted." *Id.* at 249–50 (internal citations omitted).

### III. ANALYSIS

At first glance, this case appears to present puzzling questions of conflict preemption and proximate cause in the field of aviation. Yet, I have come to suspect that its complexity, like that of a shimmering oasis in the eyes of a weary wanderer, may be nothing more than a clever mirage flowing from strained interpretations of the law and academic daydreams divorced from fact. In accordance with the discussion that follows, I hold that Plaintiff's state tort claims must fail because they are conflict preempted and lack proximate cause.



**A. There Is No Genuine Dispute Of Material Fact As To Whether Plaintiff's State Tort Claims Are Conflict Preempted, Because The FAA's Regulations Rendered It Impossible For Lycoming To Unilaterally Implement What Design Changes Pennsylvania Law Allegedly Required Of It.**

Federal law “shall be the supreme Law of the Land . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.” U.S. Const., Art. VI, cl. 2. “It is basic to this constitutional command that all conflicting state provisions be without effect.” *Maryland v. Louisiana*, 451 U.S. 725, 746 (1981). Thus, “under the Supremacy Clause, from which our preemption doctrine is derived, any state law, however clearly within a State’s acknowledged power, which interferes with or is contrary to federal law, must yield.” *Gade v. Nat’l Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 108 (1992) (internal quotation marks omitted).

In *Colacicco v. Apotex Inc.*, 521 F.3d 253, 261 (3d Cir. 2008), the United States Court of Appeals for the Third Circuit explained that there are three primary types of preemption: (1) “express” preemption, when Congress expressly states its intent to preempt state law; (2) “field” preemption, when Congress’ intent to pre-empt all state law in a particular area may be inferred; and (3) “conflict” preemption, when state law is nullified to the extent that it actually conflicts with federal law. On occasion, field and conflict preemption are jointly referred to as “implied” preemption. Only conflict preemption is at issue here.

The above framework necessarily means that “[e]ven in the absence of an express pre-emption provision,”

courts may find preemption where “it is ‘impossible for a private party to comply with both state and federal requirements.’” *Mutual Pharm. Co. v. Bartlett*, 133 S. Ct. 2466, 2473 (2013) (quoting *English v. General Elec. Co.*, 496 U.S. 72, 79 (1990)). Importantly, a holding of preemption “is inescapable and requires no inquiry into congressional design where compliance with both federal and state regulations is a physical impossibility for one engaged in interstate commerce.” *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142–43 (1963). Thus, “[t]he question for ‘impossibility’ is whether the private party could independently do under federal law what state law requires of it.” *PLIVA, Inc. v. Mensing*, 564 U.S. 604, 620 (2011). When federal regulations prevent the defendant from “unilaterally” doing what state law required, the state law is conflict preempted. *Id.*

In recent years, the Supreme Court of the United States has issued two opinions examining conflict preemption in the context of federal regulations: *Mutual Pharmaceutical Co. v. Bartlett*, 133 S. Ct. 2466 (2013) and *PLIVA, Inc. v. Mensing*, 564 U.S. 604 (2011). Both cases weigh strongly in favor of conflict preemption here.

In *PLIVA v. Mensing*, Justice Clarence Thomas, writing for the Court, held that a system of regulations promulgated by the Food and Drug Administration (FDA) conflicted with certain state failure to warn claims regarding alleged labeling deficiencies in pharmaceuticals. 564 U.S. at 608–11. The narrow issue in *PLIVA* was thus whether generic drugmakers could independently change their labels after initial FDA approval. *Id.* at 614. The FDA filed a brief interpreting its regulation as prohibiting generic manufacturers from altering the drug label without such approval. *Id.* As the Court summarized, “The FDA denies

that the Manufacturers could have . . . unilaterally strengthen[ed] their warning labels.” *Id.* In support, it noted that an agency’s views are controlling “unless plainly erroneous or inconsistent with the regulation[s].” *Id.* (quoting *Auer v. Robbins*, 519 U.S. 452, 461 (1997)).<sup>19</sup>

The state failure to warn claims in *PLIVA* were therefore conflict preempted because “[i]t was not lawful under federal law for the Manufacturers to do what state law required of them.” *PLIVA*, 564 U.S. at 618. This was true in two respects. First, had the drugmakers independently changed their labels, they would have violated federal law. *Id.* at 618–19. Second, and just as important, the Court noted that even if the drugmakers could have eventually altered their labels by “requesting FDA assistance,” the state tort claims would still be preempted. *Id.* at 619. This was so because the state claims “demanded a safer label”—they did not “instruct the Manufacturers to communicate with the FDA about the possibility of a safer label.” *Id.* In other words, the possibility that the FDA might approve a drugmaker’s proposed changes did not alter the conflict preemption calculus whatsoever.

*PLIVA*’s second justification, that a future hypothetical determination by the agency was irrelevant to the preemption inquiry, holds particular weight in the present case. In fact, the tort claimants in *PLIVA* argued that “when a private party’s ability to comply with state law depends on approval and assistance” from the agency, a finding of preemption requires that party “to demonstrate that the [agency] would not have allowed compliance with

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<sup>19</sup> The Court also reminded that “[a]lthough we defer to the agency’s interpretation of its regulations, we do not defer to an agency’s ultimate conclusion about whether state law should be preempted.” *Id.* n.3.

state law.” *Id.* at 620 “This is a fair argument,” Justice Thomas wrote, “but we reject it.” *Id.*

Permitting litigants to consider hypothetical regulatory action would “render conflict preemption largely meaningless,” and it would make most conflicts “illusory.” *Id.* “We can often imagine that a third party or the Federal Government *might* do something that makes it lawful for a private party to accomplish under federal law what state law requires of it,” the Court wrote. *Id.* “If these conjectures suffice to prevent federal and state law from conflicting,” then “it is unclear when, outside of express preemption that the Supremacy Clause would have any force.” *Id.* at 621. Thus, contrary to what the Plaintiff might suggest here, conflict preemption cannot “take into account hypothetical federal action.” *Id.* n.6

“To decide these cases,” the *PLIVA* Court concluded, “it is enough to hold that when a party cannot satisfy its state duties without the Federal Government’s special permission and assistance, which is dependent on the exercise of judgment by a federal agency, that party cannot independently satisfy those state duties for preemption purposes.” *Id.* at 623–24. Justice Thomas then noted that in regulatory preemption cases such as these, “the possibility of possibility”—that is, the possibility that the agency will approve a requested change—does not defeat conflict preemption. *Id.* at 624.

Two years later, the Supreme Court extended its bright-line conflict preemption jurisprudence by deeming preempted several § 402A strict liability design defect claims in *Mutual Pharmaceutical Co., Inc., v. Bartlett*,

133 S. Ct. 2466 (2013).<sup>20</sup> *Bartlett* involved the same “onerous and lengthy” regulatory scheme as did *PLIVA*, which required manufacturers to obtain FDA approval “before marketing any drug in interstate commerce.” *Id.* at 2470–71. At the same time, state tort law had effectively forbidden manufacturers from selling products that were “unreasonably unsafe.” *Id.* at 2470. Thus, when the prevalence of a dangerous side-effect associated with one of Mutual Pharmaceutical’s drugs became more prevalent, state law required the company redesign the drug or its label in direct violation of a regulation that “prohibited [it] from making any unilateral changes.” *Id.* at 2471–72. Accordingly, because “state law imposed a duty on Mutual *not* to comply with federal law,” Justice Samuel A. Alito, Jr., writing for the Court, held that the tort law was “without effect.” *Id.* at 2470.

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<sup>20</sup> The *Bartlett* Court drew no meaningful distinction between strict liability claims premised upon § 402A of the Second Restatement and common law negligence claims. To the contrary, it noted that for preemption purposes, such claims typically fall hand-in-hand. This is true because “most common-law causes of action for negligence and strict liability do not exist merely to spread risk, but rather impose affirmative duties.” *Id.* at 2474 n.1 (citing *Riegel v. Medtronic, Inc.*, 552 U.S. 312 (2008)). In *Riegel*, the Court explained that “common-law causes of action for negligence and strict liability do impose requirements and would be preempted by federal requirements.” Indeed, in preemption cases, judicial “reference to a State’s ‘requirements’ includes its common-law duties,” and “a tort judgment therefore establishes that the defendant has violated a state-law obligation.” *Id.* at 323–324 (internal citations omitted). This is particularly true as a matter of Pennsylvania law following the decision of our Supreme Court in *Tincher v. Omega Flex, Inc.*, 104 A.3d 328 (Pa. 2014), a decision clarifying strict liability and negligence principles, to which I turn my attention more fully herein.

As is the case here, the state law at issue in *Bartlett* imposed on the manufacturer “a duty to design his product reasonably safely for the uses which he can foresee.” *Id.* at 2473. Compare *Tincher*, 104 A.3d at 383 (“[An] entity engaged in the business of selling a product has a duty to make and/or market the product—which is expected to and does reach the user or consumer without substantial change in the condition in which it is sold—free from a defective condition unreasonably dangerous to the consumer.” (internal quotation marks omitted)). In addition, the state at issue in *Bartlett* had applied the “risk-utility approach,” one of two applicable approaches in Pennsylvania after *Tincher*, pursuant to which courts must consider “the usefulness and desirability of the product to the public”; “whether the risk of danger could have been reduced without significantly affecting either the product’s effectiveness or manufacturing cost”; and “the presence and efficacy of a warning to avoid an unreasonable risk of harm from hidden dangers.” *Id.* at 2475. Thus, because the regulations as interpreted by the FDA prevented the drugmaker from “independently changing” its products, “federal law prohibited Mutual from taking the remedial action required to avoid liability under [state] law.” *Id.* at 2476.<sup>21</sup>

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<sup>21</sup> Impossibility that an aircraft manufacturer might face when attempting to alter the essence of its product is thoroughly discussed herein. That being said, I note that the suggestion that Lycoming might have issued warning labels or changed existing packaging makes no legal difference here. First, Plaintiff has not suggested that this is a failure to warn of known dangers case. To the contrary, the precise action that Plaintiff alleges Lycoming failed to take was redesigning the engine’s carburetor. Moreover, warning labels would not have aided Lycoming in satisfying what state law required of it. Specifically, state failure to warn claims are effective only where inclusion of the alleged omission would have remedied the plaintiff’s injuries. See *Simon v. Wyeth Pharm., Inc.*, 989 A.2d 356, 368 (Pa Super. Ct.

Accordingly, in the wake of *PLIVA* and *Bartlett*, if Lycoming could not independently do what Pennsylvania state tort law may have required of it, Plaintiff's claims are also conflict preempted. That must be the case here. "Pre-emption analysis requires us to compare federal and state law. We therefore begin by identifying the state tort

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2009) ("Proximate cause is an essential element in failure-to-warn cases involving prescription medications. The law requires that there must be some reasonable connection between the act or omission of the defendant and the injury suffered by the plaintiff.") (internal quotation marks omitted). *See also Demmler v. SmithKline Beecham Corp.*, 671 A.2d 1151, 1155 (1996) ("In the duty to warn context, assuming that plaintiffs have established both duty and a failure to warn, plaintiffs must further establish proximate causation by showing that had defendant issued a proper warning to the learned intermediary, he would have altered his behavior and the injury would have been avoided."). As the *Bartlett* Court emphasized, preemption does not turn on semantic differences between various case theories but upon whether the state claims fall "outside the class of claims" that federal law preempts. 133 S. Ct. at 2479 (quoting *Bates v. Dow Agrosciences LLC*, 544 U.S. 431 (2005)). In addition, such claims would likely nevertheless be preempted regardless by the FAA's reservation of power to issue appropriate Airworthiness Directives and its guidance as to individualized Service Bulletins or Maintenance Manuals. *See, e.g.*, FAA Order 8110.117A, *Service Bulletins Related to Airworthiness Directives*, [https://www.faa.gov/documentLibrary/media/Order/8110\\_117A.pdf](https://www.faa.gov/documentLibrary/media/Order/8110_117A.pdf); FAA Advisory Circular 20-176A, *Service Bulletins Related to Airworthiness Directives and Indicating FAA Approval on Service Documents*, [https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_20-176A.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_20-176A.pdf). Finally, a fallback on labelling changes must necessarily fail to defeat preemption challenges in cases where the complained-of defect goes to the essence of the product itself. Otherwise, that fallback would make the Supreme Court's conflict preemption jurisprudence wholly illusory. "To hold otherwise would render impossibility preemption 'all but meaningless.'" *Bartlett*, 133 S. Ct. at 2447 n.3 (quoting *PLIVA*, 564 U.S. at 621).

duties and federal [ ] requirements applicable to the Manufacturers.” *PLIVA*, 564 U.S. at 611.

In *Tincher v. Omega Flex, Inc.*, the Supreme Court of Pennsylvania confirmed that state tort claims spring from “breaches of duties imposed by law,” which duties represent the Commonwealth’s judgment on “matter[s] of social policy.” 104 A.3d at 387. “In Pennsylvania, the question of whether those who make or market products have duties in strict liability (in addition to negligence) has been answered in the affirmative.” *Id.* at 389. Thus, after *Tincher*, regardless of whether a strict liability action under § 402A is viewed through the lens of the consumer expectations or risk-utility tests, it is clear that a manufacturer “has a duty to make . . . the product . . . free from a defective condition unreasonably dangerous to the consumer.” 104 A.3d at 383. Moreover, although “[t]he duty spoken of in strict liability is intended to be distinct from the duty of due care in negligence,” that both torts incorporate the concept of duty “obviously reflects the negligence roots of strict liability.” *Id.* at 388–89. The requirements instituted by these state law duties are precisely the kinds that gave rise to conflict preemption in *PLIVA* and *Bartlett*—in fact, they are identical in all practical respects to those in *Bartlett*.

The next step is a review of federal law, which by virtue of the operative FAA regulations, is set forth in Part I of this Memorandum Opinion. “Where Congress has delegated the authority to regulate a particular field to an administrative agency, the agency’s regulations issued pursuant to that authority have no less preemptive effect than federal statutes, assuming those regulations are a valid exercise of the agency’s delegated authority.” *PPL Energyplus, LLC v. Solomon*, 766 F.3d 241, 253 (3d Cir.



2014).<sup>22</sup> To summarize that law, I note that FAA approval is required for any major or minor changes to an article's type design, as well as for any major alteration. A major alteration is one that "might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness." Further, when a DER acts to implement a type design change or alteration that otherwise requires FAA approval, he acts on behalf of the FAA and within the scope of his designation, not in a private capacity.

*PLIVA* and *Bartlett*, together with a dose of common sense and pragmatism, demand a finding that Lycoming was prohibited by those regulations from making the design changes about whose omission Plaintiff has complained. In particular, recall that Plaintiff alleges that the "throttle body to float bowl screws came loose due to the faulty design of the lock tab washers as well as gasket set." Pl.'s Statement of Facts, ECF No. 488, at ¶ 16. As

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<sup>22</sup> The same is true of the FAA's Orders reviewed above, to the extent that they are relied upon herein:

The FAA's orders, as agency manuals without the force of law, are not afforded deference under *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984). Nevertheless, we conclude that the definition of "prudent" found in these orders is entitled to deference pursuant to *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944). Under *Skidmore*, the weight courts accord an agency interpretation depends on "the thoroughness evident in [the agency's] consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control." 323 U.S. at 140.

*Natural Resources Defense Council, Inc. v. F.A.A.*, 564 F.3d 549, 564 (2d Cir. 2009) (internal quotation marks omitted).

for alternative designs, Plaintiff suggests that Lycoming could have switched the manner in which the carburetors installed in its engines had their two halves fastened by, for instance, “using a fuel injection systems [*sic*] in lieu of a carburetor, safety lock wire on the throttle body to bowl screws, and different gasket material.” *Id.* at ¶ 17.

Plaintiff’s counterarguments to Lycoming’s suggestion of conflict preemption fail for two broad reasons. First, the FAA’s regulations forbid independent implementation of those changes, and the facts here plainly support that conclusion. Second, even assuming that Lycoming were to implement the suggested design changes, it is unclear whether the subject tort duty would have been met, as Lycoming’s decision could not guarantee future design decisions by aftermarket parts manufacturers like Kelly.

The operative type certificate would not have permitted Lycoming to install a different carburetor model, nor would the instant PMA have permitted Kelly to change the carburetor’s inner workings. In fact, when the FAA issued the engine’s type certificate to Lycoming, it explicitly approved the MA-4SPA model carburetor on the type certificate data sheet as the only carburetor that could be installed in the engine. Def.’s Statement of Facts, ECF No. 533, at ¶ 4. As the FAA has reiterated, “a manufacturer is bound to manufacture its aircraft or aircraft part in compliance with the type certificate.” FAA Ltr. Br. at 10–11.

Then, when the FAA issued the PMA authorizing Kelly to manufacture replacement parts for MA-4SPA model carburetors, the FAA specifically approved the design of the gasket, slotted hex head screws, and lock washers at issue here, as well as the use of those parts in the

throttle body to float bowl attachment mechanism. ECF No. 533, Exs. 1–7. These facts are well chronicled in briefing by Christopher Carlsen, Esquire, counsel for Lycoming. *See* ECF No. 534.

Moreover, as recited earlier, the regulations required Kelly to ensure that all MA-4SPA model carburetor replacement parts that it manufactured and sold pursuant to its PMA conformed to the design that the FAA had approved. *See, e.g.*, 14 C.F.R. § 21.316 (“Each holder of a PMA must . . . (b) Maintain the quality system in compliance with the data and procedures approved for the PMA; (c) Ensure that each PMA article conforms to its approved design and is in a condition for safe operation”). Absent additional approval by the FAA or a corresponding amendment to Kelly’s PMA, neither of which Kelly had at any time relevant to this case, it could not lawfully manufacture and sell replacement parts that were different from the parts actually approved for use on the replacement carburetor.

Plaintiff’s argument that the issuance of Kelly’s PMA for the replacement gasket, screw, and lock washer did not involve the FAA’s approval of the design of the attachment mechanism itself is unavailing and too clever by half.<sup>23</sup> These parts have no function apart from collectively

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<sup>23</sup> In my view, Plaintiff has also placed far too great emphasis on whether the alleged modifications would be made to parts that previously had been expressly approved the FAA. This test derives from the FAA’s interpretation of conflict preemption principles and not of its own regulations. *See* FAA Ltr. Br. at 10. Make no mistake, *PLIVA* and *Bartlett* clarify that the test for conflict preemption is whether the defendant may take independent action under federal law. Whether the FAA had at some time in the past expressly approved the article in question would appear to strengthen a conflict preemp-

attaching the throttle body to the bowl in the MA-4SPA carburetor. In fact, during the November 2013 Rule 104 hearing, plaintiff's expert witness, Mr. Sommer, described at length for this Court how crucial it is that all of those parts work as a unit so that the carburetor halves do not separate and cause the engine to lose power.

Plaintiff's attempt to separate the FAA's approval of each Kelly replacement part from its approval of the attachment mechanism itself is refuted by Kelly's own rendition of the PMA process:

Thus, to obtain approval for its replacement articles, Kelly tested an OEM carburetor for a period of time (*e.g.*, 150 hours), and then tested a carburetor that contained Kelly parts for the same period of time. It then prepared a report documenting that its parts performed just as well or better than the OEM parts.

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tion defense (on the assumption that previously approved articles typically need future approval to implement modifications). However, nothing in either *PLIVA* or *Bartlett* requires prior express approval. To the contrary, the question is whether, at the time of the alleged breach of duty, it was impossible for the defendant to unilaterally satisfy both state and federal law. To the extent that a prior aircraft article had not been expressly approved in the past at the time of its installation but would require express approval for any future modifications, it seems axiomatic that state tort claims requiring immediate modifications to that article would give rise to a conflict preemption defense. Further, to the extent that an article received express approval in the past but could be modified freely at the time of the alleged breach, conflict preemption would be a less fitting defense. That follows logically because the pertinent regulations balance the quantum of approval required with the extent of the proposed modification.

ECF No. 545 at 10. Plaintiff does not contest that the only function performed by the gasket, screws, and lock washers is to work together as the design feature that fastens the carburetor throttle body to the bowl. I agree with Mr. Carlsen that it is therefore difficult to fathom that Kelly and the FAA analyzed 300 hours of carburetor operation “simply to confirm that the gasket performed as a gasket, the screw as a screw, and the lock washer as a lock washer, all while ignoring whether the attachment mechanism they formed operated properly to hold the carburetor together”—the precise operation complained of here. *See* ECF No. 550 at 5.

In fact, a number of the proprietary drawings that Kelly submitted to the FAA in support of its PMA were attached under seal for my review. ECF No. 533, Exs. 1–6. I also reviewed the 6-page PMA Listing Supplement, which the FAA supplied to Kelly to indicate that “the parts listed below” were approved “by test and analysis per Federal Regulation (FAR) 21.303(c).” ECF No. 533–7. At page 3, that list indicates that use of the particular throttle body to float bowl hex head screws were approved by the FAA. *Id.* at 4. The Plaintiff admits “that the FAA at various points in time approved the use of each of the individual articles listed (gasket, screw, and washer) on MA–4SPA carburetors generally as acceptable substitutes for OEM parts.” *See* Pl.’s Resp. to Def.’s Statement of Material Facts, ECF No. 546, at ¶ 22.

Moreover, the linchpin under *PLIVA* and *Bartlett* is not so much express historical approval but whether immediate regulatory approval would be required to implement the proposed change at the time of the alleged breach of duty. It is evident that neither Lycoming nor Kelly could make the requested change here without first

obtaining FAA approval.<sup>24</sup> Thus, Plaintiff retreats to a fallback argument: that the alleged omission here would have constituted a minor alteration not affecting the type design were either Lycoming or Kelly to implement it. That is unsupported by the clear terms of the regulations and is logically contradictory with the premise of this action.

Plaintiff suggests that the proposed modification would be a minor one because “the use of safety wire is common, can be done by any trained mechanic, and would not adversely affect . . . the engine.” ECF No. 564 at 10. Perhaps those suggestions are factually accurate and perhaps they are not, but one thing is certain: none of them encapsulates the standard established by the FAA in its

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<sup>24</sup> Moreover, Plaintiff has made sporadic arguments suggesting that Lycoming possessed broader certification that would have allowed it to install one of a small selection of distinct carburetor models in its engine in 1969. Again, it is rather unremarkable that a manufacturer in a products liability case could theoretically comply with state and federal law by halting production of the subject product or producing different ones altogether. The Court in *Bartlett* expressly rejected arguments like this one, explaining that, when taken to their logical extreme, such lines of reasoning would defeat preemption by the mere suggestion that the manufacturer could have abstained from selling the particular product in the first place or could have left the market altogether. The Court explained that it was “undeterred by the prospect that [the defendant] could have complied with both state and federal requirements by simply leaving the market.” *Bartlett*, 133 S. Ct. at 2478. Similar here, because Plaintiff concedes that the engine was not defective when it left Lycoming’s hands in 1969, the issue as far conflict preemption goes is not whether Lycoming could have ceased producing this particular carburetor engine altogether in 1969. Rather, the question is whether, once subsequent modifications allegedly rendered the product defective, Lycoming had the power to unilaterally remedy those alleged defects at that later time. The answer under the regulations is that it did not.

regulations for distinguishing major alterations from minor ones.

Recall that major and minor alterations are defined at 14 C.F.R. § 1.1. A major alteration is any alteration not listed in the aircraft, aircraft engine, or propeller specifications that (1) might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or that (2) is not performed according to accepted practices or cannot be performed by elementary operations. *Id.* All other alterations are minor alterations. *Id.* Appendix A to 14 C.F.R. § 43 provides as follows:

(b) Major Alterations—

...

(2) Powerplant major alterations. The following alterations of a powerplant when not listed in the engine specifications issued by the FAA, are powerplant major alterations:

- (vi) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.
- (vii) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the orig-

inal manufacturer or parts not specifically approved by the Administrator.

- (viii) Installation of an accessory which is not approved for the engine.
- (ix) Removal of accessories that are listed as required equipment on the aircraft or engine specification
- (x) Installation of structural parts other than the type of parts approved for the installation.
- (vi) Conversions of any sort for the purpose of using fuel of a rating or grade other than that listed in the engine specifications.

Even from the outset, reliance on these definitions is perhaps unnecessary, as we know from the regulations and the FAA's Letter Brief that any type design change (that is, any change affecting any element of the type design supporting a type certificate) would require FAA approval. That is an important aspect of this case, as the type design includes (1) drawings and specifications; (2) structural information on materials and dimensions; (3) a showing of continued airworthiness; (4) inspection and preventative maintenance programs; and (5) any other information relevant to airworthiness, noise, fuel venting, and emissions determinations. 14 C.F.R. § 21.31.

Certainly then, it is difficult to advance the position that a change in the mechanism that powers the engine



itself, indeed a change that would allegedly increase its efficiency, would not be relevant to the type design categories recited above. For starters, such a change would likely need to be drawn and specified and could impact airworthiness. Just the same, this fallback argument has always struck me to be paradoxical to Plaintiff's theory of the case. If the alleged omission was a minor one, then by definition, it had no effect on the aircraft engine's structural strength, reliability, operational characteristics, or airworthiness. If this has been true all along, then it certainly would seem that this litigation should be over, or rather, should never have begun. Although I have confronted the case in a somewhat heady posture dealing with conflict preemption, the underlying claims are nothing more than state law tort actions, which require proximate causation. If the alleged breach of duty had no appreciable effect on the engine's reliability, airworthiness, structure, or operation, then proximate cause cannot be met. This is yet another manifestation of the damned-if-you-do, damned-if-you-don't motif that seems to riddle Plaintiff's stance on the pending motions.<sup>25</sup>

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<sup>25</sup> Perhaps what motivates Plaintiff's counterargument is her counsel's reluctance to acknowledge that "the need for a DER signature therefore prevents Lycoming from acting unilaterally to comply with state law." ECF No. 564 at 14. In other words, because our Court of Appeals has held that the FAA regulations do not field preempt related state tort claims, Plaintiff suggests that there must be some universe of claims that survives conflict preemption as well—that conflict preemption cannot effectively accomplish in one particular case what field preemption would have done in all cases. I am not so uneasy about the opposite proposition. Nothing in *PLIVA* and *Bartlett* suggests that field preemption and conflict preemption cannot be coextensive or that conflict preemption may only apply to a lesser universe of claims than field preemption otherwise might have. Further, nothing in those decisions suggests that claims that are not conflict preempted must otherwise be legally or financially viable. Thus,

Further, Plaintiff's proposed change goes to perhaps the most critical component of the aircraft: the unit that vaporized fuel in a way that guaranteed the delivery of sufficient fuel to other components of the engine. That such changes could be made without approval is unsupported by the regulations cited above and by the history of the case.

In fact, we know that Kelly, albeit in the parallel context of a PMA, did in fact submit the drawings required by regulation in order to obtain FAA approval. Moreover, when Kelly received its PMA authorization in this case, it received express approval from the FAA for precisely the design features that Plaintiff claims were defective. The drawings for the gasket and the lock tab washer are stamped "FAA Approved" or "FAA-PMA Design Approval ANE-140." ECF No. 533 Exs. 1-4. The FAA PMA approvals for the gasket, lock tab washer, and screw are signed by "Jay J. Pardee, Manager, Engine Certification Office, ANE 140." *Id.* Exs. 5-7. Minor changes to certain parts, including the gasket material that Sikkelee's expert Mr. Sommer claims is defective on page 29 of his expert report, all were approved by "Paul C. Sconyers, Associate

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where a hypothetical regulatory regime included in an explicit state law savings clause but yet required agency approval of any product design changes, it is not a far stretch to conclude that under *Sikkelee*, *PLIVA*, and *Bartlett*, state tort claims are not expressly field preempted, but to the extent that they require immediate design changes, those claims would be conflict preempted. Of course, this is a fact-specific inquiry that depends on the nature of each claim and the operative regulations. *See, e.g., In re Incretin-Based Therapies Products Liability Litig.*, 142 F. Supp. 3d 1108, 1116 (S.D. Cal. 2015) ("The determination that conflict preemption is a fact-intensive analysis is consistent with the conclusion that it presents only a question of law suitable for determination by the Court through summary judgment.").

Manager, ACE-117A, Atlanta Aircraft Certification Office.” *Id.* Ex. 6; ECF No. 546 Exs. 6–7.

It too appears from the record that Lycoming requested FAA approval to use hex head screws in its throttle body to float bowl design in the first place. Lycoming requested that approval jointly with Marvel-Schebler in February 1965. ECF No. 546-1. The letter states that it is “requesting approval” from the FAA for the “new method of safety locking the float bowl screws by . . . a hex head screw.” *Id.* “Before permitting its use in production,” Lycoming wrote, “we request your concurrence with . . . approval of this locking method.” *Id.* In response, the FAA determined in the Statement of Compliance of Aircraft or Aircraft Components with Civil Air Regulations that the hex head screw and lock tab washer in fact complied with the applicable requirements of the Civil Air Regulations. ECF No. 549 at ¶ 28. In July 1965, it wrote the following to Lycoming in reply to its request for approval: “An amendment . . . was published in the June 24, 1965 issue of the Federal Register which authorizes the use of the new locking device.” ECF No. 546-2.

Neither does it make a difference that certain changes in the design in the case might have been made by way of first obtaining DER approval. DER approval *is* FAA approval, and any argument to the contrary is creative but unavailing. Recall that DER approval is not some lower threshold of approval, but rather is a more efficient mechanism by which the FAA expedites its own grants of approval. It does not make a difference that the DER may be nominally employed by a private entity either. The emphasis in such cases is on substance over form, and the law is clear that when a privately hired DER acts, he or she acts in the capacity of an official FAA approver,

bounded by the scope of the pertinent FAA delegation. Thus, DER approval fails to move the needle even a bit as far as conflict preemption goes.

Throughout this chapter of the litigation, the retort Plaintiff's counsel has offered in response to the clear text of the regulations is that Lycoming actually should be held liable for Kelly's alleged design omissions because Kelly was bound by Lycoming's independent business decisions to manufacture the carburetor in the manner it did. That argument is logically flawed and divorced from the facts. For one, if Kelly was bound by the type designs that supported Lycoming's type certificate, then, as counsel for Lycoming, John P. O'Flanagan, Esquire, accurately pointed out at oral argument, this case is over, because the type design could not be altered by anyone (especially an aftermarket parts manufacturer Kelly) without FAA approval. That is the catch-22 that riddles Plaintiff's opposition to the present two motions and hints that at some earlier time, this case traced a path leading to nowhere but a maze's dead end. If this case truly is about Kelly indenturing itself in 2004 to a set of designs approved in the 1960s—and I certainly have my doubts about that—then conflict preemption has taken effect because Plaintiff offers no feasible explanation as to how Lycoming could have changed the type design without pre-approval if Kelly (the sole PMA holder itself) could not have done the same.

To this, Plaintiff concedes that Kelly may have a conflict preemption defense based upon either the type certificate or the PMA here, but that does not mean Lycoming can enjoy the benefit of that defense too. As to why that is the rule, Plaintiff offers nothing but silence. As Mr. O'Flanagan rightly noted at oral argument, when

a defendant stands in the shoes of another in terms of liability, it stands in the shoes of that entity in terms of defenses as well. That is correct, and to be frank, given that neither entity could alter the initial type design without FAA approval, this second layer of preemption is something of a belt-and-suspenders point at this juncture of the analysis. Nevertheless, I note that the United States Court of Appeals for the Ninth Circuit, applying many of the same preemption cases outlined above, has explained in a products liability case that a preemption determination applies “equally to manufacturers and distributors.” *Taylor AG Indus. v. Pure-Gro*, 54 F.3d 555, 562 (9th Cir. 1995). “Our decision applies equally to all defendants, the Ninth Circuit concluded, because “the analysis focuses not on whom the legal duty is imposed, but on whether the legal duty constitutes a state law requirement to provide information in addition to or different from the [regulated] label.” *Id.* at 561 n.3. Accordingly, Lycoming’s conflict preemption defense prevails not only because it could not alter the type certificate or Kelly’s PMA absent FAA approval, but also because neither could Kelly.

Relatedly, it is worth reemphasizing that even if Lycoming could have implemented the proposed modification, nothing would ensure that Kelly would follow suit and input its own design changes on its own aftermarket parts. In fact, had Lycoming received certification for an alternative method by which to fasten the throttle body to the float bowl, Kelly might just have likely decided that because its products conform to at least one type of carburetor design used on Lycoming’s engines, changing all of Kelly’s parts would represent a cost inefficiency. That is a causal conundrum skirted by Plaintiff: certification of another method does not imply decertification of all other

methods or strict adherence to the newest alternative by independent aftermarket suppliers.

I said before that Plaintiff's argument is divorced from the facts of this case because, of course, we actually know from the record that Kelly was not bound by the type designs supporting Lycoming's type certificate—and not to be duped, we know that Kelly knew as much too. How “controlling” Kelly viewed Lycoming's designs is no mystery whatsoever. Quite the opposite, when given the opportunity to follow Lycoming's type design, Kelly dispensed with Lycoming's prior workmanship, overhauling a type-certificated article (the original carburetor) by excising it from the engine and replacing it with a conglomerate melded together using one part from the era of counterculture and the other from the age of disco. Certainly, if Kelly was so bound by Lycoming's decisions, a scorched-earth engine overhaul was a curious way to pay Lycoming deference. And if Kelly *ex ante* had no qualms about that design debacle, certainly it should have felt free to disregard other tertiary aspects of the carburetor's design to which it now claims to have been strictly tethered.

I note too that a certain superficial argument tends to recur in implied preemption cases like this one. That argument questions how federal regulations can ever preempt state tort law if both regimes serve the same end, for instance, ensuring product safety. Framing the inquiry at such a high level of abstraction misstates the operative question from *PLIVA* and *Bartlett*. Implied preemption does not hinge upon whether the policy justifications of the two regimes coexist harmoniously. In fact, they often will. Rather, the critical inquiry is whether a

regulated party can unilaterally comply with both regimes simultaneously. Where one cannot, concepts of supremacy clarify that the state law has no force.

An apt illustration of this concept is the comparison between a state tort law that requires a given change to make a product safer and a corresponding federal regulation that requires exactly the same change, a hypothetical discussed at oral argument. If the federal regulatory regime also requires agency approval before that change could be made, the state tort law must be impliedly preempted if an enterprising litigant seeks to hold a manufacturer liable under such a theory.

Although these imagined tort law and regulatory regime appear identical in substance, they are not. The federal regulation, which predicates any alterations on agency approval, contains an element that state tort law does not share. Moreover, compliance with both is mutually exclusive: Either the manufacturer maintains the status quo and breaches its state tort duty, or it unilaterally satisfies that state duty and immediately runs afoul of the regulation's approval requirement. The proper question is thus whether unilateral *compliance* is simultaneously possible.

Neither is it persuasive to suggest that an approval requirement is a tertiary component of a regularly scheme, like a signature or a rubber stamp, that therefore may be overlooked in favor of substance during implied preemption inquiries. Quite the opposite, permitting and approval schemes are a major channel through which agencies regulate. To discern no implied preemption on that ground would necessarily require a finding that violation of the agency's permitting or approval processes was of no consequence for regulated actors. In other words, to adopt

this argument would gut regulatory regimes nationwide by a judicial thumbing of the nose. The propriety of permitting and approval requirements is undoubtedly a question for the executive, not politically-insulated judges.

Another rebuttal is in order. Plaintiff suggests that this Court should not follow *PLIVA* and *Bartlett* but should adhere to a decision by the Supreme Court in *Wyeth v. Levine*, 555 U.S. 555 (2009) and a decision by the Third Circuit captioned *In re Fosamax (Alendronate Sodium) Products Liability Litigation*, 852 F.3d 268 (3d Cir. 2017). Despite counsel for Plaintiff's protestations to the contrary, neither case is applicable here.

*Wyeth* involved the same regulations as did *PLIVA* and *Bartlett*, but because the defendant in *Wyeth* was a brand-name drug manufacturer, a regulatory exception permitted it "to unilaterally strengthen its warning" without prior approval. 555 U.S. at 573. The *PLIVA* and *Bartlett* Courts distinguished *Wyeth* on the ground that the particular regulatory exception at issue in *Wyeth* was not available in those two successor cases, both of which involved generic drug companies.<sup>26</sup> The FDA retained the

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<sup>26</sup> Counsel for Plaintiff, inadvisably in my view, has spent some time insisting that Lycoming and other type certificate holders are more analogous to brand-name drug manufacturers, whereas PMA holders and aftermarket part manufacturers like Kelly are more akin to generic drug companies. Although the analogy is somewhat strained, it is nevertheless a distinction without a difference when applied to the aviation context. The only reason the brand-name versus generic distinction was relevant in the pharmaceutical cases was because brand-name manufacturers enjoyed the benefit of a regulatory exception that allowed them to unilaterally modify their products. Conflict preemption did not turn on a drug maker's status as a brand-name or generic manufacturer *per se* or its position in the market. Instead the unilateral action exception was what carried the day legally. In fact, should the exception have applied to generic makers



authority to reject any changes made pursuant to that regulatory exception. *Id.* at 571. Accordingly, the Court held that, in order for conflict preemption to apply in this back-and-forth posture, the drug maker had to show by “clear evidence” that the FDA was likely to ultimately reject the any change instituted by way of the exception. *Id.* Because no such regulatory exception permitting revocable unilateral action is provided for in the applicable regulations here, *Wyeth* does not apply.

I would say the same about application of the Third Circuit’s decision in *Fosamax*. Although it is a precedential decision, advocating its application in this context sounds more in sophistry than in substance. *Fosamax* involved precisely the same nuanced regulatory exception as did *Wyeth*. 852 F.3d at 273. The only reasonable reading of these decisions is that they govern this particular regulation or more broadly, regulatory regimes that allow for unilateral yet revocable approval. Because, as outlined above, no type certificate holder may make major or minor type design changes or major alterations without FAA approval and because no such regulatory alternative is applicable here, *Wyeth* and *Fosamax* are readily distinguished.

Not to be dissuaded, counsel for Plaintiff argues that the *Wyeth* and *Fosamax* courts intended the “clear evidence” standard to be trans-substantive—to apply to *any*

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and not to brand-name companies, the Court’s three pharmaceutical cases likely would have yielded the opposite outcome each time. In the aviation context, however, there is no regulatory exception allowing unilateral action that applies to type certificate holders and not PMA holders or *vice versa*, and even if there were such a mechanism, it does not apply here. Consequently, the comparison to *Wyeth* is unsound.

conflict preemption defense involving *any* product subject to *any* federal regulatory regime. I confirmed that position at oral argument:

THE COURT: So is clear evidence then not taken from [this particular] regulatory process? It's just an evidentiary standard in your view?

MR. SINGH: That's correct. That's exactly, I think, what the Court said in *Fosamax*.

...

The standard in *Wyeth* is the clear evidence standard discussed in the *Fosamax* case. Right. You say unless the FDA would have clearly rejected a proposed change, they don't get to claim impossibility preemption. We don't see any reason necessarily to cabin that only to cases where completely unilateral action is available as a first step.

May 2017 Tr. at 146:16–20; 170:19–24. That argument is unfaithful to the law and wholly impractical. There are many reasons why the clear evidence rule must be cabined to the circumstance in which manufacturers can take unilateral yet revocable action, a number of which I turn to now.

First, *Wyeth's* concept of “clear evidence” arose in the context of a unique pharmaceutical regulation known as the “changes-being effect” or “CBE” provision. See *PLIVA*, 564 U.S. at 624. That provision allows a brand-name drug manufacturer “to unilaterally strengthen its warning without prior FDA approval.” *Id.* (internal quotation marks omitted). Importantly, however, the FDA retained the right to later rescind any changes made by a

manufacturer as part of the CBE process. *Id.* Thus, *Wyeth*'s clear evidence standard applies only to those rare cases in which a manufacturer can take immediate, unilateral action to satisfy both federal and state law, but where that unilateral action is also subject to eventual regulatory clawback. Unsurprisingly, *Fosamax* involved precisely the same regulatory provision. *In re Fosamax (Alendronate Sodium) Products Liability Litig.*, 852 F.3d 268, 293 (3d Cir. 2017).<sup>27</sup>

Further, Plaintiff's argument that "clear evidence" is a broad-based conflict preemption standard would violate the Supreme Court's clear admonition in *PLIVA* and *Bartlett* that "the possibility of possibility"—that is, the possibility that the agency will approve a requested

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<sup>27</sup> Not only did *Fosamax* pertain to a unique regulatory provision that is not at issue here, but the panel also observed that "[a] state-law failure-to-warn claim will only be preempted if a jury concludes it is highly probable that the FDA would not have approved a label change." *Id.* at 293. Relegating such a legally-specialized determination to lay jurors reinforces, in my view, that the clear evidence standard could not possibly have been meant to apply trans-substantively to every regulatory framework that might ever be the subject of a federal conflict preemption dispute. *Id.* at 293. In fact, to construe *Fosamax*'s holding any other way would not only be highly unworkable but would also contravene established Third Circuit and Supreme Court precedent. See *In re Federal-Mogul Global Inc.*, 684 F.3d 355, 364 n.16 (3d Cir. 2012) (Scirica, J.) ("The scope of preemption presents a pure question of law, which we review *de novo*."); *Horn v. Thoratec Corp.*, 376 F.3d 163, 166 (3d Cir. 2004) ("This Court also exercises plenary review over a district court's preemption determination, as it is a question of law."); *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 873–74 (2000) ("A 'special burden' would also promise practical difficulty by further complicating well-established pre-emption principles that already are difficult to apply. . . . Nothing in the statute suggests Congress wanted to complicate ordinary experience-proved principles of conflict pre-emption with an added 'special burden.'").

change—does not defeat preemption. *PLIVA*, 564 U.S. at 624. Indeed, it is quite curious that, as Mr. Singh suggests, the *Wyeth* Court instituted a universal clear evidence rule for all future conflict preemption cases, when two years later in *PLIVA*, the Court mentioned the term “clear evidence” only once in the entire body of its opinion (to distinguish *Wyeth*) and not at all in *Bartlett*. If *Wyeth* set forth the applicable standard, it appears as though the Court itself is unaware of as much.

Second, Plaintiff’s academic proposal for detecting preemption requires talents more attributable to street-corner charlatans than busy federal judges. Were Plaintiff to have her way, district court judges faced with preemption issues simply could “predict” how an agency would react to a proposed design change, imagining whether denial would be “unlikely,” “likely,” or “clearly likely.” Just how, precisely, would a district court distinguish among proposals who were “clearly likely” to be denied and those that were not? Is it a straightforward determination that can be made on text of the regulations themselves? According to Plaintiff, unfortunately it is not. Instead, her blueprint for resolution of preemption disputes requires each party to obtain an expert in that particular agency’s regulations, who will then offer their own opinions as to what the subject regulations mean and how they should apply to the instant case. Afterwards, the factfinder would make its own determination based upon that testimony. In other words, Plaintiff’s proposal requires not one but at least two layers of considerable speculation.

This off-the-cuff plan kicks judicial economy to the curb—the plain consequence of a conjectured system in which separation of powers and federalist principles carry

little weight. Even more, the United States Supreme Court has repeatedly rejected the notion that preemption may be avoided simply because a district court is confident in its ability to predict what action a regulatory body might take on hypothetical facts. A leading example is *Arkansas Louisiana (Arkla) Gas Co. v. Hall*, 453 U.S. 571 (1981). In certain provisions of the Natural Gas Act, Congress granted the Federal Energy Regulatory Commission the sole authority to approve rates that natural gas sellers may charge in connection with the sale and transportation of their shipments. *Id.* at 576–77. The lower court in *Arkla* had awarded a natural gas seller higher retroactive rates than the Commission had previously approved when one of the seller’s purchasers had breached a most favored nations provision. *Id.* at 575. The lower court reasoned that, by awarding this higher penalty rate, state contract law and the federal rate regulations were not in conflict because “had [the seller] filed rate increases with the Commission,” it was likely that those increases “would have been approved.” *Id.* at 575.

Thus, the central issue in *Arkla* was whether a court can avoid a finding of preemption “based on an assumption that had a higher rate been filed, the Commission would have approved it.” *Id.* at 573. The Supreme Court rejected that argument outright. “The court below,” it explained, “usurped a function that Congress has assigned to a federal regulatory body. This the Supremacy Clause will not permit.” *Id.* at 581–82. In the Supreme Court’s own words, the lower court’s award amounted to nothing more than a decision “based on speculation about what the Commission might have done.” *Id.* at 578–79. To permit a court to make its own decisions as to whether certain proposals satisfied the regulations “would undermine the congressional scheme,” because the proposal “was never

filed with the Commission and thus never found to be reasonable.” *Id.* at 579.<sup>28</sup>

More recently, the Supreme Court in held that state law claims alleging that an orthopedic device manufacture defrauded the FDA were conflict preempted by the FDA’s own regulations. *Buckman Co. v. Plaintiffs’ Legal Comm.*, 531 U.S. 341 (2001). *Buckman* stands for the proposition that “the relationship between a federal agency and the entity it regulates is inherently federal in character because the relationship originates from, is governed by, and terminates according to federal law.” *Id.* at 347. The state claims in *Buckman* were conflict preempted because the federal regulatory scheme “amply empower[ed]” the agency to remedy the complained-of harm *Id.* at 348. Neither does it matter if the parallel regimes exhibit varying levels of “rigor.” *Id.* Instead, a state law claim is conflict preempted so long as the corresponding regulations “enable the [agency] to make its statutorily required judgment,” while the state claim would “exert an extraneous pull on the scheme established by Congress.” *Id.* at 349.

Moreover, the United States submitted an amicus brief in support of Mutual Pharmaceutical in *Bartlett*.<sup>29</sup>

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<sup>28</sup> See also *Missouri Pacific R. Co. v. Stroud*, 267 U.S. 404, 408 (1925) (“It is elementary and well settled that there can be no divided authority over interstate commerce.”); *Chicago & N.W. Transp. Co. v. Kalo Brick & Tile Co.*, 450 U.S. 311, 326 (1981) (“A system under which each State could, through its courts, impose on railroad carriers its own version of reasonable service requirements could hardly be more at odds with the uniformity contemplated by Congress.”).

<sup>29</sup> [https://www.americanbar.org/content/dam/aba/publications/supreme\\_court\\_preview/briefs-v2/12-142\\_pet\\_amcu\\_usa.authcheckdam.pdf](https://www.americanbar.org/content/dam/aba/publications/supreme_court_preview/briefs-v2/12-142_pet_amcu_usa.authcheckdam.pdf).

Therein, the Government argued that design defect tort claims are strong candidates for conflict preemption, particularly where the agency conducts a rigorous, evidence-based evaluation process. *Id.* at 24–25. “In the face of this elaborate regulatory regime,” the Government summarized, “it would be inconsistent . . . to conclude that a manufacturer must abandon a market it has been approved by [an agency] to enter in order to avoid violating a duty recognized by a jury under state law that deems its product unsafe.” *Id.* at 27–28.

According to that same amicus brief, neither is it advisable for lay juries to reconsider an agency’s systematic regulatory judgment. “By requiring a jury to independently balance the health risks and benefits of [agency]-approved uses of a [product] and to determine if the [product] is “unreasonably dangerous” for those uses, a State with a pure design-defect product-liability law would force the jury to “second-guess” [agency] safety determination.” *Id.* at 28. This is true, the Government suggested, even in cases where federal law “establish[es] merely minimum safety standards,” so long as the underlying state tort laws “interfere with the federal balance.” *Id.*

In addition to her argument in support of broad-based application of the clear evidence rule, the Plaintiff also has suggested that the FAA regulations are meant only to set minimum standards and that when fifty bodies of tort law begin to diverge from the regulations by, for instance, setting stricter standards than the FAA, such developments are permissible rather than preempted. That argument is unavailing for a number of reasons.

First, as Mr. O’Flanagan explained at oral argument before this Court, despite the terminology, “minimum”

standards as contemplated by regulations in life-or-death fields, such as aviation or pharmaceuticals, are set substantially higher than might be the case in other less high-stakes arenas. Indeed, based upon the thorough regulatory regime reviewed earlier, it is difficult to imagine remedial measures that aircraft manufacturers might take under state law that would exceed those “minimum” standards but would not already be demanded by the FAA’s regulations.

Perhaps manufacturers could include, for example, working parachutes and lightning preparedness kits, but even Pennsylvania negligence law only requires a duty of reasonable care, not an absolute one. Indeed, Mr. O’Flanagan’s observation is consistent with an earlier remark by the Supreme Court in which it instructed that the words “minimum standards” do not “furnish[ ] a litmus-paper test for resolving issues of preemption.” *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 168 n.19 (1978). In fact, the United States Court of Appeals for the First Circuit, in the parallel context of regulations governing vehicle manufacturers, has previously remarked that this semantic “minimum standards” argument is a red herring, because “[a]lthough the standards are ‘minimum’ in the sense that a manufacturer may make a vehicle safer than required by federal law, the standards are not ‘minimum’ in relation to state law.” *Wood v. Gen. Motors Corp.*, 865 F.2d 395, 414 (1st Cir. 1988). I also note that excessive focus on a hypothetical state tort law that might fall short of, overlap with, or exceed federal regulations very likely overlooks the key conflict preemption metric gleaned from *Arkla*, *Buckman*, *PLIVA*, and *Bartlett*: whether the regulated entity could independently implement the suggested remedial measure.



Further, courts confronting conflict preemption problems in the context of “minimum standards” regimes necessarily have balanced the benefits of uniform standards with the costs of occasionally disparate ones. *See, e.g., Geier v. American Honda Motor Co.*, 529 U.S. 861 (2000). In such instances, the prevailing consideration is always the extent to which the originating statute “reflects a congressional determination” to permit nonuniformity or whether it evidences “a desire to subject the industry to a single, uniform set of federal safety standards.” *Id.* at 871. Certainly, the set of regulations governing such core aspects of aviation as engine structure and maintenance ought to be consistent whether the plane takes off from the keystone state or a bit farther south in the palmetto one. *But see Sprietsma v. Mercury Marine*, 537 U.S. 51 (2002) (declining to find conflict preemption where, quite opposite from this case, the originating statute did “not require the Coast Guard to promulgate comprehensive regulations covering every aspect of recreational boat safety and design” or to “certify the acceptability of every recreational boat subject to its jurisdiction”).

As our Court of Appeals has recognized in this matter, “Almost immediately after the airplane became a viable means of transportation, it became clear that certain aspects of aviation, such as air traffic control, required uniform federal oversight.” *See Sikkelee*, 822 F.3d at 683–84 (citing Air Commerce Act of 1926, ch. 344, 44 Stat. 568). *See also City of Burbank v. Lockheed Air Terminal Inc.*, 411 U.S. 624, 639 (1973) (“The interdependence of these factors requires a uniform and exclusive system of federal

regulation if the congressional objectives underlying the Federal Aviation Act are to be fulfilled.”).<sup>30</sup>

The typical justification for nonuniformity in regulatory cases is that such disparity may assist in adequately compensating accident victims. *See* FAA Ltr. Br. at 12. Federal courts should not contort the law in such a manner as to prioritize compensation over stability of our legal system and the efficient functioning one of our nation’s largest industries. “It is unquestioned that [the plaintiff] sustained serious injury, but not all instances of injury automatically lead to an award of damages. Not all accidents are the legal fault of another.” *Harlan v. Frazier*, 635 F.

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<sup>30</sup> In her supplemental briefing, Plaintiff also contends that certain “obstacle preemption” cases may not be relevant to my determination. That argument characterizes this matter through much too fine a lens:

The Court has not previously driven a legal wedge—only a terminological one—between “conflicts” that prevent or frustrate the accomplishment of a federal objective and “conflicts” that make it “impossible” for private parties to comply with both state and federal law. Rather, it has said that both forms of conflicting state law are “nullified” by the Supremacy Clause. . . . We see no grounds, then, for attempting to distinguish among types of federal-state conflict for purposes of analyzing whether such a conflict warrants pre-emption in a particular case.

*Geier*, 529 U.S. at 873–74.

With that in mind, I note that the Supreme Court has previously construed the conflict preemption analysis as broad as to encompass an inquiry into whether the state law “interferes with the methods by which the federal statute was designed to reach this goal,” *Int’l Paper Co. v. Ouellette*, 479 U.S. 481, 494, (1987), and “whether the [agency] has promulgated its own requirement on the subject or has decided that no such requirement should be imposed at all.” *United States v. Locke*, 529 U.S. 89, 110 (2000).

Supp. 718, 723 (W.D. La. 1986), *aff'd*, 811 F.2d 601 (5th Cir. 1987), and *aff'd*, 811 F.2d 601 (5th Cir. 1987).

To be precise, such a strained adherence to the policy goal of compensation would be improper here for a number of reasons. For one, the need to compensate a victim, however admirable, cannot be so forceful as to require modifications that would have required Lycoming to simultaneously violate federal regulations. Perhaps this analysis could be different where the tort modification and the regulations were entirely congruous, but not here. Second, there are certainly other methods of compensation, such as life insurance or worker's compensation, which soften the blow for decedents' families in many aviation accident cases and that make state tort compensation significantly less attractive and necessary relative to nationwide consistency in flight standards. Last, although no amount of money can replace a loved one, it is undisputed that the Plaintiff has already received a \$2 million settlement from Kelly, who conducted the 2004 carburetor overhaul.

Accordingly, with the foregoing discussion in mind, there is no genuine dispute of material fact that Lycoming could not independently comply with the FAA regulations and Pennsylvania state tort law. Thus, Plaintiff's tort claims are conflict preempted.

**B. There Is No Genuine Dispute Of Material Fact As To Whether The Engine Was Defective When It Left Lycoming's Hands In 1969, Or Alternatively, As To Whether Lycoming Could Have Reasonably Foreseen Introduction Of The Alleged Defect.**

Plaintiff contends that Lycoming is liable on both strict liability and negligence grounds. Neither claim survives summary judgment.

**1. Strict Liability**

In its 2014 decision *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 335, the Supreme Court of Pennsylvania declined to adopt the Third Restatement of Torts. In doing so, it confirmed that strict liability claims alleging manufacturing defects continue to be governed by § 402A of the Second Restatement. *See id.* at 383.

To prevail on such a claim under § 402A, a plaintiff must prove: (1) that the product was defective, (2) that the defect existed when it left the hands of defendant, and (3) that the defect caused the harm. *Ellis v. Chicago Bridge & Iron Co.*, 545 A.2d 906, 909 (Pa. Super. Ct. 1988). *Accord Barton v. Lowe's Home Centers, Inc.*, 124 A.3d 349, 354 (Pa. Super. Ct. 2015); *Hadar v. AVCO Corp.*, 886 A.2d 225, 228 (Pa. Super. Ct. 2005).

The element primarily at issue in this case is the second, which Pennsylvania courts have taken verbatim from comment g to § 402A. Indeed, the Supreme Court of Pennsylvania in *Tincher* acknowledged comment g for its “reasoned consideration of factors relevant in Pennsylvania to explain the existence and nature of a seller’s duty in tort.” 104 A.3d at 383. *See also Wojciechowski v. Long-*

*Airdox Div. of Marmon Grp., Inc.*, 488 F.2d 1111, 1115 (3d Cir. 1973) (Rosenn, J.) (“The Pennsylvania courts have also adopted comment g to Section 402A.”); *Forry v. Gulf Oil Corp.*, 237 A.2d 593, 597 (1968) (linking tort plaintiff’s burden of proof to comment g).

The requirement that a product be defective when it leaves the seller’s hands is “[t]he focus of § 402A.” *Eshbach v. W. T. Grant’s & Co.*, 481 F.2d 940, 942 (3d Cir. 1973). In fact, that the product “was in the same condition . . . on the day of the accident as it was at the time of sale” is “a critical element” in § 402A cases. *Rooney v. Fed. Press Co.*, 751 F.2d 140, 143 (3d Cir. 1984) (Weis, J.). As such, that provision imposes no liability on manufacturers in a supply chain who precede the defect-causing entity. *Bialek v. Pittsburgh Brewing Co.*, 242 A.2d 231, 236 (1968).

Stated another way, a manufacturer is not liable “if a safe product is made unsafe by subsequent changes,” unless it “could have reasonably expected or foreseen such an alteration.” *Davis v. Berwind Corp.*, 690 A.2d 186, 190 (1997). This rule rings “particularly true” when the defect “arises from the manner in which the component is utilized by the assembler of the final product.” *Jacobini v. V. & O. Press Co.*, 588 A.2d 476, 479 (1991).

If subsequent alterations were not reasonably foreseeable when the product entered the stream of commerce, the manufacturer is entitled to summary judgment as a matter of law. *Myers v. Triad Controls, Inc.*, 720 A.2d 134, 135 (Pa. Super. Ct. 1998). This rule confirms that “[a] manufacturer is a guarantor of its product, not an insurer,” and therefore, “it is not the purpose of § 402A to

impose *absolute* liability.” *Davis*, 690 A.2d at 190 (emphasis added).

These principles compel two inquiries: Was the engine defective when it left Lycoming’s hands in the summer of 1969? And, alternatively, could Lycoming have reasonably foreseen introduction of the alleged defect? The answers to both questions ensure that summary judgment is appropriate.

The first question, whether the engine was defective in 1969, is more easily answered. In fact, Judge Jones granted summary judgment on this precise point. In his July 2012 Memorandum Opinion, Judge Jones wrote that Plaintiff “has offered no evidence . . . demonstrating that the engine was defective when it left the Lycoming’s . . . plant in 1969.” ECF No. 299 at 13. Plaintiff’s counsel, David I. Katzman, Esquire, later conceded as much during the November 2013 evidentiary hearing before this Court:

Mr. Katzman: In 1969 when you are selling it to Beagle, who doesn’t make 172 airplanes, I agree, I couldn’t prove it was defective at that point.

Nov. 2013 Tr. at 218:20–22.

A common-sense reading of the facts supports this conclusion. From its distribution in 1969 until 1998, the subject engine was not installed or used in flight. No one, not even Lycoming, knows where the engine was during that time period or in what storage quality it was maintained. After its 1998 removal from that period of long-term storage, the engine only flew for 12 hours before maintenance was required. The engine then accumulated 6 years and 1,200 hours of problem-free flight between 1998 and 2004. In August 2004, the aircraft was struck by

lightning, and the carburetor was completely overhauled by Kelly, who replaced it with conglomerate aftermarket parts. Less than 1 year and 400 flight hours later, the crash occurred. For all of these reasons, the dispositive issue is not whether the engine was defective in 1969 but whether Lycoming could reasonably have foreseen introduction of the allegedly defective carburetor in 2004. It could not have done so.

Summary judgment may be granted where the facts make it “so clear” that the manufacturer could not have foreseen eventual changes. *Davis v. Berwind Corp.*, 640 A.2d 1289, 1297 (Pa. Super. Ct. 1994), *aff’d*, 690 A.2d 186 (1997). For instance, summary judgment is appropriate when the alteration may be “a supervening or intervening cause” of the accident. *Davis*, 640 A.2d at 1297. In that vein, foreseeability of a subsequent change “is part and parcel of a causation analysis.” *Eck v. Powermatic Houdaille, Div. of Houdaille Indus., Inc.*, 527 A.2d 1012, 1020 (Pa. Super. Ct. 1987). “Notably, an alteration that can be reasonably anticipated is still a ‘substantial change’ within the meaning of § 402A if it is negligently or improperly implemented.” *Fisher v. Walsh Parts & Serv. Co.*, 296 F. Supp. 2d 551, 563 (E.D. Pa. 2003) (citing *Kuisis v. Baldwin-Lima-Hamilton Corp.*, 319 A.2d 914, 922 n. 15 (Pa. 1974)).

This determination is made retrospectively, “by looking back from the harm or injury and tracing the sequence of events by which it was produced . . . in light of surrounding circumstances that existed at the time of the accident.” *Wilson v. Am. Chain & Cable Co.*, 364 F.2d 558, 561 (3d Cir. 1966). Changes “too remote to require reasonable prevision need not be anticipated.” *Speyer, Inc. v. Humble Oil & Ref. Co.*, 403 F.2d 766, 771 (3d Cir. 1968) (Aldisert,

J.) (quoting *Brady v. Southern Ry. Co.*, 320 U.S. 476, 483 (1943)).

An illustrative decision is that of the United States District Court for the Eastern District of Pennsylvania in *Fisher v. Walsh Parts & Serv. Co.* That case involved a metal press whose safety assembly bolts “had come loose” and had “backed out . . . so as to create a gap.” 296 F. Supp. 2d 551, 557 (E.D. Pa. 2003). The path that the press had taken to get to its ultimate user was, like that of the engine here, a winding one. In particular, the press was sold in 1976, additional parts were supplied to the same buyer three years later, no one could tell from the records what had happened to the machine from 1979 through 1987, the press was purchased by the end user in 1987, and the accident occurred in 1999. *Id.* at 556. During that time, the press underwent at least four repairs. *Id.*

Speaking mechanically, the safety assembly on the press in *Fisher* consisted of a bracket held on the cast iron frame with two hex bolts. *Id.* at 555. The hex bolts were secured by lock washers and safety wiring. *Id.* Two of the known repairs involved removal of the safety assembly and replacement of one of its original connecting pieces with a rigidly-mounted, substitute two-piece part. *Id.* at 556. After the safety assembly malfunctioned and an employee was severely maimed, a post-accident inspection revealed that the safety assembly had separated from the frame, a likely consequence of loosened bolts conditioned by the rigid replacement fixture as well as missing washers and wire. *Id.* at 564.

The court held that these alterations amounted to substantial changes unforeseeable by the original manufacturer in 1976. *Id.* at 565. In particular, it concluded that



repairs requiring the assembly's removal and overhaul were not foreseeable. *Id.* Still, the court went further, noting that judgment was appropriate on the independent ground that even if the changes were foreseeable, it was not foreseeable that they would have been performed incorrectly in a manner inconsistent with the assembly's initial design and components. *Id.* Thus, the court concluded that, in light of these modifications, it could not "lay blame on the shoulders" of the initial manufacturer. *Id.* at 568.

More recently, in *Schwartz v. Abex Corp.*, 106 F. Supp. 3d 626 (E.D. Pa. 2015), the United States District Court for the Eastern District of Pennsylvania confronted the question of whether, under Pennsylvania law, a manufacturer could be liable on a strict liability theory for components part that it neither manufactured nor supplied but were nevertheless used within its product. The court held that Pennsylvania law does not support such a theory. *Id.* at 628.

The plaintiff in *Schwartz* was an airplane propeller mechanic and crew chief at two Pennsylvania Air Force bases. *Id.* at 629. The defendant manufactured airplane engines that used external insulation containing asbestos. *Id.* It was undisputed that the airplane engine manufacturer did not manufacture or supply the component part at issue. *Id.* This was an important concession, as the court ultimately held that the term "product" under § 402A does not embrace "an aftermarket component part." *Id.* at 653. This holding stemmed from the established principle that a manufacturer cannot be strictly liable "for a product it neither manufactured nor supplied." *Id.* (quoting *Schaffner v. Aesys Techs., LLC*, No. 1901 EDA 2008, 2010 WL 605275, at \*5 (Pa. Super. Ct. Jan. 21, 2010)).

Just as importantly, the court concluded that, “*as a matter of law*, replacement of original component parts (and/or addition of a component part . . . ) constitutes a ‘substantial change’ to the manufacturer’s product, for purposes of strict liability.” *Schwartz*, 106 F. Supp. 3d at 653 (emphasis added). Accordingly, the airplane engine manufacturer was entitled to summary judgment because “a manufacturer is never strictly liable for injury caused by . . . aftermarket component parts.” *Id.* at 664.

Similarly, in *Reese v. Ford Motor Co.*, No. CIV.A. 09-2948, 2011 WL 4572027 (E.D. Pa. Oct. 4, 2011), the United States District Court for the Eastern District of Pennsylvania granted summary judgment in favor of an automaker where “aftermarket parts” caused a vehicle fire. The court in *Reese* accepted expert testimony that the aftermarket wiring was installed after the automobile left manufacturer’s possession. *Id.* at \*2. The plaintiffs nevertheless attempted to hold the automaker strictly liable on the theory that installation of the aftermarket wiring was foreseeable. *Id.* at \*5. The court rejected that argument, reasoning that installation of aftermarket wiring was not foreseeable, even if such installation was made by one of the manufacturer’s authorized dealers. *Id.*

These recent decisions flow from a line of established precedent. See *Speyer, Inc. v. Humble Oil & Ref. Co.*, 403 F.2d 766, 771 (3d Cir. 1968) (Aldisert, J.) (affirming entry of judgment on substantial change grounds where replacement hose made of different material was installed on gas pump 9 years after sale); *Southwire Co. v. Beloit E. Corp.*, 370 F. Supp. 842, 858 (E.D. Pa. 1974) (Becker, J.) (granting judgment in favor of manufacturer where product’s failure was attributable not to “self-contained . . . defect unreasonably dangerous at the time it

left [the manufacturer],” but “to the changes that were made in it by the counterweight welding”); *Merriweather v. E. W. Bliss Co.*, 636 F.2d 42, 43 (3d Cir. 1980) (substantial change defense applicable where switch that powered machine was “removed,” and machine was “equipped” with new controls); *Hanlon v. Cyril Bath Co.*, 541 F.2d 343, 345 (3d Cir. 1975) (directed verdict warranted because “substitution” of “electrical starting device” for original starter was substantial change not reasonably foreseeable 17 years before accident at time of sale).

These authorities point toward a singular conclusion: in 1969, Lycoming could not foresee the substantial modifications its engine would ultimately undergo before the subject accident 36 years later. This lapse of time alone is enough to warrant a grant of summary judgment. See *Gumbs v. Int’l Harvester, Inc.*, 718 F.2d 88, 94 (3d Cir. 1983) (confirming that the key period in allegedly defective product’s life cycle is “the time that it left the hands of the particular seller”); *Oquendo v. Bettcher Indus., Inc.*, 939 F. Supp. 357, 363 (D.N.J. 1996), *aff’d*, 118 F.3d 1577 (3d Cir. 1997) (granting summary judgment where manufacturer “only learned of [component’s] removal post-manufacture” because “the relevant time period . . . is the time of design and fabrication”).

In particular, Plaintiff took no issue with Lycoming’s emphasis on the 12-year overhaul period when I asked at oral argument about the extent to which aircraft engines were durable or nondurable goods. As it were, the aircraft engine here should have been overhauled three times in 12-year cycles during the 36-year timeframe after its sale. This is problematic in two ways. First, it indicates that the engine was subjected to a maintenance schedule contrary to Lycoming’s best practices and therefore reached the

end user in an unforeseen manner. Second, it plainly suggests that the delay in maintenance was potentially an intervening cause of the engine's alleged decline in airworthiness.

Further, the extreme extent of the modification here and the tortured life cycle of this particular engine also warrant the entry of summary judgment. In addition to obvious factors such as the physical or mechanistic breadth of a modification that tend to make it a substantial one, courts also look to whether it could "be reasonably anticipated." *Fisher*, 296 F. Supp. 2d at 563. *See also Harsh v. Petroll*, 840 A.2d 404, 421 (Pa. Commw. Ct. 2003), *aff'd*, 887 A.2d 209 (2005) (considering "extent of the effect of the modifications").

Here, the post-shipment modifications were not only extensive but they were also not objectively foreseeable. After a nearly 30-year period of storage, the engine was installed in an aircraft that did not even exist and for which it was not type certificated at the time of manufacture. After being struck by lightning, the engine and the carburetor were both completely overhauled. Recall that under 14 C.F.R. § 43.2, "overhaul" is a regulatory term of art, encompassing the entire process by which a component, using methods, techniques, and practices acceptable to the FAA, has been disassembled, cleaned, inspected, repaired as necessary, and reassembled. During that process, the engine was removed from the aircraft, and the carburetor was removed from the engine. The carburetor was overhauled using Kelly's third-party aftermarket parts. In fact, recall that experts in this matter believe that the two core carburetor components were likely aftermarket replacement parts from two different decades, melded together to create one finished unit. That alone, in

my view, is sufficiently extreme to warrant summary judgment in light of the preceding case law. By that stage, Lycoming was simply not the kind of seller § 402A is meant to reach.

Plaintiff's primary counterargument is that Lycoming can still be held liable for the aftermarket modifications, given that Kelly purports to have followed one of Lycoming's general service bulletins and maintenance manuals. That argument illustrates full well a strand of fallacious reasoning that I believe permeates Plaintiff's position: this is an exceptionally complex matter that cannot properly be resolved by resorting to vague generalities. In particular, the focus of this case has far too often been upon whether type certificate holders *generally* may be liable for aftermarket part installations, or whether those same manufacturers *generally* may be liable if they issue repair manuals and things go wrong. Of course the answer to those questions is yes. But, this matter has long since progressed beyond general principles of products liability law. The question now is whether under the *specific* circumstances at issue, tort liability may still lie. *See Berkeley Inv. Grp., Ltd. v. Colkitt*, 455 F.3d 195, 201 (3d Cir. 2006) ("In this respect, summary judgment is essentially 'put up or shut up' time for the non-moving party.").

"[N]othing precludes a court from determining proximate cause as a matter of law if a jury could not reasonably differ on the issue." *Chetty Holdings Inc. v. North-Marq Capital, LLC*, 556 F. App'x 118, 121 (3d Cir. 2014) (Fisher, J.). "To put it another way, where there is no issue of fact, the issue of proximate cause is one for the court to determine as a matter of law." *Heeter v. Honeywell Int'l, Inc.*, 195 F. Supp. 3d 753, 758 (E.D. Pa. 2016), *aff'd* 2017 WL 3128488 (3d Cir. July 24, 2017). While every

case turns on its facts, these general instructional material do not create a genuine dispute of material fact warranting the denial of summary judgment here.

Indeed, having previously read at length in Plaintiff's briefs about the purportedly decisive nature of the contested service bulletin, known as Service Bulletin 366, it was rather disappointing to lay eyes on it once again on remand. Its potency in this litigation, like that of a monstrous shadow emanating from a much smaller, harmless source, quickly dissipates upon closer inspection. Recall that the bulletin was broadly issued in 1973 to any and all parts manufacturers or end users who might be responsible for securing maintenance on "All AVCO Lycoming engines equipped with Marvel-Schebler carburetors." In fact, it consists of three short paragraphs, together approximately one-half page in length.

The Bulletin is written generally and provides no direct guidance for the particular parts or methods eventually employed 31 years later by Kelly. Instead it merely notifies recipients that if leaking is evident or the screws are loose, the carburetor may be disassembled so that the gasket may be replaced and the screws retightened. It makes no mention of the specific types of components or the designs that should be used when an aftermarket parts manufacturer seeks a PMA pertaining to the carburetor. Of course, the service bulletin is also silent as to the type of conglomerate overhaul that Kelly undertook. Plaintiff's argument as to this service bulletin is therefore flawed in several respects: it cannot be said that the bulletin addresses the entirety of the carburetor maintenance performed during the overhaul; the bulletin is intended for engines that have been maintained using best practices; no reasonable person could find that Kelly

faithfully followed the bulletin when it implanted the conglomerate carburetor; and Plaintiff has not shown that further instructional information on Lycoming's part would have materially altered Kelly's future design choices or maintenance decisions.<sup>31</sup>

The thrust of this Memorandum Opinion does not mean to say that type certificate holders can never be liable for aftermarket work or that instructional manuals will never give rise to liability. To the contrary, the crux of this portion of my discussion is rather narrow: when an engine is lost, stored, overhauled, and the allegedly defective part has been entirely replaced with a suspect knock-off, liability simply cannot lie. This is not the type of case that § 402A is intended to reach. In fact, if this judgment cannot be entered here as a matter of law, it is hard to imagine what other scenarios would absolve manufacturers. Summary judgment is not limited to the fanciful scenario in which a midnight burglar penetrates the air hangers and meddles with the Cessna aircrafts. Rather, at some point, the tortuous life cycle of a product necessarily snuffs out any remaining liability early manufacturers once had. The engine here has undoubtedly passed that point.

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<sup>31</sup> The same is true of certain letters Lycoming may have received from the FAA in the early 1970s regarding perceived defects in the engine. As Ms. Slavin rightly pointed out at oral argument, those concerns must have been *de minimis*, as the Administration continued approving Lycoming's same designs at that time and continuing for a period of at least 20 more years. May 2017 Tr. 44:07–17. Of course, the FAA also approved Kelly's PMA that used an imitation design similar to the one about which Plaintiff now complains. Generic recitations pertaining to foreseeability are inadequate at this stage of such a complex case as this one.

## 2. Negligence

My analysis as to Plaintiff's negligence claims does not repeat, though it certainly rhymes with that above. "Proximate causation is a necessary element in proving a tort case under theories of strict liability or negligence." *Van Buskirk v. Carey Canadian Mines, Ltd.*, 760 F.2d 481, 492 (3d Cir. 1985) (Adams, J.) (citing *Sherk v. Daisy-Heddon*, 450 A.2d 615, 617 (Pa. 1982)). Accordingly, the causal inquiry is "inescapable" in negligence and strict liability cases where subsequent modifications are at issue. *Van Buskirk*, 760 F.2d at 495 n.11.

"In *Tincher*, the Pennsylvania Supreme Court noted that the standard for establishing a strict liability claim in Pennsylvania is designed to be more easily satisfied than that for a negligence claim." *Schwartz v. Abex Corp.*, 106 F. Supp. 3d 626, 654 (E.D. Pa. 2015). "Pursuant to the guidance of the Pennsylvania Supreme Court, the standard for establishing liability of a product manufacturer under a negligence theory would be more stringent and, thus, more difficult to satisfy." *Id.*

"In order to show negligent design and negligent manufacture under Pennsylvania law, plaintiff must show that (1) the manufacturer owned a duty to the plaintiff, (2) the duty was breached and (3) such a breach was the proximate cause of plaintiff's injuries." *Soufflas v. Zimmer, Inc.*, 474 F. Supp. 2d 737, 753 (E.D. Pa. 2007) (citing *Phillips v. Cricket Lighters*, 841 A.2d 1000, 1008 (Pa. 2003); *Dauphin Deposit Bank & Trust v. Toyota*, 596 A.2d 845, 849–50 (Pa. Super. Ct. 1991)). Further, "a claim for negligence under a failure-to-warn theory in products liability requires showing, unlike in a strict products liability claim, that the manufacturer was at fault" and that "the absence or inadequacy of the warnings was the factual or



proximate cause of the injury.” *Wright v. Ryobi Techs., Inc.*, 175 F. Supp. 3d 439, 454–55 (E.D. Pa. 2016) (citing *Dauphin Deposit Bank & Tr. Co. v. Toyota Motor Corp.*, 596 A.2d 845, 849–50 (Pa. Super. Ct. 1991); *Moroney v. General Motors Corp.*, 850 A.2d 629, 633–34 (Pa. Super. Ct. 2004).

A proximate, or legal cause, is defined as a substantial contributing factor in bringing about the harm in question.” *Van Buskirk*, 760 F.2d at 492. “Pennsylvania courts utilize the ‘substantial factor’ test from the Restatement (Second) of Torts to ascertain proximate cause.” *Heeter*, 195 F. Supp. 3d at 758. “The following considerations are deemed important under the Restatement’s ‘substantial factor’ test to determine proximate cause: (1) the number of factors other than the actor’s conduct that contributed to producing the harm and the extent of their contribution; (2) whether the actor’s conduct created a force or series of forces that were in continuous and active operation up to the time of the harm, or created a situation harmless unless acted upon by other forces for which the actor is not responsible; and (3) the lapse of time between the actor’s conduct and the harm.” *Id.* at 759. “The questions of proximate cause and superseding cause are intended to further the same ultimate inquiry: how far should legal responsibility extend?” *Van Buskirk*, 760 F.2d at 495.

Thus, proximate causation as to negligence is further called into question based upon Kelly’s own independent aftermarket actions. Recall that Kelly did not obtain its PMA by tying its approval strictly to that of Lycoming’s through an identity submission. To the contrary, Kelly submitted its own tests and computations. To that end, the record reveals that the new parts installed during the carburetor overhaul all were Kelly parts. ECF No. 524

¶¶ 4, 5, 7). The part numbers for the various new replacement carburetor parts contain the letters CF—for Consolidated Fuel Systems (an entity related to Kelly), and the data tag installed on the overhauled carburetor contains the letters KA—for Kelly Aerospace. *Id.* ¶¶ 7, 9.

Further, the foregoing analysis as to the time that elapsed since the engine left Lycoming’s hands, as well as to the extent of the modification, is just as applicable to proximate cause analysis in the negligence context as it is to strict liability. However, negligence is distinct from strict liability—indeed, a more difficult cause of action upon which to succeed—because negligence requires something that strict liability does not: breach of a duty of *reasonable care*.

If Plaintiff’s strict liability claims fail, and they undoubtedly should, it would be highly inadvisable to shoe-horn these facts into a negligence cause of action. That, it seems to me, would amount to the imposition of a duty of *absolute care*. In my view, Plaintiff has not articulated what precise duty Lycoming breached and what precise remedial measures Lycoming could have taken that would have altered the eventual outcome. That Lycoming should have stopped selling carburetors altogether or should have had omniscient foresight in 1969 are impermissible suggestions incongruous with the concept of reasonableness.<sup>32</sup>

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<sup>32</sup> In my view, Plaintiff’s negligence claims would also fail when viewed through the lens of Pennsylvania’s “*Althaus* test” for discerning, as a matter of law, whether a duty in tort exists. That test requires consideration of: (1) the relationships between the parties; (2) the social utility of the defendant’s conduct; (3) the nature of the risk imposed and foreseeability of the harm incurred; (4) the consequences of imposing a duty upon the defendant; and (5) the overall

Last, as the preceding authority makes clear, manufacturers are not insurers. Expansive liability for entities in a supply chain is recognized precisely so that plaintiffs are not foreclosed from recovering just because one manufacturer or seller may be illiquid. In that case, liability may reach proximate comparators. What that form of supply chain liability does not do in negligence cases, however, is stretch into space and time *ad infinitum*. That converts the Commonwealth's negligence law into a beast that it is not.

For these reasons, Lycoming is entitled to summary judgment on this second, independent ground.

#### IV. CONCLUSION

At this point in conflict preemption opinions, the court typically laments “the unfortunate hand that federal [ ] regulation has dealt” the plaintiff. *PLIVA*, 564 U.S. at 625. As her \$2 million settlement evidences, such sympathy for unrealized pecuniary losses is not in order for the Plaintiff here. As Ms. Slavin expressed at oral argument, “Kelly’s hands placed the carburetor into the stream of commerce, and Mrs. Sikkelee . . . recovered \$2 million. So everything that *Tincher* says should happen did happen as to the actual seller or supplier.” May 2017 Tr. at 19:08–12.

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public interest in the proposed solution. *See Althaus v. Cohen*, 756 A.2d 1166, 1169 (Pa. 2000). Straining to find liability in the present case would leave these factors entirely uncalibrated in that it would impose significant costs and uncertainty on aircraft manufacturers (and ultimately consumers and shareholders), solely to pay for the injuries of an individual who has already been compensated and whose connection to the manufacturer was slight and destroyed by several intervening events.

154a

I agree.

An appropriate Order follows.

**APPENDIX D**

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

JILL SIKKELEE, Individually and as Personal Representative of the ESTATE OF DAVID SIKKELEE,  
deceased,

Plaintiff,

v.

AVCO CORPORATION, *et al.*,

Defendants.

No. 4:07-CV-00886

(Judge Brann)

**ORDER**

**AND NOW**, this 3rd day of August 2017, in accordance with the accompanying Memorandum Opinion, **IT IS HEREBY ORDERED** that:

1. Lycoming's Motion for Summary Judgment on the Ground of Conflict Preemption, ECF No. 532, is **GRANTED**;
2. Lycoming's Motion for Summary Judgment in light of *Tincher v. Omega Flex*, ECF No. 523 is **GRANTED**;

3. The Clerk of Court is directed to **DEFER** the entry of judgment until final resolution of this litigation, because this Order “adjudicates fewer than all the claims or the rights and liabilities of fewer than all the parties,” pursuant to Federal Rule of Civil Procedure 54(b).

BY THE COURT:

s/ Matthew W. Brann  
Matthew W. Brann  
United States District Judge

**APPENDIX E**

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

JILL SIKKELEE, Individually and as Personal Representative of the ESTATE OF DAVID SIKKELEE,  
deceased,

Plaintiff,

v.

AVCO CORPORATION, *et al.*,

Defendants.

No. 4:07-CV-00886

(Judge Brann)

**ORDER**

August 3, 2017

Defendant has filed a motion to reconsider my earlier decision as to the survival of Plaintiff's 14 C.F.R. § 21.3 claim. That Section provides in pertinent part as follows, with my emphasis added:

**§ 21.3 Reporting of Failures, Malfunctions, and Defects.**

- (a) The holder of a type certificate (including amended or supplemental type certificates), a PMA, or a

TSO authorization, or the licensee of a type certificate must report any failure, malfunction, or defect in any product or article *manufactured by it* that it determines has resulted in any of the occurrences listed in paragraph (c) of this section.

- (b) The holder of a type certificate (including amended or supplemental type certificates), a PMA, or a TSO authorization, or the licensee of a type certificate must report any defect in any product or article *manufactured by it* that has left its quality system and that it determines could result in any of the occurrences listed in paragraph (c) of this section.
- (c) The following occurrences must be reported as provided in paragraphs (a) and (b) of this section:
  - (1) Fires caused by a system or equipment failure, malfunction, or defect.
  - (2) An engine exhaust system failure, malfunction, or defect which causes damage to the engine, adjacent aircraft structure, equipment, or components.
  - (3) The accumulation or circulation of toxic or noxious gases in the crew compartment or passenger cabin.
  - (4) A malfunction, failure, or defect of a propeller control system.
  - (5) A propeller or rotorcraft hub or blade structural failure.
  - (6) Flammable fluid leakage in areas where an ignition source normally exists.



- (7) A brake system failure caused by structural or material failure during operation.
  - (8) A significant aircraft primary structural defect or failure caused by any autogenous condition (fatigue, understrength, corrosion, etc.).
  - (9) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure.
  - (10) An engine failure.
  - (11) Any structural or flight control system malfunction, defect, or failure which causes an interference with normal control of the aircraft for which derogates the flying qualities.
  - (12) A complete loss of more than one electrical power generating system or hydraulic power system during a given operation of the aircraft.
  - (13) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.
- (d) The requirements of paragraph (a) of this section ***do not apply to***—
- (1) Failures, malfunctions, or defects that the holder of a type certificate (including amended or supplemental type certificates), PMA, TSO authorization, or the licensee of a type certificate determines—
    - (i) Were caused by improper maintenance or use;

- (ii) Were reported to the FAA by another person under this chapter; or
  - (iii) Were reported under the accident reporting provisions of 49 CFR part 830 of the regulations of the National Transportation Safety Board.
- (2) Failures, malfunctions, or defects in products or articles—
- (i) Manufactured by a foreign manufacturer under a U.S. type certificate issued under § 21.29 or under an approval issued under § 21.621; or
  - (ii) Exported to the United States under § 21.502.

To prevail on a claim under § 21.3, Plaintiff must prove (1) Lycoming determined a defect in the MA-4SPA created safety risks; (2) that such defect caused the crash; and (3) that the FAA would have responded to Lycoming's § 21.3 reports . . . by ordering changes to the carburetor's design or otherwise taking action that would have prevented the accident. *Sikkelee v. Precision Airmotive Corp.*, 45 F. Supp. 3d 431, 459 (M.D. Pa. 2014).

“By its plain terms, § 21.3(a) applies only to a type certificate holder that *also* manufactured the subject product or part that is determined to be defective.” *Dalrymple ex rel. Dalrymple v. Fairchild Aircraft Inc.*, 575 F. Supp. 2d 790, 797 (S.D. Tex. 2008). *See also Bain ex rel. Bain v. Honeywell Int'l, Inc.*, 167 F. Supp. 2d 932, 939 (E.D. Tex. 2001) (“Bell admits that it holds the type certificate for model 206 helicopters, however, it offers undisputed evidence showing that it is not the type certificate holder for the engine and fuel control unit implicated in the accident

involving Bain.”); *Hasler Aviation, L.L.C. v. Aircenter, Inc.*, No. 1:06-CV-180, 2007 WL 2263171, at \*5 (E.D. Tenn. Aug. 3, 2007) (“Again, here the standard of care under 14 C.F.R. § 21.3(a) is imposed as a duty on the type certificate holder in relation to a product ‘manufactured by it.’ If Plaintiff does not establish these elements, Plaintiff cannot support a negligence per se claim.”).

As set forth more fully in the accompanying Memorandum Opinion issued on this date, the allegedly defective carburetor was manufactured by Kelly using third-party aftermarket parts. Such manufacturing and installation occurred in connection with the 2004 overhaul of the subject aircraft’s engine. Plaintiff does not dispute that. Thus, the regulation’s requirement that the allegedly defective article be “manufactured by” the defendant is not met here. For that reason alone, liability under § 21.3 is improper.

The regulation also excludes from liability alleged defects “caused by improper maintenance or use,” which exception is met here at least three times over: once for the conglomerate carburetor that was installed, twice for the unusually lengthy three decades of storage, and thrice for missed overhaul periodicity.

Separately, Plaintiff has failed to show that the FAA would have responded to the allegedly dilatory § 21.3 reports. To the contrary, the record, as set forth in the accompanying Memorandum Opinion, shows that the FAA likely was aware of what the Plaintiff suggests constituted a design defect in the subject carburetor but nevertheless continued to approve Lycoming’s design and a separate third-party PMA for years thereafter.

Last, as discussed in the accompanying Memorandum Opinion, Plaintiff has failed to show that the alleged defect or the alleged failure to report the alleged defect was the proximate cause of her decedent's injuries. To the contrary, no reasonable juror could find as much on the facts of this case. "[N]othing precludes a court from determining proximate cause as a matter of law if a jury could not reasonably differ on the issue." *Chetty Holdings Inc. v. NorthMarq Capital, LLC*, 556 F. App'x 118, 121 (3d Cir. 2014) (Fisher, J.) "To put it another way, where there is no issue of fact, the issue of proximate cause is one for the court to determine as a matter of law." *Heeter v. Honeywell Int'l, Inc.*, 195 F. Supp. 3d 753, 758 (E.D. Pa. 2016), *aff'd* 2017 WL 3128488 (3d Cir. July 24, 2017).

"The purpose of a motion for reconsideration is to correct manifest errors of law or fact or to present newly discovered evidence." *Harsco Corp. v. Zlotnicki*, 779 F.2d 906, 909 (3d Cir. 1985) (Rosenn, J.). In light of the foregoing and the accompanying Memorandum Opinion, my earlier denial of summary judgment was erroneous, and I take the opportunity to correct that oversight today.

**AND NOW, THEREFORE, IT IS HEREBY ORDERED** that Lycoming's Motion for Reconsideration as to Plaintiff's § 21.3 claim, ECF No. 497, is **GRANTED**.

BY THE COURT:

s/ Matthew W. Brann  
Matthew W. Brann  
United States District Judge

**APPENDIX F**

UNITED STATES COURT OF APPEALS  
FOR THE THIRD CIRCUIT

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No. 14-4193

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JILL SIKKELEE, Individually and as Personal Representative of the Estate of David Sikkelee, deceased,  
Appellant

v.

PRECISION AIRMOTIVE CORPORATION; PRECISION AIRMOTIVE LLC, Individually and as Successor-In-Interest to Precision Airmotive Corporation;  
BURNS INTERNATIONAL SERVICES CORPORATION, Individually and as Successor-In-Interest to Borg-Warner Corporation, and Marvel-Schebler, a Division of Borg-Warner Corporation; TEXTRON LYCOMING RECIPROCATING ENGINE DIVISION, A Division of Avco Corporation; AVCO CORPORATION;  
KELLY AEROSPACE, INC., Individually and Joint Venturer and a Successor-In-Interest; KELLY AEROSPACE POWER SYSTEMS, INC., Individually and as Joint Venturer and Successor-In-Interest a/k/a ElectroSystems, Inc. a/k/a Confuel Inc.; ELECTROSYSTEMS, INC., Individually and as Joint Venturer and as Successor-In-Interest a/k/a Consolidated Fuel Systems, Inc. a/k/a Confuel, Inc.; CONSOLIDATED FUEL SYSTEMS, INC., a/k/a Confuel, Inc.

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Filed: April 19, 2016

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Before: CHAGARES, KRAUSE, and VAN ANTWERPEN, Circuit Judges.

### OPINION

KRAUSE, Circuit Judge.

This case presents the question whether *Abdullah v. American Airlines, Inc.*, 181 F.3d 363 (3d Cir. 1999), in which we held that federal law preempts the field of aviation safety, extends to state law products liability claims. We hold it does not. In light of principles of federalism and the presumption against preemption, Congress must express its clear and manifest intent to preempt an entire field of state law. Here, none of the relevant statutes or regulations signals such an intent. To the contrary, the Federal Aviation Act, the General Aviation Revitalization Act of 1994, and the regulations promulgated by the Federal Aviation Administration reflect that Congress did not intend to preempt aircraft products liability claims in a categorical way. The District Court faithfully sought to apply our precedent, and while it concluded that state products liability claims are preempted by *Abdullah*, it also recognized the question was sufficiently unclear and important to certify its order for interlocutory review. Today, we clarify the scope of *Abdullah* and hold that neither the Act nor the issuance of a type certificate per se preempts all aircraft design and manufacturing claims. Rather, subject to traditional principles of conflict preemption, including in connection with the specifications expressly set forth in a given type certificate, aircraft products liability cases like Appellant's may proceed using a state standard of care. For these reasons, we will reverse the District Court's entry of summary judgment in favor of Appellees and remand for further proceedings.

## I. Background

### A. Overview of Federal Aviation Regulation

Almost immediately after the airplane became a viable means of transportation, it became clear that certain aspects of aviation, such as air traffic control, required uniform federal oversight. *See* Air Commerce Act of 1926, ch. 344, 44 Stat. 568. Congress soon thereafter expanded federal control over aviation by enacting the Civil Aeronautics Act of 1938, which created the Civil Aeronautics Authority (“CAA”) to oversee the regulatory aspects of aviation safety and to prescribe “minimum standards governing the design . . . of aircraft, aircraft engines, and propellers as may be required in the interest of safety.” Civil Aeronautics Act of 1938, ch. 601, 52 Stat. 973, 1007. The 1938 Act also authorized the CAA to issue so-called “type certificates,” “production certificate[s],” and “airworthiness certificate[s]” if an airplane or airplane part complied with the relevant safety regulations. *Id.* at 1007, 1009-10.

As the scope of federal involvement in regulating aviation expanded, so too did the number of governmental bodies regulating aviation, and by the 1950s, there had, at one point, been seventy-five different interagency groups with some responsibility in the field. S. Rep. No. 85-1811, at 6 (1958). To resolve this problem, Congress enacted the 1958 Federal Aviation Act, Pub. L. No. 85-726, 72 Stat. 731, to consolidate regulatory authority in a single entity: the Federal Aviation Administration (“FAA”). The Federal Aviation Act adopted verbatim from the Civil Aeronautics Act the statutory framework for the promulgation of minimum standards for design safety and the process

for the issuance of certificates that indicated compliance with those regulations.<sup>1</sup>

Pursuant to the statutory framework established in the Civil Aeronautics Act and adopted by the Federal Aviation Act, aircraft engine manufacturers must obtain from the FAA (1) a *type certificate*, which certifies that a new design for an aircraft or aircraft part performs properly and meets the safety standards defined in the aviation regulations, 49 U.S.C. § 44704(a); 14 C.F.R. § 21.31; and (2) a *production certificate*, which certifies that a duplicate part produced for a particular plane will conform to the design in the type certificate, 49 U.S.C. § 44704(c); 14 C.F.R. § 21.137. Before a new aircraft may legally fly, it must also receive (3) an *airworthiness certificate*, which certifies that the plane and its component parts conform to its type certificate and are in condition for safe operation. 49 U.S.C. §§ 44704(d), 44711(a)(1).

The FAA issues a type certificate when it has determined that a product “is properly designed and manufactured, performs properly, and meets the regulations and minimum standards prescribed under [49 U.S.C. §] 44701(a).” 49 U.S.C. § 44704(a)(1); *see also* 14 C.F.R. § 21.21. A type certificate includes the type design, which

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<sup>1</sup> The only difference between these portions of the two Acts is that the Federal Aviation Act replaced the word “Authority”—referring to the Civil Aviation Authority created by the 1938 Act—with “Administrator,” which refers to the appointed head of the Authority’s successor organization, the Federal Aviation Administration. *See also* H.R. Rep. 85-2360, at 16 (1958) (reflecting that, except for certain enumerated changes, “TITLE VI. SAFETY REGULATION OF CIVIL AERONAUTICS [of the Federal Aviation Act] . . . is a reenactment of existing law without substantial change”).



outlines the detailed specifications, dimensions, and materials used for a given product; the product's operating limitations; a "certificate data sheet," which denotes the conditions and limitations necessary to meet airworthiness requirements; and any other conditions or limitations prescribed under FAA regulations. *See* 14 C.F.R. §§ 21.31, 21.41; FAA, Order 8110.4C, change 5, Type Certification, ch. 3-3(a) (2011). This certification process can be intensive and painstaking; for example, a commercial aircraft manufacturer seeking a new type certificate for a wide-body aircraft might submit 300,000 drawings, 2,000 engineering reports, and 200 other reports in addition to completing approximately 80 ground tests and 1,600 hours of flight tests. *See United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 805 n.7 (1984). A type certificate remains in effect "until surrendered, suspended, revoked, or a termination date is otherwise established by the FAA." 14 C.F.R. § 21.51. A manufacturer may make both "major" and "minor" changes to a type certificated design, 14 C.F.R. § 21.93, but must obtain the appropriate regulatory approval to do so, which for "major changes" requires the issuance of an amended or supplemental type certificate by the FAA, *see* 49 U.S.C. § 44704(b); 14 C.F.R. § 21.97; FAA Order 8110.4C, change 1, Type Certification, ch. 4-1(a), 4-2 (2011), and for "minor changes" requires the manufacturer to comply with a pertinent "method acceptable to the FAA," 14 C.F.R. § 21.95.

## **B. Factual History**

This case involves alleged manufacturing and design defects in a Textron Lycoming O-320-D2C engine ("the engine") manufactured in 1969 and installed "factory new" on a Cessna 172N aircraft ("the aircraft") in 1998.

Lycoming holds both a type certificate and production certificate for the engine. The engine in the aircraft was overhauled in 2004 and installed with a MA-4SPA carburetor in accordance with Lycoming's type-certificated design.

David Sikkelee was piloting the aircraft when it crashed shortly after taking off from Transylvania County Airport in Brevard, North Carolina in July 2005. Sikkelee was killed as a result of serious injuries and burns he suffered in the crash. His wife, Jill Sikkelee, the Plaintiff-Appellant in this case, alleges that the aircraft lost power and crashed as a result of a malfunction or defect in the engine's carburetor. Specifically, she contends that, "due to the faulty design of the lock tab washers as well as gasket set," vibrations from the engine loosened screws holding the carburetor's throttle body to its float bowl. J.A. 643. When properly functioning, a carburetor regulates the mixture of fuel and air that enters the engine's cylinders. According to Sikkelee, however, the manner by which the throttle body was attached to the float bowl in the Textron Lycoming O-320-D2C engine allowed raw fuel to leak out of the carburetor into the engine and thereby caused the aircraft to crash.

### **C. Procedural History**

Sikkelee initially filed a wrongful death and survival action in the Middle District of Pennsylvania in 2007 against seventeen defendants, asserting state law claims of strict liability, breach of warranty, negligence, misrepresentation, and concert of action. In 2010, the District Court granted defendants' motion for judgment on the pleadings, holding that Sikkelee's state law claims, which were premised on state law standards of care, fell within

the preempted “field of air safety” described in *Abdullah. Sikkelee v. Precision Airmotive Corp.*, 45 F. Supp. 3d 431, 435 (M.D. Pa. 2014) (quoting *Abdullah*, 181 F.3d at 367). Sikkelee subsequently filed an amended complaint, continuing to assert state law claims, but this time incorporating federal standards of care by alleging violations of numerous FAA regulations.<sup>2</sup> Following certain settlements and motion practice, Sikkelee narrowed her claims against Lycoming to defective design (under theories of both negligence and strict liability) and failure to warn.<sup>3</sup>

As the trial date approached, the District Court expressed concern that Sikkelee’s proposed jury instructions using federal standards of care were “all but completely unable to assist the Court in . . . formulating an intelligible statement of applicable law.” *Sikkelee*, 45 F. Supp. 3d at 437 (internal quotation marks omitted) (recounting its position on this point as first expressed in its Memorandum of November 20, 2013). On the one hand, the District Court asserted that, under *Abdullah*, it was

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<sup>2</sup> As summarized by the District Court, Sikkelee specifically alleged that Lycoming had violated, at least, the following regulations: Civil Air Regulations (CARs) §§ 13.100, 13.101, 13.104, 13.110 (1964); 14 C.F.R. §§ 21.2, 21.3, 21.14, 21.21, 21.303, 33.4, 33.15, 33.19, 33.35, 145.221(a) (2004). As described by the District Court, CARs were precursors to modern day Federal Aviation Regulations codified in Title 14 of the Code of Federal Regulations. *Sikkelee*, 45 F. Supp. 3d at 440 n.9 (citing a description of the history of aviation regulations found in 2 Kreindler, *Aviation Accident Law* § 9.01(1)-(2) (Matthew Bender)).

<sup>3</sup> The case then took a detour to this Court to determine whether the Second or Third Restatement of Torts applied to products liability cases. In denying the petition for interlocutory appeal, we clearly indicated that the Third Restatement applied. *Sikkelee v. Precision Airmotive Corp.*, No. 12-8081, 2012 WL 5077571 (3d Cir. Oct. 17, 2012). At that point, the case was reassigned from Judge John E. Jones III to Judge Matthew W. Brann.

bound to apply some federal standard of care and that compliance with the applicable design and construction regulations was the only identifiable, let alone articulable, federal standard. On the other hand, because it determined that the “FAA regulations relating to the design and manufacture of airplanes and airplane component parts were never intended to create federal standards of care,” *id.* at 437 n. 4 (quoting *Pease v. Lycoming Engines*, No. 4:10-cv-00843, 2011 WL 6339833, at \*22 (M.D. Pa. Dec. 19, 2011) (Conner, J.)) (internal quotation marks omitted), the District Court found it to be “arduous and impractical” to fashion the regulations themselves into such standards, *id.* (quoting *Pease*, 2011 WL 6339833, at \*23) (internal quotation marks omitted). Faced with this conundrum, the District Court ordered Sikkelee to submit additional briefing on the question of the appropriate standard of care and, after review of that briefing, invited Lycoming to file a motion for summary judgment. *Id.* at 438.

In its ruling on that motion, the District Court concluded that the federal standard of care was established in the type certificate itself. Reasoning that the FAA issues a type certificate based on its determination that the manufacturer has complied with the pertinent regulations, the District Court held that the FAA’s issuance of a type certificate for the Textron Lycoming O-320-D2C engine meant that the federal standard of care had been satisfied as a matter of law. *Id.* at 451-43, 456. The District Court therefore granted Lycoming’s summary judgment motion, in part, on that basis. *Id.* at 456. The District Court denied summary judgment, however, on *Sikkelee’s* failure to warn claims, which were premised on Lycoming’s alleged violation of 14 C.F.R. § 21.3 for failure to “report any failure, malfunction, or defect in any product,

part, process, or article” that Lycoming manufactured.<sup>4</sup> *Id.* at 459-60 (quoting 14 C.F.R. § 21.3(a) (2004)).

Recognizing that its grant of partial summary judgment raised novel and complex questions concerning the reach of *Abdullah* and the scope of preemption in the airlines industry, the District Court certified the order for immediate appeal, and we granted interlocutory review.

## II. Jurisdiction and Standard of Review

The District Court had diversity jurisdiction under 28 U.S.C. § 1332(a), and we have jurisdiction under 28 U.S.C. § 1292(b) to review the order certified by the District Court for interlocutory appeal. We review the District Court’s order granting summary judgment de novo. *Azur v. Chase Bank, USA, Nat’l Ass’n*, 601 F.3d 212, 216 (3d Cir. 2010). We also review questions of preemption de novo. *Farina v. Nokia Inc.*, 625 F.3d 97, 115 n.20 (3d Cir. 2010).

## III. Discussion

The doctrine of preemption is a necessary but precarious component of our system of federalism under which the states and the federal government possess concurrent sovereignty, subject to the limitation that federal law is

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<sup>4</sup> Upon receiving a report that a product has malfunctioned or contains a defect, the FAA may issue a legally enforceable airworthiness directive that specifies “inspections you must carry out, conditions and limitations you must comply with, and any actions you must take to resolve an unsafe condition.” 14 C.F.R. § 39.11; *see also* 14 C.F.R. §§ 39.3, 39.5. Any further operation of an aircraft in contravention of an airworthiness directive is a violation of federal law. 14 C.F.R. §§ 39.7, 39.9.

“the supreme Law of the Land . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.” U.S. Const. art. VI, cl. 2. Consistent with this principle, Congress has the power to enact legislation that preempts state law. *See Arizona v. United States* (2012). At the same time, with due respect to our constitutional scheme built upon a “compound republic,” with power allocated between “two distinct governments,” The Federalist No. 51, at 323 (James Madison) (Clinton Rossiter ed., 1961); *see also U.S. Term Limits, Inc. v. Thornton*, 514 U.S. 779, 838 (1995) (Kennedy, J., concurring), there is a strong presumption against preemption in areas of the law that States have traditionally occupied, *see Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996); *Bruesewitz v. Wyeth, Inc.*, 561 F.3d 233, 240 (3d Cir. 2009) (explaining that, “[w]hen faced with two equally plausible readings of statutory text, [courts] have a duty to accept the reading that disfavors preemption” (internal quotation marks omitted)). For that reason, all preemption cases “start with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.” *Wyeth v. Levine*, 555 U.S. 555, 565 (2009) (quoting *Medtronic*, 518 U.S. at 485) (internal quotation marks omitted). Congressional intent is the “ultimate touchstone” of a preemption analysis. *Id.* Thus, when confronted with the question of whether state claims are preempted, as we are here, we look to the language, structure, and purpose of the relevant statutory and regulatory scheme to develop a “reasoned understanding of the way in which Congress intended the statute and its surrounding regulatory scheme to affect business, consumers, and the law.” *Medtronic*, 518 U.S. at 486; *see also Bruesewitz*, 561 F.3d at 243-44 (recognizing that divining congressional intent re-

garding preemption requires considering a law’s “structure and purpose,” underlying “object and policy,” and, where relevant, legislative history (internal quotation marks omitted).

Congress may exert its supremacy by expressly preempting state law, but it may also do so implicitly, which we have recognized in limited circumstances in the doctrine of “field” preemption. *See Oneok, Inc. v. Learjet, Inc.* (2015). For that doctrine to apply, “we must find that federal law leaves no room for state regulation and that Congress had a clear and manifest intent to supersede state law” in that field. *Elassaad v. Indep. Air, Inc.*, 613 F.3d 119, 127 (3d Cir. 2010) (quoting *Holk v. Snapple Beverage Corp.*, 575 F.3d 329, 336 (3d Cir. 2009)) (alteration and internal quotation marks omitted). Where Congress expresses an intent to occupy an entire field, States are foreclosed from adopting any regulation in that area, regardless of whether that action is consistent with federal standards. *Oneok*.

In addition to field preemption, federal law may supersede state law through conflict preemption. This occurs when a state law conflicts with federal law such that compliance with both state and federal regulations is impossible, *PLIVA, Inc. v. Mensing*, 564 U.S. 604 (2011), or when a challenged state law “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of a federal law,” *Williamson v. Mazda Motor of Am., Inc.*, 562 U.S. 323, 330 (2011) (internal quotation marks omitted).

In this case, we are asked to analyze the extent to which federal aviation law preempts state tort law, specifically, products liability claims for defective design. We do

not write on a blank slate, but rather, against the backdrop of our decision in *Abdullah v. American Airlines, Inc.*, 181 F.3d 363 (3d Cir. 1999).

**A. *Abdullah***

In *Abdullah*, we considered the preemptive effect of federal in-flight seatbelt regulations on state law negligence claims for a flight crew’s failure to warn passengers that their flight would encounter severe turbulence. *Id.* at 365. One of the plane’s crew members had illuminated the fasten seatbelt sign in accordance with the federal regulations, but none of the crew had given the passengers an additional verbal warning of expected turbulence. *Id.* at 365, 371 & n.11. When the turbulence hit, the plaintiffs suffered serious injuries. *Id.* at 365. After the jury found American Airlines liable and awarded the plaintiffs damages, the district court ordered a new trial, holding that the Federal Aviation Act preempted the territorial standards for aviation safety, and thus, that the jury should not have been instructed on a territorial standard of care. *Id.* at 365-66. We affirmed, explaining that the Federal Aviation Act and federal regulations “establish complete and thorough safety standards for interstate and international air transportation and that these standards are not subject to supplementation by, or variation among, jurisdictions.” *Id.* at 365. Although we held that federal law preempts state law standards of care in the field of air safety, we also held that it preserves state law remedies. *Id.* at 364. As such, within the field of air safety, *Abdullah* instructs that plaintiffs may bring state law causes of action that incorporate federal standards of care. *Id.* at 365.

Our analysis in reaching this conclusion focused on the text and legislative history of the Federal Aviation Act,



which was adopted primarily to promote safety in aviation and gave the FAA broad authority to issue safety regulations. *Id.* at 368-69. We observed that the FAA, in exercising this authority, “has implemented a comprehensive system of rules and regulations, which promotes flight safety by regulating pilot certification, pilot pre-flight duties, pilot flight responsibilities, and flight rules.” *Id.* at 369 (footnotes omitted). We then reviewed several cases from the Supreme Court and our sister Circuits that had found federal preemption with regard to discrete matters of in-flight operations, including aircraft noise, *City of Burbank v. Lockheed Air Terminal Inc.*, 411 U.S. 624 (1973); pilot regulation, *French v. Pan Am Express, Inc.*, 869 F.2d 1, 6 (1st Cir. 1989); and control of flights through navigable airspace, *British Airways Bd. v. Port Auth. of N.Y.*, 558 F.2d 75, 84 (2d Cir.1977). *Abdullah*, 181 F.3d at 369-71. We paid special heed to 14 C.F.R. § 91.13(a), which proscribes “operat[ing] an aircraft in a careless or reckless manner so as to endanger the life or property of another,” and observed that it provided a catch-all standard of care. *Id.* at 371.<sup>5</sup> Thus, we concluded that state law standards of care within the “field of aviation safety” were preempted, and we instructed that “a court must refer . . . to the overall concept that aircraft may not be operated in a careless or reckless manner” in addition to any specific regulations that may be applicable. *Id.*

Importantly for our purposes, although we stated in broad terms that the Federal Aviation Act preempted the “field of aviation safety,” *id.*, the regulations and decisions

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<sup>5</sup> The full text of this regulation reads: “Aircraft operations for the purpose of air navigation. No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.” 14 C.F.R. § 91.13(a).

we discussed in *Abdullah* all related to in-air operations, see 14 C.F.R. § 1.1 (“Operate, with respect to aircraft, means use, cause to use or authorize to use aircraft, for the purpose . . . of air navigation including the piloting of aircraft . . .”), and the catch-all standard of care that we held a court “must refer to” applied only to operating, not designing or manufacturing, an aircraft. See 14 C.F.R. §§ 1.1, 91.13.

We confirmed the limits of our holding in *Abdullah* a decade later in *Elassaad*, 613 F.3d at 121, where we clarified that a flight crew’s oversight of the disembarkation of passengers after an airplane came to a complete stop at its destination was not within the preempted field of aviation safety. By drawing a line between what happens during flight and what happens upon disembarking, we made clear that the field of aviation safety described in *Abdullah* was limited to in-air operations. *Id.* at 127-31 (“[T]he [Federal Aviation Act’s] safety provisions appear to be principally concerned with safety in connection with *operations* associated with flight.” (emphasis added)). *Abdullah* thus does not govern products liability claims like those at issue here.<sup>6</sup> Indeed, as discussed further below, products liability claims are not subject to the same catch-all standard of care that motivated our field preemption decision in *Abdullah*; the design regulations governing the issuance of type certificates are not as comprehensive as the regulations governing pilot certification, pilot pre-flight duties, pilot flight responsibilities, and flight rules

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<sup>6</sup> Appellees point to our passing reference in *Elassaad* that the certification and airworthiness requirements for aircraft parts concern aspects of air safety. 613 F.3d at 128. The certification process, however, had no relevance to the pertinent issues in *Elassaad*, so this statement constituted dicta. See *In re Nat’l Football League Players Concussion Injury Litig.*, 775 F.3d 570, 583-84 n.18 (3d Cir. 2014).

discussed there; and our post-*Abdullah* case law cautions us against interpreting the scope of the preempted field too broadly. *See Elassaad*, 613 F.3d at 131.

This conclusion is consistent with other courts that have interpreted *Abdullah*. For example, the Ninth Circuit, which had previously adopted *Abdullah*'s conclusion that the Federal Aviation Act preempts state law standards of care in the field of aviation safety, has held that products liability does *not* fall within that preempted field. *Martin ex rel. Heckman v. Midwest Express Holdings, Inc.*, 555 F.3d 806, 809-11 (9th Cir. 2009) (Kozinski, J.). Even the district courts that believed *Abdullah* compelled them to extend the preempted field to products liability claims, including the District Court in this case, have noted that such a holding was at odds with the federal regulatory scheme governing aviation design and manufacturing. *See Sikkelee*, 45 F. Supp. 3d at 460 (“Yet having endeavored to reconcile *Abdullah* with the federal regulatory scheme that governs aviation design and manufacturing, this Court—either by way of its own error or that of the precedents it has followed—has reached holdings that it imagines have little to do with Congressional intent.”); *see also Pease*, 2011 WL 6339833, at \*22-23 (stating that *Abdullah*'s reasoning is overbroad).

Having concluded that *Abdullah* does not control here, we must now determine whether Congress intended the Federal Aviation Act to preempt products liability claims.

### **B. Whether the Presumption Against Preemption Applies**

Typically, our preemption analysis begins with the presumption that Congress does not preempt areas of law

traditionally occupied by the states unless that is its clear and manifest intent. *Wyeth*, 555 U.S. at 565. In this case, Appellees argue that the presumption against preemption should not apply in the aviation context given the history of federal involvement in the field. That argument turns, however, on a selective view of history.

In general, products liability claims are exemplars of traditional state law causes of action. *See Medtronic*, 518 U.S. at 491. Indeed, state law governed the earliest products liability claims in this country. *See, e.g., Curtain v. Somerset*, 21 A. 244, 244-45 (Pa. 1891) (applying Pennsylvania law); *Thomas v. Winchester*, 6 N.Y. 397, 407-11 (N.Y. 1852) (applying New York law); *see also* Karl N. Llewellyn, *On Warranty of Quality, and Society*, 36 Colum. L. Rev. 699, 732-44 (1936) (discussing distinctions between the early products liability law of the various States).

More specifically, even aviation torts have been consistently governed by state law. In *The Crawford Bros. No. 2*, 215 F. 269 (W.D. Wash. 1914), which appears to be the earliest tort case involving an aircraft, the court considered the effect of the “legal code of the air” that had been proposed by the International Juridic Committee on Aviation on a salvage claim related to an airplane crash in Puget Sound. *Id.* at 269-70. The court posited that, if the code had become law, “it would be important to consider its provisions in determining what was reasonable and proper in a cause involving air craft in a common-law action,” much like with rules governing water craft. *Id.* at 270. The court ultimately dismissed the suit for lack of jurisdiction, as neither the proposed legal code of the air nor maritime law provided for jurisdiction, and instructed that such questions “must be relegated to the common-

law courts.” *Id.* at 271. The decision in *Crawford Bros.* thus recognized that, absent specific legislation, the common law governed aviation tort claims.

Years later, after Congress passed the 1926 Air Commerce Act but before the current type certification regime was imposed, Judge Buffington authored what appears to be this Court’s first decision involving an aviation-related tort claim, *Curtiss-Wright Flying Service v. Glose*, 66 F.2d 710 (3d Cir.), *cert. denied*, 290 U.S. 696 (1933). There, a widow brought suit against the Curtiss-Wright Flying Service, an early airline, after her husband was killed in a plane crash as a result of negligent operation. *Id.* at 711. We analyzed the claims under common law negligence standards, *see id.* at 712, as no specific legislation or regulation governed those claims. Of course, because that decision preceded *Erie Railroad Co. v. Tompkins*, 304 U.S. 64 (1938), our analysis turned on federal, rather than state, common law, but the distinction is not important for our purposes here. Rather, our decision reflects that despite the emergence of federal statutes governing aviation, the common law continued to apply to aviation torts.

Since then, in the absence of applicable statutory or regulatory provisions, we have consistently applied state law to tort claims arising from airplane crashes. Only a month before the Federal Aviation Act was enacted, we were faced with a case involving three claims of defective design against an aircraft manufacturer after its plane broke apart in midair. *Prashker v. Beech Aircraft Corp.*, 258 F.2d 602, 603-04 (3d Cir.), *cert. denied*, 358 U.S. 910 (1958). In concluding that the aircraft manufacturer did not negligently design the plane, we did not exclusively rely on the Civil Aeronautics Board’s certification of the relevant design, but rather methodically considered each

design defect claim under a common law negligence standard, using the type certificate as but a part of that overall analysis. *Id.* at 605-07; *see also Nw. Airlines v. Glenn L. Martin Co.*, 224 F.2d 120, 124 (6th Cir. 1955), *cert. denied*, 350 U.S. 937 (1956) (confirming the district court's decision to leave the question of a manufacturer's negligent design to the jury for determination of whether the pertinent state standard of ordinary care was met).

We have done the same in the years since the Federal Aviation Act replaced the Civil Aeronautics Act, *see, e.g., Paoletto v. Beech Aircraft Corp.*, 464 F.2d 976, 978-82 (3d Cir. 1972) (applying a state standard of care to claims for strict liability, negligence, and breach of warranty arising from an airplane crash caused by the collapse of the plane's right wing); *Noel v. United Aircraft Corp.*, 342 F.2d 232, 236-37 (3d Cir. 1964) (rejecting defendant's argument that approval by the Civil Aeronautics Administration of an airplane's propeller system was conclusive of compliance with the standard of care), as have other Courts of Appeals, *see, e.g., Martin*, 555 F.3d at 808; *Bennett v. Sw. Airlines Co.*, 484 F.3d 907, 908 (7th Cir. 2007); *McLennan v. Am. Eurocopter Corp.*, 245 F.3d 403, 426 (5th Cir. 2001); *In re Air Crash Disaster*, 86 F.3d 498, 522-23 (6th Cir. 1996); *Pub. Health Trust v. Lake Aircraft, Inc.*, 992 F.2d 291, 293-95 (11th Cir.1993); *Cleveland v. Piper Aircraft Corp.*, 985 F.2d 1438, 1441-47 (10th Cir. 1993); *In re N-500L Cases*, 691 F.2d 15, 27-28 (1st Cir. 1982); *Braniff Airways, Inc. v. Curtiss-Wright Corp.*, 411 F.2d 451, 452-53 (2d Cir. 1969); *Banko v. Cont'l Motors Corp.*, 373 F.2d 314, 315-16 (4th Cir. 1966).

Consistent with the uniform treatment of aviation products liability cases as state law torts, we expressly

held in *Elassaad* that the presumption against preemption applies in the aviation context.<sup>7</sup> See 613 F.3d at 127 (“When considering preemption of an area of traditional state regulation, we begin our analysis by applying a presumption against preemption. . . . [I]t is appropriate to use a restrained approach in recognizing the preemption of common law torts in the field of aviation.” (quoting *Holk*, 575 F.3d at 334) (internal quotation marks omitted)); *Abdullah*, 181 F.3d at 366 (“[We] have addressed claims of preemption with the starting presumption that Congress does not intend to supplant state law.”). Appellees’ attempts to set the presumption aside are therefore unavailing.

With this presumption in mind, we must determine whether Congress expressed its clear and manifest intent to preempt aviation products liability claims. We do so by reviewing the text and structure of the Federal Aviation Act, and, to the extent necessary and relevant to this statute, examining subsequent congressional action that sheds light on its intent. See *Medtronic*, 518 U.S. at 485-86. We also consider relevant regulations that have been issued pursuant to the valid exercise of the FAA’s delegated authority, which can have the same preemptive effect as federal statutes. See *Fellner v. Tri-Union Seafoods, L.L.C.*, 539 F.3d 237, 243 (3d Cir. 2008).

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<sup>7</sup> The Tenth Circuit rejected the application of the presumption against preemption in the air operations context on the ground that “the field of aviation safety has long been dominated by federal interests.” See *U.S. Airways, Inc. v. O’Donnell*, 627 F.3d 1318, 1325 (10th Cir. 2010) (internal quotation marks omitted). For the reasons discussed above, we respectfully disagree.

## C. Indicia of Congressional Intent

### 1. The Federal Aviation Act

As we have explained, although the federal government has overseen certain aspects of aviation, such as air traffic control and pilot certification, since the early days of flight, *see* Air Commerce Act of 1926, ch. 344, 44 Stat. 568, there was little question when the Civil Aeronautics Act was adopted in 1938 that common law standards governed tort claims arising from plane crashes, *see, e.g., Curtiss-Wright Flying Serv.*, 66 F.2d at 711-13 (applying the common law standard for negligence). It is therefore significant that the Federal Aviation Act, which succeeded the Civil Aeronautics Act and remains the foundation of federal aviation law today, contains no express preemption provision. In fact, it says only that the FAA may establish “minimum standards” for aviation safety, 49 U.S.C. § 44701—statutory language the Supreme Court has held in other contexts to be insufficient on its own to support a finding of clear and manifest congressional intent of preemption, *see Fla. Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 145 (1963); *see also Ray v. Atl. Richfield Co.*, 435 U.S. 151, 168 n.19 (1978); *Abdullah*, 181 F.3d at 373-74; *Cleveland*, 985 F.2d at 1445.

Further, the Federal Aviation Act contains a “savings clause,” which provides that “[a] remedy under this part is *in addition* to any other remedies provided by law.”<sup>8</sup> 49 U.S.C. § 40120(c) (emphasis added). The Supreme Court observed that this statutory scheme permits states to re-

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<sup>8</sup> There is no question that state law provides remedies for products liability claims. *See, e.g., Tincher v. Omega Flex, Inc.*, 104 A.3d 328 (Pa. 2014).



tain their traditional regulatory power over aspects of aviation. *See Morales v. Trans World Airlines, Inc.*, 504 U.S. 374 (1992) (noting that the Federal Aviation Act’s savings clause permitted the States to regulate intrastate airfares and enforce their own laws against deceptive trade practices prior to the 1978 enactment of the Airline Deregulation Act, which *did* expressly preempt state laws relating to the rates, routes, or services of an air carrier). While the inclusion of the savings clause “is not inconsistent” with a requirement that courts apply federal standards of care when adjudicating state law claims, *Abdullah*, 181 F.3d at 374-75, it belies Appellees’ argument that Congress demonstrated a clear and manifest intent to preempt state law products liability claims altogether.

Whereas Appellees must show a clear and manifest congressional intent to overcome the presumption against preemption, they instead have mustered scant evidence and, at best, have demonstrated ambiguity. For example, they discuss § 601 of the Federal Aviation Act, which empowers the FAA to promulgate regulations “to promote safety of flight of civil aircraft in air commerce by prescribing . . . minimum standards governing the design, materials, workmanship, construction, and performance of aircraft, aircraft engines, and propellers as may be required in the interest of safety.” Federal Aviation Act of 1958, Pub. L. No. 85-726, § 601(a)(1), 72 Stat. 731, 775. Yet, that provision, along with § 603, which provides the statutory framework for the issuance of type certificates, was adopted verbatim from the 1938 Civil Aeronautics Act, *id.* § 603; *see* H.R. Rep. No. 85-2360, at 16 (1958), which clearly did not preempt state law products liability claims, *see supra*, Part III.B. Neither the Federal Aviation Act nor subsequent amendments substantially changed this statutory framework. *See* Revision of Title 49, United

States Code Annotated, “Transportation,” Pub. L. No. 103-272, 108 Stat. 745 (1994); *see also* H.R. Rep. No. 103-180, at 343-44 (1993) (discussing changes to the statutory provisions governing the issuance of type certificates as words “added for clarity” and “omitted as surplus”).

Appellees thus present no evidence from the Federal Aviation Act’s text or extensive legislative history that plausibly suggests Congress intended these same provisions to have a different meaning in the 1958 Act than they had in the 1938 Act. Simply put, if Congress had wanted to change the preemptive effect of the type certification process, it would have done so—or at least given some indication of that intention. It did not. The Federal Aviation Act itself therefore does not signal an intent to preempt state law products liability claims.

## 2. Federal Aviation Regulations

The federal aviation design regulations are likewise devoid of evidence of congressional intent to preempt state law products liability claims. The FAA, in the letter brief it submitted as *amicus curiae* in this case, takes the position that the Act and these regulations so pervasively occupy the field of design safety that, consistent with *Abdullah*, they require state tort suits that survive a conflict preemption analysis to proceed under “federal standards of care found in the Federal Aviation Act and its implementing regulations.” Letter Br. of *Amicus Curiae* Fed. Aviation Admin. 11 (“FAA Ltr. Br.”).<sup>9</sup>

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<sup>9</sup> At our request, the FAA submitted a letter brief specifically to address the scope of field preemption, the existence and source of any federal standard of care for design defect claims, and the role of the type certificate in determining whether the relevant standard of care had been met. For the reasons set forth below, we are not persuaded

We do not defer to an agency's view that its regulations preempt state law, but we do recognize that agencies are well equipped to understand the technical and complex nature of the subject matter over which they regulate and thus have a "unique understanding of the statutes they administer and an attendant ability to make informed determinations about how state requirements may pose an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Wyeth*, 555 U.S. at 576-77 (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)) (internal quotation marks omitted); see also *Farina*, 625 F.3d at 126. We therefore consider the FAA's "explanation of state law's impact on the federal scheme" governing aircraft design and manufacture, but "[t]he weight we accord [its] explanation . . . depends on its thoroughness, consistency, and persuasiveness." *Wyeth*, 555 U.S. at 577 (citing *United States v. Mead Corp.*, 533 U.S. 218, 234-35 (2001); *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944)); *Farina*, 625 F.3d at 126-27 & n.27. Specifically, its views as presented in an amicus brief are "entitled to respect' only to the extent [they] ha[ve] the 'power to persuade.'" See *Gonzales v. Oregon*, 546 U.S. 243, 255-56 (2006) (quoting *Skidmore*, 323 U.S. at 140); see also *Farina*, 625 F.3d at 126-27.

Here, three fundamental differences between the regulations at issue in *Abdullah* and those concerning aircraft design, along with the agency's inability to specifically identify or articulate the proposed federal standard of care, lead us to disagree with this aspect of the FAA's

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by the FAA's position on field preemption and the applicable standard of care. However, we do find persuasive its views on the relevance of the type certification process to a conflict preemption analysis. See *infra* Part III.D.2.

submission. First, the regulations governing in-flight operations on their face “prescribe[] rules governing the operation of aircraft . . . within the United States.” 14 C.F.R. § 91.1(a); *see also* 14 C.F.R. § 121.1(e) (prescribing rules governing “[e]ach person who is on board an aircraft being operated under this part”). In contrast, the manufacturing and design regulations prescribe “[p]rocedural requirements for issuing and changing—(i) Design approvals; (ii) Production approvals; (iii) Airworthiness certificates; and (iv) Airworthiness approvals” and “[r]ules governing applicants for, and holders of” such approvals and certificates. 14 C.F.R. § 21.1(a). That is, these regulations do not purport to govern the manufacture and design of aircraft per se or to establish a general standard of care but rather establish procedures for manufacturers to obtain certain approvals and certificates from the FAA, *see generally* 14 C.F.R. § 21, and in the context of those procedures, to “prescribe[] airworthiness standards *for the issue of type certificates*,” 14 C.F.R. § 33.1(a) (aircraft engines) (emphasis added); *see also* 14 C.F.R. §§ 23.1(a), 25.1(a), 27.1(a), 29.1(a), 31.1(a), 35.1(a). Of course, the issuance of a type certificate is a threshold requirement for the lawful manufacture and production of component parts and, at least to that extent, arguably reflects nationwide standards for the manufacture and design of such parts. But the fact that the regulations are framed in terms of standards to acquire FAA approvals and certificates—and not as standards governing manufacture generally—supports the notions that the acquisition of a type certificate is merely a baseline requirement and that, in the manufacturing context, the statutory language indicating that these are “minimum standards,” 49 U.S.C. § 44701, means what it says.

Second, the standards that must be met for the issuance of type certificates cannot be said to provide the type of “comprehensive system of rules and regulations” we determined existed in *Abdullah* to promote in-flight safety “by regulating pilot certification, pilot pre-flight duties, pilot flight responsibilities, and flight rules.” *Abdullah*, 181 F.3d at 369 (footnotes omitted). Rather, many are in the nature of discrete, technical specifications that range from simply requiring that a given component part work properly, *e.g.*, 14 C.F.R. § 33.71(a) (providing that a lubrication system “must function properly in the flight altitudes and atmospheric conditions in which an aircraft is expected to operate”), to prescribing particular specifications for certain aspects (and not even all aspects) of that component part, *e.g.*, 14 C.F.R. § 33.69 (providing that an electric engine ignition system “must have at least two igniters and two separate secondary electric circuits, except that only one igniter is required for fuel burning augmentation systems”). The regulation governing the fuel and induction system at issue in this case, for example, specifies that this part of the engine “must be designed and constructed to supply *an appropriate mixture* of fuel to the cylinders throughout the complete operating range of the engine under all flight and atmospheric conditions.” 14 C.F.R. § 33.35(a) (emphasis added). As the District Court observed, the highly technical and part-specific nature of these regulations makes them exceedingly difficult to translate into a standard of care that could be applied to a tort claim.

Third, the regulations governing in-flight operations “suppl[y] a comprehensive standard of care,” *Abdullah*, 181 F.3d at 371, that could be used to evaluate conduct not specifically prescribed by the regulations, *i.e.*, that a person must not “operate an aircraft in a careless or reckless

manner so as to endanger the life or property of another,” 14 C.F.R. § 91.13(a). We recognized in *Abdullah* that § 91.13(a) sounds in common law tort, making it appropriate and practical to incorporate as a federal standard of care in state law claims concerning in-flight operations and rendering existing state law standards of care duplicative (if not conflicting with them outright). *Abdullah*, 181 F.3d at 371, 374. Neither the FAA nor Appellees have pointed us to any analogous provision for aircraft manufacture and design, nor have we identified one.<sup>10</sup>

We therefore agree with the District Court that neither the Federal Aviation Act nor the associated FAA regulations “were [ever] intended to create federal standards of care” for manufacturing and design defect claims. *Sikkelee*, 45 F. Supp. 3d at 437 n.4 (internal quotation marks omitted) (describing the District Court’s reasoning in its earlier memorandum responding to proposed jury instructions and citing *Pease*, 2011 WL 6339833, at \*22-23). However, the District Court proceeded from that accurate premise to a faulty conclusion (the one urged by Appellees), i.e., that because there is no federal standard of care for these claims in the statute or regulations, the

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<sup>10</sup> Although Appellees suggest 49 U.S.C. § 44701(a)(5) and CAR §§ 13.100-101, 13.104 (1964) as candidates for an equivalent to § 91.13(a), neither states a workable standard of care. The first simply describes what types of regulations the FAA is authorized to promulgate by directing the agency to prescribe “regulations and minimum standards for other practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security.” 49 U.S.C. § 44701(a)(5). The second establishes “standards with which compliance shall be demonstrated for the issuance of and changes to type certificates for engines used on aircraft.” CAR § 13.0 (1964). Neither provision purports to, nor could, practically function as a general standard of care for products liability claims.

issuance of a type certificate must both establish and satisfy that standard. Not so. In light of the presumption against preemption, absent clear evidence that Congress intended the mere issuance of a type certificate to foreclose all design defect claims, state tort suits using state standards of care may proceed subject only to traditional conflict preemption principles.

Besides preserving principles of federalism, this conclusion avoids interpreting the Federal Aviation Act in a way that would have “the perverse effect of granting complete immunity from design defect liability to an entire industry that, in the judgment of Congress, needed more stringent regulation.” *Medtronic*, 518 U.S. at 487. Conversely, were we to adopt Appellees’ position, we would be holding, in effect, that the mere issuance of a type certificate exempts designers and manufacturers of defective airplanes from the bulk of liability for both individual and large-scale air catastrophes. While Appellees answer that “failure to report defects” claims could still proceed under state law, as the District Court permitted here, even Appellees acknowledge that, at best, only some “percentage of claims that are theoretically available would be left under [their] interpretation. . . .” Oral Arg. at 35:01, 42:54 (argued June 24, 2015).<sup>11</sup>

In short, like the manufacturer in *Medtronic*, Appellees would have us adopt the position that “because there is no explicit private cause of action against manufacturers contained in the [Act], and no suggestion that the Act created an implied private right of action, Congress would

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<sup>11</sup> An audio recording of the oral argument is available online, at <http://www2.ca3.uscourts.gov/oralargument/audio/14-4193JillSilleev.PrecisionAirmotiveCorp.mp3>.

have barred most, if not all, relief for persons injured by defective [aircraft parts].” *Medtronic*, 518 U.S. at 487. Like the Supreme Court in *Medtronic*, however, we find it “to say the least, ‘difficult to believe that Congress would, without comment, remove all means of judicial recourse for those injured by illegal conduct.’” *Id.* (quoting *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 251 (1984)).

These observations lead us to conclude that the Federal Aviation Act and its implementing regulations do not indicate a clear and manifest congressional intent to preempt state law products liability claims; Congress has not created a federal standard of care for persons injured by defective airplanes; and the type certification process cannot as a categorical matter displace the need for compliance in this context with state standards of care.

### 3. GARA

Our conclusion is solidified by the General Aviation Revitalization Act of 1994 (“GARA”), Pub L. No. 103-298, 108 Stat. 1552 (codified at 49 U.S.C. § 40101 note). In that statute, Congress created a statute of repose that, with certain exceptions, bars suit against an aircraft manufacturer arising from a general aviation accident brought more than eighteen years after the aircraft was delivered or a new part was installed.<sup>12</sup> 49 U.S.C. § 40101 note § 3(3). GARA was adopted to limit the “long tail of liability” imposed on manufacturers of general aviation aircraft. *Blazevska v. Raytheon Aircraft Co.*, 522 F.3d 948, 951 (9th

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<sup>12</sup> “General aviation aircraft” is defined in GARA as any aircraft with a maximum seating capacity of fewer than 20 passengers that was not engaged in scheduled passenger-carrying operations at the time of the accident. 49 U.S.C. § 40101 note § 2(c). In other words, general aviation is distinct from larger-scale commercial aviation.



Cir. 2008) (quoting *Lyon v. Agusta S.P.A.*, 252 F.3d 1078, 1084 (9th Cir. 2001)).

By barring products liability suits against manufacturers of these older aircraft parts, GARA necessarily implies that such suits were and are otherwise permitted. Indeed, GARA's eighteen-year statute of repose would be superfluous if all aviation products liability claims are preempted from day one. Because we must "interpret a statute so as to 'give effect to every word of a statute wherever possible,'" *Shalom Pentecostal Church v. Acting Sec'y U.S. Dep't of Homeland Sec.*, 783 F.3d 156, 165 (3d Cir. 2015) (quoting *Leocal v. Ashcroft*, 543 U.S. 1, 12 (2004)), GARA reinforces what is now apparent: Federal law does not preempt state design defect claims. Rather, Congress left state law remedies in place when it enacted GARA in 1994, just as it did when it enacted the Civil Aeronautics Act in 1938 and the Federal Aviation Act in 1958.

Appellees argue that GARA would not be entirely superfluous because general aviation manufacturers would "remain subject to state tort remedies for actual violations of federal aviation safety standards," Appellee's Br. 51, such as the failure to disclose defects discovered after a type certificate has been issued or the failure to comply with an airworthiness directive, Oral Arg. at 35:20, 37:00. Those kinds of claims, however, are already expressly exempted in § 2(b)(1) from GARA's statute of repose.<sup>13</sup> In

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<sup>13</sup> In full, this exception provides that GARA's statute of repose does not apply

if the claimant pleads with specificity the facts necessary to prove, and proves, that the manufacturer with respect to a type certificate or airworthiness certificate for, or obligations with respect to continuing airworthiness of, an aircraft or a component, system, subassembly, or other part of an aircraft

sum, if GARA and its § 2(b)(1) carveout are to serve their stated purpose, the state law claims to which GARA's statute of repose applies must not be preempted.

Our interpretation of the Federal Aviation Act is only bolstered by GARA's legislative history. We are mindful, of course, that "the authoritative statement is the statutory text, not the legislative history or any other extrinsic material," as legislative history can be "murky, ambiguous, and contradictory." *Exxon Mobil Corp. v. Allapattah Servs., Inc.*, 545 U.S. 546, 568 (2005). Here, however, the legislative history is none of those things. GARA's legislative history states explicitly what is implied by the statutory text: Aviation products liability claims are governed by state law. *See* H.R. Rep. No. 103-525, pt. 2, at 3-7 (1994). The House Report begins by stating that "[t]he liability of general aviation aircraft manufacturers is governed by tort law" that "is ultimately grounded in the experiences of the legal system and values of the citizens of a particular State." *Id.* at 3-4. In enacting GARA, Congress "voted to permit, in this exceptional instance, a very limited Federal preemption of State law," that is, only

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knowingly misrepresented to the Federal Aviation Administration, or concealed or withheld from the Federal Aviation Administration, required information that is material and relevant to the performance or the maintenance or operation of such aircraft, or the component, system, subassembly, or other part, that is causally related to the harm which the claimant allegedly suffered.

49 U.S.C. § 40101 note § 2(b)(1). This provision would exempt from the statute of repose claims that are based on a manufacturer's misrepresentations and omissions with regard to a type certificate or the continuing airworthiness of a plane or its component part, such as a manufacturer's failure to comply with a type certificate or failure to report required information to the FAA.

where GARA's statute of repose has run are state law claims preempted. *Id.* at 4-7. "[I]n cases where the statute of repose has not expired, State law will continue to govern fully, unfettered by Federal interference."<sup>14</sup> *Id.* at 7.

Appellees attempt to discount GARA's significance, arguing that the views of Congress in 1994 "form a hazardous basis for inferring the intent" of the 1958 Congress that enacted the Federal Aviation Act. Appellee's Br. 41 (quoting *United States v. Price*, 361 U.S. 304, 313 (1960)). It is true that "the weight given subsequent legislation and whether it constitutes a clarification or a repeal is a context- and fact-dependent inquiry," *Bd. of Trs. of IBT Local 863 Pension Fund v. C & S Wholesale Grocers, Inc.*,

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<sup>14</sup> Appellant notes that, as indicated in the House Report accompanying GARA, prior legislative efforts to explicitly federalize aviation tort law failed to get off the ground. H.R. Rep. No. 103-525, pt. 2, at 6 & n. 11 (referencing failed bill H.R. 5362, 102d Cong. (1992)); see Appellant's Br. 9. For example, H.R. 5362 would have explicitly preempted state tort claims against aircraft manufacturers arising out of general aviation accidents, put in place substantive legal rules for such actions (e.g., applying principles of comparative responsibility in such cases), and imbued federal courts with original, concurrent jurisdiction to adjudicate such claims. Although Appellant seems to be suggesting that such proposed bills reflect Congress's belief at the time that the field of aviation products liability was not preempted—and, thus, remains so today absent legislation to the contrary—we take no confidence in the reading of tea leaves left behind by failed legislative efforts. For, while on rare occasion the Supreme Court has described legislative inaction as "instructive" but "not conclusive," *Firestone Tire & Rubber Co. v. Bruch*, 489 U.S. 101 (1989) (internal quotation marks omitted), it far more often, and with good reason, has emphasized its "reluctan[ce] to draw inferences from Congress'[s] failure to act," *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 306 (1988); see also *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 155 (2000) (declining to "rely on Congress'[s] failure to act").

802 F.3d 534, 546 (3d Cir. 2015), but there are circumstances where its consideration is appropriate. Indeed, the Supreme Court relied on precisely this type of analysis in determining congressional intent in the preemption context in *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984). There, the Court considered the question of whether state law actions for punitive damages were subject to field preemption under the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011-2284. *Silkwood*, 464 U.S. at 241. The Atomic Energy Act itself was silent on the preemption of state tort claims, but, when it was subsequently amended by the Price-Anderson Act, Pub. L. No. 85-256, 71 Stat. 576 (1957), the accompanying Joint Committee Report reflected an assumption that state law would apply in the absence of subsequent legislative action. *Id.* at 251-54. The Supreme Court found this legislative history to be persuasive in concluding that Congress did not intend to foreclose state remedies for those injured by nuclear accidents by way of field preemption. *Id.* at 256.

More recently, in *Texas Department of Housing & Community Affairs v. Inclusive Communities Project, Inc.*, 135 S. Ct. 2507 (2015), the Supreme Court held that disparate impact claims were cognizable under the 1968 Fair Housing Act (“FHA”), relying in part on the “crucial[ly] importan[t]” fact that Congress had adopted amendments to the Act in 1988 that assumed the existence of such claims. *Id.* at 2519-20. Because the amendments would make sense only if disparate impact liability existed under the FHA, the Court reasoned that the most logical conclusion was that Congress presupposed the existence of disparate impact claims under the FHA as it had been enacted in 1968. *Id.* at 2520-21.

Consistent with the Supreme Court's approach and our recent guidance in *Board of Trustees of IBT Local 863 Pension Fund*, we may pay heed to the significance of subsequent legislation when it is apparent from the facts and context that it bears directly on Congress's own understanding and intent. Here, the Federal Aviation Act itself neither states nor implies an intent to preempt state law products liability claims, and GARA confirms that Congress understood and intended that Act to preserve such claims. Thus, despite Appellees' exhortations, we cannot infer a clear and manifest congressional purpose to preempt these claims where the indicia of congressional intent, including in this case the assumptions underlying subsequent legislation, point overwhelmingly the other way.

#### **D. Relevant Preemption Precedent**

We turn next to Appellees' contention that the Supreme Court's preemption jurisprudence compels us to find that federal law occupies the entire field of aircraft design and manufacture and that the issuance of a type certificate conclusively demonstrates compliance with the corresponding federal standard of care. Appellees argue that: (1) the Court has accorded broad field preemption to analogous statutory regimes governing oil tankers and locomotives; (2) the Court has given broad preemptive effect to analogous premarket approval processes in the medical device context; and (3) other Courts of Appeals have recognized preemption of the field of aviation safety. For its part, the FAA argues that the mere issuance of a type certificate does not preempt all design defect claims concerning the certificated part but that specifications expressly embodied in a type certificate may, in a given case,

preempt such claims under traditional conflict preemption principles. We address Appellees' arguments below and conclude that the case law of the Supreme Court and our sister Circuits supports the application of traditional conflict preemption principles but not preemption of the entire field of aviation design and manufacture.

### 1. Field Preemption in Analogous Statutory Regimes

Although they acknowledge that the Supreme Court has not addressed whether the Federal Aviation Act preempts the field of aviation design and manufacture, Appellees argue on the basis of other Supreme Court precedent that we should affirm the reasoning of the District Court. First, Appellees point to the Supreme Court's observation in *City of Burbank*, 411 U.S. at 639, that the Federal Aviation Act "requires a uniform and exclusive system of federal regulation if the congressional objectives underlying [it] are to be fulfilled" as evidence that the Supreme Court has concluded the FAA occupies the entire field of aviation safety. That begs the question, however, of the scope of the field in question. In *City of Burbank*, the Court held only that Congress had preempted the field of aircraft noise regulation. *Id.* at 633, 638-40. Even in interpreting the express preemption clause of the Airline Deregulation Act,<sup>15</sup> the Court has taken a cautious approach, holding that plaintiffs' claims under state consumer protection statutes are preempted

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<sup>15</sup> The Airline Deregulation Act, Pub. L. No. 95-504, § 105(a)(1), 92 Stat. 1705, 1708 (1978), expressly preempted state law claims "relating to rates, routes, or services of any air carrier." In light of non-substantive amendments by Congress, today's iteration of the express preemption clause precludes state law claims "related to a price, route, or service of an air carrier." 49 U.S.C. § 41713(b)(1).

but that related state law claims for breach of contract are not. *See Am. Airlines, Inc. v. Wolens*, 513 U.S. 219, 223, 227-33 (1995); *Morales*, 504 U.S. at 391. The Supreme Court also has observed in dicta that state tort law “plainly appl[ies]” to aviation tort cases and that Congress would need to enact legislation “[i]f federal uniformity is the desired goal with respect to claims arising from aviation accidents.” *Exec. Jet Aviation, Inc. v. City of Cleveland*, 409 U.S. 249 (1972). The Court’s few pronouncements in the area of aviation preemption, in other words, offer little support for the broad field preemption Appellees seek.

Appellees next compare aircraft to oil tankers and locomotives, urging that the broad scope of field preemption recognized by the Supreme Court in those industries should extend as well to aircraft design defect claims. As Appellees point out, the Supreme Court has found field preemption of oil tanker design, operation, and seaworthiness under Title II of the Ports and Waterways Safety Act and concluded state regulations that impose additional crew training requirements and mandate standard safety features on certain boats fall within this preempted field. *United States v. Locke*, 529 U.S. 89, 109-14 (2000); *Ray*, 435 U.S. at 158-68. Appellees also refer to decisions that have found field preemption of design defect claims in the railroad context, *see Kurns v. R.R. Friction Prods. Corp.*, 132 S. Ct. 1261, 1267-68 (2012); *Del. & Hudson Ry. Co. v. Knoedler Mfrs., Inc.*, 781 F.3d 656, 661-62 (3d Cir. 2015).

We do not find either of these analogies apt. As to tankers, the Supreme Court subsequently distinguished *Ray* and *Locke* on the grounds that both cases invalidated state regulations that created positive obligations, and neither of those cases “purported to pre-empt possible

common law claims,” *Sprietsma v. Mercury Marine*, 537 U.S. 51, 69 (2002), such as the aviation tort claims at issue here. As to locomotives, the Supreme Court and our own Court were bound to find such design defect claims preempted by the Supreme Court’s ninety-year-old precedent in *Napier v. Atlantic Coast Line Railway Co.*, 272 U.S. 605 (1926), which held that the Locomotive Inspection Act preempts “the field of regulating locomotive equipment used on a highway of interstate commerce,” including “the design, the construction, and the material of every part of the locomotive and tender and of all appurtenances.” *Id.* at 607, 611.

Far more apropos in the transportation industry is the Supreme Court’s conflict preemption approach in the context of automobiles and boats, for just as the Federal Aviation Act directs the FAA to “prescrib[e] minimum standards required in the interest of safety for appliances and for the design, material, construction, quality of work, and performance of aircraft, aircraft engines, and propellers,” 49 U.S.C. § 44701(a)(1), the National Traffic and Motor Safety Act of 1966 (“NTMSA”) empowers the National Highway Traffic Safety Administration to “prescribe motor vehicle safety standards for motor vehicles and motor vehicle equipment,” 49 U.S.C. § 30101(1), and the Federal Boat Safety Act of 1971 (“FBSA”) authorizes the Secretary of Transportation to issue regulations “establishing minimum safety standards for recreational vessels and associated equipment,” 46 U.S.C. § 4302(a)(1).<sup>16</sup> Moreover,

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<sup>16</sup> Appellees argue that the Federal Aviation Act’s mandate that the FAA Administrator establish “minimum” standards in both Section 604 (pertaining to operations) and Section 601(a) (pertaining to aircraft design and manufacture) justifies the extension of *Abdullah* field preemption to both areas. Appellees’ Br. 34 (citing §§ 101(3), (10), (21); 601(a)(1)-(5)). In *Abdullah*, however, we observed that the



like the Federal Aviation Act, the NTMSA and FBSA both contain savings clauses. 49 U.S.C. § 30103(e); 46 U.S.C. § 4311(g).

In assessing implied preemption under these statutory schemes, the Supreme Court has found that the statutory language and applicable regulations support not field preemption, but rather a traditional conflict preemption analysis. In the automobile context, for example, the Court held that a federal regulation governing air bag usage implicated a significant federal regulatory objective—maintaining manufacturer choice—and therefore preempted a state law tort claim, *Geier v. Am. Honda Motor Co.*, 529 U.S. 861 (2000), while another regulation governing seatbelt usage did not reflect a similarly significant federal objective and thus did not preempt state law claims, *Williamson*, 562 U.S. at 336.

Similarly, in *Sprietsma*, the Court held that the Federal Boat Safety Act did not preempt the field of “state common law relating to boat manufacture,” but nonetheless applied a conflict preemption analysis to determine whether petitioner’s tort law claims were preempted by the Federal Boat Safety Act (“FBSA”) or the Coast Guard’s decision not to promulgate a regulation requiring propeller guards on motorboats. 537 U.S. at 60-70. The Court held that the Coast Guard’s decision not to regulate did not preclude “a tort verdict premised on a jury’s finding that some type of propeller guard should have been installed on this particular kind of boat equipped with respondent’s particular type of motor” because the Coast

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reference to “minimum standards” did not *preclude* a finding of field preemption; we did not hold that it required or even supported it. See *Abdullah*, 181 F.3d at 373-74.

Guard’s decision “does not convey an ‘authoritative’ message of a federal policy against propeller guards.” *Id.* at 67.<sup>17</sup>

In sum, the Supreme Court’s preemption cases in the transportation context support that aircraft design and manufacture claims are not field preempted, but remain subject to principles of conflict preemption.

## 2. Type Certification As Support for Field Preemption

Appellees also assert that because type certificates represent the FAA’s determination that a design meets federal safety standards, allowing juries to impose tort liability notwithstanding the presence of a type certificate would infringe upon the field of aviation safety as defined in *Abdullah* and would fatally undermine uniformity in the federal regulatory regime. Appellees’ Br. 44-45 (quoting *City of Burbank*, 411 U.S. at 639). In support of this

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<sup>17</sup> We recognize that, unlike the Federal Aviation Act, the NTMSA and the FBSA also contain express preemption clauses. 49 U.S.C. § 30103(b)(1); 46 U.S.C. § 4306. Despite these clauses, however, the Supreme Court still conducted a conflict preemption analysis in *Geier* and *Sprietsma* rather than a field preemption analysis because it determined that, while an express preemption clause may indicate some congressional desire to “subject the industry to a single, uniform set of federal safety standards,” the presence of a savings clause simultaneously “reflects a congressional determination that occasional nonuniformity is a small price to pay for a system in which juries . . . enforce[] safety standards [and] . . . provid[e] necessary compensation to victims.” *Geier*, 529 U.S. at 867-71; *see also Sprietsma*, 537 U.S. at 62-65. Because the Court has been willing to apply conflict rather than field preemption even in situations where an *express* preemption clause is at play, conflict preemption appears especially apt in a case like this one where there is no such clause to counsel in favor of field preemption.

argument, Appellees rely on *Riegel v. Medtronic, Inc.*, 552 U.S. 312 (2008), in which state tort claims were deemed preempted by an express preemption clause where the plaintiff challenged the safety of a medical device that had received preapproval from the Food and Drug Administration. *Id.* at 330. Although there is no express preemption clause here, Appellees posit that the FAA’s type certification process should be accorded a similar field preemptive effect.

The FAA, on the other hand, argues that type certification is relevant only to an analysis under “ordinary conflict preemption principles.”<sup>18</sup> FAA Ltr. Br. 2. Thus, according to the FAA, “[i]t is . . . only where compliance with both the type certificate and the claims made in the state tort suit ‘is a physical impossibility[]’; or where the claim ‘stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress,’ that the type certificate will serve to preempt a state tort suit.” *Id.* at 10 (first quoting *Fla. Lime & Avocado Growers, Inc.*, 373 U.S. at 142-43; then quoting *Geier*, 529 U.S. at 873). This, the FAA contends, strikes the right balance in the interests of federalism because:

to the extent that a plaintiff challenges an aspect of an aircraft’s design that was expressly approved by the FAA as shown on the type certificate, accompanying operating limitations, underlying type certificate data sheet, or other form of FAA approval incorporated by reference into those mate-

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<sup>18</sup> Even with regard to those claims not preempted by conflict preemption, the FAA contends that a federal standard of care should apply. FAA Ltr. Br. 11. For the reasons set forth above, we have rejected that contention. *See supra* Part III.C.2.

rials, a plaintiff's state tort suit arguing for an alternative design would be preempted under conflict preemption principles . . . because a manufacturer is bound to manufacture its aircraft or aircraft part in compliance with the type certificate.

*Id.* at 10-11. On the other hand, "to the extent that the FAA has not made an affirmative determination with respect to the challenged design aspect, and the agency has left that design aspect to the manufacturer's discretion, the claim would not be preempted." *Id.* at 11.<sup>19</sup>

We have no need here to demarcate the boundaries of those tort suits that will be preempted as a result of a conflict between state law and a given type certificate, nor which FAA documents incorporated by reference in a type certificate might give rise to such a conflict. While the parties responded to the FAA's submission by arguing for the first time in supplemental submissions whether the alleged design defect at issue in this case is a design aspect that was expressly incorporated into the type certificate for the Textron Lycoming O-320-D2C engine and what significance that might have for conflict preemption, we will leave those issues for the District Court to consider on remand. *See, e.g., Miller v. Mitchell*, 598 F.3d 139, 148 (3d Cir. 2010) (remanding consideration of an issue discussed in supplemental briefing on appeal

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<sup>19</sup> A type certificate thus would not create such a conflict in the FAA's view where unilateral changes are permissible without preapproval or where an allegation of negligence arises after the issuance of a type certificate, such as claims related to a manufacturer's maintenance of an aircraft, issuance of service bulletins to correct an issue that has come to the manufacturer's attention, or failure to conform its manufacturing process to the specifications in the type certificate. *See* FAA Ltr. Br. 10-11, 12-13 n. 2.

but not addressed by the district court in the first instance). For today, we hold only that, consistent with the FAA’s view, type certification does not itself establish or satisfy the relevant standard of care for tort actions, nor does it evince congressional intent to preempt the field of products liability; rather, because the type certification process results in the FAA’s preapproval of particular specifications from which a manufacturer may not normally deviate without violating federal law, the type certificate bears on ordinary conflict preemption principles. *See Wyeth*, 555 U.S. at 576-77 (according “some weight” to an agency’s “unique understanding” of “state law’s impact on [a] federal scheme” insofar as its views are “thorough[], consisten[t], and persuasive[]”); *accord Farina*, 625 F.3d at 126-27.

Indeed, when confronting an analogous preapproval scheme for pharmaceutical labeling, the Supreme Court has held that, where manufacturers are unable to simultaneously comply with both federal and state requirements, state law design defect claims are conflict preempted, not field preempted. *See Mut. Pharm. Co. v. Bartlett*, 133 S. Ct. 2466, 2473 (2013); *PLIVA*, 131 S. Ct. at 2577. Before a new drug may legally be distributed in the United States, both its contents and its labeling must be preapproved by the FDA. 21 U.S.C. §§ 355(a), (b)(1)(F). In a series of recent preemption cases, the Court has distinguished between brand-name drugs and their generic equivalents, determining that at least some state law tort claims may be brought against brand-name drug companies because such companies have the ability to make some *unilateral* changes to their labels without additional regulatory preapproval, *Wyeth*, 555 U.S. at 572-73, 581, but such claims against generic drug manufacturers can-

not survive a conflict preemption analysis because the generic manufacturers are bound by federal law to directly mimic their brand-name counterparts, *Bartlett*, 133 S. Ct. at 2473, 2480; *PLIVA*, 131 S. Ct. at 2577-81.<sup>20</sup> Ultimately, where a party cannot “independently do under federal law what state law requires of it,” the state law is conflict preempted. *PLIVA*, 131 S. Ct. at 2579.

The same considerations apply to the case before us. The FAA’s preapproval process for specifications embodied or incorporated into a type certificate, which precludes a manufacturer from making at least “major changes”<sup>21</sup> to

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<sup>20</sup> In the case of a new brand-name drug, FDA approval can be secured only by submitting a new drug application (“NDA”), which must include full reports of clinical investigations, 21 U.S.C. § 355(b)(1)(A), relevant nonclinical studies, 21 C.F.R. § 314.50(d)(2), “any other data or information relevant to an evaluation of the safety and effectiveness of the drug product obtained or otherwise received by the applicant from any source,” 21 C.F.R. § 314.50(d)(5)(iv), and “the labeling proposed to be used for such drug,” 21 U.S.C. § 355(b)(1)(F). The FDA approves an NDA only if it determines that the drug in question is safe for use under its proposed labeling and the drug’s probable therapeutic benefits outweigh its risk of harm. 21 U.S.C. § 355(d); *Brown & Williamson Tobacco Corp.*, 529 U.S. at 140. In contrast, a manufacturer of generic drugs can piggyback off of a previously-approved brand-name drug, but is required by federal law to match the preapproved brand-name analogue’s labeling and composition *exactly*. 21 U.S.C. § 355(j)(2)(A).

<sup>21</sup> As previously described, a company may not manufacture, much less produce, an aircraft part until its proposed design, to the extent described in its application, has been approved by the FAA in a type certificate. *See supra*, Part I.A. Once approved, there are two basic mechanisms by which a change can be made, depending whether the change is a “major change” or “minor change.” *See* 14 C.F.R. § 21.93. For “major changes,” a manufacturer cannot alter its design without obtaining preapproval and an amended type certificate from the FAA. *See* 49 U.S.C. § 44704(b); 14 C.F.R. § 21.97. Even

a design aspect without further preapproval, means a manufacturer may well find it impossible to simultaneously comply with both a type certificate's specifications and a separate—and perhaps more stringent—state tort duty. Thus, there may be cases where a manufacturer's compliance with both the type certificate and a state law standard of care “is a physical impossibility,” *Fla. Lime & Avocado Growers, Inc.*, 373 U.S. at 142-43, or would pose an obstacle to Congress's purposes and objectives. In such cases, the state law claim would be conflict preempted. For, even if an alternative design aspect would improve safety, the mere “possibility” that the FAA would approve a hypothetical application for an alteration does not make it possible to comply with both federal and state requirements: As the Supreme Court observed in *PLIVA*, if that were enough, conflict preemption would be “all but meaningless.” 131 S. Ct. at 2579.

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where a manufacturer identifies and reports a defect, it may not unilaterally make a major change to its preapproved design; instead, the FAA must either preapprove such a change or issue an airworthiness directive that provides legally enforceable instructions to make the product safe. *See supra*, Part I.A. “Minor changes,” on the other hand, “may be approved under a method acceptable to the FAA before submitting to the FAA any substantiating or descriptive data.” 14 C.F.R. § 21.95. Importantly, “[t]he FAA permits a wide latitude in the approval process for minor changes to type design,” FAA, Order 8110.4C, change 5, Type Certification, ch. 4-1 (2011), allowing, for example, for manufacturers holding a certain, separately-applied-for authorization from the FAA (a so-called “technical standard order authorization”) to “make minor design changes . . . without further approval by the FAA,” 14 C.F.R. § 21.619(a). Under the regulations, then, it appears that “major changes” to the design aspects expressly set forth in or incorporated into a type certificate require preapproval, whereas “minor changes,” depending on the “method acceptable to the FAA,” 14 C.F.R. § 21.95, may not.

As for Appellees' reliance on *Riegel*, we agree that the FAA's type certification process resembles the "rigorous" preapproval process for certain medical devices under the Federal Food, Drug, and Cosmetic Act (FDCA), Pub. L. No. 75-717, 52 Stat. 1040 (1939) (amended 1976). *Riegel*, 552 U.S. at 317 (quoting *Lohr*, 518 U.S. at 477). Not unlike type certification, this approval process involves copious submissions and exhaustive review, and the FDA grants approval only if a device is deemed both safe and effective. *Id.* at 317-19. In addition, just as aircraft manufacturers may not make major changes to or deviate from their type certificates without the FAA's sign-off, certain medical device manufacturers may not deviate from a federally sanctioned design without first obtaining supplemental approval from the FDA. *See* 21 U.S.C. § 360e(d)(6)(A)(i); *Riegel*, 552 U.S. at 319. However, unlike the Federal Aviation Act, the statute governing medical devices includes an express preemption clause that forbids states from imposing "requirements" that are "different from, or in addition to" federal requirements placed on medical devices. 21 U.S.C. § 360k(a)(1); *Riegel*, 552 U.S. at 316. Because the Supreme Court's preemption analysis in *Riegel* hinged on its interpretation of this express preemption clause, the case provides no support for the general proposition that states may not regulate devices governed by a federal statutory scheme.

Moreover, in an important respect, *Riegel* cuts against a finding of field preemption in this case, particularly when read in conjunction with the Court's prior medical device decision in *Lohr*. Together these cases reflect a narrow, rather than sweeping, approach to analyzing the preemptive contours of a federal premarket approval scheme. In *Lohr*, finding that the "overarching concern"



of the federal statutory and regulatory scheme was ensuring “that pre-emption occur only where a particular state requirement threatens to interfere with a specific federal interest,” the Court preserved state common law requirements “equal to, or substantially identical to, requirements imposed under federal law.” 518 U.S. at 497, 500-01 (internal quotation marks omitted). Subsequently, in *Riegel*, although the Court held that state design defect claims were preempted where they imposed additional safety requirements on medical device manufacturers in violation of the express preemption clause, the Court left *Lohr* intact and took care to note that state duties that “‘parallel,’ rather than add to, federal requirements” are not preempted by the statute. 552 U.S. at 330. Here, confronted with a similarly exhaustive preapproval process governing aircraft manufacture and design and no express preemption clause, we see no justification for going further than the Supreme Court elected to go in *Riegel* or *Lohr* by deeming categorically preempted even those state requirements that may be consistent with the federal regulatory scheme as embodied in the FAA’s type certificates. We thus read *Riegel* not to bestow field preemptive effect on type certificates, but rather to counsel in favor of narrowly construing the effect of federal regulations on state law—much like the conflict preemption analysis undertaken in *Bartlett* and *PLIVA*.

### **3. Aviation Preemption Precedent in the Courts of Appeals**

With a dearth of support for the proposition that the field of aircraft design and manufacture is preempted, Appellees attempt to muster support from select language in the opinions of other Courts of Appeals. Their efforts are unavailing.

Appellees observe that various Courts of Appeals have described the entire field of aviation safety as preempted, but, on inspection, even those courts have carefully circumscribed the scope of those rulings. The Second, Ninth, and Tenth Circuits all assess the scope of the field of aviation safety by examining the pervasiveness of the regulations in a particular area rather than simply determining whether the area implicated by the lawsuit concerns an aspect of air safety. See *Gilstrap v. United Air Lines, Inc.*, 709 F.3d 995, 1006 (9th Cir. 2013) (inquiring as to “whether the particular area of aviation commerce and safety implicated by the lawsuit is governed by pervasive federal regulations” (quoting *Martin*, 555 F.3d at 811) (alteration and internal quotation marks omitted)); *Goodspeed Airport L.L.C. v. E. Haddam Inland Wetlands & Watercourses Comm’n*, 634 F.3d 206, 210-11 (2d Cir. 2011) (“[C]oncluding that Congress intended to occupy the field of air safety does not end our task. . . . [T]he inquiry is twofold; we must determine not only Congressional intent to preempt, but also the scope of that preemption. ‘The key question is thus at what point the state regulation sufficiently interferes with federal regulation that it should be deemed pre-empted[.]’ ” (second alteration in original) (quoting *Gade v. Nat’l Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 107 (1992))); *U.S. Airways, Inc. v. O’Donnell*, 627 F.3d 1318, 1329 (10th Cir. 2010) (“Based on the pervasive federal regulations concerning flight attendant and crew member training and the aviation safety concerns involved when regulating an airline’s alcoholic beverage service, we conclude that NMLCA’s application to an airline implicates the field of airline safety that Congress intended federal law to regulate exclusively.”).<sup>22</sup>

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<sup>22</sup> Thus, although described as field preemption, these two-part tests define the relevant “field” so narrowly as to result in an analysis

In any event, to date, the Courts of Appeals have held that aviation products liability claims are not preempted, although they have taken a variety of different approaches to reach that result. *See Martin*, 555 F.3d at 812; *Greene v. B.F. Goodrich Avionics Sys., Inc.*, 409 F.3d 784, 788-89, 794-95 (6th Cir. 2005); *Pub. Health Trust*, 992 F.2d at 294-95; *Cleveland*, 985 F.2d at 1442-47. The Ninth Circuit has held that the entire field of aviation safety is preempted, *Montalvo v. Spirit Airlines*, 508 F.3d 464, 468-69 (9th Cir. 2007), but that products liability claims are not within that preempted field, drawing a line between areas of law where the FAA *has* issued “pervasive regulations”—such as passenger warnings, *id.* (concluding that state law negligence claims for failure to warn passengers of medical risks accompanying long flights are preempted), and pilot qualifications, *Ventress v. Japan*

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that resembles conventional conflict preemption. *See Williamson*, 562 U.S. at 330 (asking “whether, in fact, the state tort action conflicts with the federal regulation” (citation and internal quotation marks omitted)). Indeed, in *Gade v. National Solid Wastes Management Ass’n*, 505 U.S. 88 (1992) (plurality opinion), on which the Second Circuit relied in *Goodspeed* to articulate its test, the Supreme Court rested its plurality opinion on conflict preemption rather than field preemption. *See Goodspeed*, 634 F.3d at 209 n. 4, 210-11 (recognizing that the categories of preemption “are not rigidly distinct,” but that, while field preemption may be considered a “subset of conflict preemption,” courts often recognize field preemption and conflict preemption as separate doctrinal categories (citing *English v. Gen. Elec. Co.*, 496 U.S. 72, 79 n.5 (1990))).

Notably, several district courts have also rejected field preemption in the aviation context and thereafter considered whether conflict preemption applies. *See, e.g., Sheesley v. Cessna Aircraft Co.*, Nos. Civ. 02-4185, 03-5011, 03-5063, 2006 WL 1084103, at \*23 (D.S.D. 2006); *Monroe v. Cessna Aircraft Co.*, 417 F. Supp. 2d 824, 836 (E.D. Tex. 2006); *Holliday v. Bell Helicopters Textron, Inc.*, 747 F. Supp. 1396, 1400 (D. Haw. 1990).

*Airlines*, 747 F.3d 716, 721-23 (9th Cir.), *cert. denied*, 135 S. Ct. 164 (2014) (holding state law claims implicating pilot qualifications and medical standards fall within the preempted field of aviation safety because “unlike aircraft stairs, [they] are pervasively regulated”)—and other areas where the FAA has not—such as products liability claims for allegedly defective airstairs, *Martin*, 555 F.3d at 808-11.

The Tenth and Eleventh Circuits, in addressing products liability claims, have held that not only are those claims governed by state law, but also that the entire field of aviation safety is not preempted. *See Pub. Health Trust*, 992 F.2d at 295; *Cleveland*, 985 F.2d at 1447. While the basis for their broader holdings is now in doubt,<sup>23</sup> both

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<sup>23</sup> The Tenth and Eleventh Circuits both relied in part on *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504 (1992), and the canon of *expressio unius est exclusio alterius* to conclude that because products liability claims were outside the scope of the ADA’s express preemption clause, they were not preempted. Although this employment of *expressio unius* has been called into question by more recent Supreme Court authority, *see Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 872-73 (2000), courts in the Eleventh Circuit continue to apply *Public Health’s* broad holding, *see Branche v. Airtran Airways, Inc.*, 342 F.3d 1248, 1253-55 (11th Cir. 2003); *Psalmund v. Delta Air Lines, Inc.*, No. 1:13-cv-2327, 2014 WL 1232149, at \*3 (N.D. Ga. Mar. 25, 2014); *North v. Precision Airmotive Corp.*, No. 6:08-cv-2020, 2011 WL 679932, at \*4-5 (M.D. Fla. Feb. 16, 2011). The fate of *Cleveland* is less certain. In *O’Donnell*, the Tenth Circuit reversed course and held that the field of aviation safety is preempted. *O’Donnell*, 627 F.3d at 1322. Several district courts, including the District Court here, have stated without explanation that *Cleveland* has been abrogated by *O’Donnell*. *See, e.g., Sikkelee*, 45 F. Supp. 3d at 448 n.16. While *O’Donnell* narrowed *Cleveland’s* holding, it did not purport to overturn *Cleveland’s* application to products liability claims, but rather concluded that it “does not dictate the outcome in this case.” 627 F.3d at 1326. Thus, *Cleveland’s* holding that products liability claims are not preempted still appears to be the law of the Tenth Circuit.

of those Circuits still hold that aviation products liability claims are governed by state law. The Sixth Circuit's approach is most difficult to decipher: In a single opinion, it relied on *Abdullah* for the proposition that "federal law establishes the standards of care in the field of aviation safety and thus preempts the field from state regulation" yet also applied Kentucky tort law to a design defect products liability claim involving a navigational instrument. *Greene*, 409 F.3d at 788-89, 794-95. The most logical reading of *Greene* is that it holds products liability claims not to be preempted, as any other interpretation would render futile its extensive analysis of the design defect claim under state law. *See Martin*, 555 F.3d at 811; *McWilliams v. S.E., Inc.*, 581 F. Supp. 2d 885, 888-92 (N.D. Ohio 2008).

Even those Courts of Appeals that have not directly addressed the issue have adopted approaches to aviation preemption that suggest they would reach a similar result. The Seventh Circuit has clearly indicated its understanding that state law applies to aviation products liability claims. *See Bennett*, 484 F.3d at 908-09 ("Defendants' early theory that federal law occupies the field of aviation safety and thus 'completely preempts' all state law has been abandoned. . . . Illinois tort law supplies the claim for relief. On that much all parties agree. For decades aviation suits have been litigated in state court when the parties were not of diverse citizenship."). And the Fifth Circuit has found field preemption only of the narrower field of passenger safety warnings, *Witty v. Delta Air Lines, Inc.*, 366 F.3d 380, 385 (5th Cir. 2004), and otherwise has applied state law to aviation products liability claims, *e.g.*, *McLennan*, 245 F.3d at 425-26.

In sum, no federal appellate court has held an aviation products liability claim to be subject to a federal standard

of care or otherwise field preempted, and Appellees have been unable to identify a single decision from any court, other than the District Court here, that has held the mere issuance of a type certificate conclusively establishes a defendant's compliance with the relevant standard of care.

### **E. The Parties' Policy Arguments**

In addition to their legal arguments, the parties present various policy arguments in support of their respective positions. While we are not unsympathetic to those arguments, they carry no sway in face of clear evidence of congressional intent and the guidance we draw from the Supreme Court's preemption jurisprudence. Nonetheless, for the sake of completeness, we address those arguments briefly here.

First, in support of field preemption and a federal standard of care, Appellees and their amici warn that allowing state tort law to govern design defect claims will open up aviation manufacturers to tremendous potential liability and the unpredictability of non-uniform standards applied by juries throughout the states. *See, e.g.*, Br. of Amicus Curiae Gen. Aviation Mfrs. Ass'n 18-24. Even if we accepted the premise that members of the aviation manufacturing industry would suffer more harm from exposure to tort liability than any other manufacturer that sells its products in all fifty states, this policy argument could not lead us to find field preemption without the requisite congressional intent. And as even the FAA acknowledges, "[a]lthough allowing a defendant to be held liable for a design defect in an engine that has received a type certificate from the FAA is in some tension with Congress's interest in national uniformity in safety standards with oversight by a single federal agency, Congress

struck a balance between protecting these interests in uniformity and permitting States to compensate accident victims.” FAA Ltr. Br. 12.

Nor are we moved by Appellees’ predictions of the dire consequences to aircraft and component manufacturers of permitting products liability claims to proceed under state tort law, for our holding does not effect a sea change. On the contrary, it simply maintains the status quo that has existed since the inception of the aviation industry, preserving state tort remedies for people injured or killed in plane crashes caused by manufacturing and design defects. That status quo leaves intact the traditional deterrence mechanism of a state standard of care, with attendant remedies for its breach. Thus, while perhaps contrary to certain policies identified by Appellees and their amici, our holding furthers an overriding public policy and one we conclude is consistent with the Federal Aviation Act, FAA regulations, GARA, and decisions of the Supreme Court and our sister Circuits: promoting aviation safety. *See* 49 U.S.C. §§ 40101(a)(1)-(3), 44701(a).

On the other side of this debate, in arguing that type certificates should have no significance for conflict preemption, much less field preemption, Appellant contends that FAA preapproval of particular specifications provides no assurance of safety because the FAA delegates ninety percent of its certification activities to private individuals and organizations, known as designees, which can include the manufacturers themselves. U.S. Gov’t Accountability Office, GAO-05-40, *Aviation Safety: FAA Needs to Strengthen the Management of Its Designee Programs* 3 (2004); *see also Junhong v. Boeing Co.*, 792 F.3d 805, 808 (7th Cir. 2015) (“Instead of sending a cadre of inspectors to check whether every aircraft design

meets every particular of every federal rule and policy, the FAA allows [manufacturers] to do some of the checking [themselves].”). We too have recognized that designers receive inconsistent monitoring and oversight from the FAA, and many have some association with the applicant, so that in essence “[s]ome manufacturers are able to grant themselves a type certificate.” *Robinson v. Hartzell Propeller, Inc.*, 454 F.3d 163, 166 (3d Cir. 2006); *see also Varig Airlines*, 467 U.S. at 818 n.14 (expressing concern that the staff of the FAA “performs only a cursory review of the substance of the overwhelming volume of documents submitted for its approval” (alteration, internal quotation marks, and citation omitted)). Even the FAA acknowledges that, “[i]n light of its limited resources,” the agency designates outside organizations to perform some of the FAA’s work in preparing a type certificate. FAA Ltr. Br. 14. From these alleged “flaws” in the review process, Appellant argues that the agency preapproval of specifications in the type certificate amounts to an unreliable self-policing regime that should play no role in even conflict preemption.

This very same argument, however, was raised in *Bartlett* and failed to carry the day. While the dissenters decried that granting “manufacturers of products that require preapproval . . . *de facto* immunity from design-defect liability” would force the public “to rely exclusively on imperfect federal agencies with limited resources,” *Bartlett*, 133 S. Ct. at 2495 (Sotomayor, J., dissenting), the majority held that because generic drug manufacturers are required to directly mirror the preapproved labels of their brand-name counterparts and are thus “prohibited from making any unilateral changes” to their labels, state law design defect claims were foreclosed by “a straightforward application of pre-emption law,” *id.* at 2471, 2480.



Although the resource limitations and extent of outsourcing of parts of the review process highlight the need for the FAA's vigilant oversight, the FAA still makes the ultimate decision to approve the particular design specifications sought in a type certificate. 49 U.S.C. § 44704(a); 14 C.F.R. § 21.21. Thus, the reasoning of the *Bartlett* majority, 133 S. Ct. at 2473, 2480, and the consideration we must give to the FAA's views under separation of powers principles, *see Wyeth*, 555 U.S. at 576-77, lead us to conclude that the FAA's preapproval process for aircraft component part designs must be accorded due weight under a conflict preemption analysis.

In sum, the parties' policy arguments notwithstanding, the case law of the Supreme Court and our sister Circuits confirm our conclusion: We are dealing with an area at the heart of state police powers, and we have no indication of congressional intent to preempt the entire field of aviation design and manufacture. We therefore decline the invitation to create a circuit split and to broaden the scope of *Abdullah's* field preemption to design defects when the statute, the regulations, and relevant precedent militate against it.

#### **IV. Conclusion**

We conclude that the District Court erred in granting summary judgment on Sikkelee's design defect claims on the basis of field preemption. The field of aviation safety we identified as preempted in *Abdullah* does not include product manufacture and design, which continues to be governed by state tort law, subject to traditional conflict

preemption principles. Accordingly, we will vacate and remand for further proceedings consistent with this opinion.<sup>24</sup>

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<sup>24</sup> Appellees should address to the District Court in the first instance their argument that Sikkelee's claims fail as a matter of Pennsylvania law. Given the basis for its judgment, the District Court had no need to reach that question and it is not fairly encompassed within the order certified for this interlocutory appeal. *See Pollice v. Nat'l Tax Funding, L.P.*, 225 F.3d 379, 407 (3d Cir. 2000) (declining to consider on interlocutory appeal issues unaddressed by the district court below).

**APPENDIX G**

UNITED STATES COURT OF APPEALS  
FOR THE THIRD CIRCUIT

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No. 14-4193

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JILL SIKKELEE, Individually and as Personal Representative of the Estate of David Sikkelee, deceased,  
Appellant

v.

PRECISION AIRMOTIVE CORPORATION;  
PRECISION AIRMOTIVE LLC, Individually and as Successor-In-Interest to Precision Airmotive Corporation; BURNS INTERNATIONAL SERVICES CORPORATION, Individually and as Successor-In-Interest to Borg-Warner Corporation, and Marvel-Schebler, a Division of Borg-Warner Corporation; TEXTRON LYCOMING RECIPROCATING ENGINE DIVISION, A Division of Avco Corporation; AVCO CORPORATION; KELLY AEROSPACE, INC., Individually and as Joint Venturer and Successor-In-Interest; KELLY AEROSPACE POWER SYSTEMS, INC., Individually and as Joint Venturer and Successor-In-Interest a/k/a Electrosystems, Inc. a/k/a Confuel Inc.; ELECTROSYSTEMS, INC., Individually and as Joint Venturer and as Successor-In-Interest a/k/a Consolidated Fuel Systems, Inc. a/k/a Confuel, Inc.; CONSOLIDATED FUEL SYSTEMS, INC., a/k/a Confuel, Inc.

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Filed: June 7, 2016

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SUR PETITION FOR REHEARING

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BEFORE: McKEE, *Chief Judge*, AMBRO, FUENTES, SMITH, FISHER, CHAGARES, JORDAN, HARDIMAN, GREENAWAY, JR., VANASKIE, SHWARTZ, KRAUSE, RESTREPO, and VAN ANTWERPEN,<sup>1</sup> *Circuit Judges*.

The petition for rehearing filed by appellant in the above-entitled case having been submitted to the judges who participated in the decision of this Court and to all the other available circuit judges of the circuit in regular active service, and no judge who concurred in the decision having asked for rehearing, and a majority of the judges of the circuit in regular service not having voted for rehearing, the petition for rehearing by the panel and Court en banc, is denied.

BY THE COURT,

s/Cheryl Ann Krause  
Circuit Judge

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<sup>1</sup> Judge Van Antwerpen's vote is limited to panel rehearing only.

**APPENDIX H**

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

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No. 4:07-cv-00886

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JILL SIKKELEE, Individually and as Personal Representative of the Estate of David Sikkelee, deceased,  
Plaintiff

v.

PRECISION AIRMOTIVE CORPORATION, PRECISION AIRMOTIVE LLC, PRECISION AEROSPACE CORPORATION, PRECISION AEROSPACE SERVICES LLC, PRECISION AVIATION PRODUCTS CORPORATION, PRECISION PRODUCTS LLC, ZENITH FUEL SYSTEMS LLC, BURNS INTERNATIONAL SERVICES CORPORATION, FORMER FUEL SYSTEMS, INC., MARK IV INDUSTRIES, INC., TEXTRON LYCOMING RECIPROCATING ENGINE DIVISION, TEXTRON INC., AVCO CORPORATION, KELLY AEROSPACE, INC., KELLY AEROSPACE POWER SYSTEMS, INC., ELECTROSYSTEMS, INC., CONSOLIDATED FUEL SYSTEMS, INC., Defendants.

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Filed: September 10, 2014

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**MEMORANDUM**

BRANN, District Judge.

For the following reasons, the motion for summary judgment of AVCO Corporation, on behalf of its Lycoming Engines Division (hereinafter, “Lycoming”), is granted in part and denied in part.

**I. Background**

Before turning to Lycoming’s pending motion for summary judgment, the Court should review the relatively long history of this products liability case. Commenced in May 2007 by way of a 103-page Complaint, the case was originally assigned to the Honorable John E. Jones III, and was reassigned to the undersigned almost six years later on January 17, 2013.

Plaintiff is Jill Sikkelee (hereinafter, “Sikkelee”), individually and as personal representative of the estate of David Sikkelee (hereinafter, “David”); David was Jill’s husband when he died piloting an airplane in 2005. Sikkelee’s Complaint asserts that David’s “aircraft lost power as a result of an engine fuel delivery system [*i.e.*, carburetor] malfunction/defect [that, in turn, caused] the aircraft and its pilot [*i.e.*, David] to lose control and crash” shortly after takeoff from Transylvania County Airport in Brevard, North Carolina. (Complaint, May 16, 2007, ECF No. 1 ¶ 11). The Complaint asserts claims against seventeen defendants associated with the alleged “malfunction/defect” that supposedly caused David’s crash and death. Sikkelee predicated her claims on state law theories of strict liability, breach of warranty, negligence, misrepresentation, and concert of action.

Sikkelee's claims against five defendants were dismissed by stipulation on Dec. 22, 2008 (ECF No. 102); two more defendants were dismissed by stipulation on April 14, 2010 (ECF No. 140); and settlement with four more defendants was approved on July 13, 2010. (ECF No. 146).

On August 13, 2010, more than three years after the Complaint was filed, Judge Jones dismissed Sikkelee's claims against the remaining defendants. A decade before, in *Abdullah v. Am. Airlines*, 181 F.3d 363 (3d Cir. 1999), the United States Court of Appeals for the Third Circuit held "that federal law establishes the applicable standards of care in the field of air safety, generally, thus preempting the entire field from state and territorial regulation," though "traditional state and territorial law remedies continue to exist for violation of those [federal] standards."<sup>1</sup> *Id.* at 367, 375. Ten years later, Judge Jones concluded that *Abdullah* compelled dismissal of Sikkelee's Complaint: "[B]ased upon the state of the controlling law, this action is indeed controlled by *Abdullah*." *Sikkelee v. Precision Airmotive Corp.*, 731 F. Supp. 2d 429, 438-39 (M.D. Pa. 2010) (hereinafter, "*Sikkelee I*"). Therefore, continued Judge Jones, "any claims that Plaintiff asserts under a state-law standard of care"—*i.e.*, all of Sikkelee's claims in the Complaint—"must necessarily be dismissed." *Sikkelee I*, 731 F. Supp. 2d at 438-439.

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<sup>1</sup> Which is to say, the Circuit Court "did not conclude in *Abdullah* that the [plaintiffs's] common law negligence claims themselves were preempted; instead, [the Circuit Court] determined only that the standard of care used in adjudicating those claims was preempted. Local law still governed the other negligence elements (breach, causation, and damages), as well as the choice and availability of remedies." *Elassaad v. Independence Air, Inc.*, 613 F.3d 119, 125 (3d Cir. 2010).

Although she had opposed the extension of *Abdullah* to her claims partly on the ground that “there is no specific federal regulation pertaining to the actual design, construction, inspecting, and testing [of the] carburetor/engine fuel system at issue [in this case . . . , *i.e.*,] [t]here is a gap, unlike the facts in *Abdullah* ” (Pl. Br., May 6, 2009, ECF No. 117 at 20), Judge Jones nevertheless granted Sikkelee “leave to amend the Complaint and assert claims under federal standards of care.” *Sikkelee I*, 731 F. Supp. 2d at 439. On August 31, 2010, Sikkelee filed a 155-page Amended Complaint. (ECF No. 160).

As the case neared its fourth anniversary, Judge Jones granted Lycoming’s motion to dismiss Sikkelee’s claims for breach of warranty, misrepresentation, and concert of action. 2011 WL 1344635, at \*4 (M.D. Pa. Apr. 8, 2011). Sikkelee followed with a Second Amended Complaint (137 pages, for those keeping track) on April 18, 2011 (ECF No. 205), and by the time Judge Jones decided on March 13, 2012, that “Pennsylvania law will apply to the liability issues remaining in th[is] case,”<sup>2</sup> the termination of additional parties left Lycoming as the only defendant in the case. (ECF No. 288 at 1-2).

Just past the wooden anniversary, with the matter pared down to Sikkelee’s claims asserting Lycoming’s negligence and strict liability, Judge Jones decided two Lycoming motions for summary judgment on July 3, 2012

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<sup>2</sup> Given Judge Jones’s previous determination that *Abdullah* applies and that, accordingly, federal law supplies the standard of care in this case, Pennsylvania law is preempted insofar as it imposes a standard of care on Lycoming.



n an opinion reported at 876 F. Supp. 2d 479 (2012) (hereinafter, “*Sikkelee II*”). Upon consideration of the parties’s briefs, which “focus[ed] primarily on the issue of whether or not Lycoming is a manufacturer” subject to potential liability under Pennsylvania products liability law, Judge Jones denied Lycoming’s motions in part, holding that “genuine issues of material fact remain with regard to whether Lycoming is a manufacture [*sic*] relative to the defective carburetor and overhaul of the engine in 2004, whether a defect existed, and whether said defect proximately caused the Plaintiff’s injuries.” *Sikkelee II*, 876 F. Supp. 2d at 493, 495. He also, however, “grant[ed] summary judgment to the limited extent that Plaintiff’s claims may be construed to allege a defect in the engine in 1969,” reasoning that “Plaintiff has offered no evidence . . . demonstrating that the engine was defective when it left the Lycoming’s Williamsport manufacturing plant in 1969 or that a defect existing at that time caused the 2005 aircraft accident.” *Id.* at 486. Judge Jones ordered that “[t]he case shall proceed on the negligence and strict liability design defect theories asserted by the Plaintiff as they relate to the 2004 engine overhaul.” *Id.* at 495.

On July 26, 2012, at Lycoming’s urging, Judge Jones amended the Order that accompanied *Sikkelee II* to include a statement under 28 U.S.C. § 1292(b) encouraging the Third Circuit to hear an interlocutory appeal on the issue of “whether the Pennsylvania Supreme Court would adopt the RESTATEMENT (THIRD) OF TORTS or continue in its application of the RESTATEMENT (SECOND) OF TORTS.” (ECF No. 306). Judge Jones had predicted in *Sikkelee II* that the Pennsylvania Supreme Court would be guided by the Restatement (Second) of Torts, and denied Lycoming’s motions for summary judg-

ment based on his application of the Restatement (Second). Deeming the Restatement (Second) versus Restatement (Third) issue “a controlling question of law” (ECF No. 306), Judge Jones suspended briefing on Lycoming’s then-pending motion for reconsideration in order to give the parties the benefit of the Third Circuit’s expected disposition of Lycoming’s interlocutory appeal (July 26, 2012, ECF No. 307).

On September 14, 2012, a panel of the Third Circuit denied Lycoming’s Petition for Permission to Appeal Judge Jones’s July 3, 2012 Order. 2012 WL 4953074 (3d Cir. Sept. 14, 2012). Lycoming petitioned for rehearing *en banc* and panel rehearing. The Third Circuit likewise rejected these petitions on October 17, 2012, but its Order decidedly instructed that “federal courts sitting in diversity and applying Pennsylvania law to products liability cases should look to sections 1 and 2 of the *Restatement (Third) of Torts*.” 2012 WL 5077571 (3d Cir. Oct. 17, 2012) (emphasis added). The same day, Judge Jones denied as moot Lycoming’s pending motion for reconsideration of *Sikkelee II* and provided that “[t]he parties MAY, at their election, file new motions for reconsideration, guided by the Circuit’s direction that the RESTATEMENT (THIRD) is applicable to this action.” (ECF No. 324). On October 31, 2012, Lycoming filed a motion for reconsideration of *Sikkelee II* to the extent it denied Lycoming’s motion for summary judgment. (ECF No. 332). That motion for reconsideration was pending at the time this case was reassigned to the undersigned in January 2013.

On June 3, 2013, applying against Lycoming the demanding standard that confronts a motion for reconsideration,<sup>3</sup> this Court held that neither an intervening change in law nor supposed clear error warranted reversal of *Sikkelee II*, 2013 WL 2393005 (M.D. Pa. June 3, 2013), a determination the Court reinforced and elaborated upon in an Order dated July 9, 2013, 2013 WL 3456953 (M.D. Pa. July 9, 2013), at oral argument on November 13, 2013 (Tr., Nov. 25, 2013, ECF No. 459 at 199-204), and in a Memorandum dated November 20, 2013 (ECF No. 456 at 4 n.2). Trial was then scheduled for December 2, 2013.

Some months before trial, however, it became clear that Sikkelee had hurdled the fence of the Restatement (Third) only to be confronted by the menacing hound that is *Abdullah* lurking on the other side. On October 24, 2013, Sikkelee proposed jury instructions incorporating some eighteen federal regulations and pronouncements of the Federal Aviation Administration (hereinafter, the “FAA”) and Civil Aeronautics Board, the FAA’s predecessor. (ECF No. 409-7). The Court reviewed the proposed charge with a raised eyebrow, puzzled by Sikkelee’s derivation of a standard of care from certain regulations,

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<sup>3</sup> See page \*2 of the Court’s Memorandum:

The Court may amend its prior ruling “if the party seeking reconsideration shows at least one of the following grounds: (1) an intervening change in the controlling law; (2) the availability of new evidence that was not available when the court granted the motion for summary judgment; or (3) the need to correct a clear error of law or fact or to prevent manifest injustice.” *Howard Hess Dental Lab. Inc. v. Dentsply Int’l, Inc.*, 602 F.3d 237, 251 (3d Cir. 2010) (quoting *Max’s Seafood Cafe v. Quinteros*, 176 F.3d 669, 677 (3d Cir. 1999)).

and unable to grasp the causal relevance of the alleged breach of others.

At a November 13, 2013 hearing, the Court expressed doubt concerning the validity of Sikkelee’s proposed instructions and heard her counsel’s attempts to justify them. By way of a November 20, 2013 Memorandum, the Court—after explaining the difficulty that courts have had fashioning jury instructions consistent with *Abdullah* generally<sup>4</sup>—recounted the hearing as follows:

[P]laintiff’s counsel was all but completely unable to assist the Court in, to use Chief Judge Conner’s phrase, “formulating an intelligible statement of applicable law.” The Court’s confidence in the capacity of plaintiff’s proposed instructions to guide the Court steadily diminished throughout the argument, and was lost completely when plaintiff’s counsel made the incredible suggestion that the Court could fulfill its duty to instruct the jury by delivering Pennsylvania pattern instructions on

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<sup>4</sup> At pages 2-3, the Court wrote,

As Chief Judge Conner has explained, “FAA regulations relating to the design and manufacture of airplanes and airplane component parts were never intended to create federal standards of care.” [*Pease v. Lycoming Engines*, 2011 WL 6339833, at \*22 (M.D. Pa. Dec. 19, 2011)]. This makes construing the regulations as standards of care, which *Abdullah* requires, “arduous and impractical.” *Pease*, 2011 WL 6339833, at \*23. Chief Judge Conner found under similar circumstances that “[t]he court’s obligation to instruct the jury with these obscure regulations will be severely challenged, and there is no jurisprudential guidance to assist the court in formulating an intelligible statement of applicable law.” *Id.*

negligence. *See Abdullah*, 181 F.3d at 376 (remanding case to district court to “evaluate whether the evidence on standards of care and the instructions given to the jury conformed to the federal aviation safety standards as we have described them”).

(ECF No. 456 at 5-6).

With trial approaching, the Court found itself “without sufficient guidance from either precedent or the parties as to the law that will govern not only the jury’s deliberations, but also the Court’s rulings on the relevance of evidence, motions pursuant to Fed. R. Civ. P. 50, and other questions.” (*Id.* at 6). The Court postponed trial to March 10, 2014 and ordered Sikkelee to submit a brief showing why the regulations she cited constitute the standard of care applicable to Lycoming; Lycoming was given the opportunity to respond. (Nov. 20, 2013, ECF No. 457).

Upon review of the parties’s papers, the Court determined that the issues raised would profit from examination in the posture of summary judgment. Not incidentally, an order resolving a motion for summary judgment would, in the Court’s view, be conducive of interlocutory consideration by the Third Circuit under 28 U.S.C. § 1292(b), consideration which this Court resolved to encourage in light of the vexation these issues have caused this Court and others. *Compare Lewis v. Lycoming*, 957 F. Supp. 2d 552 (E.D. Pa. 2013), *with Pease v. Lycoming Engines*, 2011 WL 6339833, at \*22 (M.D. Pa. Dec. 19, 2011).<sup>5</sup> On February 10, 2014, the Court ordered summary judgment briefing limited to Lycoming’s contention

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<sup>5</sup> The Third Circuit has permitted appeals of analogous issues in the past. *See In re TMI*, 67 F.3d 1103, 1106 (3d Cir. 1995) (certified

that, in view of the parties's evidence, no reasonable jury could conclude that Lycoming's allegedly tortious conduct breached a federal standard of care and caused David's crash thereby. Trial was postponed. (ECF No. 478). In accordance with the Court's Order, Lycoming moved for summary judgment on March 19, 2014. (ECF No. 482).

## II. Summary Judgment Standard

Summary judgment is appropriate where "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). A fact is "material" where it "might affect the outcome of the suit under the governing law." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A dispute is "genuine" where "the evidence is such that a reasonable jury," giving credence to the evidence favoring the nonmovant and making all reasonable inferences in the nonmovant's favor, "could return a verdict for the nonmoving party." *Id.*

For movants and nonmovants alike, the assertion "that a fact cannot be or is genuinely disputed must" be supported by "citing to particular parts of materials in the record," or by "showing that the materials cited [by an adverse party] do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact." Fed. R. Civ. P. 56(c)(1). "If a party fails to properly support an assertion of fact or fails to properly address another party's assertion of fact as required by Rule 56(c), the court may . . .

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question involving whether specified federal regulations constituted standard of care in case involving claims arising from the Three Mile Island nuclear meltdown).

consider the fact undisputed for purposes of the motion.” Fed. R. Civ. P. 56(e)(2).

Thus, where the moving party’s motion is properly supported and his evidence, if not controverted, would entitle him to judgment as a matter of law, the nonmoving party, to avoid summary judgment in his opponent’s favor, must answer by setting forth “genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be resolved in favor of either party.” *Anderson*, 477 U.S. at 250. In the face of the moving party’s evidence, the nonmoving party’s mere allegations, general denials or vague statements will not create a genuine factual dispute. *See Bixler v. Cent. Pennsylvania Teamsters Health & Welfare Fund*, 12 F.3d 1292, 1302 (3d Cir. 1993). Only citation to specific facts is sufficient. *Anderson*, 477 U.S. at 250.

Where the nonmoving party has had adequate time for discovery and will bear the burden of proof at trial, “a complete failure of proof concerning an essential element of the nonmoving party’s case necessarily renders all other facts immaterial,” and summary judgment is warranted. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986).

### III. Facts<sup>6</sup>

Sikkelee claims that Lycoming is liable for alleged defects in the “engine, . . . carburetor, . . . [and] fuel delivery

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<sup>6</sup> Where the parties’s accounts differ, the Court views the facts and draws reasonable inferences therefrom in Sikkelee’s favor. *See Montone v. City of Jersey City*, 709 F.3d 181, 189 (3d Cir. 2013) (facts and reasonable inferences drawn therefrom must be favorable to party opposing motion for summary judgment).

system” (as well as various “manuals and instructions” related to these components) installed in the aircraft (a Cessna 172N) that David was piloting when he crashed fatally in 2005 (hereinafter, the “accident aircraft”). (2d Am. Compl., Apr. 18, 2011, ECF No. 205 ¶¶ 141, 144, 162). The nature of Lycoming’s association with the components at issue is important to the Court’s analysis and will be set forth in some detail.

In 1969, Lycoming manufactured the engine—a model O-320-D2C bearing the serial number L-6590-39A (hereinafter, the “subject engine”)—that was installed in the accident aircraft at the time of David’s crash. (Def. Facts, Mar. 19, 2014, ECF No. 483 ¶¶ 6, 8 (hereinafter, “Def. Facts I”). Most of the subject engine’s 35-plus years were spent in storage: Lycoming shipped the engine to Beagle Aircraft, Inc., in September of 1969, and it was not until 1998 that the engine was installed “factory new” on the accident aircraft. (Def. Facts I ¶ 7; Pl. Facts, Apr. 28, 2014, ECF No. 488 ¶ 7 (hereinafter “Pl. Facts”).

When the subject engine left Lycoming’s control in 1969, it shipped with a carburetor<sup>7</sup>—setting 10-3678-32, serial number A-25-15850 (hereinafter, the “original carburetor”)—but the carburetor installed in the subject engine when the accident aircraft crashed in 2005 was not the original carburetor. (Def. Facts I ¶¶ 7, 9, 11; Pl. Facts ¶ 9). When the engine came out of storage in 1998, an overhauled Marvel-Schebler/Precision Airmotive Corp. (hereinafter, “Precision”) model MA-4SPA carburetor bearing serial number CK 6 11739 was installed in accordance

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<sup>7</sup> A “carburetor” is defined at Merriam-Webster.com as “the part of an engine in which gasoline is mixed with air so it will burn and provide the engine with power.”



with the O-320-D2C's type-certificated design (more on FAA "type certification" shortly), which calls for installation of the MA-4SPA. (Pl. Ex., ECF No. 234-1; Pl. Ex., ECF No. 234-6 at 8).

Then, just under a year before David's accident, Kelly Aerospace, Inc. (hereinafter, "Kelly"), an FAA certified repair station, overhauled another MA-4SPA carburetor—this one bearing serial number CK 6 10964 and originally manufactured by Precision in 1978 (hereinafter, the "replacement carburetor")—and installed it on the subject engine, again in accordance with Lycoming's type-certificated design. (Pl. Facts ¶ 10; Pl. Ex., ECF No. 234-6 at 8; Pl. Ex., ECF No. 54 ¶ 101; Pl. Ex., ECF No. 207 ¶ 22). In performing the overhaul, Kelly was required to "use the methods, techniques and practices prescribed in [Lycoming's] maintenance manual or Instructions for Continued Airworthiness," 14 C.F.R. § 43.13(a) (2004), and did so (Pl. Ex., ECF No. 234-6 at 9-10). As part of the overhaul, Kelly removed parts from the replacement carburetor and replaced them with parts<sup>8</sup> that Kelly had manufactured under its FAA-issued Parts Manufacturer Approval (hereinafter, "PMA") (more on PMA shortly). (Def. Facts I ¶ 10). The Kelly-overhauled replacement carburetor was powering the subject engine when David was piloting the accident aircraft in 2005.

Those are the basics. To better understand Lycoming's association with—and duties with regard to—the allegedly defective components, however, it is necessary to specify where Lycoming is situated in the context

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<sup>8</sup> These parts include the "pump plunger assembly," the "valve and seat assembly," the "single piece venturi," the "throttle shaft," and the "carburetor float," the last of which was actually manufactured by a vendor to Kelly. (Def. Facts I ¶¶ 12-13).

of the Civil Air Regulations (hereinafter, the “CARs”) and the Federal Aviation Regulations (hereinafter, the “FARs”). General background for the CARs and the FARs is provided in the margin.<sup>9</sup>

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<sup>9</sup> The Kreindler Treatise provides a helpful guide through the statutory and regulatory evolution generally relevant to the case at bar:

As early as 1938, . . . Congress . . . enacted the Civil Aeronautics Act of 1938 (CAA), the predecessor to the Federal Aviation Act.

Originally, under the CAA, the Civil Aeronautics Board (CAB), an agency within the Department of Commerce, was the agency responsible for the regulatory aspects of aviation safety, including promulgating safety rules [and] inspecting and certifying aircraft, . . . .

In 1958, the Federal Aviation Act (the Act) was passed and continues to be the basic law of the land concerning aviation. With the enactment of the Federal Aviation Act of 1958, the regulatory functions of the CAB were transferred to a newly created Federal Aviation Agency. Subsequently, Congress enacted the Department of Transportation Act of 1966, which transferred the duties of the Federal Aviation Agency, in their entirety, to the newly created Department of Transportation (DOT) and its Secretary of Transportation. The Department of Transportation Act did not change the substance of the Federal Administration Act, but rather only reorganized the administrative hierarchy.

The Federal Aviation Agency, renamed as the Federal Aviation Administration (FAA), remains as an agency within the DOT and acts for the Secretary of Transportation in the safety rule-making, air-traffic controlling, and certification processes. The CAB was stripped of its safety and investigatory functions . . . .

. . . .

The Federal Aviation Regulations (FARs) are promulgated pursuant to the Federal Aviation Act and have the full force and effect of law. The FARs are a voluminous body of ever-changing rules and regulations governing the qualifications, certification, and operation of aircraft, pilots, instructors, air carriers, and air

#### IV. Regulatory Structure

Lycoming is the holder of a “type certificate” for the Lycoming O-320-D2C model engine. (Def. Facts I ¶ 2). To obtain this status, which it did in 1966, Lycoming demonstrated the O-320-D2C’s compliance with certain “airworthiness” standards, *see* CAR § 13.10 (1964),<sup>10</sup> and type certification denotes that, in the view of the Federal Aviation Administrator (the head of the FAA, hereinafter, the “Administrator”), the engine “is of proper design, material specification, construction, and performance for safe operation, and meets the minimum standards, rules, and regulations” prescribed by the FAA. 49 U.S.C. § 1423(a) (1964). The MA-4SPA carburetor, which is actually manufactured by Precision (or, in the past, Precision’s predecessors), is a component of the O-320-D2C’s type-certificated design.<sup>11</sup> (Pl. Ex., ECF No. 234-9).

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traffic controllers. . . . In large part, they constitute a broad recodification of the former Civil Air Regulations, which were originally issued by the Secretary of Commerce, then by the Civil Aeronautics Board (CAB), then by the Federal Aviation Agency, and finally by the Federal Aviation Administration (FAA). They are codified in Title 14 of the Code of Federal Regulations.

2 Kreindler, *Aviation Accident Law* § 9.01(1)-(2) (Matthew Bender).

<sup>10</sup> When discussing type certification of the O-320-D2C, the Court refers to the CARs and relevant provisions of the Federal Aviation Act as they stood in 1964 because, in the Court’s understanding, the 1964 regulations and statute governed Lycoming’s 1966 application for type certification. Otherwise, the Court refers to the FARs and Federal Aviation Act as they stood in 2004, doing so on the understanding that the 2004 regulations and statute governed at the time of David’s accident.

<sup>11</sup> Since at least the 1970s, it appears, Lycoming has licensed its design of the MA-4SPA to Precision or Precision’s predecessors in

By virtue of its status as a type certificate holder, Lycoming has the privilege of “obtain[ing] a production certificate” for the O-320-D2C. 14 C.F.R. § 21.45 (2004). A production certificate holder is permitted to produce duplicates of the certificated product, 49 U.S.C. § 44704(c) (2004), and Lycoming obtained such a certificate (although when it did so is not clear from the record) for the O-320-D2C (Pl. Ex., ECF No. 234-5 at 12) by demonstrating that it maintains a quality control system adequate to ensure that “each [O-320-D2C produced] will meet the design provisions of the [O-320-D2C] type certificate,” 14 C.F.R. § 21.139 (2004), and that it has developed “procedures necessary to ensure that each article produced conforms to the type design and is in a condition for safe operation,” 14 C.F.R. § 21.143(a) (2004). The FARs take account of the fact that a type certificated product (*e.g.*, an engine) is often an assemblage of smaller components (*e.g.*, a carburetor) purchased from outside suppliers (*e.g.*, Precision), making clear that a production certificate holder must establish procedures for ensuring the quality and conformity of all components integrated in the certificated product. 14 C.F.R. § 21.143(a)(2) (2004). Once a production certificate is obtained, the holder is responsible for maintaining its quality control system and for “[d]etermin[ing] that each part and each completed product . . . submitted for airworthiness certification or approval conforms to the approved design and is in a condition for safe operation.” 14 C.F.R. § 21.165 (2004). The subject engine is one of many O-320-D2Cs produced under Lycoming’s production certificate.

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interest. (Pl. Opp’n Br., Apr. 28, 2014, ECF No. 487 at 12; Pl. Ex., ECF No. 152-4 at 9; Pl. Ex., ECF No. 234-13).

Like all machines, aircraft engines must be maintained to ensure proper functioning, and the FAA would prefer that you not rely on your handy uncle to do the job. Accordingly, only persons designated qualified by the FARs are permitted to “maintain, rebuild, alter, or perform preventative maintenance on an . . . aircraft engine,” a designation which includes agents of “[t]he holder of a repair station certificate.” 14 C.F.R. § 43.3(a) & (e) (2004). Kelly held such a certificate when it overhauled the replacement carburetor. Under federal regulations, type certificate holders are required to “prepare and make available an approved manual containing instructions for the installation, operation, servicing, maintenance, repair, and overhaul of the engine,” CAR § 13.21 (1964), and as noted above, Kelly was required to follow Lycoming-prepared manuals and instructions in performing the overhaul. 14 C.F.R. § 43.13(a) (2004).

Finally, sometimes parts of aircraft engines should be replaced to ensure proper functioning. Rather than give the holder of a production certificate or his supplier a monopoly on replacements, however, the FARs permit others to “produce a modification or replacement part for sale for installation on a type certificated product . . . pursuant to a Parts Manufacturer Approval issued” by the Administrator. 14 C.F.R. § 21.303(a) (2004). An applicant obtains a PMA once the “Administrator finds, upon examination of the design and after completing all tests and inspections, that the design meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product on which the part is to be installed”—unless “the design of the part is identical to the design of the part that is covered under a type certificate,” in which case no such showing is necessary—and the applicant “submits a statement certifying that he has established”

a system for “ensur[ing] that each completed part conforms to its design data and is safe for installation on applicable type certificated products.” 14 C.F.R. § 21.303(d) & (g) (2004). Once a manufacturer has obtained a PMA, he is responsible for “determin[ing] that each completed part conforms to the design data and is safe for installation on type certificated products.” 14 C.F.R. § 21.303(k) (2004). A number of the parts that Kelly installed on the replacement carburetor were manufactured under a “Parts Manufacturer Approval.” (Pl. Facts ¶ 10).

In sum, the regulatory framework attempts to ensure—by way of issuing various certificates/authorizations and imposing responsibilities on their holders—that the design of an aircraft engine is safe (type certification), that duplicate engines manufactured for the public conform to the approved design (production certification), that engine maintenance and repairs are performed in accordance with manuals and instructions prepared by the manufacturer, 14 C.F.R. § 43.13 (2004), and that any replacement parts for the engine are either identical to the original parts described in the type certificate or otherwise airworthy (PMA). But in recognition of the fact that the Administrator’s authorization of an engine’s design and manufacture is an imperfect predictor of the engine’s future performance in the field, holders of type certificates and PMAs are required to “report any failure, malfunction, or defect in any product, part, process, or article” that they have manufactured when they determine that the item “has resulted in any of [various] occurrences,” including “engine failure.” 14 C.F.R. § 21.3(a) (2004). If the item left the holder’s quality control system, the holder must report any defect “that it determines could result in any of [various] occurrences,” again includ-

ing “engine failure.” 14 C.F.R. § 21.3(b) (2004). Such reports are “made to the Aircraft Certification Office in the region in which the person required to make the report is located.” 14 C.F.R. § 21.3(e) (2004).

When the Administrator determines that an “unsafe condition exists” in an engine and that the “condition is likely to exist or develop in other [engines] of the same type design” and, further, that “design changes are necessary to correct the unsafe condition,” the type certificate holder must change the design and, upon the Administrator’s approval of the design, “make available the descriptive data covering the changes to all operators of [engines] previously certificated under the type certificate.” 14 C.F.R. §§ 21.99 & 39.5 (2004). Absent an unsafe condition, if the Administrator or the type certificate holder finds “through service experience that changes in type design will contribute to the safety of the [engine], the holder of the type certificate may submit appropriate design changes for approval.” 14 C.F.R. § 21.99(b) (2004). Upon approval, “the manufacturer shall make information on the design changes available to all operators of the same type of product.” *Id.*

Sikkelee asserts that David’s crash was caused by Lycoming’s violation of various federal regulations that govern type certification and breaches of the duties of type certificate and production certificate holders. In particular, Sikkelee argues that Lycoming’s design of the O-320-D2C engine (and its MA-4SPA carburetor) violated a number of design-related requirements that an engine must satisfy for type certification and that Lycoming failed to provide an adequate instruction manual (CARs §§ 13.21, 13.100(a), 13.101, 13.104 & 13.110(a) (1964)); that Lycoming breached the duty of a production certificate

holder to ensure that “each part and each completed product . . . submitted for . . . approval [by the certificate holder] conforms to the approved design and is in a condition for safe operation” (14 C.F.R. § 21.165 (2004)); and that Lycoming breached the duty of a type certificate holder to report engine defects to the Administrator and to suggest design changes in order to make the O-320-D2C safer (14 C.F.R. §§ 21.3 & 21.99 (2004)).

## V. Discussion

Lycoming calls for summary judgment in its favor on various grounds: (1) Sikkelee fails to set forth federal regulations establishing a standard of care applicable to Lycoming’s allegedly tortious conduct; (2) assuming *arguendo* that the regulations cited by Sikkelee establish an applicable standard of care, Sikkelee adduces no evidence from which a reasonable jury could infer that Lycoming violated the regulations; and (3) assuming *arguendo* that Lycoming violated regulations that establish an applicable standard of care, Sikkelee proffers no evidence from which a reasonable jury could infer that the violation caused David’s crash. (Def. Supp. Br., Mar. 19, 2014, ECF No. 484 at 8 (hereinafter, “Def. Supp. Br.”)). In particular, Lycoming argues that (4) FAA type certification of the O-320-D2C (including its carburetor, the MA-4SPA) “conclusively establishes” that the engine met any design-related standard of care established by federal regulations. (Def. Supp. Br. at 9).

Sikkelee retorts with her own battery of arguments: (1) Judge Jones “held that [Sikkelee] presented genuine issues of material fact as to whether Lycoming breached federal standards of care,” and the law of the case doctrine dictates that the Court should adhere to this ruling (Pl.



Opp'n Br., Apr. 28, 2014, ECF No. 487 at 6, 8, 48 (hereinafter, "Pl. Opp'n Br."); (2) Lycoming has previously admitted that certain federal regulations apply in this litigation (Pl. Opp'n Br. at 7); and (3) by their terms, various federal regulations govern Lycoming's allegedly tortious conduct, namely 14 C.F.R. §§ 21.3, 21.99 & 21.165 (2004), and CAR §§ 13.21, 13.100, 13.101, 13.104 & 13.110 (1964). Sikkelee also argues that (4) Judge Jones's determination that federal law preempts the field of aviation safety and supplies the standard of care for this case dictates *per force* that federal regulations reach Lycoming's allegedly tortious conduct because "[t]here can be no pervasive regulation [of the field of aviation safety, thus preempting the field from state regulation,] if there are no regulations applicable to [Lycoming's] aircraft engine design." (Pl. Opp'n Br. at 43). Further, (5) Sikkelee extrapolates from the "premise" of *Abdullah* that, where no specific federal regulation governs Lycoming's conduct, the Court must recognize a federally supplied "overall concept" of appropriate behavior requiring reasonably careful conduct from aircraft designers, and corresponding liability for carelessness or recklessness that causes injury. (*Id.* at 45-46). Finally, (6) Sikkelee argues that the FAA's issuance of a type certificate for the O-320-D2C does not preclude a jury from finding that Lycoming's design fell short of the standards set by federal regulation.

As a mode of proceeding, the Court will first address briefly Sikkelee's arguments (1) and (2), holding that neither the law of the case doctrine nor the doctrine of judicial estoppel defeat Lycoming's motion for summary judgment. The Court will then skip to Sikkelee's arguments (4)-(6), rejecting each and explaining why Lycoming is therefore entitled to summary judgment in re-

lation to Sikkelee’s claims alleging violations of design-related regulations. After granting Lycoming summary judgment in relation to two additional regulatory bases for Sikkelee’s claims, the Court will then discuss briefly the single basis on which Sikkelee may proceed to trial.

**(a) The “law of the case” doctrine should not bar the Court from considering Lycoming’s Motion for Summary Judgment.**

Denying (in part) Lycoming’s previous motion for summary judgment, Judge Jones held that Sikkelee “has created a genuine issue of material fact for the jury with respect to whether Lycoming breached the applicable federal standards of care by negligently designing a defective product that proximately caused” David’s crash. *Sikkelee II*, 876 F. Supp. 2d at 495. Based on this ruling, Sikkelee now asserts that “[t]he law of the case mandates that material questions of fact abound as to Lycoming’s breach of the cited federal regulations.” (Pl. Opp’n Br. at 8).

The Court disagrees. Courts tend not to revisit issues already decided, a tendency named the “law of the case” doctrine. *See Williams v. Runyon*, 130 F.3d 568, 573 (3d Cir. 1997). The doctrine “does not limit the power of trial judges to reconsider their prior decisions,” but the Third Circuit “has identified two prudential considerations that limit a court’s authority to do so. First, the court must explain on the record the reasoning behind its decision to reconsider the prior ruling. Second, the court must take appropriate steps so that the parties are not prejudiced by reliance on the prior ruling.” *Id.*

The law of the case doctrine should not bar the Court from considering Lycoming's pending Motion for Summary Judgment. For one thing, the law of the case doctrine does not apply to Judge Jones's denial of Lycoming's previous summary judgment motion:

A denial of a motion for summary judgment cannot determine the law of a case because it is an interlocutory order subject to reconsideration at any time before final judgment in the case. It does not conclusively resolve any legal issue or find any fact . . . and has no claim- or issue-preclusive effect. Therefore, the law of the case doctrine does not apply to a denial of a summary judgment motion.

11 *Moore's Federal Practice*, § 56.121(1)(c) (Matthew Bender 3d ed.).

Moreover, assuming *arguendo* that the doctrine does apply, there is good reason to reconsider Judge Jones's holding. As Judge Jones noted at the time of his decision in 2012, "the parties' briefs focus primarily on the issue of whether or not Lycoming is a manufacturer" for purposes of Pennsylvania law, not on the issue of whether Lycoming breached federal standards, and Judge Jones reached his holding on the latter issue "after briefly engag[ing] in a largely independent analysis." *Sikkelee II*, 876 F. Supp. 2d at 493-94. This is not the foundation upon which highly reliable holdings are built. In addition, Sikkelee has presented no evidence showing prejudice to her resulting from reliance on Judge Jones's prior ruling and the Court perceives none. Thus, "prudential considerations" do not counsel against reconsideration of Judge Jones's holding.

- (b) **Lycoming’s previous statements should not bar it from asserting that it is not liable for violating various CARs and FARs.**

Without using the phrase (or citing any relevant caselaw), Sikkelee opposes Lycoming’s summary judgment motion on the ground that the doctrine of judicial estoppel applies. Because “Lycoming . . . [previously] admitted in this case that federal regulations apply” (Pl. Opp’n Br. at 7), Lycoming should now be barred from asserting that it cannot be found liable under various FARs and CARs, Sikkelee argues.

The Court disagrees. “Under the doctrine of judicial estoppel, a court can defend the integrity of the judicial process by barring a party from taking contradictory positions during the course of litigation.” *G-I Holdings, Inc. v. Reliance Ins. Co.*, 586 F.3d 247, 261 (3d Cir. 2009). “Though there is no rigid test for judicial estoppel, three factors inform a federal court’s decision whether to apply it: there must be (1) irreconcilably inconsistent positions; (2) adopted in bad faith; and (3) a showing that estoppel addresses the harm and no lesser sanction [is] sufficient.” *Id.* at 262 (internal quotation marks and alterations omitted).

Either ignoring or not recognizing the existence of these factors, Sikkelee does not argue all of them, focusing all but exclusively on the first. But her argument fails even here. Most of the statements Sikkelee attributes to Lycoming were actually mouthed by other defendants (since dismissed from this case) in support of a motion joined by Lycoming. (*See* Pl. Opp’n Br. at 28-29). But by joining other defendants in the motion (*see* Def. Supp. Br., Apr. 6, 2009, ECF No. 111 at 2), Lycoming did not adopt

the statements made in the other parties’s briefs—indeed it could not. *See* L.R. 7.8(a) (“No brief may incorporate by reference all or any portion of any other brief”). Thus, the statements that Sikkelee pulls from other parties’s briefs are not Lycoming’s admissions. Moreover, the statements that Sikkelee attributes to Lycoming are not irreconcilably inconsistent with Lycoming’s current position that it is not liable for violating various FARs and CARs. For these reasons, judicial estoppel doctrine should not bar Lycoming from summary judgment.

- (c) Federal preemption of the field of aviation safety does not necessarily imply that there must be a regulation “at hand” for Lycoming to have violated, and neither principles of field preemption nor *Abdullah* require this Court to fill in the gaps of the FARs and CARs with an “overall concept” of due care for engine designers; accordingly, Sikkelee’s arguments (4) and (5) are rejected.**

Although she does not stress the point at this stage of the game, it is worth remembering that Sikkelee’s original position in this litigation—a position she no doubt maintains today—was that *Abdullah* does not control design defect claims against aircraft engine manufacturers. Judge Jones conceded that he perceived the “wisdom” of this position—as does this Court<sup>12</sup>—but thought his hands were tied by “the state of the law as articulated by the

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<sup>12</sup> *See also Pease v. Lycoming Engines*, 2011 WL 6339833, at \*22 (M.D. Pa. Dec. 19, 2011) (Conner, C.J.) (“The undersigned concludes that *Abdullah* fails in its application to aviation products liability cases, and for the following reasons, it would be far more facile to employ the applicable state standards of care in aviation products liability cases.”).

Third Circuit,” and held that federal law must supply the standard of care in this case because state standards are preempted. *Sikkelee I*, 731 F. Supp. 2d at 438. Since Judge Jones’s decision was issued in 2010, Judge Harvey Bartle III has reasoned that the pronouncements of the Third Circuit that Judge Jones viewed as “controlling” in *Sikkelee I*, *id.*, were actually “dicta, not the holding of *Abdullah*,” *Lewis v. Lycoming*, 957 F. Supp. 2d 552, 558 (E.D. Pa. 2013), a view this Court also finds compelling.<sup>13</sup>

Nevertheless, the Court will not revisit Judge Jones’s determination to apply *Abdullah*, a determination reached after a careful effort to be faithful to the Third Circuit’s precedents in this jumbled area of the law.<sup>14</sup> (*Cf.* section V.(a) *supra* (deciding to revisit issue previously addressed by Judge Jones where briefs submitted to Judge Jones at that time focused primarily on a different issue and Judge Jones reached his holding based on largely independent analysis)). Therefore, *Abdullah* applies.

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<sup>13</sup> Judge Bartle would subject defendants like Lycoming to the standards of “state products liability, negligence, or breach of warranty law.” *Id.* at 599.

<sup>14</sup> Examining the relevant precedents, Judge Jones noted that the Third Circuit in *Elassaad v. Independence Air, Inc.*, 613 F.3d 119 (3d Cir. 2010), “reaffirmed that ‘*Abdullah*’s primary holding was that federal law preempted the entire field of aviation safety,” and “strongly, and perhaps explicitly, suggest[ed] that the manufacture of aircraft parts is . . . contained in this field and, thus, subject solely to federal standards of care.” *Sikkelee I*, 731 F. Supp. 2d at 437-38 (quoting *Elassaad*, 613 F.3d at 126). *See also Pease v. Lycoming Engines*, 2011 WL 6339833, at \*21-\*22 (M.D. Pa. Dec. 19, 2011) (Conner, C.J.) (collecting evidence for the proposition that “the Third Circuit’s definition of ‘air safety’ litigation encapsulates aviation product liability cases”).

Her prime position defeated, Sikkelee now offers second-best arguments purporting to show that the impact of *Abdullah* on her claims is limited. In particular, she argues that if her claim is subject to field preemption, then there must be a federal regulation “at hand” for Lycoming to have violated because “[t]here can be no pervasive regulation [of the field of aviation safety, thus preempting the field from state regulation,] if there are no regulations applicable to [Lycoming’s] aircraft engine design.” (Pl. Opp’n Br. at 43). Relatedly, Sikkelee argues that *Abdullah* implies the general principle that aircraft engine designers should not act carelessly or recklessly, even where no specific federal regulation governs their conduct, and that if the Court finds that “no general or specific regulation” reaches Lycoming’s allegedly tortious conduct, then “Lycoming is not immune . . . [-] there would simply be no preemption.” (*Id.* at 46).

The Court rejects both arguments. First, *Abdullah* does not compel the conclusion that the CARs and FARs imply a general standard of care for aircraft engine designers. At issue in *Abdullah* was plaintiffs’s suit for damages sustained while passengers on the severely turbulent American Airlines Flight 1473. 181 F.3d at 365. The plaintiffs brought suit “against defendant American Airlines, Inc., alleging negligence on the part of the pilot and flight crew in failing to take reasonable precautions to avoid the turbulent conditions known to them and in failing to give warnings reasonably calculated to permit plaintiffs to take steps to protect themselves.” *Id.* Judge Roth held that the plaintiffs could recover only if the conduct of the airline’s personnel fell below federal aviation safety standards.

In reaching this conclusion, Judge Roth analyzed the 1958 Federal Aviation Act (hereinafter, the “Aviation Act”) and federal regulations concerning aviation and “[found] implied federal preemption of the entire field of aviation safety.” 181 F.3d at 365. “[T]he [Aviation Act] and relevant federal regulations establish complete and thorough safety standards for interstate and international air transportation and . . . these standards are not subject to supplementation by, or variation among, jurisdictions.” *Id.* “[F]ederal law establishes the applicable standards of care in the field of air safety.” *Id.* at 367.

Examining federal law in order to identify the relevant standard of care, Judge Roth held that, in addition to any specific applicable regulations, “there is an overarching general standard of care under the [Aviation Act] and its regulations[,] . . . [arising] in particular from 14 C.F.R. § 91.13(a).” *Abdullah*, 181 F.3d at 365. Section 91.13(a) of the FARs provides with respect to “aircraft operations for the purpose of air navigation” that “[n]o person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.” 14 C.F.R. § 91.13(a) (2004). Judge Roth instructed that § 91.13(a) should form an aspect of the standard of care applicable to the *aircraft operations* at issue in *Abdullah* on remand. *Abdullah*, 181 F.3d at 365.

The case at bar, however, is not an aircraft “operations” case. *See* 14 C.F.R. § 1.1 (2004) (“*Aircraft* means a device that is used or intended to be used for flight in the air.” “*Operate*, with respect to aircraft, means use, cause to use or authorize to use aircraft, for the purpose . . . of air navigation including the piloting of aircraft, with or without the right of legal control (as owner, lessee, or otherwise).”) (emphasis in original). No party argues that



this is an “operations” case, and the Court sees no reasonable argument to be made, *see Ellassaad v. Independence Air, Inc.*, 613 F.3d 119, 129-30 (3d Cir. 2010) (analyzing application of § 91.13 at length); therefore, § 91.13(a) does not readily supply a general standard of care to fill gaps left by the relevant FARs and CARs. Accordingly, *Abdullah* does not compel the conclusion that aircraft designers are governed by a general standard of care.

That much is clear, but how the Court should adapt *Abdullah* to apply in the context of the case at bar is anything but. *See Pease v. Lycoming Engines*, 2011 WL 6339833, at \*23 (M.D. Pa. Dec. 19, 2011) (Conner, C.J.) (“[C]onstruing and applying FAA safety regulations as federal standards of care in [aircraft product liability cases] will be arduous and impractical”).<sup>15</sup> A major source of the difficulty is that Judge Roth’s identification of § 91.13(a) (which bears a definite resemblance to a common law negligence standard) as an aspect of the standard of care applicable to the *aircraft operations* at issue in *Abdullah* seems to have provided critical support for her decision to find the field of aviation safety preempted.<sup>16</sup> *Abdullah*, 181 F.3d at 365, 376. It is tempting, if for no reason

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<sup>15</sup> Deciding how federal regulations should translate into a standard of care has proven a bedeviling task in other contexts as well. *See, e.g., In re TMI*, 67 F.3d 1103, 1107 (3d Cir. 1995) (“Although it is clear that federal law governs the standard of care for tort claims arising from nuclear accidents, it is more difficult to discern the precise contours of that federal duty”).

<sup>16</sup> The existence of a “general standard” backstopping the “specific standards” set forth in the relevant federal regulations seems to have been an important aspect of *Abdullah*. Faulting the trial judge for the “narrow nature of the federal standard” applied below, *Abdullah*, 181 F.3d at 365, Judge Roth reasoned that, “[i]n a case . . . where there is no specific provision or regulation governing air safety,

other than an appreciation of symmetry, to conclude that because Judge Roth found the field of aviation safety federally preempted at least partly because she derived a general standard of care from the federal regulations applicable in *Abdullah*, that placing the facts of this case within the preempted field (as Judge Jones did) implies the existence of a general standard of care.

The Court is faced with an uncomfortable choice: (1) read an “overall concept” of careful conduct into the federal regulations, dissociated from any anchor in the text, or (2) apply only the standards specifically enunciated in the relevant federal regulations, leaving gaps un-

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§ 91.13(a) provides a general description of the standard required for the safe operation of aircraft,” *id.* at 371:

Thus, in determining the standards of care in an aviation negligence action, a court must refer not only to specific regulations but also to the overall concept that aircraft may not be operated in a careless or reckless manner. The applicable standard of care is not limited to a particular regulation of a specific area; it expands to encompass the issue of whether the overall operation or conduct in question was careless or reckless.

*Id.* And faulting the Tenth Circuit’s decision in *Cleveland v. Piper Aircraft Corp.*, 985 F.2d 1438 (10th Cir. 1993), *abrogated by U.S. Airways, Inc. v. O’Donnell*, 627 F.3d 1318 (10th Cir. 2010), for concluding that, because state common law duties do not conflict with duties imposed by the federal aviation safety regulations, federal law therefore does not preempt the common law, Judge Roth wrote that “there is no gap in the federal standards to fill with a state common law standard [because] [t]he § 91.13(a) prohibition of ‘careless or reckless’ operation of an aircraft occupies the apparent void.” *Abdullah*, 181 F.3d at 374. “[B]ecause the Administrator [of the FAA] has provided both general and specific standards, there is no need to look to state or territorial law to provide standards beyond those established by the Administrator.” *Id.*

filled by any overall concept of care, thus taking a sledgehammer to one of the pillars (load-bearing or ornamental?) that underlaid Judge Roth's finding of preemption in *Abdullah*.<sup>17</sup>

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<sup>17</sup> A third option that would normally be available—to fill the gaps with state common law not inconsistent with any specific federal regulation—is unavailable as a consequence of Judge Jones's decision that this case is within the field of aviation safety governed by *Abdullah*: “If Congress has preempted a field—whether it be expressly or by implication—state laws attempting to regulate within that field will be invalidated no matter how well they comport with substantive federal policies.” *Abdullah*, 181 F.3d at 374 (internal quotation marks omitted). See also *Arizona v. United States*, 132 S. Ct. 2492, 2502 (2012) (“Field preemption reflects a congressional decision to foreclose any state regulation in the area, even if it is parallel to federal standards.”).

A fourth option is Judge Bartle's approach—to hold that aircraft design defect cases are not within the field governed by *Abdullah*—but Judge Jones's previous ruling likewise precludes taking this option. See also *Martin v. Midwest Express Holdings, Inc.*, 555 F.3d 806, 811 (9th Cir. 2009) (“[W]hen the agency issues ‘pervasive regulations’ in an area, like passenger warnings, the FAA preempts all state law claims in that area. In areas without pervasive regulations or other grounds for preemption, the state standard of care remains applicable.”).

There may be yet a fifth option, though it seems to have been eliminated by the Third Circuit's decision in *In re TMI*, 67 F.3d 1103 (3d Cir. 1995), a case that set the groundwork for the Circuit Court's approach in *Abdullah*, 181 F.3d at 367. Four years prior to the 1995 *TMI* decision, Judge Scirica concurred in an earlier Judge Mansmann opinion in the same case, 940 F.2d 832 (3d Cir. 1991), but doubted Judge Mansmann's holding that, because the federal government occupied the field of nuclear safety, “plaintiffs' rights [in nuclear safety torts actions] will necessarily be determined, in part, by reference to federal law, namely the federal statutes and regulations governing the safety and operation of nuclear facilities.” *TMI*, 940 F.2d at 860. Judge Scirica wrote,

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[I]t is not clear to me that Congress has precluded state law tort suits predicated on standards of care that do not conform to federal regulation. As the majority notes, in *Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission*, 461 U.S. 190, 103 S.Ct. 1713, 75 L.Ed. 752 (1983), the Court held that the Atomic Energy Act pre-empts all state regulation of nuclear safety. But in *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 104 S.Ct. 615, 78 L.Ed.2d 443 (1984), the Court considered the holding of *Pacific Gas* in the context of private tort law. In *Silkwood*, the Court held that Congress did not intend to pre-empt punitive damages awards under state tort law. The Court relied on the legislative history of the Price-Anderson Act, which indicated that Congress intended to retain all state tort law remedies. The Court noted that “Congress assumed that traditional principles of state tort law would apply with full force unless they were expressly supplanted,” and that the defendant has the burden of demonstrating pre-emption. *Id.* at 255, 104 S.Ct. at 625. It also indicated that a state may impose strict liability for nuclear accidents. *Id.* at 254, 256, 104 S.Ct. at 625. See also *Goodyear Atomic Corp. v. Miller*, 486 U.S. 174, 186, 108 S.Ct. 1704, 1712-13, 100 L.Ed. 2d 158 (1988) (Characterizing *Silkwood* as finding that “Congress was willing to accept regulatory consequences of application of state tort law to radiation hazards even though direct state regulation of safety aspects of nuclear energy was pre-empted.”).

If state tort law may hold a nuclear plant operator strictly liable, or establish some other standard of care that does not conform to federal regulation, the federal law quotient in public liability actions would be decreased. As noted in the majority opinion, notwithstanding *Silkwood*, at least two district courts have found that the Price-Anderson Act pre-empts state tort suits that do not adopt federal regulations as the standard of care. See *Hennessey v. Commonwealth Edison Co.*, 764 F. Supp. 495 (N.D. Ill. 1991); *O’Conner v. Commonwealth Edison Co.*, 748 F. Supp. 672 (C.D. Ill. 1990). In *Hennessey*, however, the court left open the issue of whether state law may impose strict liability for nuclear incidents.

Unlike the majority, I would not decide these issues here.

Sikkelee would have the Court pick option (1), but the Court thinks option (2) is the better choice. By what principle could the Court choose option (1)? To do so would undermine an unambiguously crafted—and therefore, the Court presumes, deliberate—regulatory scheme. The relevant regulations prohibit careless or reckless *aircraft operation* generally. Makers of aircraft engines and components, in contrast, are subject only to specific regulations devised to ensure engine safety; Sikkelee points to no regulation imposing a generally applicable standard of care functioning as a catchall; once the engine or component-maker has complied with the specific regulations, he has met any standard of care the federal regulations can be said to constitute. Moreover, since this is an area in which this Court has no “authority to formulate federal common law . . . absent some congressional authorization to formulate substantive rules of decision,” *Texas Indus., Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 640-41 (1981), and “neither . . . *Abdullah*, nor any language in the FAA contemplates such [rules],” *Martin v. Midwest Express Airlines, Inc.*, 555 F.3d 806, 811 (9th Cir. 2009) (“The [Aviation Act] itself makes no mention of federal courts developing a federal common law standard of care for airplane personal injury actions . . .”), the Court does not view the creation of federal common law as an option. Ultimately, Sikkelee’s argument for a general standard of care represents a mere policy disagreement with the regulations as written, and for the Court to follow Sikkelee’s approach would be the functional equivalent of filling in the gaps left by the FARs and CARs with state common

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*TMI*, 940 F.2d at 870 (Scirica, J., concurring). Four years later, however, Judge Scirica held that Judge Mansmann’s ruling “controls, and federal law determines the standard of care and preempts state tort law” in the field of nuclear safety. *TMI*, 67 F.3d at 1107.

law, which is anathema to the very notion that the field is preempted. The Court will not travel this road.

Of course, option (2) is not without its drawbacks, which have been foreshadowed *supra*. Not recognizing a general prohibition on careless or reckless conduct leaves gaps in the regulatory scheme governing makers of aircraft engines and components. These gaps are problematic in the sense that they give one pause before concluding that the case at bar is within the field of preemption identified in *Abdullah*. See *Abdullah*, 181 F.3d at 367 (“[I]mplied federal preemption may be found where federal regulation of a field is pervasive . . . or where state regulation of the field would interfere with Congressional objectives.”) (internal citations omitted).

Gaps are, however, not terribly problematic once it has been determined—and it has been, by Judge Jones—that this case is within a preempted field, and this is so even if Sikkelee is left remediless because she cannot identify any relevant federal regulation that Lycoming has violated.

In other words, Sikkelee is incorrect when she suggests that “[t]here can be no pervasive regulation [of the field of aviation safety, thus preempting the field from state regulation,] if there are no regulations applicable to [Lycoming’s] aircraft engine design.” (Pl. Opp’n Br. at 43). So long as its intent is clearly expressed, Congress’s decision to leave an area *unregulated* by both the federal and state governments preempts the field as effectively as its decision to have federal law regulate so comprehensively that state law supplementation is undesirable. See *Puerto Rico Dept. of Consumer Affairs v. Isla Petroleum Corp.*,

485 U.S. 495, 503 (1988). Moreover, where Congress determines that common law tort claims should play no role in a regulatory scheme, preemption may leave an injured person remediless. *See, e.g., Kurns v. R.R. Friction Prods. Corp.*, 132 S. Ct. 1261 (2012) (Locomotive Inspection Act preempted defective design/warning claims of railroad locomotive repairman exposed to asbestos, leaving repairman remediless).<sup>18</sup> Stated conversely, the absence of federal regulation that reaches Lycoming’s allegedly tortious conduct does not necessarily imply that “there [is] simply . . . no preemption.”<sup>19</sup>

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<sup>18</sup> This result obtained even though relevant federal regulations did not address hazards arising from locomotive repair. Indeed, the agency to which Congress delegated regulatory authority had never regulated locomotive repair and disclaimed the power to do so. *Kurns*, 132 S. Ct. at 1274 (Sotomayor, J., concurring in part and dissenting in part). Despite the consequent regulatory gap, the Supreme Court’s field preemption holding “[left] petitioners without a remedy for what they allege was fatal exposure to asbestos in repair facilities.” *Id.* at 1275.

<sup>19</sup> Of course, *Abdullah* held neither that Congress desired to leave the field of aviation safety unregulated, nor that Congress envisioned no regulatory role for state common law remedies to play. As the Third Circuit has clarified,

We did not conclude in *Abdullah* that the passengers’ common law negligence claims themselves were preempted; instead, we determined only that the standard of care used in adjudicating those claims was preempted. Local law still governed the other negligence elements (breach, causation, and damages), as well as the choice and availability of remedies.

*Elassaad*, 613 F.3d at 125. The Court mentions the extreme case of Congress leaving an area totally unregulated simply to illustrate that, contrary to Sikkelee’s contention, the federal government’s pervasive regulation of the field of aviation safety does not imply that there must there be a federal regulation “at hand” for Lycoming to have violated.

Thus, in accordance with Judge Jones determination that *Abdullah* controls and Sikkelee's failure to provide persuasive reasons for undergirding the relevant specific federal regulations with a general standard of care, the Court will choose option (2) *supra*. The Court will measure Lycoming's allegedly tortious conduct against the specific federal regulations that Sikkelee asserts are applicable; if there is no genuine issue as to whether Lycoming violated the specific regulations, then summary judgment in Lycoming's favor is warranted.

**(d) Type certification of the O-320-D2C entitles Lycoming to summary judgment on the design-related regulatory grounds asserted by Sikkelee.**

Lycoming argues that type certification of the O-320-D2C renders a number of Sikkelee's claims—namely those alleging failure to comply with regulations governing the design of aircraft engines—a dead letter:

The FAA alone establishes the regulations governing the design requirements for aircraft engines, and the FAA alone, through the type certification process, decides whether the standards of care it has created by those regulations have been met. . . . [T]he question of whether any standards in those regulations were met cannot exist separately from the issuance of the type certificate. Under field preemption, the standards can only be what the FAA defines them to be, and the FAA alone decides if they have been met.

(Def. Supp. Br. at 34).



Sikkelee disagrees, arguing that Lycoming's position is contrary to the United States Supreme Court's decision in *United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797 (1984), and contrary to Chief Judge Conner's decision in *Pease*, 2011 WL 6339833, at \*13-\*14 (M.D. Pa. Dec. 19, 2011).

To evaluate the significance of the O-320-D2C's type certificate for Sikkelee's claims, the Court must examine the regulatory basis for Sikkelee's assertion that Lycoming breached "federal standards related to design and continued airworthiness." (Pl. Opp'n Br. at 30). Sikkelee cites to four regulations that she supposes comprise a federal standard of care for aircraft engine design: CAR § 13.100, CAR § 13.101, CAR § 13.104, and CAR § 13.110(a) (1964). Each of these provisions is taken from the CARs's Part 13, which says of the "[a]pplicability of this part" that it "establishes standards with which compliance shall be demonstrated for the issuance of and changes to type certificates for engines used on aircraft." CAR § 13.0 (1964). Part 13 further provides that

[a]n engine shall be eligible for type certification under the provisions of this part if it complies with the airworthiness provisions hereinafter established or if the Administrator<sup>20</sup> finds that the provision or provisions not complied with are compensated for by factors which provide an equivalent level of safety: *Provided*, That the Administrator finds no feature or characteristic of the engine which renders it unsafe for use on aircraft.

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<sup>20</sup> Defined as the then-existing Administrator of Civil Aeronautics.

CAR § 13.10. At CAR § 13.13(a), it is further provided, in relevant part, that “[a]n applicant shall be issued a type certificate when he demonstrates the eligibility of the engine by complying with the requirements of this part.”

An applicant for type certification “demonstrates the eligibility” of his engine by “submit[ting] to the Administrator . . . descriptive data, test reports, and computations.” CAR § 13.14(a). The descriptive data is

known as the type design and shall consist of such drawings and specifications as are necessary to disclose the configuration of the engine and all the design features covered in the requirements of this part, such information on dimensions, materials, and processes as is necessary to define the structural strength of the engine, and such other data as are necessary to permit by comparison the determination of the airworthiness of subsequent engines of the same type.

CAR § 13.14(b).

Finally, under the heading of “[d]esign and [c]onstruction,” there are the provisions that Sikkelee asserts Lycoming violated. Part 13 provides that reciprocating engines (like the O-320-D2C) should, as a general matter, “not incorporate design features or details which experience has shown to be hazardous or unreliable.” CAR § 13.100(a). The sections that follow, CARS §§ 13.101-13.115 (hereinafter, along with CAR § 13.100(a), the “design and construction regulations”), set forth specific standards for design devised by regulators to ensure safety when an engine is “installed, operated, . . . maintained in accordance with the instruction manual . . . and . . . fitted with an appropriate propeller.” CAR § 13.100(b).

Sikkelee asserts that there is a genuine issue of material fact concerning whether Lycoming violated three of these:

CAR § 13.101—The suitability and durability of all materials used in the engine shall be established on a basis of experience or tests. All materials used in the engine shall conform to approved specifications which will insure their having the strength and other properties assumed in the design data.

CAR § 13.104—All parts of the engine shall be designed and constructed to minimize the development of an unsafe condition of the engine between overhaul periods.

CAR § 13.110(a)—The fuel system of the engine shall be designed and constructed to supply an appropriate mixture of fuel to the cylinders throughout the complete operating range of the engine under all flight and atmospheric conditions.

In tension with Sikkelee's assertion that Lycoming has violated these provisions, the FAA's issuance of a type certificate for the O-320-D2C in 1966 denotes the Administrator's finding that the engine met all applicable requirements. *See* CAR § 13.13(a) ("An applicant shall be issued a type certificate when he demonstrates the eligibility of the engine by complying with the requirements of this part."). Lycoming argues that the FAA's determination is conclusive.

The Court holds that Lycoming is entitled to summary judgment on Sikkelee's claims asserting violations of CAR §§ 13.100(a), 13.101, 13.104, and 13.110. As set forth

*supra*, each of the cited regulations establishes a requirement that applicants must satisfy *in order to obtain a type certificate*, and it is the Administrator alone who decides whether a certificate should be issued. To hold as Sikkelee proposes, the Court would be required to take two questionable steps away from the apparent regulatory scheme. First, the design and construction regulations would have to be read as freestanding mandates possessing a meaning independent of that given them by the Administrator’s application, not as mere prerequisites for type certification, an interpretation without apparent basis in the regulation. *Cf. Martin*, 555 F.3d at 814 (Bea, J., concurring) (“[I]n the field of aircraft design regulation, the FAA directs only the conditions under which the government may grant an aircraft design a ‘certificate’ that permits production; the FAA does not prescribe general standards the manufacturer must follow to exercise reasonable care in designing a safe aircraft.”). Second, the Administrator would be dethroned as the arbiter of whether the requirements set forth in the design and construction regulations have been met. How else—after the Administrator’s decision to type certify the O-320-D2C in 1966—could the Court allow a jury to reconsider Lycoming’s compliance with the design and construction regulations? The Court concludes that the natural interpretation of the regulatory scheme commands that, under the circumstances, Sikkelee is precluded from proving that Lycoming violated CAR §§ 13.100(a), 13.101, 13.104, and 13.110 as a matter of law.<sup>21</sup>

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<sup>21</sup> In *Pease*, Chief Judge Conner concluded that “[t]here is simply no textual support in either the *Abdullah* decision or the Aviation Act that Congress intended the FAA to act as the sole arbiter of whether manufacturers have complied with its own regulations.” This Court

*Varig Airlines* is not to the contrary. Even Sikkelee does not argue that the holding of the case—*i.e.*, that tort

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disagrees, at least with respect to the design and construction regulations.

The issue is complicated. In the Aviation Act, Congress gave the Administrator the “duty to promote safety of flight of civil aircraft in air commerce by prescribing and revising from time to time . . . [s]uch minimum standards governing the design, materials, workmanship, construction, and performance of . . . aircraft engines . . . as may be required in the interest of safety.” 49 U.S.C. § 1421 (1964). Here, the language suggests that the minimum standards are to be prescribed by the Administrator, but that (at least theoretically) anyone might evaluate compliance with them. At 49 U.S.C. § 1423(a) (1964), however, the “Administrator is empowered to issue type certificates for . . . aircraft engines,” and it is commanded that “he shall issue a type certificate” once he finds—after “investigation[s],” “hearings,” and “tests” for his consideration—“that such . . . aircraft engine . . . is of proper design, material, specification, construction, and performance for safe operation, and meets the minimum standards, rules, and regulations prescribed by the Administrator.” Congress’s creation of this apparatus suggests an intention to give the Administrator sole responsibility for not only prescribing minimum standards, but also for interpreting and applying them in the process of deciding whether an engine is sufficiently safe for the use of pilots and passengers.

As discussed *supra*, the regulations promulgated by the Administrator in accordance with Congress’s mandates show that he viewed “minimum standards governing design” merely as a framework for determining an applicant’s entitlement to a type certificate, *see* CAR § 13.0 (“This part establishes standards with which compliance shall be demonstrated for the issuance of and changes to type certificates for engines used on aircraft.”), and viewed himself as the arbiter of compliance with the standards. The Court should defer to the Administrator’s interpretation. *See Chevron, U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 843-45 (1984). Moreover, as discussed *infra*, the design and construction regulations are sufficiently vague that, unless the Administrator is given sole responsibility for their interpretation and application, it is difficult to see how Congress’s intention that “the Administrator . . . exercise sole discretion in regulating air safety,” *Abdullah*, 181 F.3d at 369, can be accomplished.

claims against the FAA for alleged negligence in certifying aircraft for use in commercial aviation are barred by the discretionary function exception of the Federal Tort Claims Act—controls here. Rather, Sikkelee posits that Chief Justice Burger’s description of the FAA’s role in type certification mandates that a jury should be permitted to revisit Lycoming’s compliance with the design and construction regulations. (*See* Pl. Opp’n Br. at 44).

In *Varig Airlines*, Chief Justice Burger explained that the FAA had “implement[ed] [a] ‘spot-check’ system of compliance review” for determining whether an applicant meets the type certification prerequisites:

The FAA certification process is founded upon a relatively simple notion: the duty to ensure that an aircraft conforms to FAA safety regulations lies with the manufacturer and operator, while the FAA retains the responsibility for policing compliance. Thus, the manufacturer is required to develop the plans and specifications and perform the inspections and tests necessary to establish that an aircraft design comports with the applicable regulations; the FAA then reviews the data for conformity purposes by conducting a “spot check” of the manufacturer’s work.

467 U.S. at 816-17, 819. In Sikkelee’s view, the FAA’s approach to determining compliance with the design and construction regulations is too hands-off and would benefit from a jury’s assistance. Therefore, argues Sikkelee, a jury’s reconsideration of Lycoming’s compliance with the regulations must be permitted.

Sikkelee’s argument is lent some credence by Chief Judge Conner’s acceptance of its essentials in *Pease*,

where the Chief Judge wrote that jury reconsideration of a manufacturer's compliance with the design and construction regulations "pragmatically recognizes the limitations of FAA certification." 2011 WL 6339833, at \*14. "Moreover," in the Chief Judge's view,

there is a salutary effect of opening the courthouse door: "An inquiry . . . into whether the manufacturer in fact complied with the regulations . . . would assist the FAA in policing a manufacturer's compliance rather than hampering the agency in this regard." [*Elsworth v. Beech Aircraft Corp.*, 691 P.2d 630, 636 (Cal. 1984)]. In the case *sub judice*, the [plaintiffs's] products liability claims regarding the airworthiness of [an] engine serve the public interest of ensuring that [the defendant-manufacturer] complied with all applicable FAA regulations. The [plaintiffs's] claims will not disrupt the "uniform system of regulation" desired by Congress because the FAA still has sole authority to promulgate regulations. *See Abdullah*, 181 F.3d at 368.

*Pease*, 2011 WL 6339833, at \*14.

To this Court, the Chief Judge's reasoning is incomplete. A jury trial will have the "salutary effect" of "ensuring . . . compli[ance] with all applicable FAA regulations" only if one makes the assumption that a jury will interpret and apply the FAA regulations as would the Administrator himself. But there is no reason to think this assumption will hold in reality. The jury might also interpret and apply the regulations in a more demanding fashion than

the Administrator, in which case a trial will have the *un-salutary* effect of invading the federally preempted field of aviation safety.

In this Court's view, that the jury's interpretation and application of the CARs will vary from the Administrator's is more than likely. As Chief Judge Conner himself wrote in *Pease*, "The applicable FAA regulations are acutely technical and often incurably vague." 2011 WL 6339833, at \*23. Indeed, when the regulations provide that an "engine shall not incorporate design features or details which experience has shown to be hazardous or unreliable," CAR § 13.100(a), how much experience is contemplated? What are the relevant hazards? If the "suitability and durability of all materials used in the engine shall be established on the basis of experience or tests," CAR § 13.101, how much experience or testing is required? If "[a]ll parts of the engine shall be designed and constructed to minimize the development of an unsafe condition of the engine between overhaul periods," CAR § 13.104, how small should the probability of the development of an unsafe condition be? If the "fuel system of the engine shall be designed and constructed to supply an appropriate mixture of fuel to the cylinders throughout the complete operating range of the engine under all flight and atmospheric conditions," CAR § 13.110(a), does this contemplate a negligence or strict standard of liability or, more likely, is it merely a way of expressing that the system should prove its fitness through the "[i]nspections and tests . . . found necessary by the Administrator," CAR § 13.15? What should be made of CAR 13.10, which provides that, even if the engine does not satisfy the design and construction regulations, the engine may still be considered safe when the "provisions not complied with are



compensated for by factors which provide an equivalent level of safety”?

Faced with these imponderables, the parties, the Court and the jury will likely resort to more familiar negligence standards, a problematic outcome in this federally preempted field. In this regard, Judge Scirica’s decision in *In re TMI* is instructive. 67 F.3d 1103 (3d Cir. 1995). In *TMI*, plaintiffs sought to recover in tort for injuries allegedly caused by the Three Mile Island nuclear meltdown. As in *Abdullah*, the Third Circuit held that, in light of federal preemption of the field of nuclear safety, “federal law determines the standard of care.” *Id.* at 1107. The Third Circuit then endeavored to “discern the precise contours of that federal duty” and rejected plaintiffs’s attempt to fashion a standard of care out of a regulation requiring applicants for “a permit to construct a nuclear power reactor[] [to] identify the design objectives, and the means to be employed, for keeping levels of radioactive material in effluents to unrestricted areas as low as is reasonably achievable.”<sup>22</sup> *Id.* at 1107, 1109 (quoting 10 C.F.R. § 50.34a(a)). Agreeing with the trial judge that the “as low as is reasonably achievable” requirement—deemed the “ALARA” standard—resulted “essentially, in a negligence standard,” Judge Scirica reasoned that “[a]dopting ALARA as part of the standard of care would put juries in charge of deciding the permissible levels of radiation

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<sup>22</sup> The regulations defined “as low as reasonably achievable” to mean “as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety and other societal and socio-economic considerations, and in relation to the utilization of atomic energy in the public interest.” *TMI*, 67 F.3d at 1109 (quoting 10 C.F.R. § 50.34a(a)).

exposure and, more generally, the adequacy of safety procedures at nuclear plants—issues that have explicitly been reserved to the federal government in general and the [Nuclear Regulatory Commission] specifically.” *TMI*, 67 F.3d at 1115. He continued,

Adoption of a standard as vague as ALARA would give no real guidance to operators and would allow juries to fix the standard case by case and plant by plant. An operator acting in the utmost good faith and diligence could still find itself liable for failing to meet such an elusive and undeterminable standard. Our holding protects the public and provides owners and operators of nuclear power plants with a definitive standard by which their conduct will be measured.

*Id.*

Jury interpretation and application of the design and construction standards in the case at bar will poke at the same hornets’s nest identified by Judge Scirica. No less than if jurors were permitted to subject manufacturers to state common law duties, jury interpretation and application of the design and construction regulations would put jurors in charge of deciding permissible safety levels and engine designs—issues left to the Administrator. Jurors would fix the standard case by case and engine by engine, resulting in an elusive and undeterminable standard, as opposed to the “one, consistent means of regulating aviation safety” that Congress intended. *Abdullah*, 181 F.3d at 372.

Therefore, the Court cannot conclude that the supposed inadequacies<sup>23</sup> in the type certification process imply that the jury should be employed to “ensur[e] that Lycoming complied with all applicable FAA regulations.” *Pease*, 2011 WL 6339833, at \*14. Rather than ensure such compliance, jury reconsideration of the design and construction requirements (in this case and others) promises to “disrupt the ‘uniform system of regulation’ desired by Congress” and achieved by putting responsibility for type certification with the Administrator. *Id.*

Accordingly, this Court holds that the Administrator’s issuance of a type certificate for the O-320-D2C is conclusive of the engine’s compliance with the design and construction regulations. Lycoming’s motion for summary judgment on Sikkelee’s claims predicated on the violation of these regulations should be granted.

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<sup>23</sup> That it relies heavily on manufacturers is not an unambiguously flawed aspect of the type certification process. Granted, agents of the manufacturers are burdened by a conflict of interest that could make them prone to cut corners in the manufacturer’s favor. On the other hand, they likely “possess detailed knowledge of an aircraft[] [or engine’s] design based upon their day-to-day involvement in its development,” *Varig Airlines*, 467 U.S. at 807, knowledge that could make their work more accurate and efficient than that of FAA officials.

- (e) **Sikkelee’s claims may move forward on the theory that Lycoming violated its duty to report engine defects to the FAA.**

The Court holds that Lycoming is entitled to summary judgment in relation to additional FARs,<sup>24</sup> primarily because these FARs are meant to ensure that products *conform* to a type design found safe by the Administrator.<sup>25</sup> Sikkelee does not claim or proffer evidence showing that the replacement carburetor did not conform to its type design (*see* Pl. Opp’n Br. at 30 (“There is no claim here of defective manufacture.”)); she claims, rather, that the replacement carburetor conformed to a defective type design. Fundamentally, Sikkelee’s claims and her evidence in support of them are mismatched with these regulations.

Sikkelee asserts that Lycoming, as holder of a production certificate for the O-320-D2C, violated its responsibility to “[d]etermine that each part and completed product . . . submitted for airworthiness certification or approval conforms to the approved design and is in a condition for safe operation.” (Pl. Opp’n Br. at 32 (citing 14 C.F.R. § 21.165(b) (2004))).

The Court disagrees. Sikkelee proffers no evidence showing that the allegedly defective replacement carburetor did not conform to its “approved design”; she states

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<sup>24</sup> Sikkelee has asserted in previous filings that Lycoming violated additional FARs, but the Court assumes that, by not addressing these regulations in her brief, she has abandoned any claims based on them.

<sup>25</sup> Sikkelee’s briefs are as exacting as a shock and awe bombing campaign; as a result, the Court sometimes strains to understand how, in her view, a given regulation is relevant. The discussion *infra* represents the Court’s best effort to make sense of Sikkelee’s arguments.

the opposite multiple times. (Pl. Facts ¶¶ 10, 12, 13). She also does not proffer evidence showing that David’s crash was caused by Lycoming’s alleged failure to determine that the carburetor was in a “condition for safe operation.” For one thing, Lycoming’s § 21.165 duty applied (if at all) in 1978—*i.e.*, when the replacement carburetor was hot off the assembly line and initially submitted for airworthiness certification—not in 2004 when Kelly overhauled the replacement carburetor. Sikkelee directs the Court to no evidence showing that Lycoming breached its § 21.165 duty in 1978 or that such breach contributed to the 2005 accident. And there is another hurdle: assuming *arguendo* that Lycoming’s § 21.165 duties extended to Kelly’s submission of the replacement carburetor for airworthiness certification in 2004, Sikkelee directs the Court to no evidence showing that Kelly’s submission was not in a “condition for safe operation.”

According to the FAA, an “engine is in a condition for safe operation when the condition of the engine considering such factors such as wear, damage, and deterioration does not prevent the engine from demonstrating compliance with those requirements of [the airworthiness standards for type certificate issuance] that relate to the safe operation of the engine, and does not result in an unsafe condition to the aircraft.” (Pl. Opp’n Br. at 37 (citing FAA AC 33.4-1, *Instructions for Continued Airworthiness* (Aug. 27, 1999))). Sikkelee blames David’s crash on the O-320-D2C’s carburetor, specifically the MA-4SPA’s “throttle body to float bowl screws [coming] loose due to the faulty design of the lock tab washers as well as gasket

set.” (Pl. Facts ¶ 16).<sup>26</sup> But during its 2004 overhaul, Kelly installed “new throttle body to bowl screws and lock tab washers as an attachment system,” and the engine was adorned with an airworthiness approval tag. (Pl. Facts ¶¶ 12, 14).<sup>27</sup> Sikkelee proffers no evidence that “the condition of the engine considering factors such as wear, damage, and deterioration” was a factor in the crash; the “condition” of the engine allowed it to function with the same potential for failure as a new engine that conformed to Lycoming’s (allegedly defective) type design.<sup>28</sup> Since there is neither evidence showing that the replacement carburetor did not conform to the approved design, nor evidence showing that the replacement carburetor was not in a condition for safe operation, Lycoming is entitled to summary judgment to the extent Sikkelee’s claims are based on the violation of 14 C.F.R. § 21.165.

For much the same reason, Sikkelee fails in her assertion that Lycoming violated regulations requiring it to

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<sup>26</sup> (See also Pl. Opp’n Br. at 15 (“Plaintiff’s expert found that loose throttle body to bowl screws caused a loss of engine power, which was a causal factor in the crash at issue.”)).

<sup>27</sup> (See also Pl. Facts ¶ 13) (“Lycoming instructed carburetor overhaulers to follow Precision’s manual, which Kelly did, requiring new throttle body to bowl screws and lock tab washers as an attachment system. This defective method of throttle body to bowl attachment for the O-320 series engines was part of the O-320 engine type design, and approved by Lycoming.”)

<sup>28</sup> Presumably, then, the subject engine was also no less likely than a new engine to “demonstrat[e] compliance with those requirements of [the airworthiness standards for type certificate issuance] that relate to the safe operation of the engine . . . [and to not] result in an unsafe condition to the aircraft.” To the extent the subject engine would not have demonstrated such compliance or did compromise safety, the design—not the “condition”—of the engine was the problem.

provide “Instructions for Continued Airworthiness.” (Pl. Opp’n Br. at 40-43). First, the relevant CAR—CAR § 13.21 (1964)—actually calls for the type certificate applicant to prepare “an approved manual containing instructions for the installation, operation, servicing, maintenance, repair, and overhaul of the engine”; the requirement of “Instructions for Continued Airworthiness” came later, as did most of the supposed “standards” to which Sikkelee cites. CAR § 13.21 does not supply a “standard.” In any case, the concept of “airworthiness” simply denotes that an engine “conforms to its type certificate” and “is in a condition for safe operation.” (Pl. Opp’n Br. at 36 (citing FAA AC 33.4-1, *Instructions for Continued Airworthiness* (Aug. 27, 1999))). As discussed *supra*, Sikkelee does not claim that the supposedly defective carburetor failed to conform to Lycoming’s type design, and the part of the carburetor that allegedly caused David’s crash was in a condition for safe operation as defined by the FAA.

Moreover, Sikkelee does not really allege or proffer evidence in support of the claim that Lycoming did not comply with the applicable regulations requiring Instructions for Continued Airworthiness. Her position, rather, is that “Lycoming was required to use reasonable care in the design of its continued airworthiness instructions” and failed to do so. (Pl. Opp’n Br. at 41). But there is nothing in the regulations themselves that imposes a reasonable care standard on Lycoming in this regard; Sikkelee has overlaid that common law standard on top of Lycoming’s duty to comply with the federal regulations. Contrary to Sikkelee’s view that “[t]his is a negligence case where Lycoming is held to the standard of reasonable care in complying with the minimum federal regulations” (Pl. Opp’n Br. at 27), it is the minimum regulations

themselves that constitute the standard of care. Accordingly, Lycoming is entitled to summary judgment to the extent Sikkelee's claims are based on a violation of CAR § 13.21.

That leaves Sikkelee's claims based on Lycoming's alleged violation of 14 C.F.R. §§ 21.3 and 21.99 (2004). With respect to § 21.99(b), which provides that "the holder of [a] type certificate [who] finds through service experience that changes in type design will contribute to the safety of the product . . . may submit appropriate design changes for approval [of the Administrator]," Lycoming should be granted summary judgment. Section 21.99(b) is permissive; it does not create a duty. Sikkelee's argument to the contrary—that "[i]t is for a jury to determine whether Lycoming should have issued a design change pursuant to § 21.99(b) [because] [t]his is a negligence case where Lycoming is held to the standard of reasonable care in complying with the minimum federal regulations" (Pl. Opp'n Br. at 27)—has already been rejected by this Court. It is the minimum regulations themselves that constitute the standard of care, and since § 21.99(b) does not impose a standard of care on Lycoming, it cannot serve as the basis for Sikkelee's claims.

So Sikkelee is left with 14 C.F.R. § 21.3, the regulation to which she devotes by far the most attention in her brief (Pl. Opp'n Br. at 8-26), and (relatedly) § 21.99(a). Under § 21.3(a), holders of type certificates are required to "report any failure, malfunction, or defect in any product, part, process, or article" that they manufactured, if the holder determines that the item "has resulted in any of [various] occurrences," including "engine failure." 14 C.F.R. § 21.3(a). If the item left the holder's quality control system, then under § 21.3(b) the holder must report



any defect “that it determines could result in any of [various] occurrences,” again including “engine failure.” Sikkelee proffers a variety of evidence tending to show that Lycoming knew of a defect in the O-320-D2C (namely the MA-4SPA carburetor), but hid the defect from the FAA, arguably preventing the Administrator from ordering “design changes . . . to correct the unsafe condition” under § 21.99(a). (Pl. Opp’n Br. at 15-27; Pl. Facts ¶¶ 16-34).

Lycoming raises four defenses: (1) § 21.3 “does not apply to Lycoming because [Lycoming] did not manufacture the [replacement] carburetor, and the carburetor did not pass through Lycoming’s quality control system; (2) “[n]o evidence exists that Lycoming ever determined that a failure, defect, or malfunction in the subject carburetor could or did result in any of the enumerated safety risks”; (3) Lycoming’s reporting obligation was lifted by the previous reports of others (citing 14 C.F.R. § 21.3(d) (reporting is not necessary when the type certificate holder “knows” that the failure, malfunction, or defect was already reported to the FAA by another person)); and (4) “[n]o evidence exists in this case that [a report from Lycoming to the FAA] would have caused the FAA to issue an Airworthiness Directive<sup>29</sup> or otherwise mandate a design change.” (Def. Supp. Br. at 24-27).

The Court rejects Lycoming’s first argument because it mischaracterizes Sikkelee’s theory of liability. In the

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<sup>29</sup> Airworthiness Directives are issued by the FAA when the agency “finds that . . . [a]n unsafe condition exists in [a] product.” 14 C.F.R. § 39.5 (2004). The Directive “specif[ies] inspections you [*i.e.*, the operator of a given aviation product] must carry out, conditions and limitations you must comply with, and any actions you must take to resolve an unsafe condition.” 14 C.F.R. § 39.11 (2004).

Court's understanding, Sikkelee posits that had Lycoming complied with its § 21.3 reporting responsibilities in relation to the O-320-D2C engines (incorporating MA-4SPA carburetors) that *were* manufactured by Lycoming or *did* go through its quality control system, then a type design change would have been mandated by the Administrator, which would have changed the design of even those carburetors that were not manufactured by Lycoming. Since the identity of the manufacturer of the replacement carburetor is irrelevant under Sikkelee's theory of liability, Lycoming's defense on the basis that it did not manufacture the carburetor fails.

The Court rejects Lycoming's second arguments because Sikkelee adduces enough evidence to create a genuine issue of material fact as to whether Lycoming determined that a defect in the MA-4SPA created safety risks. It is possible that Lycoming never made such a determination, in which case its reporting responsibility was never triggered. But viewing the facts in Sikkelee's favor, it is also possible that Lycoming made the determination, but hid the relevant information from the FAA.

The Court rejects Lycoming's third argument for similar reasons. Sikkelee has adduced enough evidence to allow the jury to compare the "failure, malfunction, or defect" reports of others to the reports that Lycoming allegedly should have made and decide whether Lycoming's reporting duty was rendered unnecessary under § 21.3(d).

Finally, Lycoming is correct that Sikkelee's claim based on § 21.3 is a difficult one because Sikkelee must prove not only that the allegedly defective replacement carburetor caused David's crash, but also that the FAA would have responded to Lycoming's § 21.3 reports—had

Lycoming not breached its duty to make them—by ordering changes to the carburetor’s design or otherwise taking action that would have prevented David’s accident. In other words, Sikkelee must prove that the carburetor’s defective design caused the crash *and* that the carburetor’s design was defective on the date of David’s accident because Lycoming failed to make § 21.3 reports to the FAA. Proving the second element requires establishing that the FAA would have responded meaningfully to the reports.

The circumstances are similar to those in *Stanton v. Astra Pharm. Prod., Inc.*, 718 F.2d 553 (3d Cir. 1983), which involved a claim against the manufacturer of an anesthetic for negligence that caused the plaintiff severe injury. The alleged negligence was the manufacturer’s failure to submit certain adverse-reaction reports to the Food and Drug Administration. On proving causation, Judge Becker wrote that the manufacturer’s negligence “in failing to file the reports is not in itself sufficient to sustain the finding that [the manufacturer] was liable. The negligence must also have been a proximate cause of the [plaintiff’s] injury.” *Stanton*, 718 F.2d at 565. The plaintiff relied on four experts “to establish causation by introducing evidence tending to show that the information withheld from the FDA was of great importance and that the agency could not properly perform its regulatory and supervisory roles without access to the unreported data, and that the FDA would have taken action had it been aware of [the anesthetic’s] propensity to cause adverse reactions despite low dosage.” *Id.* at 568. Calling the issue “an extremely close one,” Judge Becker held that the such evidence was sufficient to support the jury’s verdict in the plaintiff’s favor. *Id.* at 568-69.

In the case at bar, Sikkelee’s evidence is similar to that of the plaintiff in *Stanton*. For example, one of Sikkelee’s experts opines that, “As a former FAA certification engineer, this reportable failure, malfunction, or defect information associated with the Lycoming O-320 series engines and the Model MA-4SPA carburetor, is something that I would want to have and use to determine if an Airworthiness Directive should be issued to correct the unairworthy carburetor . . . .” (Pl. Ex., ECF No. 234-5 at 24). Since Sikkelee may be able to make a case for causation on par with the plaintiff in *Stanton*, summary judgment should be denied as to her claims based on Lycoming’s violation of 14 C.F.R. § 21.3.

## VI. Conclusion

The watchword in *Abdullah* was Congressional intent. Yet having endeavored to reconcile *Abdullah* with the federal regulatory scheme that governs aviation design and manufacturing, this Court—either by way of its own error or that of the precedents it has followed—has reached holdings that it imagines have little to do with Congressional intent. Fortunately, whether this Court has been pushed to pier’s end by precedent or has stumbled to the edge itself, the Circuit Court has the authority to pull it back to safety. *See* 28 U.S.C. § 1291.

For the foregoing reasons, Lycoming’s motion for summary judgment is granted in part and denied in part.

BY THE COURT:

s/ Matthew W. Brann

Matthew W. Brann

United States District Judge

**APPENDIX I**

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

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No. 07-cv-886

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JILL SIKKELEE, Individually and as Personal Representative of the Estate of David Sikkelee, deceased,  
Plaintiff,

v.

PRECISION AIRMOTIVE CORPORATION, *et al.*,  
Defendants.

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Filed: August 13, 2010

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**MEMORANDUM & ORDER**

JONES, District Judge.

**THE BACKGROUND OF THIS ORDER IS AS FOLLOWS:**

**I. INTRODUCTION**

Before the Court in this wrongful death/survival action is Defendants Precision Airmotive LLC, Precision Airmotive Corporation, Burns International Services

Corporation, Former Fuel Systems, Inc.,<sup>1</sup> and Mark IV Industries, Inc.’s<sup>2</sup> (“Carburetor Defendants”) Motion for judgment on the pleadings and dismissal of Plaintiff Jill Sikkelee’s (“Plaintiff”) Complaint. (Doc. 107). For the reasons articulated in this Memorandum, the Court will grant in part and deny in part the Motion and grant Plaintiff leave to amend the Complaint.

## II. PROCEDURAL HISTORY

Plaintiff initiated this action on May 16, 2007 with the filing of a Complaint and asserted claims related to an aircraft accident that resulted in the death of her husband, David Sikkelee (“the decedent”). (Doc. 1). Individually and as personal representative of David Sikkelee’s estate, Plaintiff named as Defendants the Carburetor Defendants, AVCO Corporation and Textron, Inc. (collectively “Textron Defendants”), Kelly Aerospace, Inc., Kelly Aerospace Power Systems, Inc., and Consolidated Fuel Systems, Inc. (collectively, “Kelly Defendants”)<sup>3, 4</sup> In the 103-page Complaint, Plaintiff asserts five causes of action against the moving Carburetor Defendants—strict liability, negligence, breach of warranty, misrepresentation, and concert of action—related to the manufacture of a carburetor that Plaintiff alleges malfunctioned. On July

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<sup>1</sup> Former Fuel Systems, Inc. was terminated as a Defendant on April 15, 2010.

<sup>2</sup> Mark IV Industries, Inc. was terminated as a Defendant on April 15, 2010.

<sup>3</sup> The Kelly Defendants were terminated on July 13, 2010.

<sup>4</sup> Plaintiff also named the following Defendants who have since been terminated from the action: Precision Aerospace Corporation, Precision Aerospace Services LLC, Precision Aviation Products Corporation, Precision Products LLC, and Zenith Fuel Systems LLC.

25, 2007, Carburetor Defendants answered Plaintiff's Complaint. On March 13, 2008, all Defendants jointly moved to transfer this case to the United States District Court for the Western District of North Carolina, and we denied that motion. (Doc. 85).

The Carburetor Defendants filed the instant Motion for Judgment on the Pleadings ("the Motion") (Doc. 107) and a brief in support thereof (Doc. 108) on March 17, 2009. Plaintiff filed her brief in opposition to the Motion on April 28, 2009. (Doc. 116). Carburetor Defendants responded on May 12, 2009. (Doc. 119). The Textron Defendants filed a brief in support of, and joining in, the Motion on April 6, 2009 (Doc. 111), to which Plaintiff responded on May 6, 2009 (Doc. 117).<sup>5</sup> In May of 2009, the Court issued a stay of proceedings as to all parties involved because Defendant Mark IV Industries entered bankruptcy proceedings. (Doc. 121). Upon resolution of those proceedings, the stay was lifted and an amended scheduling order issued. (Doc. 125). Accordingly, this matter is ripe for disposition.

### III. STANDARD OF REVIEW

Federal Rule of Civil Procedure 12(c) provides that "after the pleadings are closed—but early enough not to delay trial—a party may move for judgment on the pleadings."<sup>6</sup> A "Rule 12(c) motion is little more than a relic of the common law and code era, and it only has utility when

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<sup>5</sup> The Kelly Defendants also joined the Motion; but, as they are no longer parties to the action, we will not consider their filings in support. (*See* Doc. 146 (approving partial settlement)).

<sup>6</sup> Defendants already filed an answer and, at the time the motion was filed the trial date was in the distant future. Thus, Defendants properly raised the Motion under 12(c).

all the material allegations of fact are admitted in the pleadings and only questions of law remain. Granting a Rule 12(c) motion results in a determination on the merits at an early stage in the litigation, and thus this court requires the movant to clearly establish that no material issue of fact remains to be resolved and that he is entitled to judgment as a matter of law.” *Inst. for Sci. Info., Inc. v. Gordon & Breach, Sci. Publishers, Inc.*, 931 F.2d 1002, 1005 (3d Cir. 1991) (citing *Jablonski*, 863 F.2d at 290-91, punctuation omitted). A motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c) is subject to the same standard as a motion to dismiss for failure to state a claim under Federal Rule of Civil Procedure 12(b)(6). See *Turbe v. Gov’t of Virgin Islands*, 938 F.2d 427, 428 (3d Cir. 1991).

Thus, courts “accept all factual allegations as true, construe the complaint in the light most favorable to the plaintiff, and determine whether, under any reasonable reading of the complaint, the plaintiff may be entitled to relief.” *Phillips v. County of Allegheny*, 515 F.3d 224, 231 (3d Cir. 2008) (quoting *Pinker v. Roche Holdings, Ltd.*, 292 F.3d 361, 374 n. 7 (3d Cir. 2002)). In resolving a motion to dismiss under 12(c), a court generally should consider only the allegations in the complaint, as well as “documents that are attached to or submitted with the complaint, . . . and any matters incorporated by reference or integral to the claim, items subject to judicial notice, matters of public record, orders, [and] items appearing in the record of the case.” *Buck v. Hampton Twp. Sch. Dist.*, 452 F.3d 256, 260 (3d Cir. 2006).

A motion under Rule 12(b)(6) or 12(c) tests the sufficiency of the complaint against the pleading requirements of Rule 8(a). Rule 8(a)(2) requires that a complaint contain



a short and plain statement of the claim showing that the pleader is entitled to relief, “in order to give the defendant fair notice of what the claim is and the grounds upon which it rests.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (quoting *Conley v. Gibson*, 355 U.S. 41, 47 (1957)). While a complaint attacked by a motion to dismiss need not contain detailed factual allegations, it must contain “sufficient factual matter, accepted as true, to ‘state claim to relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 129 S. Ct. 1937, 1949 (2009). To survive a motion to dismiss, a civil plaintiff must allege facts that “raise a right to relief above the speculative level. . . .” *Victaulic Co. v. Tieman*, 499 F.3d 227, 235 (3d Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). Accordingly, to satisfy the plausibility standard, the complaint must indicate that defendant’s liability is more than “a sheer possibility.” *Iqbal*, 129 S. Ct. at 1949. “Where a complaint pleads facts that are ‘merely consistent with’ a defendant’s liability, it ‘stops short of the line between possibility and plausibility of entitlement to relief.’” *Id.* (quoting *Twombly*, 550 U.S. at 557).

Under the two-pronged approach articulated in *Twombly* and later formalized in *Iqbal*, a district court must first identify all factual allegations that constitute nothing more than “legal conclusions” or “naked assertions.” *Twombly*, 550 U.S. at 555, 557. Such allegations are “not entitled to the assumption of truth” and must be disregarded for purposes of resolving a motion to dismiss. *Iqbal*, 129 S. Ct. at 1950. Next, the district court must identify “the ‘nub’ of the . . . complaint—the well-pleaded, nonconclusory factual allegation[s].” *Id.* Taking these allegations as true, the district judge must then determine whether the complaint states a plausible claim for relief. *See id.*

However, “a complaint may not be dismissed merely because it appears unlikely that the plaintiff can prove those facts or will ultimately prevail on the merits.” *Phillips*, 515 F.3d at 231 (citing *Twombly*, 127 S. Ct. at 1964-65, 1969 n.8). Rule 8 “does not impose a probability requirement at the pleading stage, but instead simply calls for enough facts to raise a reasonable expectation that discovery will reveal evidence of the necessary element.” *Id.* at 234.

#### **IV. FACTUAL BACKGROUND**

In accordance with the standard of review, we have derived the following background facts from the well-pleaded allegations of the Complaint, and construe them, and all reasonable inferences therefrom, in the light most favorable to Plaintiff as the non-moving party.

This action arises from an accident involving a 1976 Cessna aircraft, operated by the decedent David Sikkelee. On July 10, 2005, the decedent was piloting the subject aircraft when the aircraft lost power as a result of an engine fuel delivery system malfunction or defect shortly after takeoff. Because of the loss of power, the decedent lost control of the aircraft and crashed. The decedent died as a result of severe injuries and burns sustained from the accident.

The subject aircraft was overhauled in 2004 to restore it to a “factory new or as new condition with new or as new components.” At that time a carburetor was installed that was rebuilt or overhauled by the Kelly Defendants, who installed new or as new parts within said carburetor. The engine was tested and approved for a return to service. The Carburetor Defendants serviced, manufactured, or supplied the carburetor. The Textron Defendants were

the designer, manufacturer, seller, supplier, certifier, overhauler, repairer, maintainer, and product support servicer of the engine that was installed in the subject aircraft.

Plaintiff maintains that the Carburetor and Textron Defendants were aware of numerous problems and defects with the screws and locking mechanism that attaches the carburetor together. Plaintiff further maintains that these Defendants failed to meet industry standards by failing to warn of these problems or provide instructions to maintain their safety. Plaintiff advances that, beyond a mere failure to follow industry standard in that respect, Defendants further knowingly concealed such a defect. Plaintiff asserts myriad other allegations related to these Defendants' negligence. Thus, Plaintiff asserts the following claims against the Carburetor (Precision) Defendants and the Textron Defendants: Strict Liability (Counts I and IV); Breach of Warranties (Counts II and V); Negligence (Counts III and VI); Misrepresentation (Count X); and Concert of Action (Count XI).<sup>7</sup> Plaintiff seeks compensatory and punitive damages under the applicable Survival Act and Wrongful Death statute.

## V. DISCUSSION

### A. Preemption

#### 1. The Parties' Arguments

Defendants advance two central arguments to support their Motion for Judgment on the Pleadings. First and

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<sup>7</sup> Plaintiff also asserted the same or similar claims against the Kelly Defendants in Counts VII-IX and XII but, as previously mentioned, those Defendants are no longer a part of this action.

foremost, Defendants argue that Plaintiff's claims are preempted by federal law. Defendants maintain that because the Federal Aviation Act ("FAA") and other corresponding aviation-legislation create uniform and exclusive standards for the entire field of aviation safety and because federal regulation of aviation safety is pervasive, Congress intended to preempt the entire field. Defendants note that United States Court of Appeals for the Third Circuit found field-preemption in the entire field of aviation safety for those same reasons. *See Abdullah v. Am. Airlines, Inc.*, 181 F.3d 363 (3d Cir. 1999) (discussed *infra* ). Thus, Defendants maintain that Plaintiff's claims must consequently allege violations of federal standards of care and, therefore, her claims that assert state-law standards of care must necessarily be dismissed.

Plaintiff responds to Defendants' preemption arguments by maintaining that the Third Circuit's mandate in *Abdullah* is inapplicable to the matter *sub judice*. In support, Plaintiff argues that *Abdullah* does not apply to this general aviation case because, unlike the commercial aviation case at bar in *Abdullah*, there are no federal regulations that apply to the specific carburetor in question. Further, and somewhat in the alternative, Plaintiff questions the holding in *Abdullah* because it did not consider the General Aviation Revitalization Amendment ("GARA") and was decided before the September 11th Victim Compensation Fund of 2001 Amendment to the FAA that expressly preserved state tort-law standards. Plaintiff also disputes the validity of *Abdullah* by arguing that its preemption conclusion was essentially overruled by the Supreme Court's preemption decision in *Wyeth v. Levine*, 129 S. Ct. 1187 (2009). Finally, because there is no Supreme Court case law interpreting the FAA and field-preemption of general aviation, and because courts in

other Circuits disagreed with the Third Circuit's decision in general aviation cases, Plaintiff asserts that *Abdullah* is not controlling.

Candidly, we note that the decision that follows has not been easy to reach. Both parties advance compelling arguments in support of or in opposition to the Motion, and each interpretation finds support in this clearly underdeveloped body of law. Like the learned counsel for the parties, the Court has conducted exhaustive research and has considered all apparent interpretations and conclusions. We thus detail the controlling and instructive law that has formed our conclusion below.

## 2. Controlling Statutory and Case Law

The instant Motion implicates various legal issues we must resolve: the proper method to analyze whether a field is preempted where Congressional intent is unclear; the purpose and extent of federal regulation of the aviation industry; and the extent to which our analysis is controlled by *stare decisis*. As such, before commencing our analysis, we find it appropriate to review the various statutes and case-law, which date back over half of a century.

**The Federal Aviation Act of 1958:** In response to a “series of fatal air crashes between civil and military aircraft operating under separate flight rules,” *Abdullah v. Am. Airlines, Inc.*, 181 F.3d 363, 368 (3d Cir. 1999), Congress enacted the Federal Aviation Act of 1958 (“FAA”) “to establish a new Federal Agency with powers adequate to enable it to provide for the safety and efficient use of the navigable airspace by both civil and military operations.” H.R. Rep. No. 2360, 85th Cong., 2d Sess. Congress found that a “uniform and exclusive system of federal regulation” was necessary to achieve the air-safety objectives

of the FAA. *City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 639 (1973). Thus, “Congress intended to rest sole responsibility for supervising the aviation industry with the federal government.” *Abdullah*, 181 F.3d at 368. The FAA as originally enacted contained no clause preempting state regulation in the field of aviation, and contained the following savings clause that it still retains to this day: “Nothing contained in this chapter shall in any way abridge or alter the remedies now existing at common law or by statute, but the provisions of this chapter are in addition to such remedies.” 49 U.S.C. § 40120(c); 49 U.S.C. app. § 1506.

**The Airline Deregulation Act of 1978:** Twenty years later, Congress amended the FAA with the Airline Deregulation Act (“ADA”). In order to prevent states from frustrating the deregulation of the airline industry by extensively regulating on their own, the ADA prohibited the states from enacting “any law, rule, regulation, standard, or other provision . . . relating to rates, routes, or services of any air carrier having authority . . . to provide air transportation.” 49 U.S.C. § 41713; 49 U.S.C.A § 1305(a)(1).<sup>8</sup> Thus, unlike the FAA, the ADA expressly preempted state regulation, although only with respect to “rates, routes, or services” of an “air carrier.” The savings clause found in the FAA, however, remained intact.

**The General Aviation Revitalization Act of 1994:** Neither the FAA as originally enacted nor including the ADA amendment in 1994 specifically addressed products-liability actions. In response to declining sales of aircraft

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<sup>8</sup> This clause was revised in 1994 to read: “[A] State . . . may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of an air carrier.” 49 U.S.C. § 41713(b)(1).

and increasing products-liability actions, the general aviation industry began pushing for tort reform. Subsequently, Congress passed the General Aviation Revitalization Act of 1994 (“GARA”). Ultimately, balancing the interests of the general-aviation industry and consumer-rights advocates resulted in the imposition of an eighteen (18) year statute of repose on civil actions for death, personal injury, or property damage relating to general-aviation aircraft and parts. 49 U.S.C. app. § 410101. GARA retained the FAA’s original savings clause and provided that “A remedy under this part is in addition to any other remedies provided by law”, 49 U.S.C. § 40120, and the legislative history reflects that “[i]n cases where the statute of repose has not expired, state law will continue to govern fully, unfettered by Federal interference.” H.R. Rep. No. 103-525, 103d Cong., 2d Sess., pt. 2, at 6-7 (1994). Subsequent to the passage of GARA, some courts found that GARA’s legislative history demonstrated that Congress intended *not* to preempt the entire field of aviation safety, and some scholars observed that, until the commencement of the statute of repose, state products-liability standards control actions regarding the design or defects of general-aviation aircraft and component parts. *See, e.g.*, John D. McClune, *There is No Complete, Implied, or Field Federal Preemption of State Law Personal Injury/Wrongful Death Negligence or Product Liability Claims in General Aviation Cases*, 71 J. AIR L. & COM. 717 (Fall 2006) (“There is a clear distinction between enacting minimum federal regulations pertaining to general aviation aircraft and component design and manufacture and creating a body of federal common law foreclosing state rights.”); Timothy S. McAllister, *A “Tail” of Liability Reform: General Aviation Revitalization Act of 1994*, 23 TRANSP. L.J. 301 (1995).

Courts and commentators alike thus disagree with the implications of the enactment of GARA—even if Congress intended to preempt the entire aviation field with the FAA, it failed to expressly state that intention with the original passage of the FAA, nor did it do so twenty years later with the passage of the ADA, and it failed again to do so forty years later with the passage of GARA. As discussed below, some courts have held that Congress therefore did not intend to preempt the entire field of aviation, *see Cleveland v. Piper Aircraft Corp.*, 985 F.2d 1438 (10th Cir. 1993)<sup>9</sup>, while others, including the Third Circuit, have held that the comprehensive and pervasive nature of federal regulation evinces Congressional intent to impliedly preempt the entire field of aviation. *See Abdullah v. Am. Airlines, Inc.*, 181 F.3d 363 (3d Cir. 1999). This reference provides us with an appropriate segue to the material case law.

***Abdullah v. American Airlines:***<sup>10</sup> Before the Third Circuit in *Abdullah v. American Airlines* (“*Abdullah*”) was an action for damages for injuries sustained during an American Airlines flight. The plaintiffs alleged that defendants were negligent in failing to take precautions to avoid severely turbulent conditions or to warn the passengers of those conditions. A jury found for plaintiffs and awarded more than two million dollars in damages. Facing post-trial motions, the District Court of the Virgin Is-

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<sup>9</sup> *Cleveland*, a products-liability action related to aircraft design, was decided a year before GARA was passed. The Tenth Circuit noted that “the plain language of the Federal Aviation Act suggests that Congress intended that the Act have no general preemptive effect.” *Id.* at 1442.

<sup>10</sup> 181 F.3d 363 (3d Cir. 1999).



lands held that the FAA impliedly preempts state and territorial regulations, and thus plaintiffs should have recovered only for claims that asserted violations of federal standards. The District Court then certified to the Third Circuit the following question: Does federal law preempt the standards for air safety, but preserve State and Territorial damage remedies? The Third Circuit, based upon the following reasoning, answered each part of the certified question in the affirmative.

With respect to the first clause of the certified question, the Third Circuit found implied field-preemption of the “entire field” of aviation because the FAA and other regulations “establish complete and thorough safety standards for interstate and international air transportation that are not subject to supplementation by, or variation among, jurisdictions.” *Abdullah*, 181 F.3d at 367. In so holding, the Third Circuit noted that they chose to “depart from the precedent established by a number of cases which hold that federal law does not preempt any aspect of air safety.” *Id.* at 368 (citing *In re Air Crash Disaster at John F. Kennedy Int’l Airport*, 635 F.2d 67, 74-75 (2d Cir. 1980); *Trinidad v. American Airlines*, 932 F. Supp. 521 (S.D.N.Y. 1996); *In re Air Crash Disaster at Stapleton Int’l Airport*, 721 F. Supp. 1185, 1187 (D. Colo. 1988)). In support of this conclusion, the Court first ruled that, based upon the legislative history of the FAA, Congress intended to vest sole responsibility for aviation in the federal government.<sup>11</sup> The Court further advanced that “[t]o

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Congress found the creation of a single, uniform system of regulation vital to increasing air safety. [. . .] By enacting the FAA, Congress intended to rest sole responsibility for supervising the aviation industry with the federal government:

effectuate this broad authority to regulate air safety, the Administrator of the FAA has implemented a comprehensive system of rules and regulations, which promotes flight safety by regulating pilot certification, pilot pre-flight duties, pilot flight responsibilities, and flight rules.” *Abdullah*, 181 F.3d at 369. Thus, the Court concluded that “[b]ecause the legislative history of the FAA and its judicial interpretation indicate that Congress’s intent was to federally regulate aviation safety . . . *any* state or territorial standards of care relating to aviation safety are federally preempted.” *Id.* at 371 (emphasis in original).

The Court recognized that “[d]espite the legislative history and interpreting authority which have informed our decision, many courts have held that the field of aviation safety is not federally preempted.” *Id.* at 372. The Court nonetheless detailed, at length, why the rationale used by those courts was unpersuasive. First, the Court highlighted that other courts have employed the maxim

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“Aviation is unique among transportation industries in its relation to the federal government—it is the only one whose operations are conducted almost wholly within federal jurisdiction, and are subject to little or no regulation by States or local authorities. Thus, the federal government bears virtually complete responsibility for the promotion and supervision of this industry in the public interest.” S. Rep. No. 1811, 85th Cong., 2d Sess. 5 (1958). Similarly, the House Report accompanying the FAA indicates that one of the purposes of the Act is to give “the Administrator of the new Federal Aviation Agency . . . full responsibility and authority for the advancement and promulgation of civil aeronautics generally, including the promulgation and enforcement of safety regulations.” H.R. Rep. No. 2360. . . . “It is essential that one agency of government, and one agency alone, be responsible for issuing safety regulations if we are to have timely and effective guidelines for safety in aviation.”

*Abdullah*, 181 F.3d at 368-69.

*expressio unius est exclusio alterius*, (to express one is to exclude the other), to conclude that, because the ADA only expressly mandates the preemption of “rates, routes, and services” and does not overtly preempt other state tort law claims such as personal injury, the latter claims were never intended to be preempted by federal law. The Court averred that this maxim “serves only as an aid in discovering the legislative intent when that is not otherwise manifest”, *id.* at 373 (quoting *United States v. Barnes*, 222 U.S. 513, 519 (1912)), and that Congress’s clear intent to preempt the entire field of aviation in the enactment of the FAA should not be skewed by the enactment of a separate statute (the ADA) twenty years later. *See id.* at 372-73. Further, the Court rejected other courts’ conclusion that, because Congress directs the Administrator to prescribe “minimum standards” to promote aviation safety, state and territorial common-law could require duties beyond FAA regulations as long as they do not conflict with the federal law. Instead, the Court offered that “in a federally preempted area, the question whether state or territorial law conflicts with federal law is a pointless inquiry.” *Id.* at 374. Moreover, the Court held that the FAA’s savings clause preserves only remedies—it does not preserve state standards or causes of action even when interpreted with the FAA’s insurance clause.<sup>12</sup> Finally, the Court disagreed with those courts that found that states may regulate aviation safety pursuant to their traditional police powers, asserting that states may only invoke those powers in fields that are not federally preempted.

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<sup>12</sup> The insurance clause mandates that airlines have liability insurance “for bodily injury to, or death of, an individual . . . resulting from the operation or maintenance of the aircraft.” 49 U.S.C.A. § 41112(a).

Although the Court found that state and territorial standards of care in aviation safety are entirely preempted, the Court also found that the state and territorial remedies still exist for violations of federal standards. The Court affirmed that “it is evident in both the savings and the insurance clauses of the FAA that Congress found state damage remedies to be compatible with federal aviation safety standards”, *id.* at 375, even if state *standards* are not likewise compatible.

***Duvall v. Avco Corporation***:<sup>13</sup> We were called upon to interpret and apply the essential holding of *Abdullah* in *Duvall v. Avco Corporation*, 05-cv-1786, an action that involved a fatal aircraft accident. The plaintiff asserted claims sounding in wrongful death, negligence, and products liability and alleged that the accident was caused by malfunctions of the aircraft’s engine and fuel servo. Upon the filing of a motion to dismiss or for a more definite statement, we were presented with nearly the same arguments regarding preemption of claims as we are today. We originally found that the holding of *Abdullah* applied only to the *operation* of an aircraft, but not the *manufacturing* of aircraft parts. *DuVall v. AVCO Corporation*, 2006 U.S. Dist. LEXIS 6093, \*9 (M.D. Pa. January 30, 2006). However, upon consideration of the defendants’ motion for reconsideration, we were compelled to reluctantly agree with the defendants that we originally misconstrued the essential holding of *Abdullah*. 2006 U.S. Dist. LEXIS 31445 (M.D. Pa. May 19, 2006). In the May 19, 2006 Order, we noted that the Third Circuit did not limit its opinion in *Abdullah* to piloting or aircraft operation, and explicitly “rejected the approach adopted by other courts that found only certain aspects of aviation

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<sup>13</sup> 2006 U.S. Dist. LEXIS 31445 (M.D. Pa. May 19, 2006).

safety to be preempted. . . .” *Id.* at \*8. Thus, we interpreted *Abdullah* as evidencing the Third Circuit’s intent, primarily through its precise language, to hold that the *entire* field of aviation is preempted: including its application to the manufacturing of aircraft parts. Our sister courts in this Circuit have also declared that the Third Circuit intended to hold that the entire field of aviation safety is preempted by federal law. *See, e.g. Landis v. U.S. Airways, Inc.*, 2008 U.S. Dist. LEXIS 21300, \*12 (W.D. Pa. March 18, 2008).

***Wyeth v. Levine***:<sup>14</sup> The United States Supreme Court recently addressed a preemption claim in the field of products liability in *Wyeth v. Levine* (“*Wyeth*”). In *Wyeth*, the Supreme Court granted certiorari on a decision of the Vermont Supreme Court to determine whether the Food and Drug Administration’s drug labeling judgments preempted state law products liability claims. The Vermont Supreme Court had affirmed a jury verdict that awarded damages to the plaintiff on her state law claims. In affirming the decision of the Vermont Supreme Court, the Supreme Court articulated the “two cornerstones” of preemption jurisprudence:

First, “the purpose of Congress is the ultimate touchstone in every pre-emption case.” *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485, 116 S. Ct. 2240, 135 L.Ed. 2d 700 (1996). Second, “[i]n all pre-emption cases, and particularly in those in which Congress has ‘legislated . . . in a field which the States have traditionally occupied,’ . . . we ‘start with the assumption that the historic police powers of the States were not to be superseded by the Federal

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<sup>14</sup> 129 S. Ct. 1887 (2009).

Act unless that was the clear and manifest purpose of Congress.’” *Lohr*, 518 U.S. at 485.

*Id.* at 1194-95 (other internal citations omitted). Thus, with those cornerstones in mind and because Congressional intent was not explicit, the Court reviewed the legislative history of the FDA and ultimately ruled that Congress never intended to preempt state-law claims with respect to drug labeling requirements<sup>15</sup>, and thus the plaintiff could properly assert products liability claims.

***Elassaad v. Independence Air, Inc.***<sup>16</sup> The Third Circuit recently revisited their reasoning in *Abdullah* in *Elassaad v. Independence Air, Inc.* (“*Elassaad*”), and reaffirmed that “*Abdullah*’s primary holding was that federal law preempted the entire field of aviation safety.” 2010 U.S. App. LEXIS 13721 (3d Cir. 2010). The Court clarified, however, that their “use of the term ‘aviation safety’ in *Abdullah* to describe the field preempted by federal law was [] limited to in-air safety.” *Id.* at \*18. Thus, as the plaintiff in *Elassaad* was asserting common-law negligence claims regarding an injury he sustained while

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<sup>15</sup> Specifically, the Court stated:

If Congress thought state-law suits posed an obstacle to its objectives, it surely would have enacted an express pre-emption provision at some point during the FDCA’s 70-year history. But, despite its 1976 enactment of an express pre-emption provision for medical devices, see § 521, 90 Stat. 574 (codified at 21 U.S.C. § 360k(a)), Congress has not enacted such a provision for drugs.

*Id.* at 1200.

<sup>16</sup> 2010 U.S. App. LEXIS 13721 (3d Cir. 2010). The first opinion issued by the Third Circuit in this case on May 12, 2010 was vacated and amended by this opinion. See *Elassaad v. Independence Air, Inc.* 604 F.3d 804 (3d Cir. 2010).

*disembarking* an airplane, the plaintiff could avail himself of common-law standards of care because the issue did not implicate the preempted field of in-air safety. Notably for purposes of the action *sub judice*, when distinguishing in-air safety and safety measures when disembarking an aircraft, the Court detailed in great length the sort of measures that are encompassed within in-air safety and thus are preempted. For example, the Court noted that the FAA directs the Aviation Administration to issue regulations to reduce or eliminate the possibility or recurrence of aircraft accidents. Further, in highlighting that “most of the regulations adopted pursuant to the [FAA] concern aspects of safety that are associated with flight”, the Court propounded as an example that “the regulations detail certification and ‘airworthiness’ requirements for aircraft parts.” *Id.* at 22. Thus, although *Elassaad* slightly narrowed the broad definition of the “field of aviation” that could be interpreted from *Abdullah*, it strongly, and perhaps explicitly, suggests that the manufacture of aircraft parts is nonetheless contained in this field and, thus, subject solely to federal standards of care.

Notably, *Elassaad* was decided by the Third Circuit after the Supreme Court’s decision in *Wyeth*, which Plaintiff claims contradicts the Third Circuit’s field-preemption framework articulated in *Abdullah*. The Third Circuit declined to decide whether *Wyeth* has any effect on the holding in *Abdullah* because *Abdullah* did not apply to the facts of *Elassaad*.

### 3. Conclusion

There is certainly not an absence of authority that agrees with Plaintiff’s proffered interpretation of the

law.<sup>17</sup> Indeed, we find the logic therein alluring, and perceive the wisdom of the various decisions in other Circuits that have failed to find preemption in circumstances similar to the case at bar. Nonetheless, no matter how compelling their reasoning, those authorities are not controlling for our purposes as we must follow the state of the law as articulated by the Third Circuit. The legal principle of *stare decisis* commands no less. Unlike *Elassaad*, which was distinguishable from *Abdullah* on the grounds that the case did not implicate “in-air” safety, we find that, based upon the state of the controlling law, this action is indeed controlled by *Abdullah*. We have previously extended *Abdullah*’s holding to general aviation cases, and there has been no change in the controlling law to preclude us from doing the same at this juncture. Further, although Plaintiff challenges the Third Circuit’s preemption analysis and argues that *Wyeth*’s preemption analysis supports no purpose of Congress to preempt, we find that the analysis of *Abdullah* is still applicable post-*Wyeth*. We

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<sup>17</sup> See, e.g. *Sheesley v. Cessna Aircraft Co.*, 2006 U.S. Dist. LEXIS 27133 (D.S.D. 2006); *Monroe v. Cessna Aircraft Co.*, 417 F. Supp. 2d 824 (E.D. Tex. 2006); *Sakellaridis v. Polar Air Cargo, Inc.*, 104 F. Supp. 2d 160 (S.D.N.Y. 2000); *Skidmore v. Delta Air Lines, Inc.*, 2000 U.S. Dist. LEXIS 18587 (N.D. Tex. Dec. 15, 2000); see also John D. McClune, *Article: There is No Complete, Implied, or Field Federal Preemption of State Law Personal Injury/Wrongful Death Negligence or Product Liability Claims in General Aviation Cases*, 71 J. AIR L. & COM. 717, 730 (Fall, 2006) (“[. . .] *Abdullah* involved a commercial flight . . . even if correctly decided its reasoning does not apply to general aviation product liability, breach of warranty . . . cases. . . . *Abdullah* contradicts the FAA and its history [and] ignores GARA.”); AVIATION ACCIDENT LAW § 9.03 (2010) (“There are some indications that [*Abdullah*] will not withstand the test of time . . . Although one court in within the Third Circuit’s jurisdiction has followed it, the decision has been openly or implicitly criticized, or simply ignored, by other courts.”).



reach this conclusion because the Third Circuit applied in *Abdullah* the same process of analysis that was articulated in *Wyeth*. Thus, any claims that Plaintiff asserts under a state-law standard of care must necessarily be dismissed.

### **B. FAILURE TO STATE A CLAIM**

Defendants argue that Plaintiff's remaining claims that do not rely on state standards contain only "cursory references to an alleged breach of an unidentified federal law". Defendants assert that Plaintiff fails to plead that she, or the decedent, were intended to be a third-party beneficiary for the sale of the carburetor, and also fails to identify any express warranty related to the carburetor. Thus, Defendants maintain that the Complaint fails to give Defendants adequate notice, and therefore should be dismissed for failure to state a claim upon which relief can be granted. Plaintiff counters that she has provided a "short and plain statement of the claim showing that the pleader is entitled to relief" sufficient to satisfy the notice pleading requirements of Federal Rule of Civil Procedure 8(a)(2). She further asserts that even if the Court finds that she has not satisfied the pleading requirements she should nonetheless be granted leave to file an amended complaint so that she can list violations of federal regulations by number. We agree, and thus find that the fairest course in this matter is to grant Plaintiff leave to amend the Complaint and assert claims under federal standards of care.

## **VI. CONCLUSION**

Because of the reasons articulated in this memorandum, we ultimately grant Defendants' Motion vis-a-vis Plaintiff's claims that assert duties under state common-

law standards of care, and shall accordingly dismiss those claims. We will however grant Plaintiff leave to amend the Complaint against the remaining Defendants so that she may endeavor to properly assert her claims under appropriate federal standards.

**NOW, THEREFORE, IT IS HEREBY ORDERED:**

1. Defendants' Motion for Judgment on the Pleadings (Doc. 107) is **GRANTED IN PART AND DENIED IN PART** to the following extent:
  - a. Plaintiff's claims that are based upon state-law standards of care are **DISMISSED**;
  - b. The Motion is denied in all other respects; and
2. Plaintiff **SHALL FILE** an Amended Complaint to properly assert her claims as detailed above within twenty (20) days of the date of this Order. Failure to do so shall result in dismissal of the action.

/s/ John E. Jones III  
John E. Jones III  
United States District Judge

**APPENDIX J**

1. 49 U.S.C. § 40120(c) provides:

**(c) Additional remedies.**—A remedy under this part is in addition to any other remedies provided by law.

\* \* \* \* \*

2. 49 U.S.C. § 44701 provides:

**(a) Promoting safety.**—The Administrator of the Federal Aviation Administration shall promote safe flight of civil aircraft in air commerce by prescribing—

(1) minimum standards required in the interest of safety for appliances and for the design, material, construction, quality of work, and performance of aircraft, aircraft engines, and propellers;

(2) regulations and minimum standards in the interest of safety for—

(A) inspecting, servicing, and overhauling aircraft, aircraft engines, propellers, and appliances;

(B) equipment and facilities for, and the timing and manner of, the inspecting, servicing, and overhauling; and

(C) a qualified private person, instead of an officer or employee of the Administration, to examine and report on the inspecting, servicing, and overhauling;

(3) regulations required in the interest of safety for the reserve supply of aircraft, aircraft engines, propellers,

appliances, and aircraft fuel and oil, including the reserve supply of fuel and oil carried in flight;

(4) regulations in the interest of safety for the maximum hours or periods of service of airmen and other employees of air carriers; and

(5) regulations and minimum standards for other practices, methods, and procedure the Administrator finds necessary for safety in air commerce and national security.

**(b) Prescribing minimum safety standards.**—The Administrator may prescribe minimum safety standards for—

(1) an air carrier to whom a certificate is issued under section 44705 of this title; and

(2) operating an airport serving any passenger operation of air carrier aircraft designed for at least 31 passenger seats.

**(c) Reducing and eliminating accidents.**—The Administrator shall carry out this chapter in a way that best tends to reduce or eliminate the possibility or recurrence of accidents in air transportation. However, the Administrator is not required to give preference either to air transportation or to other air commerce in carrying out this chapter.

**(d) Considerations and classification of regulations and standards.**—When prescribing a regulation or standard under subsection (a) or (b) of this section or any of sections 44702-44716 of this title, the Administrator shall—

(1) consider—

(A) the duty of an air carrier to provide service with the highest possible degree of safety in the public interest; and

(B) differences between air transportation and other air commerce; and

(2) classify a regulation or standard appropriate to the differences between air transportation and other air commerce.

**(e) Bilateral exchanges of safety oversight responsibilities.—**

(1) **In general.**—Notwithstanding the provisions of this chapter, the Administrator, pursuant to Article 83 bis of the Convention on International Civil Aviation and by a bilateral agreement with the aeronautical authorities of another country, may exchange with that country all or part of their respective functions and duties with respect to registered aircraft under the following articles of the Convention: Article 12 (Rules of the Air); Article 31 (Certificates of Airworthiness); or Article 32a (Licenses of Personnel).

(2) **Relinquishment and acceptance of responsibility.**—The Administrator relinquishes responsibility with respect to the functions and duties transferred by the Administrator as specified in the bilateral agreement, under the Articles listed in paragraph (1) for United States-registered aircraft described in paragraph (4)(A) transferred abroad and accepts responsibility with respect to the func-

tions and duties under those Articles for aircraft registered abroad and described in paragraph (4)(B) that are transferred to the United States.

**(3) Conditions.**—The Administrator may predicate, in the agreement, the transfer of functions and duties under this subsection on any conditions the Administrator deems necessary and prudent, except that the Administrator may not transfer responsibilities for United States registered aircraft described in paragraph (4)(A) to a country that the Administrator determines is not in compliance with its obligations under international law for the safety oversight of civil aviation.

**(4) Registered aircraft defined.**—In this subsection, the term “registered aircraft” means—

**(A)** aircraft registered in the United States and operated pursuant to an agreement for the lease, charter, or interchange of the aircraft or any similar arrangement by an operator that has its principal place of business or, if it has no such place of business, its permanent residence in another country; and

**(B)** aircraft registered in a foreign country and operated under an agreement for the lease, charter, or interchange of the aircraft or any similar arrangement by an operator that has its principal place of business or, if it has no such place of business, its permanent residence in the United States.

**(f) Exemptions.**—The Administrator may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any of sections 44702-44716 of this title if the Administrator finds the exemption is in the public interest.

\* \* \* \* \*

3. 49 U.S.C. § 44704 provides:

**(a) Type certificates.—**

**(1) Issuance, investigations, and tests.—**The Administrator of the Federal Aviation Administration shall issue a type certificate for an aircraft, aircraft engine, or propeller, or for an appliance specified under paragraph (2)(A) of this subsection when the Administrator finds that the aircraft, aircraft engine, propeller, or appliance is properly designed and manufactured, performs properly, and meets the regulations and minimum standards prescribed under section 44701(a) of this title. On receiving an application for a type certificate, the Administrator shall investigate the application and may conduct a hearing. The Administrator shall make, or require the applicant to make, tests the Administrator considers necessary in the interest of safety.

**(2) Specifications.—**The Administrator may—

**(A)** specify in regulations those appliances that reasonably require a type certificate in the interest of safety;

**(B)** include in a type certificate terms required in the interest of safety; and

**(C)** record on the certificate a numerical specification of the essential factors related to the performance of the aircraft, aircraft engine, or propeller for which the certificate is issued.

**(3) Special rules for new aircraft and appliances.—**Except as provided in paragraph (4), if the holder of a type

certificate agrees to permit another person to use the certificate to manufacture a new aircraft, aircraft engine, propeller, or appliance, the holder shall provide the other person with written evidence, in a form acceptable to the Administrator, of that agreement. Such other person may manufacture a new aircraft, aircraft engine, propeller, or appliance based on a type certificate only if such other person is the holder of the type certificate or has permission from the holder.

**(4) Limitation for aircraft manufactured before August 5, 2004.**—Paragraph (3) shall not apply to a person who began the manufacture of an aircraft before August 5, 2004, and who demonstrates to the satisfaction of the Administrator that such manufacture began before August 5, 2004, if the name of the holder of the type certificate for the aircraft does not appear on the airworthiness certificate or identification plate of the aircraft. The holder of the type certificate for the aircraft shall not be responsible for the continued airworthiness of the aircraft. A person may invoke the exception provided by this paragraph with regard to the manufacture of only one aircraft.

**(5) Release of data.**—

**(A) In general.**—Notwithstanding any other provision of law, the Administrator may make available upon request, to a person seeking to maintain the airworthiness or develop product improvements of an aircraft, engine, propeller, or appliance, engineering data in the possession of the Administration relating to a type certificate or a supplemental type certificate for such aircraft, engine, propeller, or appliance, without the consent of the owner of record, if the Administrator determines that—



(i) the certificate containing the requested data has been inactive for 3 or more years, except that the Administrator may reduce this time if required to address an unsafe condition associated with the product;

(ii) after using due diligence, the Administrator is unable to find the owner of record, or the owner of record's heir, of the type certificate or supplemental type certificate; and

(iii) making such data available will enhance aviation safety.

**(B) Engineering data defined.**—In this section, the term “engineering data” as used with respect to an aircraft, engine, propeller, or appliance means type design drawing and specifications for the entire aircraft, engine, propeller, or appliance or change to the aircraft, engine, propeller, or appliance, including the original design data, and any associated supplier data for individual parts or components approved as part of the particular certificate for the aircraft, engine, propeller, or appliance.

**(C) Requirement to maintain data.**—The Administrator shall maintain engineering data in the possession of the Administration relating to a type certificate or a supplemental type certificate that has been inactive for 3 or more years.

**(b) Supplemental type certificates.—**

**(1) Issuance.**—The Administrator may issue a type certificate designated as a supplemental type certificate for a change to an aircraft, aircraft engine, propeller, or appliance.

**(2) Contents.**—A supplemental type certificate issued under paragraph (1) shall consist of the change to the aircraft, aircraft engine, propeller, or appliance with respect to the previously issued type certificate for the aircraft, aircraft engine, propeller, or appliance.

**(3) Requirement.**—If the holder of a supplemental type certificate agrees to permit another person to use the certificate to modify an aircraft, aircraft engine, propeller, or appliance, the holder shall provide the other person with written evidence, in a form acceptable to the Administrator, of that agreement. A person may change an aircraft, aircraft engine, propeller, or appliance based on a supplemental type certificate only if the person requesting the change is the holder of the supplemental type certificate or has permission from the holder to make the change.

**(c) Production certificates.**—The Administrator shall issue a production certificate authorizing the production of a duplicate of an aircraft, aircraft engine, propeller, or appliance for which a type certificate has been issued when the Administrator finds the duplicate will conform to the certificate. On receiving an application, the Administrator shall inspect, and may require testing of, a duplicate to ensure that it conforms to the requirements of the certificate. The Administrator may include in a production certificate terms required in the interest of safety.

**(d) Airworthiness certificates.**—(1) The registered owner of an aircraft may apply to the Administrator for an airworthiness certificate for the aircraft. The Administrator shall issue an airworthiness certificate when the Administrator finds that the aircraft conforms to its type

certificate and, after inspection, is in condition for safe operation. The Administrator shall register each airworthiness certificate and may include appropriate information in the certificate. The certificate number or other individual designation the Administrator requires shall be displayed on the aircraft. The Administrator may include in an airworthiness certificate terms required in the interest of safety. (2) A person applying for the issuance or renewal of an airworthiness certificate for an aircraft for which ownership has not been recorded under section 44107 or 44110 of this title must submit with the application information related to the ownership of the aircraft the Administrator decides is necessary to identify each person having a property interest in the aircraft and the kind and extent of the interest.

**(e) Design and production organization certificates.—**

**(1) Issuance.**—Beginning January 1, 2013, the Administrator may issue a certificate to a design organization, production organization, or design and production organization to authorize the organization to certify compliance of aircraft, aircraft engines, propellers, and appliances with the requirements and minimum standards prescribed under section 44701(a). An organization holding a certificate issued under this subsection shall be known as a certified design and production organization (in this subsection referred to as a “CDPO”).

**(2) Applications.**—On receiving an application for a CDPO certificate, the Administrator shall examine and rate the organization submitting the application, in accordance with regulations to be prescribed by the Admin-

istrator, to determine whether the organization has adequate engineering, design, and production capabilities, standards, and safeguards to make certifications of compliance as described in paragraph (1).

**(3) Issuance of certificates based on CDPO findings.**—The Administrator may rely on certifications of compliance by a CDPO when making determinations under this section.

**(4) Public safety.**—The Administrator shall include in a CDPO certificate terms required in the interest of safety.

**(5) No effect on power of revocation.**—Nothing in this subsection affects the authority of the Secretary of Transportation to revoke a certificate.