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## Rotax 912 Bed Mount Steel Bracket E1-1X June 24, 2010



Above: Cracked Rotax 912 Bed Mount Steel Bracket E1-1X

We have had reports of the earlier Rotax 912 Bed Mount Steel Brackets, P/N E1-1X, cracking around the bolt holes that mounts the Steel Brackets to the engine. This has been found on a few earlier Rotax 912 ULS engine installations and is likely caused by the higher vibrations from the 100 horsepower engine along with the rough startup and shutdown of earlier Rotax 912 ULS engines. There are several additional possible causes, including part misalignment or improper bolt toque. A change was made from mild steel to 4130, with the thickness remaining 1/8", a number of years ago to prevent the parts from cracking, and to our knowledge only the mild steel brackets have shown cracking. We need to remind all our builders, owners and operators to inspect these parts thoroughly for cracks and replace them if any cracks are found. Note that the bracket E1-1X is used with Rotax 912 series mounting on different models, including the Zodiac CH 601 and STOL CH 701 series aircraft.

Below is the letter from Bob Jones of Big Bear, Alaska, owner of a Rotax 912 ULS-powered STOL CH 701 (on skis in the winter and floats in the summer):

I would like to make all STOL CH 701 Owners aware of a potential serious problem I found on my plane. First of all, my serial # is 7-4226, a 1999 version, that was built to the later **SP** specs (it has all of the 1,100 lb. upgrades). The plane has the Rotax 912 ULS, and unlike the 912 S motors that use KN Air Filters, mine has the Tuned Intake and makes a true 100Hp, at take off, as opposed to 92-95 Hp, for the KN equipped planes. I have 500+ hours and 1200+ take-offs, logged to date, most of which were close to gross weight.

On the last flight before this year's Annual, the passenger side Engine Plate Mount broke out at both bolt holes that fasten the Mount Plates to the side of the 912 Block. The other side Plate had long cracks and could also have failed (at which time the engine could have departed the airframe!). Early engine Frame Plates were constructed of Mild Steel, as were mine. The later Models and replacement Plates are 4130 Chrom-Moly Steel. A second plane in this area was inspected and also found to have cracks, starting at 194 hours.

Because it is the Pilot/Mechanic's responsibility to watch for and repair these problems, I urge <u>ALL</u> to inspect these plates <u>frequently</u>! They are difficult to see, and must be inspected with a Flex Mirror, to be absolutely sure of their condition. I encourage anyone with Questions to contact me: Bob Jones, (907) 892-7369, and to study the (above) photo.