



Airworthiness Directive

AD No.: 2021-0042

Issued: 29 January 2021

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

BALLONS CHAIZE
 BALLONS LIBERT SPRL
 BALLONSERVICE & TECHNIK
 BALÓNY KUBÍČEK spol. s.r.o.
 CAMERON BALLOONS Ltd
 LINDSTRAND TECHNOLOGIES Ltd
 NOTHEISZ BALLOONS HUNGARY Kft.
 NOUVELLE MANUFACTURE D'AEROSTATS
 SUP-AIR BALLON EGYESÜLET
 Theo SCHROEDER FIRE BALLOONS GmbH
 ULTRAMAGIC S.A.

Type/Model designation(s):

Hot Air Balloons (see Applicability)

Effective Date: 12 February 2021

TCDS Number(s): Austria BA 009-ACG, EASA.BA.003, EASA.BA.010, EASA.BA.012, EASA.BA.013, EASA.BA.014, EASA.BA.015, EASA.BA.016, EASA.BA.019, EASA.BA.021, EASA.BA.022, EASA.BA.025, EASA.BA.026, EASA.BA.028, EASA.BA.030, EASA.BA.119, EASA.BA.517, EASA.SAS.BA.012, EASA.SAS.BA.023 and EASA.SAS.BA.025.

Foreign AD: Not applicable

Supersedure: None

ATA – Hot Air Balloons – Burner Assembly and Hanger – Inspection / Modification

Manufacturer(s):

114 (714) ZO Svazarmu, Aviatik Klub, Aerotechnik P.O.S., Aerotechnik s.r.o, Aerotechnik Podnik ÚV Svazarmu, Altisph'air, Annonay Air Concept, Ballons Libert Sprl, Ballons Chaize, Ballonservice & Technik, Balóny Kubíček spol. s.r.o., Cameron Balloons Ltd, Colt Balloons, Firma Johann Schön, Kubíček spol. s.r.o., Lindstrand Balloons Ltd (LBL), Lindstrand Hot Air Balloons Ltd, Llopis Balloons, Notheisz Balloons Hungary Kft., Pilatre De Rozier S.I.G.A. S.A., Theo Schroeder fire balloons GmbH, Sky Balloons, SUP-AIR Ballon Egyesület, Thunder Balloons, Thunder & Colt, Ultramagic S.A., Lindstrand Technologies Ltd.



Note: The above list of manufacturers (some companies no longer exist) may not be complete, due to lack of historical data. In case a balloon manufacturer's name is not listed, that does not mean that this AD does not apply to that balloon – see the Applicability below.

Applicability:

All balloon types and models, as specified in the referenced TCDS and Specific Airworthiness Specification (SAS) listed above, all serial numbers.

Definitions:

For the purpose of this AD, the following definitions apply:

Affected part A: Stratus double burner hangers, having Part Number (P/N) CB8504, Issues A to C inclusive, except those installed on an affected part B. The affected hangers are part of Stratus double burner assemblies, having P/N CB8720 or P/N CB8721.

Affected part B: Stratus double burners, having P/N CB8720 or P/N CB8721, using a doubler plate to reinforce the central part of the hanger bracket, as shown on figure 2 of the SB.

Serviceable part: Stratus double burner hangers, having P/N CB8504, Issue D, or later.

The SB: Cameron Balloons Service Bulletin (SB) 28 revision 2, which makes reference to TN3191 issue B.

Reason:

An occurrence was been reported of a Stratus burner hanger, P/N CB8504, failing after landing, leaving one burner unit detached from the load frame. Investigation revealed a limited number of similar failures. Comparable issues have been experienced with other parts of the Stratus product line (see Australian CASA [AWB 14-001](#)). The suspected cause is fatigue cracking of the weld, caused mainly during ground transportation with the burner erect, combined with an overload event.

This condition, if not detected and corrected, could lead to burner falling on the balloon occupant's head, resulting in injury to balloon occupants. It could also lead to an uncontrolled cold descent and hard landing, possibly resulting in injury to balloon occupants and persons on the ground.

To address this potential unsafe condition, Cameron Balloons issued the SB, providing inspection and replacement instructions. It was determined that some burner hangers cannot be inspected as they are covered with a doubler plate to reinforce the central part of the hanger bracket.

For the reasons described above, this AD requires repetitive detailed inspections (DET) of the affected parts A and, depending on findings, replacement with a serviceable part. This AD also requires direct replacement of the burner hanger installed on affected parts B.



Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Inspection (affected part A):

- (1) Within 30 days or 10 flight cycles (FC), whichever occurs first after the effective date of this AD, and, thereafter, at intervals not to exceed 12 months, accomplish a DET of the weld of each affected part A in accordance with the instructions of the SB.

Corrective Action(s):

- (2) If, during any DET as required by paragraph (1) of this AD, any crack is detected, before next flight, replace the affected part A with a serviceable part, as defined in this AD, in accordance with the instructions of the SB.

Credit:

- (3) DET accomplished on an affected part before the effective date of this AD in accordance with the original issue or revision 1 of Cameron Balloons SB 28 are an acceptable method to comply with the initial requirements of paragraph (1) of this AD for that affected part.

Terminating action:

- (4) Installation on a burner assembly of a serviceable part, as defined in this AD, constitutes terminating action for the repetitive DET as required by paragraph (1) of this AD for that burner assembly.

Modification (affected part B):

- (5) Within 30 days or 10 FC, whichever occurs first after the effective date of this AD, for each affected part B, replace the burner hanger with a serviceable part, as defined in this AD, in accordance with the instructions of the SB.

Parts Installation:

- (6) From the affected date of this AD, do not install an affected part A on any balloon.
- (7) From the affected date of this AD, do not install on any balloon an affected part B, unless the burner assembly is equipped with a serviceable part, as defined in this AD.

Ref. Publications:

Cameron Balloons SB 28 original issue dated 15 January 2020, or Revision 1 dated 24 February 2020, or Revision 2 dated 04 March 2020.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.



2. This AD was posted on 19 May 2020 as PAD 20-083 for consultation until 16 June 2020. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact: Cameron Balloons Ltd., St Johns Street , Bedminster, Bristol BS3 4NH, United Kingdom, Telephone +44 (0)117 9637216, E-mail: technical@cameronballoons.co.uk, Website: <http://www.cameronballoons.co.uk/>.



Service Bulletin 28



1. General

(a) Service Bulletin No:	28
(b) Revision / Date	3 / 03-February-2021
(c) Title:	Stratus Double Burner, Burner Hanger Inspection
(d) Description:	Inspection / Replacement of Stratus Double Burner Hanger.
(e) Applicability:	<p>Manufacturers: Altisph'air, Ballons Libert sprl, Ballonservice & Technik, Balóny Kubíček spol. s.r.o., Ballons Chaize, Cameron Balloons Ltd., Lindstrand Hot Air Balloons Ltd., Lindstrand Technologies, Llopis Balloons, Notheisz HAB, Nouvelle Manufacture d'Aerostats, Schroeder Fire Balloons GmbH, Sup-Air, Ultramagic S.A.</p> <p>TCDS Numbers: Austria BA 009-ACG, EASA.BA.003, EASA.BA.010, EASA.BA.012, EASA.BA.013, EASA.BA.014, EASA.BA.015, EASA.BA.016, EASA.BA.019, EASA.BA.021, EASA.BA.022, EASA.BA.025, EASA.BA.026, EASA.BA.030, EASA.BA.119, EASA.BA.517, EAS.IM.BA.110 and France No.186.</p> <p>Burner Assembly Part Numbers: CB8720 & CB8721.</p>
(f) Effectivity:	All CN where Stratus Double Burners are used; burner serial number up to & including 320.

Note: Applicability= All types and variants to which the change can be applied.
Effectivity = Actual CN or group of CN's to which the bulletin has been/will be applied.

2. Background:

A Stratus burner hanger, CB8504, has failed in service after landing. The burner hanger failed, leaving one burner unit detached from the load frame. Examination of our records shows a small number of similar failures.

The failures appear to be caused by progressive fatigue cracking of the welded joint between the central tube and the end plate of the hanger assembly

An improved version of the hanger was introduced with CB8504 Issue D in 2009 which is stronger and more easily inspected.

3. Compliance (Category) and times: Required within 30 days or 10 flights.

4. Consequences of Non-Compliance (Possible): Failure of the burner hanger may result in one or both cans detaching from the frame, resulting in an unsafe condition.

5. Required Action (s):

1/ Identify the build standard of the burner hanger - see accomplishment instructions section 2; CBL/TN/DCB/3191 Issue B or later issue.

2/ If the burner hanger is identified to be issue C or earlier inspect the hanger for cracks in the weld - see accomplishment instructions Section 3: CBL/TN/DCB/3191 Issue A or later issue.

3/ Should any visible cracks be found further flight with the affected burner is not permitted. Report any observed defects to technical@cameronballoons.co.uk attaching photographs if available. Cracked hangers must not be re-welded. Repair affected burners by replacing the cracked hanger with a new issue D or later burner hanger.

4/ Record the inspection in the aircraft log-book.

5/ For burners with hanger CB8504 issue C or earlier the inspection must be repeated at each annual inspection.

6/ A number of burners were produced in 1995 / 1996 using a doubler plate to reinforce the central part of the hanger bracket (Fig 2). The welded joint is hidden by the doubler plate and therefore impossible to inspect. Hangers of this design must be replaced by a new hanger CB8504-0000 Issue D or later.



Fig 1. Hanger with Weld Crack.



Fig 2. Hanger with doubler plate.

6. *Materials* - See CBL/TN/DCB/3191 Issue A or later

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7. *Other Publications Affected* None

8. Mass (Weight)/Balance: Not affected

9. *Maintenance and Operating Instructions* Not affected

10. *Additional Information*

An improved burner hanger, CB8504-0000 Issue D or later is available for retrofit from Cameron Balloons Ltd.

Fitting of the CB8504-0000 Issue D or later constitutes terminating action for the repetitive inspections required by Section 5 paragraph 5 above.

The contents of this bulletin will be added to the Cameron Balloons Inspection Schedule at its next revision (Maintenance manual Section 6).

This Service Bulletin (from revision 2) is linked to EASA Airworthiness Directive 2021-0042

Compiled by:

Notes:

Date: 03-02-21

Name: D J Cameron

11. *Design Organisation Approval*

Statement of Compliance Verification

I hereby confirm that the instructions identified in this bulletin provide for practical and well-defined installation/inspection methods and when accomplished the product is in conformance with approved design data.

Signed, for and on behalf of Cameron Balloons Ltd.

Chief Airworthiness Engineer

Date: 03-02-21

Name: D Boxall

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Approval Statement

I hereby confirm that these instructions are in compliance with all the applicable airworthiness requirements. The technical content of this document is approved under the authority of DOA nr UK.21J.0140

Signed, for and on behalf of Cameron Balloons Ltd.



PP Head of Design



Date: 03-02-21

Name: D Boxall

Note: If this Service Bulletin is or will become the subject of an Airworthiness Directive, a statement to that effect must be entered in Section 10 of this form.

SB28: Accomplishment Instructions.
Stratus Double Burner; Mounting Hanger Inspection.

CBL/TN/DCB/3191

Issue: B

04/02/2020

D C Boxall



1 BACKGROUND

- 1.1.1 A Stratus Burner hanger CB8504 has failed in service after landing. The burner hanger failed, leaving one burner unit detached from the load frame. The burner was supplied in April 1999 and its history is unknown.
- 1.1.2 Investigation of the Cameron Balloons Problem Report System revealed a small number of similar failures; SB28 is issued as a result.
- 1.1.3 This document provides the accomplishment instructions for SB28.
- 1.1.4 Throughout this document all Maintenance Manual references are to Issue 10 Amendment 4 or higher.
- 1.1.5 The design of the welded hanger assembly was fundamentally revised at Issue D (2009). Only Issue A, B & C components are affected.



Fig 1. Double Stratus Burner Unit
Note failed hanger on the right.



Fig 2. Close-up of weld failure.

2 IDENTIFICATION OF AFFECTED HANGERS.

- 2.1.1 The affected hangers were fitted to double burners with serial numbers 320 or lower. The burner serial number is hand engraved onto one of the hanger end plates. Should the burner serial number be unreadable or missing Cameron Balloons can identify the burner from the manifold block serial numbers (machine engraved onto the upper surface of the burner manifold block).

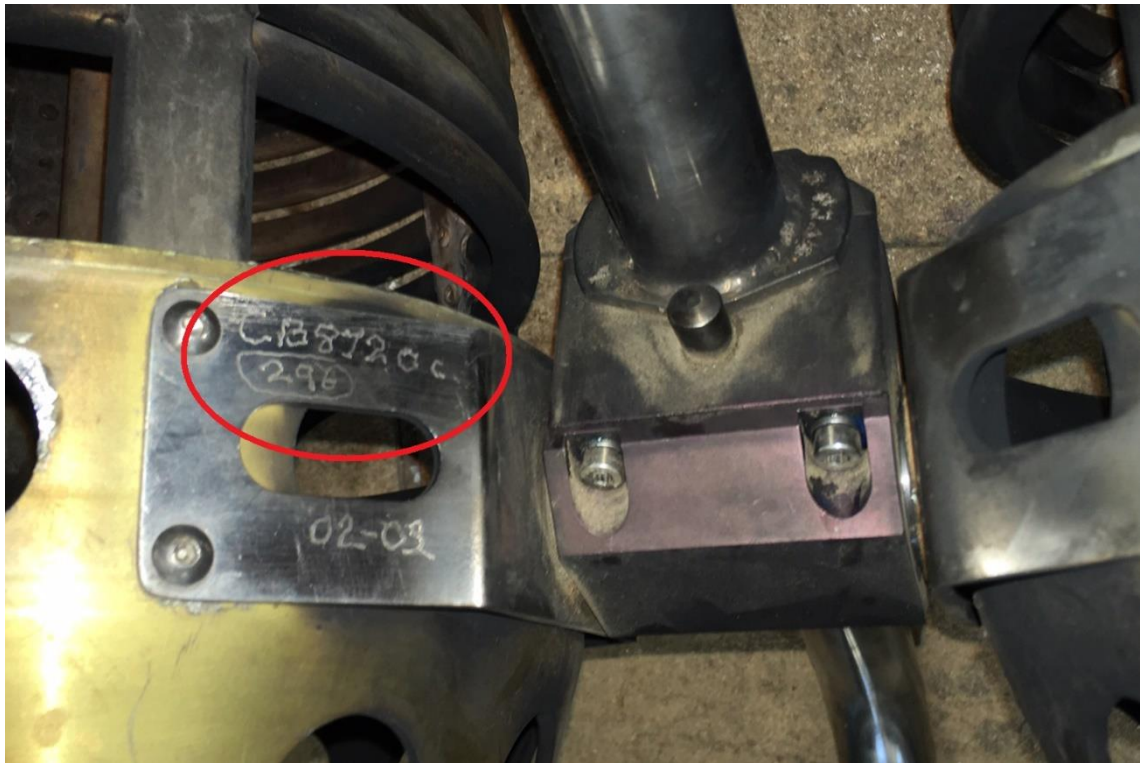


Fig 3. Burner Serial Number (296) & Part Number (CB8720) engraved on the hanger

2.1.2 Affected hangers (Issues A through C) have either no machine engraving or have “Cameron Balloons Limited” machine engraved in the upper right-hand corner of the end plate. Non-affected hangers (Issue D and E) have the text “Cameron Balloons Limited” machine engraved in the lower right-hand corner of the end plate.

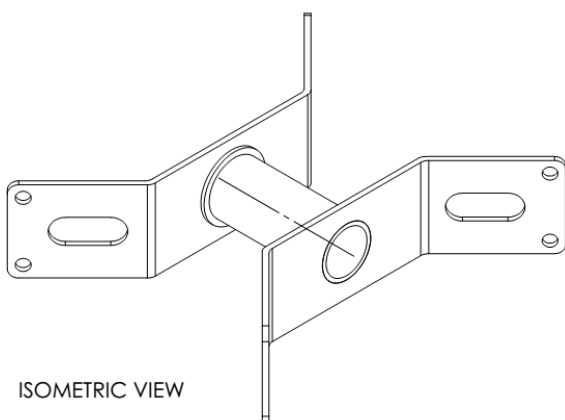


Fig 4. View of Hanger Assembly.

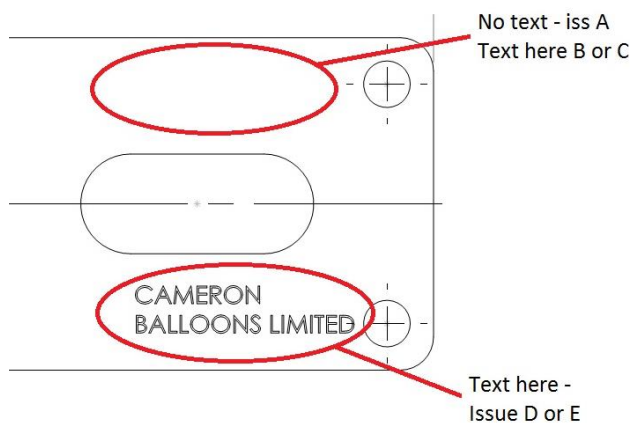


Fig 5. Position of Machine Engraving.

3 INSPECTION.

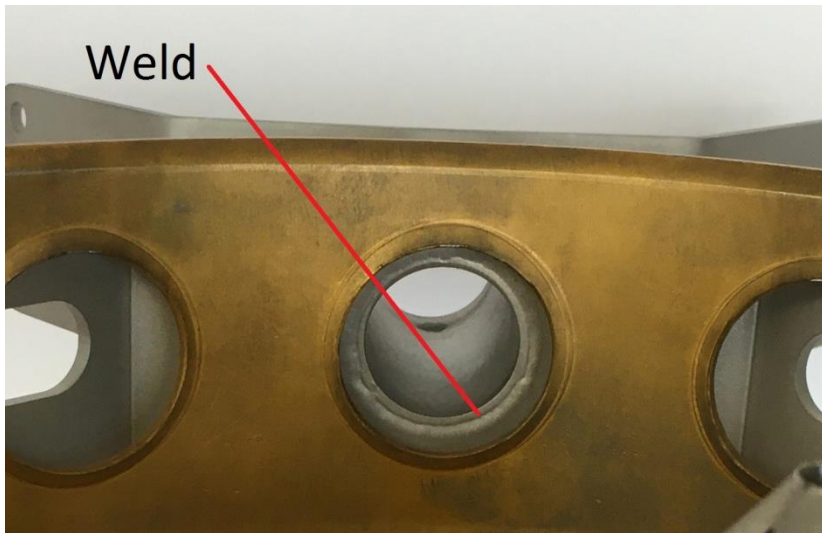


Fig 6. View of the affected weld. Note burner coil removed for clarity.

- 3.1.1 The weld in the end of the hanger can be seen through the holes in the can. A torch and a mirror may be required to give a clear view.
- 3.1.2 Remove any soot or dirt prior to inspection. WD40 or kerosene (paraffin) is the preferred cleaner; some solvent cleaners may damage the finish of the can.
- 3.1.3 Inspect the weld for any signs of cracking. Attempting to move the burner relative to the hanger may assist in making the crack visible.
- 3.1.4 If a clear view cannot be obtained or there is any doubt then the hanger must be removed from the burner. The burner is mounted to the hanger with M5 fasteners CY-0005-1004, CY-0005-1016, and CY-0005-2009. A single M3 screw secures each burner manifold block to the tubular handle.
- 3.1.5 Cracked hangers must be replaced before further flight with a new part CB-8504-0000 Issue D or later. **Cracked hangers must not be re-welded.**

4 DOCUMENTATION

- 4.1.1 Record the inspection in the aircraft log book.
- 4.1.2 Report any cracked hangers to technical@cameronballoons.co.uk including the serial number of the burner (engraved on the hanger end-plate) or the serial numbers of the manifold blocks.

5 APPROVAL

Compiled by:



D Boxall

Approved By:

