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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20441; Directorate Identifier 2003-CE-35-AD; Amendment 39-14322; AD 2003-19-14 R2]

RIN 2120-AA64

Airworthiness Directives; BURKHART GROB LUFT-UND RAUMFAHRT GmbH & CO KG Models G103 TWIN ASTIR, G103A TWIN II ACRO, and G103C TWIN III ACRO Sailplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is revising Airworthiness Directive (AD) 2003-19-14 R1, which applies to certain BURKHART GROB LUFT-UND RAUMFAHRT GmbH & CO KG (GROB) Models G103 TWIN ASTIR, G103A TWIN II ACRO, and G103C TWIN III ACRO sailplanes. AD 2003-19-14 R1 requires you to modify the airspeed indicators, install flight speed reduction and aerobatic maneuver restrictions placards (as applicable), and revise the flight and maintenance manuals. AD 2003-19-14 R1 approves simple aerobatic maneuvers for Model G103A TWIN II ACRO sailplanes and provides an option for modifying the rear fuselage for Models G103A TWIN II ACRO and G103C TWIN III ACRO sailplanes to terminate the flight limitation restrictions for aerobatic maneuvers. This AD retains all the actions from AD 2003-19-14 R1 for Models G103A TWIN II ACRO and G103C TWIN III ACRO and reinstates certain operating limits for Model G103 TWIN ASTIR sailplanes. We are issuing this AD to prevent damage to the fuselage during limit load flight, which could result in reduced structural integrity. This condition could lead to loss of control of the sailplane.

DATES: This AD becomes effective on November 30, 2005.

On August 12, 2004 (69 FR 34258, June 21, 2004) the Director of the Federal Register approved the incorporation by reference GROB Service Bulletin No. MSB315-65, dated September 15, 2003; GROB Service Bulletin No. OSB 315-66, dated October 16, 2003; and GROB Work Instruction for OSB 315-66, dated October 16, 2003.

As of November 30, 2005, the Director of the Federal Register approved the incorporation by reference of GROB Service Bulletin No. MSB315-64/3, dated September 14, 2004.

ADDRESSES: To get the service information identified in this AD, contact GROB Luft-und Raumfahrt, Lettenbachstrasse 9, D-86874 Tussenhausen-Mattsies, Germany; telephone: 011 49 8268 998139; facsimile: 011 49 8268 998200; e-mail: *productsupport@grob-aerospace.de*.

To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-20441; Directorate Identifier 2003-CE-35-AD.

FOR FURTHER INFORMATION CONTACT: Gregory A. Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Discussion

Has FAA taken any action to this point? Reports from the Luftfahrt-Bundesamt (LBA), which is the airworthiness authority for Germany, that the safety margins established into the design of the fuselage may not be sufficient to sustain limit loads during certain maneuvers and during flight at certain speeds for Model G103 TWIN ASTIR, G103 TWIN II, G103A TWIN II ACRO, and G103C TWIN III ACRO sailplanes. This caused us to issue AD 2003-19-14, Amendment 39-13317 (68 FR 56152, September 30, 2003). AD 2003-19-14 required the following:

- Modifying the airspeed indicators;
- Installing placards restricting flight speeds, prohibiting aerobatic maneuvers, and restricting load limits; and
- Incorporating revisions to the flight and maintenance manuals.

AD 2003-19-14 was issued as an interim action until the manufacturer completed further investigations into the effects of certain flight conditions on the fuselage structure and the development of corrective procedures.

The manufacturer conducted further investigations and static strength tests to verify the safety margins of the fuselage on the affected sailplanes. This information prompted us to issue AD 2003-19-14 R1, Amendment 39-13676 (69 FR 34258, June 21, 2004). AD 2003-19-14 R1 requires the following:

For Model G103 TWIN ASTIR sailplanes:

- Retain all flight limitation restrictions in AD 2003-19-14.

For Model G103 TWIN II sailplanes:

- Reinstate the original flight speed limitations and maneuver operations and remove from the applicability section of AD 2003-19-14;

For Model G103A TWIN II ACRO (utility category) sailplanes:

- Reinstate the original flight speed limitations and maneuver operations; and
- Allow only basic aerobatic maneuvers (spins, lazy eights, chandelles, stall turns, steep turns, and positive loops).

For Model G103A TWIN II ACRO (aerobatic category) sailplanes:

- Reinstate the original flight speed limitations except for rough air (VB) and maneuvering speeds (VA); and
- Allow only basic aerobatic maneuvers (spins, lazy eights, chandelles, stall turns, steep turns, and positive loops).

For Model G103C TWIN III ACRO sailplanes:

- Increase airspeed limits specified in AD 2003-19-14 but maintain a reduction from the original limitations; and
- Retain restrictions in AD 2003-19-14 on all aerobatic flights, including simple maneuvers, and cloud flying.

The manufacturer also developed a modification for Models G103A TWIN II ACRO (aerobatic category) and G103C TWIN III ACRO sailplanes (aerobatic category). When this modification is incorporated, full acrobatic status is restored to these sailplanes.

What has happened since AD 2003-19-14 R1 to initiate this proposed action? The LBA recently notified FAA of the need to change AD 2003-19-14 R1. Based on analysis, the LBA reports that certain limits of operation for Model G103 TWIN ASTIR sailplanes may be reinstated.

Specifically, the maximum airspeed in calm air (VNE) could be reinstated to 135 knots (155 mph/250kmh) for Model G103 TWIN ASTIR sailplanes. Aerobatic flight is still prohibited; however, simple aerobatic flight (looping, steep turns, lazy eights, and chandelles) may be performed following the flight manual.

What is the potential impact if FAA took no action? If not prevented, damage to the fuselage during limit load flight could result in reduced structural integrity. This condition could lead to loss of control of the sailplane.

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 certain GROB Models G103 TWIN ASTIR, G103A TWIN II ACRO, and G103C TWIN III ACRO sailplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on March 23, 2005 (70 FR 14580). The NPRM proposed to revise AD 2003-19-14 R1 with a new AD that would:

- (1) retain all actions required in AD 2003-19-14 R1 for Models G103A TWIN II ACRO and G103C TWIN III ACRO sailplanes; and
- (2) reinstate certain operating limits for Model G103 TWIN ASTIR sailplanes.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Are consistent with 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.

Changes to 14 CFR Part 39—Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and

alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many sailplanes does this AD impact? We estimate that this AD affects 94 sailplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected sailplanes? We estimate the following costs to do the modifications to the airspeed indicators, flight limitations placards, and revising the flight and maintenance manuals:

Labor cost	Parts cost	Total cost per sailplane	Total cost on U.S. operators
1 work hour \times \$65 = \$65	Not applicable	\$65	$\$65 \times 94 = \$6,110.$

For G103A TWIN II ACRO (aerobatic category) sailplanes and G103C TWIN III ACRO (aerobatic category) sailplanes, we estimate the following costs to do the fuselage modification:

Labor cost	Parts cost	Total cost per sailplane
30 work hours \times \$65 = \$1,950	\$5,307	\$7,257.

What is the difference between the cost impact of this AD and the cost impact of AD 2003-19-14 R1? There is no cost difference between this AD and AD 2003-19-14 R1. This AD is only revising certain operating limits for certain Model G103 TWIN ASTIR. This AD does not require any additional actions than are currently required in AD 2003-19-14 R1.

Authority for This Rulemaking

What authority does FAA have for issuing this rulemaking action? 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.

We are 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 AD.

Regulatory Findings

Will this AD impact various entities? We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

Will this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

We prepared a summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2005-20441; Directorate Identifier 2003-CE-35-AD" in your request.

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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2003-19-14 R1, Amendment 39-13676 (69 FR 34258, June 21, 2004), and 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/aircraft/safety/alerts/

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).

2003-19-14 R2 BURKHART GROB LUFT-UND RAUMFAHRT GmbH & CO KG:
Amendment 39-14322; Docket No. FAA-2005-20441; Directorate Identifier 2003-CE-35-AD;
Revises AD 2003-19-14 R1, Amendment 39-13676.

When Does This AD Become Effective?

- (a) This AD becomes effective on November 30, 2005.

What Other ADs Are Affected By This Action?

- (b) This AD revises AD 2003-19-14 R1, Amendment 39-13676.

What Sailplanes Are Affected by This AD?

- (c) This AD affects the following sailplane models and serial numbers that are certificated in any category:

Model	Serial numbers
G103 TWIN ASTIR	All serial numbers.
G103A TWIN II ACRO (aerobatic category)	All serial numbers with suffix "K".
G103C TWIN III ACRO (aerobatic category)	All serial numbers.

What Is the Unsafe Condition Presented in This AD?

- (d) This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Germany. The actions specified in this AD are intended to prevent damage to the fuselage during limit load flight, which could result in reduced structural integrity. This condition could lead to loss of control of the sailplane.

What Must I Do To Address This Problem?

- (e) To address this problem, you must do the following:

Actions**Compliance****Procedures**

- (1) For G103 TWIN ASTIR sailplanes:
 (i) Re-set the airspeed indicator to the new placard limitations;
 (ii) Install the following placard:

Maximum flying weight				
Without Waterballast:		650 kg / 1435lbs		
With Waterballast:		650 kg / 1435 lbs		
Maximum airspeeds:		km/h	kts	mph
In calm air:	V_{NE}	250	135	155
In rough air:	V_B	170	92	106
Aerotow:	V_T	170	92	106
Winch or auto launch:	V_W	120	65	75
Airbrakes open:	V_{DF}	250	135	155
Maneuvering speed:	V_A	170	92	106

Within the next 25 hours time-in-service (TIS) after November 30, 2005 (the effective date of this AD), unless already done.

Following GROB Service Bulletin No. MSB315-64/3, dated September 14, 2004.

- (iii) You may perform simple aerobatic flight (looping, steep turns, lazy eights, and chandelles) following the flight manual; and (iv) Revise the flight and maintenance manuals.

(2) For G103A TWIN II ACRO (acrobatic category) and G103C TWIN III ACRO (acrobatic category) sailplanes:

- (i) Re-set the airspeed indicator to the new placard limitations; and
 (ii) Install the following placards on Model G103A TWIN II ACRO (aerobatic category) sailplanes:

<p>“Simple Aerobatic” maneuvers (spins, lazy eights, chandelles, stall turns, steep turns, and positive loops) are permitted.</p>

Within the next 25 hours time-in-service (TIS) after August 12, 2004 (the effective date AD 2003-19-14 R1), unless already done.

Follow Grob Service Bulletin No. MSB315-65, dated September 15, 2003.

Maximum flying weight		580 kg / 1280 lbs		
Maximum airspeeds:		km/h	kts	mph
In calm air:	V_{NE}	250	135	155
In rough air:	V_B	170	92	106
Aerotow:	V_T	170	92	106
Winch or auto tow:	V_W	120	65	75
Airbrakes extended:	V_{FE}	250	135	155
Maneuvering speed:	V_A	170	92	106

Actions**Compliance****Procedures**

(iii) Install the following placards on Model G103C TWIN III ACRO (aerobatic category) sailplanes:

All aerobatic maneuvers and cloud flying are prohibited

Maximum flying weight		580 kg / 1280 lbs		
Maximum airspeeds:		km/h	kts	mph
In calm air:	V_{NE}	250	135	155
In rough air:	V_{RA}	170	92	106
Aerotow:	V_T	170	92	106
Winch or auto tow:	V_W	120	65	75
Airbrakes extended:	V_{FE}	250	135	155
Maneuvering speed:	V_A	170	92	106

(3) For G103A TWIN II ACRO (acrobatic category) and G103C TWIN III ACRO (acrobatic category) sailplanes: as an alternative to the flight restrictions in paragraph (e)(2) of this AD, you may install additional stringers in the rear fuselage section. Installing additional stringers terminates the flight restrictions in paragraph (e)(2) of this AD.

At any time after August 12, 2004 (the effective date AD 2003-19-14 R1).

Follow Grob Service Bulletin No. OSB 315-66, dated October 16, 2003, and Work Instruction for OSB 315-66, dated October 16, 2003.

(4) For G103A TWIN II ACRO (acrobatic category) and G103C TWIN III ACRO (acrobatic category) sailplanes: only if you installed the additional stringers specified in paragraph (e)(3) of this AD, do the following:

Prior to further flight after doing the actions in paragraph (e)(3) of this AD.

Follow Grob Service Bulletin No. OSB 315-66, dated October 16, 2003.

- (i) Remove the placard prohibiting all aerobatic maneuvers;
- (ii) Install the following flight limitation placard on Model G103A TWIN II ACRO (aerobatic category) sailplanes:

Maximum flying weight		580 kg / 1280 lbs		
Maximum airspeeds:		km/h	kts	mph
In calm air:	V_{NE}	250	135	155
In rough air:	V_{RA}	180	97	112
Aerotow:	V_T	170	92	106
Winch or auto tow:	V_W	120	65	75
Airbrakes extended:	V_{FE}	250	135	155
Maneuvering speed:	V_A	180	97	112

(iii) Install the following flight limitation placard on Model G103C TWIN III ACRO (aerobatic category) sailplanes:

Maximum flying weight		600 kg / 1323 lbs		
Maximum airspeeds:		km/h	kts	mph
In calm air:	V _{NE}	280	151	174
In rough air:	V _B	200	108	124
Aerotow:	V _T	185	100	115
Winch or auto tow:	V _W	140	76	87
Airbrakes extended:	V _{FE}	280	151	174
Maneuvering speed:	V _A	185	100	115

Note: The placard information in this AD is different from the information in the applicable service bulletins. This AD takes precedence over the service bulletins. You should update your placards to reflect the information presented in this AD.

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Standards Office, Small Airplane Directorate, FAA. For information on any already approved alternative methods of compliance, contact Gregory A. Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4130; facsimile: (816) 329-4090.

Is There Other Information That Relates to This Subject?

(g) German AD D-2003-231R3, dated November 9, 2004, also addresses the subject of this AD.

Does This AD Incorporate Any Material by Reference?

(h) You must do the actions required by this AD following the instructions in GROB Service Bulletin No. MSB315-64/3, dated September 14, 2004; Grob Service Bulletin No. MSB315-65, dated September 15, 2003; Grob Service Bulletin No. OSB 315-66, dated October 16, 2003; and Work Instruction for OSB 315-66, dated October 16, 2003.

(1) On August 12, 2004 (69 FR 34258, June 21, 2004), and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register approved the incorporation by reference of Grob Service Bulletin No. MSB315-65, dated September 15, 2003; Grob Service Bulletin No. OSB 315-66, dated October 16, 2003; and Work Instruction for OSB 315-66, dated October 16, 2003.

(2) As of November 30, 2005, and in accordance with 5 U.S.C. 552(a) and 1 CFR part 51, the Director of the Federal Register approved the incorporation by reference of GROB Service Bulletin No. MSB315-64/3, dated September 14, 2004.

(3) To get a copy of this service information, contact GROB Luft-und Raumfahrt, Lettenbachstrasse 9, D-86874 Tussenhausen-Mattsies, Germany; telephone: 011 49 8268 998139; facsimile: 011 49 8268 998200; e-mail: productsupport@grob-aerospace.de. To review copies of this service information, go to the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html or call (202) 741-6030. To view the AD docket, go to the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-001 or on the Internet at <http://dms.dot.gov>. The docket number is FAA-2005-20441; Directorate Identifier 2003-CE-35-AD.

Issued in Kansas City, Missouri, on September 28, 2005.

David R. Showers,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.
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