Service Bulletin

Improvement of Electric Ground Bus

SB-ASTM-F2-03

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:	F2
Model:	F2-LSA
Serial Number:	all
Applicable Countries:	USA

1.2. Concurrent Documents

none

1.3. Reason

On some aircraft problems with grounding occurred. This problem is indicated by unreliable electric aircraft systems, error messages, charging problems, etc.

1.4. Subject

This service bulletin publishes a solution by exchanging the installed ground bus bar.

1.5. Compliance

Implementation of this service bulletin is only required in case of problems described in section 1.3 occur.

1.6. Approval

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.

1.7. Type of Maintenance

heavy

1.8. Personnel Qualifications

For US LSA aircraft: 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

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

The effect to empty aircraft weight and cg is significantly below 0.45 kg (1 lb). Therefore, in compliance with FAA publication AC 43.13-1B reweighing of the aircraft is not required due to this measure alone.

▲**Warning:** When this exemption has been used already for earlier maintenance events on the aircraft, or when other maintenance events are conducted in parallel and the weight changes of the individual events add up to more than 0.45 kg (1 lb), re-weighing of the aircraft is required for the sum of the effects.

1.11. References

Drawings:

none

Documents:

Procedures provided by AC43-13 provide additional or enhanced information that supports conduct of steps described in section 3 of this SB.

1.12. Superseded Documents

none

1.13. Contact Details

For further information on conduct of this SB, or to report any 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:

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1.14. Disclaimer

This service bulletin has been prepared with utmost care. Nevertheless, errors and misunderstandings can never be fully excluded. In case of any doubt the applicant of this service bulletin is requested to contact Flight Design immediately to clarify the issue.

2. Resources

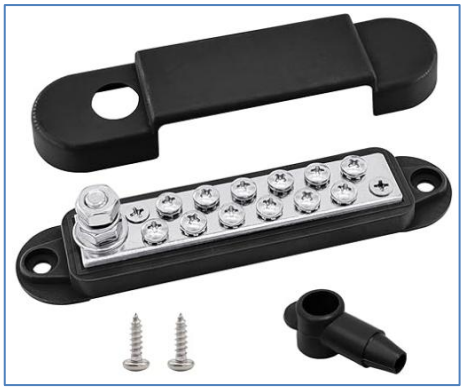
2.1. Workshop Conditions

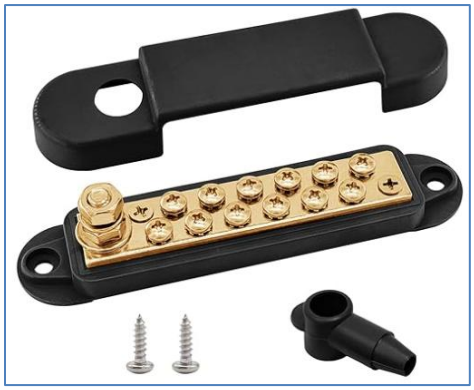
standard working conditions

2.2. Parts

- ground bus bar
  suitable for 12V, min, 50A
  min. 10 poles / contacts matching to AWG16 lugs (see below)
  min. 1 pole / contact for AWG8 lug
  brass with optional coating

  example:





- AWG16 lugs, min. 32 pcs, attachment diameter matching to the bus bar
- AWG12 lugs, min. 4 pcs, attachment diameter matching to the bus bar
- AWG8 lug, min. 1 pcs attachment diameter matching to the bus bar
- AN3 bolts for attaching the bus bar to the cockpit length matching the bus bar

2.3. Tools

1. standard metric and imperial tools
2. pliers
3. crimping tool for lugs
4. drill

2.4. Special Tools

none

2.5. Manpower

The task described incl. required paperwork can be performed within approximately 2 hours (working time).

2.6. Cost

Parts will be provided free of charge.

3. Instructions

This chapter provides extended explanations for the sequential steps.

Step 1

Secure the aircraft against rolling (parking brake, chocks) and disconnect the aircraft battery (engine compartment).

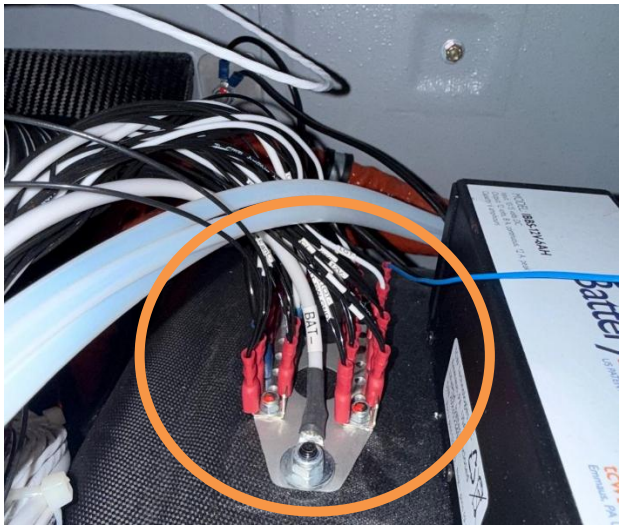
Step 2

Take out the right GARMIN G3X screen (4 bolts, one in each corner) and disconnect the large Sub-D connector on its rear side.

Alternatively, the entire cockpit panel may be uninstalled.

Step 3

Identify the ground bus bar:



Step 4

Pull off all cables from the bus bar.

- **Note:** Tie them together, so you do not lose one of them.

Step 5

Uninstall the existing new ground bus bar and replace it with the new one. It might be required to drill new attachment holes. There is no need to cover the old attachment holes or to apply a composite repair procedure.

- **Note:** Use a vacuum cleaner while drilling to avoid carbon dust spreading out inside the cockpit. This can cause short circuits!

Step 6

One by one, cut off the spade connector, crimp a lug on each cable and install it to the ground bus bar. There is no need to install a cover that might be supplied with the ground bus bar.

- **Note:** Do not cut off all spade connectors at once but replace the connectors with lugs one by one.

Step 7

Optionally apply a corrosion inhibitor. Good experience has been made with Corrosion-X applied with a pen. When spraying, shield the area of the bus bar to avoid that spray settles elsewhere in the cockpit.

Step 8

Reinstall the GARMIN screen in reverse order of step 2.