FAA Safety Team
FAASTeam

Safer Skies Through Education

A group of dedicated FAA aviation safety inspectors with extensive general aviation backgrounds in operations and maintenance specialties believe that—with your help—all of us can make a difference in aviation safety!

The FAASTeam focuses on improving the Nation's aviation safety record by conveying safety principles and practices through training, outreach, and education, while establishing partnerships and encouraging the continual growth of a positive safety culture within the aviation community.

Log on to www.faasafety.gov. Register on the Safety Program Airmen Notification System (SPANS) to receive notices that will help make flying safer and more enjoyable for everyone.

Whether you are a pilot or AMT, you'll find hundreds of safety courses on line. You can register and complete them at your convenience.

Also, FAASafety.gov will send you notices about safety seminars in your area.

Participate in the AMT Awards Program or WINGS – Pilot Proficiency Program. Earning and maintaining any phase of WINGS will keep your Flight Review current.

Contact your FAASTeam.

www.FAASafety.gov
Your Aviation Safety Web Site

Federal Aviation Administration

Light Sport Aircraft

FAASTeam
FAA SAFETY TEAM

Light Sport Aircraft Incident/Accident Reports Grow in 6 Categories

Whether you are a new sport pilot or an experienced aviator stepping back into sport pilot privileges, the new changes in aircraft, engines, and avionics merit your attention and consideration. It's clear to everyone that new aircraft—either factory built or home built—are more advanced than their predecessors.

Although the incident/accident rate for sport pilots remains very close to the rate for general aviation operations under Part 91, incident and accident reports for sport pilots and light sport aircraft show increasing trends in the following six areas:

1. **Loss of control.**
2. **First flight.**
3. **Transition.**
4. **Power loss.**
5. **Maintenance.**
6. **Airport selection.**

The FAA Safety Team (FAASTeam) wants to alert you to these trends and offer some advice and guidance pertaining to safe operations. If you have questions or concerns about anything that is not discussed in this brochure, contact your local FAASTeam program manager or consider calling your local EAA chapter and ask to speak with its technical counselor or flight advisor. These professionals can offer some useful advice.

www.FAASafety.gov

PUT SAFETY FIRST.

Help Reverse Increases in Light Sport Incident and Accident Trends

Loss of Control

Unfortunately, aviation incidents and accidents still result from the pilot's loss of control during the takeoff or landing phase of flight. Takeoffs are optional, but once they are successfully completed, landings become mandatory. Some factors that have always affected takeoffs and landings are—

- **Crosswinds:** Do they exceed the aircraft's limitations—or your skill level?
- **Aircraft experience:** Are you familiar with, and comfortable in, the aircraft? (There is a world of difference between "competent" and "comfortable.")
- **Mindset:** In general, these aircraft are not as powerful, nor as capable, as some you may have previously flown. Always have an alternate plan of action for unforeseen circumstances. Don't hesitate to change your plans if you are uncomfortable with the weather, winds, approaching darkness, etc. "Take a Second for Safety" and reconsider your alternatives.

First Flight/Transition

If this is the "first flight" of your experimental aircraft, you have many things to consider. If this is "your" first flight in a new category/class or make of aircraft (airplane–to–weight shift) many of these same things still apply—

- Did you obtain ground and flight training in this particular make/model/type of aircraft?
- If you have previous piloting experience in another make/model/type of aircraft, do the flight controls on this aircraft operate EXACTLY the same way? (In an emergency, previous training and experience/reflexes have often been the cause of the accident.)
- If this is the aircraft's first flight—
  - Have you received ground and flight training from the kit or ELSA manufacturer (if available)?
  - Were the taxi tests satisfactory?
  - Do you have a test flight plan from the kit/plans manufacturer, or from your EAA chapter flight advisor?
  - Did you use the services of an EAA technical counselor?
  - Did you preflight everything—twice?
  - Did you check controls? Do they move the way they are supposed to?
  - Are the winds calm?
  - Is an emergency crew or someone else at the airport to assist you, just in case?
  - Are you feeling external pressures? Are you prepared to cancel this flight—for any reason—even though family and friends are there to celebrate it? (Many builders' long hours of labor have been destroyed in a few seconds.)

Maintenance/Power Loss

The use of composite structures, two-cycle engines, and numerous other advances in amateur-built/light sport aircraft are considerably different than structures, systems, and techniques used for several years previously. If you built your aircraft, you received a Repairman's Certificate from the FAA that allows you to work on your own aircraft and perform/sign off the annual "Condition Inspection." If you purchased a previously built "experimental" aircraft, you do not have this privilege—unless you hold an FAA-issued Mechanic's Certificate with Airframe and Powerplant ratings, or you have completed a 16-hour course on the type of aircraft you own and received a Repairman's Certificate with an Inspection rating.

A long-established aircraft manufacturer recently entered the Special Light Sport Aircraft field using a new engine. Comments from mechanics and flight school operators convinced the company to switch to an engine long established in the aviation industry. This action is NOT a reflection on the newer engine but merely an indication that aviation service personnel may need additional training to provide high-quality maintenance and repair services on many of the newer aircraft engines.

Unfortunately, incident/accident reports concerning loss of engine power seem to have a common thread. They usually occur shortly after some type of engine maintenance, repair, and/or adjustment. Consider these thoughts—

- The FAA requires a mechanic to have the appropriate maintenance/repair manuals and inspection references available at his or her workstation while working on an aircraft. This requirement would be good for you to follow as well.
- If you have not received training on your aircraft's specific engine type, DO NOT TINKER WITH IT!!
- If you are taking your aircraft to a mechanic, make certain he or she has the training, manuals, tools, and test equipment to properly service the engine. The phrase, "An engine is an engine!" DOES NOT WORK in this case.
- Many engine manufacturers, as well as aircraft manufacturers, offer specific training.

Airport Selection

Numerous factors enter into airport selection. Whether it is the "first flight" of your newly completed homebuilt, or a refueling stop on a cross-country flight, you need to consider several things:

- **First flights:** Even if you intend to do only taxi tests, you need to consider—
  - Runway surface and adjacent surfaces: Is the area wide and flat (no ditches or culverts along the side) enough, should you lose control during taxi and/or takeoff or landing, for you to exit the runway without damage to the aircraft?
  - Are crash/fire/rescue services available? If not, consider asking someone to be present to watch you—just in case you need them.
  - Is the runway a single strip that always has some crosswind? If so, you may want to consider another airport for those first tests.
- **Cross-country stops:** In addition to fuel, think about—
  - Is the airport attended at the time you plan to arrive and depart?
  - Are the runways adequate for the wind conditions—especially if the winds change?
  - Are there any runway obstructions?