Service Bulletin

BRS Harness and Pickup Collar Verification

SB-ASTM-CTSW-17
SB-ASTM-CTLS-20
SB-ELA-CTLS-004

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:	all CT models
Serial Number:	all S/N equipped with a BRS 6-1350HS recovery system (canister type)
Applicable Countries:	not limited

1.2 Concurrent Documents

Depending on the aircraft model, the following manuals are applicable

- PARACHUTE INSTALLATION MANUAL BRS 1350 HS Flight Design GmbH, CTSW Aircraft
- PARACHUTE INSTALLATION MANUAL BRS 1350 HS Flight Design GmbH, CTLS Aircraft
- BRS Service Bulletin SB 07-03 Revision 4 (published by BRS Aerospace Inc.)

Manuals have been included in the document package during initial handover from the dealer to the first customer. In case the manuals are unavailable for the current owner, contact Flight Design: customer.care@flightdesign.com

1.3 Reason

Flight Design and BRS Aerospace have received reports that on several aircraft, mechanics or repairmen have not been following the parachute (rescue system) installation instructions correctly when reinstalling the parachute system after a repack and/or rocket replacement. This has created an unsafe condition on several aircraft including parachute bridles stowed on top of the canister blocking the parachute, incorrect rocket pickup collar installation, and bridles caught in the main attachment carabiner. Flight Design is issuing this Service Bulletin requiring owners and service providers to inspect their aircraft for these errors which may have occurred.

1.4 Subject

Inspect the parachute installation using approved re-installation directions from Flight Design/BRS and a BRS Service Bulletin specified to use for review in this Service Bulletin. If any part of the parachute installation is found to be installed incorrectly, corrective action must be made.

1.5 Compliance

This Service Bulletin requires immediate action.

The Owner/Operator visual inspection must be completed prior to next flight.

If installation errors are found, corrective action must be performed. It depends on the national certification if the aircraft may be ferried to a capable mechanic or service center. If permitted, it is within the responsibility of the owner/operator to do so. Keep in mind that the recovery is inoperative!

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

▲**Warning:** With an incorrectly installed of the recovery system, the system is inoperative and cannot protect you in case it is needed. An incorrectly installed recovery system a release of the system will fail.

1.6 Approval

For ASTM-LSA or Ultralight aircraft

This SB is approved by the aircraft manufacturer i.a.w. ASTM F3198 for conduct on aircraft as defined in 1.1. Subsequent to complete and correct conduct of this SB the aircraft will still meet the requirements of the applicable ASTM design and performance specification.

For EASA certified aircraft or aircraft operated under EASA permit to fly

The technical content of this document is approved under the authority of the DOA ref. EASA. 21J.416.

1.7 Type of Maintenance

Line

1.8 Personnel Qualifications

For the initial visual inspection

- owner/operator

If installation errors are found, corrective action and compliance require national maintenance and inspection qualification as applicable for heavy maintenance.

- general: national requirements/regulations apply
- US LSA aircraft only: Repairman, Light Sport Aircraft-Maintenance (RLSA-M) – holds a repairman certificate (light sport aircraft) with a maintenance rating, A&P, IA or an FAA repair station.

1.9 Release to Service

If no installation errors are found:

- Conduct of the visual inspection can be logged into the aircraft logbook with date by the Owner/Operator.

If installation errors are found, corrective action and compliance required:

- 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.

1.10 Weight and Balance

none

1.11 References

BRS/Flight Design Service Alert SA-ASTM-CTLS-05

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

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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

The aircraft can be visually inspected in a hangar but you will need a good source of light and a mechanic’s mirror to inspect the harness bundle and carabiner on the roof and of the baggage area. Pad the floor where you will be kneeling as this might take some time to properly observe the installation.

2.2 Parts

Replacement aluminum screws for BRS rocket pickup collar if the component is incorrectly installed.

2.3 Materials

Thin Ty Wraps or Cable Ties for securing the harness bundle if needed.

2.4 Tools

Standard mechanic’s metric hand tools if the installation requires correction.

2.5 Special Tools

none

2.6 Manpower

The described task can be performed within approximately 30 minutes to 2 hours (working time).

The working time includes:

- Reading this Service Bulletin and the supplemental information provided (30 minutes) to correcting a misplaced harness bundle or correcting a mis-installed BRS Rocket pickup collar (as much as 2 hours).

2.7 Cost

not applicable

3 Instructions

3.1 General

Have the applicable installation guide available (see section 1.2), as well as the BRS/Flight Design Service Alert SA-ASTM-CTLS-05. Open the baggage doors on your aircraft. Using a flashlight or a shop light, inspect the area at the top of the BRS canister. Make certain that the main harness bundle is clear of the canister.

This bundle is to the right side of the canister on the CTSW and in front (towards the aircraft direction of flight) on the CTLS series.

Check the large carabiner that attaches the harnesses to the system is fully threaded, closed and no part of the harness is trapped in the carabiner. Make sure all of the required harness end loops are in the carabiner.

Make certain that the rear harness(es), one on the CTSW and two on the CTLS are correctly attached to the main gear leg on the CTSW or the two brackets on the CTLS as shown in the installation directions.

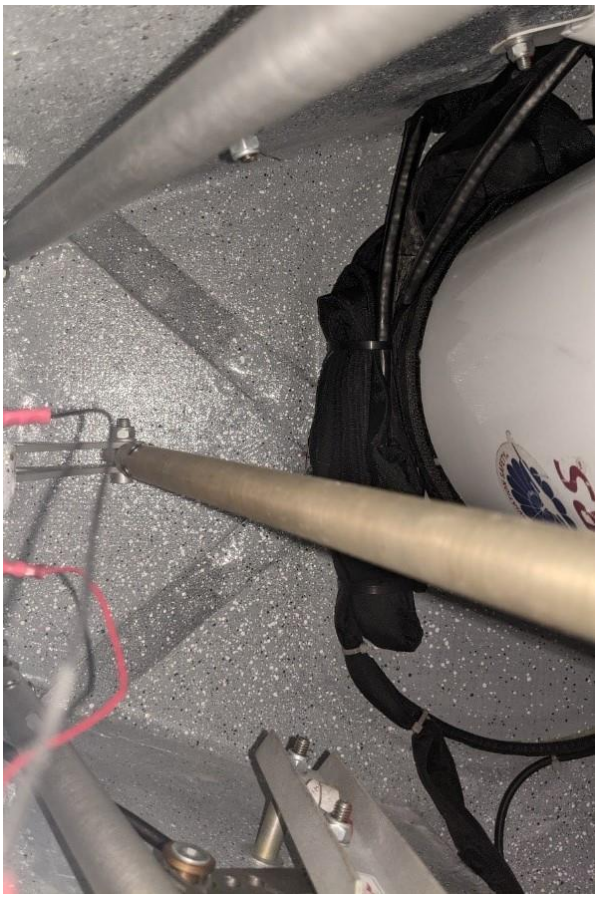

Fig 1

incorrectly installed harness
early model CTLS (2008 … 2009)

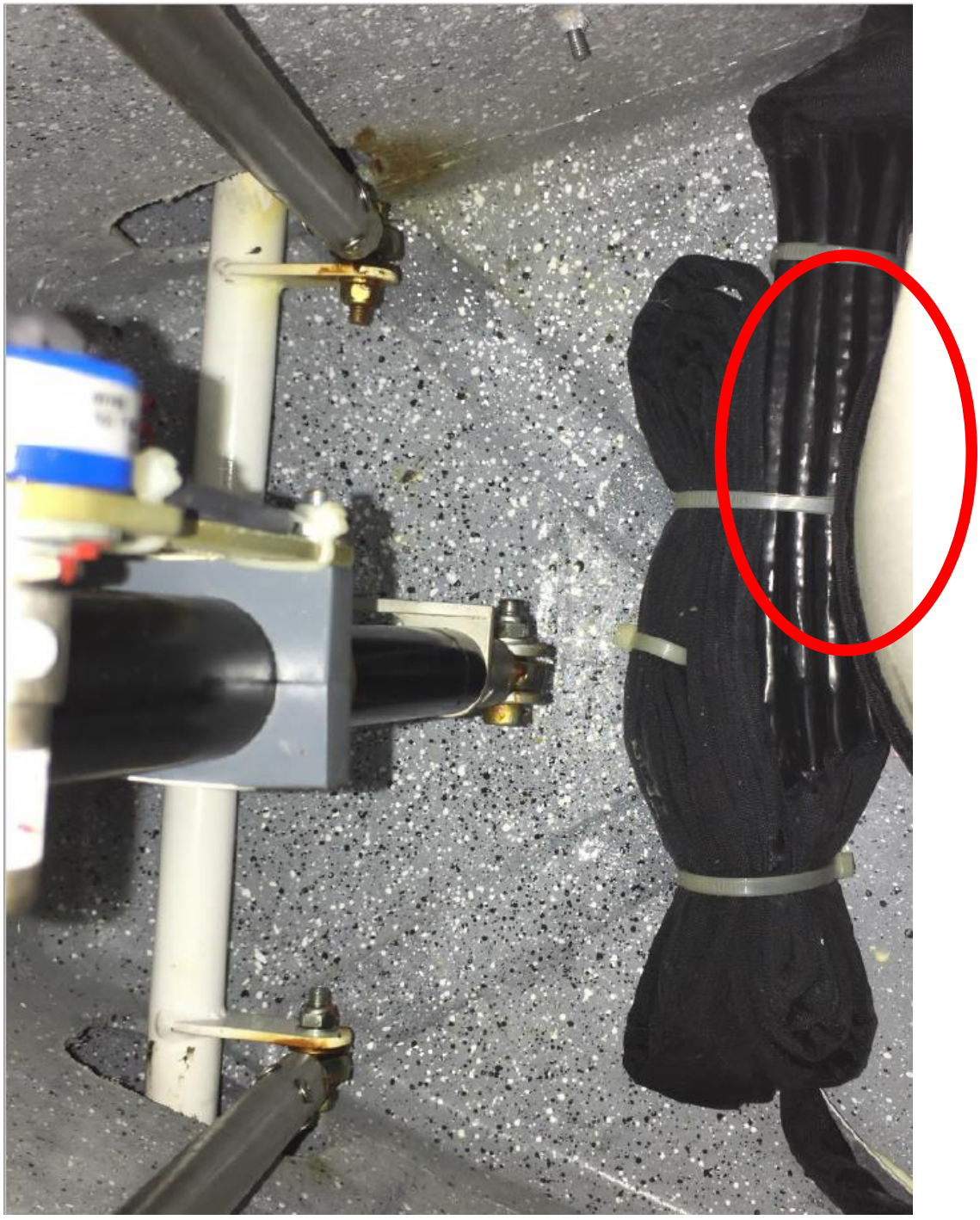

Fig 2

incorrectly installed harness
later model CTLS (2009 and on)

Please notice the way that the harness bundle is on top of the canister on both of these pictures. The harness bundle must be in front of (to the left in these pictures-the direction of flight is to the left).

Next, referring to the BRS/Flight Design Service Alert SA-ASTM-CTLS-05 make certain that the rocket pickup collar is oriented correctly as shown in the Service Alert. If your aircraft is a CTLS, be sure that there is clearance between the pickup collar arm and the parachute mount structure.

3.2 General Procedures

none

3.3 Detailed Procedure

Step 1. The inspection

To begin with, there are three main items to look for during the inspection of the BRS installation of your aircraft. First is that the top of the BRS canister is clear of and not overlapping the hatch that is located on the top of the fuselage. So that if the parachute is extracted out of the hatch it will not hit the edge of the hatch.

Next check that the harness for the parachute which is ty-wrapped into a bundle (which will be called harness bundle) is clear of the top of the canister and is on the outside of the plastic edge protector found around the edge of the hatch.

Make certain that the large carabiner is fully threaded and closed tightly, that there is no part of the harness caught in the threads and is clear of the canister.

Then check that the orientation of the BRS rocket pickup collar installation matches the correct installation shown in the Flight Design/BRS Service Alert SA-ASTM-CTLS-05. Specifically, that the arms or prongs of the collar are pointing downward and the orientation as specified is correct.

Finally, check that the Rocket pickup collar is clear of the white tubular structure that mounts the parachute canister to the airframe. There must be 6mm or ¼" clearance between pickup collar and structure.

Step 2. Shimming of the Rocket Attachment

If the BRS canister does not clear the edge of the hatch, then the canister must be shimmed using appropriate numbers of washers on the bolts that mount the canister to the tubular structure of the BRS mount.

Step 3. Relocating Harness

If the harness bundle is on top of the canister you must secure it further forward by moving the bundle behind the plastic edge protector of the hatch and securing it with ty-wraps using the small slots cut into the edge of the hatch hole in the fuselage. If you cannot move the bundle behind, you can also move it slightly more to the left-hand side towards the carabiner as shown in Fig 3.

Fig 3 (Note: edge protection not installed in order to clearly show composite edge)

proper installation of harness bundle

Step 4. Rocket Pickup Collar

If the BRS rocket pickup collar is incorrectly mounted, you must contact BRS support to get replacement aluminum mounting screws for reinstalling the pickup collar correctly as shown in the Flight Design/BRS Service Alert SA-ASTM-CTLS-05 pickup collar HS 1350.

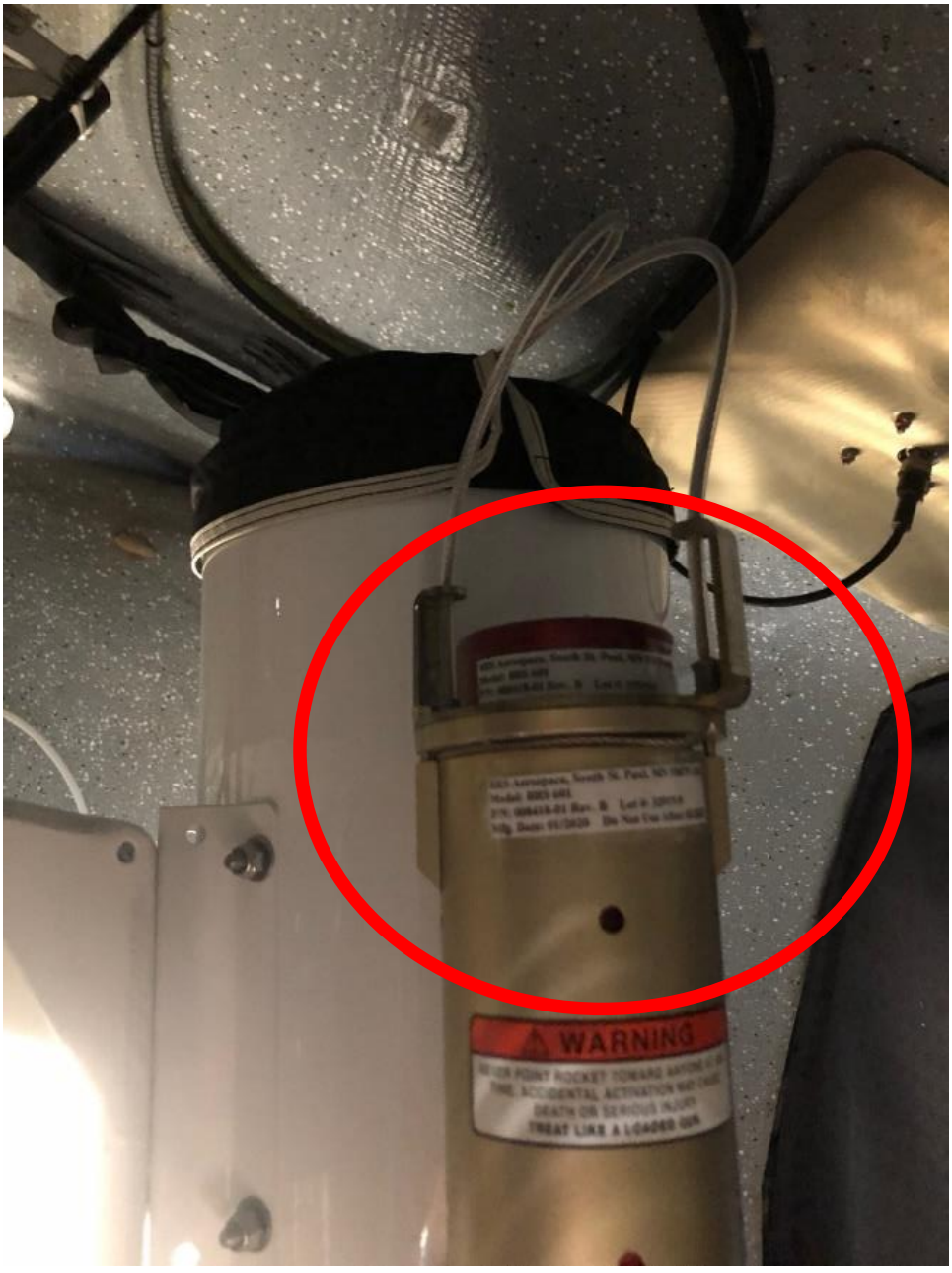

Fig 4

Mis-installed collar on CTSW.
Collar mounted in reverse direction (upside down).

Fig 5

Properly installed collar on CTLS. Cables swing toward BRS canister and are not twisted.

Step 5

Make certain that there is clearance between the BRS rocket pickup collar and the white tubular structure mounting as shown in Fig 6.

Fig 6

Correctly installed collar on CTLS.
Proper clearance between collar and tubular structure mounting

Step 5

Make certain that the carabiner is properly mounted and threaded tight. Make sure there no part of the harness bundle of straps caught in the threads.

Fig 7

open carabiner (incorrect!!!)

Fig 8

closed carabiner (properly installed)

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.