Signed in Washington, DC, on May 15, 2025.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

[FR Doc. 2025–09029 Filed 5–19–25; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

10 CFR Part 431

[EERE–2017–BT–TP–0007]

RIN 1904–AD82

Energy Conservation Program: Energy Conservation Standards for Commercial Refrigerators, Freezers, and Refrigerator-Freezers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule; withdrawal.

SUMMARY: Pursuant to the Congressional Review Act, this document withdraws a disapproved final rule that was published in the **Federal Register** on January 21, 2025. The final rule would have established amended energy conservation standards for commercial refrigerators, freezers, and refrigerator-freezers.

DATES: As of May 20, 2025, the final rule on energy conservation standards for commercial refrigerators, freezers, and refrigerator-freezers, published in the **Federal Register** on January 21, 2025, at 90 FR 7464, and delayed at 90 FR 11466 (Mar. 7, 2025), is withdrawn.

FOR FURTHER INFORMATION CONTACT: Appliance Standards Program, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Email: *ApplianceStandardsQuestions@ee.doe.gov.*

Pete Cochran, U.S. Department of Energy, Office of the General Counsel, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (240) 961–1189. Email: *Peter.Cochran@hq.doe.gov.*

SUPPLEMENTARY INFORMATION: On January 21, 2025, the U.S. Department of Energy published in the **Federal Register** a final rule (''January 2025 Final Rule'') prescribing amended energy conservation standards for commercial refrigerators, freezers, and refrigerator-freezers. 90 FR 7464. The effective date of the January 2025 Final Rule is May 20, 2025. 90 FR 11466 (Mar. 7, 2025).

On May 9, 2025, President Trump signed into law a joint resolution of disapproval of the January 2025 Final Rule. *See* 5 U.S.C. 801. In accordance with the Congressional Review Act, the January 2025 Final Rule shall have no force or effect. *See* 5 U.S.C. 802(a). As a result, DOE withdraws the January 2025 Final Rule and provides notice that the amended energy conservation standards for commercial refrigerators, freezers, and refrigerator-freezers prescribed in the January 2025 Final Rule shall have no force or effect.

To the extent that 5 U.S.C. 553 applies to this action, DOE finds that notice and comment is unnecessary because DOE is withdrawing a final rule that has been disapproved under the Congressional Review Act. Further, as this withdrawal is providing notice that the January 2025 Final Rule has no force or effect, DOE finds good cause to waive the 30-day delay in effective date under 5 U.S.C. 553(d).

Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule; withdrawal.

List of Subjects in 10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Reporting and recordkeeping requirements, Small businesses.

Signing Authority

This document of the Department of Energy was signed on May 15, 2025, by Louis Hrkman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on May 15, 2025.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

[FR Doc. 2025–09031 Filed 5–19–25; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. FAA–2025–0438]

Accepted Means of Compliance (MOC); Airworthiness Standards: Normal Category Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notification of availability (NOA).

SUMMARY: This document announces the availability of ASTM International (ASTM) consensus standards for use as an FAA-accepted MOC to the applicable airworthiness standards for normal category airplanes. The FAA accepts ASTM F3264–24, ''Standard Specification for Normal Category Aeroplanes Certification,'' with changes identified in this document.

DATES: Acceptance of the means of compliance is effective on May 20, 2025.

FOR FURTHER INFORMATION CONTACT: Hieu Nguyen, Federal Aviation Administration, Policy and Standards Division, AIR–600, GA, Airplanes, Rotorcraft and Emerging Aircraft Section, AIR–62B, 901 Locust Street, Room 301, Kansas City, Missouri 64106; telephone: (316) 946–4123; facsimile: (316) 946–4107; email: *hieu.nguyen@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

Under the provisions of the National Technology Transfer and Advancement Act of 1995 [1] and Office of Management and Budget (OMB) Circular A–119, ''Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,'' effective January 27, 2016, the FAA participates in the development of consensus standards for use as a means of carrying out its policy objectives where appropriate.

Consistent with the Small Airplane Revitalization Act of 2013, the FAA has been working with industry and other stakeholders through the ASTM F44 Committee on General Aviation Aircraft to develop consensus standards as a MOC in certificating small airplanes under part 23.[2]

[1] *Ref* Public Law 104–113 as amended by Public Law 107–107.

[2] *Ref* Public Law 113–53.

In part 23, amendment 23–64 (81 FR 96572), published on December 30, 2016,[3] the final rule stated the FAA would publish an NOA of those consensus standards in the **Federal Register** when the Administrator accepts the consensus standards as an acceptable MOC. The FAA reviewed the published ASTM consensus standards developed by the ASTM F44 Committee on General Aviation Aircraft as the basis for a MOC to 65 sections of part 23, amendments 23–64 and 23–65. In some cases, the Administrator found sections of ASTM F3264–24, without changes, are accepted as a MOC for the airworthiness requirements of part 23, amendments 23–64 and 23–65. In other cases, the MOC, while based on ASTM consensus standards, include additional FAA provisions necessary to comply with the airworthiness requirements of part 23, amendments 23–64 and 23–65.

Part 23, amendment 23–64, established airworthiness requirements based on the safety requirements outlined in amendment 23–63, except in areas that address loss of control and icing, where the FAA increased the safety level. Depending on the details of a design, the applicant may require use of a different MOC beyond those accepted by this NOA. For example, novel airplane designs, such as unmanned airplanes or vertical takeoff and landing airplanes, may be outside the scope of this NOA, and applicants may need to propose an alternative MOC applicable to their designs accepted under § 23.2010.

Means of Compliance Accepted

The FAA accepts only the revisions of the standards referenced in ASTM F3264–24, ''Standard Specification for Normal Category Aeroplanes Certification,'' as a MOC for part 23, amendments 23–64 and 23–65, with the changes identified in table 1. For ease of use, table 2 was added to provide a side-by-side view, linking the applicable part 23 regulation to the ASTM F3264–24 section.

This is a guidance document. Its content is not legally binding in its own right and will not be relied upon by the Department as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with the guidance document is voluntary only, and nonconformity will not affect rights and obligations under existing statutes and regulations.

TABLE 1—PART 23 ACCEPTED MOC BASED ON ASTM CONSENSUS STANDARDS[4 5]

ASTM No. as identified in F3264–24	ASTM document title	Changes required for FAA acceptance[4 5]	Additional Information[6]
F2490–20	Standard Guide for Aircraft Electrical Load and Power Source Capacity Analysis.	None.	
F3061/F3061M–22b	Standard Specification for Systems and Equipment in Aircraft.	The tables defining applicability of requirements in sections 4, 10, 13, and 17 are not accepted. Applicability will be determined by the Policy and Standards Division. Replace 17.3.1.1 with: (a) Each electrical or electronic system that performs a function, the failure of which would prevent the continued safe flight and landing of the airplane, must be designed, and installed such that— (1) The function at the airplane level is not adversely affected during and after the time the airplane is exposed to lightning; and (2) The system recovers normal operation of that function in a timely manner after the airplane is exposed to lightning unless the system's recovery conflicts with other operational or functional requirements of the system. Replace 17.3.1.2 with: (b) Each electrical and electronic system that performs a function, the failure of which would significantly reduce the capability of the airplane or the ability of the flight crew to respond to an adverse operating condition, must be designed and installed such that the system recovers normal operation of that function in a timely manner after the airplane is exposed to lightning. Remove 17.3.1.3. Replace 10.4.2, 10.4.3, 10.4.4 Level 1 with Level 4.	The tables defining applicability found in F3061/F3061M–22b sections 4, 10, 13, and 17 are not accepted. Applicability will be determined by the Policy and Standards Division. Aircraft certification levels are as defined in 14 CFR 23.2005. F3061/F3061M–22b does not contain means for showing compliance to § 23.2310, *Buoyancy for seaplanes and amphibians.* If applying for certification of a seaplane or amphibian, applicants may use the provisions of §§ 23.751, 23.755, and 23.757 at amendment 23–63 as a means of complying with § 23.2310 or may obtain FAA acceptance of a different MOC in accordance with § 23.2010.
F3062/F3062M–20	Standard Specification for Aircraft Powerplant Installation.	None.	
F3063/F3063M–21	Standard Specification for Aircraft Fuel Storage and Delivery.	None.	
F3064/F3064M–21	Standard Specification for Aircraft Powerplant Control, Operation, and Indication.	None.	
F3065/F3065M–21a	Standard Specification for Aircraft Propeller System Installation.	None.	

[3] *See https://www.federalregister.gov/documents/2016/12/30/2016-30246/revision-of-airworthiness-standards-for-normal-utility-acrobatic-and-commuter-category-airplanes.*

[4] The MOC are intended for traditional part 23 airplanes, not for novel designs. Novel designs require evaluation and possible modification of the MOC.

[5] Wherever ''shall'' is used within a standard, replace with ''must.''

[6] You may find additional information on the FAA Small Airplane Issues List (SAIL) here: *https://www.faa.gov/aircraft/air_cert/design_approvals/small_airplanes/small_airplanes_regs/.*

TABLE 1—PART 23 ACCEPTED MOC BASED ON ASTM CONSENSUS STANDARDS [4] [5]—Continued

ASTM No. as identified in F3264–24	ASTM document title	Changes required for FAA acceptance [4] [5]	Additional Information [6]
F3066/F3066M–18	Standard Specification for Aircraft Powerplant Installation Hazard Mitigation.	None.	
F3082/F3082M–22	Standard Specification for Weights and Centers of Gravity of Aircraft.	None.	
F3083/F3083M–20a	Standard Specification for Emergency Conditions, Occupant Safety, and Accommodations.	Replace 4.1.6 with: Powerplant and ESS mounts and supporting structures must withstand 18.0 g forward for powerplants and ESS installed behind and above the seating compartment.	
F3093/F3093M–21	Standard Specification for Aeroelasticity Requirements.	None.	
F3114–21	Standard Specification for Structures.	None.	
F3115/F3115M–23	Standard Specification for Structural Durability for Small Aeroplanes.	Replace 4.4.3.3 with: The residual strength evaluation must show that the remaining structure is able to withstand the residual strength loads in 4.5 with the extent of detectable damage consistent with the results of the damage tolerance evaluations. The residual strength demonstrated for inspectable damage shall be sufficiently above limit loads in 4.5 and should consider variables such as the severity of damage, inspection interval, and inspection method. This level of residual strength demonstrated should also account for material variability, damage, growth rate, and environmental effects. Guidance for no growth, slow growth, or arrested growth can be found in documents X2.3 and X2.4. Replace 4.4.1.1 with: For all airplanes the methods described in 4.4.3. Delete 4.4.1.2.	If the applicant proposes to use F3115/F3115M–20 sections 4.3 or 6.3.2, the Policy and Standards Division will be involved as the standard is applied during projects to review the approach to determining similarity (F3115/F3115M–20 section 4.3) and criteria defining obvious damage (F3115/F3115M–20 section 6.3.2). If the applicant proposes to use F3115/F3115M–23 sections 4.1.3 or 4.3.3.2, the Policy and Standards Division will be involved as the standard is applied during projects to review the approach to determining similarity (F3115/F3115M–23 section 4.1.3) and criteria defining obvious damage (F3115/F3115M–23 section 4.3.3.2). *Note:* Composite structure needs to be damage tolerant. If impractical, safe life methods may be used. Means of compliance must reflect this. F3115–20 replace 7.1.1 with: For all airplanes the methods described in 7.3. Delete 7.1.2.
F3116/F3116M–18e2	Standard Specification for Design Loads and Conditions.	Replace 4.1.4 with: Appendix X1 through Appendix X4 provides, within the limitations specified within the appendix, a simplified MOC with several of the requirements set forth in sections 4.2 to 4.26 and 7.1 to 7.9 that can be applied as one (but not the only) means to comply. If the simplified methods in Appendix X1 through X3 are used, they must be used together in their entirety. Replace X1.1.1 with: The methods provided in this appendix provide one possible means (but not the only possible means) of compliance and can only be applied to Level 1 and Level 2 low speed airplanes. Replace X2.1.1 with: The methods provided in this appendix provide one possible means (but not the only possible means) of compliance and can only be applied to Level 1 and Level 2 low speed airplanes. Replace X3.1.1 with: The methods provided in this appendix provide one possible means (but not the only possible means) of compliance and can only be applied to Level 1 and Level 2 low speed airplanes. Replace X4.1.1 with: The methods provided in this appendix provide one possible means (but not the only possible means) of compliance and can only be applied to Level 1 low speed airplanes.	
F3117/F3117M–23a	Standard Specification for Crew Interface in Aircraft.	None.	
F3120/F3120M–20	Standard Specification for Ice Protection for General Aviation Aircraft.	None.	
F3173/F3173M–21a	Standard Specification for Aircraft Handling Characteristics.	None.	
F3174/F3174M–21	Standard Specification for Establishing Operating Limitations and Information for Aeroplanes.	None.	
F3179/F3179M–22e1	Standard Specification for Performance of Aircraft.	None.	

TABLE 1—PART 23 ACCEPTED MOC BASED ON ASTM CONSENSUS STANDARDS [4] [5]—Continued

ASTM No. as identified in F3264–24	ASTM document title	Changes required for FAA acceptance [4] [5]	Additional Information [6]
F3180/F3180M–21	Standard Specification for Low-Speed Flight Characteristics of Aircraft.	The FAA does not universally accept all alternatives contained in F3180/F3180M–21. The FAA previously accepted and continues to accept F3180/F3180M–16.	Applicants may propose elements of F3180/F3180M–21, or other means, for development of their project MOC to § 23.2150 in accordance with § 23.2010.
F3227/F3227M–22	Standard Specification for Environmental Systems in Aircraft.	None.	
F3228–21	Standard Specification for Flight Data and Voice Recording in Small Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3228–21 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3229/F3229M–17	Standard Practice for Static Pressure System Tests in Small Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3229/F3229M–17 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3230–21a	Standard Practice for Safety Assessments of Systems and Equipment in Small Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3230–21a is not accepted. Applicability will be determined by the Policy and Standards Division.
F3231/F3231M–23	Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3231/F3231M–23 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3232/F3232M–20	Standard Specification for Flight Controls in Small Aircraft.	None.	
F3233/F3233M–21	Standard Specification for Flight and Navigation Instrumentation in Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3233/F3233M–21 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3234/F3234M–21	Standard Specification for Exterior Lighting in Small Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3234/F3234M–21 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3235–22	Standard Specification for Aircraft Storage Batteries.	Remove: Section 4.2 Remove: Table 1.	If applying for certification of an airplane with installed lithium batteries, applicants may use the guidance provided by RTCA DO–311A or may obtain FAA acceptance of a different MOC in accordance with § 23.2010. Aircraft Type Code compliance matrix table found in F3235–22 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3236–21a	Standard Specification for High Intensity Radiated Field (HIRF) Protection in Small Aircraft.	Remove: Table 1	Aircraft Type Code compliance matrix table found in F3236–21a is not accepted. Applicability will be determined by the Policy and Standards Division.
F3239–22a	Standard Specification for Aircraft Electric Propulsion Systems.	The FAA does not universally accept F3239–22a.	Applicants may propose F3239–22a for development of their MOC for electric propulsion systems on a project-by-project basis. Any MOC proposed must receive acceptance by the FAA in accordance with § 23.2010.
F3254–22	Standard Specification for Aircraft Interaction of Systems and Structures.	Figures 2, 3, and 4 Replace: ''Remote'' with: ''10^{-5}''. Replace: ''Extremely Improbable'' with: ''10^{-8}'' for Level 1, 2, and 3 airplanes and with ''10^{-9}'' for Level 4 airplanes.	Other proposed probabilities will be considered by the FAA on a case-by-case basis.
F3309/F3309M–21	Standard Practice for Simplified Safety Assessment of Systems and Equipment in Small Aircraft.	None.	
F3316/F3316M–19	Standard Specification for Electrical Systems for Aircraft with Electric or Hybrid-Electric Propulsion.	FAA does not universally accept F3316/F3316M–19. Remove: Table 1.	Applicants may propose F3316/F3316M–19 for development of their MOC for electrical systems installed on airplanes with electric or hybrid-electric propulsion systems on a project-by-project basis. Applicants may obtain FAA acceptance of a different MOC in accordance with § 23.2010. Aircraft Type Code compliance matrix table found in F3316/F3316M–19 is not accepted. Applicability will be determined by the Policy and Standards Division.
F3331–18	Standard Practice for Aircraft Water Loads.	None.	

TABLE 1—PART 23 ACCEPTED MOC BASED ON ASTM CONSENSUS STANDARDS [4] [5]—Continued

ASTM No. as identified in F3264–24	ASTM document title	Changes required for FAA acceptance [4] [5]	Additional Information [6]
F3367–21a	Standard Practice for Simplified Methods for Addressing High-Intensity Radiated Fields (HIRF) and Indirect Effects of Lightning on Aircraft	Replace 5.1.1 with: Systems that are part of the Type Certificated Engine must be installed in accordance with the engine manufacturer's requirements. The minimum HIRF and lightning qualification in accordance with sections 8 and 9 of this ASTM practice should be met at the aircraft level, except for engine control systems in Level 1 and 2 airplanes, which should meet the following: HIRF: DO–160, section 20–R for both radiated and conducted susceptibility. Lightning: Utilize guidance in AC 33.28–3. For metallic fuselage DO–160G, section 22–A3J3L3 (shielded) and A3H3L3 (unshielded). For composite fuselage DO–160G, section 22–B3K3L3 (shielded) and B3H3L3 (unshielded). Use of lower HIRF and lighting induced voltage and current levels may be acceptable for electronic engine control systems if substantiated at the airplane level (by test in the proposed installation or similar) when exposed to external HIRF environment per AC 20–158 (latest revision) and lightning per AC 20–136 (latest revision); using shielding and grounding of the electronic engine control system and accessories in the given installation.	
F3380–19	Standard Practice for Structural Compliance of Very Light Aeroplanes.	None.	
F3396/F3396M–20	Standard Practice for Aircraft Simplified Loads Criteria.	None.	
F3397/F3397M–21	Standard Practice for Aeroplane Turbine Fuel System Hot Weather Operations.	None.	
F3408/F3408M–21	Standard Specification for Aircraft Emergency Parachute Recovery Systems.	None.	
F3432–20a	Standard Practice for Powerplant Instruments.	None.	
F3498–21	Standard Practice for Developing Simplified Fatigue Load Spectra.	None.	
F3532–22	Standard Practice for Protection of Aircraft Systems from Intentional Unauthorized Electronic Interactions.	None.	

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
Subpart B—Flight		
§ 23.2100 Weight and center of gravity	5.1 Weight/Mass and Center of Gravity:	5.1.1 F3082/F3082M–22 Standard Specification for Weights and Centers of Gravity of Aircraft. 5.1.2 F3114–21 Standard Specification for Structures.
§ 23.2105 Performance data	5.2 Performance Data:	5.2.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2110 Stall speed	5.3 Stall Speed:	5.3.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2115 Takeoff performance	5.4 Takeoff Performance:	5.4.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2120 Climb requirements	5.5 Climb Requirements:	5.5.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2125 Climb information	5.6 Climb Information:	5.6.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2130 Landing	5.7 Landing:	5.7.1 F3179/F3179M–22e1 Standard Specification for Performance of Aircraft.
§ 23.2135 Controllability	5.8 Controllability:	5.8.1 F3173/F3173M–21a Standard Specification for Aircraft Handling Characteristics.
§ 23.2140 Trim	5.9 Trim:	5.9.1 F3173/F3173M–21a Standard Specification for Aircraft Handling Characteristics.
§ 23.2145 Stability	5.10 Stability:	5.10.1 F3173/F3173M–21a Standard Specification for Aircraft Handling Characteristics.
§ 23.2150 Stall characteristics, stall warning, and spins.	5.11 Stall Characteristics, Stall Warning, and Spins:.	5.11.1 F3180/F3180M–21 Standard Specification for Low-Speed Flight Characteristics of Aircraft.
§ 23.2155 Ground and water handling characteristics.	5.12 Ground and Water Handling Characteristics:.	5.12.1 F3173/F3173M–21a Standard Specification for Aircraft Handling Characteristics.
§ 23.2160 Vibration, buffeting, and high-speed characteristics.	5.13 Vibration, Buffeting, and High-Speed Characteristics:.	5.13.1 F3173/F3173M–21a Standard Specification for Aircraft Handling Characteristics.
§ 23.2165 Performance and flight characteristics requirements for flight in icing conditions.	5.14 Performance and Flight Characteristics Requirements for Flight in Icing Conditions:.	5.14.1 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
Subpart C—Structures		
§ 23.2200 Structural design envelope	6.1 Structural Design Envelope:	6.1.1 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions. 6.1.1.1 F3396/F3396M–20 Standard Practice for Aircraft Simplified Loads.
§ 23.2205 Interaction of systems and structures.	6.2 Interaction of Systems and Structure:.	6.2.1 F3254–22 Standard Specification for Aircraft Interaction of Systems and Structures.
§ 23.2210 Structural design loads	6.3 Structural Design Loads:	6.3.1 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions. 6.3.1.1 F3396/F3396M–20 Standard Practice for Aircraft Simplified Loads. 6.3.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2215 Flight load conditions	6.4 Flight Load Conditions:	6.4.1 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions. 6.4.1.1 F3396/F3396M–20 Standard Practice for Aircraft Simplified Loads.
§ 23.2220 Ground and water load conditions.	6.5 Ground and Water Load Conditions:	6.5.1 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions. 6.5.1.1 F3331–18 Standard Practice for Aircraft Water Loads.
§ 23.2225 Component loading conditions	6.6 Component Loading Conditions:	6.6.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.6.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 6.6.2 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions. 6.6.2.1 F3396/F3396M–20 Standard Practice for Aircraft Simplified Loads.
§ 23.2230 Limit and ultimate loads	6.7 Limit and Ultimate Loads:	6.7.1 F3114–21 Standard Specification for Structures. 6.7.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2235 Structural strength	6.8 Structural Strength:	6.8.1 F3114–21 Standard Specification for Structures. 6.8.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2240 Structural durability	6.9 Structural Durability:	6.9.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.9.2 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 6.9.3 F3115/F3115M–23 Standard Specification for Structural Durability for Small Aeroplanes. 6.9.3.1 F3380–19 Standard Practice for Structural Compliance of Very Light Aeroplanes. 6.9.3.2 F3498–21 Standard Practice for Developing Simplified Fatigue Load Spectra. 6.9.4 F3116/F3116M–18e2 Standard Specification for Design Loads and Conditions.
§ 23.2245 Aeroelasticity	6.10 Aeroelasticity:	6.10.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.10.2 F3093/F3093M–21 Standard Specification for Aeroelasticity Requirement. 6.10.3 F3232/F3232M–23a Standard Specification for Flight Controls in Small Aircraft.
§ 23.2250 Design and construction principles.	6.11 Design and Construction Principles:.	6.11.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.11.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 6.11.2 F3114–21 Standard Specification for Structures. 6.11.2.1 F3380–19 Standard Practice for Structural Compliance of Very Light Aeroplanes. 6.11.3 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2255 Protection of structure	6.12 Protection of Structure:	6.12.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.12.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 6.12.2 F3114–21 Standard Specification for Structures. 6.12.2.1 F3380–19 Standard Practice for Structural Compliance of Very Light Aeroplanes. 6.12.3 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 6.12.4 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2260 Materials and processes	6.13 Materials and Processes:	6.13.1 F3114–21 Standard Specification for Structures. 6.13.1.1 F3380–19 Standard Practice for Structural Compliance of Very Light Aeroplanes. 6.13.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2265 Special factors of safety	6.14 Special Factors of Safety:	6.14.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 6.14.2 F3114–21 Standard Specification for Structures. 6.14.2.1 F3380–19 Standard Practice for Structural Compliance of Very Light Aeroplanes.
§ 23.2270 Emergency conditions	6.15 Emergency Conditions:	6.15.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
		6.15.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 6.15.2 F3083/F3083M–20a Standard Specification for Emergency Conditions, Occupant Safety and Accommodations. 6.15.3 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
Subpart D—Design and Construction		
§ 23.2300 Flight control systems	7.1 Flight Control Systems:	7.1.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 7.1.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 7.1.2 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 7.1.3 F3117/F3117M–23a Standard Specification for Crew Interface.
§ 23.2305 Landing gear systems	7.2 Landing Gear Systems:	7.2.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.
§ 23.2310 Buoyancy for seaplanes and amphibians.	7.3 Buoyancy for Seaplanes and Amphibians:.	7.3.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.
§ 23.2315 Means of egress and emergency exits.	7.4 Means of Egress and Emergency Exits:.	7.4.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 7.4.2 F3083/F3083M–20a Standard Specification for Emergency Conditions, Occupant Safety and Accommodations.
§ 23.2320 Occupant physical environment.	7.5 Occupant Physical Environment:	7.5.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 7.5.1.1 F3227/F3227M–22 Standard Specification for Environmental Systems in Small Aircraft. 7.5.2 F3083/F3083M–20a Standard Specification for Emergency Conditions, Occupant Safety and Accommodations. 7.5.3 F3114–21 Standard Specification for Structures. 7.5.4 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft.
§ 23.2325 Fire protection	7.6 Fire Protection:	7.6.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 7.6.1.1 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 7.6.1.2 F3234/F3234M–21 Standard Specification for Exterior Lighting in Small Aircraft. 7.6.1.3 F3316/F3316M–19 Standard Specification for Electrical Systems for Aircraft with Electric or Hybrid-Electric Propulsion. 7.6.2 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 7.6.3 F3083/F3083M–20a Standard Specification for Emergency Conditions, Occupant Safety and Accommodations. 7.6.4 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2330 Fire protection in designated fire zones and adjacent areas.	7.7 Fire Protection in Designated Fire Zones and Adjacent Areas:.	7.7.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 7.7.1.1 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 7.7.2 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 7.7.3 F3114–21 Standard Specification for Structures.
§ 23.2335 Lightning protection	7.8 Lightning Protection:	7.8.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.
Subpart E—Powerplant		
§ 23.2400 Powerplant installation	8.1 Powerplant Installation:	8.1.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.1.2 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 8.1.3 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.1.3.1 F3432–20a Standard Practice for Powerplant Instruments. 8.1.4 F3065/F3065M–21a Standard Specification for Aircraft Propeller System Installation. 8.1.5 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.1.6 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2405 Automatic power or thrust control systems.	8.2 Power or Thrust Control Systems: ..	8.2.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.2.2 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.2.2.1 F3432–20a Standard Practice for Powerplant Instruments. 8.2.3 F3065/F3065M–21a Standard Specification for Aircraft Propeller System Installation. 8.2.4 F3117/F3117M–23a Standard Specification for Crew Interface.
§ 23.2410 Powerplant installation hazard assessment.	8.3 Powerplant Installation Hazard Assessment:.	8.3.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
		8.3.2 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.3.3 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 8.3.4 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.3.4.1 F3432–20a Standard Practice for Powerplant Instruments. 8.3.5 F3065/F3065M–21a Standard Specification for Aircraft Propeller System Installation. 8.3.6 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.3.7 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 8.3.8 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2415 Powerplant ice protection	8.4 Powerplant Installation Ice Protection:.	8.4.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.4.2 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 8.4.3 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.4.4 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2420 Reversing systems	8.5 Reversing Systems:	8.5.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.5.2 F3065/F3065M–21a Standard Specification for Aircraft Propeller System Installation. 8.5.3 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2425 Powerplant operational characteristics.	8.6 Powerplant Operational Characteristics:.	8.6.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.6.2 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.6.2.1 F3432–20a Standard Practice for Powerplant Instruments. 8.6.3 F3065/F3065M–21a Standard Specification for Aircraft Propeller System Installation. 8.6.4 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.6.5 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 8.6.6 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2430 Fuel systems	8.7 Fuel and Energy Storage and Distribution Systems:.	8.7.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.7.2 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 8.7.2.1 F3397/F3397M–21 Standard Practice for Aeroplane Turbine Fuel System Hot Weather Operations. 8.7.3 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.7.3.1 F3432–20a Standard Practice for Powerplant Instruments. 8.7.4 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.7.5 F3114–21 Standard Specification for Structures. 8.7.6 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2435 Powerplant induction and exhaust systems.	8.8 Powerplant Induction, Exhaust, and Support Systems:.	8.8.1 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.8.2 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
§ 23.2440 Powerplant fire protection	8.9 Powerplant Installation Fire Protection:.	8.9.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 8.9.2 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 8.9.3 F3063/F3063M–21 Standard Specification for Aircraft Fuel an Energy Storage and Delivery. 8.9.4 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 8.9.4.1 F3432–20a Standard Practice for Powerplant Instruments. 8.9.5 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 8.9.6 F3239–22a Standard Specification for Aircraft Electric Propulsion Systems.
Subpart F—Equipment		
§ 23.2500 Airplane level systems requirements.	9.1 Systems and Equipment Function—Requirements:.	9.1.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.1.1.1 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 9.1.1.1(a) F3235–22 Standard Specification for Aircraft Storage Batteries. 9.1.1.2 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
		9.1.1.3 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.1.1.3(a) F3229/F3229M–17 Standard Practice for Static Pressure System Tests in Small Aircraft. 9.1.1.4 F3316/F3316M–19 Standard Specification for Electrical Systems for Aircraft with Electric or Hybrid-Electric Propulsion. 9.1.2 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 9.1.2.1 F3432–20a Standard Practice for Powerplant Instruments. 9.1.3 F3066/F3066M–18 Standard Specification for Aircraft Powerplant Installation Hazard Mitigation. 9.1.4 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 9.1.5 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft. 9.1.6 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2505 Function and installation	9.2 Equipment Function and Installation Requirements:.	9.2.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.2.1.1 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 9.2.1.1(a) F3235–22 Standard Specification for Aircraft Storage Batteries. 9.2.1.2 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 9.2.1.3 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.2.1.4 F3316/F3316M–19 Standard Specification for Electrical Systems for Aircraft with Electric or Hybrid-Electric Propulsion. 9.2.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems. 9.2.3 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft.
§ 23.2510 Equipment, systems, and installations.	9.3 Equipment, Systems, and Installation:.	9.3.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.3.1.1 F3230–21a Standard Practice for Safety Assessments of Systems and Equipment in Small Aircraft. 9.3.1.2 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.3.1.3 F3227/F3227M–22 Standard Specification for Environmental Systems in Small Aircraft. 9.3.1.4 F3309/F3309M–21 Standard Practice for Simplified Safety Assessment of Systems and Equipment in Small Aircraft. 9.3.1.5 F3532–22 Standard Practice for Protection of Aircraft Systems from Intentional Unauthorized Electronic Interactions. 9.3.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2515 Electrical and electronic system lightning protection.	9.4 Electrical and Electronic System Lightning Protection:.	9.4.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.4.1.1 F3367–21a Standard Practice for Simplified Methods for Addressing High-Intensity Radiated Fields (HIRF) and Indirect Effects of Lightning on Aircraft.
§ 23.2520 High-intensity Radiated Fields (HIRF) protection.	9.5 High Intensity Radiated Fields (HIRF) Protection:.	9.5.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.5.1.1 F3236–21a Standard Specification for High Intensity Radiated Field (HIRF) Protection in Small Aircraft. 9.5.1.2 F3367–21a Standard Practice for Simplified Methods for Addressing High-Intensity Radiated Fields (HIRF) and Indirect Effects of Lightning on Aircraft.
§ 23.2525 System power generation, storage, and distribution.	9.6 System Power Generation, Storage, and Distribution:.	9.6.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.6.1.1 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 9.6.1.1(a) F2490–20 Standard Guide for Aircraft Electrical Load and Power Source Capacity Analysis. 9.6.1.2 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.6.1.3 F3316/F3316M–19 Standard Specification for Electrical Systems for Aircraft with Electric or Hybrid-Electric Propulsion. 9.6.1.3(a) F2490–20 Standard Guide for Aircraft Electrical Load and Power Source Capacity Analysis. 9.6.2 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 9.6.3 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft.
§ 23.2530 External and cockpit lighting ..	9.7 External and Cockpit Lighting:	9.7.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.7.1.1 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.7.1.2 F3234/F3234M–21 Standard Specification for Exterior Lighting in Small Aircraft. 9.7.2 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 9.7.3 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
§ 23.2535 Safety equipment	9.8 Safety Equipment:	9.8.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.8.2 F3083/F3083M–20a Standard Specification for Emergency Conditions, Occupant Safety and Accommodations. 9.8.3 F3117/F3117M–23a Standard Specification for Crew Interface.
§ 23.2540 Flight in icing conditions	9.9 Flight in Icing Conditions:	9.9.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.9.1.1 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 9.9.2 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft.
§ 23.2545 Pressurized systems elements.	9.10 Pressurized System Elements:	9.10.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 9.10.1.1 F3229/F3229M–17 Standard Practice for Static Pressure System Tests in Small Aircraft.
§ 23.2550 Equipment containing high-energy rotors.	9.11 Equipment Containing High-Energy Rotors:.	9.11.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft.
Subpart G—Flight Crew Interface and Other Information		
§ 23.2600 Flightcrew interface	10.1 Flight crew Compartment Interface:	10.1.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 10.1.1.1 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 10.1.2 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 10.1.3 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 10.1.4 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 10.1.4.1 F3432–20a Standard Practice for Powerplant Instruments. 10.1.5 F3114–21 Standard Specification for Structures. 10.1.6 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 10.1.7 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2605 Installation and operation	10.2 Installation and Operation Information:.	10.2.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 10.2.1.1 F3227/F3227M–22 Standard Specification for Environmental Systems in Small Aircraft. 10.2.1.2 F3231/F3231M–23 Standard Specification for Electrical Systems for Aircraft with Combustion Engine Electrical Power Generation. 10.2.1.3 F3232/F3232M–20 Standard Specification for Flight Controls in Small Aircraft. 10.2.1.4 F3233/F3233M–21 Standard Specification for Flight and Navigation Instrumentation in Aircraft. 10.2.2 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 10.2.3 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 10.2.4 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 10.2.4.1 F3432–20a Standard Practice for Powerplant Instruments. 10.2.5 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 10.2.6 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft. 10.2.7 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2610 Instrument markings, control markings, and placards.	10.3 Instrument Markings, Control Markings, and Placards:.	10.3.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 10.3.2 F3063/F3063M–21 Standard Specification for Aircraft Fuel and Energy Storage and Delivery. 10.3.3 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 10.3.4 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft. 10.3.5 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
§ 23.2615 Flight, navigation, and powerplant instruments.	10.4 Flight, Navigation, and Powerplant Instruments:.	10.4.1 F3061/F3061M–22b Standard Specification for Systems and Equipment in Small Aircraft. 10.4.2 F3062/F3062M–20 Standard Specification for Aircraft Powerplant Installation. 10.4.3 F3064/F3064M–21 Standard Specification for Aircraft Powerplant Control, Operation, and Indication. 10.4.3.1 F3432–20a Standard Practice for Powerplant Instruments. 10.4.4 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft.
§ 23.2620 Airplane flight manual	5.15 Operating Limitations:	5.15.1 F3174/F3174M–21 Standard Specification for Establishing Operating Limitations and Information for Aeroplanes. 5.15.2 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.
	10.5 Airplane Flight Manual:	10.5.1 F3117/F3117M–23a Standard Specification for Crew Interface in Aircraft. 10.5.2 F3174/F3174M–21 Standard Specification for Establishing Operating Limitations and Information for Aeroplanes.

TABLE 2—SIDE-BY-SIDE VIEW OF PART 23 REGULATIONS AND ASTM F3264–24 SECTION(S)—Continued

Part 23 amendments 23–64 and 23–65 regulation(s)	ASTM F3264–24 section(s) [7]	ASTM F3264–24 subsection(s) [8]
		10.5.3 F3120/F3120M–20 Standard Specification for Ice Protection for General Aviation Aircraft. 10.5.4 F3408/F3408M–21 Standard Specification for Aircraft Emergency Parachute Recovery Systems.

[7] The ASTM F3264–24 section(s) provides a means of compliance intended to be used on projects for traditional part 23 airplanes, not for novel designs. Novel designs require evaluation and possible modification of the means of compliance.

[8] Changes required for FAA acceptance and additional information per table 1 still apply to table 2. The FAA does not accept the Aircraft Type Code compliance matrix tables included in F3228–21, F3229/F3229M–17, F3230–21a, F3231/F3231M–23, F3233/F3233M–21, F3234/F3234M–21, F3235–22, F3236–21a, and F3316/F3316M–19. The tables defining applicability found in F3061/F3061M–22b sections 4, 10, 13, and 17 are not accepted. Applicability will be determined by the Policy and Standards Division.

The MOC accepted by this NOA provide one means, but not the only means, of complying with part 23 regulatory requirements. Applicants who desire to use a MOC reflected by other revisions to ASTM standards not previously accepted may seek guidance and possible acceptance from the FAA for the use of those MOC on a case-by-case basis. Applicants may propose an alternative MOC for FAA review and possible acceptance.

Editorial, Reapproval, Revision, or Withdrawal

ASTM policy states that a consensus standard should be reviewed in its entirety by the responsible subcommittee and must be balloted for reapproval, revision, or withdrawal within five years of its last approval date. When an ASTM standard is reapproved, that reapproval is denoted by the year in parentheses (*e.g.,* F2427–05a (2013)). This date indicates the completion of a review cycle with no technical changes made to the standard. In addition, ASTM issues editorial changes denoted by a superscript epsilon in the standard designation (*e.g.,* F3235–17ε1). This epsilon indicates information was corrected, and it did not change the meaning or intent of a standard. Since reapprovals and editorial changes do not change the technical content of standards, then any standard FAA-accepted by this NOA that is later reapproved or editorially changed by ASTM, is also considered FAA-accepted and without the need for an updated NOA.

ASTM revises a standard to make changes to its technical content. Revisions are identified by a hyphen after the document number, which is followed by the last two numbers of the year of acceptance or of last revision. If the standard is revised again during the same year, this is indicated by adding an ''a'' for the second revision, ''b'' for the third revision, and so on for each revision. Since revisions change the technical content, revisions to consensus standards that are the basis for a MOC accepted by this NOA will not be automatically accepted, and will require further FAA acceptance for the revisions to be an accepted MOC.

Availability

ASTM F3264–24, ''Standard Specification for Normal Category Aeroplanes Certification,'' is available online at *https://www.astm.org/READINGLIBRARY/.* ASTM copyrights these consensus standards and charges the public a fee for service. Individual downloads or reprints of a standard (single or multiple copies, special compilations, and other related technical information), as well as information regarding membership, ASTM offices abroad, or Committee F44 on General Aviation Aircraft, may be obtained online or by contacting ASTM by telephone: (610) 832–9585; facsimile: (610) 832–9555; or through email: *service@astm.org.*

Issued in Kansas City, Missouri, on May 12, 2025.

Sheila I. Mariano,

Acting Manager, Technical Policy Branch, Policy and Standards Division, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–2721; Project Identifier AD–2024–00610–E; Amendment 39–23045; AD 2025–10–11]

RIN 2120–AA64

Airworthiness Directives; General Electric Company Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain General Electric Company (GE) Model CF6–80E1A2, CF6–80E1A3, CF6–80E1A4, and CF6–80E1A4/B engines. This AD was prompted by a manufacturer investigation that revealed certain high-pressure turbine (HPT) stage 1 and HPT stage 2 disks were manufactured from powder metal material suspected to contain iron inclusion. This AD requires replacement of affected HPT stage 1 and HPT stage 2 disks with parts eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 24, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2024–2721; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Alexei Marqueen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7178; email: *alexei.t.marqueen@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain GE Model CF6–80E1A2, CF6–80E1A3, CF6–80E1A4, and CF6–80E1A4/B engines. The NPRM was published in the **Federal Register** on January 30, 2025 (90 FR 8505). The NPRM was prompted by a manufacturer investigation that revealed the detection of iron inclusion in an HPT stage 2 disk manufactured from the same powder metal material used to manufacture certain HPT stage 1 and HPT stage 2 disks for GE Model CF6–80E1A2, CF6–