

*(j) General Test Instructions*

(1) The appropriate ATD to assess occupant injury (FAA Hybrid III or ES-2re) will be determined based on the occupant kinematics at the selected test angle. At the +10 degree yaw angle, the occupant kinematics show that occupant injury tests using both ATDs may be required.

(2) Conduct vertical tests with the Hybrid II ATD or equivalent, with existing pass/fail criteria.

(3) Conduct longitudinal structural tests with the Hybrid II ATD or equivalent, deformed floor, with 10 degrees yaw, and with all lateral structural supports (e.g., armrests or walls) required to support the occupant.

(4) Conduct longitudinal occupant injury tests, as necessary, with the Hybrid III ATD or ES-2re ATD, or both, undeformed floor, yaw, and with all lateral structural supports (e.g., armrests or walls) critically represented which are within the contact range of the occupant.

*(i) Pass/fail injury assessments:*

(A) Perform HIC, fore/aft neck injury, spinal tension, and femur evaluations using an FAA Hybrid III ATD.

(B) Perform lateral neck injury, thoracic, abdominal, pelvis, and femur evaluations using an ES-2re ATD.

*(ii) [Reserved]*

(5) For injury assessments accomplished by testing with the ES-2re ATD for the longitudinal test(s) conducted in accordance with § 25.562(b)(2) and these special conditions, the ATDs must be positioned, clothed, and have lateral instrumentation configured as follows:

*(i) ES-2re ATD Lateral**Instrumentation:*

The rib-module linear slides are directional (i.e., deflection occurs in either a positive or negative ATD y-axis direction). Install the modules such that the moving end of the rib module is toward the front of the airplane. Install the three abdominal-force sensors so that they are on the side of the ATD and toward the front of the airplane.

*(ii) ATD Clothing:*

Clothe each ATD in form-fitting cotton stretch garments with short to full-length sleeves, mid-calf to full-length pants, and size 11E (45) shoes weighing about 2.5 lbs (1.1 kg) and having a heel height of about 1.5 inches (3.8 cm). The color of the clothing should be in contrast to the color of the restraint system and the background. The color of the clothing should be chosen to avoid overexposing the high-speed images taken during the test. The ES-2re jacket is sufficient for torso clothing, although a form-fitting shirt may be used if desired.

*(iii) ATD Positioning:*

(A) Lower the ATD vertically into the seat while simultaneously:

(1) Aligning the midsagittal plane (a vertical plane through the midline of the body; dividing the body into right and left halves) with approximately the middle of the seat place.

(2) Keeping the upper legs horizontal by supporting them just behind the knees.

(3) Applying a horizontal x-axis direction (in the ES-2re ATD coordinate system) force of about 20 lbs (89 N) to the bottom rib of the ES-2re to compress the seat back cushion.

(B) After all lifting devices have been removed from the ATD:

(1) Rock it slightly to settle it in the seat.

(2) Bend the knees of the ATD.

(3) Separate the knees by about 4 inches (100 mm).

(4) Set the ATD's head at approximately the midpoint of the available range of z-axis rotation (to align the head and torso midsagittal planes).

(5) Position the ATD's arms at the joint's mechanical detent to position them to an approximately 20 to 40-degree angle with respect to the torso.

(6) Position the feet such that the centerlines of the lower legs are approximately parallel.

Issued in Kansas City, Missouri, on December 10, 2024.

**Patrick R. Mullen,**

*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-2024-2667; Project Identifier MCAI-2024-00473-T]**

**RIN 2120-AA64**

**Airworthiness Directives; Deutsche Aircraft GmbH (Type Certificate Previously Held by 328 Support Services GmbH; AvCraft Aerospace GmbH; Fairchild Dornier GmbH; Dornier Luftfahrt GmbH) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD)

2024-03-07, which applies to all Deutsche Aircraft GmbH Model 328-100 and 328-300 airplanes. AD 2024-03-07 requires a one-time detailed inspection of each affected part, and applicable corrective actions. Since the FAA issued AD 2024-03-07, the FAA determined that repetitive inspections are necessary. This proposed AD continues to require the actions in AD 2024-03-07 and would require repetitive inspections of the affected part as specified in a European Union Aviation Safety Agency (EASA) AD which is proposed for incorporation by reference (IBR). The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by February 6, 2025.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.

- *Fax:* 202-493-2251.

- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-2667; 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 NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For EASA material identified in this proposed AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); website [easa.europa.eu](https://easa.europa.eu). You may find this material on the EASA website at [ad.easa.europa.eu](https://ad.easa.europa.eu). It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-2667.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

**FOR FURTHER INFORMATION CONTACT:** Joe Salameh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410,

Westbury, NY 11590; telephone 206–231–3536; email [joe.salameh@faa.gov](mailto:joe.salameh@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA–2024–2667; Project Identifier MCAI–2024–00473–T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to [regulations.gov](https://www.regulations.gov), including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

##### Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Joe Salameh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206–231–3536; email [joe.salameh@faa.gov](mailto:joe.salameh@faa.gov). Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

##### Background

The FAA issued AD 2024–03–07, Amendment 39–22677 (89 FR 17723, March 12, 2024) (AD 2024–03–07), for all Deutsche Aircraft GmbH Model 328–100 and 328–300 airplanes. AD 2024–

03–07 was prompted by an MCAI originated by EASA, which is the Technical Agent for the Member States of the European Union. EASA issued AD 2023–0137, dated July 12, 2023, to correct an unsafe condition.

FAA AD 2024–03–07 requires a one-time detailed inspection of each affected part, and applicable corrective actions. The FAA issued AD 2024–03–07 to address reports of worn and ruptured bonding straps inside the feeder wing tanks and in both outer and inner wing tanks.

##### Actions Since AD 2024–03–07 Was Issued

Since the FAA issued AD 2024–03–07, EASA superseded AD 2023–0137 and issued EASA AD 2024–0154, dated August 2, 2024 (EASA AD 2024–0154) (also referred to as the MCAI), to correct an unsafe condition for all Deutsche Aircraft GmbH Model 328–100 and 328–300 airplanes. The MCAI states that occurrences were reported of finding damaged affected parts (*i.e.*, worn and ruptured bonding straps). The extent of the detected damage of the affected parts did not ensure that appropriately low electrical impedance is obtained and maintained through the affected bonding path. This condition, if not detected and corrected, could lead to loss of bonding function and, in combination with a lightning strike, create a source of ignition in a fuel tank, possibly resulting in a fire or explosion and consequent loss of the airplane. To address this potentially unsafe condition, EASA issued AD 2024–0154 to require repetitive inspections of the affected parts. Additionally, Deutsche Aircraft GmbH developed a modification that replaces all the existing bonding straps with parts of the same cross-section and length but with nickel-plated surface protection.

The FAA is proposing this AD to address the unsafe condition on these products. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2024–2667.

##### Explanation of Retained Requirements

Although this proposed AD does not explicitly restate the requirements of AD 2024–03–07, this proposed AD would retain all of the requirements of AD 2024–03–07. Those requirements are referenced in EASA AD 2024–0154, which, in turn, is referenced in paragraph (g) of this proposed AD.

##### Material Incorporated by Reference Under 1 CFR Part 51

EASA AD 2024–0154 specifies procedures for repetitive detailed inspections for damage of the bonding

straps located inside the feeder wing tank (left-hand (LH) and right-hand (RH) sides), outer and inner wing tanks (LH and RH sides), and replacement or repair of damaged affected parts. EASA AD 2024–0154 also specifies procedures for an optional modification to replace all the existing bonding straps with parts of the same cross-section and length but with nickel-plated surface protection. The optional modification still includes detailed inspections for damage of the bonding straps as required by EASA AD 2024–0154, but allows for the termination of repetitive inspections. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

##### FAA’s Determination

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop in other products of the same type design.

##### Proposed AD Requirements in This NPRM

This proposed AD would require accomplishing the actions specified in EASA AD 2024–0154 described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD and except as discussed under “Differences Between This NPRM and the MCAI.”

##### Explanation of Required Compliance Information

In the FAA’s ongoing efforts to improve the efficiency of the AD process, the FAA developed a process to use some civil aviation authority (CAA) ADs as the primary source of information for compliance with requirements for corresponding FAA ADs. The FAA has been coordinating this process with manufacturers and CAAs. As a result, the FAA proposes to incorporate EASA AD 2024–0154 by reference in the FAA final rule. This proposed AD would, therefore, require compliance with EASA AD 2024–0154 in its entirety through that incorporation, except for any differences identified as exceptions in the regulatory text of this proposed AD. Using common terms that are the same as the heading of a particular section in

EASA AD 2024–0154 does not mean that operators need comply only with that section. For example, where the AD requirement refers to “all required actions and compliance times,” compliance with this AD requirement is not limited to the section titled “Required Action(s) and Compliance Time(s)” in EASA AD 2024–0154. Material required by EASA AD 2024–0154 for compliance will be available at *regulations.gov* under Docket No. FAA–2024–2667 after the FAA final rule is published.

**Differences Between This NPRM and the MCAI**

Paragraph (4) of EASA AD 2024–0154 specifies that an optional modification of an airplane in accordance with the instructions of the modification service bulletins cited in EASA AD 2024–0154 allows for the termination of repetitive inspections. However, the optional modification service bulletins include detailed inspections for damage (*i.e.*, any worn or ruptured bonding strap), but do not specify corrective actions if any damage is found. This proposed AD

would require doing corrective actions, as specified in paragraph (3) of EASA AD 2024–0154, if any worn or ruptured bonding strap is detected during the detailed inspection. The FAA has added an exception to EASA AD 2024–0154 in paragraph (h)(5) of this proposed AD accordingly.

**Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 23 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

**ESTIMATED COSTS FOR REQUIRED ACTIONS**

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
44 work-hours × \$85 per hour = \$3,740 .....	\$0	\$3,740	\$86,020

**ESTIMATED COSTS FOR OPTIONAL ACTIONS**

Labor cost	Parts cost	Cost per product
56 work-hours × \$85 per hour = \$4,760 .....	\$1,500	\$6,260

The FAA estimates the following costs to do any necessary on-condition action that would be required based on

the results of any required or optional actions. The FAA has no way of

determining the number of aircraft that might need this on-condition action:

**ESTIMATED COSTS OF ON-CONDITION REPLACEMENT**

Labor cost	Parts cost	Cost per product
10 work-hours × \$85 per hour = \$850 .....	\$117	\$967

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this proposed AD.

**Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an

unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

**Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

**PART 39—AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by:
  - a. Removing Airworthiness Directive (AD) 2024–03–07, Amendment 39–22677 (89 FR 17723, March 12, 2024) and
  - b. Adding the following new AD:

**Deutsche Aircraft GmbH (Type Certificate Previously Held by 328 Support Services GmbH; AvCraft Aerospace GmbH; Fairchild Dornier GmbH; Dornier Luftfahrt GmbH):** Docket No. FAA–2024–2667; Project Identifier MCAI–2024–00473–T.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by February 6, 2025.

**(b) Affected ADs**

This AD replaces AD 2024–03–07, Amendment 39–22677 (89 FR 17723, March 12, 2024) (AD 2024–03–07).

**(c) Applicability**

This AD applies to all Deutsche Aircraft GmbH Model 328–100 and 328–300 airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by operator reports of worn and ruptured bonding straps inside the feeder wing tanks and in both outer and inner wing tanks. The FAA is issuing this AD to address damaged bonding straps. The unsafe condition, if not addressed, could result in the loss of bonding function and, in combination with a lightning strike, create a source of ignition in a fuel tank, possibly resulting in a fire or explosion and consequent loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Requirements**

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2024–0154, dated August 2, 2024 (EASA AD 2024–0154).

**(h) Exceptions to EASA AD 2024–0154**

(1) Where EASA AD 2024–0154 refers to July 26, 2023 (the effective date of EASA AD 2023–0137), this AD requires using April 16, 2024 (the effective date of AD 2024–03–07).

(2) Where EASA AD 2024–0154 refers to its effective date, this AD requires using the effective date of this AD.

(3) This AD does not adopt the “Remarks” section of EASA AD 2024–0154.

(4) Where paragraph (3) of EASA AD 2024–0154 specifies if “any damage is detected as defined in the inspection ASB,” this AD requires replacing those words with “any worn or ruptured bonding strap is detected.”

(5) Where paragraph (4) of EASA AD 2024–0154 specifies “Modification of an aeroplane in accordance with the instructions of the modification SB,” this AD requires replacing those words with “Accomplishing a modification, including doing detailed inspections, of an airplane in accordance with the instructions of the modification SB, and doing corrective actions if any worn or

ruptured bonding strap is detected as specified in paragraph (3).”

**(i) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j) of this AD and email to: [AMOC@faa.gov](mailto:AMOC@faa.gov).

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Deutsche Aircraft GmbH’s EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(j) Additional Information**

For more information about this AD, contact Joe Salameh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206–231–3536; email [joe.salameh@faa.gov](mailto:joe.salameh@faa.gov).

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2024–0154, dated August 2, 2024.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); website [easa.europa.eu](http://easa.europa.eu). You may find this material on the EASA website at [ad.easa.europa.eu](http://ad.easa.europa.eu).

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locationsoremailfr.inspection@nara.gov](http://www.archives.gov/federal-register/cfr/ibr-locationsoremailfr.inspection@nara.gov).

Issued on December 17, 2024.

**Victor Wicklund,**

*Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.*

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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA–2024–2668; Project Identifier AD–2024–00561–E]**

**RIN 2120–AA64**

**Airworthiness Directives; CFM International, S.A. Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2023–09–06, which applies to all CFM International, S.A. Model (CFM) LEAP–1A23, LEAP–1A24, LEAP–1A24E1, LEAP–1A26, LEAP–1A26CJ, LEAP–1A26E1, LEAP–1A29, LEAP–1A29CJ, LEAP–1A30, LEAP–1A32, LEAP–1A33, LEAP–1A33B2, and LEAP–1A35A (LEAP–1A) engines. AD 2023–09–06 requires replacement of certain high-pressure turbine (HPT) rotor stage 1 disks (HPT stage 1 disks), forward outer seals, and compressor rotor stages 6–10 spools. AD 2023–09–06 also prohibits installation of an HPT stage 1 disk, forward outer seal, or compressor rotor stages 6–10 spool that has a part number and serial number identified in the service information onto any engine. Since the FAA issued AD 2023–09–06, the manufacturer identified additional affected parts that were manufactured from material suspected to have reduced material properties due to iron inclusion, which prompted this AD. This proposed AD would retain the requirements to replace certain HPT stage 1 disks, forward outer seals, and compressor rotor stages 6–10 spools and expand the applicability to include additional affected parts manufactured from the same material suspected to have reduced material properties due to iron inclusion. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by February 6, 2025.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR