



# Cause & Effect

## The Causes of Homebuilt Accidents

**LET'S CUT RIGHT TO THE CHASE...** what are the main causes of homebuilt aircraft accidents? I downloaded National Transportation Safety Board (NTSB) accident reports for the years 1998 through 2007 and categorized the cause of each of more than 2,100 "homebuilt" accidents. It shouldn't be a surprise to find that failure of stick-and-rudder skills (pilot mishandling/error) was the leading single cause of homebuilt accidents. These accidents consist basically of ground loops, undershoots, overshoots, and stalls.

The second-place category is a bit unsettling: undetermined engine failure. These are accidents where the engine quit, but the NTSB was unable, afterward, to determine why. It could have been carburetor icing; it could have been vapor lock in the fuel lines or even a pilot who accidentally turned the fuel off and didn't admit it. These undetermined failures caused more than 9 percent of homebuilt accidents. In fact, about one-third of all homebuilt accidents start with an engine failure, be it "undetermined," internal

failure, or problems with the fuel system. Sadly, about 10 percent of all homebuilt accidents can be attributed to either a mistake made by the builder or a mistake by the person performing the maintenance on the aircraft. If one includes cases where a wrench-turner's actions contributed to the accident but didn't directly cause it, the percentage jumps to 14 percent.

That means one in seven homebuilt accidents involved builder or maintainer error. Something to think about when we're working on our aircraft. **EA**

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