 FLIGHT DESIGN <small>LIFTAIR®</small>	<h2>Service Bulletin</h2>
Flight Design general aviation GmbH Am Flugplatz 3, D-99820 Hørselberg Hainich, Airfield Eisenach-Kindel Web: www.flightdesign.com ; Phone: +49 36920 7530-10 E-mail: airworthiness@flightdesign.com	SB-ASTM-CTLS-16, Revision 00 Date of Initial Publication: 22-Nov-2019 Publication Date of this Revision: 22-Nov-2019

Service Bulletin

Installation of Starter Solenoid on CTLS with Large SLA Battery SB-ASTM-CTLS-16

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
 Serial Number: F-10-01-01 F-10-01-02, F-10-01-03, F-10-02-07, F-10-02-08,
 F-10-06-04, F-10-07-05, F-10-07-06, F-10-07-07; F-10-08-05,
 F-10-08-06, F-10-08-11, F-10-08-12, F-10-11-07, F-10-12-03,
 F-11-04-05, F-11-04-11, F-11-04-13, F-11-05-02, F-11-05-11,
 F-11-07-03- F-11-07-06, F-11-09-04, F-11-09-12, F-11-10-01,
 F-11-10-03, F-11-10-06, F-11-10-07, F-12-02-09, F-12-02-10,
 F-12-02-10, F-12-04-09, F-13-04-08, F-14-04-03, F-14-04-06,
 F-16-06-46
 Other aircraft equipped with large battery may be affected as well.

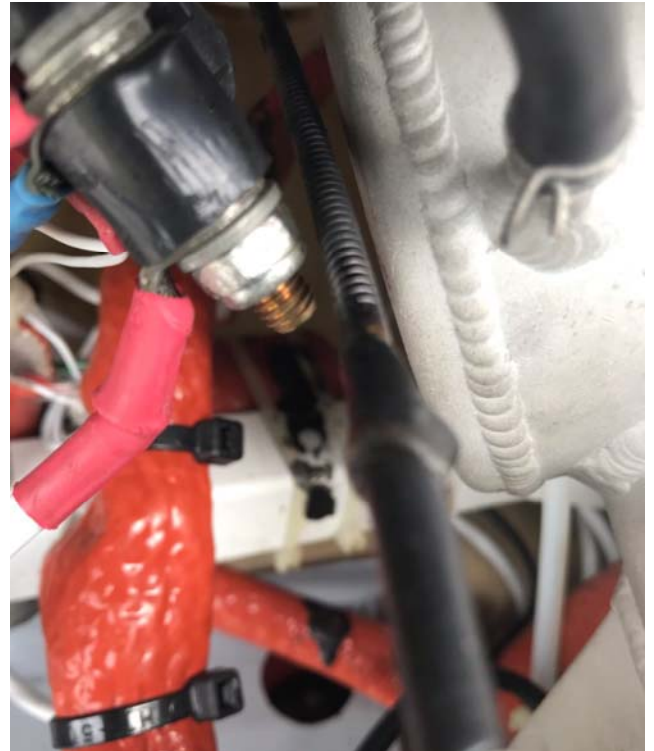
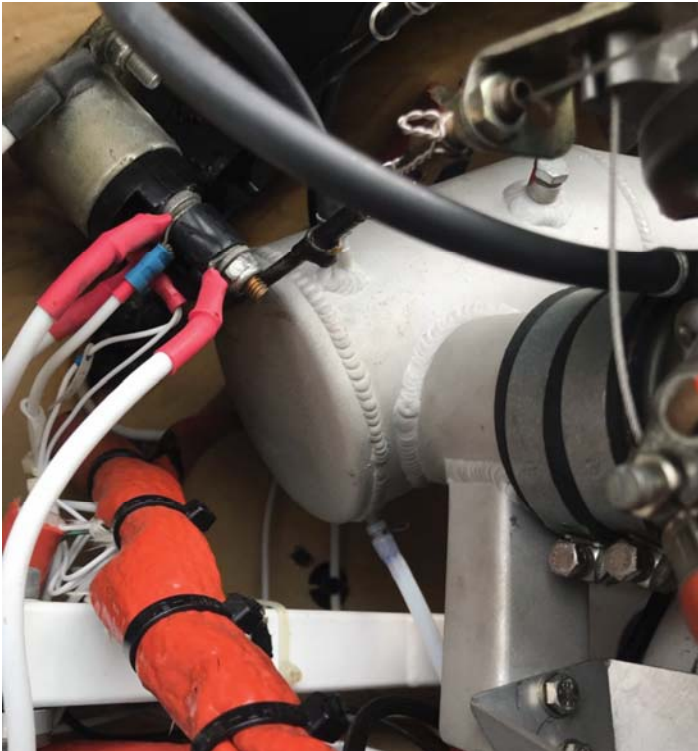
Applicable Countries: Not limited.

1.2 Concurrent Documents

- none -

1.3 Reason

Some CTLS are equipped with a larger sealed lead acid battery. This requires a different location of the starter solenoid. Under certain unfavorable combination of tolerances, contact of the starter solenoid may contact the throttle cable housing, which in return gets worn through over time. An unprotected electric short circuit may be the result.




incorrect installation of starter solenoid, collision with throttle cable housing

This kind of misaligned installation should have been observed and corrected at the factory or during any annual condition inspection.

1.4 Subject

The starter solenoid must be installed in a correct position. This may be accomplished either by using existing tolerances or by help of an adaptor plate.

1. Inspection for applicability
2. Correction of installation of starter solenoid

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1.5 Compliance

Inspection: before the next flight.

Correction: without signs of wear and tear: within next 10 hours of operation
 with signs of wear and tear: before 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 F2483-05 for conduct on affected 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 or pilot/owner maintenance
 Correction: Heavy

1.8 Personnel Qualifications

Inspection: A&P Mechanic, LSA Repairman, Owner/Operator with Sport Pilot certification or higher, Part 145 Repair Station, Flight Design Service Center
 Correction: A&P Mechanic, LSA Repairman, Owner/Operator with Sport Pilot certification or higher, Part 145 Repair Station, Flight Design Service Center

1.9 Release to Service


Conduct of this SB must be logged in the aircraft documentation by A&P Mechanic, LSA Repairman, Owner/Operator with Sport Pilot certification or higher, Part 145 Repair Station, or a Flight Design Service Center.

1.10 Weight and Balance

- no effect –

1.11 References

- none –

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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 general aviation website: www.flightdesign.com under “Dealer Location”.

In cases where the local distributor is not known or available contact Flight Design general aviation GmbH directly: 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

2.1 Workshop Conditions

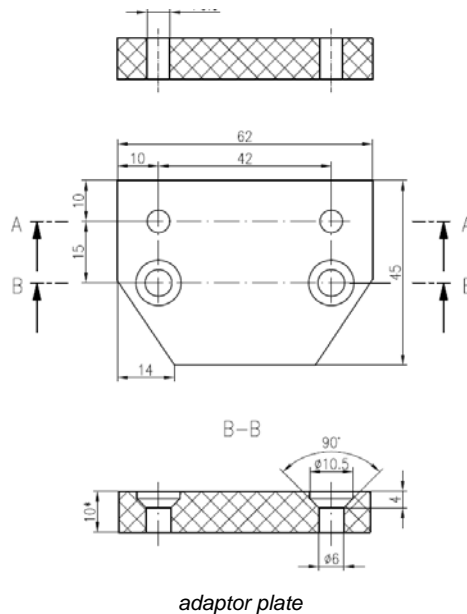
No specific requirements.

2.2 Parts

- none –

2.3 Materials

None-conductive material for preparation of an adaptor plate, if required, e.g. GFRP or phenolic material with thickness 7-10 mm (1/4-5/8 inch). Refer to the drawing below.



2.4 Tools

standard metric tools

2.5 Special Tools

- none -

2.6 Manpower

Inspection: 10min

Correction: 2 hours

3 Instructions

- **Note:** Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements.

3.1 General

This chapter provides extended explanation for the inspection and/or correction of the misaligned installation of the starter solenoid.

3.2 Inspection Procedures

- Open the cowling
- Identify the throttle cable housing of the right carburetor
- Identify the starter solenoid
- Determine the distance between Bowden wire and contacts of the solenoid
- Distance should be at least 15mm-1/2 inch (a finger should fit in between)



correct installation of starter solenoid

3.3 Procedure for Correction

- Disconnect battery
- Detach solenoid from firewall
- Turn solenoid by 180 degrees (need to detach starter wiring temporarily)
- If needed prepare an adaptor plate to relocate the solenoid for correct distance to throttle cable housing.
- Properly attach solenoid and starter wiring.
- Reconnect battery.
- Close cowling.