

**SUBJECT: Zenair CH601XL Safety Alert – Directive,  
(Structural changes to wing/Fuselage).**

**DATE: 1<sup>st</sup> December 2009**

## ZENAIR CH601 XL MODS

### FREQUENTLY ASKED QUESTIONS

With Francis Donaldson,  
Chief Engineer.

At present, the AMD website is showing the progress of a modification which is being developed to increase the strength of the CH601 XL. This follows a series of structural failures around the world which lead to factory-built examples of the type being grounded by the FAA. The situation is developing day by day as the AMD modification is developed.

The UK fleet of these aircraft consists mainly of aircraft built from kits supplied by CZAW in the Czech Republic. A very small number of more recent kits are also under construction in the UK, from kits of a later type supplied by the Zenair factory in Missouri, USA.

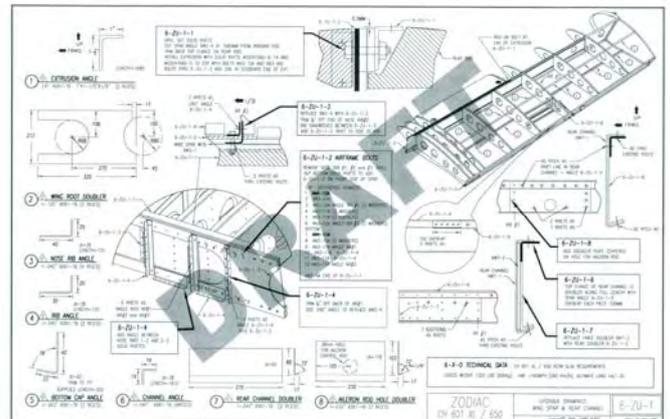
The answers to the **FREQUENTLY ASKED QUESTIONS** below show LAA Engineering's position as of 1st December 2009.

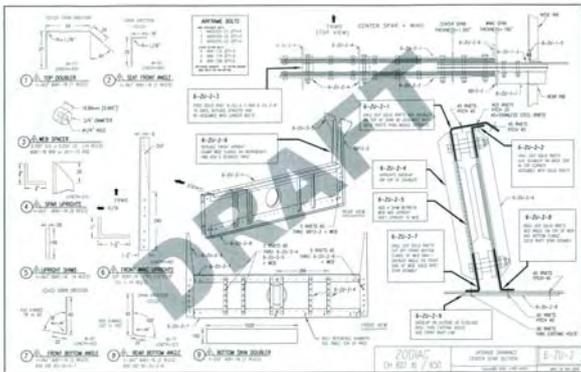
**Q.1** *I have a CZAW CH601 XL, I have done the LAA mod LAA/MOD/162B/004, do I have to do the AMD mod issued 11/7/09 ?*

No, a CZAW XL fitted with LAA/MOD/162B/004 does not need to be further modified at this point in the UK. As far as we are aware the aircraft as modified by the LAA mod just meets the UK strength requirements provided it is operated within the operating limitations imposed in the UK i.e. 560 Kg MTWA, max weight not including wing fuel and wing baggage 494 Kg, 140 kts Vne, manoeuvre limits +3.8g – 1.52g, max rough air speed 90 kts.

**Q.2** *Having done the LAA mod already, may I fit the AMD mod to my CZAW CH601 XL if I wish to do so, for extra peace of mind?*

At the moment, no, the AMD mod is still being developed. It has not been finalised let alone cleared by LAA yet. We are hoping that in due course it will be able to be cleared on an optional basis. We anticipate that doing the AMD mod would allow the 494 kg max weight without wing fuel and baggage to be removed, and allow the gust speed to be increased to a higher figure. Unfortunately of course, doing the AMD mod involves a weight penalty which will reduce the aircraft's payload when operating the aircraft at 560 Kg max gross weight. On the plus side, doing the AMD mod will undoubtedly make the aircraft stronger and increase safety factors, providing the significant re-work involved can be done without over-sizing the rivet holes, straining existing assemblies or causing other damage in the process.





**Q.3** *What would be needed to increase the max gross weight of a CZAW XL kit to 600 Kg ?*

As CZAW are no longer in business, and are unable to provide technical submissions for their version, for liability reasons it will be difficult or impossible to clear the CZAW version to a higher weight than CZAW originally proposed. From the technical point of view, assuming we are able to clear the AMD mod in due course, it would be necessary to carry out the AMD mod and also it would probably be necessary to up-rate the CZAW model to include some of the many variations between the CZAW model and the American Light Sport spec. The multiple differences include some major

changes such as a different undercarriage and thicker fuselage skins – it is not known at this point which of these upgrades would need to be included to allow 600 Kg gross weight. This may not be a practical option as a retro-fit but might be for a CZAW kit still in build, if the technical and liability issues could be resolved.

**Q.4** *I have an American kit CH601 XL which was sold as being 600 Kg max gross weight capable, which includes the aluminium (rather than composite) undercarriage and other upgrades from the CZAW model. Do I have to do the AMD modification?*

At present, only the CZAW version of the XL has been cleared in the UK. We anticipate that an American kit CH601 XL which did not include the AMD modifications but does include LAA/MOD/162B/004 would only be able to be cleared in the UK with a 560 Kg max gross weight and the other limitations applicable to the CZAW version. With the heavier undercarriage on this version, the payload at 560 Kg gross weight would be compromised. At present, the AMD modification is not approved by the LAA but once the AMD mod has been finalised LAA will complete an investigation to see if it can be approved by LAA.

**Q.5** *I have an American kit CH601 XL which was sold as being 600 Kg max gross weight capable, as above. If I incorporate the AMD mod will the aircraft be cleared by the LAA for 600 Kg Max gross weight ?*

At present the AMD mod is not finalised or approved by LAA, but assuming this goes ahead and is satisfactory, we would anticipate that it will be mandatory to carry out the AMD mod. on an American kit CH601 XL if it is to be cleared to 600 Kg max gross weight in the UK.

