

SPORT AIRCRAFT WORKS, INC.
6444 52nd TERRACE
PALM CITY, FL 34991

SAFETY DIRECTIVE -MANDATORY-

NO: CZAW-SD-SC-009

DATE: 2010/07/26

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MODELS AFFECTED: SPORTCRUISER: All SLSA Sport Cruisers and Experimental Kits built under Czech Aircraft Works (CZAW).

SUBJECT: SEAT BELT SHOULDER HARNESS REPLACEMENT

DESCRIPTION: The FAA/NTSB recently concluded the factual portion of an accident investigation report, **CASE NUMBER: CHI08FA196**, involving a CZAW Sport Cruiser. In an effort to be more proactive concerning the safety of all CZAW Sport Cruiser operators and pilots, Sport Aircraft Works is issuing a mandatory seat-belt shoulder harness replacement for the entire US fleet of Czech Aircraft Works (CZAW) Sport Cruisers. It is also recommending the seat-belt shoulder harness replacement to all other Sport Cruiser kits in the world-wide fleet.

The newly recommended seat belts are made identically to the same Part 23 General Aviation TSO c-22-f standards. Although the new seat-belt shoulder harness restraint system is a non TSO'd part, it meets and exceeds the standards set forth by the ASTM. The harness is superior in construction, performance and strength relative to the old harness used in the Sport Cruiser models, including the Sport Cruisers that are being shipped today by other manufacturers. Important safety considerations and highlights for the new seat belt shoulder harness restraint system are as follows:

- Mil-Spec webbing is used and rated for a minimum breaking strength of 5500 lbs
- Average breaking strength tested and verified at 7858 lbs. Well above the current ASTM standard
- Same webbing material used for the seat belt and the shoulder harness.
- Load applied at the apex of the Y in a much different manner between the two designs. (current design is much more prone to failure at this point. The loading will not evenly spread and will focus the load in the central point which will cause premature failure.
- Two stitch patterns are used at the apex in order to add strength, stiffen and allow the load to be applied evenly.
- Seat belts are tested to be able to carry the full load assuming no shoulder harness.
- Shoulder harness is also tested for the ability to hold the entire load.

The cost of the seat belts is not covered under warranty. The seat-belt shoulder harness restraint system will need to be ordered directly from Sport Aircraft Works to insure the belts are in compliance with the TSO c-22-f specification and the Safety Directive SD-SC-009. They may not be obtained anywhere else.

Sport Aircraft Works, Inc. has assembled a complete turnkey solution to help its CZAW Sport Cruiser customers with the retrofit installation of the seat-belt shoulder restraint harness. The procedure is outlined and explained in detail in the following paragraphs below.

For more information about this and all other important Safety Directives issued regarding the CZAW Sport Cruiser, please contact **Susan Adams** of **Sport Aircraft Works Inc.** at **(772) 223-8915** at your earliest convenience.

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INSTALLTION PROCEDURES:

1. Three (3) bolts are used to secure the seat-belt shoulder harness to the airframe on each side. Uninstall all the attachment bolts that secure the existing harness from the airframe. One can start by removing the rear attachment bolt of each harness, located in photo Figure 1.

NOTE: Make sure not to lose the insert shims that are installed with the harness during the disassembly. There is no particular order in which bolt to remove first.



Figure 1

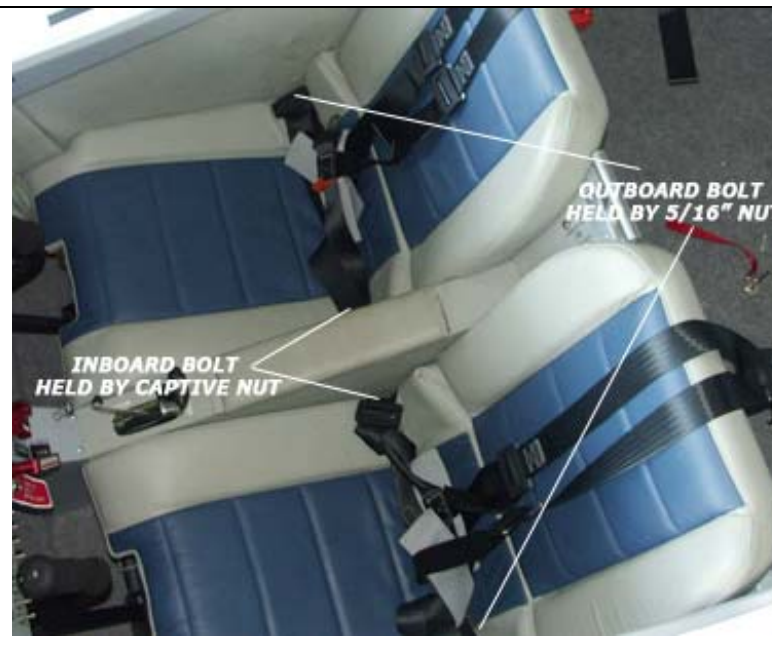


Figure 2



Figure 3



Figure 4

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INSTALLTION PROCEDURES: (continued)

2. Next remove the inboard lap belt bolt, located in photo Figure 2. This bolt is held with a basket nut for easy removal.

3. Removal of the outboard lap belt bolt located in photo Figures 2-3 will be the most difficult nut and bolt to remove since its fastener nut is located in the vicinity of where the wing attaches on the outside area of the airframe. Take a moment to review installation photos. Photo Figure 3 shows the location of a small access hole that must be cut from the lower wing skin. Great care must be taken to gently remove the glue attaching the rubber seal that runs along the edge of the wing skin. This can be done with a sharp plastic scraper and inserted just enough to reveal the inboard edge of the skin. Cut the glue away until you can push the rubber seal to allow access for the next operation of cutting the skin.



Figure 5(a)



Figure 5(b)

4. Mark a small rectangular pattern 7/8" long and no wider than the rubber seal. Use a small grinding rotary file to slowly remove the outlined metal for best results. Pay close attention while grinding the skin not to protrude too far into the wing cavity as this could damage wires or other equipment. After cutting the rectangular hole, remove any burrs that have formed along the cut edges. This hole should now allow access to the 5/16" nut holding the seat-belt nut fastener. Photo Figure 4 shows the access opening after cutting the access hole.

5. Photo Figures 5(a) and 5(b) shows the wrench inserted into the hole for nut removal. A small piece of tape placed over the box end of the wrench should allow you to capture the nut for removal. Photo Figure 6 shows this method which is the best way to capture the nut.

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INSTALLTION PROCEDURES: (continued)

6. Prepare the new seatbelts shown in photo Figure 7. **NOTE TO INSTALLER:** Only seat belts with the part number CZAW 2894 are approved for this Safety Directive as this part has been guaranteed and approved to be constructed using TSO c-22-f as a basis for its design, construction and testing. Refer to photo Figure 8 for label description and part authenticity verification. No other seat belt shoulder harness restraint system may be used to fulfill the obligation of this Safety Directive under any circumstances.



Figure 6



Figure 7



Figure 8



Figure 9

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INSTALLTION PROCEDURES: (continued)

7. Photo Figure 9 shows the new nut going back with a piece of tape holding it in place.
8. Reinstall all bolts with **NEW** nuts in original positions.
9. Reattach rubber seal with clear RTV or contact cement.
10. Make log book entry. This safety Directive must be carried with and accompany the Maintenance logbooks at all times. Failure to so will be in direct violation of the stated rules set for the by the FAA.