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[Page 35-39]  
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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

[Docket No. 2001-CE-45-AD; Amendment 39-12987; AD 2002-26-02]

**RIN 2120-AA64**

**Airworthiness Directives; Univair Aircraft Corporation Models Alon A-2 and A2-A; ERCO 415-C, 415-CD, 415-D, 415-E, and 415-G; Forney F-1 and F-1A; and Mooney M10 Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that applies to all Univair Aircraft Corporation (Univair) Models Alon A-2 and A2-A; ERCO 415-C, 415-CD, 415-D, 415-E, and 415-G; Forney F-1 and F-1A, and Mooney M10 airplanes. This AD requires you to repetitively inspect the wing center section for evidence of corrosion through the installation of inspection openings, through the use of a specified scope and light source, or through the removal of the outer wing panels. This AD also requires you to repair or replace any parts where corrosion or corrosion damage is found, install cover plates if inspection openings were made, and send inspection results to Federal Aviation Administration (FAA). This AD is the result of several reports of corrosion being found throughout the wing center section structure. The actions specified by this AD are intended to detect and correct corrosion in the wing center section which could result in failure of the wing center section structure during flight. Such failure could lead to loss of control of the airplane.

**DATES:** This AD becomes effective on February 14, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of February 14, 2003.

**ADDRESSES:** You may get the service information referenced in this AD from Univair Aircraft Corporation, 2500 Himalaya Road, Aurora, Colorado 80011, telephone: (303) 375-8882; facsimile: (303) 375-8888. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2001-CE-45-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Roger Caldwell, Aerospace Engineer, FAA, Denver Aircraft Certification Office, 26805 East 68th Avenue, Room 214, Denver, Colorado 80249-6361; telephone: (303) 342-1086; facsimile: (303) 342-1088.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

*What events have caused this AD?* The FAA has received several reports of severe corrosion being found throughout the wing center section of Univair Models Alon A-2 and A2-A; ERCO 415-C, 415-CD, 415-D, 415-E, and 415-G; Forney F-1 and F-1A, and Mooney M10 airplanes. We have determined that the original design configuration of these airplanes does not provide adequate means for routine visual inspection of the wing center section wing walkway boxes. The inability to inspect this area has resulted in corrosion being undetected on these airplanes.

*What is the potential impact if FAA took no action?* If corrosion is not detected and corrected, the wing center section structure could fail during flight. Such failure could lead to loss of control of the airplane.

*Has FAA taken any action to this point?* We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all Univair Models Alon A-2 and A2-A; ERCO 415-C, 415-CD, 415-D, 415-E, and 415-G; Forney F-1 and F-1A; and Mooney M10 airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on April 3, 2002 (67 FR 15763). The NPRM proposed to require the following:

- Repetitively inspect the wing center section for evidence of corrosion through the installation of inspection openings, through the use of a specified scope and light source, or through the removal of the outer wing panels;
- Install cover plate assemblies if inspection openings were made; and
- Repair or replace any parts where corrosion or corrosion damage was found.

*Was the public invited to comment?* The FAA encouraged interested persons to participate in the making of this amendment. The following presents the comments received on the proposal and FAA's response to each comment:

### **Comment Issue No. 1: Add Additional Method for Accomplishing the Inspection**

*What is the commenter's concern?* Several commenters state that the two methods specified in the NPRM are an economic burden, impact the aesthetic and structural appearance of the airplane, and/or reduce the structural integrity of the wings. Several of the commenters state that the cost of the scope and light source necessary to perform the inspection is much more expensive than that stated in the NPRM, and that installing inspection openings in the wings will reduce the structural integrity of the wings.

The commenters request to have a third method added to the AD that allows for removing the outer wing panels from the airplane to accomplish the inspections. The commenters also state that this method is less of an economic burden and feel it is more effective than the two methods proposed in the NPRM.

*What is FAA's response to the concern?* We concur that a third inspection method option should be added to the AD.

The manufacturer has revised the service bulletin to incorporate this additional method, and we will incorporate the new service bulletin into the final rule AD action.

We also have verified that the Olympus OSF Endoscope (sigmoidoscope) with a Fujinon FIL-150 light source, as specified in Note 1 of the NPRM, is available for the cost stated in the NPRM.

We will change the final rule AD action to incorporate Revision 1 of Univair Service Bulletin 31.

### **Comment Issue No. 2: Change the Repetitive Inspection Compliance Time**

*What is the commenter's concern?* Several commenters state that the majority of the airplanes affected by this AD are over 40 years old with no history of corrosion problems in the wing center section. Therefore, once the initial inspection has been performed and no corrosion is found, the commenters do not believe that corrosion would become an unsafe condition within the next 12 months or 100 hours time-in-service (TIS). The commenters suggest that a 3 year or a 5 year repetitive interval will be more than adequate.

*What is FAA's response to the concern?* We agree with the commenters. The initial inspection compliance time will remain the same; however, we will change the repetitive inspection intervals to be every 3 years.

We will change the final rule AD action to incorporate this change.

### **Comment Issue No. 3: Service Bulletin Unavailable**

*What is the commenter's concern?* Several commenters state that Univair was unable to provide them with a copy of the service bulletin referenced in the NPRM. Therefore, the commenters were unable to provide comments related to the actions required by the service bulletin as stated in the NPRM. We infer that the commenters want the NPRM withdrawn because they could not obtain the service bulletin.

*What is FAA's response to the concern?* We do not concur. We understand the concerns of the commenters. However, we cannot require accomplishment of any action in accordance with a supplemental document, i.e., manufacturer's service bulletin, unless we have an approved original copy submitted to FAA from the manufacturer. The service bulletin referenced in the NPRM is an official part of the rules docket and was available during the comment period at the offices specified in the ADDRESSES paragraph in the NPRM.

We are not changing the final rule AD action based on this comment.

### **Comment Issue No. 4: Remove the Mooney Model M10 Airplanes From the Applicability**

*What is the commenter's concern?* The commenter states that the Mooney rear spar can be readily inspected after the seats and baggage compartment floor are removed. This makes it unnecessary to install inspection holes in the skin on this airplane. The commenter wants Mooney Model M10 airplanes removed from the applicability section of the final rule AD action.

*What is FAA's response to the concern?* We do not concur. Corrosion or corrosion damage can occur on the Mooney Model M10 airplanes, and owners/operators of the affected airplanes have two other methods to use for accomplishing the inspection requirements of this AD without installing inspection holes.

We are not changing the final rule AD action based on this comment.

### **Comment Issue No. 5: AD Is Not Warranted**

*What is the commenter's concern?* Several commenters state that, as long as the airplane has been properly maintained (using existing procedures) and properly stored, there should not be a problem with corrosion build-up in the wing center section. Also, the commenters state that the NPRM was issued based on an isolated case of corrosion being found on an airplane that was improperly maintained and stored. The commenters don't believe there is enough evidence to warrant AD action against the entire fleet. Therefore, the commenters recommend that FAA withdraw the NPRM.

*What is FAA's response to the concern?* We do not concur that the NPRM should be withdrawn. We have 27 documented cases, from 1974 to the present, of corrosion found throughout the wing components and other parts of the airframe. Our analysis indicates that normal maintenance procedures and methods do not allow for the detection of corrosion in the wing center section of the affected airplanes.

We are not changing the final rule AD based on these comments.

**FAA's Determination**

*What is FAA's final determination on this issue?* After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for the addition of another method to be used for accomplishing the inspection, changing the compliance time for the repetitive inspection intervals, and minor editorial corrections. We have determined that these changes and minor corrections:

- Provide the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

**Cost Impact**

*How many airplanes does this AD impact?* We estimate that this AD affects 2,600 airplanes in the U.S. registry.

*What is the cost impact of this AD on owners/operators of the affect airplanes?* We estimate the following costs to accomplish the installation of the inspection openings:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>
10 workhours x \$60 per hour = \$600	\$175	\$775

We estimate the following costs to accomplish the inspection using a scope and light source:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>	<b>Total cost on U.S. operators</b>
2 workhours x \$60 per hour = \$120	\$450 for purchase of a borescope or an endoscope, if applicable.	\$120 or \$570	\$120 x 2,600 = \$312,000 or \$570 x 2,600 = \$1,482,000.

We estimate the following costs to accomplish the inspection by removing the outer wing panel:

<b>Labor cost</b>	<b>Parts cost</b>	<b>Total Cost per airplane</b>	<b>Total Cost on U.S. operators</b>
5 workhours x \$60 per hour = \$300	Not applicable	\$300	\$300 x 2,600 = \$780,000.

The FAA has no method of determining the number of repetitive inspections each owner/operator will incur over the life of each of the affected airplanes so the cost impact is based on the initial inspection.

The FAA has no method of determining the number of repairs or replacements each owner/operator will incur over the life of each of the affected airplanes based on the results of the inspections. We have no way of determining the number of airplanes that may need such repair. The extent of damage may vary on each airplane.

## **Compliance Time of This AD**

*What would be the compliance time of this AD?* The compliance time of this AD is "within the next 12 calendar months after the effective date of this AD and thereafter at intervals not to exceed 3 years."

*Why is the compliance time presented in calendar time instead of hours time-in-service (TIS)?* The unsafe condition specified by this AD is caused by corrosion. Corrosion can occur regardless of whether the airplane is in operation or is in storage. Therefore, to assure that the unsafe condition specified in this AD does not go undetected for a long period of time, the compliance is presented in calendar time instead of hours TIS.

## **Regulatory Impact**

*Does this AD impact various entities?* The regulations adopted herein will 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

*Does this AD involve a significant rule or regulatory action?* For the reasons discussed above, I certify that this action (1) Is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

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

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

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. FAA amends § 39.13 by adding a new AD to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2002-26-02 Univair Aircraft Corporation:** Amendment 39-12987; Docket No. 2001-CE-45-AD.

(a) *What airplanes are affected by this AD?* This AD affects the following airplane models and serial numbers that are certificated in any category:

Models	Serial Numbers
Alon A-2 and A2-A	All.
ERCO 415-C, 415-CD, 415-D, 415-E, and 415-G.	All.
Forney F-1 and F-1A	All.
Mooney M10	All.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to detect and correct corrosion in the wing center section which could result in failure of the wing center section structure during flight. Such failure could lead to loss of control of the airplane.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
<p>(1) Inspect the wing center section for corrosion or corrosion damage by accomplishing one of the following:</p> <ul style="list-style-type: none"> <li>(i) Install inspection openings to gain access to the wing walkway box structure and inspect the wing center structure for corrosion or corrosion damage;</li> <li>(ii) Use a scope and light source, <i>e.g.</i>, fiberscope borescope or an endoscope (as specified in paragraph (e) of this AD) to inspect the wing center structure for corrosion or corrosion damage); or</li> <li>(iii) Remove the outer wing panels to gain visual access to the wing walkway box structure for corrosion or corrosion damage.</li> </ul>	<p>Within the next 12 calendar months after February 14, 2003 (the effective date of this AD) and thereafter at intervals not to exceed 3 years.</p>	<p>In accordance with the Procedures section of Univair Aircraft Corporation Service Bulletin No. 31, dated January 29, 2002; or Univair Aircraft Corporation Service Bulletin No. 31, Revision 1, dated June 14, 2002; and Advisory Circular 43-4A, Corrosion Control for Aircraft.</p>

<p>(2) If corrosion or corrosion damage is found during any inspection required in paragraph (d)(1) of this AD, repair or replace damaged components of the wing center section.</p>	<p>Prior to further flight after any inspection in which the corrosion or corrosion damage is found.</p>	<p>In accordance with the Procedures section of Univair Aircraft Corporation Service Bulletin No. 31, dated January 29, 2002; or Univair Aircraft Corporation Service Bulletin No. 31, Revision 1, dated June 14, 2002; the applicable maintenance manual; and Advisory Circular 43-4A, Corrosion Control for Aircraft.</p>
<p>(3) If inspection openings are installed in accordance with paragraph (d)(1)(i) of this AD, install cover plate assemblies.</p>	<p>Prior to further flight after each inspection or repair required in paragraphs (d)(1) and (d)(2) of this AD.</p>	<p>In accordance with the Procedures section of Univair Aircraft Corporation Service Bulletin No. 31, dated January 29, 2002; or Univair Aircraft Corporation Service Bulletin No. 31, Revision 1, dated June 14, 2002.</p>
<p>(4) If any damage is found during any inspection required by this AD, submit a Malfunction or Defect Report (M or D), FAA Form 8010-4, to the FAA.</p> <p>(i) Include the airplane model and serial number, the extent of the damage (location and type), and the total number of hours TIS on the damaged area.</p> <p>(ii) You may submit M or D reports electronically by accessing the FAA AFS-600 Web page at <a href="http://av-info.faa.gov/isdr">http://av-info.faa.gov/isdr</a>. You will lose access to the report once electronically submitted. We recommend you print two copies prior to submitting the report. Forward one copy to the Denver Aircraft Certification Office (ACO) and keep the one copy for your records. The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 <i>et seq.</i>) and assigned OMB Control Number 2120-0056.</p>	<p>Within 10 days after the inspection in which the corrosion or damage was found or within 10 days after February 14, 2003 (the effective date of this AD), whichever occurs later.</p>	<p>Send the report to Roger Caldwell, FAA, at the address in paragraph (g) of this AD. You may also file electronically as discussed in this AD.</p>

(e) *What kind of scope or light source must I use to accomplish the inspection required in paragraph (d)(1)(ii) of this AD?* We have determined that Olympus OSF Endoscope (sigmoidoscope) with a Fujinon FIL-150 light source is acceptable for the inspections option chosen in paragraph (d)(1)(ii) of this AD. Other scopes and light sources are acceptable and must meet the following minimum characteristics:

- (1) Must be a remote high intensity light source of 150 Watts halogen or better.
- (2) The optical system must be of a quality such that it remains constantly in focus from about 4 millimeters (0.16 inch) to infinity.

(3) When the tip is approximately 4 millimeters from the inspected surface, a magnification of about 10X must be achieved.

(4) The image guide and protective sheath length must be at least 2 feet for more, and the distal tip diameter must be 0.450 inch or larger.

(5) There must be control handles for four-way tip articulation of the last 4 to 5 inches for a minimum of 100 degrees for each direction.

(f) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust the compliance time if:

(1) Your alternative method of compliance provides an equivalent level of safety; and

(2) The Manager, Denver Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Denver ACO.

**Note:** This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(g) *Where can I get information about any already-approved alternative methods of compliance?*

Contact Roger Caldwell, Aerospace Engineer, FAA, Denver Aircraft Certification Office, 26805 East 68th Avenue, Room 214, Denver, Colorado 80249-6361; telephone: (303) 342-1086; facsimile: (303) 342-1088.

(h) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(i) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with Univair Aircraft Corporation Service Bulletin No. 31, dated January 29, 2002; or Univair Aircraft Corporation Service Bulletin No. 31, Revision 1, dated June 14, 2002. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from Univair Aircraft Corporation, 2500 Himalaya Road, Aurora, Colorado 80011. You may view copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(j) *When does this amendment become effective?* This amendment becomes effective on February 14, 2003.

Issued in Kansas City, Missouri, on December 23, 2002.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-32885 Filed 12-31-02; 8:45 am]

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