The Newsletter of Chapter 26, Experimental Aircraft Association ❖ Seattle, Washington ❖ Volume XVI No. 5 ❖ May 2008

NEXT MEETING:

2nd Thursday of the Month
May 8th, 2008
7:30 PM

LOCATION

Opportunity Skyway Bldg.
6524 Warsaw St. S. (N.W. Corner of Boeing Field)

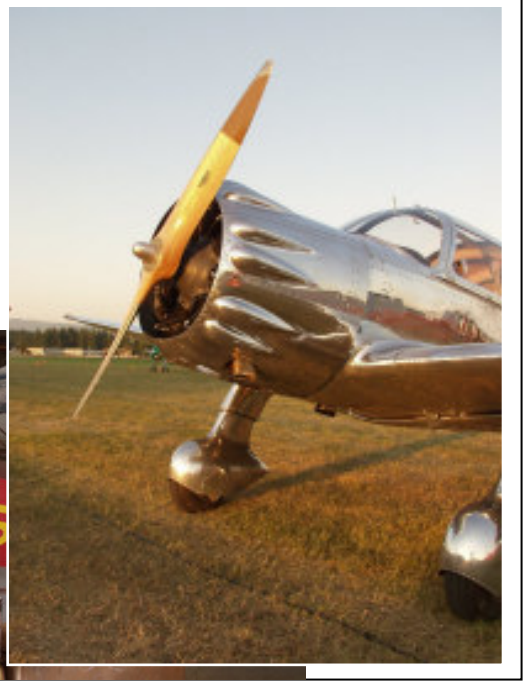
Chapter Web Page

www.eaa26.org

APRIL MEETING

A Round Engine Special

Russ Williams will speak about small antique radial engines. He owns several Pre-WWII aircraft powered by Kinner, Warner, and Ken-Royce Engines.



FUTURE EVENTS

May 10—Arlington Light Flight Spring Opener

May 16-17—Sportair Workshops "RV Construction", Arlington

June 7 – EAA Chapter 1111 clubhouse inauguration, Kelso-Longview airport

July 9-13 – Arlington Fly-In

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PRESIDENT'S MESSAGE…

A Very Different kind of Experimental Aircraft

During the weekend of the 19 & 20th, when some of you were enduring rain, snow, hail, and thunderstorms, I was getting a nice sunburn in Wichita KS.

So what would possess someone to vacation in Kansas in April? I had the opportunity to be a volunteer judge at the AIAA Design Build Fly (DBF) competition where I had been a student competitor from 2003 to 2005. Three other WSU alumni of the DBF competition were also able to show up, so a bit of a reunion as well. Being a volunteer also gave opportunity to meet several other AIAA volunteers and past DBF alumni that now work at Cessna, Raytheon, Gulfstream, Insitu, Naval Research Labs, Boeing, and more.

The DBF is a competition where universities from around the world build an electric R/C airplane that performs some unique task and/or carry some unusual payloads. Past years have had water bombers, tennis balls, large simulated antennas, packages that can be deployed, and more. This year's competition was hosted by Cessna, at McCauley Field.

This years competition was a fast loading "combi" aircraft. The passengers were 14 half-full ½ L bottles, and the cargo was 4 ½ size clay bricks, or a combination in-between. Before flight, teams were notified of their random payload combination, and timed on loading the payloads. After loading, the airplane was flipped upside-down to demonstrate the payloads were secured. On top of the payloads, there is a laundry list of other requirements. The airplane must fit in a 4'x5' box, takeoff in 75ft, current limited with a 40A fuse, and many more. Teams score was based on the weight of their aircraft, their design report score, and number of laps.

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Continued Next Page

President's Message (Continued)

The first mission was to "deliver" the aircraft empty. Teams selected their battery pack, since their battery weight factored heavily into the score, and demonstrated how many laps could be flown within 5 minutes.

The second mission was the "payload", where 2 laps must be completed. With all the design constraints, many had problems taking off loaded in 75 feet. Being so short, many had stability problems, particularly when it became quite windy (as high as 24G33KT). This resulted in several spectacular crashes, and one full blown fire.

In looking at the dozens of teams, some aircraft were oddly similar, and some quite unique. Many different solutions to the same task, much like all the different Experimental Amateur-Built aircraft we build and fly.

More details and results of the 2008 DBF can be found here:

http://www.aiaadbf.org/

http://terrabreak.org/

Youtube.com has many good videos, search "08 DBF" or "2008 DBF" and sort by date.

Tom

Geoff Sharples' Cessna 172 Needs a Quick Sale

Geoff Sharples' family needs to sell his airplane quickly to help pay for his nursing care.

It's a 1956 Cessna 172 with 2500 TT, and ten hours SMOH. Exterior and interior are original (and look it) but the seats have been re-upholstered. It's got a basic VFR panel (I'm guessing 70s-80s vintage) with radio and transponder. It's two years out of annual.

They're looking for about $25,000...which is really a steal, when you consider $23K was spent on the engine overhaul.

Jim Huber is handling this for the family. You can call him at home at 253-630-1689, or email him at james.huber@comcast.net.

EAA Asks FAA to Authorize Electric Motors in Ultralights and Light-Sport Aircraft

In an effort to gain attention and support for electric aircraft innovation and to help advance efforts to bring affordable electric aircraft to recreational aviators, EAA has filed a request to the FAA for regulatory exemptions that would allow the use of electric motors in ultralight and light-sport aircraft.

EAA's petition to the FAA specifically proposes specifications for battery-pack weight limits on ultralight aircraft and the development and adoption of electric-motor ASTM standards for light-sport aircraft. "The request for those specifications, combined with suggested language changes to remove exclusive references to reciprocating engines, would make electric motors legal for these aircraft," said Earl Lawrence, EAA's vice president of industry and regulatory affairs.

EAAers Scrutinize Sport Pilot NPRM Revisions

The FAA published its Notice of Proposed Rulemaking delineating 22 suggested revisions to the Sport Pilot regulations in mid-April. EAAers' evaluations of the "fixes," as the agency referred to them, are largely favorable. However, ideas for improvement to some of the proposed revisions are emerging.

"We've received a steady stream of correspondence from EAA members asking questions and sharing thoughts about the proposed rule revisions," said Earl Lawrence, EAA vice president of industry and regulatory affairs. "In general, the feedback has been agreeable, with the recognition that the collective revisions aim to better align the sport pilot and light-sport aircraft regulations with traditional pilot certificates and ratings," Lawrence said.

He cited as the most conspicuous example the proposed wholesale removal of the Sport Pilot Instructor section of the rule. "This change would end the segregation of sport pilot instruction from other pilot instruction. The individual would be a flight instructor like all other flight instructors, in this case having a sport pilot rating."

Another integrating measure involving flight training would ensure that all dual instruction for sport pilots would apply as dual instruction toward a private pilot certificate as well. Currently the sport pilot receives credit for this flight time to apply toward a private pilot certificate, but the pilot might not receive dual-instruction credit for that time, depending on the credentials of the flight instructor.

FAA Notice Answers EAAers' Call to Protect 51%-Approved Aircraft Kits

The FAA has posted to the Federal Register a policy decision to not re-evaluate any previously approved aircraft kits under its forthcoming new policy on amateur-built certification.

"The policy published today represents a significant victory in the EAA community's ongoing advocacy to preserve the enormous recreational and educational value of the vast majority of today's amateur-building practices," said Earl Lawrence, EAA vice president of industry and regulatory affairs.

The FAA's statement reassures aircraft-kit manufacturers and customers that - as the agency firms up its policy on interpreting and enforcing the requirement that amateur builders personally perform more than half (51% or more) of the construction tasks in building their aircraft - the FAA will not disqualify any kits that it had already approved.

That Ugly Spike - Updated

By Ron Wanttaja

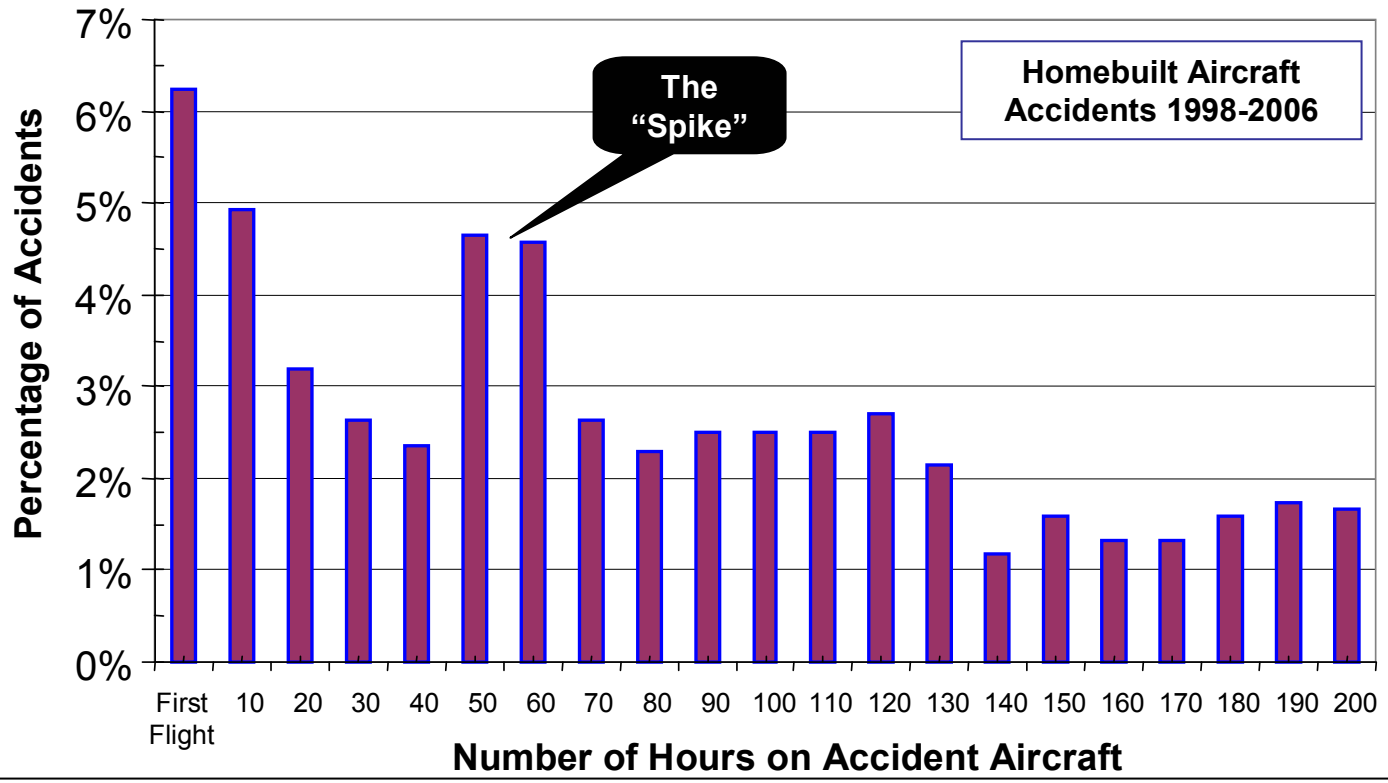
As most of you are aware, I occasionally download NTSB accident reports and analyze the trends in homebuilt aircraft accidents. I recently added the 2005 and 2006 reports to my database (Since the NTSB sometimes takes a year or more to come to a Probable Cause, the 2007 accident records weren't complete).

I've presented this kind of data to the Chapter several times. Many of you might remember that I usually marvel about the "Spike"…the rise in homebuilt accidents after the initial test period is completed.

The "Spike" is still there with the new data. As the plot below shows, about 6.2% of all homebuilt accidents occur on the first flight, but it tapers down until the magic 40 hours is reached (when the aircraft has competed its initial test phase).

Then the accident rate spikes again, practically doubling for the next twenty to thirty hours of aircraft time.

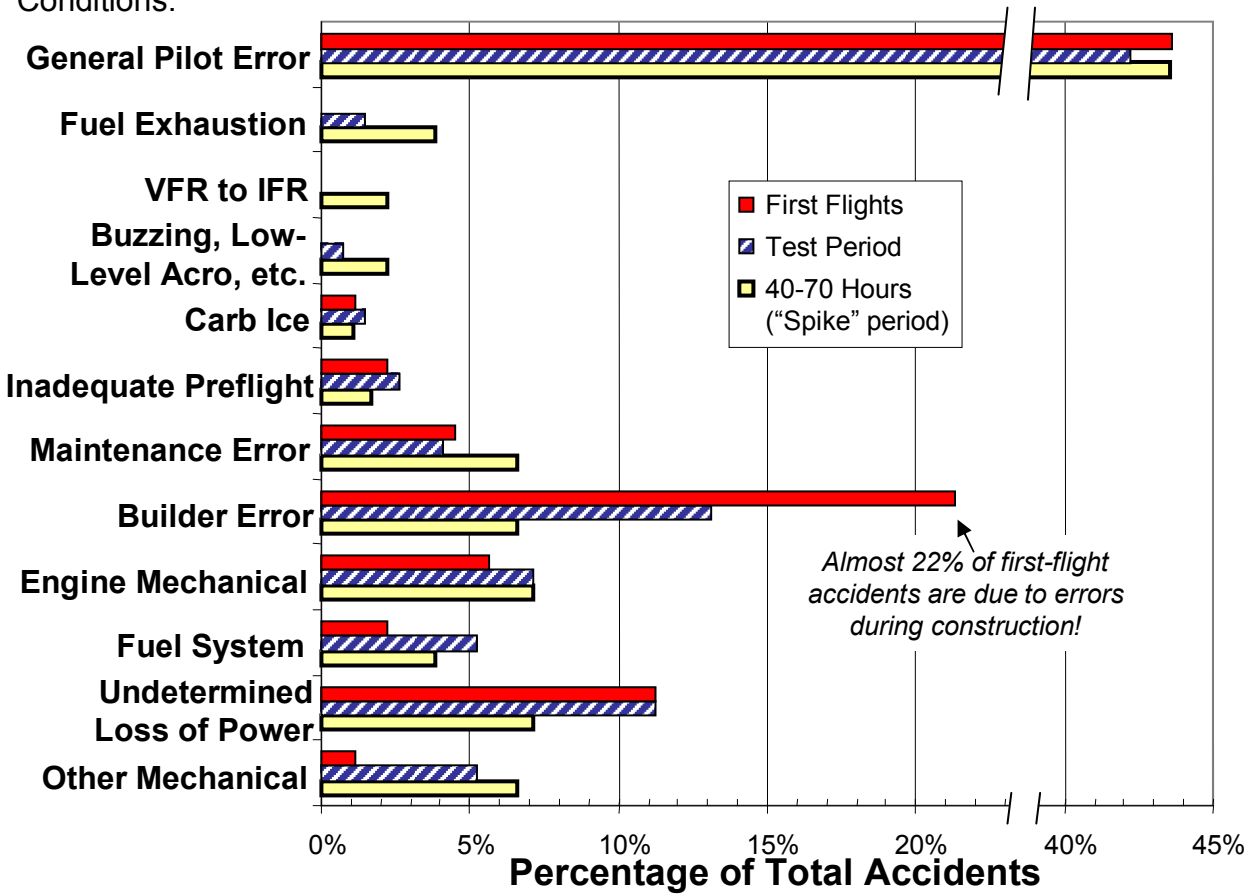
What is happening in this period? Let's compare the causes of accidents during the first flight, test period, and the 40-70 hour range on the next page.



That Ugly Spike (Continued)

The bar chart below provides the relative frequency of typical of homebuilt-aircraft accident causes. The top bar in each set (Red for online readers, black for print copies) shows the frequency for first-flight accidents, the middle bar (striped) is the result for the 40-hour test period (including the first flight accidents) and the bottom pale yellow bar shows the results for aircraft with forty to seventy hours at the time of accident.

Four main categories are contributing to the "Spike". The first two are Fuel Exhaustion and "Continued VFR flight into IFR Conditions."



These are what I call 'Cross-Country" accidents…they aren't likely to happen on a local pleasure hop (or test flight). So it makes sense that the frequency of these accidents increases just right after the airplane is allowed to leave its local test area.

The second category is basically "Buzzing". Pilots start feeling their oats, I guess, after the Test Period is done. It's interesting to note that the percentage of accidents in this category is even higher after the 40-70 hour range….

The big item, to me, is the "Maintenance Error" category. It's more than a 50% jump from the test period rate.

Even more telling, the rate in the 40-70 hour range is even *higher* than the overall rate for homebuilt accidents (6.6% vs. 4.4% for overall).

Two things here: First, just because the airplane survives its test period doesn't mean all the bugs are out of it.

Second, that 40-70 hour point pretty much coincides with when most homebuilts will be undergoing their first annual inspection. Looking at the reports, most of the accidents appear due to the owner not securing things properly after working on them or making modifications that cause problems.

The message? Just because you completed the test period doesn't mean you're out of the woods. Don't slack off just because things are going well!

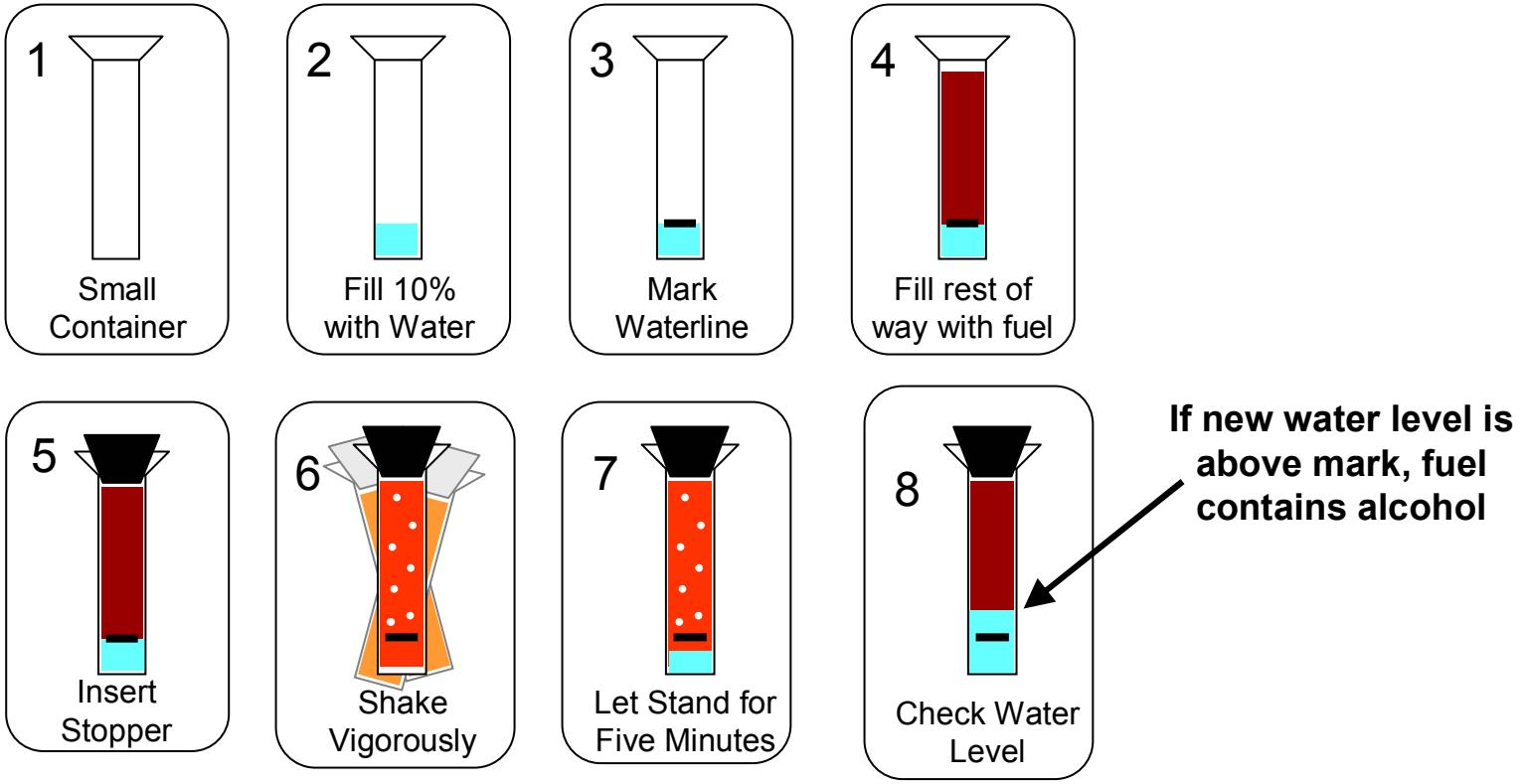
Testing Mogas for Alcohol

I first ran these instructions in the newsletter two years ago. The Washington ethanol mandate is upon us, with our corner gas stations required to sell a minimum amount of ethanol-laced fuel by the end of the year (100LL is unaffected). It's in the gas pumps in Eastern Washington, and one can expect it to arrive here, soon.

Fortunately, testing for ethanol is simple. As a type of alcohol, it has a great affinity for water. The basis procedure is to mix a gasoline sample with a small amount of water. If there's more "water" after the test than you put in, the gasoline sample contained alcohol.

You'll need a small clear container. A test tube or gradated cylinder would be best. It doesn't need to be big, but the taller it is, the easier the results will be to read. It needs a lid or a stopper…initially, I used a small baby-food jar. Since then, I bought a set of test tubes and stoppers at a local hobby store. EAA also sells a nice little test kit for $15.

This is quick and easy, and should be performed prior to ANY fillup with autofuel.



Marketplace

For sale: Tires – 15/6.00-5, 6ply, 2 tires, 2 tubes. Brand new, unused, with yellow tag. These are retread tires that are heavier duty than standard – With deeper treads and harder rubber they'll last longer than new. They work well on 5 inch wheels, but give a larger tire size for unimproved runways. Great for your RV or T-18! $125 for the set. Ross Mahon 206.550.9526 or Rossair@aol.com

Zenair 601 HDS Project for sale: Firewall back, including fairings, LR fuel tanks, and lights. Price negotiable. Terry Wilson, 206 522-4006.

Wanted: Lycoming O-235 engine, will consider any version, prefer run out engine in need of overhaul. Ross Mahon 206.550.9526 or Rossair@aol.com

Former EAA member Keith Klinck recently passed away and his wife Helen has his Smyth Sidewinder project up for sale. This is a 1960's vintage design, all metal, tricycle gear configuration somewhat similar to an RV-6. The project has a completed fuselage and many other component parts and aluminum sheet. For more information call Ron Klinck at 425.739.0715.

Airpark Home Seattle / Port Orchard. Vaughan's Airpark. Charming 3br. 2-1/4ba. Country Farmhouse style home with wrap around verandah & upgrades, on 2.47 acres with loafing shed and cross fencing for horse. Attached hangar/ workshop/ garage. http://mysite.verizon.net/resun6v1 (253) 857-4330 after 6PM or lv. msg .

Want to Borrow

Ross Mahon is looking to borrow some reamers to do a valve job on some O-320 jugs.

Valve guide bore:

0.404 to 0.405 inches
0.4985 to 0.4995 inches

Some we don't know what specific oversize we will need reamers for, but will be in the range of:

0.595-0.600 inches
0.660 to 0.670 inches

(Cylinder head bore for valve guide)
Contact Ross at 206.550.9526 or Rossair@aol.com

EAA CHAPTER 26 - MEMBERSHIP INFO

- Dues are $16.50 per year, due in **January**.
- If you are a prospective new member we will be happy to send you a couple of complimentary newsletters.
- Please fill out the membership form.
- Make checks payable to "EAA Chapter 26", and pay Treasurer at the next meeting or mail your check to:

EAA 26,
c/o Tony Livic
3546 Gangmarken Ln NE
Bainbridge Island WA 98110

(Note: Members who have not paid by March will no longer receive a newsletter)

On the Wreckord

Recent Homebuilt Accidents from the NTSB Web Page

Waiex – Florida : During takeoff with a crosswind from the left side of the airplane, the pilot held "left aileron into the wind." The left wing then lifted up, the airplane veered to the left, and the pilot reduced engine power to idle. The airplane; however, continued to veer to the left. It then exited the left side of the runway into the grass, and struck a runway marker damaging the left wing and propeller.

Lancair ES – Oregon: Six minutes after takeoff at about 10,000 feet, the pilot told ATC he had an emergency. Radar contact was lost about a minute later

A witness heard an engine revving up and down repeatedly. He looked in the sky for an airplane while he continued to hear this sound, and then he saw the airplane come out of a cloud layer about 2,000 feet AGL. As the airplane came out of the cloud layer, the right wing pitched down and the airplane was in a corkscrew pattern clockwise, at a descent angle of approximately 45 degrees. It continued this corkscrew pattern until going out of view of the witness. Two fatal.

Glasair – Colorado : The pilot decided to land with a six knot tailwind due to the airport's request to avoid flying over populated areas. He postponed dropping his flaps until he had the runway made. He crossed the runway threshold at 50 feet AGL and 90 knots. Full flaps were deployed and he reduced airspeed as he approached the runway. The first touchdown was 800 feet past the runway threshold and as he pulled back to flare, the airplane ballooned up 20 feet. The pilot flared again but the airplane dropped and bounced on the main gear, then the nose gear, which then collapsed. The propeller struck the runway and the airplane skidded to a halt.

RV-9A – New Jersey : As the plane turned on to the crosswind leg of the traffic pattern, the airplane's engine began to falter. Within seconds the engine lost power, and the propeller stopped. The pilot force-landed into trees. About 1 flight hour prior to the accident flight, he had performed some work on the airplane's engine and propeller reduction gearbox.

Midget Mustang – Colorado: The pilot said he started his takeoff roll. When he reached 50 mph, he pushed the control forward stick to raise the tail. The airplane immediately swerved to the left and the pilot corrected with right rudder. The airplane struck a snow bank along the right side of the runway. Winds recorded by the AEJ Automated Weather Observation Station (AWOS) were from 270 degrees at 10 knots, gusting to 18 knots.

According to the airport manager, the pilot had recently modified the airplane by repositioning the main landing gear.

Velocity XL/RV-8 – Florida: The accident occurred at the local EAA chapter's monthly pancake breakfast. A flight of 4 RV-8's landed in formation. When the lead RV-8 had turned off at an intersection and was midway between the runway and the parallel taxiway, it was struck from the left side by the Velocity.

The Velocity had landed on runway 15 following the flight of 4 RV-8's and departed the runway on the left side entering a grassy area separating the runway and taxiway. The Velocity continued in the grass and witnesses stated that they observed the Velocity collide with the RV-8 in a left bank and with full engine power. Both airplanes exploded into a fire ball. Three fatal, one serious injury.