

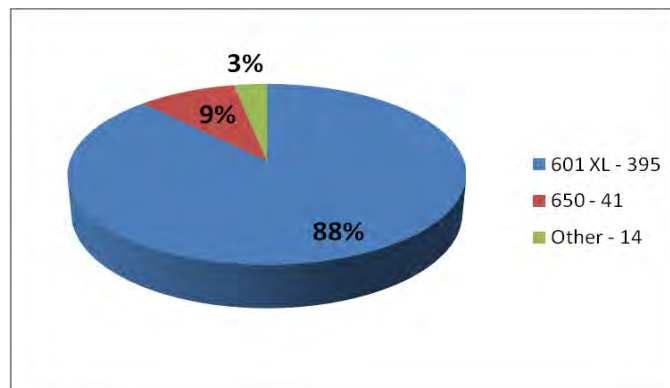


Experimental Aircraft Association

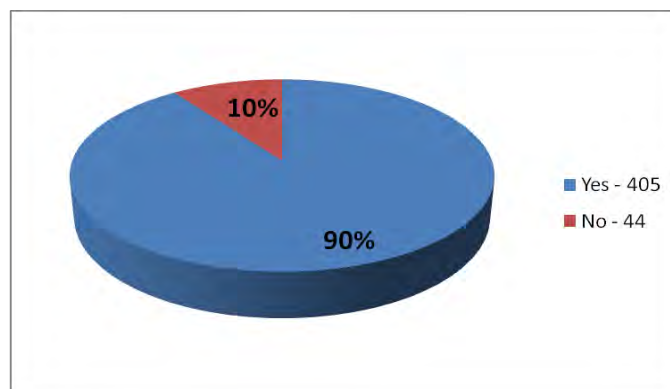
601 XL / 650 Owner Survey

Between November 25-30, EAA surveyed Zenith 601XL and 650 owners to gauge their awareness of the Special Airworthiness Information Bulletin (SAIB) issued by the FAA, the Service Directive / Safety Alert issued by AMD, and their intent to comply with both. EAA identified 165 owners of the 601XL or the 650 within our database and sent e-mail invitations directly to them. EAA also included the survey in our weekly e-hotline newsletter and posted the story on our website. 450 responses have been received. Below is a summary of the results.

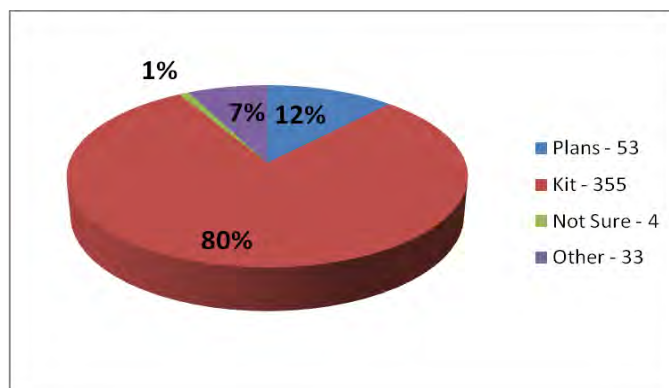
Question 1 – What version of the Zodiac do you have?



Question 2 – Are you the builder?



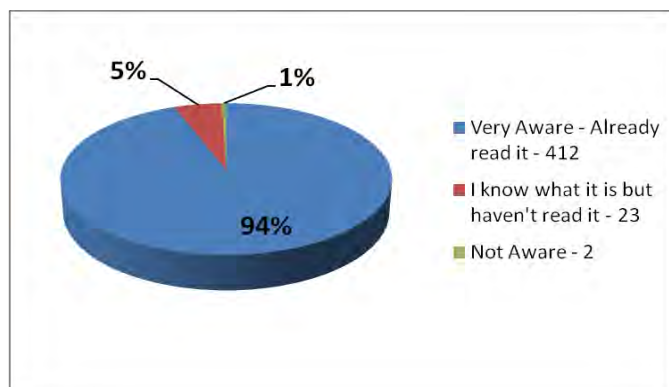
Question 3 – Your aircraft was constructed from . . .



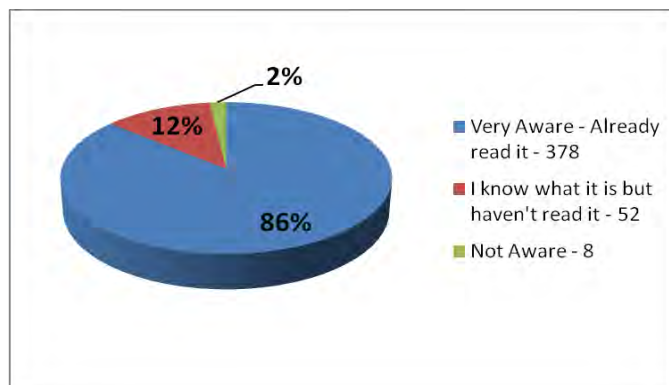
Question 4 – Your aircraft has been flown for how many hours?

Average of 72 hours

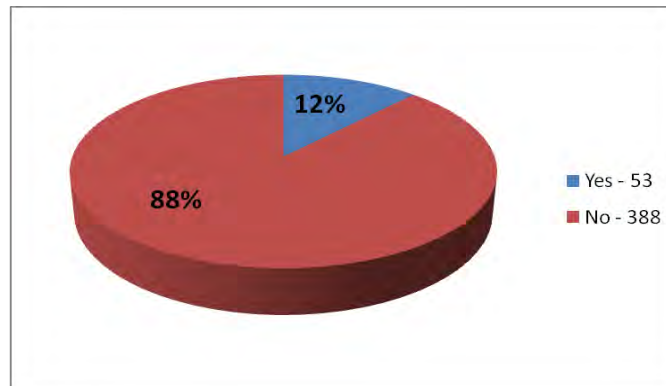
Question 5 – Rate your awareness regarding the Special Airworthiness Information Bulletin released by FAA?



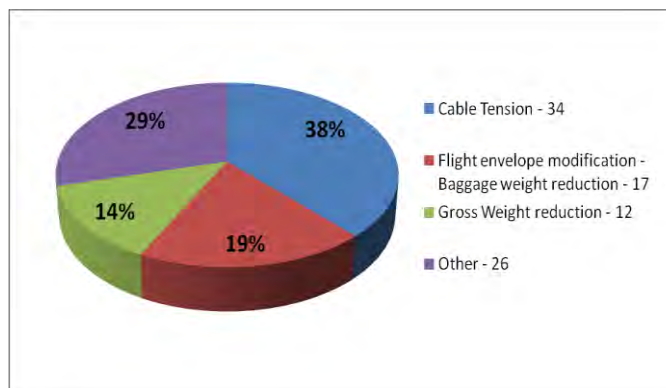
Question 6 – How aware are you of the Safety Alert / Safety Directive issued by AMD for the S-LSA version of the 601?



Question 7 – Have you previously performed modifications to your airplane to address the flutter issue?



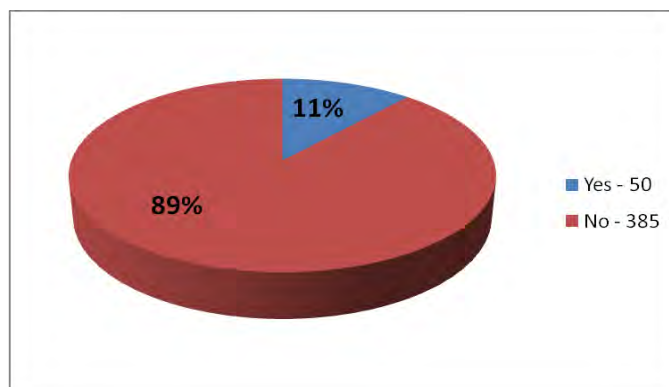
Question 8 – What types of changes/modifications were done?



Other Responses include –

- Reduced speeds
- Ailerson counter weights
- Reduced elevator travel
- Flap and elevator stops
- Push/pull aileron tubes
- Strengthened bell-crank structure

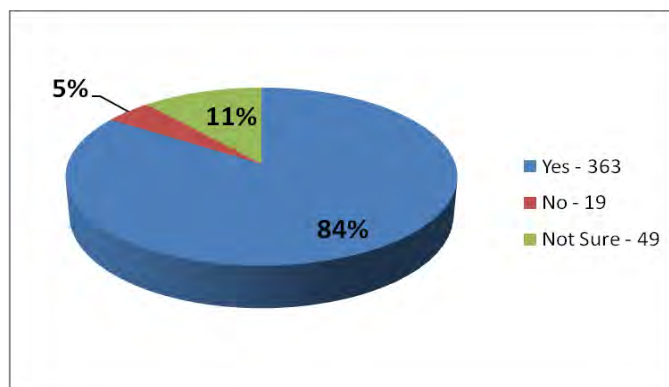
Question 9 – Have you previously performed modifications to your airplane to improve the strength of the wing structure or wing attachments?



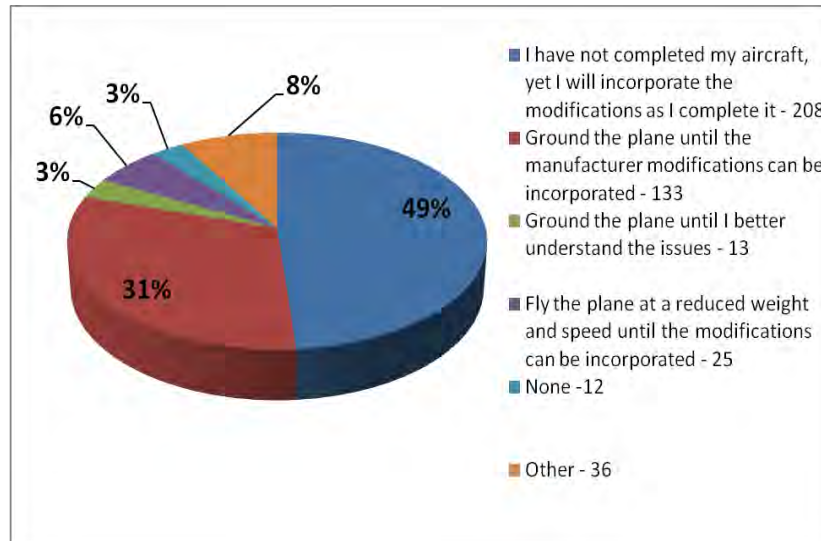
Question 10 – Please describe the modifications done.

All modifications addressed stiffening of the wing structure in one shape or form. A majority of the respondents stiffened the rear spar and/or added “L” angle stiffeners.

Question 11 – Are you planning on incorporating the new AMD safety directive?

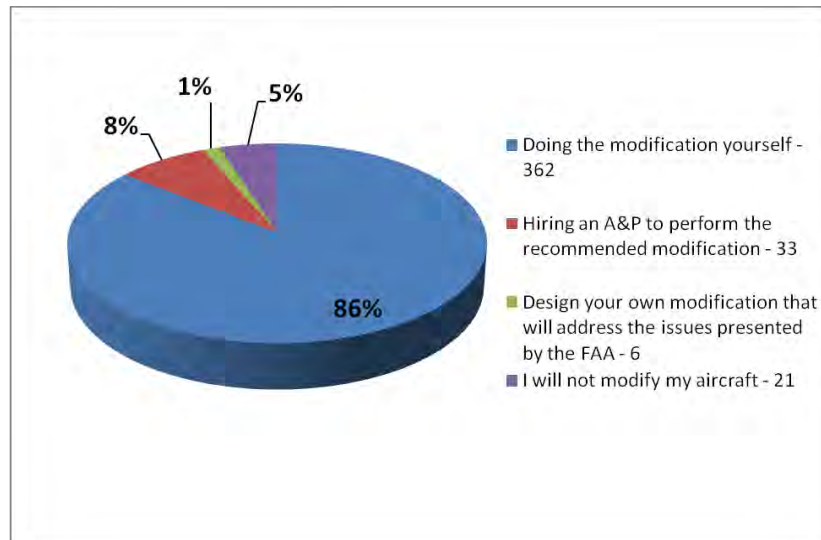


Question 12 – What actions are you taking currently to address the safety concern?

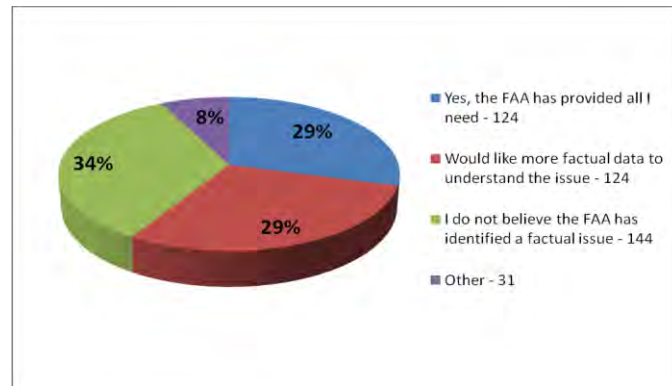


A majority of respondents to the other category are planning to sell their plane, either partially built or complete without the modifications.

Question 13 – Regarding the modification, you plan on . . .



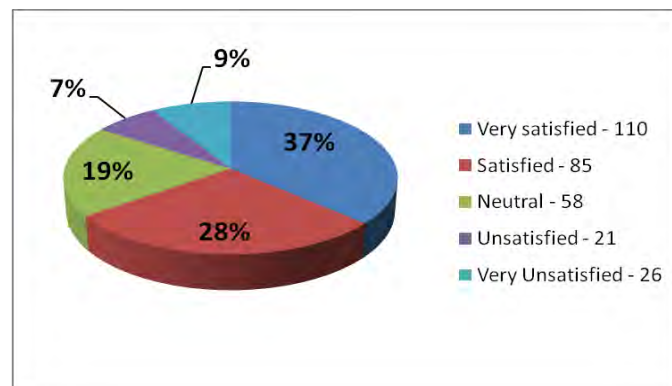
Question 14 – Regarding the FAA, are you satisfied with the information they have provided on the 601/650 issue?



Other responses include –

- The root cause has not been indentified
- More information is needed regarding the different conditions and factors since no common root cause is cited
- Too general, just shotgunning
- I would have made any factory recommended modification; no FAA input needed
- I'm not sure the FAA or NTSB ever found definitive cause(s) for the crashes and am not 100% confident these upgrades will resolve the issue(s)
- Info mostly from other sources
- I wish it hadn't taken another fatality for the FAA to move on this
- Not enough information to form a firm opinion
- Would prefer fact based action
- FAA took way too long to act
- I believe there was a rush to judgment on the recommended modifications before a true cause was identified. I believe the destructive nature of the mods may do more harm than good.

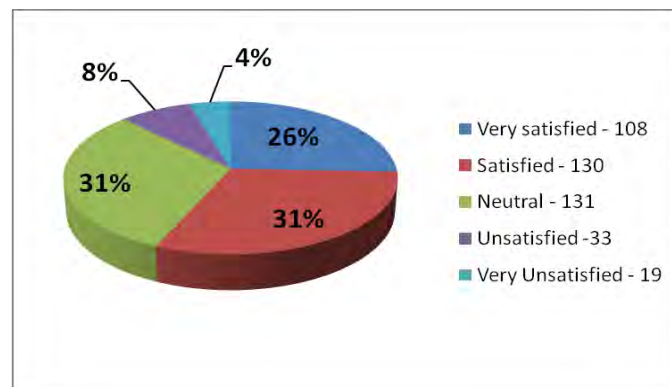
Question 15 – Regarding the manufacturer, how satisfied are you with their reaction?



Question 16 – Why are you dissatisfied with the manufacturer on this issue?

Responses include –

- I purchased a quick build kit and do not feel comfortable having to open the fuselage
- They have never contacted me or sent me anything
- The manufacturer appears to have decided to submit to FAA pressure despite there being no identified common cause for the existing accidents
- The designer has publicly stated that there is no problem with the existing design if flown and maintained properly
- Should have grounded the planes himself over a year ago
- They seem to want to keep this a secret and deny any responsibility
- The kit now requires a lot of work I'm not really competent to do, and it certainly isn't a "quick-build" kit anymore
- There was a lot of time spent saying "there is not an issue" and they supported it by engineering facts . . then they produce a recommended fix that makes me tear a majority of my plane apart. Total contradiction.
- An independent structural analysis and a source open to fully answer serious structural questions should be made available to all existing owners
- Specific info regarding problems and fixes that would strengthen wings non-existence or way late
- I don't think they believe they have a problem with wing separation and have offered this modification as an appeasement
- The aircraft should have been correctly tested in the first place, the 601XL has failed under the FAA tests.

Question 17 – Regarding the EAA, how satisfied are you with our reaction?

Question 18 – Is there anything you would like to add that will help guide EAA’s efforts on this issue?

Responses include –

- Give some instruction on hints for homebuilders and tool recommendations
- We need some real facts about the accidents, not just presumptions. Each failure has been different, why have some flown for long periods with no problems?
- Continue to keep us informed of progress relating to rectifying the problem for all categories involved
- Continue to be involved. Your help is appreciated.
- Maybe local EAA members might assist on some of the hard stuff, like drilling out rivets
- Need to better define the weak points where the problem is located, at this point it looks like just beefing everything up and hope the problem will go away
- I would like the EAA to publish the facts in this matter so the public will know the truth
- Need a recap of the accidents with factual, incident by incident analysis of each accident
- Keep supporting efforts to get airplanes safe and flying
- No, just keep communicating on any updates / news that is available

Analysis and Summary

The data clearly shows that owners/builders of the 601XL and 650 are aware of the SAIB issued by the FAA and Safety Alert / Safety Directive issued by AMD. 84% of respondents are planning on incorporating the AMD safety directive into their Zodiac. However, 11% are still unsure as to what action they will take. It is clear from their comments that more information is needed, but more importantly, factual data. Respondents commented that the FAA has not released any factual data regarding their tests and the designer, although encouraging builders to comply with the safety directive, states that there are no design flaws. 63% of respondents would either like more factual data to understand the issue or does not believe the FAA has identified a factual issue. It is imperative that these owners become convinced of a flaw in the design of their aircraft and it be addressed. If and when that factual data is released, EAA will do its part to inform our members and the homebuilding community. Our technical counselors, numerous chapters, and the manufacturer can and should be utilized to educate the 601XL community on the extensive and challenging modification.

It is also evidenced by the survey that the homebuilt community is proactive about safety and self-regulates when needed. Numerous comments attest that action was needed sooner to address the 601XL failures; either from the FAA or the manufacturer. Although not regulated to comply with the safety directive, a resounding 97% of respondents are currently taking action to address the safety concern with a large majority voluntarily grounding their aircraft. EAA recommends releasing the testing data so all members of the 601 community will be aware and convinced of any possible design flaw in the 601. The safety of the pilots, their passengers, and persons and property on the ground is dependent upon this information being made available.