HPH spol.s r.o.
Čáslavská 234
CZ284 01 Kutná Hora
Czech Republic
Tel/Fax 00420-327 512633
e-mail : *info@hph.cz*

Service bulletin

No.: G304eS – 14a)

Type: Type Certificate No.: EASA.A.030
Model: Glasfügel 304eS
Serial No.: all

Subject: FES system wiring – inspection / replacement of shunt cable attachment screws

Urgency: Action 1, 2 – During next 100 hrs inspection or Annual inspection

Refer. documents: G304eS-14-WI Working instructions for SB G304eS-14a)

Reason: A shunt (resistor) circuit is used to measure voltage drop (and thus calculate current from the batteries). This shunt is connected to the negative pole of the battery packs and the motor controllers, respectively, using high current cables. These cables are attached to the shunt circuit using brass screws (see Figure 1).

Based on reports of the similar FES system installations where these screws heads were found torn off. To make the connection more robust and reliable, the brass screws are replaced by steel screws.

This condition, if not detected and corrected, could lead to FES loss in flight.

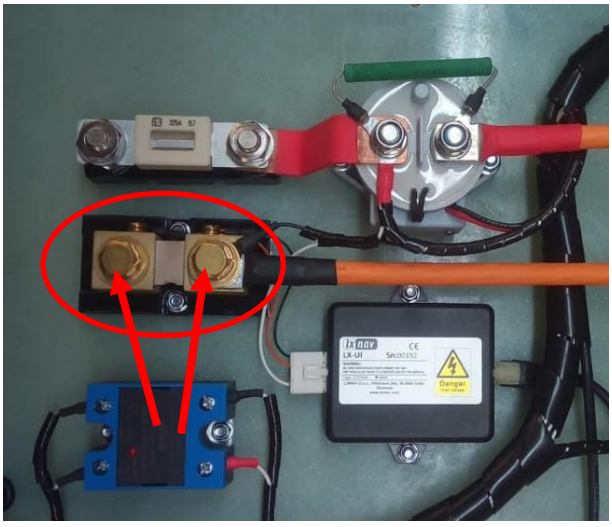

Figure 1 – Detail of shunt circuit (encircled, with screws marked with arrows)

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Čáslavská 234
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Datum 07.11.2024
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Issued by

Jaroslav Potměšil

Action 1: **Shunt connecting screw inspection**

SAFETY WARNING: FES battery packs must be disconnected and removed from the sailplane during maintenance work!

The shunt circuit is located on the front side of the firewall (see Figure 2).

Figure 2 – Firewall, the shunt circuit is located on its front side

Demount the firewall.
In order to do so, the battery packs and the floor pads must be removed from the battery compartment, the shunt circuit cables leading to the engine controller must be disconnected from the controller (accessible through controller cover in the rear of the luggage compartment, see Figure 3), the firewall securing screws must be removed and the whole firewall assembly with shunt circuit carefully pulled out and laid onto battery compartment floor. The procedure is described in detail in the Working Instructions.

Action 1 (cont.):

Figure 3 – Engine controller cover in the rear of the luggage compartment

Inspect the shunt circuit, note screw type and condition (see Figure 4).

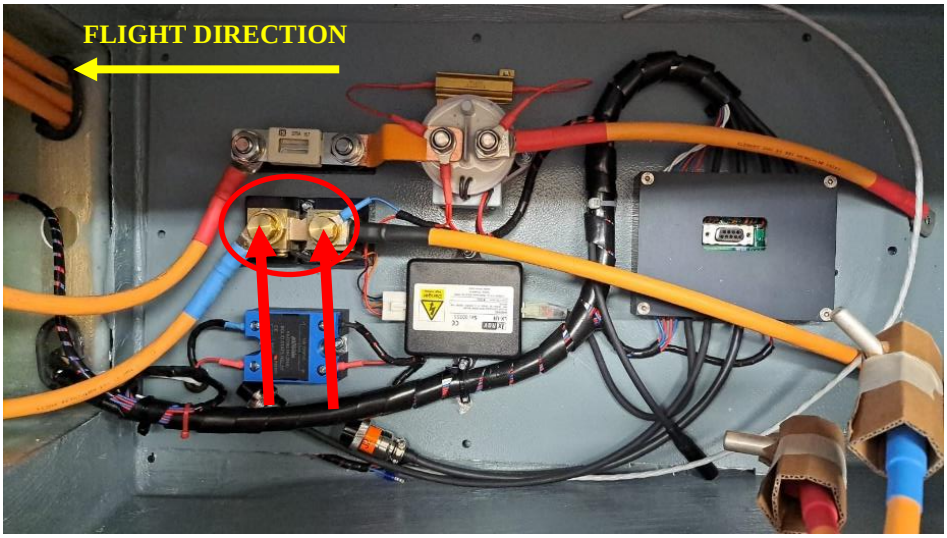

Figure 4 – Disassembled firewall laid on the battery compartment floor, with shunt circuit screws marked by red arrows.

If steel screws are used, no replacement is necessary, and the firewall, any connections and covers are reattached according to the Working Instructions. If brass screws are used, Action 2 shall be accomplished.

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Action 2

Shunt connecting screw replacement

SAFETY WARNING: FES battery packs must be disconnected and removed from the sailplane during maintenance work!

Remove the brass screws (see Figure 4) and their washers.

Install replacement steel screws and safety washers, ensure the correct orientation of the safety washer (see Figure 5).

In addition to safety washer a thread locking adhesive (medium strength – Loctite 243 or similar) should be used on the screw thread.

Tightening torque is 17Nm.

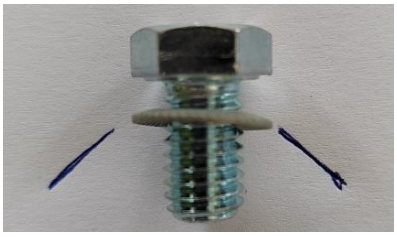

Figure 5 – Proper orientation of "Schnorr" safety washer

Reinstall the firewall, its connections and any covers removed during Action 1, according to the Working Instructions.

Material:

- 2× steel screws (3/8" – 16 UNC thread)
- 2× "Schnorr" safety spacers
- Loctite 243 thread-lock adhesive (medium strength) or equivalent
- Size 14 wrench
- Torque wrench, adjusted to 17Nm of torque
- Set of metric size spanners and hex (Allen) keys
- Working instructions (doc. No. G304eS-14-WI)

Weight and balance: Negligible

Remarks

All maintenance work must be carried out and certified by qualified and authorized personnel.

Owner covers the expenses of the action.

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