	<b>Service Bulletin</b>	
	<b>Flight Design GmbH</b> Zum Tower 4 01917 Kamenz Germany Tel.: +49 (0)3578 37335 0 Fax: +49 (0)3578 37335 69 E-Mail: <a href="mailto:airworthiness@flightdesign.com">airworthiness@flightdesign.com</a>	<b>SB-ASTM-CTLS-13</b> <b>Revision 00</b>
	Date of Initial Publication: <b>04-Aug-2016</b> Publication Date of this Revision: <b>04-Aug-2016</b>	

# Service Bulletin

## Verification of Stabilator Mounting Pivot SB-ASTM-CTLS-13

### Repeating Symbols:

Please pay attention to the following symbols throughout this document emphasizing particular information.

- ▲ **Warning:** Identifies an instruction, which if not followed may cause serious injury or even death.
- **Caution:** Denotes an instruction which if not followed, may severely damage the aircraft or could lead to suspension of warranty.
- **Note:** Information useful for better handling.

## 1 Planning Information

### 1.1 Affected Aircraft

Type: CT;  
 Model: CTLS-LSA;  
 Series: CTLSt-HL-LSA;  
 Serial Number: All;  
 Applicable Countries: Not limited.

### 1.2 Concurrent Documents

- none -


### 1.3 Reason

Customer observed presence of crack on stabilator mounting pivot during maintenance inspection. Observed non-conformance can lead to failure of part during operation. Failure of stabilator mounting pivot during flight can lead to significant difficulties of aircraft control system operation, possible blocking of system which can lead to loss of aircraft control.

CTLSt-HL-LSA series aircraft has another control system design principle than CTLS-LSA aircraft series. Instead of “push-pull” cable used on CTLS-LSA, the control system with stiff steering rods is used on CTLSt-HL-LSA. It is assumed that system without “push-pull” has less control and flight loads damping properties.

Flight Design has decided to mandate inspection of the stabilator mounting pivot of all CTLSt-HL-LSA series aircraft.

- **Note:** CTLS-LSA series aircraft have a different design of stabilator control system, therefore aircraft of this series are not affected.

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#### 1.4 Subject

Inspection of the Stabilator Mounting Pivot conformance. Inspection of stabilator control system and stabilator trim tab control system for absence of play in connections. In case of non-conformance: Removal and new part installation following to manufacturer instructions.

#### 1.5 Compliance

This Service Bulletin requires immediate action.

Compliance must be shown prior to next flight.

**▲ Warning:** Non-compliance with these instructions could result in further damages, personal injuries or death.

#### 1.6 Approval

This SB is approved by the aircraft manufacturer i.a.w. ASTM F2483 for conduct on damaged aircraft as defined in 1.1. Subsequent to complete and correct conduct of this SB the aircraft being repaired will still meet the requirements of the applicable ASTM design and performance specification subsequent to the repair.

#### 1.7 Type of Maintenance

Inspection: Line

Re-Installation, if required: Heavy

#### 1.8 Personnel Qualifications

Aircraft inspector with qualification to conduct an annual inspection, as per national regulations.

#### 1.9 Release to Service

Conduct of this SB must be inspected by an aircraft inspector according to the national applicable regulations for the country of registry of the aircraft.


Conduct of this SB must be logged in the aircraft log book with date and signature of the responsible Person according to national regulations.

Confirmation of Completion of this SB (chapter 4.2) has to be submitted to Flight Design.

#### 1.10 Weight and Balance

The effect to empty aircraft weight and CG is significantly below 0.45 kg (1 lb). Therefore, in compliance with FAA publication AC 43.13-1B reweighing of the aircraft is not required due to this measure alone.

**▲ Warning:** When this exemption has been used already for earlier maintenance events on the aircraft, or when other maintenance events are conducted in parallel and the weight changes of the individual events add up to more than 0.45 kg (1 lb), re-weighing of the aircraft is required for the sum of the effects.

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### **1.11 References**

#### 1. Drawings:

- none -

#### 2. Documents:

[1] AC 0480 0002, Rev.00, CT / CTLS-HL Airplane Maintenance Manual (AMM).

### **1.12 Superseded Documents**

- none -

### **1.13 Contact Details**

For further information on conduct of this SB, or to report any Safety of Flight or Service Difficulty issues contact your Distributor responsible for your country. Your Distributor can be located via the Flight Design website: [www.flightdesign.com](http://www.flightdesign.com) under "Dealer Location".

In cases where the local distributor is not known or available contact Flight Design GmbH directly: [customer.care@flightdesign.com](mailto:customer.care@flightdesign.com).

### **1.14 Disclaimer**

This Service Bulletin has been generated with utmost care. Nevertheless errors and misunderstandings can never be fully excluded. In case of any doubts the applicant of this Service Bulletin is requested to contact Flight Design immediately to clarify the issue.

## **2 Resources**

In case installation of new part is required, refer to AMM or concurrent SI that will be provided to you by Flight Design upon request.

### **2.1 Workshop Conditions**

Dry workshop; for inspection purposes with temperatures above freezing; for re-installation of the part with temperatures above 15°C.

### **2.2 Parts**


- none -

### **2.3 Materials**

In case installation of new part is required, refer to AMM [1] (chapter 4.3.5.2).

### **2.4 Tools**

1. Flashlight
2. Inspection mirror

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## 2.5 Special tools

In case installation of new part is required, refer to AMM [1] (chapter 4.3.5.1).

## 2.6 Manpower

The inspection can be performed within approximately 0,5 hours (working time).

In case required, the new part installation can be performed within approximately 5 hours (working time). The working time includes:

- Removal of the old part;
- Installation of the new part;
- Adjustment of system.

The working time does not include:

- Preparations.

## 2.7 Cost

Not applicable

## 3 Instructions

In case installation of new part is required, refer to AMM [1] (chapter 4.3.5.4-4.3.5.7).

### 3.1 General

This chapter provides extended explanations for the sequential inspection steps.

### 3.2 General Procedures

- none -

### 3.3 Detailed Procedure


#### 3.3.1 Securing of the Aircraft

Make sure the aircraft is properly parked and wheel chocks are applied.

Make sure the safety pin is inserted to the activation handle of the Airframe Emergency Parachute System, so that the system cannot be accidentally deployed.

#### 3.3.2 Inspection of Stabilator Mounting Pivot

Stabilator mounting pivot, as part of aircraft stabilator control system, is located in the rear side of fuselage (Fig.1).

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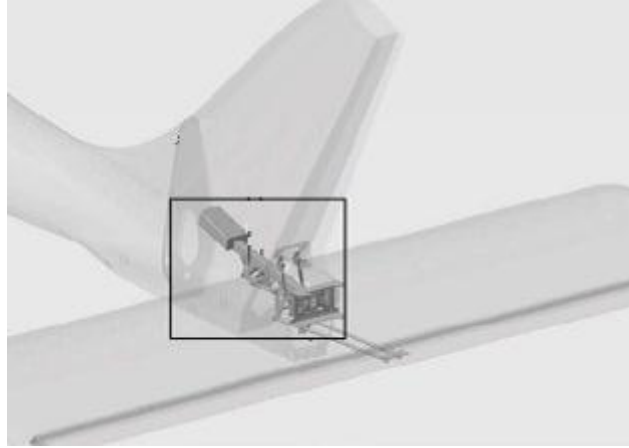



Fig. 1 – Sample view of the location of the stabilator mounting pivot on aircraft.



Fig. 2 – General view to area of stabilator mounting pivot to be inspected.

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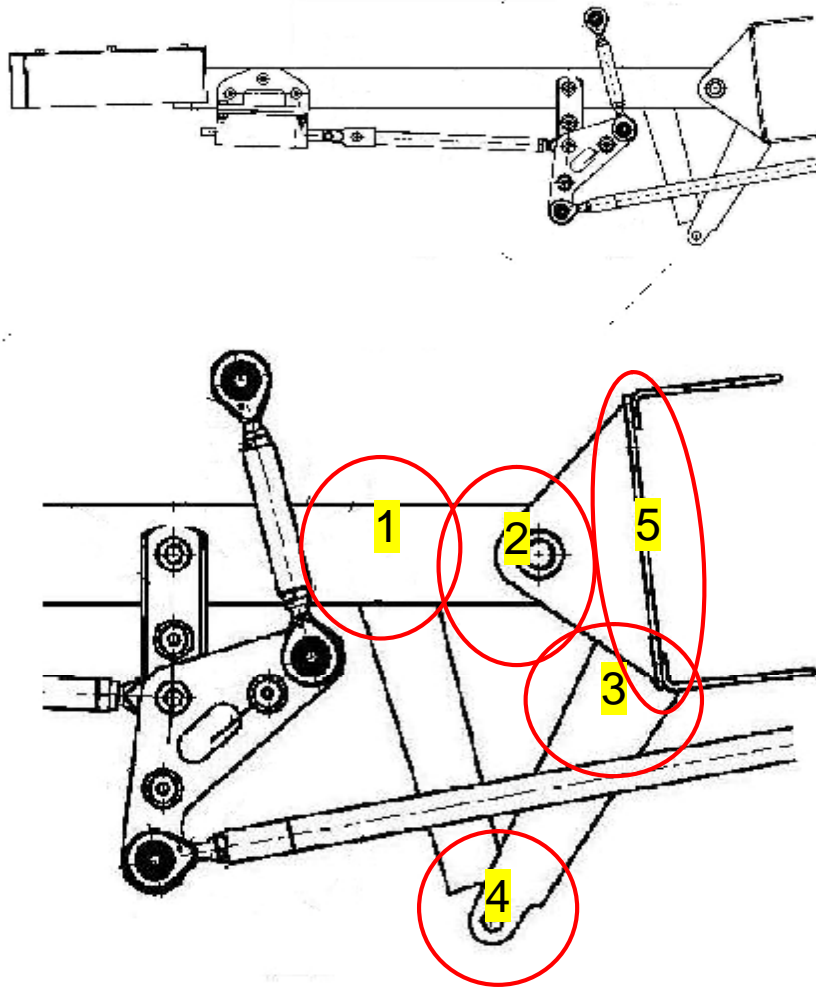



Fig. 3 – Areas of stabilator mounting pivot to be inspected (shown on the sample of stabilator mounting pivot with mechanical trim option).

Part is in normal condition when there is no visible crack on part surface and on welding seams in specified areas (Fig. 3).

Part is **not non-conformant** when observed visible cracks on part surface (in specified areas, see Fig. 3) or/and observed material cracks on welding seams of part.

Conduct following inspection steps (use flashlight and inspection mirror when required):

- Check area of connection of pivot control lever to pivot arm (area 1, according Fig.3);
- Check area of connection of pivot arm and pivot axis support (area 2, according Fig.3);
- Check area of connection of pivot axis support and pivot control lever, rear side (area 3, according Fig.3);
- Check area of pivot control lever (area 4, according Fig.3);

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- Check area of pivot axis support (area 5, according Fig.3), especially in corners of part (from left and right side of part).



Fig. 4 – Inspection of stabilator mounting pivot.

### 3.3.3 In Case of Part Non-Conformance

**▲ Warning:** Do the following steps only when the aircraft is already at a workshop adequately qualified for the re-installation of the part! The aircraft cannot be flown with the part removed.


In case of stabilator mounting pivot non-conformance, and when the aircraft is at a workshop adequately qualified for the re-installation of the part, remove the non-conformant part according to the instructions shown in aircraft maintenance manual [1], chapter 4.3.5.4.

- **Note:** In case of doubt – contact manufacturer first before removal.

After removal of part please do a picture documentation of the non-conformant part condition: Use the attached feedback form to contact Flight Design for further information.

### 3.3.4 Verification of Stabilator and Stabilator Trim Tab Control System

Prior to completion of this SB, and after inspection of stabilator mounting pivot condition, verify that the stabilator control system and stabilator trim tab system has no playing in system parts connections.

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**▲ Warning:** Presence of play in control system negatively affect on control system stiffness and can lead to generation of unacceptable vibrations of control surfaces and even flutter of control surfaces.

Inspection of stabilator control system and stabilator trim tab system can be done following steps shown in aircraft maintenance manual [1], chapter 4.3.5.7.

Use the attached feedback form to provide short summary report inspection of systems.

### **3.3.5 Reporting of the Inspection Result**

Use the attached response form to provide feedback to Flight Design, in case you observe non-conformance.

### **3.3.6 Completion of the Inspection**

In case you have observed a conformance of part and system, make sure that all tools are fully removed from the inspection area.

## **3.4 Documentation**

Conduct of this SB must be logged in the aircraft log book with date and signature of the responsible Person conducting the SB. National regulations have to be considered.

## **4 Appendix**

### **4.1 Changes to Previous Revision**


Original Issue – no changes

### **4.2 Feedback Template**

Use the subsequent feedback form **to report a non-conformance** to Flight Design.

**Warning:** This SB is only considered complied-with for the respective aircraft, when a non-conformance is reported to Flight Design, and when the subsequent instructions provided by Flight Design are implemented with successful final inspection.



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### Feedback Form

Submission can be done by mail, Fax or as scanned copy by e-mail to Flight Design GmbH (see header of this page) or to your national Flight Design Distributor who will forward the information for you.

#### Information to obtain spare parts

Aircraft Type: CT  
 Model / Series: CTLS-LSA / CTLSst-HL-LSA  
 Serial Number: \_\_\_\_\_  
 Aircraft Owner, Name and Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Spare stabilator mounting pivot required Yes  No   
 Number of Pictures attached:

Observations made (use separate page, if needed):  
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### Confirmation

Conduct of this SB has been done at the following workshop:

\_\_\_\_\_ Responsible Mechanic:  
 \_\_\_\_\_

Date: \_\_\_\_\_ Location: \_\_\_\_\_ Signature: \_\_\_\_\_

**Warning:** As long as the form has not been submitted to Flight Design, this SB is considered not complied-with for the respective aircraft.