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**Mandatory Action – Safety Alert**

**Release Date:**

Monday, November 23, 2009

**Effective Date:**

Immediate

**Subject/Purpose:**

Mandatory Upgrade, before next flight.

**Limitations:**

None, once upgrade is complete. [Use the AMD POH limitations.](#)

**Affected Models:**

All Zodiac CH 601 XL and CH 650 with a gross weight of more than 475 kg. This includes the Canadian advanced ultra-light airplane (AULA), Experimental Amateur Built (EAB), homebuilt aircraft etc.

All CH 601 XL/CH 650E models built and operated as ULM (MTOM of 450 kg + 5%) see:

[http://www.zenairulm.com/FAQ/index\\_files/Page541.htm](http://www.zenairulm.com/FAQ/index_files/Page541.htm)

[ZE-2009-07](#) & [ZE-2009-06](#)

**Serial numbers:**

All

**Notification Number:**

Monday, November 23, 2009

**Does this Notice supersede another document?**

Yes – Aircraft POH and all other aircraft documents that makes reference to flight limitations and Weight & Balance including pre-flight check list.

## **Discussion:**

This Mandatory Action is based on [Safety Alert of November 7<sup>th</sup> 2009](#) issued by AMD.

## **Corrective Action:**

Complete the installation of the upgrade kit as per the following.

1. Complete the upgrade by using the following information:
  - i. Drawing [6-ZU-1, 6-ZU-2, 6-ZU-3, and 6-ZU-4](#).
  - ii. Photo guide with construction standards
  - iii. Use "FAA AC-43.13.-1B and 2A if additional information is required
  - iv. Use the UK LAA's modification MOD/162B/004 dated 18/08/09 for only the installation of the aileron counter balance weights. Drawings and assembly instructions are part of the modification.
  - v. When removing and reassembling the wings, ailerons and flaps, follow the procedure in the AMD Zodiac 601 XL service manual section VII
  - vi. When removing and reinstalling the wing tanks follow the procedure in the same service manual section VIII
  - vii. Inspect the aircraft using the [Zodiac series checklist](#). This is a 45-page checklist to help owners thoroughly inspect their aircraft before flying again.
  - viii. Use the checklist in the [AMD Zodiac 601 XL Service Manual](#) as you complete a 100 hour inspection as per Table 1.
  - ix. Ground and flight test procedures for the return to service after upgrade. Follow AMD Zodiac 601 XL service manual Appendix 1 for "major repairs and alterations"
  - x. For calibration of the ASI with a GPS, proper outside air temperature must be taken with a temperature gauge while doing the flight test as actual outside air temperature is required to allow proper correction.
  - xi. Complete a new weight & balance.

## **INFORMATION:**

- [AMD Safety Alerts](#), Service Bulletins and Notices can be viewed at: [http://www.newplane.com/amd/CH2000\\_Service.html](http://www.newplane.com/amd/CH2000_Service.html)
- UK LAA aileron balance can be viewed at: [http://www.lightaircraftassociation.co.uk/engineering/engineering\\_updates.html](http://www.lightaircraftassociation.co.uk/engineering/engineering_updates.html)
- For more information including downloading of the upgrade drawings, please see: <http://zenithair.com/news/ntsb-astm-4-09a.html>
- For detailed procedures on how to complete the upgrade, see: [www.zenith.aero](http://www.zenith.aero)
- Zodiac updates, drawings etc. <http://www.zenithair.com/zodiac/xl/xl-up-bldr.html>

In addition to this and before each flight:

1. Check all control cable tensions by hand. If in doubt about the cables being properly tensioned, check them with a calibrated cable tension gauge. If necessary, adjust the cable tension to the proper values. If unsure, get a licensed mechanic to check or adjust the cables.

**WARNING:** Do not fly with control cables that are too loose or too tight.

2. Check for free play in the aileron control system. When holding the control stick stationary, beyond minor flexing, there should be no free play in the system when gently pushing up or down on the aileron trailing edges. Note that if the ailerons are not locked when the aircraft is parked outside, wind can damage the system.

**WARNING:** Do not fly with loose, sloppy or damaged controls.

3. Check the flaps for positive firm contact with the flap stops when in the “up” (retracted) position. Check for movement by gently pushing up and down on the flap trailing edges.

**WARNING:** The flap system can get damaged if the flaps are stepped on. Do not fly with loose or damaged flaps.

4. When placing luggage/items in the wing lockers, baggage area behind seats, or in other places, check that it is well secured before take-off.

**WARNING:** Do not fly with loose luggage or other items in the aircraft.

5. Make sure the colored arcs on your ASI all properly indicate the correct speed limits (CAS). Incorrect markings could cause the pilot to unintentionally exceed aircraft limitations. Before flying your aircraft, know all the flight limitations including VA and Vc. Mark VA on your airspeed indicator (or panel). Remember that all aircraft limitations should be included in your flight manual (POH).

6. Check that your canopy closes and latches properly on both sides. If in doubt, add a secondary latching system as recommended by the Australian CAA. If your canopy does open in flight, keep your hands on the controls, lower your speed to approximately 60 knots, keep flying the aircraft and land as soon as practicable.

**WARNING:** Do not try to close the canopy in flight: Fly the aircraft!

7. “Self checkout” is not recommended. Before flying the aircraft, make sure that you have been properly checked out and that you are familiar with all flight limitations and the handling characteristics (feel and responsiveness) of the controls. Remember that, as with any light aircraft, if you encounter unexpected turbulence while cruising, ride it out rather than fight it – and slow down!

**REMINDER TO PILOTS:** Always get to know a new aircraft you plan to fly before taking the controls (this applies to any aircraft). A thorough condition inspection of the aircraft is essential; learn the operating limitations from the POH (and respect them); and get properly checked out to be familiar with the aircraft’s handling qualities.