

20-2951-cv

United States Court of Appeals *for the* Second Circuit

BRENDA JONES, as CoAdministrator of the Estate
of JOHN DAVID HORTMAN, JILL HORTMAN MORRIS,
as Co-Administrator of the Estate of JOHN DAVID HORTMAN,
Plaintiffs-Appellants,

ADALIA LEE REDD, Individually and CoAdministrator
for the Estate of STEVEN BURTON REDD, DEZARAY REDD, Individually,
JAZLYN REDD, Individually and Co-Administrator for the Estate of STEVEN
BURTON REDD, TRISTYN REDD, Individually,
Consolidated-Plaintiffs-Appellants,

— v. —

BOEING CO, GOODRICH PUMP & ENGINE
CONTROL SYSTEMS, INC., ROLLS-ROYCE CORP,
Consolidated-Defendants-Appellees,
(For Continuation of Caption See Inside Cover)

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

BRIEF FOR *AMICI* THE GENERAL AVIATION MANUFACTURERS ASSOCIATION, INC. AND NATIONAL ASSOCIATION OF MANUFACTURERS IN SUPPORT OF APPELLEES

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L-3 COMMUNICATIONS CORPORATION,
L-3 COMMUNICATIONS HOLDINGS, INC.,

Consolidated-Defendants,

GOODRICH CORPORATION, ROLLS-ROYCE NORTH AMERICA, INC.,
MD HELICOPTERS, INC., L3 COMMUNICATIONS INTEGRATED
SYSTEMS, LP, ALLISON ENGINE COMPANY, INC.,

Defendants.

DISCLOSURE STATEMENTS

In accordance with Federal Rule of Appellate Procedure (FRAP) 26.1, the General Aviation Manufacturers Association, Inc. (GAMA) states that GAMA is a not-for-profit trade association representing the interests of general aviation manufacturers and maintainers. GAMA has no publicly owned parent corporation, subsidiary, or affiliate, nor has it issued shares or debt securities to the public. No publicly held company owns 10% or more of any stock in GAMA.

The National Association of Manufacturers (NAM) is a nonprofit corporation organized under the laws of the State of New York. It has no parent company and has issued no stock.

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IDENTITY AND INTEREST OF *AMICI CURIAE*¹

Pursuant to FRAP 29 and Local Rule 29.1, GAMA and NAM respectfully submit this brief of amici curiae in support of Defendants-Appellees. GAMA is an international trade association representing over one hundred of the leading manufacturers of general aviation aircraft, engines, avionics, and components. For over fifty years, GAMA's mission has been to foster and advance the welfare, safety, interests, and activities of general aviation and general aviation manufacturers in the United States and abroad. General aviation encompasses all civilian flying except scheduled commercial transport. Examples of general aviation include flight training, business travel, aerial firefighting, crop dusting, pipeline patrol, air ambulance services, and search and rescue. GAMA's members make nearly all of the general aviation aircraft flying today. Boeing Business Jets and Boeing Global Services, business units of The Boeing Company, and Rolls-Royce are GAMA member companies.

The National Association of Manufacturers (NAM) is the largest manufacturing association in the United States, representing small and large manufacturers in every industrial sector and in all fifty states. Manufacturing employs more than twelve million individuals, contributes roughly \$2.33 trillion to

¹ Pursuant to FRAP 29(a)(4)(E) and Local Rule 29.1, amici curiae state that no party to this case authored any part of this brief, nor did any party or other person contribute funding for the preparation or submission of this brief. All parties have consented to the filing of this brief.

the U.S. economy annually, has the largest economic impact of any major sector, and accounts for nearly two-thirds of private-sector research and development in the Nation. The NAM is the voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States. NAM's members include not only manufacturers of aircraft and related products, but also consumers of America's air transportation.

This case presents a critical question about the preemptive scope of the federal regulatory framework governing the safety of aviation products; specifically, the standards for design and manufacturing. Amici's members' products are comprehensively regulated by the FAA and other federal regulatory regimes, and they rely on the safety and predictability that come from a unified system of regulation. Many members hold Federal Aviation Administration (FAA) design and manufacturing approvals and work with the FAA and the agency's design and manufacturing regulations and policies daily. Consequently, amici and their members are uniquely positioned to discuss the impacts on general aviation manufacturers and maintainers, and manufacturers generally. Amici and their members' decades-long expertise in aviation product design and manufacturing, aviation safety, and product safety generally will prove useful to this Court in understanding the questions presented in this case.

SUMMARY OF ARGUMENT

Aviation manufacturers are subject to a comprehensive federal regulatory framework. At the direction of Congress, the FAA exercises pervasive authority to establish aviation design standards and approve compliance with those standards. The FAA also retains ultimate, exclusive authority over changes to approved designs and monitors aviation products throughout their lives in service to address any safety issues. This federal regulatory scheme requires preemption to prevent an unworkable array of conflicting requirements that would jeopardize the safety and viability of the aviation industry—in the United States and globally.

ARGUMENT

I. Congress directed the FAA to comprehensively regulate the field of aviation safety—including the design of aviation products—and that is exactly how the FAA regulates.

Aviation is, by its nature, a uniquely interstate industry; the very purpose of aircraft is to transcend state, and national, boundaries. Congress recognized that a safe and effective aviation industry necessitates uniform regulation across states and the highest degree of international harmonization possible. Since at least 1926, the federal government has had responsibility for aviation oversight. Air Commerce Act of 1926, 44 Stat. 568, 49 U.S.C.A. § 171 *et seq.*, as amended by the Civil Aeronautics Act of 1938, 52 Stat. 973, 49 U.S.C.A. § 401 *et seq.* With the Federal Aviation Act of 1958, Congress consolidated its existing aviation

regulatory authority into a single body, the FAA, and directed the FAA to promulgate aviation safety standards, including for design and manufacture of aviation products. Federal Aviation Act of 1958, § 301(a), P.L. 85-726, 72 Stat. 731; *see also City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 639 (1973) (recognizing that the Federal Aviation Act “requires a uniform and exclusive system of federal regulation if the congressional objectives underlying the Federal Aviation Act are to be fulfilled”).

Congress specifically directed the FAA to comprehensively regulate the design of aviation products, including design changes and the resolution of safety hazards with products in service. The FAA fulfilled Congress’s regulatory mandate by creating a system of federal certification of aviation product designs (type certificate), manufacturing (production certificate), and aircraft airworthiness (airworthiness certificate), as well as governing post-certification maintenance, design modifications, and continued operational safety (continued airworthiness). FAA regulations cover every aspect and foreseeable issue related to product design and manufacturing—including materials, workmanship, construction, testing, structural characteristics, flight performance, systems and equipment, operating procedures and limitations, markings and placards, and flight and maintenance manuals. Congress has consistently recognized that this level of federal oversight makes aviation “an industry whose products are regulated to a degree not

comparable to any other.” H.R. Rep. No. 103-525 (II), at 5–6 (1994), *as reprinted in* 1994 U.S.C.C.A.N. 1644, 1647.

The Federal Aviation Act expressly gives the FAA “plenary authority” to “[m]ake and enforce safety regulations governing the design and operation of civil aircraft” in order to ensure the “maximum possible safety and efficiency.” H.R. Rep. No. 85-2360 (1958), *reprinted in* 1958 U.S.C.C.A.N. 3741, 3741–42, 3747; *see also* S. Rep. No. 1811, 85th Cong., 2d Sess. 5, at 5 (1958) (“[T]he Federal Government bears virtually complete responsibility for the promotion and supervision of this industry in the public interest.”). The exact language of Congress’s mandate—often quoted incompletely—is that the FAA prescribe “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) (emphasis added). As the FAA has explained, the Federal Aviation Act’s requirement that the FAA adopt “minimum standards required in the interest of safety” does *not* indicate that FAA regulations can be supplemented without conflict by more stringent state regulations: “[I]t is sufficiently clear that Congress directed the promulgation of standards on the national level, as well as national enforcement,’ without an additional role for alternative state standards.” Brief for the United States as Amicus Curiae (Dec. 2019), *Avco Corp. v. Sikkelee*, 140 S. Ct. 860 (2020) at 19

[hereinafter “U.S. Amicus Brief”] (quoting *Ray v. Atl. Richfield Co.*, 435 U.S. 151, 168 (1978)). There is no indication that Congress intended FAA’s safety standards to be “minimums” in relation to state aviation laws—let alone a patchwork of state jury verdicts—or that the federal aviation regulations do not establish an acceptable level of safety. Congress expressly empowered the FAA to evaluate *every* aspect of a proposed aviation product relevant to safety, and “would not have anticipated that an aircraft design that has been certified by the FAA as safe under the controlling federal standards would nevertheless be deemed unsafe by the law of a particular State.” *Id.* at 16.

For over twenty-five years, the FAA has consistently maintained that its federal design and manufacturing standards preempt state standards. Letter Brief from the Dep’t of Transp. and FAA as Amici Curiae (Sept. 2, 2015), *Sikkelee v. Precision Airmotive Corp.*, 822 F.3d 680 (3d Cir. 2016) at 2 [hereinafter Letter Brief from FAA] (stating that the government adheres to its position regarding preemption in its brief in *Cleveland By & Through Cleveland v. Piper Aircraft Corp.*, 985 F.2d 1438 (10th Cir. 1993)). As the FAA has explained:

“The structure of the Federal Aviation Act confirms the federal government’s occupation of the field of substantive safety standards by establishing an all-encompassing federal regulatory framework and directing the Secretary to issue regulations setting safety standards for every facet of air safety and aircraft design The field preempted by the Federal

Aviation Act thus extends broadly to all aspects of aviation safety and includes product liability claims based on allegedly defective aircraft and aircraft parts by preempting state standards of care.”

Id. at 7. In December 2019, the FAA reaffirmed that “Congress’s decision to have the FAA exercise pervasive regulation of aircraft engine design impliedly preempts the States from using their law (whether common law or positive law) to impose their own standards of care.” U.S. Amicus Brief at 15. Given the FAA’s comprehensive regulatory framework, denying federal design safety standards their preemptive effect is simply illogical.²

² Indeed, several appellate courts have concluded that the field of aviation safety is preempted and recognized that design and manufacturing come within that field. *Witty v. Delta Air Lines, Inc.*, 366 F.3d 380, 384 (5th Cir. 2004) (citing airworthiness standards among regulations issued by the FAA “[p]ursuant to its congressional charge to regulate air safety”); *Greene v. B.F. Goodrich Avionics Systems, Inc.*, 409 F.3d 784, 795 (6th Cir. 2005) (stating “federal law establishes the standards of care in the field of aviation safety and thus preempts the field from state regulation” and holding that the district court did not err in finding plaintiff’s failure to warn claim concerning alleged manufacturing defects preempted); *Montalvo v. Spirit Airlines*, 508 F.3d 464, 472 (9th Cir. 2007) (citing airworthiness standards among regulations established with “a preemptive intent to displace all state law on the subject of air safety”); *US Airways, Inc. v. O’Donnell*, 627 F.3d 1318, 1326 (10th Cir. 2010) (abrogating *Cleveland*, 985 F.2d at 1438 and holding that “the comprehensive regulatory scheme promulgated pursuant to the FAA evidences the intent for federal law to occupy the field of aviation safety exclusively”). And prior to 2016, the Third Circuit also had indicated that design regulations were within the preempted field of aviation safety. *Elassaad v. Independence Air, Inc.*, 613 F.3d 119, 128 (3d Cir. 2010) (explaining that

A. FAA regulations establish the standards of care for the design and manufacturing of aviation products.

The FAA’s regulation of aviation product design begins at a product’s inception with a comprehensive five-phase design approval or “type certification” process for aircraft, engines, and propellers. *See generally* 14 C.F.R. pt. 21 (Certification Procedures for Products and Articles); FAA Order 8110.4C – With Change 6, *Type Certification* (Mar. 6, 2017) [hereinafter “FAA Order 8110.4C”]. Through this process, the FAA not only sets the safety standards that products must meet, but also regulates how manufacturers demonstrate to the FAA that those standards have been met.

Generally, the first step in type certification is for the FAA to conduct orientation and familiarization briefings with the type certificate applicant to understand the proposed product. FAA Order No. 8110.4C at 20. The FAA then establishes the certification basis for the product, which designates all of the applicable federal regulations and conditions³ that must be met to achieve type

Abdullah’s primary holding was that “federal law preempted ‘the entire field of aviation safety’” and providing as examples of regulations associated with safe flight those that “detail certification and ‘airworthiness’ requirements for aircraft parts”); *Abdullah v. Am. Airlines, Inc.*, 181 F.3d 363, 365 (3d Cir. 1999).

³ If the FAA finds that the airworthiness regulations “do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of a novel or unusual design feature,” the agency prescribes special conditions and amendments “to establish a level of safety equivalent to that established in the regulations.” 14 C.F.R. § 21.16.

certification. These regulations and conditions prescribe both specific and general requirements for design, manufacture, and performance—defining the safety standard to which a product is built and maintained.

After the FAA sets the certification basis, the applicant then submits a detailed “certification plan” explaining how the applicant will demonstrate compliance with every requirement in the certification basis. *Id.* at 21. Once the FAA approves the certification plan, the applicant implements it—a process involving extensive tests and analyses that can take thousands of man hours, averaging three to five years for an aircraft. *Id.* at 41–57. The manufacturer generates, substantiates, and documents compliance data, and the FAA reviews the data and makes an independent finding of compliance for each requirement in the certification basis. The FAA approves the design and issues a type certificate only if the FAA finds that the applicant satisfied the product’s certification basis and that “no feature or characteristic makes it unsafe for the category in which certification is requested.” 14 C.F.R. § 21.21(b)(2).

To assist the agency in meeting its comprehensive regulatory responsibilities, including product certification, Congress empowered the FAA to delegate to qualified persons or organizations the legal authority to act on the agency’s behalf. 49 U.S.C. § 44702(d). Designees act as “representatives” of the FAA. *See, e.g.*, Establishment of Organization Designation Authorization Program,

70 Fed. Reg. 59932, 59933 (Oct. 13, 2005) (explaining that designees “have a unique status” and act as “representatives of the Administrator”). Although a designee may be a manufacturer or manufacturer employee,⁴ designees are “legally distinct from and act independent of the organizations that employ them.” 70 Fed. Reg. at 59933; *see also Official Report of the Special Committee to Review the Federal Aviation Administration’s Aircraft Certification Process* (Jan. 16, 2020), at 25, available at <https://www.transportation.gov/sites/dot.gov/files/2020-01/scc-final-report.pdf> [hereinafter “Special Committee Report”] (“Although self-employed or in some cases employed by the regulated entity, *these designees serve as representatives of the FAA Administrator.*”) (emphasis added). A designee’s actions are governed by “the same standards, procedures, and interpretations applicable to FAA employees accomplishing similar tasks.” FAA Order 8100.15B at A-18. Manufacturers cannot and do not “self-certify” their own products. *See, e.g.,* FAA, Airworthiness Certification, https://www.faa.gov/aircraft/air_cert/airworthiness_certification/ (last visited Feb.

⁴ Not all designees are manufacturers applying for FAA approval. *See* FAA ODA Directory: February 22, 2021, available at https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/media/odadirectory.pdf; *see also* FAA Order 8100.15B, *Organization Designation Authorization Procedures* (May 16, 2013), at 2-2 [hereinafter “FAA Order 8100.15B”] (explaining that consultant groups with the required knowledge and experience may qualify as designees).

26, 2021) (“The FAA has never allowed companies to police themselves or self-certify their aircraft.”). Even though the Third Circuit in *Sikkelee* incorrectly held against field preemption, the court nonetheless rejected the argument that delegation negates federal control. *Sikkelee v. Precision Airmotive Corp.*, 822 F.3d 680, 708 (3d Cir. 2016) (“*Sikkelee I*”) (“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.”); *see also Sikkelee v. Precision Airmotive Corp.*, 907 F.3d 701, 722 (3d Cir. 2018), *reh’g denied* (Dec. 11, 2018), *cert denied Avco Corp. v. Sikkelee*, 140 S. Ct. 860 (2020) (“*Sikelee II*”) (“[Designees] are agents of the FAA, and so their involvement does not mean the FAA has not approved a design.”).

To duplicate an FAA-approved design, the FAA also requires a manufacturer to obtain an FAA production certificate. 14 C.F.R. pt. 21, subpt. G. To obtain a production certificate, an applicant must establish that the manufacturer’s quality system, organization, and facilities are in compliance with applicable regulations. The quality system must “ensure[] that each product and article conforms to its approved design and is in a condition for safe operation.” *Id.* § 21.137.

Finally, FAA regulations prohibit anyone from operating a civil aircraft in the United States without a valid airworthiness certificate. *Id.* § 91.203(a). The FAA only issues an airworthiness certificate if the FAA determines that an aircraft conforms to its FAA-approved design and “is in condition for safe operation.” *Id.* § 21.183; *see also id.* § 21.1(b)(1) (“Airworthiness approval means a document, issued by the FAA for an aircraft, aircraft engine, propeller, or article, which certifies that the aircraft, aircraft engine, propeller, or article conforms to its approved design and is in a condition for safe operation, unless otherwise specified.”).

II. The federal regulatory framework for the design of aviation products cannot accommodate supplementary state standards.

A. FAA regulations require any design approval holder to conform to its FAA approved design and obtain FAA approval before making any changes.

After the FAA issues a type certificate, a manufacturer cannot deviate from the FAA-approved design without further FAA approval. *Id.* pt. 21, subpt. D. Congress tasked the FAA with the responsibility and the authority for overseeing approved designs in service, including design changes in response to safety issues. The FAA monitors approved products throughout their service lives and has the power to re-inspect a product at any time and amend, modify, suspend, or revoke any part of an FAA certificate in the interest of air safety. 49 U.S.C. § 44709.

The FAA collects data on in-service products through several avenues. For example, FAA regulations require type certificate holders to report certain product failures, malfunctions, and defects to the FAA. 14 C.F.R. § 21.3. The FAA also collects data through its involvement in the investigation of aircraft accidents and incidents. Congress gave the National Transportation Safety Board (NTSB) sole authority over the investigation of civil aircraft accidents and tasked the NTSB with investigating every accident involving a civil aircraft in the United States. 49 U.S.C. § 1131; *see also* 49 C.F.R. § 800.3(a)(1) (“The Board is responsible for the investigation, determination of facts, conditions, and circumstances and the cause or probable cause or causes of . . . [a]ll accidents involving civil aircraft, and certain public aircraft.”). The NTSB is permitted to designate entities who can “provide suitable qualified technical personnel to actively assist in an investigation” as “parties.” *Id.* § 831.11. The law requires the NTSB to allow the FAA to participate to perform its aviation safety duties, 49 U.S.C. § 1132(c), but does *not* contemplate a role for private attorneys in safety investigations, 49 C.F.R. § 831.11(a). *See also* NTSB, “Certification of Party Representative,” https://www.nts.gov/legal/Documents/NTSB_Investigation_Party_Form.pdf (“No party coordinator or representative may occupy a legal position or be a person who also represents claimants or insurers.”).

The FAA uses a technical procedure to track and assess in-service fleet data, determine if an “unsafe condition” exists, and evaluate and select corrective actions. *See generally* FAA Order 8110.107A, *Monitor Safety/Analyze Data* (Oct. 1, 2012), at 1. If the FAA becomes aware of an unsafe condition and it determines that the condition is likely to exist or develop in other products with the same design, the FAA issues an “airworthiness directive” to correct the unsafe condition for in-service aircraft. 14 C.F.R. § 39.5 (“FAA issues an airworthiness directive addressing a product when we find that: (a) An unsafe condition exists in the product; and (b) The condition is likely to exist or develop in other products of the same type design.”). FAA Airworthiness Directives are “legally enforceable rules;” compliance with an applicable Airworthiness Directive is required for an aircraft to be considered airworthy. *Id.* §§ 39.3, 39.7. Actions that may be required by FAA Airworthiness Directives include inspections, repairs, operating limitations, maintenance requirements, and design changes.

Even if the FAA determines that correcting the unsafe condition requires a design change, however, the type certificate holder cannot make the change without first submitting proposed modifications to the FAA for review and approval. *Id.* § 21.99. (“When an Airworthiness Directive is issued . . . the holder of the type certificate for the product concerned must . . . [i]f the FAA finds that design changes are necessary to correct the unsafe condition of the product, and

upon his request, *submit appropriate design changes for approval . . .*.”)

(emphasis added). Further, only the FAA can issue an Airworthiness Directive: An aircraft manufacturer can issue a “Service Bulletin” to communicate service information to owners and operators, but without FAA action, compliance with a Service Bulletin is optional—even if a manufacturer considers and categorizes it as “mandatory.” The federal regulatory framework provides that only the FAA can require a change to an FAA approved design, and that change must first receive FAA approval.

In *Sikkelee II*, the Third Circuit acknowledged that FAA regulations prohibit a design approval holder from unilaterally changing an FAA-approved design without first submitting the change to the FAA. *Id.* at 713 (stating that “the Federal Aviation Act and FAA regulations require FAA approval of a type certificate and changes to it”). Nonetheless, the court declined to find preemption unless the manufacturer could prove that the FAA would not have approved a design change, citing *Wyeth v. Levine*, 555 U.S. 555 (2009). Significantly, the regulation at issue in *Wyeth* allows a manufacturer to unilaterally make a product label change—*before* receiving federal agency approval. 555 U.S. at 571 (“[T]he [Changes Being Effected (CBE)] regulation permitted it to provide such a warning before receiving the FDA’s approval.”); *id.* at 573 (“The CBE regulation permitted Wyeth to unilaterally strengthen its warning.”). The FAA’s design change regulations,

however, *preclude* manufacturers from making unilateral changes to FAA-approved designs. By ignoring the need to obtain FAA design change approval, the Third Circuit’s decision undermines the FAA’s uniform regulatory scheme and directly conflicts with the Supreme Court’s recent holdings on preemption. Congress tasked the FAA with determining whether a design is safe and when and how an unsafe condition must be eliminated, and the imposition of state law standards stands in opposition to the FAA’s responsibility and execution thereof.

B. The federal regulatory framework does not allow for different product design requirements across different states.

The FAA’s regulatory framework requires federal field preemption to achieve Congress’s safety goals; it cannot coexist with supplementation by—or variation among—local safety standards. As the Ninth Circuit recognized in *Montalvo v. Spirit Airlines*, “Congress could not reasonably have intended an airline on a Providence-to-Baltimore-to-Miami run to be subject to certain requirements in, for example, Maryland, but not in Rhode Island or in Florida.” 508 F.3d 464, 473 (9th Cir. 2007).

Without uniform, exclusive federal control, a state jury verdict could retroactively impose a design standard on an aviation product—a standard not only different from what the FAA requires, but also different from what another state requires. *See, e.g., Riegel v. Medtronic, Inc.*, 552 U.S. 312, 328–29 (2008) (“General tort duties of care . . . ‘directly regulate’ the device itself, including its

design.”). States apply different tests to determine whether products are defectively designed, which would lead to varying design directives. Different states could develop entirely incompatible hypothetically safer designs for the same aviation products with no mechanism to reconcile the differences. There would be no way to know whether these hypothetical alternative designs could even achieve FAA certification, or whether they would be safer overall.

The federal regulatory framework, however, simply does not allow for differing designs of the same aviation product as it travels over and through the fifty states. There is no way for a manufacturer to simultaneously comply with two (or more) different state law design requirements and FAA rules. The FAA has confirmed that the “[e]nforcement of state-law aircraft-design standards would frustrate Congress’s intention to establish uniform federal aircraft design standards—a view that the FAA has consistently maintained for decades.” U.S. Amicus Brief at 17.

C. Uniform federal standards are also essential to international aviation safety.

Aviation is not only an inter-state industry, but also an international industry. To facilitate safe and efficient international aircraft operations, national governments around the world have entered into complex treaties and agreements, including with respect to the certification of the designs of aviation products. These treaties and agreements require harmonization at the national level. The United

Nations treaty establishing the International Civil Aviation Organization, for example, specifically obligates signatories, including the United States, “to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization.” Convention on International Civil Aviation, art. 37 Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295.

The FAA also has entered into longstanding agreements with individual foreign authorities that facilitate the reciprocal airworthiness certification of civil aviation products imported or exported between signatory countries. These agreements are based on reciprocity and mutual acceptance of national aviation product certification systems and procedures for technical validation. For example, FAA and its European Union counterpart, the European Union Aviation Safety Agency (EASA), have agreed to recognize each other’s product certifications as if they were made in accordance with their own laws. FAA–EASA Technical Implementation Procedures for Airworthiness and Environmental Certification Between the FAA of the United States of America and the EASA of the European Union (last amended Apr. 2, 2019). The United States has similarly broad arrangements with several other countries, such as Australia, Brazil, Canada, and China. There is no mechanism for these agreements to recognize or accommodate state-level design requirements within the United States. State design standards would impede the United States’ compliance with these agreements and undermine

the international regulatory cooperation and harmonization necessary for global aviation safety and innovation.

III. State-law design directives are not necessary to ensure aviation product safety, and actually could compromise safety.

Undermining the FAA’s uniform regulatory scheme jeopardizes the safety and viability of the aviation industry. *See* 1958 U.S.C.C.A.N. at 3761 (“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.”); *see also Montalvo*, 508 F.3d 473 (“The uniqueness of the aviation industry further mandates the need for a centralized authority

Aviation transportation requires more national coordination than any other public transportation and also poses the largest risks Regulation on a national basis is required because air transportation is a national operation.”) (internal citations and quotations omitted).

The FAA’s comprehensive, uniform regulatory scheme has proven extraordinarily successful: Aviation has achieved a level of safety unprecedented in other modes of transportation. The U.S. aviation industry is the safest, largest, and most diverse in the world. The FAA’s air traffic organization⁵ handles an

⁵ The FAA’s Air Traffic Organization provides “safe and efficient air navigation services to 29.4 million square miles of airspace.” FAA, “Air Traffic Organization,” https://www.faa.gov/about/office_org/headquarters_offices/ato/ (last visited Feb. 26, 2021).

average of 45,000 flights every day. FAA, “Air Traffic By the Numbers,” https://www.faa.gov/air_traffic/by_the_numbers/ (last visited Feb. 22, 2021).

Commercial air travel is the safest mode of transportation in human history. And in 2017, general aviation in the United States achieved its lowest fatal accident rate on record. NTSB, Aviation Statistics, *available at* https://www.nts.gov/investigations/data/pages/aviation_stats.aspx.

Recently, the FAA’s certification system has come under intense scrutiny in response to the tragic crashes of two Boeing 737 Max 8 aircraft. Numerous investigations were conducted into the FAA’s certification system, including a Special Committee of experts created by the U.S. Secretary of Transportation to review the FAA’s aircraft certification process. Significantly, at the conclusion of its investigation, “the Committee found that the FAA’s certification system is effective and a significant contributor to the world’s safest aviation system.” Special Committee Report at 6. The Special Committee also “caution[ed] against any actions that would systematically dismantle the FAA’s current certification system and its use of delegated authority.” Special Committee Report at 8.

Ultimately, the Special Committee recommended strengthening the *federal* certification system, in particular with respect to the FAA’s holistic understanding of changes to approved designs and comprehensive authority over design certification. Special Committee Report at 8 (“Any radical changes to this system

could undermine *the collaboration and expertise that undergird the current certification system, jeopardizing the remarkable level of safety that has been attained in recent decades*. The Committee emphasizes that the suggested safety benefits of these proposed reforms *cannot be fully realized unless adopted and practiced globally.*”) (emphases added); *see also id.* (“The Committee determined that potential vulnerabilities within our complex, global aviation system will be mitigated by better use of data and safety management systems, better integration of human factors, enhanced coordination and communication, and the harmonization of global standards.”). The notion that state juries should develop safety standards for aviation products through litigation—outside of the FAA’s certification system—stands in direct tension with these safety recommendations. Congress created a single, uniform federal system for aviation products, recognizing that retrospective, inconsistent design requirements threaten to compromise, rather than enhance, safety. *See also* U.S. Amicus Brief at 16 (“In the judgment of the FAA, aircraft manufacturers must maintain their focus on using the type certification process to ensure that every aircraft engine design, and every certified aircraft that flies, achieves compliance with the federal safety standards, as opposed to diverting time and resources to accommodate a patchwork of additional design requirements that have been or may be imposed by state laws across the Nation.”).

Importantly, preempting state-law standards of care for aviation products does *not* foreclose all remedies for products liability suits arising from allegedly defective aviation products. Plaintiffs may continue to bring suits based on *federal* design safety standards. The FAA agrees: Plaintiffs are permitted to bring tort suits arising from aviation injuries, but those claims must “be adjudicated on the merits by reference to the federal standards of care found in the Federal Aviation Act and its implementing regulations.” U.S. Amicus Brief at 10 (internal quotations omitted). In *Sikkelee I*, the Third Circuit struggled to apply this concept for want of a standard that sounded like a common-law tort standard. *Id.* at 695 (explaining that the court could not identify a federal standard for manufacture and design that “sounds in common law tort”). But preemption does not require the federal standard of care to take a particular form to be given its effect; it fundamentally derives from Congressional intent. Under the Congressional framework for aviation products, the certification basis—all of the applicable federal regulations and conditions that must be met to achieve type certification—sets the federal design safety standard.

The Third Circuit also incorrectly found that the General Aviation Revitalization Act of 1994 (GARA), Pub. L. No. 103-298, 108 Stat. 1552 (49 U.S.C. § 40101 *et seq.*) “reinforces” that “Federal law does not preempt state design defect claims.” *Sikkelee I*, 822 F.3d at 696. GAMA was one of the primary

advocates for the enactment of GARA. The purpose of GARA was to establish an “18 year statute of repose for a civil action against aircraft manufacturers” H.R. No. 103-525(II), 103rd Cong., 2d Sess. (1994), at 1. GARA is a federal statute of repose; it did not impact the scope of federal regulation of air safety standards. Notably GARA does not apply⁶

“if the claimant pleads with specificity . . . and proves, that the manufacturer with respect to a type certificate or airworthiness certificate of, an aircraft or a component, system, subassembly, or other part of an aircraft *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 . . . that is causally related to the harm which the claimant allegedly suffered.”

49 U.S.C. § 40101 (emphasis added). That the exception focuses on *federal* obligations demonstrates that Congress recognized state law remedies for violations of *federal* aviation product standards, not state substantive causes of action. Indeed, two years after GARA, Congress re-affirmed that the FAA’s “certification means that [a] product meets world-wide recognized standards of

⁶ GARA contains three other exceptions: “(2) if the person for whose injury or death the claim is being made is a passenger for purposes of receiving treatment for a medical or other emergency; (3) if the person for whose injury or death the claim is being made was not aboard the aircraft at the time of the accident; or (4) to an action brought under a written warranty enforceable under law but for the operation of this Act.”

safety and reliability.” 49 U.S.C. § 40101 note (section 271, ¶ 9, 10). The purpose, structure, and language of GARA make clear that this statute of repose does not undermine the preemptive effect of federal standards for aviation product design and manufacturing.

IV. A strong, safe aviation industry is vital to the U.S. economy and transportation infrastructure.

Although this case has significant implications for the aviation industry as a whole, amici are uniquely positioned to discuss the importance of general aviation manufacturers and maintainers to the U.S. economy and transportation infrastructure. “The economic impact of general aviation reaches all 50 states and the District of Columbia.” PricewaterhouseCoopers, *Contribution of General Aviation to the US Economy in 2018* (Feb. 19, 2020), at E-1.⁷ In the United States in 2018, general aviation supported \$247 billion in total economic output, \$128 billion in GDP, and 1.2 million total jobs. *Id.* at 11. “[E]ach direct job in general aviation supported 3.3 jobs” in other sectors of the economy. *Id.* Sales of new, US-manufactured general aviation aircraft totaled \$12.2 billion. *Id.* at 3. General aviation manufacturing and maintenance also plays a significant role in international trade. “In addition to the manufacture of new aircraft, US manufacturers also produce a variety of parts and components for use in the

⁷ Available online at https://gama.aero/wp-content/uploads/General_Aviation_s_Contribution_to_the_US_Economy_FINAL_20200219.pdf

manufacture, repair, and upkeep of general aviation aircraft around the world.” *Id.* at 4. In 2018, commercial and general aviation exports reached \$131 billion. *Id.* at 4.

General aviation is also crucial to the transportation infrastructure. General aviation connects communities, people, and businesses, and provides specialized services that cannot be supported at primary commercial service airports. FAA, *General Aviation Airports: A National Asset* (May 2012), at 2, available at https://www.faa.gov/airports/planning_capacity/ga_study/media/2012AssetReport.pdf. The majority of U.S. commercial airline flights operate out of a small number of large city airports. Whereas commercial air transportation serves only around 563 airports in the U.S., there are more than 19,000 landing facilities served by general aviation aircraft. *Id.* at 8. Business aircraft are largely flown into locations with little or no airline service. *The Real World of Business Aviation: 2018 Survey of Companies Using General Aviation Aircraft* (2018), available at <https://gama.aero/wp-content/uploads/The-Real-Worldof-Business-Aviation-2018-Survey-of-Companies-UsingGeneral-Aviation-Aircraft.pdf>. In some remote parts of the country like Alaska—where “82 percent of the state’s communities are not connected to a highway or road system”—general aviation is a lifeline, providing the only means of transportation and critical access to products, supplies, emergency and health-care services. *The Wide Wings and Rotors of General*

Aviation: The Industry's Economic and Community Impact on the United States at 5 (2015), available at https://gama.aero/wp-content/uploads/GAMA_WhitePaper_Final_LRes-Wings-andRotors.pdf. In 2018, general aviation aircraft in the US flew 25.5 million hours. See, e.g., GAMA, 2019 Databook (Mar. 20, 2020), available at https://gama.aero/wp-content/uploads/GAMA_2019Databook_Final-2020-03-20.pdf. During the COVID-19 pandemic, general aviation aircraft have been transporting persons and time-sensitive supplies, and medical and testing equipment, around the country.

General aviation is also essential to the flight training infrastructure, including the training of pilots for commercial airlines. The primary pipelines for commercial airline pilots in the United States are the military and general aviation, the majority now coming from general aviation. General aviation operations also include environmental aerial survey work; law enforcement flights; medical transport of patients, organs, blood, and supplies; aerial firefighting; search and rescue; humanitarian relief and charity flights; and treating approximately 127 million acres of crops annually. Nat'l Agricultural Aviation Ass'n, *Industry Facts*, <https://www.agaviation.org/industryfacts> (last visited Apr. 19, 2020). The breadth and reach of general aviation exemplify the vital role this segment plays in the U.S. economy and transportation infrastructure, and the critical importance of its health and safety.

CONCLUSION

For the forgoing reasons, amici respectfully submit that this Court should affirm the judgement of the district court.

Respectfully submitted,

General Aviation Manufacturers Association, Inc.
and

The National Association of Manufacturers

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March 23, 2021

CERTIFICATE OF BAR MEMBERSHIP

I hereby certify that I am a member in good standing of the Bar of the
United States Court of Appeals for the Second Circuit.

Date: March 23, 2021

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the type-volume limitation of Fed. R. App. P. 29(a)(5) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f), this document contains 6,059 words. This document complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman type style.

Date: March 23, 2021

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CERTIFICATE OF SERVICE

I hereby certify that on March 23, 2021, I electronically filed the foregoing document with the Clerk of Court using CM/ECF. I also certify that the foregoing document is being served on this day on all counsel of record via transmission of the Notice of Electronic Filing generated by CM/ECF or in some other authorized manner for those counsel or parties who are not authorized to receive Notices of Electronic Filing.

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