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NOTIFICATION – JAN 06 2020

Issue Date
January 06 2020, Rev. 0

Subject/Purpose
Engine mount cracks - Rotax

Affected Models
Chris Heintz (CH) aircraft models with Rotax 912 bed mount

Compliance Time
Inspection within the next 25 hours, or annual inspection (whichever is first)

Inspection Frequency
Annual (on-going)

Background

A Zodiac CH 601HD customer found cracks on his engine mount. We also had a customer find cracks on the engine mounting brackets. See attached photos. Ii is our experience that many airframe issues start from excessive vibrations and improper installation.

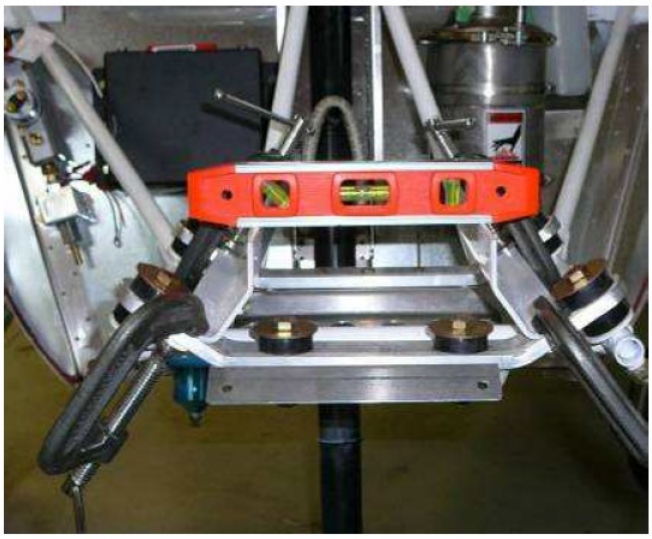
Excessive vibrations
- The Rotax 912 engine can run very rough if the carburetors are not synced exactly right. Engine needs to be tuned for smooth operation at all RPM settings, change to the ignition model with built in soft start for easy starting.
- Ground or in-flight propellers can cause excessive vibrations if not installed correctly. The 2 or 3 blades must be set-up exactly the same. Its a good idea to check the angle of each blade, making sure they are the exact same. Once done, get a vibration analysis done on the propeller when installed to the aircraft.
- Different fuels can have a significant impact on the smoothness of the engine. Make sure your fuel is clean and within the limitations of the engine manual.

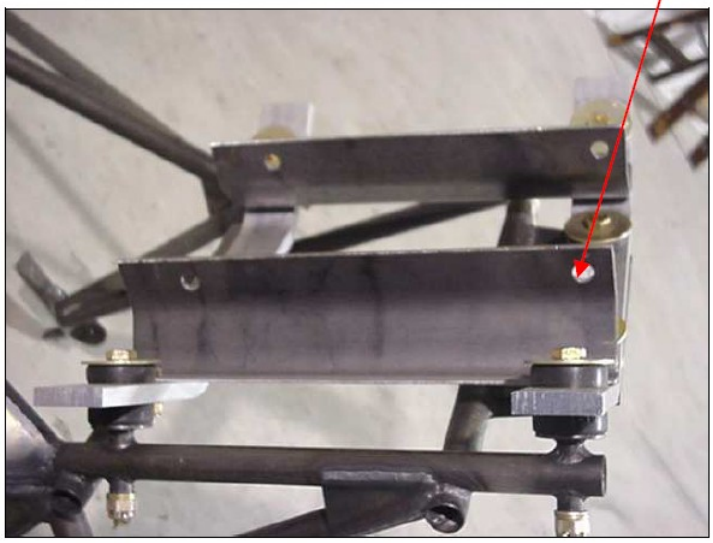
Reasons why your engine could be running rough.
- Old ignition module
- Faulty ignition cable
- Improper grounding of ignition module, and broken exhaust baffle
- Carburetors not synchronized
- Imprecise propeller pitch
- Worn Belleville washers in the gearbox
- When flying on 100LL avgas on long-distance trips, the engine could show the effect of lead-fouled spark plugs and run rough during start-up and taxiing
- Bad or dirty fuel or dirt in the cab floats
- Improperly installed engine on engine mount or loose bolts

Installation of the engine to engine mount.

Reference: engine is level with the fuselage reference line

Before drilling the holds in the bracket E1-1X check that the engine will be level.

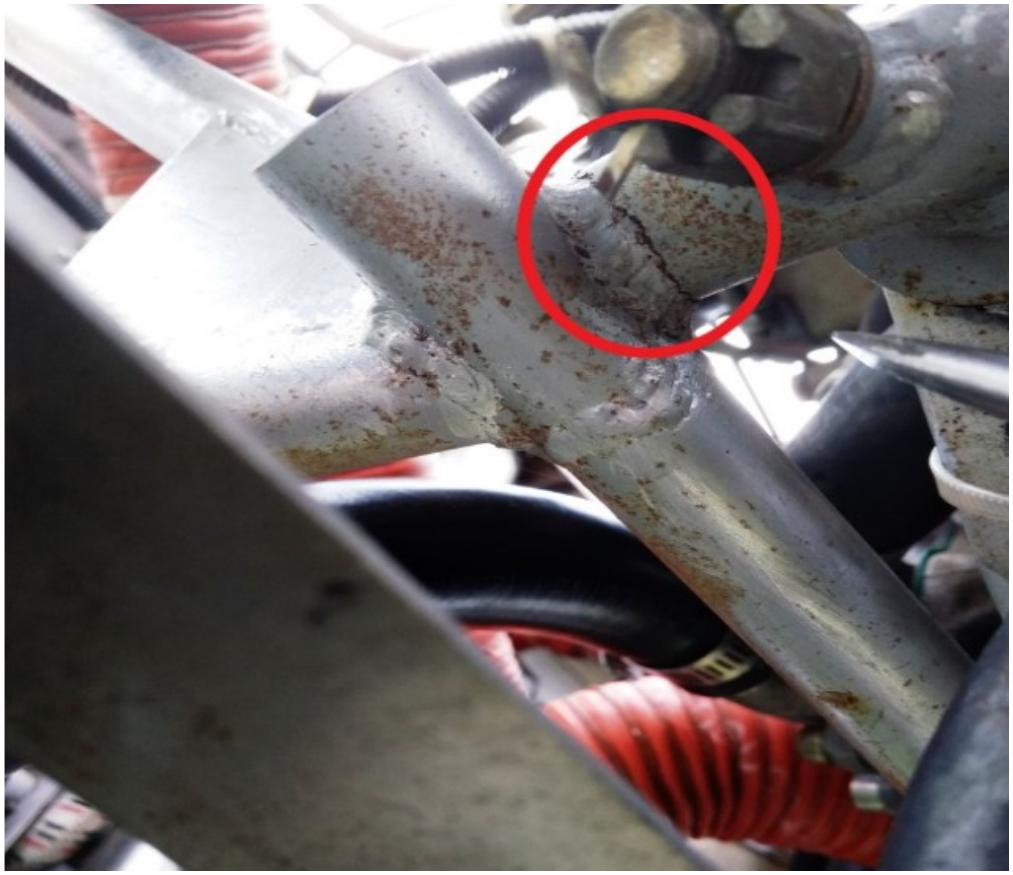


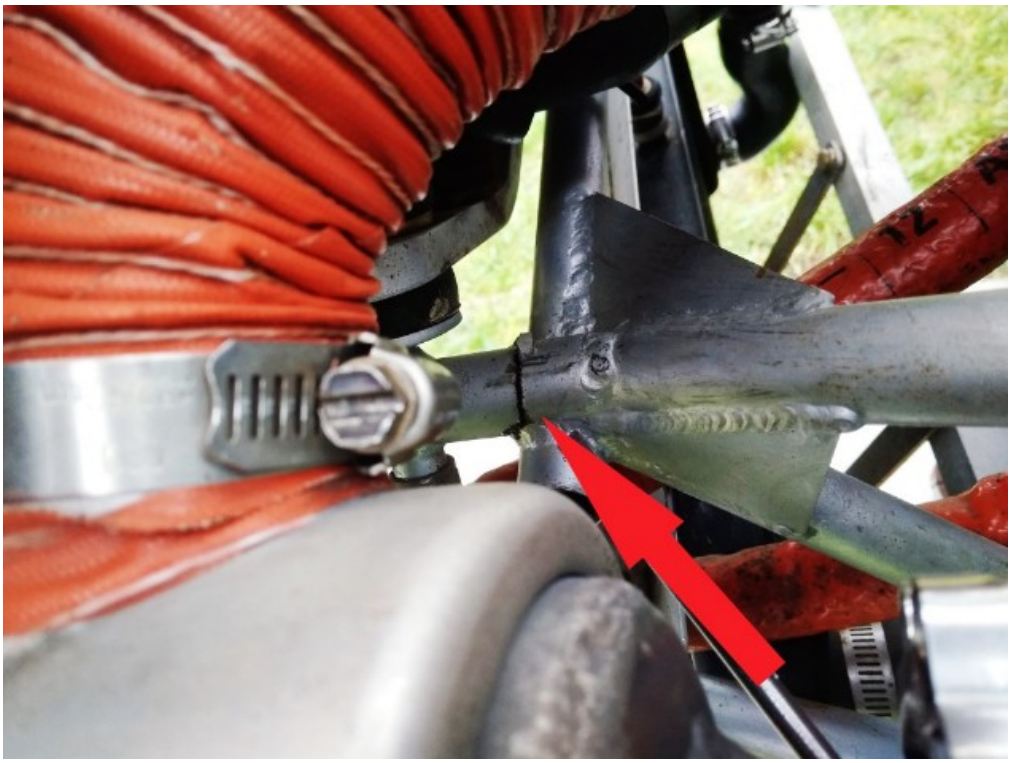


Above is taken from the Zenair installation manual, 912S FIREWALL FORWARD, SECTION: 2 - Page 3 of 7. Available to all customers.

If the E1-1X steel brackets are not parallel at the top, the engine will not fit between the brackets properly. When tightening the bolts the 4 bolts that hold the engine, the brackets will be stressed and could crack. Everything needs to fit properly. The 6 rubber mounts must fit snug in the brackets and bolts tightened correctly.

Following are examples of cracks in the engine mount





Following are examples of cracks in the E1-1X steel brackets

ACTION:

Thoroughly inspect your engine mount, and everything else including E1-1X steel brackets. Check for cracks, loose screws etc.

Go over all the engine manufacturers (Rotax) continued airworthiness documentation and make sure your engine is up-to date. Same with the propeller and other installed items.

Perform a vibration analysis once everything has been inspected.

If cracks are found, stop flying the aircraft. Remove the part and replace.

For second aircraft owners (people who own an aircraft that they did not build), familiarize yourself with all the aircraft documentation and hire a mechanic who has experience maintaining the engine you have.

Register with Zenith Aircraft and log into the **builders resource area**. Ask questions to other builders and get involved with the www.zenith.areo web site.

Get to know your aircraft before flying, on the ground and in-flight. Your EAB (Experimental Amateur-Built) aircraft is a one-of-a kind. It is not a certified aircraft.

Please log onto www.newplane.com for continued airworthiness documentation or onto www.zenithair.com

For additional questions and documentation, please contact Zenair Ltd.