



# TECHNICAL BULLETIN

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tel: 00 420 572 543 456  
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NO: TB-SC-FRA-004

DATE: 2008/06/15

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<b>MODEL AFFECTED:</b>	ALL SPORTCRUISER SERIAL NUMBERS
<b>SUBJECT:</b>	FUEL-TANK FILLER CAP SWELLING
<b>ASSEMBLED AIRCRAFT AFFECTED:</b>	Due to the potential nature and frequency of this problem, this Technical Bulletin can affect all SportCruiser models using Automotive/MOGAS Type fuels.
<b>COMPLIANCE:</b>	Czech Aircraft Works recommends accomplishment of this bulletin IF the effects of fuel additives such as ethanol and other chemicals are affecting the normal operation of the Fuel-cap components or seals.

## DESCRIPTION:

As a result of data collected from the field this technical bulletin has been developed to help address the potential problems that may arise as a result from fuel additives, ethanol, and or other chemicals that are introduced into the SportCruiser fuel storage system, and thereby causing the Fuel-cap components and/or seals to swell. Operators have reported that the Fuel-cap becomes difficult to open and close to the point where tools are needed to aid in the rotating of the cap's locking tab during removal or refastening of the Fuel-cap. A simple modification to the cap will resolve this issue.

## APPROVAL:

Sport Aircraft Works INC. authorizes alteration/installation of the following equipment on all SportCruiser's that are having difficulty with swelling of Fuel-cap components and /or seals as a result from fuel additives and other chemicals introduced into the fuel system. The engineering design aspects of this bulletin are Czech Aircraft Works s.r.o approved.

All equipment will be installed in accordance with the manufacturer's written instructions and diagrams. Such diagrams and instructions must be kept permanently with the owner's Aircraft's Maintenance Manual.

### Affidavit of ASTM Compliance;

I certify that the installation of the equipment described and outlined in the Technical Bulletin TB-SC-FRA-004 will not alter the applicable ASTM design and performance of this aircraft.

*Dan Defelici – Czech Aircraft Works Authorized Technical Representative*



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## **MANPOWER:**

Approximately 1.5 hour(s) of labor is required to complete this technical bulletin. Man-hours may vary with personnel and facilities available.

## **WARRANTY:**

No Warranty Coverage is available for this modification.

## **MATERIAL: NONE**

**SPECIAL TOOLS:** No special tools required.

**WEIGHT AND BALANCE:** Insignificant.

**ELECTRICAL LOAD DATA: NONE**

## **REFERENCES:**

SPORTCRUISER Maintenance and Inspection Procedures (MIP)

## **PUBLICATIONS AFFECTED:**

SPORTCRUISER Maintenance and Inspection Procedures (MIP)

## TECHNICAL BULLETIN INSTRUCTIONS:

1. Secure the aircraft indoors in a location where it is free of flying dust and debris.
2. Remove the fuel cap from one side and in its place stuff a very clean rag (free of dirt and other debris) in the fuel filler hole or be certain as to ensure nothing foreign can enter your fuel system while it is exposed with the Fuel-cap removed.
3. **TO DISASSEMBLE THE FUEL CAP:** Loosen the nut as shown in the diagram. The cap will come apart when the nut is removed. The cap is an assembly consisting of the twist-lock tab bolt, a spring, the grey circular bottom plug, and the metal top seal cover.

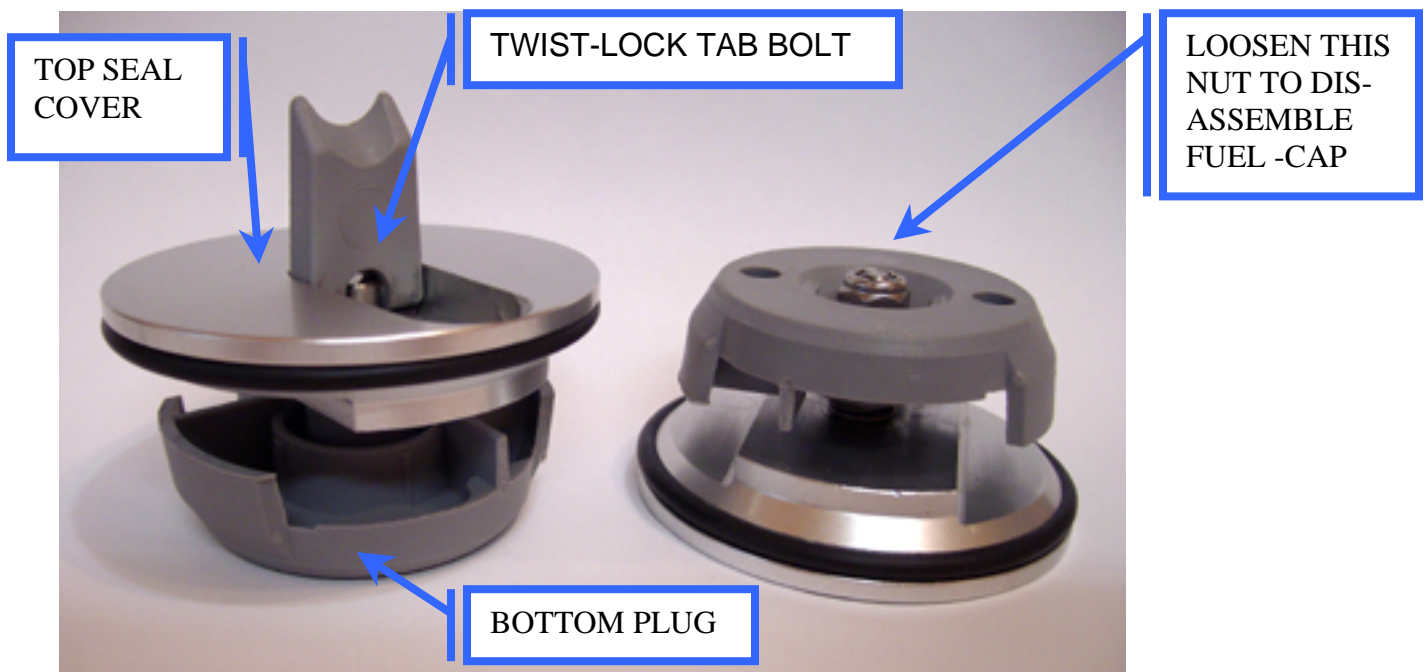


FIGURE 1.

## **INSPECT AND REPLACE THE O-RINGS AS REQUIRED**

Inspect the O-rings. If replacement is necessary then do so after completing steps 1 through 4 below and before reassembly of the fuel-cap. If o-rings show signs of swelling or deterioration then replace with the following type:

### **Use Viton or Hi Nitrile Coated O-Rings ONLY**

Outer Seal Ring : 57 x 3 mm

Lever Pin Ring : 6 x 2 mm

## ADJUST THE HEIGHT OF THE SADDLE RISER HOUSING:

4. The next step is to carefully trim a portion of the saddle off of the bottom plug (this is where the twist-lock tab-bolt passes through). The depth of the cut should be about  $\frac{3}{4}$  of the way down from the top of the saddle as shown in Figure 2 and Figure 3. By decreasing the height of this saddle, it should allow enough clearance for the twist-lock tab to engage and secure, normally and without UNUSUAL binding and/or friction.

**NOTE:** Use a flat file to ensure the saddle is level and uniform in height around the circumference. Also using an Exacto-knife remove and clean any loosely hanging material from the edges and inside areas of the saddle as shown in Figure 5.

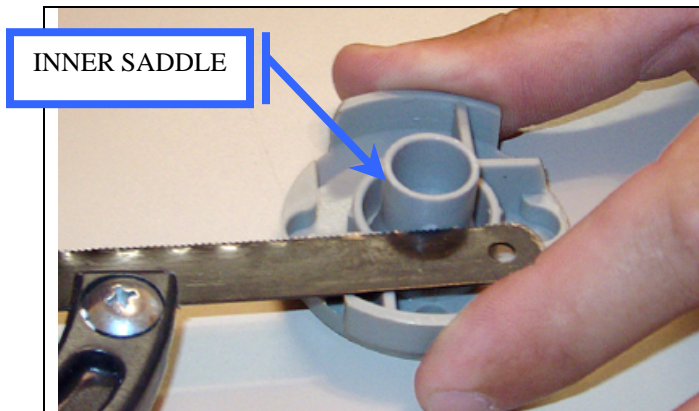


FIGURE 2.



FIGURE 3.

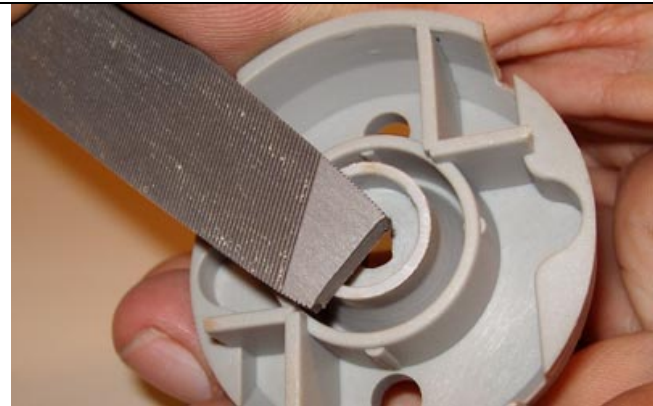


FIGURE 4.

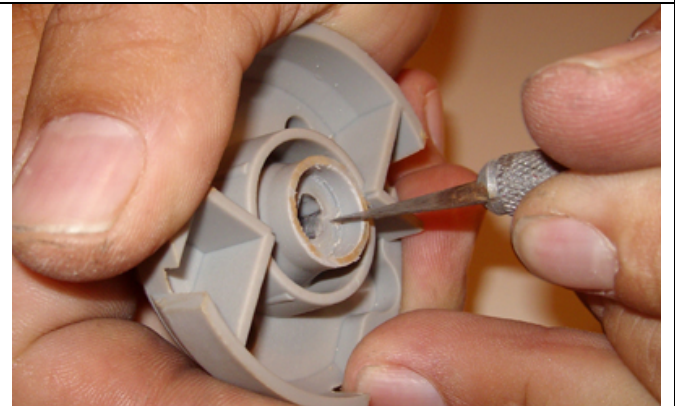


FIGURE 5.

**NOTE:** Be sure to clean the plug free of any loosely hanging particles and/or debris as a result of trimming off the material.

## **REASSEMBLE THE FUEL-CAP AND RESECURE TO TANK:**

**5. NOTE:** Lubricate lightly with Vaseline: Key-Lock (if applicable), Lever and Center-pin. Proceed with reassembling the fuel cap by passing the bolt in the center holes of the upper and lower pieces. Do not forget the spring that goes between both upper and lower center saddle points. The bolt passes inside of this spring.

Tighten the securing nut of the tab lock-pin bolt to the proper torque value **by adjusting the number of threads to show between 1.5 – 2.0 threads past the nut; it should be such that it compresses and causes the O-ring to expand when the lock lever-tab is rotated to the fully 'CLOSED' position and latched down.** Adjust to a light easy seal, Not tight, not rattling loose. **The installer may need to repeat this process to achieve the correct fit and feel.**

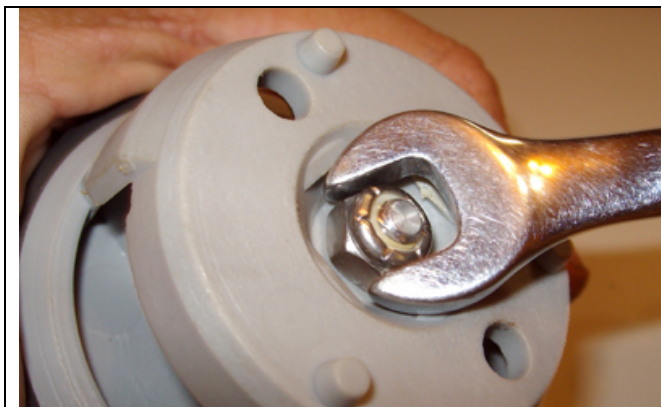


FIGURE 6.

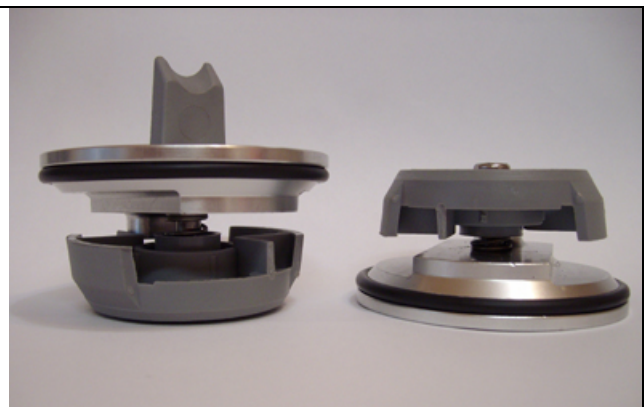


FIGURE 7.

**6.** Remove any clean rags inserted in fuel filler hole, and re-secure Fuel-cap to the tank. Confirm and verify that the Fuel-cap has required normal tightening and un-tightening frictional forces.

Repeat this procedure for the opposite side Fuel-tank cap.

## **RESTORE AIRCRAFT TO AIRWORTHY CONDITION:**

**7.** Record and Log the maintenance work in the aircraft records to reflect compliance with this technical bulletin. Technicians may use the following annotation in Maintenance Logbook entry:

INSPECTED AND COMPLIED WITH CZAW TECHNICAL BULLETIN TB-SC-FRA-004 PERTAINING TO REQUIRED FUEL TANK FILLER CAP ADJUSTMENT DUE TO SWELLING OF COMPONENTS BY ETHANOLS AND OTHER UNKNOWN FUEL ADDITIVES.