RUNWAY 35

The Official Newsletter of EAA Chapter 35, San Antonio TX

December 2012

Volume 54 Issue 12

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Next Event

Dec 8th

Holiday Party

EAA Club House

17:00 Social Hour

1800 Dinner

Catered by Acadiana

Runway 35 is published monthly by EAA chapter 35.
Ed Seurer: Publisher

Chuck Fisher: Editor

eaa35news@gmail.com

More About the Breezy

Norris Warner

As some may recall, we purchased "an almost ready to fly" Breezy a few years back. The builder had "Gone West," and his chapter in Provo, Utah, was selling

the project. It was advertised as the second Breezy that the retired engineer had built, so what could go wrong?

Well, the first thing we found (Jack Ridgway and I) was that no engine log would be provided even though they told us the engine had been majored with a new crank—"we have your money, and you

(Continued on page 3)

Saving Pete

Chuck Fisher

During the years following WWI, aviation transitioned from an experiment for dare-devils and inventors to something the common man could experience. Barnstormers, using former military trainers gave rides by the thousands and thrilled onlookers, many who had arrived by horse and carriage or by foot (remember when people walked from place to place?), and inspired many of those passengers to go on to enter aviation as a career or hobby. One of those was Bernie Pietenpol, who became a pioneer in aviation

(Continued on page 4)

EAA 35 Holiday Dinner

Dec 8 2012, 6-7:30pm
Catered by Acadiana (Yum!)
Reservations by Dec 4th
$25/Person

Checks/Payment to
Dee Brame
103 Box Oak
Shavano Park, TX 78230

PRESIDENT'S COCKPIT

Nelson Amen

Chapter 35 President

With the arrival of cooler weather, I suspect many of us will take advantage of the rather short "Texas fall" and head out

My workshop in Alaska. Thought I'd provide a glimpse of winter!

to work on our airplanes or take a flight. It's a whole new world out there without the burning Texas sun and hot temperatures. You may even find aircraft performance has improved with the cooler air temperatures (!)

While you are enjoying your favorite hobby, give some thought to sharing the joy with a family member, friend, or even just a visitor at the hangar. Why fly with that empty seat? Something as simple as a few touch and go's, or a short flight to fill the tanks would certainly put a smile on the face of a passenger. A flight and a meal will be remembered for the whole year! You and I know the joy of flight … let's take the chance to share while the weather is doing its part as well. Your plane is most likely a new experience, even for a seasoned pilot. Hey - - -'tis the season!

And speaking of the holidays, our annual Christmas party "meeting" is scheduled for December 8th. Come share a good flying story with a member, and help celebrate one of our most cherished treasures: friendship. Best wishes and prayers to you and your family this Christmas. Life is good.

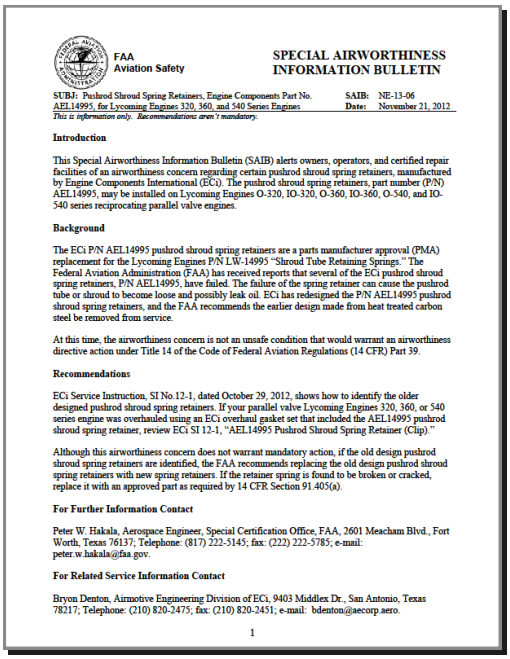
Be safe, fly safe, taxi safe, fly happy,

Nelson Amen

SPECIAL AIRWORTHINESS INFO BULLETIN (LYCOMING ENGINES

The FAA recently announced this SAIB that I thought might be relevant to several members. This is a summary of the document:

This Special Airworthiness Information Bulletin (SAIB) alerts owners of an airworthiness concern regarding certain pushrod shroud spring retainers, manufactured by Engine Components International (ECi). The pushrod shroud spring retainers, part number (P/N) AEL14995, may be installed on Lycoming Engines O-320, IO-320, O-360, IO-360, O-540, and IO-540 series reciprocating parallel valve engines.



FAA
Aviation Safety

SPECIAL AIRWORTHINESS
INFORMATION BULLETIN

SUBJ: Pushrod Shroud Spring Retainers, Engine Components Part No. AEL14995, for Lycoming Engines 320, 360, and 540 Series Engines
This is information only. Recommendations aren't mandatory.

SAIB: NE-13-06
Date: November 21, 2012

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts owners, operators, and certified repair facilities of an airworthiness concern regarding certain pushrod shroud spring retainers, manufactured by Engine Components International (ECi). The pushrod shroud spring retainers, part number (P/N) AEL14995, may be installed on Lycoming Engines O-320, IO-320, O-360, IO-360, O-540, and IO-540 series reciprocating parallel valve engines.

Background

The ECi P/N AEL14995 pushrod shroud spring retainers are a parts manufacturer approval (PMA) replacement for the Lycoming Engines P/N LW-14995 "Shroud Tube Retaining Springs." The Federal Aviation Administration (FAA) has received reports that several of the ECi pushrod shroud spring retainers, P/N AEL14995, have failed. The failure of the spring retainer can cause the pushrod tube or shroud to become loose and possibly leak oil. ECi has redesigned the P/N AEL14995 pushrod shroud spring retainers, and the FAA recommends the earlier design made from heat treated carbon steel be removed from service.

At this time, the airworthiness concern is not an unsafe condition that would warrant an airworthiness directive action under Title 14 of the Code of Federal Aviation Regulations (14 CFR) Part 39.

Recommendations

ECi Service Instruction, SI No.12-1, dated October 29, 2012, shows how to identify the older designed pushrod shroud spring retainers. If your parallel valve Lycoming Engines 320, 360, or 540 series engine was overhauled using an ECi overhaul gasket set that included the AEL14995 pushrod shroud spring retainer, review ECi SI 12-1, "AEL14995 Pushrod Shroud Spring Retainer (Clip)."

Although this airworthiness concern does not warrant mandatory action, if the old design pushrod shroud spring retainers are identified, the FAA recommends replacing the old design pushrod shroud spring retainers with new spring retainers. If the retainer spring is found to be broken or cracked, replace it with an approved part as required by 14 CFR Section 91.405(a).

For Further Information Contact

Peter W. Hakala, Aerospace Engineer, Special Certification Office, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; Telephone: (817) 222-5145; fax: (222) 222-5785; e-mail: peter.w.hakala@faa.gov.

For Related Service Information Contact

Bryon Denton, Airmotive Engineering Division of ECi, 9403 Middlex Dr., San Antonio, Texas 78217; Telephone: (210) 820-2475; fax: (210) 820-2451; e-mail: bdenton@aecorp.aero.

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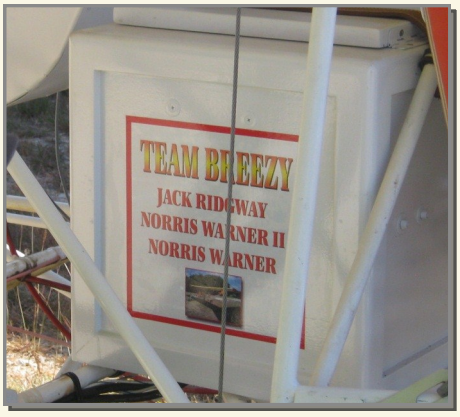
BREEZY (CONT)

(Continued from page 1)

own the project" so, in a nutshell—everything! The builder had both a mill and a lathe, and he built up some of the most elaborate and unconventional control systems found anywhere. These weird devices have all caused trouble requiring rework, but that was only the beginning. And, yes, you guessed it—the engine required another major overhaul before we got 100 hours on it!



The three-longeron tail section was bolted (!) on, and this showed signs of failing quite soon. The wings were another kettle of soup—aluminum spars and wood ribs. (What?) Because the wings were covered, this was not apparent at first, but when we realized we could hand-squeeze the lift strut attachment tangs, we knew the fabric had to come off. Additionally, the spar-to-fuselage attachments were in single shear—a real no-no in my book. All of these attachments were replaced, quite obviously. And to add insult to injury, the lift struts were 1 ¼ inch diameter, .090 inch wall, round 4130 tubes. For fence posts they were adequate, but at eight pounds each, were totally useless as lift struts. Carlson streamlined aluminum struts were the best solution.

When we ran the weight and balance, we found that the empty Center of Gravity (CG) was aft of the 50% point on the wing chord (50% mean aerodynamic chord—MAC). Of course, when you add the pilot (way up front) the CG goes forward to 39% MAC, and the plans author thinks that might be O.K. (I doubt he really knows where his CG is at!). anyway, that seemed too far aft for us, so we cast two removable lead weights which can be installed under the pilot's seat. A very light pilot, flying solo, may use both, a 300 pound pilot flying solo neither, but I chose to use one when solo, giving me a CG of 32%.

During taxi tests, we noted that it was impossible to lift the nose gear off of our turf runway until reaching 55 mph. Of course, by then, the airplane was at climb-out airspeed, and climb it did! Being still fairly fast on the controls, it was manageable, but far from desirable.

My research told me that the nose gear should be able to be lifted off at 80% of stall speed—which I had found in flight to be 40 mph indicated. Surely, something needed to be done. Also, I found engineering data which confirmed that the main gear was too far aft, perhaps by six inches or so. If we could move the main gear forward, the tail down-load during the takeoff roll would allow me to rotate much earlier. However, moving the gear would be a complicated and costly proposition.

Our next approach was meant to accomplish two things: 1) reduce the back pressure needed on the stick during flight and on the ground, and 2) rotate earlier on the takeoff roll. First, we removed the weight that the elevator itself places on the stick by putting a balance spring in the system. The stick is now neutral on the ground with no real tendency to move nose down or up. Secondly, we moved the leading edge of the stabilizer down (more positive decalage) to enhance the ability of the entire horizontal tail to produce a down load.

These two adjustments helped, but the rotation speed was still too high, Putting our heads together (Jack Ridgway, Norris II, and I), we decided to give the wing a more positive angle of attack on the takeoff roll, instead of moving the main gear forward. We did this by lengthening the nose gear leg 4 ½ inches (exactly three, 2 X 4's laid flat!) which changed the sitting angle of attack of the wing nearly three degrees.

This was one more improvement, but we had other, nagging problems. Thanks to far-too-small tail surfaces, the airplane simply could not be slipped. Off came the tail so that we could increase the areas of the fin, rudder, stabilizer and elevator all by 30%. This also was a good opportunity to add electric elevator trim, which is greatly appreciated.

Now, although rotation at takeoff was much better than earlier on, I decided to do to the main gear what Cessna did for the 120/140 fleet—move the main gear axles forward three inches. Using ½" thick aluminum plate, this provided

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BREEZY (CONTINUED)

(Continued from page 3)

the final fix for proper rotation. The only down side is that the airplane has a slight tendency to sit on its tail skid occasionally when at rest.

Our next improvement was caused by the tortuous drought we have been experiencing. Our grass runway turned more into a gravel one, and we began to find rock nicks in our pusher propeller. Refinishing and balancing the prop was required, and hand-formed wheel parts had to be added. Problem fixed!

One last item had been bothering me for some time. Was the carburetor getting "clean" air, or was the airflow behind the rear seat (and beer box) so scrambled as to cause a loss of power. A couple of "experts" said a ram-air source for the carb would be counter-productive, but I just would not believe this. We therefore brought a smooth aluminum duct (with a flex joint) from the carb to the point just over the passenger's head—and picked up 100 RPM on takeoff roll! And that was worth the effort, to be sure.

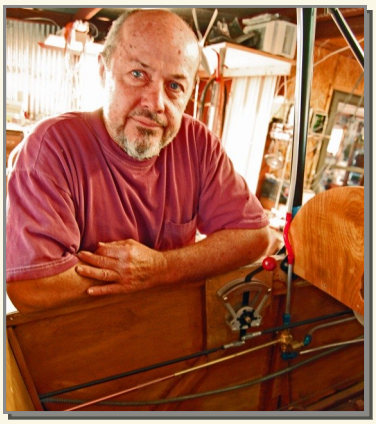
There are many, many lessons in all of this. The first one is not to become so enamored with one design that you are likely to jump at the first project you find. Secondly, buying off E-Bay and relying on the words of the seller—even an EAA chapter—is simply asking to be ripped off. I might add that every communication that I later sent to those folks simply went unanswered. Third, even when you think you've found "a steal," anything you can't open up certainly is a hiding place for critical errors. And lastly, building from scratch might seem to be the long road, but it is likely to be the smart choice.

They say you never get a homebuilt truly finished, and we have proved that fact over and over again. And again!

PETE (CONTINUED)

(Continued from page 1)

for the hobbyist, now experimental aviation, by developing perhaps the most enduring design in all of flying – the Pietenpol Air Camper.



Pietenpol designed the plane to be built using tools, techniques and materials available in any well-equipped buggy shop or farmer's shed. Spruce boards, standard plywood, simple metal fittings and for power – a Ford model A engine. The light construction, big highly cambered wings and high stance allowed it to be flown from pretty much any mostly flat field. There weren't many prepared fields in 1928. Who would have known back then that nearly 100 years later there would be just shy of 500 of them still in the FAA registry and that meticulous builders and mechanics like EAA 35 member John Kuhfahl would still be building and restoring them.

I had a chance to learn a little about the Pietenpol and about John during a visit to his hangar/workshop on San Geronimo Airpark. John is a retired Air Force colonel who spent his career in electronics systems maintenance, communications and eventually mission support command. He first learned to fly while in the Air Force through one of the then ubiquitous aeroclubs. Then he went on to teach shop and mechanics in his second career, so he has technical skills and knowledge derived of decades of experience. A Volkswagen enthusiast, he learned to work on the air cooled boxer type engines and found a natural similarity to aircraft engines. So, he fine tuned his mechanical skills and spent countless hours learning the finer points of aircraft engine rebuilding eventually going on to earn his A&P certificate. With those skills he recently restored an Ercoupe to indisputably better than new.

He purchased his Pietenpol locally. It was a well-loved plane flown by several members, but it had fallen into disuse. John bought it for the C-85 engine, fully intending to

(Continued on page 5)

SAVING PETE (CONT)

(Continued from page 4)

rehab the engine alone. However, as he looked over the carefully crafted wood, he realized "It needed to be saved". So, he launched into another restoration.

His Pietenpol uses some J-3 cub parts, like the landing gear and fuel tank, and has a Continental C85 engine, but is otherwise fairly true to the original design. It could have been a flyer without much work. But that is not John's style.

John, an engine aficionado, began with the C85. Completely disassembling the engine, cleaning and checking every tolerance, he found that it had chrome rings and chrome cylinders – a combination that tends not to seat cleanly. So he replaced those achieving much better compression. He meticulously rebuilt the carburetor and every seal with the proper part. He eve used original new old stock spark plugs. The engine now looks better than brand new.

He treated the airframe the same way. He carefully de-mated wood parts, inspected or replaced them, then rebuilt them using Resorcinol. The fuselage was in good shape, but some ply parts had disintegrated. So, using marine grade plywood he built up new panels and parts. For the panel, though, John used original or period parts when available giving this "Pete" an antique feel although pulled behind a Swiss watch engine.

Every metal part and fitting was removed – no small task in a glued wood plane. They were bead blasted, primed and repainted or replaced if needed, but he stayed with existing parts and authentic construction for the most part. He has, though, made a few concessions to modern technology. The original "Pete" was designed to be assembled from common parts and pieces in hardware stores. John, however, has replaced cracking rubber hoses with aircraft grade aluminum and fittings. He has installed an aircraft grade fuel selector and the cables and plumbing are modern.

John's "Pete" and his Ercoupe share a common characteristic. Each is extraordinarily clean, precise, and correct. The key to that is simple – it's right or it's not. He takes each part, and works on it until it is jewel perfect, then moves on to the next. So, his projects are not quick, but they end up right.

John still has a ways to go on the Pete. He'll re-use the wings without rebuilding them, so a little paint and they'll be ready to go. Once the remaining metal parts are bead blasted, painted and re-installed and a bit of upholstery is finished, he'll be ready to fly. Like all builders, he hedges on a time estimate but figures he'll be ready to fly "Tuesday". So, some Tuesday, nearly a century after it's design, San Geronimo's newest project will take to the sky, true to the original, but perhaps better. Who could have known?

This is the fifth of a monthly feature that highlights a member, team or project of our EAA chapter each month. If you would like your project to be a featured, please contact me via eaa35news@gmail.com

I LEARNED FROM THAT!

By Dennis Scheidt

Glider flying is not simply being towed up and then gliding back to the ground. If that was it, almost no one would do it. It just would not be worth the trouble. The challenge is stay up and sometimes to actually go somewhere. In South Texas the primary method of staying up is to circle within the bounds of a thermal. A thermal is a bubble or column of warm air that rises because of its lower density than the surrounding air, much like a bubble rises in water. In other parts of the country, there are other methods of climbing a glider, especially in the big mountains and long ridges.

While flying gliders it is not unusual to be circling in a thermal with birds, usually vultures, hawks or other soaring birds. On one such flight in my Schleicher Model Ka-6 German built glider, I was climbing in a thermal a few miles southwest of San Geronimo Airpark at about 6000 feet. I noticed that a vulture had joined me in the thermal. The vulture was ahead of me and just inside my circle. After a few more turns, I was catching up with the vulture and he was just off my left wingtip. He turned his head and looked straight at me sitting in the cockpit. We both seemed to accept each other and continued flying together climbing in the thermal. I began to wonder just how close together we could fly. We got to where he was only about 3 or 4 feet off my left wingtip. I moved in a little closer and he turned to look at me again. I then wondered if I could actually touch the vulture's wing with my wingtip, kind of like shaking hands as friends do. I moved even closer and the wingtip was only a couple of feet from him when he suddenly squawked, rolled over, and put his claws up to the wingtip. Surprised, I moved away quickly with thoughts of a damaged wingtip. We both decided that had been close enough and departed ways

NOTICE FOR A&PS

A&P Certificate Replacement- Notice Number: NOTC4449

If you have already replaced your paper A&P certificate, then this message is not for you. On the other hand, if your A&P certificate is still printed on paper, please read carefully.

The FAA is under a mandate to replace all paper certificates with plastic certificates. If you do not replace your paper certificate on or before March 31, 2013, you will no longer be able to exercise your privileges!

All certificated Airmen, including mechanics, repairmen, pilots, etc., are required to replace their paper copy with a plastic copy, or they will no longer be able to exercise the privileges of that certificate.

The best way to get a new replacement certificate is to follow the instructions at http://www.faa.gov/licenses_certificates/airmen_certification/certificate_replacement/.

The replacement cost is $2.00, unless you still have your Social Security Number on your certificate and you ask to have it removed.

TRIP REPORT—DAVID WAYNE HOOKS

Steve Jones

Low ceilings. Of course. What would possess Freda and me to jump into her Cessna 152 and fly to Bulverde on a day like today anyway? It's not like we had a date with destiny.

Truth be told, we probably did. Doc Hecker had invited us on two previous occasions to fly with him down to David Wayne Hooks airport to meet the members of the Gulf Coast Wing of the Commemorative Air Force. He's been trying to recruit us to take on the newsletter as Sandy Thompson prepares to resign the position and turn her attention to matters even more important than this. I've seen some of the newsletters Sandy has authored, and I've been subconsciously avoiding this meeting. Her work is outstanding! How on Earth would I be able to maintain such an outstanding publication?

Today, Doc noted, would be a workday on the B-17 Texas Raiders. There was sheet metal work to be done, and an engine to replace. Now that was something I could handle. With appropriate adult supervision, I could turn wrenches. Weather be damned, we piled into the car, dressed to work on an airplane. We must have looked like a couple of hillbillies, arriving at 1T8.

Doc pulled out his beautifully maintained 1965 Cessna 210E and invited us to pile in. It has sumptuous synthetic leather upholstery. We thought we'd seen sumptuous before, in our Glastar. We were wrong. This is an ultimate cross country machine. Hours later I would remark it was like flying around in our living room.

Nestled into this cocoon of faux leather and memory foam, I consulted the DTC DUAT application on my phone for an updated weather briefing. As I did this, I pictured the living, breathing weather briefer at his console sighing and flipping his pencil into his (hopefully) empty coffee cup. In my vision, he looked a bit like Gordon Jump, the Maytag repairman. Times really are changing, and this brings me to a eureka moment. The avionics in this Centurion are adequate to the task – more than adequate. A Garmin 430, backup radios, and an Apollo GPS to crosscheck against; by way of comparison, the avionics in the B-17 Texas Raiders are vintage. We noted that the wing is raising funds to update the avionics, so we made a small contribution to help move this along.

Big, muscular, purposeful. These describe the Centurion well; and at 160 knots on 14 gallons per hour, surprisingly efficient. I did the math – at nearly twice the speed, the Centurion was easily as fuel-efficient as our 152. Sigh. Freda noted the back seats in the Centurion were a LOT nicer than the back seats in the 152. I'm afraid to think where this is going.

On a previous visit to San Geronimo Airpark, Doc Hecker congratulated me on earning my Private Pilot certificate, then offered the controls to his Champ. I decided right there, the PP certificate really is a license to learn, as that Champ fought me like a livery horse on a dude ranch, knowing perfectly well this city slicker didn't have a clue how to control the situation. I had long suspected the 152 was a remarkably forgiving aircraft, and this confirmed my suspicion. Flying the Centurion would be another eye-opening experience.

Not that the 210 is difficult to fly – in fact, it's remarkably docile, given the complexity of the machine, the speed and the horsepower. But it's not your father's 150, either. P-factor, engine torque, retractable gear that wiggle around a good bit more than fixed gear, all conspired to make the takeoff from DWH a life-affirming moment. Then there were the additional controls and gauges – propeller, manifold pressure? "Gear up." "Gear up confirmed."

As we turned out to the west, we stole a look back at the airport. It's remarkable to see two parallel runways, and a waterway – Hooks has an on-field water landing strip, and from what we saw, at least one Cessna 172 on floats, ready to help you earn your seaplane rating.

Later, during the post-flight briefing, Doc would ask me what I considered to be the most challenging part of the flight. Was it the plane's systems, its flying characteristics, navigation, or

(Continued on page 8)

I LEARNED FROM THAT (CONT)

(Continued from page 7)

simply working through Class B airspace and dealing with flight following and the various handoffs? Communications, I replied. This will likely come as a surprise to folks at San Geronimo – I sound so confident on the radio, when I'm tooling around in uncontrolled airspace. The jig is up: It's a ruse.

What I observed is really nothing new – folks like Ron O'Dea have told me in the past that the key to a successful flight through controlled airspace is planning. Have a plan in your mind, so you're five minutes ahead of the plane and the upcoming situation. This played out in dramatic fashion as Doc Hecker handed me the kneeboard and said, "For the trip home, you have the plane AND the communications." I can't repeat my response here.

Communications: A little situational awareness goes a long way here. Doc took note of the instructions other pilots were receiving, and expected handoffs and frequency changes. Each time I needed to change frequencies, he'd already preloaded the Garmin 430. I'm pretty sure I would have let all this stack up, making for some pretty frantic moments and requests to repeat instructions. The clearance out of Hooks was interesting – cleared for take-off, remain at or below 1800 until cleared into Class Bravo. This would be my first time dealing with Bravo. I have to say the controllers made it a downright pleasant experience. As we continued our journey, I learned that Flight Following is the way to go. We had ample support from Houston Center, Austin Approach and San Antonio Approach. The flight advisories ensured we continued to have a non-eventful flight.

Flying: With the ball on the left side of the cockpit, keeping the plane coordinated was interesting. Fortunately, the Centurion has a highly effective rudder trim, so trimming for coordinated flight in climb, cruise, and descent pretty much defined the whole of the task. Maneuvering flight? Let's just say the Centurion is as forgiving as a 152 in this domain. I'll do better when I have the ball in front of me. I have to say it's an incredibly stable platform. We never engaged the autopilot; I hand flew it there and back. The plane kept us nailed on our intended altitude with just the slightest elevator trim adjustment.

Cockpit Resource Management: There are enough systems, avionics, and speed to this aircraft to warrant task management. Plan ahead, take note of the situation unfolding ahead, manage tasks and crewmembers to take some of the workload and cross-check important items like Gear Down. In the 152, we have all sorts of time to think about what we'll be doing next. In the Centurion, things happen a little faster. It doesn't hurt to be a little pedantic. As Ron O'Dea noted, if you're not doing anything at the moment, you're probably doing something wrong.

To summarize, we had an outstanding flight and introduction to a workhorse of an airplane. We met some outstanding, committed airmen who are working against daunting odds to preserve our flying heritage, and we even took some time out to explore what Springs Creek Barbecue had to offer, and we'll go back. The brisket sandwich basket was an outstanding meal for $8.25. If you'd like to learn more about the B-17 Texas Raiders, visit their site at http://b17texasraiders.org.

Upcoming Events

January Meeting 12 Jan 2013

Show-off your airplane/project day!

BOD	**10:30 AM to 11:30 AM**
Lunch	**12:00 PM to 1:00 PM**
Visit Airplanes/Projects	**1:00 PM to ??**

Aviation Calendar of Events websites

Aero Vents	**http://AeroVents.com**
EAA	**http://www.eaa.org/calendar**
Fly-in calendar	**http://www.flyincalendar.com**
Fly-ins	**http://www.flyins.com**

Saturday, Dec 01, 2012
Spring, Texas: Hooks Memorial Airport (DWH)
Spring - Fly-in/Drive-in and Open House
American Flyers invites you and a friend to join us for our open house. Spend a fun-filled afternoon at the airport and enjoy the camaraderie of others who share your passion for aviation. Enjoy a complimentary lunch and stay for the optional WINGs seminar. All attendees will be given a certificate for a free 2-hour VFR or IFR simulator session.
Contact - Adam Steel 281-655-4500
Website - http://www.americanflyers.net/about/aviation_seminars.asp

Saturday, Dec 8 2012
New Braunfels
Pancake Breakfast Fly-In (Young Eagle Rally)

BUILDERS CORNER: PROPPING AN AIRPLANE

Mark Julicher
EAA 35 Technical Advisor

Before you elect to prop an unfamiliar airplane, there are some variations on the theme that must be understood. While the basic procedure and safety rules remain the same, consider the following situations and be aware of how to approach them.

Impulse Couplings vs. No Impulse Couplings

Impulse couplings mechanically retard the spark until the piston reaches top dead center. This delayed spark occurs only at low RPM to assist starting. Impulse couplings make the hand-propping task far easier because the spark is hot and timed perfectly. If, however, the propeller is positioned very near the top dead center position then the slightest nudge will trip the impulse coupling and the engine can start. The most casual bump on the prop is all it takes so KNOW WHERE THE SWITCH IS POSITIONED! Assume the P-leads are broken and the magnetos are hot. Engines without impulse couplings do not retard the spark with the possible exception of engines employing dual point magnetos. Propping an engine without impulse couplings is not necessarily difficult, but the prop swing should be strong and finished with a follow through flick of the wrists. Spark will be weaker as the magnetos are moving slowly. Limp-wrist technique will produce a kick back which is no big deal except it is detrimental to vacuum pumps if the engine is so equipped.

In-flight propping is NOT a generally recommended practice
http://twinbeech.com/images/beech-18.jpg

Electronic Ignition

Consider this to be an impulse coupling without the associated click noise. So why would you prop this engine? Doesn't an electronic ignition require a battery? Well; weak battery, broken starter solenoid… it can happen. This beast can fire off with the slightest bump on the prop.

Left Hand Rotation Engines (Clockwise as seen from the front)

Left hand rotation is not difficult to deal with, but it helps if you are able to position your hands and feet in mirror image to how you prop a right hand engine. If this technique feels awkward, then go ahead and use your right hand positioning, but take a minute to think out how your body parts will follow through and be clear when the engine starts.

Shower of Sparks Ignition

There is more than one kind of shower of sparks ignition, but what I am referring to here is a system where the pilot manually presses a button that commences a shower of sparks to the firing cylinder. (Yak 52 for example) The sparks provide excellent ignition, but since the shower commences when the pilot pushes a button, sparking occurs before the prop is swinging and the engine may kick back as the individual doing the propping is reaching for the blades. Ouch. The solution is to prime the engine as normal, then, with the propeller clear the pilot pushed the shower of sparks button for a moment. This burns out the prime in any cylinder that is currently in firing position and yes, the engine may actually start or kick back! Now the propeller can be approached and the pilot activates both the shower system and closes the magneto switch, and the propeller is swung in the normal manner. Any time the engine is re-primed, the button must be actuated to spark off the cylinder in firing position or else the propping individual can be hurt.

Variable Pitch Propeller

Not a big deal is you are dealing with a controllable pitch prop or a constant speed prop, but there are a few antiques out there that have a prop that more or less free-floats in pitch. Air loads, centrifugal force, and balance weights determine the propeller pitch and the pilot has no control over it. This sort of propeller can be freely twisted by hand through about 10 or 20 degrees. Needless to say this is rather disconcerting if you need to swing the propeller. The trick is to cock your hands so the propeller is firmly against the forward or aft pitch stop. This gives a firm feel and allows a rather normal feel as the prop is swung.

Nose Wheel Aircraft and Low Slung Aircraft

Sometimes it is just darn difficult to get a good grip on a propel-

(Continued on page 10)

BUILDERS CORNER (Cont.)

(Continued from page 9)

ler if it is on a nose dragger or sitting low to the ground. I recommend you practice a couple of licks with the ignition off (but regard it as HOT). If you are not comfortable with the difficult angle then call off the prop start and get the battery charged.

Large Propeller

Large propellers swing slower, but they pack a lot of momentum. It may take a bit more body movement or even a little leg kick to get a good swing on a large prop. This is not a difficulty, but keep your body moving away from the prop during your follow through and recognize the large diameter of the propeller arc.

Small Propeller

Small propellers – especially the really small propellers and especially little two-stroke motors with tiny propellers can spin up WAY fast! So fast that the propeller can accelerate away from the palms of your hands and come around to bite the back of your hands. Be wary and anticipate this trait and you will be OK. If you have ever played "bat the paw" with your cat and you have never been clawed, then you are qualified here.

Six Cylinders and Round Engines

Oh No! The propeller blades are in the wrong place! While a four-cylinder engine can be set up so the stationary propeller is always pointing from 10 o'clock to 4 o'clock, this situation is not the case with six-cylinder engines or round engines. It is best to switch it off, move the prop into a favorable position, and then switch back on. It may be possible to start an engine by lifting, pushing or kicking on a propeller, but why do it?

Sea Planes

This author has never done this, but has seen it done a few times, (and I stayed in a Holiday In Express...) So just think about it. Airplane untied, standing on a float, probably the left float so propping motion can be downward. Ignition switch is where? Door is open or closed? No brakes! No life vest? Slippery? Wave motion? Nope, I'm not qualified without some instruction here.

Mark Julicher is a Chapter 35 member has propped all of the above types except the seaplane. Please don't tell his insurance broker. As of this date Mark still has all limbs and digits.

NOV MYSTERY PLANE REVEALED

Doug Apsey

Congratulations to R.B. "Doc" Hecker, Dan Martinez, and Dan Mangold for correctly identifying the November mystery plane. If you guessed it was either an Aeronca C-2 or C-3, you got credit for it. This particular plane is a C-3 which is the two seat version of the earlier single seat C-2. Both versions were fondly called the "Flying Bathtub" for obvious reasons. The C-2 was first introduced in 1929 with a twin cylinder Aeronca E-107 engine cranking out a whopping 26 hp. The

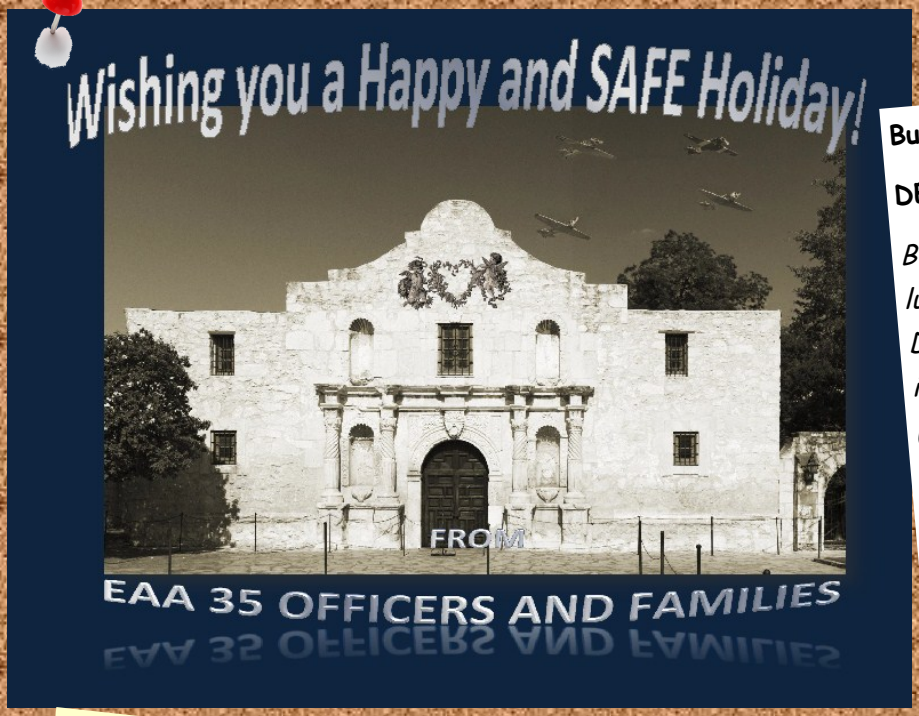
C-2 cruised at 65 mph and had a stall speed of 31 mph. The C-2 was replaced by the C-3 in 1931 with about 400 C-3's being made before production ceased in 1937. The C-3 was powered by a twin cylinder Aeronca E-113 engine that produced 37hp. It had an empty weight of 567 pounds with similar cruise and stall speeds as the C-2. The C-3 had a removable door and fold down window so you may see them in either configuration. According to Wikipedia, production of the C-3 was stopped because the design no longer met new, more stringent airworthiness standards. It lacked some of those little things we have come to expect in our airplanes today – like an airspeed indicator!

http://www.ladieslovetaildraggers.com/wp-content/uploads/2011/06/Aeronca-C-3.-Notice-the-Johnson-airspeed-indicator-on-the-whistle-stick..Robert-Keith-Armstrong-Facebook.jpg

I took the picture of the C-3 featured here at Sun 'n Fun this past spring. According to the FAA records there are 14 C-2's and 66 C-3's currently registered in the US. Only one C-3 is registered here in Texas. The next time you're at Oshkosh, stop in to the museum to check out the 1936 C-3 Master they have on display there. Might be the only one you'll ever see.

On a personal note, my Great Uncle Stanley Apsey's first airplane was a C-3. He and his "Flying Bathtub" are responsible for the aviation bug infecting my family, resulting in four generations of Apsey pilots – and hopefully more to follow!

CHAPTER BULLETIN BOARD



Bulverde Fly-In LUNCH

DEC 9, 2012

Bulverde Airport is planning a fly-in in lunch (hot dogs, hamburgers) Sunday, December 9th, at Noon. Point of Contact is Tom Anderson, Anderson Aviation, (210) 287-9073

Bulverde has fuel, and a new credit card reader. Fuel is currently $5.10 a gallon for 100LL.

January Meeting

Potluck!

Have a happy and safe NEW YEAR,

Gail

YOUR Articles Needed

Chuck Fisher

This Newsletter is YOUR newsletter. I put the articles in it, but ***you*** have to write 'em!

Your chapter needs YOUR contributions. Please share your experiences, skills and wisdom, photos, humor and announcements with our membership. What may be common knowledge to you, may be priceless for a new pilot or builder. Even if you are not a Pulitzer level author—send me your

Holiday Dinner Gift Exchange RULES

One of our Chapter 35 traditions is the gift exchange after our Holiday Dinner. Participation is optional of course but the more gifts, the more fun we have, so everyone is encouraged to bring something. The specific "Rules of Engagement" will be explained in detail prior to the start of the gift exchange but here are the things you need to know before you get to the Holiday Dinner.

You *must* bring a **wrapped gift** to participate. Gift value should be around **$10** and be something *appropriate* to the occasion. Re-gifting of something from previous years is discouraged. Finally, don't get too attached to your gift because someone else may take it from you – that's part of the fun!

EAA 35 COUNTRY STORE

Brian Goode

The Tervis Tumblers with our EAA Chapter 35 embroidered logo have arrived and are selling at a good clip. They will be on display at all Chapter functions until they are all sold.

These high quality double walled tumblers are made in Florida and carry a Lifetime Guarantee. Lids for them are available at many local retail stores.

The Chapter 35 logo is a piece of embroidered cloth between the walls of the tumbler, not a stick-on decal.

They are available for $16.00 each and come to us in packages of four. If you are looking for an exclusive EAA Chapter 35 Christmas gift for someone, or for your own use, please call or email Brian Goode at (727)-709-1159, or ladybgoode@msn.com.

They are available at the Goode's hangar (#53), or at Joe Killough's green pilot lounge hangar (#64H). Stop by and pick up a four pack.

You will be glad you did, and so will the Chapter.

NAME THE PLANE

Doug Apsey

OK fellow EAA'ers, here is this month's "Mystery Plane." Dinner is on me at the January meeting if you can tell me the following about the mystery plane. I have to be honest with you, I don't know much about this one so hopefully you can educate me about it.

What company built it?

What year did it go into production?

What was its' designation? i.e. C-172, PA-24, etc.

Were these really used at Brooks Field?

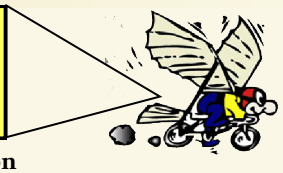
EAA CHAPTER 35 CATOLOGUE

Caps:	
Cloth Chapter 35 and EAA Notional caps	$10
Mesh Chapter 35 logo caps	$5
SWRFI caps (collector's item)	$8
Denim Shirts: Only 2 Large Short sleeve left	$20
Tervis Tumblers	$16
Chapter 35 cloth logo patches (sew on)	$3
Bumper stickers	$2
Chapter 35 logo stick-on stickers (Per inch)	$2

These stickers are only available by special order. It is the same logo that is used in the tumblers. They can be made for you at $2.00 per diameter inch. They can be made as small as 2.5" and as large as 48" in diameter. In order to have some economics of production, we need to have at least a dozen orders before they will be produced.

We are always on the lookout for new items for the Country Store, so if you have any ideas, please send them to Brian at ladybgoode@msn.com.

2012 EAA Chapter 35 Contacts List



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WANTED AND FOR SALE

FOR SALE: Complete RV-8 Quick Build Kit with O/H Lycoming IO-360 engine (minus starter/mags/prop) - $50K Contact: RB "Doc" Hecker at www.assenddragonavaiation.com or tcflying-doc@yahoo.com

FOR SALE: 1946 Aeronca 7AC Champion Continental A65-8 65HP / wood prop / Restored 2010 - $35K OBO Contact: RB "Doc" Hecker at www.assenddragonavaiation.com/ for photo of Champ and e-mail link, or tcflyingdoc@yahoo.com. Items can be viewed at 1T8 (Bulverde Airpark)

FOR SALE: Early RV-3 kit. Tail; feathers, flaps and ailerons finished and primed. Wings are finished but are the old version and only useable for parts. Have cowling, windshield structure, gear parts, wheel pants, engine mount, etc. All sheet metal and formed bulkheads for fuselage. Zero time Lycoming O-320-E3D engine with all new parts. Include engine log book and builder's log. Health forces sale. Tom Gould 830-663-4448 or nazca9t@hughes.net

FOR SALE: Stolp Starduster Too SA 300. Eng. Lyc O320 (160 hp), newly rebuilt, constant Speed Hartzell Prop, 30 gal fuel tank, new Ceconite fuselage cover, full flying surfaces rejuvenated. MUST SELL-Make Offer. Call Dan Cerna at (210) 688-9345.

FOR SALE: Subaru EJ-22 engine, Ser. # 589390. Includes single 4-barrel carburetor, Mallory ignition, planetary reduction drive. Proven system, removed from flying aircraft. $3100 Chuck @ 979 218 6153

FOR SALE: Hegar brake master cylinder. 7" single control, Bore size - 5/8" (0.625). Includes brake bleeding kit, misc. fittings. $95 Chuck @ 979 218 6153

FOR SALE: Main wheels for UL or light experimental. One pair Matco Model MH6B wheels, with brake calipers, new brake pads, new wheel bearings, new Air Trac 15X6.00X6 4-ply tires. $295 Chuck @ 979 218 6153

FOR SALE: One unused Air Trac 15X6.00X6 4-ply tire. $40 Chuck @ 979 218 6153

FOR SALE: Garmin GPS 195 with all original accessories. Outdated, but simple and fully functional, good for navigational assistance in VFR conditions. $100 Chuck @ 979 218 6153

FOR SALE: 1976 Beechcraft C-23 180 Sundowner 2250 TTA&E, compressions mid to upper 70's, oil analysis shows no wear. Dual KXM Digital radios, ADF, ILS/Mkr Bcn, VOR and Loran. Extensive annual,

$5,000 spent: new plugs, wiring harness, mags, hoses firewall forward, brake drums, brake pads, encoder, rebuilt turn indicator and new tires on the mains. Paint is about a 6/10, interior 7/10. Continuously hangared for the past 25 years. $25,000 Contact Dave Baker, 210-410-9235

FOR SALE. All items were functioning normally prior to being removed as part of the panel upgrade on my RV-6A.

- Apollo GX-60 GPS/Com, Apollo ACU (annunciator), and Jeppesen Skybound The GX60 is TSO-C129a Class A1 approved for IFR non-precision approach operation. The com function supports monitoring the stand-by frequency. I'll also include a Trans-cal model SSD120 altitude encoder (passed IFR check (3/12). - $2500.
- Vertical Speed Indicator - United model 7030, 0-3000 fpm, $100
- Altimeter - United part no 5934PD-3, Lighted (passed IFR check 3/12), $150
- Airspeed Indicator - United part no 8125, $100

Pictures available on request. Contact Dick Flunker, email RFlunker at ATT dot Net, or call 214-793-5546.

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Ron O'Dea, Membership Chairman
15464 FM 471 W., #14
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The Official Newsletter of EAA
Chapter 35, San Antonio, TX

Chapter 35 meets

Each Second Saturday of the Month

Dec 8th

Holiday Party

EAA Club House
17:00 Social Hour
1800 Dinner
Catered by Acadiana

EAA Chapter 35 is part of the worldwide network of EAA chapters. EAA embodies the spirit of aviation through the world's most engaged community of aviation enthusiasts. EAA's 170,000 plus members enjoy the fun and camaraderie of sharing their passion for flying, building and restoring recreational aircraft. Our clubhouse and building facilities are located at San Geronimo Airpark (8T8) located off FM 471 (Culebra Rd) West of San Antonio.

For over 50 years Chapter 35 has represented aviators of creativity who share a passion for flying. Come join us!