

Corner

by PAUL H. POBEREZYNY

AS A MEMBER of the Washington FAA appointed Safety Committee for General Aviation, I recently attended a meeting on aircraft crashworthiness. Naturally, there is a sincere interest by all to upgrade this area of aviation. The two day meeting centered its discussion on seat belts and shoulder harnesses, the use of which EAA has supported for the past 31 years; cabin structures that can better absorb impact loads in all positions; reduction of fire hazards and seat design that will better absorb impact loads.

These subjects were especially directed to aircraft that will be built in the future and slide presentations by NTSB, FAA, NASA and Bell Helicopter of various aircraft accidents showing impact loads, seat design failures as well as NASA crash tests were very informative and educational to all in attendance.

In our amateur built and ultralight aircraft movement, we should do our utmost to lead the way whenever we can in restraints, seat design and overall structural integrity - not only by the designers but also the builders. This should be of particular importance to those producing kits in large enough numbers that should failures occur, the statistical impact on the homebuilt safety record would be great. In reviewing some 42 NTSB homebuilt and ultralight accident investigations (they were only recently given this task), 22 resulted in fatalities and the balance involved very serious injuries. An unacceptable number were wing or component failures.

The amateur built Fly Baby, an all wood single place aircraft, has had a total of 9 wing failures. Seven resulted in fatalities and in one case the pilot bailed out. Two were due to poor workmanship.

Recently, at an East Coast air show, a Thorp T-18 was flown to destruction on a high speed pass when either flutter or structural failure occurred.

Both designers and operators have great responsibilities to each other, as I am sure there is not an aircraft that an uncaring pilot cannot damage or fly to its destruction. The designer should be alert to any needed changes and improvements.

There is much knowledge to be shared and to be learned. Our new Aviation Center at Oshkosh has excellent meeting and audio visual facilities and we have already planned meetings on such safety and structural matters so that designers and kit manufacturers, in a climate of cooperation, can share their knowledge. They can leave better educated for the benefit of aviation, whether it be crashworthiness, whether it be ultralight, light aircraft, powerplants or propellers.

There is available a great deal of current aeronautical knowledge to insure that wings should not normally fail. We have decades of good practices to draw from - simple things like the use of electrical tape or tie wraps to hold down the wires of the engine's ignition or electrical system; or, that secure restraining



straps should be used to hold an ultralight fuel tank in place. We know that fabric seats just above sharp objects that cause spine damage in hard landings need not occur.

Let's use the knowledge and safety practices that we have learned from past experiences. There is no need to go back to the days of the Wright brothers or repeat mistakes of the past.

We in the amateur built program have been very fortunate during these past 31 years to have earned an increased degree of freedom. Many today have taken this freedom as something that has always been there.

We need more aircraft to be built and flown to enjoy this vast ocean of air above us. It also is realized that there must be a commercial aspect to the movement, as materials, components and kits cannot be given away. However, there must be a balance so that the experimental amateur built program continues. We must also continue to work with FAA to attain a simple certification category for the commercial lightplane interests.

We stated in last month's issue that a major oil company accused the EAA Aviation Foundation of using "political pressure" to obtain a FAA STC for the use of auto fuel, and that we did minimal testing. My last letter to them was answered, but not to our satisfaction as it skirted the two issues. We have informed Mr. Robert J. McCool, General Manager of Lube and Commercial Business for Mobil Oil of Fairfax, Virginia that we intend to publish our correspondence with his office in an upcoming issue.

By the time you read this our 500 hour FAA flight test, using auto fuel in the Cessna 182, will have been completed (as of this writing 431 hours have been flown). Hot fuel tests flown by FAA test pilots have been completed successfully, and scheduled next are detonation tests. We thank Chief Pilot Jim Barton and pilot Col. Howard Mattes for those long hours of flying - sometimes as much as 14 hours a day. With the EAA Aviation Foundation receiving STC's for all 4-cylinder, 80 octane Continental engines, from the A-40 through the O-200 series, we now need to obtain approvals for the many airframes that use them. Yes, it takes patience, people and funds, but with that "can-do" EAA spirit, it will be done, as well as with other aircraft and powerplants. One day there will be enough airplanes using auto fuel to warrant FBO's to get their old 80 octane tanks back in operation.

