



TWO THOUSAND ELEVEN Report to Homebuilders

March 2011

To all EAA members and homebuilders:

For nearly 60 years, the abilities of aircraft builders and designers have brought an enormous number of innovations and breakthroughs to the world of flight. Today, there are more designs and possibilities available to aircraft builders than ever before, and more technology and resources available to make the dream of building and flying an aircraft possible.

There are also challenges to the homebuilt community. Ensuring that the high standards of safety are maintained AND enhanced must be a priority for all of us. By reinforcing the importance of safety in our projects and flying, we will create an even better community that opens the door wider to those who wish to participate in aviation.

EAA's 2011 Report to Homebuilders offers some of the latest information that highlights the achievements of the past year, as well as the opportunities and challenges ahead of us. With more than 32,000 homebuilt aircraft now registered in the U.S. alone – more than 15 percent of the total single-engine piston fleet in the country – amateur-built aircraft is one of the consistently growing segments of aviation. EAA is dedicated, just as it has been for almost 60 years, to supporting that community and growing participation in all of aviation.

Now, let's go aviate!

Rod Hightower
EAA President/CEO

THE PAST YEAR

Status of Homebuilt Community

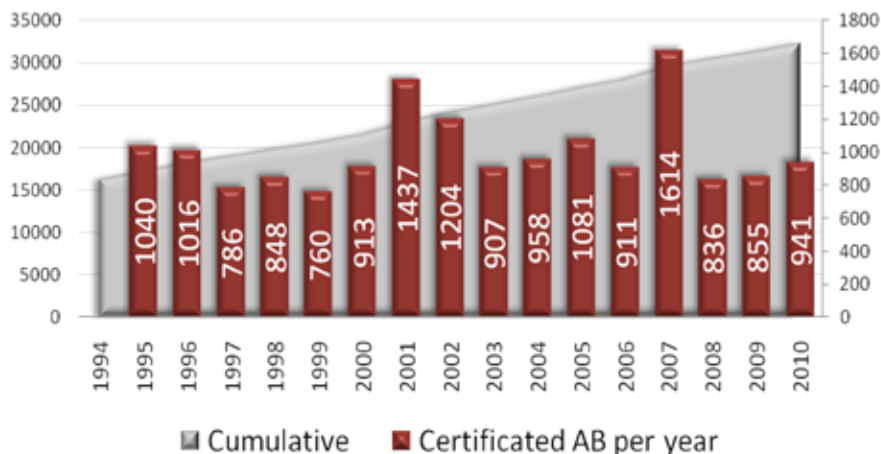
•Current totals

The total number of registered homebuilts continued to climb in 2010, and now surpasses 32,000 in the U.S. alone, with several thousand more internationally. The addition of nearly 1,000 homebuilts to the registration rolls mirrors the steady growth of the amateur-built community over the past two decades. This total now represents more than 15 percent of the entire U.S. single-engine, piston-powered fleet. The amateur-built aircraft segment has also shown the most

consistent growth of any aircraft category over the past two decades, flourishing even during the recessions of 1991-1993 and 2007-2010.

The amateur-built aircraft fleet has shown the most consistent growth of any aircraft category in the U.S. over the past 20 years, even during recessionary periods.

Homebuilt aircraft airworthiness certificates (U.S.)



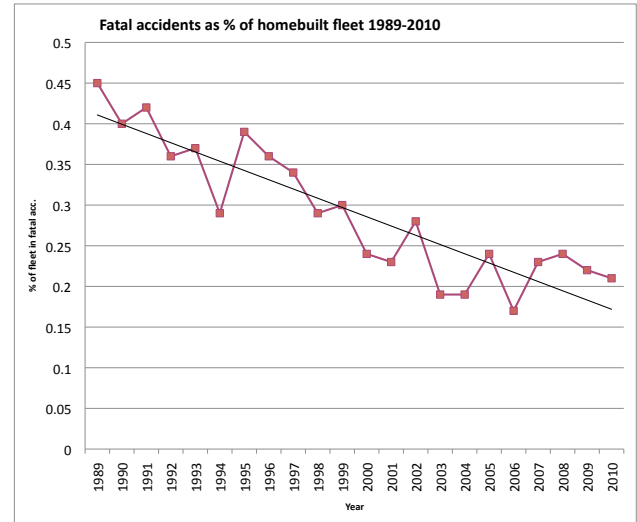
Source: FAA

SAFETY

Amateur-built category safety has become a point of emphasis by FAA, and EAA looks forward to working with all stakeholders to further enhance safety in these aircraft. The accident and fatal-accident rate in amateur-built aircraft has improved faster than any other segment of the U.S. aviation fleet in the past quarter-century (Table 2). While the total number of registered homebuilt aircraft has doubled in the past 15 years, and hours flown increased by 123 percent, the actual number of fatal accidents annually has increased by only 10 mishaps, and still measures fewer than 100 per year.

It is important to remember that average flight time and cycles (takeoffs/landings) per flight hour can cause great fluctuations within specific areas of aviation. Aircraft used for recreation and training complete many more cycles than other GA aircraft, such as corporate aircraft or those used primarily for point-to-point transportation. That creates a higher risk profile, as loss of control while maneuvering is the leading cause of aircraft accidents.

The total number of registered amateur-built aircraft increased by 2.3 percent during FAA Fiscal Year 2010, while fatal accident totals fell by 1.5 percent



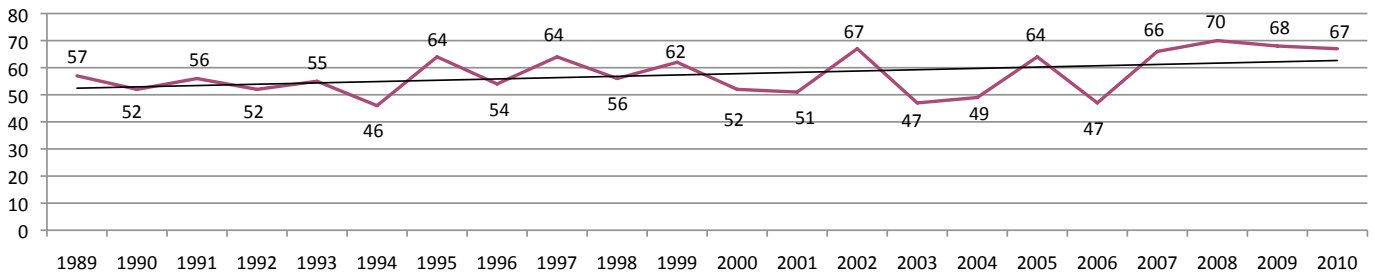
Source information: FAA FY10 GADIT Safety Review

Table 2

•Final 2009-10 numbers

In FAA’s Fiscal Year 2010, which ran from October 1, 2009 to September 30, 2010, 67 fatal accidents in amateur-built were reported. That is a decrease of one fatal accident from Fiscal Year 2009 and a decrease of three (or about 4 percent) from Fiscal Year 2008, while hours flown by amateur-built aircraft went up 12.7% during this 12-month period. These totals brought the annual total back to the nearly flat trend line of the past two decades.

Annual amateur-built fatal accidents 1989-2010



•Areas for improvement

With the comparatively low numbers of fatal amateur-built accidents each year, even an increase of one or two accidents per year can cause a significant change in percentages and accident rates per 100,000 hours flown. It is more useful to look at specific areas where amateur-built aircraft safety can be improved. Initial flights in new amateur-built aircraft provide the highest risk factors, while other events such as the 50- to 60-hour total in homebuilts and second-owner transition also are notable as areas for improvement in the amateur-built category. EAA is also working with owners of particular types of aircraft that show a higher accident rate to provide information and training to enhance those safety records. It is critical that aircraft builders remain proficient in piloting during their

projects and to seek out transition training. Homebuilt aircraft have unique handling characteristics. Just as it’s wise to seek transition training when moving to a factory-built aircraft with unfamiliar characteristics, transition training for amateur-built aircraft is a must.

•FAA focus on AB safety

In FAA’s Transforming GA Safety Five-Year Strategy announced in the fall of 2010, the agency is dedicated to reducing fatal accidents to unprecedented low levels across general aviation, including amateur-built aircraft operations. FAA has highlighted amateur-built, light-sport aircraft, warbird and agricultural operations as specific areas for improvement as part of that strategy. The agency is seeking

input from associations such as EAA and type clubs to enhance efforts to improve safety throughout GA.

•EAA's efforts: Current and future

Simply put, safety is everyone's responsibility and primary concern. Builders spend thousands of hours and tens of thousands of dollars to construct an airplane, but it's equally important to ensure that both aircraft and pilot are fully prepared for flight. EAA's Technical Counselor and Flight Advisor programs have a proven record of reducing the accident rate among those builders, owners, and pilots who use these no-cost member services. EAA is seeking to revitalize and further activate these programs to reach even more aviators in the coming months.

In addition, EAA is developing other safety programs, such as:

- Working with a consortium of type clubs to provide safety information throughout the community
- Promote the Letters of Deviation Authority that are

available to provide and receive compensated training in amateur-built aircraft

- Increase recognition and rewards for safety standard enhancements
- Highlighting safety through areas such as aircraft registration and insurance contacts
- Publish definitive accident data for amateur-built aircraft

EAA is also part of the FAA GA Joint Steering Committee, as well as its Safety Analysis Team subgroup, and the Amateur-Built Flight Standardization Board, which are aviation community/agency groups dedicated to enhancing safety through non-regulatory efforts to reduce the accident rate.

Further regulations will not enhance safety and may restrict growth in the amateur-built fleet and total hours flown. Lower experience levels mean lower skill levels by those flying or transitioning into amateur-built aircraft – the exact opposite of everyone's primary safety goal.

EAA's RESOURCES FOR HOMEBUILDERS

•Sport Aviation magazine

EAA's flagship publication, redesigned in January 2010, offers more technical tips and hands-on expertise than ever before. While the magazine is aimed at the entire EAA membership, including the two-thirds of the total membership that is not directly involved in amateur-built aircraft activities, a significant segment of Sport Aviation is dedicated to technical information and skills focused specifically on building and restoring aircraft. Homebuilders also have the opportunity to be involved through contributing their own tips and even testing new products for review. These changes have shown to increase readership of all areas of the magazine, including technical tips and safety features.

•Experimenter e-newsletter

In 2011, this e-newsletter enters its third year, with highly focused information for homebuilders. Experimenter – which was the name of the original monthly publication created by EAA founder Paul Poberezny – allows aircraft builders to “dig deeper” into their specific interest. Among the highlights are how-to info, project reports, technical articles and more. Nearly 30,000 subscribers now receive Experimenter each month, and past issues are archived online.

•Hints for Homebuilders (www.eaavideo.org)

The library of online video tips and techniques has grown to include more than 150 segments on all areas of aircraft

What safety measures can you take if you're building an aircraft?

- Keep your flying skills proficient even during the building phase
- Seek out transition training
- Understand the aircraft you're about to fly; each homebuilt model has unique flying characteristics
- Use EAA's Technical Counselors to keep your project on the right path
- Meet with an EAA Flight Advisor to make sure you're as ready as the aircraft to fly

construction. These videos have been viewed a total of more than 1 million times over the past two years. New video segments are added each week that cover the most-requested topics, large and small, that allow aviation enthusiasts to view these insightful tips over and over as they hone their own expertise.

•Technical Counselors

This longtime EAA program continues to be one of the organization's most valuable resources for members, as it provides in-person expertise on building projects at no charge to the builder. There are more than 1,000 Technical Counselors who provide these services on a volunteer basis, passing their knowledge to others in a true “member helping member” spirit.

•Flight Advisors

Nearly 400 EAA member Flight Advisors, with an invaluable

reservoir of flight experience and knowledge, are a crucial volunteer resource for those transitioning to amateur-built aircraft – whether the aircraft is new construction or previously owned. The goal is for the pilot to be as prepared for flying the aircraft as the aircraft is upon successful completion.

•**SportAir Workshops (www.sportair.com)**

At more than 50 locations throughout North America, aviation enthusiasts can develop and hone their skills through direct instruction and hands-on experience. Along with the technical knowledge, EAA SportAir Workshops provide the confidence needed to begin AND complete an aircraft project.

•**EAA Chapters (www.eaa.org/chapters)**

With nearly 1,000 chapters, EAA has an enormous reserve of “hometown knowledge” within the local chapter network. These local chapters are home for grassroots aviation enthusiasts, many of whom have built or restored aircraft, or trained others to fly. EAA’s technical Counselor and Flight Advisor programs rely on the support for local chapter members to thrive. EAA chapters are also the place where aircraft builders receive the support and recognition to ensure a “job well done.”

•**AirVenture (www.airventure.org)**

“The World’s Greatest Aviation Celebration” is not only a showcase for the entire world of flight – it offers an unequalled opportunity for the homebuilt community to show others what’s possible in the world of flight. There have been numerous anecdotes through the years of visitors to “Oshkosh” inspired to try building an airplane after seeing those parked along the flight line at Wittman Regional Airport.

Along with the inspiration and aviation eye candy are more than 1,000 workshops, forums and seminars covering every facet and skill of aircraft construction. The world’s top authorities and experts are available for face-to-face conversation, and hundreds of exhibitors can supply everything from nuts and bolts to a brand new aircraft project.

NEW IN THE LAST YEAR

•**Webinars (www.eaa.org/webinars)**

A growing segment of EAA’s homebuilder resources include regular online presentations and Q&A sessions with technical experts, homebuilt industry leaders and others who provide additional knowledge and background for aircraft builders. These hour-long sessions are also archived for later review by EAA members.

•**AirVenture-Homebuilt Hangar**

In 2010 at Oshkosh, a new area opened, providing homebuilders with an area to see the top names in the amateur-built aircraft community along with unique aircraft projects. This “Homebuilders in Review” area, supported by Aircraft Spruce and Specialty, is another addition to the community of knowledge and camaraderie that exists through EAA.

•**Staff Sonex project**

In November 2010, the first flight of the EAA-staff built Sonex lifted off the runway at Wittman Regional Airport. More than a dozen EAA employees were involved in the project, creating another link between the homebuilder community and the EAA staff who serve them each day. The airplane is currently undergoing flight testing and is scheduled to be on display at EAA AirVenture Oshkosh 2011.

•**Young Eagles (www.young eagles.org)**

While EAA’s successful youth aviation program may not seem as a fit in a homebuilders report, amateur-built aircraft have supplied a significant percentage of the flight experiences for the more than 1.6 million Young Eagles. From that group, we have already created more than 18,000 aviators as a result of providing an early positive flight experience. These Young eagles will be among the aircraft builders of tomorrow.

Listing of Homebuilt Aircraft Council and staff resources

The EAA Homebuilt Aircraft Council is group of experienced aircraft builders who help create programs and shape EAA policy in this core area. Those members in 2010 included:

Rick Weiss
Joe Gauthier
Wally Anderson
Fred Keip

In addition, EAA’s staff has a number of experienced builders and experts in a variety of areas on our EAA Aviation Services staff, from aircraft construction to medical certification issues. Among those staffers dedicated to homebuilders are:

Adam Smith, Vice President of Membership
Charlie Becker, Director of Member Programs
Joe Norris, Homebuilders Community Manager
Mark Forss, Manager, SportAir Workshops
Timm Bogenhagen, Senior Aviation Specialist
Tim Hoversten, Aviation Specialist
Susan Sedlachek, Aviation Medical Certification
Jennifer Bork, Safety Program Assistant