

The Short Wing Piper News



April-May-June 2021



Ignore the shouts of “Take Cover!” This warbird, although fully equipped as a French Air Force FAC (Forward Air Controller), will soon be on a peaceful mission to introduce aviation lovers to the Tri-Pacer’s warlike past. Doug Kulick, whose stories of KAG’s restoration and transformation have been running in the past three issues, plans to have KAG at our convention in June in Lock Haven PA and at Oshkosh in July, parked in the warbird section. You can read more about KAG inside and find the information you need to know in order to register for the convention and plan your trip to the Short Wing staging area in Baraboo WI for the group takeoff to Oshkosh.

Mark your calendars: 2021 Convention: June 21-25 - Lock Haven PA; Baraboo WI staging and fellowship: July 21-24; Oshkosh arrival: July 24 (catered dinner that evening).

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THE SHORT WING PIPER NEWS

The Voice of the Short Wing Piper - Vol. 43: No. 2
April-May-June 2021



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Chapter presidents' listing on pages 51-54

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The Short Wing Piper News is intended as a public forum concerning the maintenance, modification and operation of the aircraft that are the subject of the Short Wing Piper Club, Inc. In the interest of encouraging presentation and discussion of ideas concerning these aircraft, opinions of the readers of this publication are solicited for this forum. The Short Wing Piper Club, Inc., makes no judgment concerning any idea or opinion expressed in the Short Wing Piper News or any other forum, including but not limited to, the club's Facebook page, Twitter account, or its website. The owner or operator of any aircraft should not attempt any alteration of or modification to, or departure from, approved maintenance or operating procedures for that aircraft without first obtaining the written approval of qualified maintenance personnel or the FAA. Any event announced and/or listed herein, except as noted, is done as a matter of information and does not constitute approval, sponsorship, control, or endorsement of said event.

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August 20 for Oct-Nov-Dec 2021

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President's report:

2021 SWPC Conven- tion



Visiting at the 2019 convention's Membership Luncheon, a feature at all the annual conventions, are Steve and Faye (shown on the far side of the table) with (from left front) Judy Rudd, Jan and Ralph Widman, Steve and Faye, Will Bruce, and Terry and Claire Karlson.

**By Steve Carruthers
Sc94cat@aol.com**

As I sit down to write this it is mid-February and plans are moving along for our convention in Lock Haven on June 21 through 25. The Northeast and Mid-Atlantic chapters are working together in some very difficult circumstances to make the convention and 70th anniversary of the PA-22 something to remember.

We are taking the Short Wing Pipers back to their birthplace and because our convention is in conjunction with Sentimental Journey, all of the fabric covered Pipers will be there to celebrate with us. So, make your reservations now and send in your registration and let's hope the Covid-19 virus will allow us to have our convention! I encourage everyone to come out and enjoy the convention and support all of the people that have worked for a year to make this convention happen for you.

Also, a friendly reminder, make sure you have tiedowns with you! There will be more information about the convention elsewhere in the News, so please read it and respond by making this one of our best conventions to date!

Before I get too carried away, I want to tell you how humbled I am by all of the well wishes and support we received over the past several months. The text messages, the emails, the cards, and the well messages on Face Book have been very welcome. I want to thank each and everyone of you for your support through the Covid-19 experience! You made a huge difference in my recovery and I am proud to be part of your family!

I want to take a minute to talk about the Education Foundation. Michele Wolff is doing an exceptional job in a difficult situation. She has taken on the task of dealing with the IRS to correct our status, and we all know how much fun that is. Not only has she been dealing with all of that, I have let her down by not setting some hard guidelines for her. So, every year she has to wait until the last minute to know how much money she has to work with, so she can award meaningful scholarships.

So, on our last Board of Directors meeting, we got her some guidelines to assist her going forward. Another thing about the Education Foundation is always funding. Remember the more money we bring in each year the more we are able to give in scholarships, so please consider a donation to the Education Foundation. I do want to thank Michele for her hard work and all of the time she is putting into this, so Michele, Thank you!

Going forward we also need nominations for officers! Both the President and Secretary positions are up for election/re-election at the convention. Both Fred and I have agreed to run for another term, but remember that next year the Vice President and Treasurer offices are up for election, and they both said they would like to step down, so please consider stepping up to help keep the club running. Along with those offices we also need nominations for the Hall of Honor. Go to the website to see the conditions for nomination and submit them by April. (Editor's note: A story about the Hall of Honor and the guidelines is also elsewhere in this issue.)

Beyond the convention we also have put together 22's in 21 to Oshkosh! If you have not seen the January/February issue of EAA Vintage Airplane magazine, it is dedicated to the Short Wing Pipers! We will be staging at the Baraboo (KDLL) airport starting on Wednesday, July 21, with a pilot briefing Friday, July 23, and weather permitting takeoff from KDLL the morning of July 24 for our arrival into KOSH. We have 50 group parking spots in Vintage, so we will all be in one spot, or most of us anyway. We will discuss this at the convention in June and we will be posting in the forums and here in the News, so stay tuned for more information.

At this time, I am also working on arranging a catered dinner at the Tall Pines in the Vintage area on Sunday evening. There will be a cost associated with this event, but it will be casual and just a great time to relax before the event starts and have a good meal.

So, just know your club is working for you to make your experience the best we can and we want you to enjoy being part of the Short Wing Piper Club family!

Until next time,
Steve Carruthers

Need Technical Help?

Our Panel of Technical Advisors (see page 2) is waiting for your question. The board members (page 1) are also knowledgeable and ready and willing to answer questions. Check out the club's Facebook Page and the Forum on the club website.

See the Club Store ad on pages 44-45 for technical aids — the Micro VG kit, Tips and Techniques books and CD's, drawing and blueprint CD's, and much more! (Flash drives available instead of CD's — put request in "notes" section of order form)

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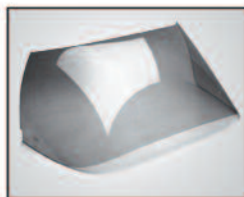
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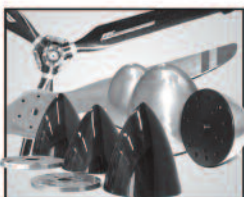
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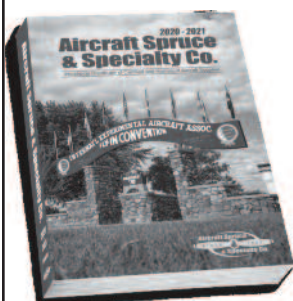


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Who's New 11-23-20 to 2-20-21

By Eleanor Mills

Membership Services

eleanormills@att.net

I usually invite the chapter presidents to contact me for the contact info on new members in their region. Hadn't had a request for a long time (although I got another one this week). But now, I'm asking you new members to check out the list of chapters and chapter presidents in this issue. Find the one for you and contact the president. Introduce yourself and tell him you're a new member.

Most of the chapters have been unable to meet during the Covid 19 pandemic, but better times will surely come this summer and fall. And chapters are your best chance to find interesting places to fly to, pretty Short Wings, knowledgeable people, and new friends. Take my word for it — you'll be glad you did!

I thought having 26 new members last quarter was pretty good for a pandemic year, but we've almost doubled that total this quarter – 51 new members! And three of them included family members, giving us 54 new voting members.

Here they are:

Nicholas Baker, Rancho Cucamonga CA

Steve Berggren and family, Rancho Murieta CA

Philip Brandt, Boyd TX

Dan Braun, Damascus OR

Jace Callender, Reno NV

Benjamin Charles, Anchorage AK

Donald Currie, Torbay, NL, Canada

Chris Doggett, Carmel In

Lucas Fifer, Woodstock IL

Brian Fisk, Sikeston MO

Clint Grant, Portage Des Sioux MO

Rustin Hanson, Spokane WA

John Haszard, Ophelia VA

Andrew Hedin, Hutchinson MN

Steven Henley, Athens GA

Sophie Huang, Newcastle WA

Kevin Hultsch, Lockport IL

Thomas Ivey, Gladewater TX

Andrew Jardetzky, Shalimar FL

Ulrich Klausung, Whitehorse, YT, Canada

Jeremy Knibbs, Weyburn, SK, Canada

Kevin Koprek, Ouray CO

Paul LaBella, Rome NY

Andrew Laurienzo, Lancaster NY

Randy MacDonald, Weidman MI

Scott MacKie, Woodstock GA

Allen Maxey & family, Jenks OK

Royce McCammon & family, Sullivan IN

Frederick Nichols, Marana AZ

Adam Nunn, Abilene TX

Monte Obritsch, Malcolm NE
John Ostmeyer, Gardner KS
Brock Parkhurst, Gooding ID
Robert Pepper, West Tamworth, NSW, Australia
Matthew Pettit, Chipping Norton, Oxfordshire, Great Britain
James Pileggi, Livermore CA
Daniel D. Poulton, Belton SC
Gerard Prosnier, Scottsdale AZ
Lee Rainey, Troy Mo
Karl Reik, Ft Thomas KY
Mitchell Riley, Santa Barbara CA
Randy Seiter, Lake Isabella MI
Werner Slawinski, McCreary, MB, Canada
James Stephens, Baskin LA
Anne Stevens, Vanderhoof, BC, Canada
James Tocco, Forsyth IL
Michael Tracy, Santee CA
Clay Troxler, Greensboro NC
Brian Ubben, Ceresco NE
Mike Urubek, Cedar Creek TX
Jerry Winter, Cumming GA

A note to new SWPC members:

Please make yourselves known to the other members by your participation — Plan to attend our 2021 convention in Lock Haven; identify yourselves there as First Timers and join in the fun; Join the local chapter nearest you and attend the fly-ins; Send in photos and stories to the SWPN — we'd like to see your Short Wing and hear about you; Participate in the comments and questions on the club's Facebook page or the website's forum or direct a question to board members, staff, or one or more of the Panel of Technical Advisors through email or a phone call (contact info on pages 1-2) — questions get answered and there's always someone to hear you and help you.

It's your club — you can make it better

Stay safe . . . stay well . . . and plan to come to the 2021 convention. We NEED a convention this year!

2021 SWPC Convention at Sentimental Journey – Lock Haven, Pa.

By Gene Keller
Co-Director, 2021 Convention
genepool@ptd.net

Hello. Expanding on Andy's earlier writings about our plans for the 2021 SWPC Convention, we are planning that the convention will happen. This is of course dependent on Sentimental Journey happening, which is dependent on the Governor of the state of Pennsylvania, Clinton County, etc. The Sentimental Journey committee has stated to us that a go/no-go decision will be made by late April. All of what we are writing is based on the belief that **it will happen.**

The dates for the convention are Monday, June 21st (normal arrivals) through Friday, June 25th (early departures), although we will have some presence from Sunday the 20th to Sunday the 27th (from early arrivals to the end of the Sentimental Journey schedule.). The convention will be held in Lock Haven, Pennsylvania, on the airport (KLHV) during Sentimental Journey. Sentimental Journey is honoring all the Short Wing Pipers.

Our convention will be co-hosted by the Mid-Atlantic and Northeast chapters of the Short Wing Piper Club. I'm sure many of you are familiar with the Sentimental Journey event. It is held on the grounds of Piper Memorial Airport, where our Short Wings were manufactured. Lock Haven is nestled in the hills by the West Branch of the Susquehanna River; the setting is quite beautiful.

In some respects, this convention will be different from others in the past. For one thing, it will include 2 events. There will not be a hotel which will be the central/focal point of the convention. **Lodging is available at the following hotel/motels: Fairfield Inn & Suites (570-748-1580); Best Western (570-748-3297); Hampton Inn & Suites (570-726-39390); Quality Inn Mill Hall (866-238-4218). There is on field underwing tent camping as well as RV camper parking, arranged through the Sentimental Journey site. Additional RV parking is at two locations: Little Place campgrounds, 570-769-6359, and Holiday Pines campgrounds 570-725-2267.**

Our base of operations will be at the Piper Museum on the 3rd floor. Our Member's Lunch, Banquet, chapter president's meeting, Executive Board meeting, seminars, registration, queue/meeting spot for trips, and shuttles to hotels, will be from the museum. The SWPC will hold aircraft judging separate from Sentimental Journey. Weeklong Sentimental Journey access, all our free events, and weeklong Piper Museum access are included in your registration.

This event (our convention and Sentimental Journey) is a weeklong fly-in/drive-in with a huge turnout of people, aircraft, vendors, seminars, and all-day food options revolving around Piper aircraft – this year – **the Short Wing Pipers.**

Arrivals Sunday 20th/Monday 21st. We will have our registration table open on Monday, with a meet and greet assembly and light dinner/snacks at the Piper Museum (included in the registration) some time late in the afternoon/early

evening of Monday June 21st. There will probably a spot for the Executive/Board meeting also.

Scheduled events for our convention for Tuesday include the Fly-out/drive-out Poker Run, Member's Luncheon, followed by Membership Meeting, Chapter President's Meeting, seminar speakers and aircraft judging.

For Wednesday (2 stops, same trip): Corning Glass Museum in the morning at Corning, NY, and then after a local lunch, the Harris Hill Soaring Museum in the afternoon at Elmira, NY.

For Thursday (2 stops, same trip): Tour of the Pennsylvania Technical College for A&P aviation mechanics school in the morning at Montoursville, PA, and then after a local lunch, tour the Lycoming Engine Factory in the afternoon at Williamsport, PA. And then the Closing Banquet that evening.

And for Friday: a fly-out to Eagle's Mere Aviation/Car Museum. Some of our departures might want to leave directly from Lock Haven early on Friday morning, or hang on and fly-out after the Eagles Mere Museum visit/lunch, or continue their stay for Saturday/Sunday. You could also head on home after the visit to the Eagles Mere Museum, knowing that your trip stages and weather compliment it. Some of the on-field Sentimental Journey activities peak on Friday and Saturday. But there are always Cubs and other antiques flying throughout the week.

The Tuesday luncheon afternoon and Thursday banquet evening will have guest speakers. I'm sure that the history of our Short Wing Pipers will be discussed at one or both of these events. In addition to our scheduled convention events, remember that Sentimental Journey will have events that you will be entitled to participate in. One of those events is their closing banquet on Saturday evening June 26th with a separate fee. There is a location on the "registration" form for this. Arrangements for their banquet is through the Sentimental Journey site or on-field signup, available seating.

I believe that the Short Wing Piper Club will have its own parking area (I think by the Museum). **Make sure to bring your own tie down ropes and anchors!** There are ongoing shuttles around the field between the Piper Museum and the rest of the activities. The food court is open for breakfast, lunch, and dinner. There is a covered pavilion for eating. At night, there is usually entertainment in the way of music/bands. Adjacent to the food area is an indoor vendor area as well as outdoor vendors. There will be shuttle service between the Piper Museum and the hotels.

Fuel will be available from the FBO. "Coming from the NYC metro area," Andy said, "I am unfortunately used to humongous tie-down fees and fuel prices. Suffice it to say that fuel at LHV is on the low side (\$4.15 as of 1/22). If you want to immerse yourself in a sea of Piper aircraft and owners, you're going to be in GA heaven! The Piper Museum, while not the Smithsonian, is quite an interesting place that has a complete history of Piper Aircraft displayed nicely. It has a ground floor with many examples of its aircraft, including some Short Wing Pipers. One of these, a Tri-Pacer donated by club member Phil Hoy, is used for Young Eagles flights piloted by member Ed Watson. And the latest "barn find" Tri-Pacer was flown from Oshkosh to Lock Haven, ferried by Ed Watson. Ed met with Gene Keller (President of the Mid-Atlantic chapter) and myself (President of the Northeast chapter) for a tour of the museum and area and is a past Piper Memorial Airport manager, and on the Board of Sentimental

Journey. He has been most helpful in the planning of this event (and might be a guest speaker at one of our events).

“Lock Haven is in Clinton County, Pennsylvania. Besides aviation, there is plenty for the folks (both young and adult) to do and see. When Gene and I visited the area in October, we visited the Clinton County Visitors Bureau and Julie Brennan, its director. It is planned that all who attend will receive a welcome package from the Bureau.

“There are so many outdoor activities to enjoy, including fishing, golfing, hiking, climbing, kayaking, photography opportunities, theme park, and beaches. Shopping is nearby, including our trip to the Woolrich Outlets. Live theater is available in Lock Haven at the Millbrook Playhouse. There are museums and galleries as well. If you wish, you can contact Julie Brennan at: tourismdirector@clintoncountyinfo.com or 888-388-6991 or 570-748-5782 and request their visitors guide.

“We have a registration form available that we urge you to fill out and return via email to me at: andytuba@optonline.net or snail mail: Andy Seligson 331 Westchester Ave. Yonkers, N.Y. 10707. We really need this information to better plan this event and get an idea as to the “numbers” we are working with. As in many endeavors, the amount of participation governs the cost of the events. If you think you might possibly attend, **please fill out and return ASAP to me, Andy. This is the final registration format (with the money collection now available). Make checks payable to ‘SWPC 2021 Convention’.**”

If you have any questions feel free to ask me, Gene Keller, via email or phone: genepool@ptd.net 610-554-2874 or Andy Seligson, email or phone: andytuba@optonline.net 914-522-3341. Andy and I have been attending Sentimental Journey since 1987 and are amazed at how this event has grown into a major GA landmark.

We’re starting to get excited about this year’s SWPC Convention and hope to see you there this June. Stay safe, healthy, and sane – Gene Keller and Andy Seligson

Prospect for our 2021 convention looks promising

**2021 SWPC Convention
Lock Haven PA
June 21-25**

**By Andy Seligson
Yonkers NY
andytuba@optonline.net
914-522-334**

I’m writing this article about the 2021 SWPC Convention as the northeast (and a lot of our country) is experiencing the full blast of a winter that can’t be over soon enough! Also, the pandemic situation is still out there. We all have to realize that we are at the “mercy” of the folks at Sentimental Journey and the governor of Pennsylvania. If they say it’s okay, then we do too. From what I am seeing and hearing from surrounding states, it looks encouraging.

These are not optimal conditions to plan a convention, but Gene Keller and I (with the help of others) are doing the best we can to make sure that if this event happens, it will live up to and possibly surpass what we members of the SWPC expect.

Many of you have already experienced Sentimental Journey – you know what to expect. For those of you not familiar, I'll try to explain what we have in store for all of our attendees. This event will take place at the site of the old Piper factory in Lock Haven, Pennsylvania, (KLHV). This is where our Short Wing Pipers were manufactured. This will be the 35th year for Sentimental Journey. The honored planes will be the Short Wing Pipers!

From a grassroots fly-in to a huge fly-in event, Sentimental Journey attracts all aircraft and all people interested in GA airplanes, especially those like the ones we own, fly, and care for.

The activity is amazing! Over the years, I have seen countless interesting aircraft come and go here. There are all kinds of seminars and vendors that are included in our registration. There is a food court including breakfast, lunch, and dinner options. At night, there is a bar and nightly entertainment.

The Piper Museum, at the west end of the airport, will be the **SWPC's home base for our activities. This includes registration, meet and greet, member's luncheon, closing banquet, any seminar for the SWPC, and touring of the museum.** The Piper Museum is a 3-story building with most exhibits on the second floor (including a nice section on the Short Wing Piper Club). The third floor is our base of operations, and the first floor (hangar) houses static displays of various Piper aircraft.

We will have our parking area in this vicinity. I must stress that **you MUST bring your own tie-down ropes and anchors.** There will be a separate area for tent camping. The spot you park in will be your spot for the duration of the convention. **The official dates for the convention are: Monday, June 21, to Friday (departures), June 25.** If you arrive early, ask where to park and make sure you tell the people that you are with the Short Wing Piper Club Convention. I plan to be there on Sunday, June 20, and may be able to help with things like early registrations/parking. There will be shuttles from the Piper Museum to the various hotels and downtown Lock Haven. There are also shuttles around the airport.

Lock Haven airport is an uncontrolled field and there will be nordo aircraft in the pattern. Listen carefully on 122.8 for advisories!

In addition to all the activities of Sentimental Journey, Gene Keller has arranged some interesting excursions. One is a trip to the Lycoming engine factory and the Pennsylvania Technical College. Another is to Corning Glass and the Harris Hill Sailplane Museum. Both trips will have time and location for lunch.

There is also a trip to the Woolrich outlets. A flying/driving poker run is planned.

We will have a meet and greet on the third floor of the Piper Museum on Monday, June 21. The members' lunch will be Tuesday, June 22. Our closing banquet will be Thursday evening, June 24. As of now, our keynote speaker for the banquet will be Clyde Smith Jr. As busy as our schedule may seem, there will be many other flying activities you can partake of with Sentimental Journey. Are you tired yet?



A Tri-Pacer arriving at Sentimental Journey — In June, this could be you! On the next page are a couple of Short Wings at Sentimental Journey, left foreground, facing the camera is Andy Seligson's Tri-Pacer while on its right is David Adams' Tri-Pacer. This year our Short Wings will be parked together in a special area by the museum.

Please look for the registration form in the SWPN (Pages 119-120). Also refer to the listing of hotels/motels. There is an area for RV camping. The Clinton County Visitors Bureau is planning to help in offering local information such as for restaurants, parks, sightseeing, theaters, etc. Feel free to contact Julie Brennan at: tourismdirector@clintoncountyinfo.com for any suggestions.

Besides all the aviation activities, there is so much to do and see in this beautiful area. From the air or on the ground, the valley that Lock Haven is situated in is gorgeous! There's fishing, golf, tennis, hiking, canoeing, kayaking, shopping, and live theater.

Please remember that your registration fee includes all the activities at Sentimental Journey as well as entry to the Piper Museum and our Meet and Greet. You do have to pay for the members' luncheon, awards banquet, any apparel, and the Sentimental Journey Banquet. These (except for the Sentimental Journey Banquet, which is on Saturday and is a separate charge by Sentimental Journey) are listed on the registration form.

Stay warm, safe, and healthy – Andy Seligson



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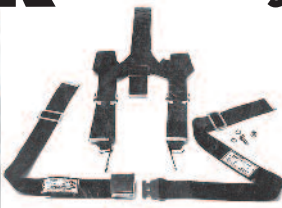
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At an earlier Sentimental Journey, members of this year's two hosting chapters are shown enjoying fellowship and lunch. (Editor's note: I see a couple of members you'll find very active this summer and was really pleased to see the photo of the late Lew Porter — I'm hoping Lily Porter will be able to come this summer to catch up with all her Short Wing friends!)



**A look at the Short Wing Piper Club display area.
One more photo from Sentimental Journey on page 18!**



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Sentimental Journey wouldn't be the same without a look at these iconic planes, a flock of yellow birds that come back to Lock Haven every year! This will probably be your view as you take off to head home following another one of our "best conventions ever"! (But don't forget — the excitement continues with Baraboo staging and Oshkosh celebration!

Birthday party called 22s in 21 begins at Baraboo WI - July 21-24

By Paul Wolff

Baraboo WI

pauljwolff@hotmail.com

This year is the 70th birthday of our beloved Tri-Pacers.

What better than to have a birthday party at Air Venture in Oshkosh? In partnership with The Vintage Aircraft Association (VAA) we will have a party referred to as 22s in 21. The VAA will be allowing parking for up to 50 Short Wing Pipers at the EAA, be it a PA-22 or a PA-20.

Non-members of our club also allowed. If you know of any non-members please pass on the information.

Michele and I, along with Dan Simpson, will be hosting a gathering at the Baraboo WI airport starting on Wednesday, July 21st thru Saturday the 24th, Saturday being the day when Steve Carruthers will lead us to Oshkosh. Weather, of course, permitting.

Hopefully you could spend a few days visiting sites in the Baraboo, Wisconsin, area. Some of my favorites are: The Circus World Museum, Al Ringling Theater, Al Ringling Mansion, The Leopoldo Center, International Crane Foundation, and Devils Lake State Park (Devils Lake is a spectacular site from the air.)

The airport manager has offered to furnish a rolled and mowed parking area for our airplanes. We will provide transportation to and from local lodging for Short Wings. Best picks for lodging would be The Clarion Hotel, Best Western Baraboo Inn, and Campus Inn Motel. These three are 3 miles south of the airport and a short walk to anything you could possibly need. And of course there is Ho Chunk Casino right next to the airport. (Yes, gambling.) The airport manager informs me that some of the local lodgings give good rates to airplane pilots.

If you need a car rental the local FBO is the best deal. (Baraboo-Flight Center at 608-356-2270). Any information you may need will be on line at Baraboo.com. Dan Simpson can be contacted at 608-512-6270, and I can be contacted at 608-963-4327.

Hope to see many members and airplanes at our convention in Lock Haven too.

Paul Wolff

Two of our Convention Grand Champions will be at Baraboo in July to greet you. At right is Paul and Michele's N4860A and below is Danny and Jayne Simpson's N2905P. The Simpsons are from Waunakee WI and the Wolffs are from Baraboo.



Your Short Wing doesn't want to miss the party — Be sure to fly her there! If she can't come, take photos to show her!

Late-breaking news from Sun 'n Fun

By Eleanor Mills
eleanormills@att.net

Sun 'n Fun on "unless the whole world shuts down" organizers say

We got late-breaking news from Florida that Sun 'n Fun in Lakeland WILL BE HELD this year. At the first Sun 'n Fun meeting held in February, organizers said the show would go on this year: "Unless they close the world, Sun 'n Fun 2021 will happen."

Dates of the air show are April 13-18. The Florida Chapter will host their first planning meeting March 20 at 1:00 in the SWP trailer.

Volunteers are needed, Jim Morris said, especially because the British Cadets can't come to help and it is unknown whether those from Canada will be able to come. The SWPC group traditionally works in the parking area and hosts refreshments at their building nearby.

For more information, check the Sun 'n Fun website or check with Jim Morris, 813-376-0551.

Southwest Regional 2021

Reprinted from the February 2021

Kent O'Kelly, editor

From Cliff Van Vleet, who, with Carole, has been to, hiked, camped, and flown over most places in our gorgeous southwest desert country.

One of my personal traits is that I plan ahead, sometimes well ahead, to prepare for travel opportunities by first making the commitment to go and then doing the homework to ensure the trips are properly stuffed with things to do and sights to see. Plan Ahead is my Motto!

So it is with our Southwest Regional now scheduled for the September/October 2021 window. We are committed, pandemic notwithstanding, to make this get together work this year. The Page/Lake Powell area is a great place to observe planet earth without a covering of trees and grass and cities and other visual obstacles obscuring the view.

It offers outstanding scenic opportunities. I know most of you are familiar with the views and should be looking forward to revisiting them. Indeed, doing all I would like to do requires more days than we have allocated so as a group we will have to pull some punches and miss some sights.

In the last issue of the Supplement nine opportunities were identified. Carole and I will do our usual thing and plan to arrive early to pack in more sights than the group as a whole will be able to do. Ya'll are invited to come early, too.

Please make your commitments and start your planning now so we may all gather together in Page this fall. We will appreciate any advance feedback on which of these items you are interested in. Knowing your druthers will help us make the final plans and schedules. Details for lodging, eating, partying will be forthcoming later.

1. Airplanes and airplane sightseeing rides,
2. John Wesley Powell museum. <https://www.powellmuseum.org>. One-armed Major Powell, one-armed due to the recent hostilities between the North and South known as the Civil War, is the first person to successfully lead an expedition through the Grand Canyon on the Colorado River in 1869, opening up one of the last areas of our continent that had not been explored. (The Escalante River drainage just north of the Grand Canyon was an even later exploration of our unknown west but that is another story.)
3. Anasazi Indian Culture <https://www.navajovillage.com>.
4. Drive/boat to local sights. One short drive tour west of Page on the road to Kanab UT is the Big Water Visitor Center featuring paleontological discoveries in the Escalante area including at least 14 new dinosaur types. <https://www.blm.gov/visit/big-water-visitor-center> The most famous and inspir-

ing sight to see is in the area is Rainbow Bridge, the largest natural bridge known to man and accessible only by boat tour from Wahweap Marina. This is a several hour boat ride going and coming plus a walk of a mile and a half or so from the boat dock to the bridge. <https://www.lakepowell.com/marinas/boat-tours/rainbow-bridge-tour/>

5. Glen Canyon Dam visitor center and dam tour.

https://www.tripadvisor.com/Attraction_Review-g60834-d12672576-Reviews-Carl_Hayden_Visitor_Center_Page-Page_Arizona.html

6. Half day, smooth water river trip 15 miles down the Colorado River. <https://www.riveradventures.com/horseshoe-bend-rafting-trips/horseshoe-bend-rafting-experience/>

7. Boat tour on Lake Powell from Antelope Marina to Lower Antelope Cyn. <https://antelopeslotcanyon.com/antelope-canyon-boat-tour/>

8. Private tour to a slot canyon: Secret Antelope Cyn and/or Horseshoe Bend overlook. <https://horseshoebendtours.com/>

9. Dinner Cruise in Wahweap Bay <https://www.lakepowell.com/marinas/boat-tours/canyon-princess-dinner-cruise/>

(Editor's note: Once again I find myself hoping I get to go to the Southwest Regional this year.

(Add that to your list of aviation events we MUST ATTEND (or at least REALLY WISH we could attend this year! **SWPC Convention, June 21-25, Lock Haven PA; Baraboo WI staging for Short Wing arrivals in Oshkosh, July 21-24; Oshkosh WI, AirVenture 2021 celebrating the PA-22's [and PA-20s], July 24 group flight, AirVenture dates July 26-Aug. 1, and Southwest Regional, Page AZ, September or October, date to be announced** – see the July-August-September SWPN or the club website for final dates).

Southwest Regionals – annual events from 1996 to 2019 and 2021...

By Kent O'Kelly

Excerpted from his story in the February Supplement

Southwest Regionals — Here's where we've been since 1996. We haven't missed a year. Yeah, we had to postpone 2020 (a four letter word), but we'll fix that this fall.

SWPC Southwest Regional Sites

1 1996 Liberal, KS

2 1997 Sante Fe, NM

3 1998 Carlsbad, NM

4 1999 Santa Fe, NM

5 2000 Durango, CO

6 2001 Truth or Consequences, NM

7 2002 Taos, NM

8 2003 Durango, CO

- 9 2004 Ruidoso, NM
- 10 2005 Burlington, CO
- 11 2006 Canon City, CO
- 12 2007 Guthrie, OK
- 13 2008 Cottonwood, AZ
- 14 2009 Albuquerque, NM
- 15 2010 Fredericksburg, TX
- 16 2011 Payson, AZ
- 17 2012 Denver, CO
- 18 2013 Silver City, NM
- 19 2014 Colorado Springs, CO
- 20 2015 Durango, CO



When I saw the photo of people on the carousel in Burlington, I remembered that someone snapped a photo of Bob and me enjoying the ride. And here we are, front and center, Bob as usual juggling his notebook and pen and camera on the left and me, just happy to be there, on the right. Good memories!

- 21 2016 Williams, AZ
- 22 2017 Claremore, OK
- 23 2018 Los Alamos, NM
- 24 2019 Eureka Springs, AR
- 25 2020 Page, Arizona: Postponed; the virus ruled, but we admit no lapse in our Regional record

26 2021 Page, Arizona: We have plans. We're gonna do it. See our plans in this issue Story by Cliff Van Vleet, page 20-21) and in earlier Supplements. The plans will also be on the SWPC website, as are our Supplements.

(Editor's Note: Kent went on in this story to talk about a few of the past Regionals and as I scrolled through I was stopped by the photograph of a couple of members on a carousel ride. The funny thing is that Bob and I attended the first Regional in Liberal and the 10th one in Burlington but I forgot they were Southwest Regionals. I remembered both of them, especially the Burlington one with the hail storm.

(Bob and I were very close to Burlington when we spotted a thunderstorm ahead and landed at a nearby airport. After the storm ahead passed, we went on and discovered Short Wing after Short Wing damaged by hailstones. Quick work by members got the aircraft back flyable and the Regional went on, including the carousel rides.

(I suggest if for some reason you didn't get the Supplement you go to the website to look it up so you can see the Southwest Regional Gallery where Kent talks about and shows photos of some of the past Regionals. Like me, you'll start thinking hard about getting to Page this year to take in the fun.)



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Piper Aviation Museum toured by blog writer Tony Bruno

By Eleanor Mills

Phil Hoy, Portland CT, is a longtime member of the club and a director on the board of the Piper Aviation Museum in Lock Haven, PA, where Sentimental Journey is held each summer and the scheduled site of our annual convention, set this year in conjunction with Sentimental Journey.

In February, he sent a link to an article by Tony Bruno about his tour of the Piper Aviation Museum. Tony has a blog entitled Aviation History Museums, and the Piper Aviation Museum was No. 20 of his “about monthly” tours. On a quick scroll through the article, which is filled with photos, I spotted the museum’s Tri-Pacer and Vagabond as well as the Short Wing Piper Club display.

I can tell you that going through the article certainly whetted my appetite for an in-person and up-close view of the airplanes and the material about Piper Aviation. All of us who attend the 2021 convention are in for a great convention and a chance to explore the whole museum. Mark your calendar for June 20-25!

In the meantime, here’s the link to the article (which I think you’ll really enjoy): <https://aviationhistorymuseums.com/blog/2021/2/9/piper-aviation-museum-lock-haven-pa>.

Just type that into Google, sit back, and tour along with Tony! Thanks a bunch to Tony and to Phil.



Andy Seligson shared a look at the SWPC display in his story about the convention (pages12-18). This photo by Tony Bruno includes the Hall of Honor. (Editor’s note: I’m looking forward to viewing this display this summer!)



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Membership Report

Deaths of three members reported

By Eleanor Mills
Membership Services
eleanormills@att.net

Jim Fix—Another important member left us last month

By Kent O'Kelly

Reprinted from the February Supplement

Many/most of us know Jim Fix. He's the man who fixed MANY of our propellers in his propeller shop. He's the man who, when we bought a new propeller through him, tuned it up and made the pitch better and the propeller more vibration-free than the new ones were.

He's the man who walked our Convention flight lines and told us how good (or bad) our propellers were.

He's the man who, with his wife Janice, attended Oshkosh and Sun 'n Fun, and other aviation events, for years, selling their Temper Foam seat for cushions. He's the man, who with Janice, attended many of our Southwest Regionals. He's the man who served in our Air Force.

I know that I've left out other, important things. He accomplished so much. We'll all thought so much of him and Janice that we inducted them into our Hall of Honor. Always smiling, always helpful and, with Janice, always friends to all of us. We wish him a smooth flight west and send our best regards to Janice.

(Editor's note: Bob and I took our Tri-Pacer to Lincoln to have Jim fix the prop. He did a lovely job. He and Janice were always such friendly people and so enthusiastic about things. We saw them every year at Oshkosh when we made the rounds in the vendor buildings to pass out copies of the Short Wing Piper News. The world is a little darker without Jim.

(Janice's address, if you would like to send her a note, is 2470 County Rd C, Box 456, Crete N 68333.)

Susan Arrow loses courageous fight against cancer

Susan Arrow, wife of Alan Arrow, died January 27 at their home in Magnolia TX. Alan and Susan, before moving to Magnolia, lived in the Kansas City area and Alan took over leading the Mid-America Chapter after the death of long-time president Steve Marsh. Alan is known to most of SWPN readers for his authorship of the continuing series of technical corner articles called Vag Rag (Vag Rag 21 was printed in the last issue).

Susan was diagnosed with pancreatic cancer about three years ago and finally reached the end of any progress from treatments. Alan announced her death with

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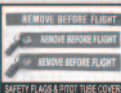
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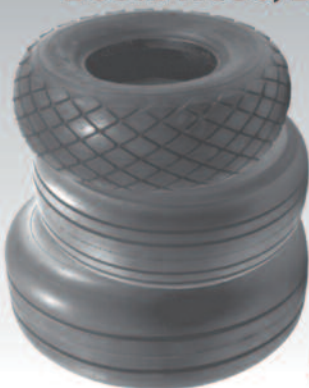
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the following statement: “The day finally came for all Susan’s suffering to end. She is now reborn to a glorious body void of illness.”

Alan’s address is 18911 Connie St., Magnolia TX 77355.

Alan requested that we run this photo of Susan, taken on their first convention trip in 2004 to Sault Ste. Marie. She’s standing in the pilot house of the Valley Camp Freighter Museum.

(Editor’s note: I apologize for the quality of the photo. 2004 is the year Bob and I sold our newspaper, including the computer we produced the SWPN on, unfortunately. I found a few photos from that year but not this one of Susan. Alan was having computer problems and had to take a photo of the photo to send to me. But here she is, happy and well!)



John Lehigh, longtime member, died December 7, 2020

I got a call from John Lehigh, Jr., earlier this year to tell me that his father, John Lehigh, died on December 7. I told John that I always remembered John and Iris because Iris called every fall and spring to give me their change of address from Zephyrhills FL to Sault Sainte Marie MI. She wanted to be sure John got his club magazine!

John laughed and said for the last few years his mother had been having to read the magazine to his dad. And he reported that Iris in September of last year had a stroke and heart attack. They had spent the last two years in Florida to be near their son.

John joined the club in 1980 and held membership number 308.

For those who would like to send a note to Iris, the Florida address that they had been using (which is the last one I have) is 35202 Dodie Dr, Zephyrhills FL 33541-7316.

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Membership Report

More news from members

By Eleanor Mills

eleanormills@att.net

If you're like me, you're tired of the pandemic, tired of winter, ready for everyone to get their Covid-19 vaccinations, ready for spring and summer, and ready for all those exciting aviation events.

Well, there's good news on a few of those things. By the time you read this spring will be on its way, more people will have their vaccinations, and there's good news on the aviation events schedule:

On February 21, I received an email from Florida saying Sun 'n Fun planning was getting underway. There's a small story in this issue about that. Our convention is still on and our co-directors (**Gene Keller** and **Andy Seligson**, presidents of the Mid-Atlantic and Northeast chapters) have an exciting convention lined up for us. Unless Sentimental Journey or the governor of Pennsylvania cancel it in late April, we're good to go and there are stories and a registration form in this issue. Oshkosh is still planning a Short Wing Piper Tri-Pacer and Pacer birthday party (22s in 21) as part of their annual event. Staging at Baraboo WI is still on as well to prepare for the launch of the Short Wings to Oshkosh. And to top it all off, the Southwest Regional in Page AZ is still on!

So mark your calendars:

April 13-18: Sun 'n Fun, Lakeland FL (Those of you who have the E-News only membership should receive your PDF in time to jump in your Short Wing and attend!)

June 21-25, SWPC Convention, Lock Haven PA

July 21-24, Baraboo WI staging and July 24, group flight to Oshkosh from Baraboo

AirVenture 2021, Oshkosh WI, July 26-Aug. 1

Southwest Regional, Page, AZ, September or October, dates to be announced later

In news from our members

Doug Clinton, Pickens SC, rejoined after a lapse, saying, "I was out of the flying game for a couple of years due to back problems, sold my Tri-Pacer, which I should not have done. Anyway, now driving a 1963 Colt. It satisfies my needs but sure is S-L-O-W! Keep 'em flying!"

Gordon Westphal, Rochester MN, says, "Hope to have the Vagabond totally rebuilt and flying in the next four months. Happy New Year to all the Short Wingers!" Send us a photo when the Vagabond is completed, Gordon.

**Don't forget
22s in 21 —
at AirVenture 2021 in Oshkosh!**

New member **Sophie Huang**, Newcastle WA, was anxious to join the club forum, saying she is a CFI, CFII, and MEI.

Cliff Van Vleet, Sierra Vista AZ, expressed recently a hope that applies to all of us: "I trust ya'll have survived the great February freeze up!! Those Texas folks really got a multiple hit with electricity, water, food, fuel, heat, frozen pipes, etc. Our only impact from the overall weather effects was having our Covid-19 second shots rescheduled. After No. 2 we will feel much more comfortable about survival even though we still have to wear masks and maintain separation, etc. Sure hope our Lock Haven, Baraboo and Oshkosh capers get to be held." Me, too, Cliff, and I'm sure we speak for a whole lot of Short Wingers!

Lyman Conley, Indianola IA, received the automatic notice from the website that his membership was expiring. Responding to me, Lyman said "After many years of membership, and enjoying all of them, I have lost my medical. Sold the Tri-Pacer and am missing it terribly. So will just let things lapse and write it up to finally run the full measure." I told him I was sorry and knew how he felt. I didn't lose a medical but I lost my pilot and had to sell the airplane. Those Short Wings have a way of getting into our hearts, don't they?

Richard Wedepohl, Madison WI, is another who rejoined after a lapse. He said, "3666Z has been sitting in the mechanic's hangar for too long. My instructor partner and I got our first shot this week and can't wait to get back in the air again."

Philip Maley, Perth, Australia, wrote to say, "I have sold my Piper Tri-Pacer VH-OLD and I don't foresee owning another Short Wing in the future, so I won't be renewing my membership. I've strongly encouraged the new owner to join SWPC. Thanks for all your great work."

Thanks, Philip, for talking to the new owner about the club. We need to spread the word as much as possible. As Ed Wach (first editor of the Short Wing Piper News and second president of the club) always said, Spread the Short Wing Gospel!

Cedric Abbott, Crescent City FL, sent a note to say, "Good news! My one winter rehab project for my Clipper, which I started 5 years ago, is finally done. It was intended to just be a "Recover the fuselage and overhaul the engine" project. Turned into a total strip and recover of everything, new panel, replace engine with a different one, and replace the radios. Flies nice though. I may be slow but I'm messy."

Cedric sent a check for his dues, saying, "My computer and I are generally not on good terms with each other." Sometimes I think my computer hates me, Cedric, but then my daughter comes over and solves whatever problem we're having! Send us a photo of the Clipper, Cedric.

Kristina Shirs sent a note with **Dan Shirs'** membership renewal, saying, "My apologies this is so late. I have been in the hospital three times in the past two months (not Covid) and had surgery two weeks ago. Then once bed rest was done, I found out I had no checks so I had to order checks." Goodness, Kristina, I'm surprised you managed to get that renewal sent at all. Hope you're all better now.

Dave Smith, Winchester CA, had trouble getting registered but finally made it. Then he sent this note: "Just for fun, take one minute and check out this link we created for the recent ICAS convention. Lady Liberty is the CAF airplane

I'm associated with: <https://vimeo.com/r88221363>. I asked the squadron for someone with a radio voice but nobody stepped up. So we got hillbilly." Thanks, Dave. (I got the video up but right now I'm in that 'my computer hates me' time as far as videos are concerned – they play just fine but there's no sound! Kay will have to solve another problem.)

Judy Rudd, who used to live in Sierra Vista AZ, moved to Georgia a year or so ago. She's moved again! I got the following note from Judy right after Christmas: "The last of January I will be moving to Longview WA near my son, Ken; just can't handle all the moisture in Georgia. Not being able to be active and involved has not been helpful either. Have always lived in a house and apartment living is too confining, which was unavoidable because of the virus. Hope the vaccine will help to open up activities for everyone. Ken was able to find a small house with a yard, so I can have a garden and flowers.

"Heard from Cliff and Carole (Van Vleet) and Sid and Sue (Brain) called and we had a great long talk – such good people. Really do miss all the SWPC friends.

"Sure praying this coming year is better for everyone. Family here has been healthy, but my grandson in Texas had a mild case of the virus but is okay now." Send me your new address, Judy, and thanks for keeping in touch.

Ed and Johnna Madoni, Carthage MO, sent a note with their renewal: "Thank you for all the work and editing you do on the Short Wing Piper News magazine. We do appreciate all that you do. We are praying for a good year for everyone in 2021 in health and activity in the club. Be careful. Stay safe." I'm doing my best, Johnna. You and Ed do the same. Things WILL get better!

Ken Reuhl, Piscataway NJ, sent a note with his renewal, saying, "My apologies for missing the renewal reminders and my thanks for the email notice that my membership had expired. I did not see the electronic reminders – I use my University email and they have automatic spam cleansing. I will try to be more alert in the future. Best wishes for 2021." Ken's email address is to Rutgers University, where he is a pathologist. I'll try to remember to send a reminder if that busy spam cleaner gets to the reminders before you do, Ken.

Dennis Beecher, Martinsburg PA, called to give me his credit card for his and Barbara's membership. As we talked he told me a bit more about his Clipper, which was a reserve grand champion at Oshkosh in 1976 and has appeared on the cover of the SWPN. Dennis said he was the second owner of the Clipper and flew it all over – to the Keys and all up and down the East Coast. You can see a photo and some info about the Clipper in a separate story in this issue (A Love Affair with Short Wings). The Beechers and the Clipper will be at our convention. Dennis said they also attended the very first Sentimental Journey. I always think of Dennis when I see a train passing. His email address includes the words "railcareengineering" and I always wonder – did he design that car?

Phil Hoy, Portland CT, sent an email with a You Tube video link of beautiful scenery in Washington. If you like mountain flying, tune in to https://www.youtube.com/watch?v=Lr0xy_uyJXA. It's entitled Tri-Pacer dinner date to Ranger Creek WA, May 2020. Look for Phil to be a our convention this summer. In addition to being a club member, he's a board of directors member for the Piper Museum.

We also got several membership applications with occupations and/or special

skills listed: **Paul LaBella**, Rome, NY, says he is retired and has his private with instrument license; **Duane and Wilma Fischer** live in Lebanon IL. Duane says he is retired but lists Airport Mechanic, A&P, Airport Operator 6LL6, and owns a PA-22/20-160, N8507D, so I presume he has a busy retirement life! **Lowell and Rhonda DePoy** live in Salem IN, where Lowell is the airport manager and is in charge of an aircraft museum. He's also on the board of the Piper Aviation Museum, so we will look for him at our convention this summer. **Casper Behr**, Neavitt MD, is an AP/IA. **Steve and Joan Pankonin** live in White City OR. Steve is an A&P/IA.

A few members sent donations along with their renewals: Paul Lock, Miramar FL, donated \$10 to the Education Foundation; **Anthony Spitzer and Diane Van Hoozer**, Kalona IA, donated \$20 to the Education Foundation; **Jerry and Yvonne Herman**, Rimrock AZ, donated \$25 to the club library and \$20 to the Education Foundation; **Ronald and Marian Lazor**, Middlefield CT, donated \$25 to the Education Foundation.

Thanks to all of you who send notes, letters, donations, stories and photos.

Short Wing Piper Education Foundation

C/O Michele Wolff, Director
S3206 Hunters Glen Cir, Baraboo WI 53913
michelejean@hotmail.com, 608-393-7696

SWP Education Foundation donations have benefited 48 students with 91 scholarships

By Eleanor Mills
eleanormills@att.net

The Short Wing Piper Education Foundation, Inc. was established in 1990, incorporated in 1994 and awarded its first scholarships in 1996. Since then, scholarships have been awarded annually to a select few individuals each year at the Short Wing Piper Club National Convention. Our Education Foundation Scholarship recipients have gone on to be professional pilots, air traffic controllers, aircraft mechanics and to work in other aviation related fields. Scholarships are funded by allocations from The Club's Online Store's, donations from Short Wing Piper Chapters and Club Members and others who generously support the future of aviation and our wonderful Short Wing Pipers!

Scholarship Recipients 1996-2020

In the years since the Short Wing Piper Foundation began awarding scholarships, 48 students have benefited with at least one year of college or technical school benefits, while some were able to renew their scholarships for succeeding years. In the 25 years of scholarship awards, a total of 91 scholarships (new and renewals) have been awarded.

Here are the scholars, year by year:

1996: Jason Burkhart and Shaun Regan

1997: Renewals for Jason and Shaun, and new scholars Nicole Ryan and

Suzanne Porter

1998: Renewals for Jason and Shaun

1999: New scholar Bobby Stokes

2000: New scholars David Simon, Greg Peterson, Kim Conrad, and Sandra Rutledge

2001: Renewals for David, Greg, Kim and Sandra

2002: Renewals for David, Greg, and Sandra, and new scholar Trent McPhail

2003: Renewal for Sandra, and new scholars Cory McLemore and Jared Paine

2004: Renewal for Cory and new scholars Abby Spanier and Keith Jones

2005: Renewals for Abby, Cory, and Keith, and new scholar Max Kahlhamer

2006: Renewals for Abby and Max, and new scholar Aaron Atkins

2007: Renewal for Max, and new scholars Alex Minium, Josh Stacey, and Michael Gonzales

2008: Renewals for Aaron, Abby, and Max

2009: Renewals for Alex and Michael, and new scholars Nathan Smith, Devin Sirois, Anthony Lalor

2010: Renewals for Alex, Anthony, Devin, and Nathan, and new scholar Jonathan Blumhorst

2011: Renewals for Anthony and Devin, and new scholars Danyelle Fuhrmann, Megan Daniels, and Linda Cochran (who had to refuse her scholarship when her planned program was cancelled by the school.)

2012: Renewals for Danyelle, and new scholars Michael “Duke” Davis, Tim Cuff, Tyler Densford, and Wesley Carter

2013: Renewals for Duke, Tim, and Tyler, and new scholars Jeff Hopson and Cody Marks

2014: Renewals for Tim and Cody, and new scholars Justin Holt and Logan Owen

2015: Renewals for Justin, and Logan, and new scholars Mark Berry, Tim Quigley, and Molly Van Scoy

2016: Renewals for Molly, Logan, Mark and Tim

2017: New scholars Aren Akins, Ethan Kurtz, and Emme Jefferies

2018: Renewal for Mark and new scholar Aaron Akers

2019: Renewal for Aaron, and new scholars Payton Mercer, Blake Lewis, and Doug Anderson

2020: Renewals for Aaron, Payton, Blake and Doug

How can you help students who want to pursue aviation careers? You could sponsor a student you know who has his or her private license and/or you could donate to the Education Foundation either by sending a check to SWPC and noting that it is for the Foundation or by going online to the club website and donating.

Now, thanks to club treasurer Claire Karlson, there’s yet another way – when you want to buy something on Amazon, go first to Amazon Smile and select the Short Wing Piper Education Foundation as your favored charity. It’s simple and it’s easy to get registered. Then, just remember to go first to Amazon Smile and then make your purchases on Amazon.

Here’s the info – just type this into Google search:

smile.amazon.com

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where you get to meet old friends and new, see great aircraft, learn tips and techniques at the seminars, tour fascinating factories and museums, win valuable prizes (the raffles and door prizes are highly sought after!) and have lots of fun! They are like chapter meetings but bigger.

Food, Flying, Fun, Family, and Fellowship!

Update for the SWPC Honor Roll — Nominations needed

By Eleanor Mills

While preparing material for this issue, I reprinted Kent O'Kelly's article on Jim Fix's death from the February Supplement. Noticing that Kent reported that Jim and Janice Fix were inducted into the club's Hall of Honor, I went to the website to see which year that happened.

Hmmm. The website didn't list the Fixes, who were inducted in 2014. After a bit of research in the past issues of the SWPN I discovered the only other inductees not listed were last year's inductees Adolph Svec and David Hedditch.

Just to jog our minds at how many truly important members of our club have been honored with the Hall of Honor induction, here is the full list:

1987: Charter members Robert A. Fuller, Stephen W. Marsh, Edwin F. Wach, Kurt Schneider, Larry D. Smith, Lonnie McLaughlin, and George Fruehauf. (Lonnie is still a member, holding Membership Number 5, and the preparer of the many indexes to the SWPN issues.)

2005: Iris Morris and Frank Rush

2006: Charles H "Chuck" Lewis, and Bob and Eleanor Mills

2007: Clyde Grant

2008: Kent O'Kelly, John Wood, and Ralph Gutowski

2009: Tom Anderson

2010: Cliff VanVleet

2011: John Beck and Doug Stewart

2012: Art Weisberger and Garry Butler

2013: George and Florence (Tyke) Klitsch

2014: Jim and Janice Fix

2015: Andy Seligson and Tom Brent

2017: Carole VanVleet

2020: Adolph Svec and David Hedditch

In case you read this list and think of someone who has also contributed much to the club, on the next page are the guidelines to nominate that person (or persons) printed from the Honor Roll section of the website:

SWPN advertisers are your best source for Short Wing parts and service. They support our club and we need to support them. Tell them you saw their ad in your SWPN quarterly magazine!

Be an ambassador for your club!

HONOR ROLL GUIDELINES

There are many members, past and present, deserving of being included on the Short Wing Piper Club Honor Roll. If you are interested in nominating someone for the Short Wing Piper Club Honor Roll, please follow the guidelines below.

1. All SWPC members and former members are eligible for this honor.
2. Any member, group or chapter may make a nomination
3. Nominations shall be formally submitted either by e-mail or postal mail to the Secretary of our Board with a copy to the President. The Club's Official Address is PO Box 10822, Springfield MO 65808.

Nominations should contain a narrative statement explaining why the nominee deserves this honor, taking into account the primary qualification of "Outstanding contribution to the Short Wing Piper Club and its goal to maintain and preserve the Piper Vagabonds, Clippers, Pacers, Tri-Pacers and Colts."

Biographical information should be included if possible and a photograph of the nominee should accompany the nomination. This information, in addition to being evaluated for induction, will be used to generate the biography page in the notebook placed in the SWPC display at the [Piper Aviation Museum](#) at Lock Haven, Pennsylvania.

4. Nominations should be received by the Secretary and President by April 15 of each year, after which the Board will review the submittals and select none, one or two to be honored. If not selected, a nominee will continue to be reviewed annually without the need for additional nomination entries.

5. The new honorees will be inducted into the Hall of Honor each summer at our convention.

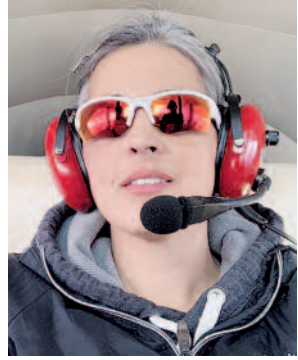
Making a difference for the club includes answering questions other members may have, on the forum, on the Facebook page, or directly. And then telling SWPN about it.

Sure, we have the Panel of Technical Advisors. And they really are experts. But even they sometimes have to scratch their heads. Maybe you know the answer because you experienced that same problem.

The beauty of our club is that the members are all different but they're all alike in that they love Short Wings. All of you have some experiences that could teach the rest of us a bit about our Short Wings. You, too, can make a difference!!

Flying Ms Daisy — Tales from the Passenger

By Holly Shuck
Montensano WA
hollyshuck@gmail.com



The Dominoes of Change

Until a few months ago Ms. Daisy had a home at an old airport about 15 minutes east of us in a darling little farm town called Elma. While the hangars do their job, the rest of this little airport has been sorely neglected for many years. On the property are the runway, a couple large grassy areas, a very rundown building that once held a pilot's lounge and café, and several rows of hangars.

When we first met Neal and Ms. Daisy, we learned that the airport had just been sold to a group of people who planned to shut it down and build a marijuana grower (being legal in our state, these are quite popular around here).

While we had hoped that it wouldn't actually happen, I'm sad to report that in November we received a letter stating that the runway was indeed going to be shut down and we renters had 30 days to fly the planes out or they would have to be trailered out instead.

With hangar space in high demand all around us, we quickly rented one of the last three hangars about 20 minutes west of us in a little town called Hoquiam. The new airport is much nicer, kept up well, and surprisingly the rent is even cheaper, but as at the end of a lovely chapter, and much like a first house, Ms. Daisy's first hangar will always hold a special little spot in our hearts.

In my forty-three years I've found that change typically has a domino effect



Moving Ms Daisy to her new hangar was a job for a dark and rainy night. That's the new hangar on the left and Ms Daisy is at right, stopped and ready to be guided in.

and indeed, the dominoes started falling. Once the move was made to Daisy's new digs, the first wobbly domino was clear. An additional twenty minutes to Shelton for lessons with Instructor Jeff was going to take some extra planning for Neal to fly Travis and I over for each lesson. This is not a big deal really, but a local instructor would help tremendously with lesson planning. Feeling like he was cheating on Instructor Jeff, Travis reluctantly made the decision to look for a local instructor.

Pilots, being pilots, talk about being pilots...that's how I met Jordan...*at the vet hospital*. Pre-Covid, when people could be in the lobby, Jordan walked up to my desk and said with a grin "Hi, Holly, I'm Jordan. I know who you are through Facebook and I saw that your husband is a student pilot; I am too!" He also assured me he wasn't a stalker, and because I am a quick study (pilots bring "piloting" into every conversation), I knew he was completely innocent.



The Jordan Brown family is ready for a ride — with his wife and their new baby (her first flight) in the back seat and their little boy in front. He rides with his dad as much as he can now that his dad is a certified pilot.

Travis and he have been friends ever since and Jordan being a member of the local flying club (the club owns and flies a Cessna 172), hooked us up with Instructor Kyle. Kyle is a retired airline captain and has been doing biennial flight reviews for the local flying club in our area and it turns out he was willing to take Travis on as a student!

With a new instructor out of the way the last domino tipped, only this one revolves mostly around body weight, the bane of my existence. Unfortunately, Instructor Kyle weighs more than Jeff did and this means the three of us almost max out our weight limit in Ms. Daisy. I can no longer go on most upcoming les-

sons unless at least one of us goes on a starvation diet and I'm not entirely sure Instructor Kyle realizes we'd prefer it be him.

This is both great and terrible for my fear factor. The more I fly the better I feel about it (great!), but the less I fly also the better I feel about it (terrible?). Instructor Kyle put it this way, the plane flies much differently with max weight and for training purposes it is better for soloing to maneuver Ms. Daisy without so much weight on board.

What is it about these instructors that always make me feel self-conscious about my excess chub? Have I gained a few? Yes. Should I have to discuss it with a perfect stranger? No! (I really do understand and am okay to sit a few lessons out so that Travis can learn what he needs to become a fabulous pilot.)

Thankfully, it was a short domino run and even though I have not been in the plane during an active lesson recently I am still learning about plane ownership. I learned about spark plugs and how the build-up on them can cause a bad magneto check. Travis brought the plugs home, cleaned them up, and explained to me what was happening.

He then, through research and trial and error, found that with Ms. Daisy he needed to lean out the mixture on run-up which, in turn, burns off the excess and fixes the problem.

One other constant issue around here is weather. Being winter in the Pacific Northwest, it's nothing but grey skies and rain so there have only been a few clear and sunny days that Travis and Kyle have been able to go up. We cannot wait for better weather in order to get him soloing and on the road to building hours, during which, I already know I will be the second lady in his life and I'm okay with that for now.

One last quick note of interest that I find humorous: When highly motivated, a person (Travis), who cannot fly by himself yet, will find other ways to be in the skies when Instructor Kyle is busy. Skydiving was finally marked off Travis's bucket list the day after Christmas this year.

It was a gift given to him by our daughter, AnnMarie, who jumped with him. They jumped at 13,000 feet, did a 60 second free fall (120 mph) and a 5 minute "ride" down on the chute. I, true to myself, was not only *not entering a plane* that planned on opening a giant side door, but also *not entering a plane* just to plan on jumping out.

I went along to watch and, of course, was horrified to hear the tandem jumper say things like "Roll forward and just sort of fall out." And then "Scoot on your butt to the edge of the plane and just dangle your feet over like you would in a swimming pool." and "Don't ever grab your instructor's hands: they need those to do important things like opening the chute."

Falling out?

Dangling my little feet out at 13,000 feet like I am pool-side?

Not grabbing anything I could to hold on to?

I don't even know how this is considered sane much less fun! What's on my bucket list? To fly in Ms. Daisy and never jump from her is now FIRST!

*New Instructor Kyle has given permission for me to write regarding his involvement with us as well as Jordan Brown and my daughter to post about them, including pictures. Again, I hope my readers will continue to enjoy our experience as new plane owners and pilot-to-be.



Here are AnnMarie and Travis ready for their skydiving adventure. AnnMarie is Travis and Holly's oldest child and only daughter. The skydiving was a gift from her to Travis.

Keep those stories coming! And keep reading to hear the joy and excitement of a youngster on her first ride in a Short Wing!

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<http://www.shortwingpiperclub.org/tool-rentals/> where you will find a full listing of tools with a picture of each tool. There's a link to take you to the Tool Rental Form (members must be logged in to access the form). To order a tool, fill out the form and submit. Terry will get an email with your order and fill the order.



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**Check the chapter reports for
places to fly and people to see!**

The SWPC Store

The SWPC Store inventory of items we sell can be found on the SWPC website, www.shortwingpiperclub.org. Credit cards and PayPal can be used for orders placed on the website. Available from the store are CD's (and flashdrives) containing drawings and blueprints pertaining to our Short Wings, CD's and hard copies of compilations of tips and techniques from the pages of the Short Wing Piper News, and products from some of our vendors.

CD's, flash drives, and hard copies available through the store include the following:

Tips & Techniques Vol. 1&II - \$40 (Technical articles, etc., from the pages of the Short Wing Piper News)

Tips & Techniques Vol. III - \$30

Tips & Techniques Vol. IV - \$30

**Best Value: All 4 Volumes Tips & Technique CD's
or flash drives \$80**

Vagabond Drawings (15 and 17) - \$40

Piper Drawings - \$60 (over 450 drawings, technical diagrams, and blue prints covering all Short Wing models)

Rigging Your Short Wing - \$20 (Frank Rush discussing rigging and Tom Anderson showing how to align landing gear)

Any of the CD's can be shipped on a flash drive if preferred

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www.shortwingpiperclub.org

More items at the Club Web Store

In addition to the CD's and Tips & Techniques Manuals listed on page 42, there are several other items currently available in the store -- See the club website for photos.

Popular items include:

Tom Anderson's LED Light Kit - \$55

The famous Sky Catch (1) - \$30 (Note: Order multiple latches if needed for the rear door as well)

**Vent Window Slide - Holds the vent window open at any degree desired — \$70 (and very well made)
and
Patches - \$3 each (SWPC cloth patch)**

All New "Colors" CD (or flash drive): All original color schemes for each model year plus a PDF file of the factory bluerint for that year. Modification section showing ideas for improving areas of the plane. \$10

Note that shipping charges are added to all items.

**Order from the website
(www.shortwingpiperclub.org) using your credit card or PayPal or order directly from Dan Miller, club store manager.**

**Contact Dan at 816-438-2138,
or sendan email to
dm1310@centurylink.net
SWPCStore@centurylink.net.**

The flight

By Amelia Bovais

EIW Level 8

Personal Narrative

29 October 2020

I was bursting with excitement as my dad drove us to the airfield. This was going to be my first flight in a small airplane. It seemed like an eternity passed before we arrived at the airport where we were meeting our friend, Steve, who owned the Piper Tri-Pacer that we would be flying.

Once we arrived, we went to the hangar. There it was, the Piper Tri-Pacer. Until now, I had only seen pictures and heard stories about the Piper. This little four-person plane, with its white body, red stripe, and custom “Piper Pub” logo on the tail, was perfect. As Steve walked me through the preflight checks, my anticipation started climbing. First, Steve walked down the left side of the plane, from the prop to the tail, to check the structure. Then, he returned on the right side to complete a full walk around. He also showed me how to check the fuel, oil, and controls. The little plane was ready for passengers!

“Amelia, are you ready to load up?” Steve asked.

“Yes!” I said with excitement in my voice and a wide smile on my face.

I was buckled in the back, and my dad sat in the front with Steve. I could not believe I was finally going flying in Steve’s Piper Tri-Pacer.

I felt every little bump as the Tri-Pacer accelerated down the runway, building up speed for takeoff. Soon, the wheels lifted off the ground and we were flying. As I gazed at the stunning view outside the window, I heard my dad’s voice crackle through my headset.

“How is it, Amelia?” he asked.

“Amazing,” was all I could reply.

I did not know what to expect. It was bouncy and nothing like a commercial flight. At that point, I could have cared less, I was having the best time ever.

“Where are we?” I asked, just after we landed, assuming we were still in Maryland.

“We are in Delaware,” Steve answered.

“No way, really? We got here really fast.”

“Yep, what normally would have taken us three hours in a car only took us an hour.”

After lunch, we were back in the air again, but this time I was in the co-pilot’s seat. It was drastically different from the back. I was right behind the controls and the yoke, with a view of the propeller out the front window.

“How high are we?” I wondered.

Steve replied, “We’re twenty-five hundred feet in the air, and we are traveling at one hundred fifteen miles per hour.”

I was speechless.

About halfway through our flight, Steve asked, “Do you want to try flying the plane?”

“Sure,” I responded with a mix of delight and nervousness.

“Okay, now you take the yoke.”

I was doing it; I was flying the plane! I was thrilled, but at the same time I was



Amelia has a big smile as she poses beside the Piper Pub, Steve Carruthers' Tri-Pacer and Amelia's flying carpet for her Eagle Flight.



Amelia takes her turn at the controls. "I'm doing it!"



And that's a champion's smile as she completes her turn at the controls of the Short Wing!

really scared. I only flew for a brief time, but it was exhilarating. When Steve took the controls back, he pointed out landmarks and taught me

about piloting. I was disappointed when we landed, but grateful for the wonderful opportunity. We put the plane in Steve's hangar and headed to the car. It was an extraordinary day.

"Can we do that again?" I asked as soon as we got in the car.

"We'll see," said my dad.

(Editor's note: Amelia lives in Port Tobacco MD, and her father, Chris, says she is "very excited to see her story published." Chris went on to say that club president Steve "needs all the recognition he can get for the tremendous time he has put into Young Eagle flights." He also added that Amelia got another chance to fly with Steve during a Young Eagle Day for her American Heritage Girl troop. "Steve gave many kids and adults their first ever flight in a general aviation airplane that day," Chris said. "He is awesome!")

(Chris, by the way, works at the Naval Research Laboratory's Vehicle Research Section. I think the flight Amelia writes about was in 2017 — hope she is still as interested in flying!)

Regional Chapter Reports

(Editor's note to all chapters: We do like to have your photos — properly identified, of course. So send them in, but do remember to attach them separately to your email. (On my program it says "attach" them, but who knows what it says on yours.) It's nice if they are at least 4 inches wide and a high resolution, if possible. And picking up tiny low resolution photos from a PDF doesn't help. So . . . if you don't see your photos, that's the reason. The SWPN goes onto the website for every member to see and we don't want pixelated photos to detract from our members or aircraft!)

I have been trying to use most of the photos, even those that are tiny. However, I do think it detracts from the looks of the magazine.

PLEASE, from now on, attach your photos to your email if you want them in the magazine.

Kansas,
Missouri, and
Northern
Arkansas



(December newsletter)

By Dan Miller

Chapter Secretary/SWPC Storekeeper

Dm1310@centurylink.net

I've been trying to conjure up something witty for an end of the year Newsletter. However, considering the year we've had I just can't come up with anything witty. If you are interested in my current adventures, read on. If not, you can just trash this now.

I made another trip to Alabama to visit my sister. This was a quick trip with no itinerary. I didn't do much or go sightseeing. Pretty boring trip. The orange trees have ripened up and I had fresh orange juice each morning. The hurricane damage I reported on last time is still evident, but the county is working on it every day

I went across the bay to Fairhope to visit the B&B pecan store and bought five pounds of Pawnee pecans. Pawnee is a variety of pecans that has a very thin shell and a nice flavor. Very easy to shell. Another variety they had is the Kiowa. A much richer flavor than the Pawnee but harder to shell. They are good for pecan pie.

I took my plane up last Sunday and flew around the pattern a few times. I'm still very rusty, but I'm working on it. I've plotted some courses on my iPad using the iFly app for future cross countries when I have some place to go. I would really like to fly to the National Convention in June. Hopefully we can have the convention this year.

Which reminds me: last month while I was flying I noticed I could only hear out of the left side of my headset. I did all the usual things like jiggling the plugs, wiggling the wires and banging on it, but nothing worked to get the other side working. I figured it was time to invest in a pair of new headsets. I started with the Sporty's catalog since the Christmas issue had just come in the mail.

It didn't take me long (I'm a quick learner) to figure out that maybe I could get along with just buying one headset, and even then I would have to take out a home equity loan to pay for it. When did headsets get so expensive?

Outside of not being able to hear, my headsets were in good condition. Perhaps I could just take them apart and find out what was wrong. Well, that didn't go so well. The further I went into the disassembly the more I realized I was not skilled enough to perform this task. There's a lot more than just wires behind those speakers.

So on to plan "B". I looked on the internet for headset repair and discovered a repair station just a little ways from me in Pleasant Hill called KC Headsets. I called the number and talked to Jerry Gibler who said he is an FAA licensed headset repair station and can fix just about any brand of headset. I decided to give him a try. The cost was certainly much less than a new set.

However, I had four other headsets lying around the hangar that had given up the ghost years ago. The covering on the wires were literally falling off. They were an oily mess that just came apart in my fingers. I tried plugging them in to see if they would still work, but it was obvious they were no longer serviceable. If Jerry was any good he could get all of them serviceable. I dropped them off in a box at Lee's Summit Airport for Jerry to pick up and two weeks later I picked them up from the same location.

I could not be more pleased with the results. I now have five headsets that look and act like new. If you have any headsets that need some TLC the number to call is 816-835-4575 or look them up on the internet at kcheadsets.com.

All the insulation has come off the mic cable. I tried taking one apart. The crossover cable completely disintegrated.

I have received a number of Christmas Cards from Club members and I deeply appreciate each and every one of them. It is interesting the personalities that are expressed in the cards comparing them to the senders. It is a shame that this tradition is dying out, but postage at 55cents a card adds up quick. Email just doesn't equal a mailed card. Which makes me appreciate the effort and expense you went to in order to acknowledge my presence on earth. Thank you!

Our local post office has some carriers that contracted the dreaded virus and mail service has not been at its best. I'm grateful to get any mail at all.

In the last SWPC News there was a Pre-Pre-Registration form for the National Convention. I printed it and filled it out. At this point there are a lot of "ifs" in the planning. Submitting this form to Andy Seligson will help the Convention Committee make decisions on what the group is interested in doing. There are a number of tours and activities offered. Meals need to be planned. Transportation may be an issue since members will be staying at several different hotels off the airport, but all activities will take place at the airport. Submitting the Pre-pre-registration form will help with those arrangements.

I have never been to the northeast part of our country and I'm looking forward to going. It's a seven hour flight or a fifteen hour drive from where I live. Sure hope the weather is nice that time of year.

I want to wish everyone a Very Merry Christmas and a Happy New Year. Let's hope we can finally get together as a club and have some fun, again. I miss seeing everyone. I'm shooting for April to be our chapter's next meeting. Let's hope this pandemic is over and done with by then. (I have my doubts, but I'm optimistic).

Dan Miller, Newsletter Editor

Response received to Dan's visit to Alabama (reported in the last SWPN)

(Editor's note: This letter from members Ron and Jackie Collier, Seymour TN, came in response to Dan's Mid-America Chapter report in the JFM 2021 SWPN, with pictures from his visit to his sister's home in Mobile AL. Here's Ron's report giving more information about one of the sites Dan explored and photographed.)

More about that Corsair at the Naval Air Museum in Pensacola

By Ron and Jackie Collier

Here is the retired/Old Man again, Eleanor. I wanted to respond to Dan Miller's report in the latest issue of the News. Jackie, my wife, grew up in Mobile. We decided to move there after retiring from the U.S. Army in 1981. We survived many hurricanes. Camille came ashore the weekend before our wedding. Then there was Frederick, Ivan, one that sat on Mobile Bay for three days and left 36 inches of rain. The last one, Katrina, my wife said, "No more" after being without power for 13 days. Thankfully we had a gas water heater.

We eventually moved to our present home, on an airpark in Tennessee, in 2006.

While in Mobile, we made many trips to Pensacola to the Naval Aviation Museum. The picture on page 52 (Jan-Feb-March 2021) of the Corsair with a 3-bladed prop needed a little explanation, since the standard prop was 4-bladed.

On 2 August 1968, I flew a DeHaviland U6A (Beaver), 57-6142, to Lakeland to pick up some of my stuff I had left with my mother while I was in Vietnam. I noticed a Corsair in the hangar at Drane Field, which was the original WWII airfield name.



Here is Dan's photo of the Corsair Ron is talking about with the 3-bladed prop.

As a young child, I remember visiting my uncle and his family while they lived in some of the old barracks (which were torn down many years ago).

I talked with the owner of the Corsair and he informed me they were restoring it to original Navy configuration. Lying on the floor was a 3-bladed prop, brand new surplus, which he had paid \$1,000 for.

Fast forward, the airplane was eventually finished. The owner, who was an old Floridian, and had made his money in orange groves, was developing his skills in order to be able to fly the Corsair. He and an instructor were practicing aerobatics in a T6 Texan, were inverted at 1000 feet, when the crankshaft failed in the engine. Tragically, they were not able to recover and died in the crash.

Prior to the accident, he had directed that the aircraft would go to the museum in his will. His wife, as I understand, fought it in court but was unsuccessful.

Today, an unusual 3-bladed Corsair resides in Pensacola for all to see and appreciate.

Thank you for all you do.

(Editor's note – and thank you, Ron and Jackie, for filling in the story or, as Paul Harvey used to always say, giving us “the rest of the story.”)

Regional Chapters/Presidents

If you need a reason to fly somewhere in your region, check with your closest regional chapter president to see when the next fly-in is. And the president is also the one who will know who flies what and who does what and who knows what! Give him or her a call and ask to join the chapter!

Chapter Presidents: Please review your information below and make certain it is correct. If changes need to be made, please notify vice president Adolph Svec, interim chapter coordinator, at the contact information found on page 1 at the front of each issue.

ALABAMA: *** (***)See note below)

ALASKA: Rick Brenden, 31076 W. Lee Circle, Sutton, AK 99674, 907-746-0992; rickb@alaska.com See website: www.swpcak.org

ARIZONA: Terry Karlson, PO Box 1236, Show Low AZ 85902, 602-625-5905 (cell); piper3737z@gmail.com

ARKANSAS: (See Razorbacks)

BUCKEYE: Tom Anderson, teanderson@cinci.rr.com, 513-398-2656.

See website: <http://ohio.shortwingpiperclub.org>

CALIFORNIA: Currently inactive *** (***) See note below)

CAROLINAS: Steve Culler, 5900 Brookway Drive, Winston-Salem, NC 27105, 336-767-6426; n2311p@aol.com; See website: www.carolinashortwings.org

COLORADO & WYOMING: Jim Lambert, 11660 E. 160th, Brighton, CO 80602, 303-659-4938; jdlambert@frii.com

COLUMBIA RIVER (Washington, Oregon, Idaho): Phil Pirrotta (co-president, Oregon & Idaho). pirrottas@hotmail.com 503-757-4218; Dave Sterling (Co-president, Washington & Idaho), 206-963-1036, dave@smsrallysport; Stacy Sterling (co-president), 206-963-4128, stacy@smsrallysport.com; chapter website: columbiariver.shortwingpiperclub.org. Find chapter newsletters at the website.

CONNECTICUT: (See Northeast)

DELAWARE: (See Mid-Atlantic)

EASTERN MISSOURI & WESTERN ILLINOIS: Greg Kuklinski, 8206 Brenner Ave., St. Louis, MO 63144-5216, 314-209-0050, gregkpac@juno.com

FLORIDA: George Klitsch, 410 Silver Streak Lane, Valrico, FL 33594, 813-689-4822; gklitsch@tampabay.rr.com

GEORGIA: David Martin, P.O. Box 36, Parrott, GA 39877; jdmartin54@aol.com

HAWAII: (Pacific Islands) Doug Conger, 711 Hartman Rd., Cortez, CO 81321-4029, 970-565-8394; dconger@q.com

HIGH PLAINS***

IDAHO: (See Montana and/or Columbia River)

ILLINOIS: ***

ILLINOIS,western: (See Eastern MO & Western IL)

INDIANA: ***

IOWA: ***

KANSAS: (See Mid-America)

KENTUCKY: ***

LOUISIANA: (Cajun, see Arkansas)

MAINE: (See Northeast)

MASSACHUSETTS: (See Northeast)

MICHIGAN: Garry Butler, 8736 Lovells Rd, Grayling, MI 49738, 989-710-3302, tripacer03c@outlook.com ; Facebook page: <https://www.facebook.com/groups/142001742595525/>

MID-AMERICA: (KS & western MO) Fred Mayes, 236 Farmers Lane, Lebanon, MO 65536-3725, 417-531-1278; fbmayes@icloud.com.

MID-ATLANTIC: (PA, NJ, DE, MD, northeastern VA) Gene M. Keller, 5625 Chenango Dr, Bethlehem PA 18017, 610-266-0910 (h), 610-554-2874 (c) genepool@ptd.net

MINNESOTA: (See North Central)

MISSISSIPPI: ***

MISSOURI, Eastern: (See Eastern MO & Western IL)

MISSOURI: (See Mid-America)

MONTANA: David Hedditch, 501 Darla Dr., Victor, MT 59875, Hedditch Airstrip (MT72), 406-360-3283; drh29@bitterroot.com

NEBRASKA: (Cornhuskers) Dallas & Lynette Worrell, 511 Road E, Schuyler, NE 68661, 402-352-8776; dalynworrell@hotmail.com

See website: www.angelfire.com/ne/swpc

NEVADA: (See Utah/Nevada/Idaho)

NEW HAMPSHIRE: (See Northeast)

NEW JERSEY: (See Mid-Atlantic & Northeast)

NEW MEXICO: (See Arizona)

NEW YORK: (See Northeast)

NORTH CENTRAL: (MN & WI) Tim McDaniel, 405 Miller Ave SW, Hutchinson, MN 55350, 320-587-2476, tlmcd4@gmail.com

NORTH CAROLINA: (See Carolinas)

NORTH DAKOTA: (See North Central)

NORTHEAST: (northeastern PA, northern NJ, NY, CT, MA, RI, NH, VT, ME) Andy Seligson, 331 Westchester Ave., Crestwood, NY 10707, (c) 914-522-3341 (H) 914-337-2968; andytuba@optonline.net

OHIO: (See **Buckeye**)

OKLAHOMA: ***

OREGON: (See Columbia River)

PENNSYLVANIA: (See Mid-Atlantic & Northeast)

RAZORBACKS: Jay Bruce (acting president) 127 Woodland Drive Searcy, AR 72143, 501-388-4874; jbruce@sdstech.biz

RHODE ISLAND: (See Northeast)

SOUTH CAROLINA: (See Carolinas)

SOUTH DAKOTA: (See North Central)

TENNESSEE: Tom Brent, 540 CR 119, Walnut, MS 38683, 901-491-1787; tomalvabrent@gmail.com

TEXAS, North: (Longhorn) Art McLemore, 417 Pecan Dr., Aledo, TX 6008, 817-441-8897; artnbetty@icloud.com

TEXAS, South: (Lone Star) currently inactive *** (see note below)

UTAH/NEVADA/IDAHO: currently inactive *** (see note below)

VERMONT: (see Northeast)

VIRGINIA: (See Northeast)

WASHINGTON: (See Columbia River}

WISCONSIN: (See North Central)

WYOMING: (See Colorado/Wyoming)

Canadian Chapters

ALBERTA: Marc Stewart, Suite 303, #1 Springfield Ave., Red Deer, AB T4N 0C5, 403-396-3675; sturdywillow@hotmail.com

BRITISH COLUMBIA: Paul Evans, 26-2515 Fortress Drive, Port Coquitlam, BC V3C-6E8, 604-945-0588; hhuestis@mdi.ca

Website: www.shortwingsovercanada.com/http__shortwingsovercanada/chapters.com

***** If you would like to begin a chapter in one of these areas, contact Interim Chapter Coordinator Adolph Svec (see page1)**

Surprise birthday celebration honors Larry Jenkins

By Larry Jenkins

Hernando MS

H75larry@hotmail.com

I have had a birthday celebration like no other! It began on Thursday morning, with a surprise breakfast with my son, youngest brother, and his two sons who live in Florida. From then until Saturday night, I had all kind of things pulled on me and I fell for every one of them.

The big day was Saturday where we had a family catered BBQ lunch to celebrate my 80th birthday. After lunch, I was asked to go out to the hangar to show my nephew the Clipper engine. Then I was told I needed to go to my son's home for a snack.

Fell for that one too. When I come through the back door, the room was full of my aviator neighbors and a few other aviator friends. This is part of the event I am writing about.

For my 80th birthday, my son-in-law, Ken Appezzato, and my son, Douglas Jenkins, worked with the FAA to give me this award. Once inside, Ken narrated the presentation and showed this video, <https://youtu.be/Hd9Zn5ze5QQ> which I would like to share with the SWPC. I was then presented two DOT Wright Brothers Master Pilot Awards plaques and lapel pins for me and Jenny. All I could say after the presentation was, "let's go flying." I was blown away; as I had no idea what was going to happen when I walked into the room. I was honored and recognized beyond my wildest imagination.

The article below was requested by my son, Douglas Jenkins, so he could help Ken get the correct information to the FAA. Like I said, I fell for it again and told everything, but it is a good representation of my more than 50 years of flying.

I CAN FLY

The passion to fly has been a lifelong experience. Before I became a teenager, I would ride my bicycle to town and buy balsa model airplane kits at Mr. Harold's newsstand. The way I made them fly was to attach a string to one of the wing tips and sling them around my head. Later on, I graduated to gas powered wire "u" control model airplanes. I still have those engines. I never got into radio control model airplanes, as my adventures probably turned to fishing and hunting.

I tempered my dreams of ever learning to fly, because I did not feel it was

something I could do, mainly because of the cost. Around 1966, I had a day off from my Coast Guard duty and visited a general aviation airport on route 50 between Annapolis and Washington, DC. I talked with a man who was painting the elevator on his Air Coupe and he told me about the flying club at Ft. George G. Meade, Tipton Army Airfield.

I investigated membership in the flying club and joined. In Glen Burnie, I bought a book written by Jules Bergman entitled "Anyone Can Fly" and I read it intently. I now could see the possibility of me learning to fly and after expressing my desire with Jenny, I started my flying career. I flew several lessons with a minister and he taught me one thing that has always helped me in my flying.

Using the acronym PAT, power, attitude, and trim, that if you changed any one of the three, it would affect the other two, and it was a lesson well learned.

I changed instructors to Mr. Joe Plum, who really taught me how to fly and recommended me for my private check ride. My lessons were in a Piper Colt, N 5974 Z and that too hooked me on Short Wing Pipers. With completion of my training, I became a private pilot in the club's Cessna 150. Jenny and Douglas were my first passengers in the Piper Colt.

In 1967 my duty station was in Honolulu, Hawaii. I joined the Air Force's Wheeler Hickam Aero Club and I flew their Cessna 150 and 172. I took many sailors for rides around Oahu. Jenny and I flew a Cessna 150 from Oahu to Kauai and back. Quite an exciting aviation adventure, as it was 90 miles over the open ocean.

My next duty station was in Portsmouth, VA, and I resumed my flying at a fixed base operation, owned by Charlie Cathcart. I wanted to broaden my aviation license and I started perusing my commercial license. My instructor was Bob Edwards and he introduced me to "Stick and Rudder" by Wolfgang Langewiesche. This book related to me and helped me polish my aviation skills.

Renting airplanes became a drag and I wanted to own my own airplane and I purchased a Cessna 182 from Charlie Cathcart, on a hand shake! N 7204 E made an awesome family airplane. The airplane was lost in an airport accident and I purchased another Cessna 182 N 4790 D, from a Cherokee Indian in Oklahoma City. N 4790 D afforded many aviation adventures, but I sold it when aviation gasoline was rationed. Going on Charlie Carthcart's advice, I purchased a Piper Super Cruiser from an elderly gentleman that the locals called "ole Yank." He only had a student pilot license and I was the real pilot when I first flew the airplane.

The Super Cruiser, N 3215 M, was our airplane for 15 years. Too many stories to tell about all of those years of flying, but I will mention a few. The airplane was based at Bill Schmidt's airport in the Marley Park area of Baltimore.

I once took Wesley Harris to West Virginia to some property he owned and we landed in a cow pasture. Later I took Douglas and Lorinda to the same cow pasture. Eventually, I moved the airplane to Tipton Army Airfield where I was out of the mud airfield.

At my military retirement I flew the Super Cruiser to New Smyrna Beach.

The Florida aviation adventures, again are a lot of stories, but the most important deal with the Space Coast shuttle launches. At 2:30 am one night, I flew Douglas and Lorinda up to 5,000 feet to watch the first night launch of the shuttle. An indescribable experience, and I was later able to take Jenny to see an-

other night shuttle launch.

Looking for a new aviation adventure, I built an RV 6, N 61 LJ. I had to sell the Super Cruiser to buy the engine and propeller for the RV 6. Douglas and I flew the RV 6 to Oshkosh in 1995, another dream accomplished. Over the years I have taken 186 different people for rides in the RV 6, with the most significant passengers being my family. I have enjoyed 725 hours in the RV 6 and it now is 25 years old.

Aircraft I have flown in the left seat, other than the above, are a Cessna 310, Aero Commander, Super Ximango, Grobe 103 A, Aeronca Champ, Aeronca Sedan, RV 6 A, Cessna Cardinal, B-17, Aluminum Overcast, for about 10 minutes, right seat with Colonel Jim Hadnot in a Beech 18, Cessna 402, front seat in a Stearman, a Tiger Moth, Pitts S2B and the Pitts Eagle.

Special aviation people I have met in my life are Paul Poberezny, the founder of the Experimental Aviation Association, Bob Hoover, one of aviator's favorite pilots, Captain Mitsuo Fuchida, of the Japanese Air Force, who led the attack on Pearl Harbor.

My involvement in aviation has guided or created my family's lives. While being employed and completing my college education at Embry Riddle Aeronautical University, Jenny was employed by the university, Douglas and I completed and graduated together from the university, and Lorinda attended the university and met and married Kenneth Appezzato. Douglas is a flight dispatcher with FedEx and Kenneth is a captain with United Airlines.

I have now been a private pilot for more than 50 years, logging approximately 2,250 hours as pilot in command. It truly has been a special opportunity and

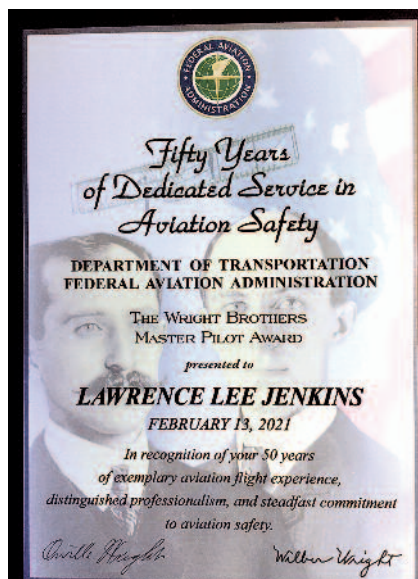


At the awards ceremony, there was a large banner congratulating Larry. Seated at the table with family and friends at the right, with her back to the camera, is Jenny, Larry's wife.

bleeding for me. I am pleased that aviation has been so good to me and my family.

(Editor's note: As I told Larry, the surprise couldn't have happened to a nicer person. Larry has been an important person in the Short Wing Piper Club, serving for many years as director of the Short Wing Piper Foundation. He also gave me a ride in his Clipper at one of our conventions, convincing me I needed to see the Poker Run from the air! Nice guy with a wealth of aviation memories.)

Larry's Wright Brothers Master Pilot award certificate.



Univair's Steve Dyer chosen as one of 2020's Sport Aviation Halls of Fame inductees

Jack Pelton, writing in EAA Sport Aviation, said the year's inductees were "another group of incredibly talented people, including some who have been previously recognized by other Halls of Fame."

Steve Dyer, an EAA Lifetime member as well as a member of the SWPC, was selected by EAA's Vintage Aircraft Association "in honor of his work keeping the classics flying through the support of his company, Univair."

Other inductees were Dan Johnson, Ultralights inductee; Frank Christensen, Homebuilding; Mark Clark, Warbirds of America, and Vern Jobst, IAC inductee. The five were to be honored by a banquet usually held at Oshkosh but postponed because of the Covid-19 situation until this spring.

(Editor's note: Thanks to Cliff Van Vleet for passing on a copy of Pelton's article from the magazine. Steve is a long-time member of the club, having joined in 1981 with membership number 648.)

More about Lonnie McLaughlin

By Eleanor Mills

You never know where an inquiring mind will take you. First I decided to reprint articles from the club's February Supplement for this issue. That led me to discovering that Jim Fix had died. Kent's article about Jim (reprinted elsewhere in this issue) led to researching the club's Honor Roll to find out when Jim and his wife Janice were inducted into the Hall of Honor.

That led me to discovering a couple of gaps in the website's listing of our honorees. That led to writing the report about the Hall of Honor (also printed elsewhere in this issue). That led me to a question about **Lonnie McLaughlin**, the only current (perhaps only living member) of the charter members of the Honor Roll.

Since I was enjoying the research I Googled Lonnie – lo and behold, up popped a lovely photo of Lonnie in his Civil Air Patrol uniform and a story about him as one of the members of the Senior Staff of the Leroy R. Grumman Cadet Squadron (NER-NY-153). And as you can see below, the second line of the bio lists his award as the New York Wing Public Affairs Officer of the Year in 1997. So not only does Lonnie look great in his uniform, he's also an awarded Public Affairs Officer. Reading the story, I discovered he had received a number of other awards from the CAP. Congratulations, Lonnie.

We know Lonnie not only as a charter member of the Honor Roll but also as the long-time secretary of the club and as the documenter and preparer of the SWPN indexes for many many years. Read on to discover more about him:

**Lt. Col. A. E. (Lonnie) McLaughlin, Jr., CAP
New York Wing Public Affairs Officer of the Year - 1997**

Lt. Col. McLaughlin joined CAP in August of 1994 and was appointed as Squadron PAO in 1995. He received his PAO Technician Rating in August of 1995, the Proficiency Rating in May of 1996 and PAO Senior Rating in March 1997. At the 1998 NY Wing Conference, he received the 1997 New York Wing Public Affairs officer of the Year award. He served as Supply Officer from 1995 until 1997 and as Aerospace Officer from 1995 until 1999.

He was appointed as Deputy Squadron Commander in 1997 and took over as Commander in 1998 and served until 2003.

After a 14 month hiatus, he returned as Deputy Commander and PAO in 2005. He was appointed Finance Officer in 2008. In May of 2011, he was appointed to the position of Recruiting and Retention Officer. At the end of 2011, he completed the requirements for the Master level of Finance Officer. He received the Garber Award at the LI Group Military Ball in January of 2012 at which time he was promoted to Lieutenant Colonel. He was named Commander's Choice for Senior Member of the Year and received the Grumman Hawk-eye Award in 2012. In 2014, he was again named Commander's Choice for Senior Member of the Year and presented with the Grumman Tomcat Award.

In 2016, he was appointed as Squadron Leadership & Mentoring Officer and in 2017, he was appointed as Logistics & Supply Officer. Several months later, he was appointed to the position of squadron Deputy Commander.

Lt. Col. McLaughlin served 4 years in the United States Army Security Agency as a Crypto Equipment repair instructor. He earned his Private Pilot's license in 1967 and bought a Piper Tri-Pacer in 1970, earning a Commercial and Instrument Ground Instructor License and an Instrument rating while accumulating more than 900 hours flying the Eastern half of the US. He was certified as CAP pilot in April, 1997.

Lt. Col. McLaughlin retired from IBM after a 36 year career as Customer Engineer and Customer Engineering Specialist. He has been married to his beloved wife, Lucille, for more than 60 years and has one daughter, Linda.

Lonnie McLaughlin in his CAP officer's uniform — looking dapper!



GHOST AIRPORT

Throughout the '30s, Floyd Bennett Field was a mecca for names like Roscoe Turner, Amelia Earhart, Wiley Post, Jackie Cochran, and even "Wrong Way" Corrigan. Records were set there.

When WWII began, the Navy turned it into a major base for operations like marshaling fighter and bomber squadrons and sending them out to their carriers. A young Ohio recruit was assigned to the tower



where he guided Wildcats, Hellcats, Corsairs, and Avengers into and out from the field. He stayed there for 20 years, retiring as a Master Chief Petty Officer, and he had a three-digit EAA number.

With his teenage son he set about restoring an old Taylorcraft BC-12D in their garage, but six years into the project he was diagnosed with Parkinson's and he couldn't work on it anymore. A few years later, the old Chief died of complications and a broken heart.

With re-fired dedication, his son finished the little Taylorcraft, and on the doors just below the windows he lovingly stenciled *Master Chief Petty Officer LeRoy Russell, Pilot in Command*.



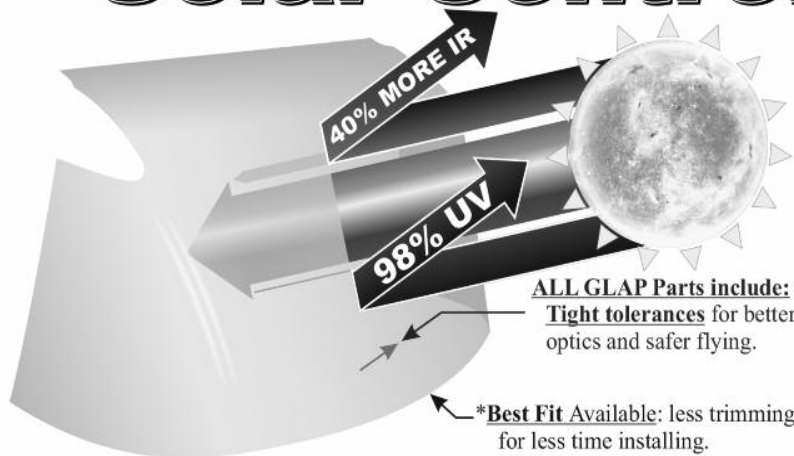
Floyd Bennett Field is abandoned now, but pilots still report hearing a voice from the tower, guiding them home.

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A love affair with Short Wings

By Eleanor Mills

Editor, Short Wing Piper News

(Editor's note: I wrote this article for submission to Sentimental Journey's program guide. I hope we have our convention, which will be at Sentimental Journey this year as they honor the Short Wings. If not, I'm sure you also applaud my love of the Short Wings!)

It's easy to find long-term ownership of Piper Short Wings. My late husband Bob and I owned our 1958 PA-22-160 for 30 years, flying everywhere, mostly to the Short Wing Piper Club's annual conventions, while our daughter, who was 6 when we bought the airplane she christened Tripey, grew up in the back seat, usually reading a book and punching me in the back occasionally to say, "How much FARTHER?"

Gene Keller, who is one of the organizers of this year's SWPC convention in conjunction with Sentimental Journey, owns and flies the 1951 Tri-Pacer, N809A, first owned by his parents, Mark and Eilene Keller, who were also long-time members of the SWPC and were part of the 1997 convention in Lancaster

Look for Gene's 809A parked near the Piper Museum with all the rest of the Short Wings this June!



PA, where Gene directed the 2017 convention.

Dennis and Barbara Beecher, Martinsburg PA, flew their Colt (see picture on next page) to the first Sentimental Journey and plan to be there again this summer. Dennis said he and Barbara bought the Colt in 1976, shortly after they married and have flown it everywhere ever since – to the Keys several times, up and down the East Coast. The Colt was a trainer at Dennis's home airport when he bought it as the Colt's second owner and Dennis said the sight of N55497 inspired many comments of "I flew that airplane" on their travels.

But beating everyone I know of is Fred Mayes who owns 1950 Pacer, N7478K. Fred and Bonnie live in Lebanon MO, where the PA-20 is now hangared. Fred's father, also named Fred, bought the Pacer in 1953, when it was 2-1/2 years old and had 145 hours on it. At the club's 2007 convention in Hutchinson KS, 78K took home two trophies and a certificate, being judged Best Pacer and Peoples Choice and also garnering honors for having been owned by one family for the longest time.

In 1955, the Fred Mayes (the father) family lived 12 miles north of Centralia MO on county highway C and owned two airplanes, the Pacer owned by the father and a J-3 Cub owned by his two sons, Fred and John. At that time, Fred was



N5549Z will be at Sentimental Journey this year as she was at the first Sentimental Journey. Dennis Beecher says the Colt's new wheel pants make her look just about as she did when she rolled off the line at Lock Haven!

20 and John, who had recently died when 78K was wowing the attendees at the 2007 convention, was 19. Both planes were used mostly for pleasure, the father said, but he planned to use the Pacer more and more for business, flying to cattle sales to buy Herefords for his 320 acre farm.

Since Fred and Bonnie have owned the Pacer, they have flown to conventions and to monthly meetings of the Mid-America Chapter of the SWPC, a group that Fred is now the president of. In addition to being active in the chapter, he is also active in the governing of the club itself, serving for many years as an at-large member of the board of directors and now the secretary of the club.

A 1955 newspaper clipping, probably, Fred thinks, from the Centralia newspaper, after highlighting the uses the Mayes family had for the Pacer, ends by quoting the father on the economy and the future of flying:

“The flying Mayeses will argue the thriftiness of owning a plane in these days. Last December he flew from San Marcos, Texas, in six hours and 10 minutes on \$15.50 worth of gas. Two cars driven by friends made the trip in 23 hours. One car, a Studebaker, used \$18 worth of gas, and the other, a Ford, consumed \$17 worth.

“The man admits the initial expense is a drawback but an airplane’s style doesn’t change as rapidly as a car. The time-saving factor sells flying to Mayes as a far better mode of transportation than a car. Since taking up flying, Mayes says he doesn’t feel safe when driving a car. He estimates that he has flown 52,000 miles in his Pacer, which cruises at 130 miles an hour (it had a 125 hp engine).” (Editor’s note: Bob often said flying was safer than driving – “After all,” he said, “there are no drunken pilots in the air.”)

Fred’s father predicted in the article that flying would become even more popular in Missouri and that in the coming age, more and more companies would add planes for business purposes.

The article closed with this statement: “Anyone who thinks Mayes is wrong on his theories will have a tough job in taking the negative side of the case for



Above is the Mayes' Family Pacer with her current owners, Fred and Bonnie Mayes. They were pictured at a Mid-America Chapter meeting in 2005 (which is why they are in black and white in your PDF). Below is the Pacer as she appeared on one of the SWPN covers, in a photo taken at the Hutchinson KS convention in 2007.



the future of family flying, whether it be business or pleasure.”

As Fred said when he sent the Short Wing Piper News the newspaper clipping, his dad was pretty prophetic.

And another long-time Short Wing owner, Ralph Widman of Lynchburg OH, who with his wife Jan owns and flies a Colt, had a good summation of the rea-

sons the Short Wing Pipers (Vagabonds PA-15 and PA-17; Clipper PA-16; Pacer PA-20, Tri-Pacer PA-22, Colt PA-22-108, and converted Tri-Pacer, PA-22/20) are popular and why their owners fall in love with them:

“Thinking about the future of our Short Wing planes, I see that our club is leaving information widely published so those who own after us don’t have to make all our mistakes.

“Our great Piper design offers three different horsepowers, can be ski or float equipped and they were manufactured by basic steel tubing and welding with the latest long life covering. You can have skylights, side stick, left and right sea-plane doors, fuel line routing mods, shoulder belts, disc brakes, North River brake boosters, wheel fairings, full IFR capable, extended range tanks, can haul 700-800 pounds. It has fuel for 4-5 hours and can cruise at 110 mph or so at 3,000 feet. It’s a great traveler for 2 or 3 people.

“One fellow said with the back seat removed, he hauled an IO-540 engine home with him (remember, you are responsible for calculating your own CG).

“Our planes were manufactured in the 40s-50s-60s – years when rules were simpler and people could use good sense to make a flyer that could become a nice kit built that was affordable.

“Insurance on the Colt is \$400, 2 seats. It may be \$900 on the Tri-Pacer. Our planes have few AD’s and have proven safe over a long time span. Hey, what’s not to like?”

I agree. What’s not to love?



Any chapter meeting will find members gathered around a Short Wing in the parking area. Above from left are Bob Mills, Fred Mayes, and Alan Arrow, with Bob and Alan admiring Fred’s Pacer at a Mid-America Chapter meeting in 2006. Showing their love!

Tri-Pacer honored by the VAA

By Eleanor Mills
eleanormills@att.net

Vintage Airplane, the magazine of the Vintage Aircraft Association devoted an entire issue (January-February 2021) to the Tri-Pacer. In addition to that, they are running an ad in this issue (see page 17) and gave us permission to reprint two articles from that issue.

The two articles are from Roger Peperell, giving the history of the Tri-Pacer, and from Clyde Smith, Jr., going step by step through the various areas of the Tri-Pacer's technical side.

Our thanks to Publisher Jack Pelton, graphic designer Cordell Walker, and VAA President Susan Dusenbury, and Jim Busha, vice president of publication, marketing and membership for all their work.

It's a great issue. (I have a copy and will send it to our club library.)

(Editor's Note: If you're not a member of the VAA and didn't manage to find a copy of the issue, the articles by Roger and Clyde begin on the next page.

The magazine has some illustrations for both articles that we don't have. However, if you need one I imagine that our club librarians, Terry and Claire Karlson, can copy them for you.

Read on)



VAA Kicks Off 22s in '21 Celebration

The Vintage Aircraft Association is celebrating the iconic Piper PA-22 aircraft in 2021, starting with a special commemorative issue of Vintage Airplane magazine. The January/February 2021 edition is completely dedicated to the short wing Piper and is sure to be a collector's item for fans of the Tri-Pacer, Canabon, and Colt. Log in to your Vintage Member's Only account [here](#) to read the magazine online.

Join us at EAA AirVenture Oshkosh 2021 for educational forums on the history of the PA-22 aircraft as well as other events. Our VAA Red Barn store will feature specially designed PA-22 clothing along with other items. Watch for more information in the upcoming month!

Need technical information?

The Panel of Technical Advisors (see page 2) is available to answer members' questions. The club store (see pages 44-45) has the Tips and Techniques manuals and several technical CD's. The club website has the most complete Short Wing technical information available in the Maintenance Data Depot (See Members Only section) and the technical forum allows you to ask and answer questions. The club's Facebook page is also a source of information.

PA-22 Tri-Pacer

By Roger Peperell

Reprinted from *Vintage Airplane*

January/February issue 2021

PA-20:

The PA-20 was originally to have been known as the 1950 model Clipper. Piper updated a 1949 model PA-16 (which was originally designed with the PA-15 Vagabond during the winter of 1947-48) with a redesigned tail and cabin interior, control wheels in place of sticks, flaps and moved all the fuel into two wing tanks. The Piper engineering manager Clyde Smith and the assistant chief engineer JW (Bill) McNary led the redesign.

Even though Walter Jamouneau was Chief Engineer, he was also Company Secretary and spent most of his time in this capacity, leaving engineering in the hands of Bill McNary. The prototype was 20-01 N7000K, completed and first flew on July 13, 1949. Power was supplied by a 115 hp Lycoming O-235-C1 engine. A second aircraft 20-1/N7100K first flew on October 4, 1949 with a 125 hp Lycoming O-290-D engine.

Several parts and ideas from the Stinson purchase were used in the Pacer. Due to an impending law-suit by Pan American Airways regarding the use of the name 'Clipper', Piper decided on a new name for the PA-20 and registered the name 'Pacer' with the Manufacturers Aircraft Association.

The Approved Type Certificate 1A4 for the PA-20 was granted on December 21st and production with the 125 hp Lycoming engine began at Lock Haven at the end of the year, the first production aircraft being 20-3/N6901K which was completed on January 6th. August Esenwein, Piper's General Manager, announced the Pacer at the Miami All American Air Manoeuvres on January 13, 1950. The PA-20 was available as a Pacer 125 with a wooden or metal Sensenich fixed pitch propeller priced at \$3,795 or as a Pacer 135 with a Koppers Aeromatic F200 or Sensenich Skyblade controllable pitch metal propeller.

During 1950 the 115 hp Lycoming O-235-C1 engine was made available in addition to the 125 hp version. Production of the PA-20 Pacer 115, on which flaps were not fitted, commenced with 20-109/N7004K completed on March 14th. Production of the 115 model was terminated after six months in September after 23 had been made.

PA-22:

The idea of a nose wheel came from the Ercoupe. It is interesting to note that Sanders Aviation (who owned the Ercoupe design) suggested that Piper consider acquiring the Ercoupe business; Piper declined. Piper took the PA-20 Pacer and moved the main undercarriage legs rearwards and fitted a nose-wheel, which was the same size as the main wheels.

The PA-22 was the first Piper aircraft to have the rudder / aileron interconnect system fitted. The bottom cowl was modified with the addition of an air intake. Clyde Smith and JW (Bill) McNary led the design effort. The first PA-22 Tri-Pacer was 22-1/N7700K, completed on July 27, 1950, and fitted with a 125 hp Lycoming O-290-D engine. It first flew with test pilot Jay Myers on the following day. Some 4,000 landings and 3,000 miles of taxiing were carried out with

the prototype, some on rough ground at the Lock Haven airport. Test pilots were taxiing at 70 mph to ensure there was no weakness in the new landing gear. It was followed by a second test aircraft 22-2/N7777K completed on November 15th. Piper announced the Tri-Pacer on December 1st. The Approved Type Certificate 1A6 was granted on December 20, 1950.

Production got underway with the 125 hp engine in December 1950 (1951 model) commencing with 22-3/N600A completed on the 30th. The standard colour was Polar Gray with Tennessee Red stripe, but other optional colours were available at extra cost. The Tri-Pacer, like all other Piper models for 1951, was covered with a new Duraclad finish, non-flammable butyrate plastic which was longer-lasting and had a highly polished enamel-like surface.

The PA-22 was built alongside the PA-20 Pacer. Like the Pacer, the PA-22 was available as the Tri-Pacer 125 with a Sensenich wood or metal fixed pitch propeller or as the Tri-Pacer 135 with a metal Koppers Aeromatic F-200 or Sensenich Skyblade controllable pitch propeller. The Standard model was priced at \$5,355 for the 125 and \$5,840 for the 135. The Custom model (with extra equipment) cost \$5,987 for the 125 and \$6,327 for the 135. The name painted on the nose of the aircraft was Pacer; it was not until the 1953 model that the name Tri-Pacer was on the nose. The Tri-Pacer was an instant success with 350 sold in its first year of production.

The first production aircraft N600A was used by WT Piper Senior as his personal aircraft for many years. It was later donated to the Mid Atlantic Air Museum at Reading, Pennsylvania. The prototype aircraft N7700K was sold in Canada during 1955.

For the 1952 model year, a bubble windshield was fitted, improved cabin air-flow and sound-proofing were installed and increased heater capacity became available. The experimental model was 22-333/N999A, converted during September and October 1951. Depending upon the levels of equipment, it was available as Standard, Custom or Super Custom. The Standard list price was \$5,595. Production started with 22-354/N1433A completed on November 21, 1951.

The first production PA-22-135 with the 135 hp Lycoming O-290-D2 engine was 22-534/N1962A and was completed on June 6, 1952. Approval for this version was received on May 5th. It is likely that N7700K was the experimental aircraft, fitted with the 135 hp engine in early 1952.

For the 1953 model year the fuselage was widened at the rear and the baggage compartment was increased from six cubic feet to over 14 with a new outside door for convenient loading. It had two-tone interior styling and a two-tone paint scheme. The experimental model was 22-714/N2333A converted on August 1, 1952. Type Inspection Approval work was carried out with this aircraft in early September. Approval was received on September 23, 1952. Production started with 22-807/N2470A completed on 30th October 1952. A 'cat-whisker' antenna for the VOR omni-directional radio was standard on the Super Custom model.

For the 1954 model year, improved sound proofing including new windows, foam rubber seats and a new cabin air system with a new bottom engine cowl were fitted. There were two experimental aircraft, 22-1285/N8539C completed on June 8th and 22-1672/N3382A completed on August 8, 1953. Production for 1954 commenced with s/n 22-1760//N3488A completed on November 6, 1953. Aircraft N8539C was tested on skis by the Federal Aircraft Works at Minneapolis, Min-

nesota during 1954.

The huge sales figures of Piper's nose-gear Tri-Pacer helped convince the conservative Cessna President, Dwane L Wallace that tricycle-gear aircraft sell. He had watched the sales of his tail-wheel all-metal model 170 dwindle in the face of competition from the Tri-Pacer, so equipped it with a nose wheel in 1955 and re-introduced the model as the very successful model 172 in late 1956.

Production of the PA-20 Pacer continued alongside the Tri-Pacer at Lock Haven until it was phased out during the summer of 1954, ending with 20-1121/N1605P completed on September 9th. A total of 1,121 tail-wheel Pacers had been manufactured.

Higher power was again introduced for the 1955 model year when production of the PA-22-150 commenced with the 150 hp Lycoming O-320-A2B engine. There were three experimental aircraft, N600A fitted with a 150 hp engine in late 1953 and 22-2000/N3767A completed with a 150 hp engine on December 21, 1953. The third aircraft, 22-2378/N1555P which was completed on August 12, 1954, was the definitive version with an extra wing rib in support of the higher power. Approval for this version was granted on September 3rd. The first production aircraft 22-2425/N1611P was delivered in November. Also for 1955, an 8 gallon fuel tank under the seat was available as an option, taking total fuel to 44 gallons. This was approved on November 12, 1954. It had a maximum speed of 139 mph.

The experimental aircraft for the 1956 model year was 22-3218/N3500P completed on July 15, 1955. It had a new rear window and door seal, new door latches, new instrument panel, hydorasoft landing gear and the rudder pedals were moved forward. Production started with s/n 22-3387 completed on October 28, 1955, exported to South Africa on 15th November.

For the 1957 model, the baggage space was increased to 18 cubic feet. The experimental aircraft was 22-4143/N6844B converted on July 16, 1956. Production started with s/n 22-4460 completed on October 2, 1956 and was exported to South Africa on the 22nd. The PA-22 was approved in the Utility category on May 24, 1957.

The 1958 model saw the introduction of the 160 hp Lycoming O-320-B powered PA-22-160. The experimental aircraft were N6844B and 22-5139/N7353D both converted in the summer of 1957. Approval for this version was granted on 27th August. In addition to a new engine and paint design, it had a new interior. The first production aircraft was 22-5603/N8113D completed on October 3rd. The 160 hp Tri-Pacer was available with one of three levels of equipment, Standard, Custom or Super Custom. A small number of PA-22-150 aircraft continued to be built alongside the 160 hp variant.

For the 1959 model, Piper AutoControl was offered as factory installed standard on the new AutoFlite model Tri-Pacer. AutoControl was a transistorized gyro-controlled stabilizing device, which controlled climb/descend and turns. The Piper 'show' model was 22-6216/N9163D. After the start of the model year, the 150 hp Tri-Pacer was phased out and replaced by a cheaper version: this new variant was still designated the PA-22-150 but was given a new name, the Caribbean. The experimental aircraft was a renamed Tri-Pacer 22-6444/N9528D and first flew on October 20th. The Caribbean was specifically created by Piper for the airport operator, offering them a 130 mph, four-place aircraft at a low cost. The first production aircraft was 22-6511/N9602D completed on November 22nd, priced at

\$8,395. A Deluxe version with full radio / navigation instrumentation for cross-country flying was available for \$9,350.

The 1960 Tri-Pacer and Caribbean models received new exterior paint designs and optional streamlined speed fairings were available which increased cruising speed. The Piper 'show' models were Tri-Pacer 22-6858/N2868Z and Caribbean 22-6785/N2869Z. The price of the standard models was \$9,340 and \$8,795 respectively. With the 1960 model Tri-Pacer Piper launched its 'Learn to Fly it, Free' program which entitled the purchaser to free flying tuition.

As with most earlier models the PA-22 was available on floats. The Approved Type Certificate for the PA-22S-135 was granted on May 14, 1952, for the PA-22S-150 on September 3, 1954 and for the PA-22S-160 on October 25, 1957. The 150 hp experimental seaplane was N3767A tested by Piper on the Susquehanna River during the summer of 1954. The Seaplane version was restricted to three persons.

On August 1, 1960 Piper decided to stop production of the Tri-Pacer and Caribbean completely when it introduced its new four seat PA-28 Cherokee at its Vero Beach facility. The last production aircraft was 22-7630/N10F completed on August 26, 1960 (except for a special order in 1963). During January and February 1963 a batch of twelve PA-22-160 aircraft were produced on a special order from the French Army (ALAT), to supplement the Tri-Pacers bought in 1957. Over the years the PA-22 was lovingly known as the 'flying milk stool.'

By 1960 Piper felt that it required a small two-place trainer aircraft in its line-up, looking at two non-Piper designs before deciding to develop its own aircraft.

Stits Aircraft of Riverside, California offered its SA-9D Sky Coupe design to Piper for commercial production in 1960. The SA-7B and D Sky Coupe, a 2-place side-by-side monoplane developed in the late 1950s, were only available as a plans-homebuilt aircraft, but Stits was developing the SA-9 Sky Coupe for commercial production. The SA-9 was an improved version of the SA-7 with a 100 hp Lycoming O-235 or Continental O-200-A engine, longer span wings and a higher gross weight. Piper declined the Stits offering. Piper also looked at buying the Forney F-1 Aircoupe and the Forney manufacturing plant at Fort Collins, Colorado, in 1960. Howard Piper visited the plant on August 3rd. The F-1 Aircoupe originally flew as the Erco 310 in 1937. It was a 2-seat low wing aircraft with a twin fin tail and a 90 hp Continental C90-12F engine. In 1955 Forney Aircraft Manufacturing Company purchased the design from Vest Aircraft (who had previously purchased it from Sanders Aviation) and modified the Erco 415G, creating the F-1. Unfortunately, Forney experienced financial trouble. Piper turned down the aircraft and the plant in favour of their own design. Howard Piper thought that the aircraft needed too much modernization. Piper decided to proceed with its own 2-place design.

Colt:

Instead of dismantling the PA-22 jigs and tooling, Piper used them to develop a two-place Tri-Pacer. As it was designed to be used for training purposes, a smaller and therefore cheaper engine of 90 or 100 hp could be fitted. Piper engineers took the PA-22-150 and removed the rear seats, baggage door, left rear door, rear windows, interconnected controls and flaps from the wings. The right wing was revised to eliminate the right fuel tank on the Standard model, although it was available as optional equipment. The gross weight was reduced to 1650 pounds with a bag-

gage capacity of 100 pounds behind the front seat.

In August 1960 the PA-22-90 was under development. By the time the first aircraft was completed Piper had decided on the 108 hp Lycoming O-235-C1B engine. The prototype was PA-22-108 22-8000/N4500Z completed on August 30th and first flew on the 31st. Several names were discussed by Piper marketing including Tri-Pacer 100, Pony and Colt. The Colt type approval was obtained on 21st October followed by the production certificate on October 29th. The first customer delivery, 22-8003/N4503Z was on 7th November.

Piper introduced the Colt, the first 'compact of the air,' to Piper's world-wide sales organization at the 21st annual International Distributors meeting held at West End, Grand Bahama Island, on November 1, 1960. Max Conrad and his wife flew from Winona, Minnesota, to Grand Bahama in the new Piper Colt. It was a low-priced sports and training aircraft priced at \$4,995. Mr. Piper said "we are very pleased to be able to offer once again a low-priced aircraft and confidently believe the Colt will meet very wide acceptance." In addition to the Standard model two other models were offered, Custom (VFR cross-country) priced at \$5,995 and Super Custom (additional instruments) priced at \$6,995. The main purpose for introducing the Colt was to create activity at the Dealer level and to strengthen the sales organization.

The Colt was the basis for a marketing concept of providing the airport operator with a new low-cost aircraft with which to increase the volume of students financially able to purchase aircraft. These students soon became active aircraft owner prospects. Historically, the aircraft purchaser progresses from low cost model up through a line of aircraft until the performance and price level are found that is best suited to their requirements. The Colt was to support development of the marketplace for the Cherokee, Comanche and the twin engine models. Piper had planned to produce 420 Colts in the first year of production, but the demand was so great that, by March 1961, production was increased to eight a day with a total of 1,036 aircraft manufactured in the first year.

For the 1962 model year there was a new paint scheme. Aircraft 22-8722/N5088Z was the 'show' aircraft.

The Colt was certified on Pee-Kay model 1800 metal floats in March 1963. Tests and approval were carried out by Pee-Kay Aircraft Products, International Falls, Minnesota, with aircraft 22-8839/N5175Z.

The Colt continued in production until March 1964 (the last s/n was 22-9848/N5974Z completed on March 26th, but the last off the production line was 22-9847/N5973Z on March 30th) when Piper introduced the two seat Cherokee 140 at Vero Beach. A total 9,490 PA-22 aircraft had been built.

Roger Peperell/June 2020

(Editor's Note: Roger Peperell is the Piper Company Historian and has published several books. One, **The Development and History of Piper Designs**, is listed on eBay as signed by author for \$175.99. A used copy [also hardcover but evidently not signed] is on Amazon for \$119.94. He is also the author of **Piper Aircraft**, and **Piper Aircraft and Their Forerunners**.

Just checked eBay and the signed book evidently is not listed but the same book [noted that it is rare] is for \$155.14. with a shipping estimate from the UK of \$51.03).

Restoration and Maintenance of a Piper PA-22

By Clyde Smith, Jr.
Reprinted from *Vintage Airplane*
January/February 2021 issue

I have been asked if I would be interested in doing an article on the maintenance and restoration of the Piper model PA-22 Tri Pacer. Piper historian Roger Peperell is doing an article on the actual history of that airplane.

Although I was only 2 ½ years old when the first Tri Pacer was built in late July of 1950, my mother once told me that my first airplane ride was in a Tri Pacer. I don't know how old I was at the time and unfortunately I don't remember the first flight.

My father, Clyde Smith Sr, as head of engineering flight test and Bill McNary as assistant chief engineer, headed up the design team along with the crew in the experimental shop. When I attended aviation events accompanied by my father I used to enjoy listening as he shared some of his experiences with interested persons. Some of the information I learned that pertained to the Tri Pacer is here fold.

While doing the max gross, full power, aft CG climb tests the rudder would no longer self center when applied, and that is when the rudder aileron interconnect system was implemented to satisfy the CAR 3 requirements.

Another story was when they were testing the new nose wheel mount and running a wingless test aircraft, loaded to full gross, back and forth on the grass field and runway at speeds up to 70 miles per hour and moving the rudder control, which steered the nosewheel, at full deflection side to side, trying to make something fail and see where the weak points were. There were many more but not worth sharing here.

The Tri Pacer shared a unique market title with hardly any competition its first 6 years of production. It was the most practical, most popular and most affordable, and had the best value of any tri-cycled four place general aviation aircraft of that time. In late 1956 Cessna jumped into the market with its very popular 172 model, but the Tri Pacer was still faster and could carry more load, especially since the new Lycoming O-320 150 engine was added on the 1955 model and the gross was increased to 2000 pounds.

WING SECTION

Okay, now let's start with the program, and we'll begin with the wing section. The Tri Pacer wings were nearly the same as the Pacer at the beginning, with flaps and an 18 gallon aluminum tank in each wing. The wing spars were made of the same material, 6061-T6 alloy, that the post war Cubs were made from except Piper added aluminum stiffeners near the wing strut attach brackets on the front and rear spars.

The wing ribs were made of Nicral or 6061-T6 aluminum alloys, using the USA 35B modified airfoil section, just as all the postwar fabric Piper models

used, with the exception that the bottom capstrip had an added section, making an “I” beam out of an upside down “T” section. This began with the PA-16 Clipper in 1948, the first 4 place Short Wing model, when full gross maximum dive speed tests found a weak point in the bottom capstrip just aft of the main spar.

The rest of the wing panels are pretty basic and follow after the design of the post war Cub wing. In the early 1950s Piper changed the leading edge skins from a thin soft alloy to the alclad 2024-T3 alloy of .020” in thickness which was much stronger and carried through to the last Super Cubs built into the early 90s. The wing tips ends carry the trademark curve using white ash wood bows that act like a car bumper and fail at the point of impact of a foreign object and don’t spread damage over much more area.

The remaining internal wing structure is made up of aluminum and steel parts, keeping things lightweight but strong where needed. The brace wires inside each wing had been steel and were then changed to stainless steel later on.

The early Tri Pacer wing panels had 12 ribs up until 1955 when the 150 hp Lycoming was installed and the gross weight increased to 2000 lbs and a 13th rib was installed inboard of the strut attach fittings, but most of the other ribs were bunched up closer to carry the increased load easier.

As for the maintenance and restoration of the wing panels I look forward to replacing all the components that form the perimeter of each wing. This includes the butt rib, leading edge skins, wing tip bow, and false spar sections. It may be possible that some of those components might be able to be reused, but that would be up to the inspector that is going to sign off the major work. The definites would be the butt rib which I always replace with a new Univair part which I like because of the extra strength in its construction and the fact the cap is actually a flange with holes already located every 3 inches. I install Rivnuts in every other hole for attachment of the wing root fairings.

The other “must replace” item is the wood bow. Even though Piper added additional bracing at the wing tip, the wood loses its nice curved shape at about 15 to 20 years and sooner if water creeps in around the wingtip light fixtures. Some people use steel tubing for the tip bow but that causes more widespread damage to the outer wing components in that the wood one breaks easier, preventing the spread of damage.

Rust and dissimilar metal corrosion can be found on poorly treated components even from original manufacturing time. Extra unused holes in the spar cap flanges from previous maintenance are a no- no and can lead to fatigue cracks in these higher stressed areas, especially near the fuel tank bay and wing strut attachment brackets. Cracked ribs at the rear spar attachment areas are common due to the flaps being deployed or used at higher than approved airspeeds, caused by uplifting of the flap attachment brackets.

The aileron and flap hinge brackets are mild steel “U” type channels open to the top with an aluminum block riveted into the rear of each channel with a hole

that accepts the hinge pin for the mating flap and aileron hinge. The front of each bracket is bolted to the rear spar and about two thirds of the way back the bracket is attached to the false spar with a separate smaller steel bracket. This rear bracket is steel and is attached to the false spar with aluminum rivets. Even though the attachment bracket is primed, the false spar is bare aluminum and this is a point where dissimilar metal corrosion occurs.

If the hinge pin holes wear out as time passes, the aluminum block may be replaced and more recently Univair now has a bushing kit to repair any worn holes without removing the blocks. The flap hinges wear more frequently because of being in the slipstream and also because of the loads exerted on them.

MAINTENANCE AND RESTORATION: If the aircraft has never been totally restored but only recovered or repaired, as far as the wing panels are concerned, I recommend that all components making up the perimeter of the wing be replaced. That consists of the butt rib, leading edges' skins, wing tip bow, false spar sections, and trailing edge sections. Of course this would be up to the IA mechanic that is going to sign off the work. It is very probable that some of these items may be in such a good condition yet that they may be left alone, and then again some items that are internal components of the wing panel may need repaired or replaced, for instance the flap and aileron hinge brackets, or a rib, or any small part.

PARTS AND SERVICES: Univair Aircraft Corp, Dakota Cub Aircraft, Aircraft Spruce, Cub Restoration Services.

PERTINANT AD NOTES:

AD15-08-04 Pertains to installation of sealed wing lift struts on all airplanes.

FUSELAGE SECTION

There were three basic versions of the fuselage frame. These were built in the old PA-16 Clipper jigs, modified as necessary as upgrades were designed. The frame used a "Warren Truss" type structure just as the other fabric Piper models but with a top longeron design, unlike all the other models that had the upper longeron located midway on the rear fuselage. This eliminated the complex superstructure known as the turtle deck, common on all the Cubs, and made for a much stronger fuselage longitudinally.

Most of the superstructure as far as exterior shape was used in the forward third of the frame around the cabin area. The upper cabin, or birdcage area, still used the thin lightweight 3/8" channels like all the other fabric models and some was used on the underside of the cabin area. A considerable amount of superstructure, made from thin mild steel sheet stock, formed into channels and angles, was used to frame in the cabin door and window areas. The basic frame utilized a combination of 1025 mild steel and 4130 chromoly steel tubing.

The Pacer and Tri Pacer utilized the same jigs except for a few minor differences. The first frame version was very similar to the old Clipper frame with a

narrow rear seat and an enclosed baggage area behind the rear seat, but with the steering wheel control yoke assembly taken from the Stinson design. This frame was used up to serial number 22-806 in 1952.

The second frame version was used for the 1953 up to 1955 models and had a slightly wider rear seat with a larger baggage area and an external baggage door allowing easier access to the baggage compartment. An upper level or hat shelf was also added for baggage capability. During this time the front seat was changed from a bench type seat to individually adjustable front seats. The Pacer was still in production yet and shared these changes.

The third frame version came out in 1955 with serial number 22-3218. In July 1954 the PA-20 was discontinued and the Tri Pacer frame was modified one last time from serial 22-3218 for the 1955 models continuing to the end of production in 1960. These changes included a new rear window shape, a new instrument panel design installed 1 ½" farther forward and the rudder pedals moved 1 ½" farther forward, due to the fact that clearance for toe brake master cylinders was no longer needed as the PA-20 Pacer was now out of production, and had shared the frame with the PA-22, and additionally a wider rear seat area and more headroom was offered. By now the Lycoming O-320 engine was now the main power plant and the gross weight had been increased to 2000 lbs.

MAINTENANCE AND RESTORATION: The most prominent problem I have seen with this frame assembly is typical of any aging steel tube and fabric covered aircraft. This problem is rust and corrosion of the metal parts caused by moisture getting into areas that it shouldn't be.

The first one of concern led to an AD note being published in 1974. This pertained to fabric attachment across the forward upper cabin ceiling where the top of the windshield is attached. Moisture would get trapped in that area causing rust on the steel and deterioration of the exterior fabric, leading to separation of the fabric and causing an airflow disturbance over the tail surfaces and possible loss of control. Piper came out with a kit consisting of a preformed aluminum fairing which was attached to the windshield channel and would prevent the fabric from tearing loose.

The second area of concern never became an AD note but was very well addressed by Piper Service Bulletin 819. This dealt with a practice that Piper and many other small aircraft manufacturers had by welding superstructure members such as channels and angles onto major structural members in a way that protective coatings could never reach the bare metal surfaces of the structural members, allowing deterioration to occur in nearly undetectable areas. Piper had problems on most of the Short Wing models dealing with this subject. Otherwise no other problems are noted due to structural design.

This airplane has a tricycle undercarriage, so sits level on the ground. Water can enter the tail at the forward stabilizer inspection plate, and because of the ground stance, the water will run forward and lay inside the fabric at the general low point under the cabin floor. There are many very important structural members there that help support the wings and landing gear, so proper drainage prac-

tics must be employed when the fuselage is recovered. The same goes for a Tri Pacer on floats.

PARTS AND SERVICES: Univair Aircraft Corp, Wicks, Aircraft Spruce, Cub Restoration Services

PERTINANT AD NOTES:

AD 74-17-04 pertains to aircraft covered with cotton or linen, to prevent fabric failure, caused by deterioration at upper windshield attachment channel by installing a preformed fairing strip to the windshield channel to prevent the fabric from tearing loose.

CABIN SECTION

Not too much going on here. The cabin area of the Tri Pacer went through yearly changes pertaining to upholstery variations. Probably the most notable changes were the addition of the outside baggage door, enlarging the baggage area, and adding the hat shelf area above the main baggage compartment. This happened in 1953. The change to the front seat from a bench to individual adjustable was a big improvement in 1954. The last big change was a new instrument panel design for 1955 with a “hump” added to the pilot side to make room for the addition of the large AN gyro horizon and directional gyro instruments. The rear cabin windows changed from the “D” shape to a multi -edge shape in 1956.

MAINTENANCE AND RESTORATION: During a restoration, the original doped fabric interior is sometimes changed to a nicely upholstered and sound-proofed living area making flight time more enjoyable and comfortable. Cabin lighting can be upgraded with LED lights for the owner who does more night flying.

PARTS AND SERVICES: Univair Aircraft Corp., Airtex Products inc., Oregon Aero, Aircraft Spruce, Cub Restoration Specialties, LP Aero Plastics, Great Lakes Aero Plastics, CEE Bailey Aero Plastics

PERTINANT AD NOTES:

AD 57-22-01 pertains to removal of insulation from under the cabin floor, on all aircraft, that could lead to a fire hazard, and installation of a kit consisting of metal seal strips around the firewall flange to prevent oil contamination, from engine compartment, getting back behind firewall.

FLIGHT CONTROL GROUP

The flight controls consist of the ailerons and flaps which are constructed totally with an aluminum frame and steel hinge brackets, and covered with fabric. The surfaces at the tail, being the rudder, horizontal stabilizers and elevators, are constructed totally of steel tube and channel and covered with fabric. The rudder is operated by a dual side by side set of rudder pedals. The elevators are horn balanced on the Pacer and Tri Pacer, which was the first of the civilian

Piper fleet to use this design. The aileron and elevator controls are operated by a set of slightly modified steering wheels and yoke assembly that was originally designed for the Stinson 108 series aircraft which Piper inherited when they bought the assets of the Stinson Corporation from Consolidated Vultee in 1949. At the front of each yoke was a 3 1/2" diameter drive pulley with the aileron cable wrapped around before it continued on to operate the complete system. This is common in all the Pacers but only used in the 1951 Tri Pacers up to s/n 22-353.

For the 1952 models and on, Piper reverted to a chain control using small 12 tooth sprockets on each control yoke that were about one half the diameter of the cable pulley. About midway down the control column the chain connected back to the existing control cable system. This actually "geared down" the control wheel effectiveness so that the wheel had to be rotated farther to do the same amount of aileron travel. The only reason I can think this was done was to make it easier to override the bungee interconnect system if necessary, as would be done in a cross controlled slip during landing.

All the 4 seat Short Wing Piper models were equipped with a double bungee system on the elevator control starting with the Clipper in 1949 and continuing with the Pacer and Tri Pacer. Some people referred to this as an elevator neutralizing system. It consisted of two springs, one connected to the upper elevator horn and one connected to the lower elevator horn. Both of the springs were attached to the yoke on the trim jackscrew. This type of trim is referred to as a variable dissymmetry system and moves the leading edge of the horizontal stabilizer up and down to achieve longitudinal trim.

The bungees springs key off the position of the trim yoke and prevent oscillation or porposing no matter what position the trim is in. An added advantage is the fact that the springs give some feel to the elevator system with the horn balanced type elevator surfaces.

Another unique design feature was the implementation of a rudder aileron interconnect system. This consisted of two bridle cables connected from the aileron controls indirectly to the rudder control cables through two more bungee springs. When the airplane was new and the system rigged properly, you could drive the airplane around on the ground like a car, and even make coordinated turns in the air with feet flat on the floor. This system wasn't installed for this but to satisfy a CAR 3 flight requirement that showed up during the initial flight test program when doing full power, max gross and full aft C.G. climb tests.

It was possible to legally disconnect the interconnect system, on later model Tri Pacers, while exercising utility category flight parameters.

The stabilizer trim system was controlled by a handle on the ceiling with a direct endless cable running back to the "slave" pulley, jackscrew and yoke that was used on the long wing Piper models, but turned upside down in its new configuration.

Rudder and elevator travel stops are fixed and not adjustable. The aileron trav-

els stops are also fixed but the ailerons can be adjusted to neutral as are the flaps. The rudder pedals control the nose gear steering by two link rods and the steering travels are fixed on the nose strut.

MAINTENANCE AND RESTORATION: Standard routine procedures should be followed at each annual inspection consisting of a fabric condition test, proper operation of the control system, and lubrication of all moving parts. The tail surfaces all have "Oilite" bronze bushings that are readily available and can be easily replaced if worn. The jackscrew and yoke can become worn and those components can be replaced fairly easily. Lubrication of the jackscrew should be done with a dry lubricant or Teflon based material as petroleum based lubricants attract abrasive contamination such as dust and sand and in cold weather turn into tar and make the operation of the system very difficult.

All parts are readily available from used serviceable donors or in new manufactured condition. As with all built up steel assemblies, moisture can be a very prominent enemy. The flaps and ailerons have their problem areas also and that being dissimilar metal corrosion where the steel hinge brackets are riveted to the aluminum spars. The spars were unpainted and the primer used on the steel parts broke down in time and a thorough inspection should be performed on these parts every annual and during a rebuild. Most new replacement parts now use cad plating to prevent this problem.

The ailerons and flaps are held to the wing with steel channels incorporating replaceable aluminum hinge blocks and Univair has a kit available that allows small thin steel bushings to be inserted in a worn hinge block.

PARTS AND SERVICES: Univair Aircraft Corp., Dakota Cub Aircraft, Wicks, Aircraft Spruce.

PERTINANT AD NOTES:

AD 60-01-07 Pertains to inspection of streamlined tail brace wires for nicks and any other noticeable damage, and installation of round style which eliminates the AD note.

FUEL SYSTEM GROUP

The fuel system consists of one 18 gallon aluminum tank in each wing. In 1952 Piper added an optional auxiliary 9 gallon tank under the rear seat. The fuel from the wing tanks was gravity fed and routed down to a selector valve on the left forward sidewall. The routing of fuel from the right wing tank led to an AD note consisting of a placard placed on the face of the right tank gauge stating no takeoff on right tank with less than 1/3 full. The problem was the path the fuel had to flow from the tank in a climb angle and with less than 6 gallons remaining. The fuel left the rear outlet of the right tank went down under the floor aft of the right seat, through a fuel filter, and then back up the sidewall forward of the door and across the bottom of the instrument panel and back down again to the fuel selector valve. With no fuel pump or "ram vent" on the cap there was insufficient supply to the engine due to loss of head pressure in a full

power climb. With the optional auxiliary tank fuel was pumped up into the right tank with an electric pump and fuel valve located under the right seat. A gasco-lator assembly was located in the left forward side of the firewall and then routed to the carburetor through a rubber hose.

MAINTENANCE AND RESTORATION: During a restoration period the fuel system should be checked for any leaks and areas where there might be contact leading to chafing or damage to the fuel lines. There are several improved versions of the fuel selector valve and it may be a very good time to replace the original valve with a new ball type valve, eliminating an AD note and allowing for much easier movement of the valve. If larger engines are installed it may be necessary to increase the diameter of the fuel lines. Larger fuel tanks are also available, from a couple vendors, for those who need more range.

PARTS AND SERVICES: Univair Aircraft Corp., Dakota Cub Aircraft, Aircraft Spruce, Keystone Instruments, Airparts of Lock Haven, Atlee Dodge Aircraft.

PERTINANT AD NOTES:

AD 53-24-04 Pertains to rerouting of fuel primer lines away from rear of ex-haust muffler on aircraft up to s/n 22-1689.

AD 55-22-03 Pertains to installation of new type fuel cap with improved vent system and improved gasket, up to s/n 22-348.

AD 59-10-08 Pertains to the reworking of fuel tank caps for improved venting.

AD 60-10-08 Pertains to the identification of all four fuel selector valve position detents and handle alignment on all aircraft.

AD 67-24-02 Pertains to installation of placard on right fuel gauge stating no takeoff with less than 1/3 quantity.

AD 72-21-03 Pertains to identification of proper fuel line routed from gasco-lator to carburetor.

AD 78-10-03 Pertains to modification of fuel cap and inspection of filler neck rubber seal.

AD 85-02-05 pertains to installation of fuel tank drains in all tanks on all aircraft.

CHASSIS AND BRAKE GROUP

The chassis group consists of the welded steel tube left and right main landing gear vee assembly along with a welded steel tube nose wheel mount and oleo strut assembly. The main gear legs are bolted to fittings that are welded to the lower longerons and the suspension system amounts to an automotive type shock absorber with rubber shock cords attached and given the name "hydra-

sorb” shock strut. As the aircraft contacts the ground the shock strut is mechanically extended and the shock absorber softens the retraction movement preventing the gear leg from slamming back to its normal position if the aircraft would bounce back into the air. The nose gear assembly is of the standard air over oil type strut. The nose strut is welded to an assemblage of tubing that is directly attached to engine mount. The nose wheel and tire are mounted within a double fork unit that is bolted to the bottom of the oleo strut. The nose gear steering consists of 2 push pull rods connected to each of the inboard rudder pedals.

Braking is done by a single Scott Master cylinder, mechanically operated by a cable connected to a Johnson bar under the center of the instrument panel. The wheel brakes are of the drum type with two shoes in each wheel operated by a double acting cylinder, just like an automobile used to be. A parking brake valve is mounted on the firewall and is operated by a “Tee” handle on the instrument panel. This valve traps hydraulic pressure, after the main brake handle is activated, and traps fluid in the lower portion of each brake line and locks the brakes ON until the manual brake handle is activated again, equalizing the pressure on each side of the parking brake valve releases, and it releases.

MAINTENANCE AND RESTORATION: Maintenance on the chassis is rather routine with normal lubrication of moving parts. Shock cords need to be replaced when the suspension seems soft or the gear pan belly fairings protrude from under the belly. If the nose strut won’t stay at its proper extension, rebuilding may be necessary with seals and recharged with Mil H 5606 hydraulic fluid and nitrogen gas. Wheel bearings need to be serviced at regular intervals also. Servicing of the brake system amounts to replacement of the diaphragm in the master cylinder, installing brake lining on the shoes, rebuilding the wheel brake cylinders with new seals, and replacing “O” rings in the parking brake valve. When an airplane is rebuilt, some of the options to be considered that are approved are, more powerful master cylinder with larger reservoir. Toe brakes with individual master cylinders for pilots and co- pilot’s pedals, and disc brakes. A high time aircraft or one that has been used for training should have the engine and nose gear mount magnafluxed and possibly rebuilt at the time of a major rebuild.

PARTS AND SERVICES: Univair Aircraft Corp., Aircraft Spruce

PERTINANT AD NOTES:

AD 51-27-03 Pertains to water contamination inside nosewheel oleo strut which could freeze or cause corrosion up to aircraft s/n 22-354.

AD 55-07-02 Pertains to reinforcement of landing gear teardrop tube where it attaches to inboard end of axle on aircraft s/n 22-1 to 22-2393.

AD-64-05-04 Pertains to inspection of upper nose gear oleo bearing for proper installation and condition on all aircraft.

AD 85-02-05 Pertains to installation of placard listing proper parking brake application procedures on all aircraft.

ELECTRICAL SYSTEM GROUP

The electrical system consists of a 12 volt lead acid battery and sealed box under the right front seat. An electrical box containing the master switch and starter switch was located under the front of the pilot's seat. The master switch had a *MAIN*, *AUXILIARY* and center *OFF* position. The starter switch was "hot" all the time and carried direct battery voltage, through it, to the starter. In mid 1956 a solenoid was added into the box so the starter switch then activated the solenoid for starting power. A small panel containing all the system circuit breakers was located under the left side of the instrument panel. Electrical control switches were located across the bottom left portion of the instrument panel.. Electrical fuel gauges and an ammeter monitored the electrical functions for the corresponding systems. Navigation lights were located on the wing tips and rudder. A taxi and landing light were located in a bracket in the outboard leading edge portion of the left wing. A white dome light was located in the cabin ceiling.

MAINTENANCE AND RESTORATION: Maintenance of the electrical system is pretty routine. A check of the battery and connections. Checking all switches and wiring as well as circuit breakers. Checking that all functions work that are controlled by switches such as lights and engine starter and checking that all electrical instruments work. During a restoration of the airplane there are several items that are usually done. An alternator system is highly recommended. Changing the instrument panel by adding more electrical equipment and moving the circuit breakers up on the face of the panel as well as relocating switches to a more localized area. Adding more modern anti collision lighting and avionics is usually in the plan.

PARTS AND SERVICES: Univair Aircraft Corp., Aircraft Spruce, Wicks

PERTINANT AD NOTES:

AD 51-23-03 Pertains to installation of insulated spacer in battery box lid to prevent battery terminals from contacting inside of lid on aircraft s/n's up to 22-348

AD 55-08-04 Pertains to replacement of defective magneto ignition filters on specific s/n aircraft.

AD 58-16-01 Pertains to installation of additional fuse in cigar lighter circuit up to aircraft s/n 22-6087.

POWERPLANT GROUP

The Tri Pacers used 4 different engines beginning with the 125 hp Lycoming 0-290-D which was used up through 1952. The 135 hp 0-290-D2 was used from 1952 to 1955. The 150 hp 0-320 engine was then used from 1955 until the end in 1960. The 160 hp 0-320-B2A was used from 1958 to 1960. A Sensenich metal prop was standard on all but a Hartzell constant speed was an option on the 0-320 engine installation only. The exhaust system used on all these models

was a “tuned” crossover type system with a muffler. Many subassemblies were similar such as the exhaust system, engine mount, baffles and cowling with possibly minor upgrades and “beef ups” on later models. Vacuum pumps were installed on engines as gyro instruments became popular. Several different oil radiators were used with the different engine options. Propeller spinners were standard and 2 different ones were used. A shorter one was used on the 0-290 engines and a longer one was used on the 0-320 engines. All engines were equipped with a starter and generator.

MAINTENANCE AND RESTORATION: Unfortunately the 0-290 series engines are no longer supported by Lycoming and finding parts and getting these engines overhauled is getting harder. The 150 and 160 HP 0-320’s are very well supported and are still made and most all engine overhaul shops will do complete overhauls. All accessories such as carburetors, magnetos, propellers, vacuum pumps, oil radiators, starters and generators are still serviced or overhauled. Exhaust system components are available new and also overhauled. All cowling and baffle parts are either being made new or good used ones are available from salvage facilities. From a restoration standpoint, there are approvals to re-engine earlier models with higher horsepower engines. The 180 HP 0-360 engine has been installed in a few of these aircraft. Alternator installations are a common upgrade as well as lightweight starters. A few exhaust system modifications have been approved.

PARTS AND SERVICES: Lycoming engines, Aircraft Spruce, Univair Aircraft Corp., many engine overhaul and accessory overhaul facilities and manufacturers.

PERTINANT AD NOTES:

AD 51-19-02 Pertains to installation of incorrect oil cooler hose material on aircraft up to s/n 22-90.

AD 68-05-01 Pertains to inspection of exhaust muffler for carbon monoxide leakage on all aircraft.

AD 73-09-06 Pertains to installation of placard warning against rapid throttle opening on aircraft with Lycoming 0-320 engines installed.

THE COLT IS BORN

In August of 1960 Piper decided to end the production of the PA-22 Tri Pacer, but they had another idea in mind which turned out to be a very good business decision and led to a successful outcome. They needed a training aircraft to compete with the Cessna 150 and even though the PA-28 Cherokee had been introduced it hadn’t had a chance to make itself well known in the market place yet. Instead of tearing down all the PA-22 jigs and tooling, a decision was made to design a cheaper 2 seat version of the Tri Pacer with lower gross weight and horsepower, removing the flaps and outside baggage door, rear door, and right wing tank. The main fuselage jig was modified but most everything else was left as it had been. This new model was to be called the Colt and the engine

chosen was the 108 hp Lycoming 0-235C1B

. This new model was the answer to a training aircraft and was very well received by the market at that time and very cheap for Piper, as far as design costs, because they could use existing tooling and raw materials.

The Colt started with serial number 22-8000 and up. It remained in production for 4 years and the PA-28 took over in the training market as it was cheaper to build and had become better known by that time.

Most all information that I have written in this article as far as systems would still carry over to the Colt. The wing panel was the same as the 2000 lb gross Tri Pacer minus the flaps. The fuselage section was similar but weighed a little less. The cabin section details were the same minus the rear seats, but a large baggage area took up that space. The instrument panel was reused from the Tri Pacer along with the instrument options. The flight control was the same minus the flaps and aileron rudder interconnect system. The fuel system was the same with the exception that the right wing tank became an option. The chassis system was the same with the exception that Cleveland disc brakes were added instead of the drum and shoe type the Tri Pacer had used. The electrical was the same. The powerplant system was the same as far as cowling and baffling and engine mount. The engine was the 0-235 with no oil cooler, smaller propeller spinner and shower of sparks magnetos.

AIRCRAFT IDENTIFICATION DETAILS

The Tri Pacer used two different data plates during its 10 year production run. Initially the aircraft data plate was attached to a diagonal main frame member just aft of the trim jack screw on the left side, inside the fabric. The plate was attached on two short lengths of welding rod and once in place the wires were bent over to secure it. This plate was the Piper #85411 plate that began use in November of 1946 on the J-3 model. The last use of this plate was used on PA-22 s/n 373 built 12/20/51.

At this time a new plate, Piper #13468, was implemented and having a different shape with a new “buzz saw” style logo at the top and some different information. The new plate was then installed under the front floor carpet just forward of the right side seat. This plate carried through to the end of production and was also used on the Colt in the same location.

Two other major components had production serial numbers not related to the main aircraft serial number. The fuselage frame had a serial number originally on the front surface of the front seat cross tube under the right seat. This same number could also be found on the frame of the front and rear door, as they were made to match the fit of the door openings. In 1955 the frame number was moved up the aft side of the front spar carry through tube, above the headliner, and on the pilot’s side.

Each wing panel had a serial number written in red crayon on the aft side of either the front or rear spar near the wing strut attach fittings and depicting left or right and again with no correlation to the fuselage frame number.

(Editor’s note: Clyde will be on hand at our convention in June if you need to pick his brain about anything pertaining to Short Wings. He’s the recognized expert on their technology, just as Roger is on their history.)

Technical Corner:

Installing Steve's Master Cylinder and Reservoir – An Alternate View

By Anders Walter
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I read the article "Installing Steve's Master Cylinder and Reservoir" that appeared in the Technical Corner at page 76 of the Short Wing Piper Club News, January-February-March 2021 edition, with interest. Contrary to the experience of the authors of that piece, I found installing the upgraded master cylinder and reservoir on a Tri-Pacer to be simple and straightforward.

People should not be unduly concerned, or think this is beyond their abilities. I'm 18 years old, and have limited experience working on airplanes (although I was working under the supervision of a licensed Aircraft Inspector).

We purchased the Vented Booster Brake kit and STC for PA-22s (Vented Booster Brake Modification STC SA01516SE) from Steve's Aircraft, White City, Oregon. The kit includes a new rear half of the brake master cylinder unit, which screws on to the front half of the original master cylinder unit. The new master cylinder is about 2 inches longer than the original cylinder. Also included is a reservoir cylinder about 2 inches tall and 1 and 1/2 inches in diameter. An 8-inch clear low-pressure tube and two brass fittings come along to connect the reservoir to the top of the cylinder. An adel clamp is included for mounting the reservoir. (Figure 1.)

The installation was as follows:

I removed both of the seats from the airplane, making it possible to work from both sides. It is necessary to remove the master cylinder from the airplane. After unbolting the brake cable from the pedal, and disassembling the brake line from the back of the cylinder, the whole unit is ready to come out. Remove the four bolts in the base of the master cylinder and bring it to the work bench. Empty the remaining brake fluid out of the cylinder. Follow the STC instructions, and remove all of the screws spaced around the diameter of the cylinder. Be sure to save these screws. The new master cylinder does not come with its own screws, and you will need to reuse the ones from the original master cylinder. The unit should split into two halves once the screws have been removed. If not, make sure you have all the screws out.

You now have two major parts. The first component is the front half of the original master cylinder unit, consisting of the mounting block and the pedal that applies the brake when the cable that is attached to this pedal is actuated by pulling the brake handle. The second half is the improved master cylinder supplied by Steve's Aircraft. These two parts need to be mated together. Before doing this, be sure to remove the old bullet from the pedal of the brake, and snap the bullet supplied with the STC into the new cylinder depressor stem. It should fit loosely with quite a bit of slop. Mate the two halves together with the black bleed screw on the top of the cylinder pointed vertically. Use the screws that came off the old unit to screw on the new unit. There is not a hole for the top

screw in the STC, so you will have one screw left over.

It is necessary then to adjust the slop in the brake pedal and the cylinder. To do this, use a wrench, rotating the bullet to the point where there is no more slop in the unit when you depress the brake pedal. Then, following the STC, you must back it off 1/16 of an inch. This assures that the valve is not pressed open even when the brake is not activated/even when the brake handle is not being pulled. Remember to tighten the locking nut, or else you will have to readjust the whole thing again.

Depending on the year of your Tri-Pacer, the master cylinder will either fit back into the original holes, or it will hit an angled piece of structure above it. If it fits, put the bolts back in, and tighten it down. If it does not fit, (as in my case) you will have to cock the unit in toward the center of the airplane, until there is proper clearance between the aircraft structure and the top of the master cylinder. The clearance required is only about 1/4 of an inch. To do this, I needed to remove the floor panel under the pilot seat. This requires you to grit your teeth just right and bend the floor out of its place. Remember to double check that you have all the screws out before you try to remove this flooring.

Underneath the floor you will find a very heavy steel plate that is welded diagonally between two steel tubes of the airplane structure. This is the mounting plate for the master cylinder, and has four nutplates for mounting the master cylinder. Three of the nutplates have to be removed. Viewing the master cylinder from behind; as in sitting on the left rear passenger seat; the forward nut plate on the left side is the only one that stays (at least in a 1960 Tri-Pacer Caribbean). (Figure 2.) Use a drill and drill the heads off the rivets holding the other three nutplates. After the heads are off, use a punch to pop out the rivets. The rivet heads are flush with the steel plate and may be hard to find especially if there is paint over them.

The next step is the only part of the job that really requires patience - and even this is not particularly difficult. Loosely bolt the master cylinder into the one nutplate left. Now, rotate the front of the master cylinder toward the center of the airplane, until there is proper clearance of at least 1/4 inch between the master cylinder and the tube above it. Not only must there be clearance, but the other three holes in the mounting block have to be located so that they all either line up with and/or completely miss the existing holes in the steel plate. Remember to also check that the bleed screw has clearance. I know it sounds difficult, but trust me, there is a sweet spot.

Once you have the master cylinder in place, use a fine point marker to mark all the holes, and trace around the base. Unbolt the master cylinder, and finalize the position of the holes using measurements from the bottom of the master cylinder mount. (Figure 3.) Drill the new holes slightly oversized to allow for error, and install new nutplates. You may be able to use some of the existing holes for the nutplates.

You will notice that the new master cylinder extends farther forward than the old one did. Most likely you will notice that your existing brake line will not reach the fitting on the new back of the cylinder, so the line will have to be moved. All instructions following are given as if you are viewing the cylinder from the left rear passenger seat.

Put a 90° pipe to tube fitting on the back of the cylinder. Orient it so it is turning left slightly less than 90° from vertical. Get a bulkhead fitting and drill a new

hole in the floor parallel and to the left of the fitting in the back of the cylinder. Be sure to include enough room to allow a proper bend radius in the brake line. Install the fitting. Run the line from under the floor into the fitting. You may need to construct a new under floor brake line to make this connection. You will probably also have to remove some of the fairings around the landing gear to install this new under the floor brake line. Then carefully bend a line that connects the fitting in the floor to the one in the back of the cylinder. (Figure 4-5.)

The last thing that is necessary is to install the reservoir.

According to the Steve's Aircraft STC, the reservoir is to be mounted on the vertical steel angle iron, which is an attachment point for the master switch box.

It is helpful for two reasons to make a mounting plate for the reservoir, which attaches to this vertical steel angle iron (which technically means that one is in compliance with the STC, since this means the reservoir is attached to the angle iron). First, this means that you do not need to drill more holes in the angle iron. Second, this allows the reservoir to be mounted farther forward, where one can check the fluid level without removing the seat. (Figure 6.)

I made a small plate, stiffened with bends, which matches the pre-existing screw holes in the angle iron that are used to mount the master switch box. (Figure 7.) This new plate bends around the steel angle iron, and is attached with two screws on the aft side of the plate. (Figure 8.) The forward side has bends facing left.

Make sure that these are small enough that they do not create a clearance issue with the master switch box. One hole should be drilled to attach the adel clamp that holds on the reservoir. When the reservoir is mounted, the top should be parallel with the top of the master switch box, and the vertical side of the reservoir should be parallel with the front vertical side of the master box. (Figure 9-10.) Connect the 90° brass fitting to the bottom of the reservoir, and install the straight brass fitting to the top of the master cylinder. Connect them with the clear low-pressure hose that comes with the kit.

Do not forget to mark and drill new holes in the floor corresponding to the new holes in the steel plate under the floor, and to reinstall the floor under the new master cylinder before you finalize the installation of the new master cylinder and bleed the brakes, or you will have to remove the master cylinder again later to reinstall the floor, after you have fully installed and bled the new system – and bleeding the new system twice is not what you want to do.

Reattach the brake cable to the foot pedal on the back of the master cylinder. If your brake cable does not fit properly now that you have moved the back of the master cylinder, there is a turnbuckle about a foot from the brake handle, under the instrument panel. Tighten or loosen the turnbuckle as needed.

You should now have a complete system. I estimate the process took about six hours of work, an easy two half days. Once the system is installed, bleed the brakes and you are done.

(Bleeding the brakes is the subject of a whole different tech article. I submitted this second article separately, so that it can be properly and separately indexed, and located by people who only need to bleed the Tri-Pacer brakes, but who are not installing the new improved master cylinder.)

(Editor's note: As Anders says, he is 18, therefore one of our youngest writers this issue, along with Amelia Bovais, who wrote about her first flight. Since he

isn't yet a member of the club (and this is a member-written magazine, I asked him for some information about himself and his relationship with the club. Here is his response:

"I am 18 years old and a senior in high school. I have been a member of EAA chapter 292, in Independence, Oregon, for several years. It was there where I met Mike Ryer, who recently became a member of the Short Wing Piper Club. We became close friends over the years and I worked along side him on several projects. Last year he bought a Piper Tri-Pacer N3405Z. I learned to fly it over the summer and had a wonderful time. We have been making improvements to it over the winter. One of the improvements we made was to upgrade the brake system, which is why I wrote the articles. Mike Ryer, and a friend who co-owns the plane, suggested that I submit it for publication in the Short Wing Piper Newsletter."

(We are certainly glad to get to know Anders. Thanks to member Mike Ryer and his partner for encouraging Anders. As Anders said in his article, he also submitted a shorter article about filling and bleeding the brakes. Keep reading for more from Anders.)

Following are the photos that accompany this article. As you know, your editor isn't very technical and Anders didn't write to identify the photos. But they are in his order, so you can probably figure out which part of the process each pictures.



Figure 1

Have a question that needs an answer?

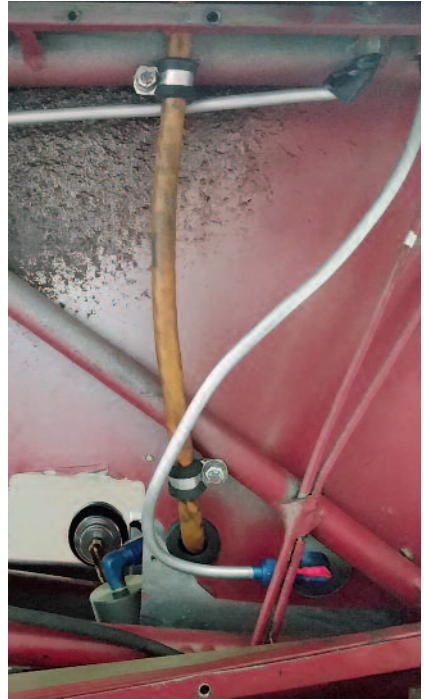
The club's Panel of Technical Advisors is available. Having trouble navigating the club's website? Call Eleanor Mills and she'll check your account in the club files and on the website to make sure everything is right and then steer you to the person who can solve your problem. Want to find out where a fly-in is in your area? Call the president of the nearest chapter. Want to know something about the club itself? The club's board members will be glad to talk to you!



Figure 2

The SWPN needs your submissions!

Send in your story about your flying or your modification to your Short Wing. Our members are interested. Your words and pictures help to advance the knowledge of the club!



**Figure 3 (above) and
Figure 4 (at right)**

Need a Bungee Buddy? Need some drawings of your Short Wing's parts?

The club has you covered. The club library has several tools you can borrow (just pay the shipping costs). Check out the list of tools on the club website. Fill out the form there and submit it. Terry Karlson will get an email with your order and ship the tool. Or you can send an email request to Library4SWPC@gmail.com or call Terry at 602-625-5905.

And the club store has several CD's (or flash drives) of blueprints and drawings, plus volumes of Tips and Techniques that belong in your aviation/technology library. See the ad in this issue for information on ordering. Dan Miller, club storekeeper, will be glad to help you.

See the store ad on pages 44-45

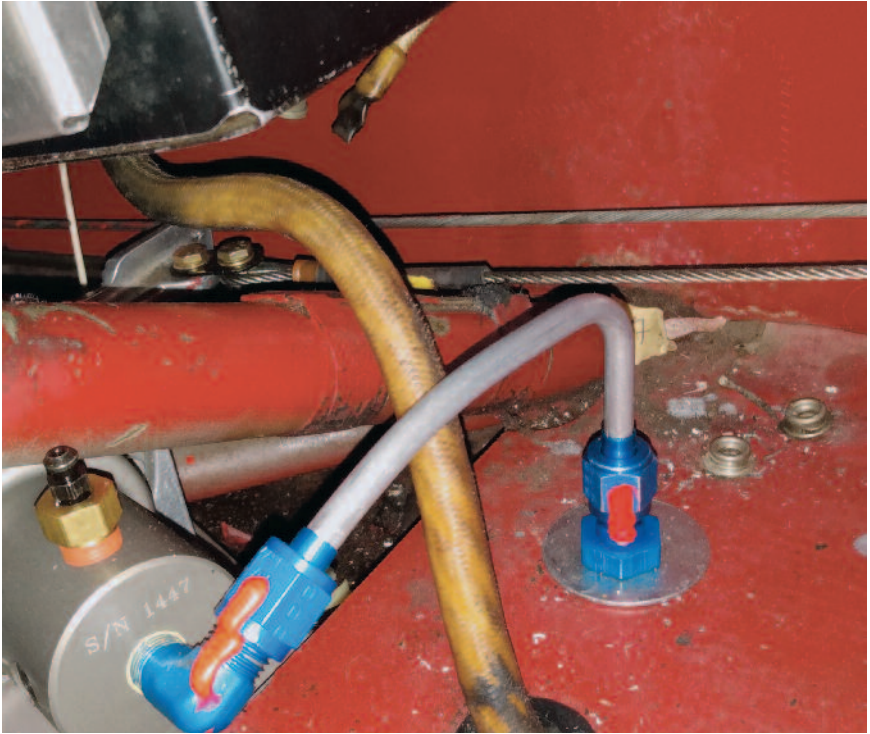


Figure 5



Figure 6 at left and Figure 7 above



Figure 8

**Have you made a modification to your Short Wing?
 Figured out how to make a difficult repair?
 Made a scenic, long, or otherwise noteworthy flight
 in your Short Wing?
 Developed a tip you think saves time?**

**The SWPN needs your stories and photos— Send
 them in to eleanormills@att.net or mail them to
 SWPN, PO Box 10822, Springfield MO 65808-0822!**

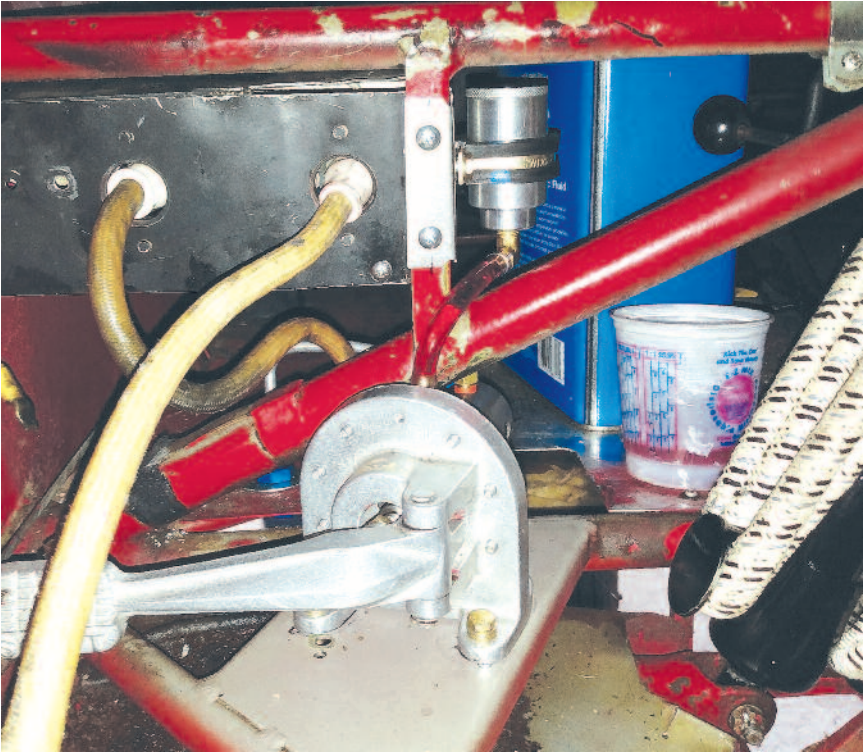


Figure 9 above and Figure 10 below



Technical Corner

Filling and Bleeding Steve's Aircraft Master Cylinder and Cleveland Brakes on a Piper Tri-Pacer

By Anders Walter
Salem, Oregon
Magicofflight88@gmail.com

It is a two-person job to fill and bleed the brake system on a Piper Tri-Pacer – but it is really quite simple if you do have two people.

1) Pump from the left wheel bleed valve to the right wheel bleed valve, through the T fitting in the center of the brake line system under the floor, using a steel pump oiler can. (Figure 1) Continue pumping until the fluid runs out of the right wheel bleed valve clear of bubbles.

2) Close the right wheel bleed valve.

3) Disconnect the left fitting (return side fitting) on the parking brake valve located on the engine side of the firewall. (Figure 2)

4) With the parking brake set to off, pump from the left wheel through the parking brake valve. Continue pumping until the fluid runs clear of bubbles.

5) Reconnect the left fitting (Return side fitting) on the parking brake.

6) Pump from the left wheel to the master cylinder and reservoir. Pump until the master cylinder is full. Then, have your partner watch the reservoir to make sure it does not overflow as you continue pumping. Stop when the reservoir is reasonably filled.

7) Using the foot pedal on the master cylinder, pump through the system from the master cylinder to the bleed valve on the left wheel. Bleed as in a car, with one or more strokes on the foot pedal, followed by continued pressure on the

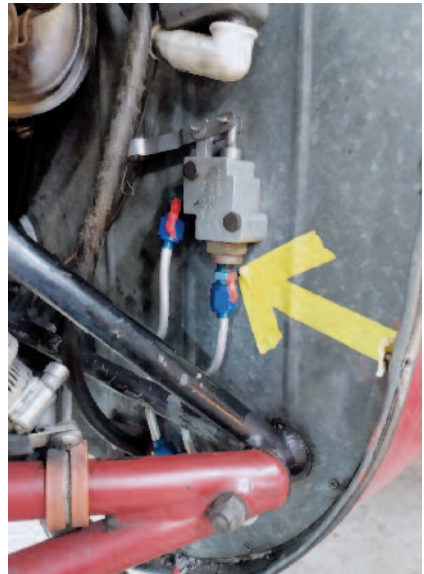


Figure 1 above and
Figure 2 at right

foot pedal, opening the bleed valve until the fluid runs out, followed by closing the bleed valve while the foot pedal is still depressed, and then pumping up again using the foot pedal, and repeating as necessary. Refill the reservoir as necessary. Continue until there is a hard stop when the brake handle is pulled when periodically testing to see if the system is bubble free. Stop and wait a day or so for bubbles to settle out if a hard stop is not achieved after a reasonable number of cycles of this step, and repeat this step in subsequent days until a hard stop is achieved.

Technical Corner - More about brakes

A Conversation About Brakes

From an email exchange.

By Kent O'Kelly, Roger McMillan, and Tom Anderson

Reprinted from the February Supplement

First, here's Roger's question that started the email exchange

I just saw your article in the SW Piper News about Brakes (Page 118 of the Oct-Nov-Dec 2020 issue). I have a 1956 Tri-Pacer that I bought Oct 2019, and it has the drum brakes and a North River Aviation Brake Booster that is a modification to the original Scott brake system. I am not satisfied with the brakes.

I purchased the plane in Glasgow, Montana, and flew it home 1000 miles. My biggest aviation adventure so far.

Can you provide more details on your disc brake installation? Is there a Univair Part No. that you can provide? Does this require different wheels?

I have read in some articles in the SWPC Tips and Techniques that the braking system requires more pressure with disc brakes, so I presume my North River booster will provide adequate pressure.

Thanks, Roger McMillan SWPC Member 19857, Camdenton, Missouri

And Kent's answer

Hello Roger... I bought Cleveland disc brakes from Univair without an STC, as I said in the article. This was some time ago, so I may not remember the details. Here's what (I think) I remember.

The installation was easy. I took the old brakes off and put the new discs/brakes on. I don't recall having to modify anything. The discs/brake pads just went where the old brakes were. I didn't have any sort of brake booster and never thought I needed one as I used the brakes. They worked just fine.

There's an off chance...or maybe a real chance...that I don't remember the bad times with the disc brake installation. I always remember the good things.

Here's what I recommend: Contact one of our Technical Advisors: Tom Anderson • Doug Arpke • Ralph Gutowski • Steve Pankonin • Clyde Smith Jr. • Frank Sperandeo • Doug Stewart • Ralph Widman. They're listed in the Short Wing Piper News (page 2, every issue). They know a lot more than I about brakes (and many/most other things on our birds).

As far as Univair offerings are concerned, I looked in the most recent Univair catalog I have...2013. I read through the Cleveland brake section and didn't understand what they were selling. So, after you talk to Tom or one of our other technical counselors, and depending upon what he/they say, call Univair and tell

them you want to buy Cleveland disc brakes without an STC. (Note: Our Technical Advisors' thoughts/advice trump anything I've been trying to say here.)

Univair has had some turnover in their sales department. Probably the most knowledgeable guy now is Jason. You can ask for him when you call. But, they're all good, and helpful.

Roger's reply

Kent, Thanks very much for your advice. Seems like the Pacers and Tri-Pacers are even more in demand these days than last year when I bought mine. I got my instrument rating this year.....and am considering upgrading my plane to have IFR capability, but I know the cost will approach \$20,000. I will take it slow in approaching this upgrade.

I am still learning about the Tri-Pacer, and being an engineer I really want to know as much about the plane as I can. I purchased the set of 4 "Tips and Technique" books and the Piper drawings from the SWPC.

I still don't know if I will keep the Tri-Pacer a long time, or upgrade to an all metal plane such as a Piper Warrior. Buying airplanes is not fun, so my inclination is to hang on to the Tri-Pacer for a few years or longer. If hangars were not so hard to find and expensive, it would be (and is) tempting to buy a second airplane or start a kit plane while keeping the Tri-Pacer to fly during the build. Will let you know how the brake project goes. Thanks, Roger

And Tom's helpful additions

A story of Disk Brake Conversion

More on brakes from Tom Anderson, A&P/IA

(Editor's Note: When Tom found out his story about the disk brake conversion was to be reprinted in this issue, he said, "I thought I should expand a bit on what I was addressing in the section I wrote. I have done so in the attached modified article. Hopefully the members will find this a bit more informative.")

So, here's Tom's **Bigger story about disk brake conversion!)**

As with most Tri-Pacers, my aircraft was born with the classic drum brakes. I have flown the plane for 30 years and the brakes generally worked pretty well and would hold on full static run-up. However, it took a lot of maintenance to keep them in that condition. With parts increasingly hard to find, and when found were very expensive, I decided it was time to consider converting to disk brakes about 1-1/2 years ago.

Without going into a lot of detail here I did a little wheeling and dealing and came up with a set of calipers, disks, torque plates and wheels that were the same as what originally came on the Piper Cherokee 140. Finding data on these parts is problematic so I would suggest that anyone considering a conversion download the Cleveland Product Catalog at

<https://www.parker.com/literature/Aircraft%20Wheel%20&%20Brake%20Di-vision/AWB%20Static%20Files%20for%20Literature/AWBPC0001.pdf>.

It can be hard to find on the Parker Hannifin web site, but a Google search for Cleveland Product Catalog will find it.

The catalog contains parts lists and illustrations for all of the brake and wheel assemblies Cleveland has made including the original drum brakes. Also keep

the following Cleveland technical support phone number handy as I found them very helpful by providing installation drawings for the various brake assemblies. The Technical Service Hotline: 1-800-BRAKING (1-800-272-5464).

The brake assembly used was a Cleveland 30-55. These brake assemblies were combined with wheel assemblies 40-86 and disks 164-0200. These brakes were a direct bolt on to the Tri-Pacer gear except for a .300 wide spacer to center the caliper pins. Flexible brake lines that run from the copper line in the gear to the caliper were also added. I made those parts. The spacer was made from a piece of 1.509" ID by .058 wall 4130 tubing turned on a lathe, although the same spacer can be purchased from Univair.

Fortunately, a spare landing gear was available to do trial fitting of the brake system. This allowed me to determine that I needed a .300" spacer on the axle to center the travel of the caliper pins. The flexible brake lines were made with standard components from Aircraft Spruce.

But this story isn't about what was put on the plane, it's about how it got approved for installation. There wasn't an STC and I could find no previous field approval for the conversion using the brakes and wheels originally certified for the Cherokee 140. I did completely prepare the field approval paperwork, including a modified maintenance supplement using parts of the Cherokee maintenance manual, and submitted it to the local FSDO for approval.

A few days later I received a call back from one of the inspectors indicating that a field approval wasn't needed. He indicated that the conversion could be done under the authority granted in Advisory Circular 23-27 The Vintage Aircraft Advisory Circular. Since this advisory circular is considered "approved data" all I needed to do was fill out a Form 337, describe what was done and reference AC 23-27, sign it as an I/A and send it in.

As a result of this experience I started looking at AD 23-27 much closer to try and understand exactly what it was saying. What I found was that if you are modifying your type certificated plane and it was certified prior to January 1, 1980, and, it weighs less than 12,500 lbs. you can use approved parts off another aircraft of similar weight size. Also, if failure of the part would prevent continued safe flight and landing, additional data is required.

There are other restrictions contained in the AC which for the most part do not impact Short Wing Pipers, but as long as no structural changes are required, the process is much easier than in the past. I found that paragraphs 5 a, d, and f were the most significant for our type aircraft. I would strongly suggest that you have a discussion with your local FAA inspector prior to starting down this road, but it can open up a lot of doors for modifying and improving our aircraft. Get a copy of this AC from the FAA web site and take a hard look at it. You might be surprised at what you can do.

Tom Anderson AP/IA

Need a nice place to fly to? Need technical info?

Don't forget that your regional chapter members are a good source of information. No regional chapter in your area? Call or email Adolph Svec, vice president of the club and interim chapter coordinator. He can tell you how you can start a chapter yourself!

Fighting Tri-Pacer

Tri Pacer fitted for combat

By Doug Kulick

Reno NV

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(Editor's note: This is part 4 of Doug's story—Part 1 is in the JAS 2020 SWPN, pages 38-43; Part 2 in the OND 2020, pages 101-105, and Part 3 in the JFM 2021, pages 60-63. Doug plans to have his meticulously restored "war-bird" at our convention at Sentimental Journey and it will be parked in the war-bird section at Oshkosh!)

The fighting Tri-Pacers of five nations took the fight to the enemies they encountered. Armor for the aircraft was the fabric and tube construction but as a tube constructed aircraft it was very crash worthy. The fabric allowed flak and bullets to enter and exit without blowing out the exit hole as in metalized aircraft. That's why even bombers of the period during WW2 had control surfaces, rudders and ailerons cloth covered. They could take damage and not lose their aerodynamics.



Doug's PA-22-160 restored as "KAG" of the French Marine Corps, which supported the French Foreign Legion in the African OPS area 1957 on.

Crews wore helmets and WW2 Flak vests but most just did their missions relying on their quiet slow approach and quick over flight of any ground combatants before those individuals had time to react and aim. Duck hunters they were not and most L Birds even in the latest conflicts post WW2 mostly counted only a few holes in their tails following missions!

N2650A "KAG" flew in support of French Foreign Legion units as a Forward Air Controller, "FAC." These French Marine Corps aircraft suffered no combat losses during the Algerian conflict but for a wind damaged hanger that took out one of the 12 aircraft in the Northern African ops area.

In Normandy during the D-Day landings and push to Germany Piper L-4 Cubs brought down battleship artillery of tons of 14 and 16 inch shells, and 105 MM to 175 MM artillery on German troops and armor despite the fact only handguns



N2650A's Forward Air Controller (FAC) white cross let her be seen down in the weeds as she called in fast moving bombers. At left is a view of the white cross from above, as the fast movers would have seen it. That photo was taken during the meticulous painting the Tri-Pacer underwent.

and light weapons were on board the aircraft. German units froze in place when an L-Bird was overhead. Any German fighter pilot or ground soldier would earn an instant one-week vacation from the front if they brought down an L-Bird!

“KAG” instilled the same wrath upon her targets because as a FAC bird she could bring in artillery and ground attack bombers within minutes on observed targets. Striking as a sneaky deadly Preying Mantis (Monte Religieuse), “KAG” stripped away our grandfathers “Flying Milk Stool” nickname.

Cuban Air Force Tri-Pacers were keen on using US Army Jeep 30 cal vehicle mounts modified to fit in the rear door of their Pipers. South African Tri-Pacers used “field modifications” to mount and drop 50 – 100 kilos of fragmentation and smoke markers in their areas of operation.

L-Birds carried 8 US Army hand grenades in Mason glass jars. US Marines in the Pacific islands with their L-Birds put grenades with pulled pins, keeping the grenade blades closed, inserted into the Mason jar which when thrown out the rear door would hit the target, breaking the glass, releasing the blade and exploding the weapon on target.

Piper Tri-Pacers also could carry a case of 12 WW2 M-18 smoke markers used to mark targets for the fast moving ground attack bombers. N2650A sports the white FAC cross on her top wings to show the fast movers her location in the weeds below their runs, preventing mid air issues.

N2650A has been equipped with a modified 30 cal Jeep mount, has stowage of 30 cal ammo in the M-1 restored ammo cans of actual WW2 vintage and grenades in Mason jars plus M-18 smoke grenades.

Remember, many armies for up to 20 years after WW2 used US Army weapons, ammunition and uniforms. The 30 cal machine gun and M1-para-carbine were favored weapons of the Foreign Legion and all armies using the Tri-

Pacers in the 1950/60s.

When a 30 cal machine gun was fitted into the rear passenger compartment, the rear seat was removed as well as the co-pilot's seat back. That allowed a small gunner to access the gun and stored ammo and have a seat sitting backward for take off and landings using the same seat belt.

The cargo net of hemp rope was a popular addition and could be made by locals in any of the areas of operations the Tri-Pacers were stationed. This net was very sturdy for hanging ammo, emergency packs of food and any gear the flight crew would carry. This writer made N650A's net using hemp rope and Boy Scout knots which replicated the net exactly.



US Army Jeep 30 cal gun mount modified, actual M-1 ammo boxes, para carbine on sidewall, and grenades behind the gun.

The French Marine Corps used 12 Piper Tri-Pacers from the late 1950s up until the French Air Force retired the Tri-Pacers in 1975. French Air Force used the Tri-Pacers for similar actions across Africa; however, this writer's focus had been on the French Marines Corp's use of the Tri-Pacer in support of the Foreign Legion.

The French were the most organized and equipped Air Force and Marine Corps units in how they used and supported the Tri-Pacers. The French rework units upgraded through IRON (inspect and repair/upgrade) all Tri-Pacers so units with PA 22-135 and 150 were ultimately reborn as PA 22-160.

This writer's restoration of N2650A followed the same progress of the French IRON aircraft in initial paint and upgrade from 135 HP engine to the 150 HP to finally her current 160 HP.

In 1955 the Israeli Police used two Tri-Pacers in civilian livery colors to patrol their fledgling borders and hunt for insurgents. By 1957 the Israeli Defense Force (IDF) took over the PA-22s and painted and converted them into the IDF transport and surveillance aircraft.



KAG as she would have looked at the Algerian Foreign Legion air base in 1961, awaiting a mission.

The Cuban Batista Air Force fought Castro until Castro forces won their insurrection. PA-22-150 and 160 aircraft using 30 cal machine guns and grenades in Mason jars kept many Castro rebels cursing the fire power brought on to their positions by the Cuban Fighting Tri Pacers. Ground fire resulted in two PA-22s' loss of aircrews and aircraft.

During several up risings in Katangeese, their neighbors, the South Africans provided several PA-22-150s flown under the flag of Katangeese forces and some dark rumors of pilots provided by England. Twelve aircraft were in service and none were combat casualties. Some aircraft were modified with bomb racks and dropped 50 and 100-kilo fragmentation and smoke marking bombs. All further records are gone.

Kenya with the help of British forces defeated several uprisings among fractional tribes. Tri-Pacers flew recon, re-supply, logistic flights and medical flights. No aircraft were lost and no further historical information is available of the 12 PA-22s used. Rumor has said aircraft crews were British pilots and crew

So the reader can see the Fighting Tri-Pacers quickly were no longer your granddad's "Flying Milk Stool," particularly to any combatants on the delivery end of the PA-22's far reaching capabilities. The question of why no US forces used Tri-Pacers is be-



cause the highly capable Cessna Bird Dog won the L-Bird contracts in the early 1950s and served the US and many other armies admirably during the 1950s to 1980s.

For more details this writer's website is now available at: www.fightingtripacer.com.

Technical Corner

Notes from Steve Pierce's seminar on the flight line, 2019 convention

**By Ralph Widman with Jan Widman, proofreader
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(These are my notes from Steve's PA-22 show and tell on the flight line at the 2019 SWPC convention in Wichita KS, June 26-2019. Don't blame Steve for my inaccuracies).

The \$200 flexible borescope is very worthwhile. It can show if the valves are being burned. Good compression can still have valve edges burning away and not be evident yet.

Oil screen: a. use NEW lock washers each time you check it; b. Nuts get 96" lbs. of torque; c. use sticky Fuel Lube on the gasket to keep it in place when installing; it also makes removing the screen easier; d. the cast aluminum mount ears on the screen housing have been known to crack.

Oil temperature probe on the oil screen is sealed with Freon. John Wolf of AirParts of Lock Haven can repair them if they leak. It NEEDS a brass adaptor to install between the temp probe and the housing because it has a tapered seat that the probe seals in. It's not a flat seat.

Sensenich props are torqued to 25 ft. lbs. only! Keep the large area washers between the prop hub and the spinner backing plate or you will dimple the backing plate at the mount holes.

If an oil filter is installed using a B&C adaptor, the veratherm and oil temperature probe won't fit into the same adaptor. They will interfere with each other.

He recommends Camguard oil additive.

Tack weld a bail into the muffler end of the exhaust pipe. Prevents burned or loose internal baffles from laying over the exhaust pipe outlet which results in a shutdown engine.

When you send a muffler out for overhaul it'll come back heavier, because it has been beefed up and made better.

The single, Sutton mufflers have no baffles so the Piper AD for leak checking is done away with. They require a 337 for installation.

Slick mags: can be retimed, and with replacement points at 500 to 600 hours can be done in the field, eliminating the expensive shop visit.

Massive spark plugs have a 400 hour life. The fine wire plugs will last until overhaul.

The PA-18 and PA-22 have the same engine installation.

Engine baffling i.e. the rubbery 1/8" inch thick seals surrounding the top of



Here are two photos from that convention Technical Seminar. Above, a few of the many people who gathered around Paul Wolff's Tri-Pacer as Steve went nose to tail commenting on the things members should watch out for. Below, Steve is shown in the first part of his talk.



the engine. The seal between the top cowl and the top of the cylinders must be tight enough to have 5"hg. pressure differential between the top cooling air and what is forced down around the cylinders. No intake cooling air should go under or around the cylinders. The baffling around the intake filter and the skirt at the bottom rear of the engine prevent the top cooling air from burbling and thus the flow of air is slowed down. It must be a single stream of cooling air from the top of the cylinders out the bottom rear of the engine.

Aircraft Spruce is a distributor for Lycoming parts.

Steven prefers original Lycoming rubber cones placed between the engine and the engine mounts. They hold up better. Torque the mount bolts to 40" lb. only. Don't crush the cones at the engine mount.

If you cut plexiglass below 60 to 70°F, it will set up stress risers that will crack out at a later time.

Steve's brake cylinder mod has a reservoir. It is a volume system and NOT a pressure system like the PA-22's . (I put one on the Colt and love it \$450).

Vortex generators: the little tabs which are glued to the aircraft increase aileron efficiency so you can fly slower because you have more control at the ailerons.

Extended tips tend to negate aileron effectiveness.

Top coat steel parts which only have been primed.

He uses self-etching primer on bare steel parts, purchased from the auto parts store.

Wing root fairings: the correct way to install them is to tighten them by the set screw in the trailing edge of the fairing. (that's what is inside the U shaped cut out at the trailing edge of the wing fairings.)

Fuel tank cover felt (wool) PN is found in the PA-17 drawing. Usually you have to order a lot of it at one time.

FUEL TANK COVER MOUNT SCREWS: ARE ONLY ½ " LONG. ANY LONGER AND THEY CONTACT THE TOP OF THE SPAR WHICH IS HIDDEN.

The top fuselage Ceconite covering which glues around the top windshield tube has an AD to install a metal doubler over the top attach end of it. Most mechanics consider the installation of Ceconite negates the AD because the AD is issued for Cotton cover only. Steve still screws on the doubler STRIP because THE FABRIC WILL BALLOON NATURALLY. MAKE SURE TO GLUE THE FABRIC ALL AROUND THE TOP WINDSHIELD TUBE TO ENSURE THE ATTACHMENT IS SECURE. He had found 3 or 4 cases where the old fabric glue had dried out and become weaker.

The PA-22 drawings the club has put on CDs is invaluable. Each time the planes are torn apart, the original strength hardware can be mixed up from the original drawing.

Parts Manual, SBs(Service Bulletins) and SIs (Service Instructions) are great sources. Piper has a good SL (Service Letter from 1990) on how to install the tail feathers on the PA-18 Piper (similar to PA-22). They had used the water born Ceconite system on their factory built Super Cubs, and it was a big failure.

Aircraft Trim: Do it in calm winds. With the rudder pedals keep the ball centered. Adjust the rear wing strut to correct any wandering wings. It should fly level hands off. Then work with the rudder by bending the leading edge of the vertical stab

Stewarts' U TUBE video is worthwhile and very long. When mixing Stewarts, remember to add the water last. Epoxy and hardener first, then the water. Stewarts will attach to enamel paint.

Trim: use a 30" digital level under the aileron rib and a 1 3/8" wooden block. Adjust the wing for washout. It usually will fly level the first try. (I later learned this washout is necessary so in a stall the inboard wing stalls before the tips do, allowing some aileron control.)

Thanks, Steve, for sharing your experiences.

(Editor's note: And thanks, Ralph, for sending this in. I tried to take notes at one of Steve's seminars held in Branson but being non-technical I would find myself watching his photos illustrating his points and would forget to write down his words. Steve's website is shortwingpipers.org.)

Technical Corner: Vag Rag Vol. 22

Stop! Don't buy that!

By Alan Arrow

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I've said it before and I'll say it again, I am not an A&P. For those of you who are A&P's you have my permission to skip this article and move on to the next.

Recently I received an email from Club Store manager, Dan Miller who had been contacted by a fellow needing help with the routing of his PA-17 Vagabond cables. Dan passed this gentleman's contact information on to me so I got about stringing my new cables to their associated destinations, taking photographs and measurements and sending it all to the fellow in need.

While connecting my new elevator cables to the Elevator Horn I noticed the Turnbuckle Forks had barely enough reach for the hole in the Fork to line up with the hole in the Horn. This caused two problems, limited travel of the fork around the horn radius and bending of the fork stem, which would lead to failure due to work hardening in short order.

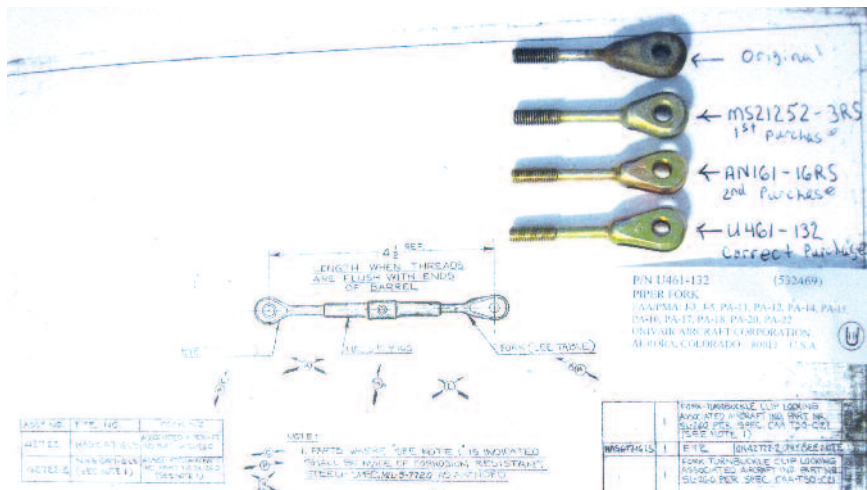
As mentioned in previous Vag Rag articles I am replacing ALL hardware and this of course included turnbuckle forks. Having little prior experience with turnbuckle forks I first consulted the Vagabond Drawings on CD which called for turnbuckle fork ends of the AN160-16S variety. However, when I went to order these fork ends I was told this part number had been superseded with part number MS21252-3RS. These are the new fork ends you see in the photos with limited travel around the Elevator Horn.

I'll be the first to admit I am hard headed, which causes me to stumble along the road of life more than not so I began looking for a vendor who might have some of the old fork ends with the original number and as luck would have it I found some. These forks had a little more reach than the MS fork ends but still not as much as those originally removed from NC4184H.

Whenever I hit a wall such as this I always have to tell myself, "Step away and Sleep on it." The next morning I began my quest of studying the book on Turnbuckle Components (aka Aircraft Spruce & Specialty catalog) which gave dimensions of fork gap and hole diameter but nothing regarding fork reach. So I spent more time with the Vagabond Drawings on CD and noticed on drawing



Above is the original fork on the elevator horn. At left is the MS fork.



Above are the original fork plus three others to show the difference.

#42722 (titled Turnbuckle Assy) as being revised on 6-21-67 almost twenty years after my Vagabond was built. I've noticed many of these drawings to be generic in nature and covering many models other than the Vagabond as well as being dated either earlier or later than my model. So I called an authority on this part, Rick at Univair.

Rick informed me the fork I needed was a Piper specific part which struck fear in the heart of your author. I asked Rick if I had to call a Piper Parts dealer to which he answered, "We have them: they are Univair P/N U461-132 and cost 42.83 each" in the matter of fact nature Rick always speaks in. Thank God for Professionals!

If I wasn't so stubbornly hard headed I would have told myself to STOP buying more turnbuckle forks after the first incorrect purchase and consulted an authority as soon as the problem arose. My folly resulted in the purchase of eight turnbuckle forks at a cost over \$100.00 that cannot be used on this restoration project. They won't go to waste as I will no doubt use them on my next experimental aircraft project but in the mean time they will do nothing other than lower my check book balance.

I've always enjoyed restoring or building an aircraft and consider them to be a learning experience — these more costly lessons tend to stick with me the most.

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Vag Rag Vol. 23

Elevator Horn to Spring-Bungee Wear

By Alan Arrow

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While installing the Elevator Balance Spring (Spring-Bungee drawing #10940) onto the Upper Elevator Horn (drawing #10499) a notch was noticed in the mounting hole of the Upper Elevator Horn. This notch is not machined into this horn but rather caused by wear and load of the spring over time.

So what should be done with this notch — leave it alone, weld the hole shut and re-drill a perfect hole or replace the horn?

I first contemplated welding the hole shut and re-drilling which I described in Vag Rag Vol. 14 regarding the Tailwheel Steering Arm (see the JFM 2020 issue, page 75-79) but decided against it after making an even closer inspection to the overall condition of the horn.

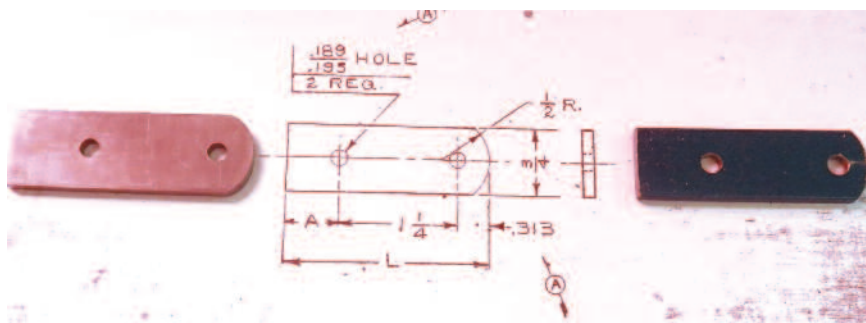
First of all I was surprised as to how crude the cutting of this horn was. You could see shear marks in all the straight edges as if the horn was simply stamped out in a press with nothing more done to relieve stress areas. Second, the rounded edges were no longer round but more egg shaped. And third, the thickness of the metal was about 1/25th of an inch thinner than what the factory drawing called, for which is .125 #1025 steel. This is the steel common to aircraft of this vintage whereas 4130 chromoly is the preferred steel of use nowadays.

I believe I mentioned in an earlier article I am the builder of several home built aircraft and while in the building process I would take completed components or sub assemblies to our local EAA Chapter meetings to have the Designee (now called a DAR or Designated Airworthiness Representative) inspect each part for approval. I spent hours with a mill file draw filing the edges of every fitting I made to pass the inspection of this person. This Piper horn would never have passed our Designee's inspection.

Making this part would fall under FAR Part 21.303(b)(2) regarding "Owner Produced Parts." So I went to my supply bins, located a piece of .125 4130 chromoly steel and set about laying out the Elevator Upper Horn onto the stock and machining out this fitting.

This fitting is not straight forward and has a bushing pressed into the largest hole so I was just lucky enough to have the bushing stock on hand too. The stock was turned down to just oversize of the hole and the two parts were joined in a press.

Since the 4130 steel is much harder than the 1025 steel the original horn was made from I wanted to guard against the sharp square edges of the spring mounting hole cutting into the new spring. Also, I didn't want the spring wearing another notch into this new fitting. Therefore, as I did with the tailwheel steering arm, I incorporated a shackle between the Elevator Horn and the spring. The parts needed for this installation are (1) AN 115-21 Cable Shackle, (1) AN 393-11 Clevis Pin, (2) AN 960-10 Washers and (1) MS 24665-134 Cotter Pin. Keep in mind this is not an approved installation and will need a Field Approval. This installation decreased the span the spring bridges across so I ordered the shorter spring called out in drawing #10940, which is part number 10940 and is



Lower Elevator Horn

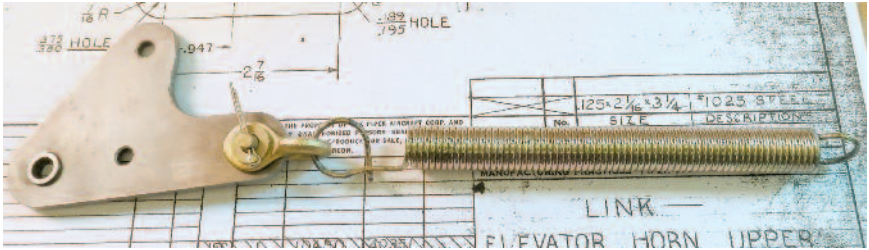
available new from Univair. All drawings called out in this article are from the Short Wing Piper Club PA-15/17 Vagabond drawings on CD available from your Club Store

As for the Lower Elevator Horn (drawing #41271), it too was about 1/25th of an inch undersized in all dimensions, length, width and thickness. So I remade this fitting as well out of the aforementioned 4130 chromoly steel.

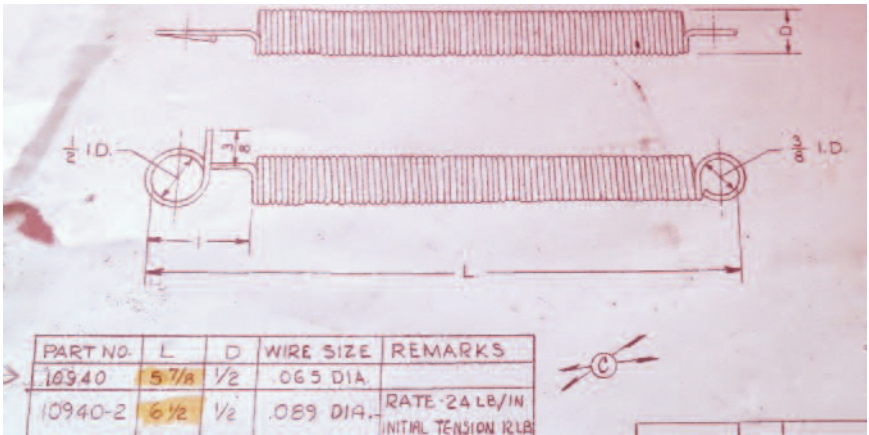
Why do you think these fittings were undersized? It is my opinion this could be due to several factors. The first is age, which will cause rust/corrosion where some of the metal will oxidize and just melt away. The other is possibly due to the fact this particular aircraft is now undergoing its 5th rebuild. It is possible prior rebuilders using grinders, sandblaster and other media have removed material over the process of these rebuilds.



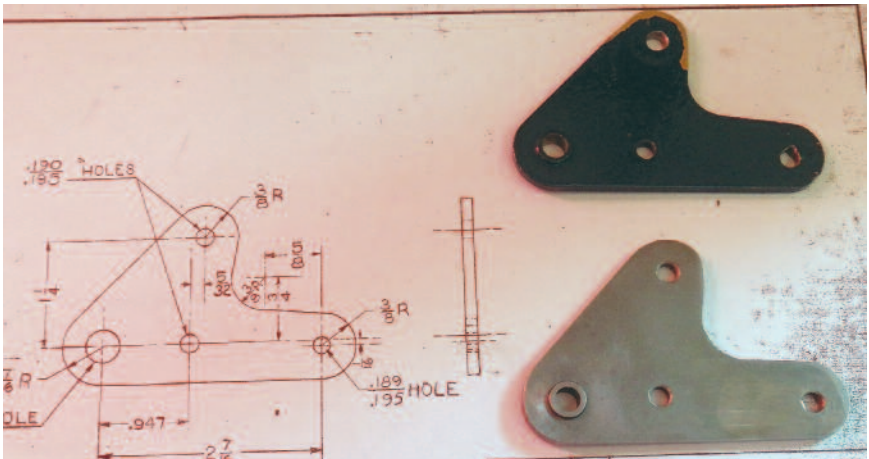
Notch worn by the spring in the hole on the right



Shackle installation



Spring-Bungee Balance Spring



Upper Elevator Horn

Rebuilding? Repairing? Refreshing paint or interior? Our readers want to know what you're doing to your Short Wing. Send us a photo or two or write us a story. Put it into your own words. What counts is what you're doing and you know what that is better than anyone else.

Rebuilding/restoring our Short Wings gives us the opportunity to look at every part under a magnifying glass and if we want to keep them flying for another 50, 60 or even 80 years we need to be on the lookout for not only wear and tear but damage which might have been done by previous owners. Likewise, give a thought to metal fatigue. These two horns I've remanufactured are critical to safe flight. Ask yourself, "Do I trust this part to the lives and safety of my family and friends who might fly with me?" If either of these horns were to fail in flight loss of control to the elevator could be catastrophic.

I have heard it said that Piper built these aircraft inexpensively and fast and never expected them to live so long. So, if we are to keep these aircraft flying into the future, parts such as these may need replacement. Let's do the right thing: when in doubt about the airworthiness of a suspect part, throw it out and obtain a new one. You'll sleep better at night not lying awake worrying about a failure.

Technical Corner

Hail Damage

Reprinted from the November Supplement

Kent O'Kelly, editor

Some years ago, we held our Southwest Regional Fly-in in Burlington, Colorado. Turns out that Burlington is one of the primary hail areas in Colorado; but, we didn't know it at the time. It hailed...not just some nice round marble sized hail, but big, jagged, irregularly shaped ice-stones, many of them about 1-1/2 inch long, and a half inch or so in diameter.

When it was over, Headwinds had 19 holes and a lot of "ringworm" circles that looked like bullseyes. I wasn't the winner. Dave Hedditch had 29 holes in his pretty bird. Jim Gardner received 7 holes in his recently restored Tri-Pacer.

We patched things up, mostly with duct tape ("500 mile" tape) and flew home. As I started repairing the wings, I found differences between the port and starboard wings. The fabric on one wing was cotton and painted with dope. The dope had dried out over the years and had become brittle. I took the cover off and, as it wrinkled, the dope shattered.

The starboard wing was covered and painted with Poly-Fiber products and after about 13 years, the glue was still flexible. Further, it was DIFFICULT to pull the glued fabric off the wing structure. Much better. Hail went through the Poly-Fiber fabric in several places. But, if the hail didn't make a hole, it bounced off, leaving no sign that the paint had been hit.

The dope surface had been painted four years earlier, but the airplane had been hangared, so I think that most of the difference was in the finish products, not solar exposure. I talked to Doug and Dan Stewart. They reported that samples of their Stewart Systems fabric finishing system were mashed up into fabric "snowballs" many times, with no noticeable effects. They did this for about 5 years with the same samples at air shows like Oshkosh and Sun 'n Fun, where the Stewarts used to demonstrate and sell their products.

We have some really good fabric recovering systems available to us. And, there are still many among us who think that doped systems are still the way to

go. I wouldn't argue with them. My opinion, howsomever, is that while doped finishing systems work, they're like Mr. Edison's incandescent light bulb. It's time to move on.

RAF, preserving aviation access in the backcountry



An unknown Short Wing camper is shown above enjoying the backwoods airstrip near Berryville AR, one of several airfields the Recreational Aviation Foundation (RAF) has helped to establish.

By Carmine Mowbray
RAF Publicity Liaison
cmowbray@theraf.org

(Editor's Note): A couple of months ago, I got an email from Carmine, who had been referred to me by Lou Reinkens, Homewood CA, who had asked her to submit a story to the SWPN on the Recreational Aviation Foundation.)

The Recreational Aviation Foundation has for nearly 20 years worked to preserve, improve, and create airstrips for recreational access. Headquartered in Bozeman, Montana, its nearly 10,000 members come from all 50 states and around the world. The RAF operates on a foundation of volunteers. Board members, state liaisons and other key persons serve on a totally non-paid basis. The RAF is the only nonprofit organization working across the US to benefit the recreational flying community.

A bit of history

A dedicated group of pilots were sitting around a campfire in Montana's backcountry and recognized the need to take action to protect airstrips under pressure of closure. They chipped in some cash, and formed the Recreational Aviation Foundation in December 2003. They recruited volunteers to serve as State Liaisons, who engage with their respective state pilot organizations, aeronautics agencies, type clubs, and public land managers to identify and accomplish projects.

"We talk a lot about planes, places and privileges," RAF Chairman John McKenna says. "The plane is a common campfire topic. What kind, what engine, what tires . . . We talk about the special places we love. Privileges is the challenging concept. Much of our efforts focus on preserving the privileges of accessing the lands with our light footprint," he adds.

In cooperation with state aviation groups, the RAF creates or improves facilities like airstrip campgrounds, shelters, restroom facilities, and maintains airstrips for safety. Donations are tax-deductible and go in great part toward the RAF Grant Fund. A state liaison will identify a project and apply for an RAF grant for materials that are not donated. Projects typically are cooperative efforts with state pilot organization volunteers who often provide labor and equipment. This model has been successful in dozens of states, on both public and private lands. Completed projects span the country. Please see www.theRAF.org for news of recent accomplishments.

The RAF is especially proud of its public/private partnership outlined in each Memorandum of Understanding with the US Forest Service, the National Park Service, and the Bureau of Land Management. These agreements are renewable every five years and authorize the RAF to provide volunteer labor, saving public taxpayer funds.

RAF representatives have worked with Congress to ensure an annual \$750,000 appropriation toward airstrips in National Forests.

On private land, the RAF has worked with state legislatures to add aviation to recreational use statutes, reducing liability for private landowners who open their airfields for non-commercial public use. The RAF "Guide for the Private Airfield Owner" is available free in hard copy or online. See www.theraf.org.

The Airfield Guide (www.airfield.guide) is an online interactive resource to help plan your next flying journey, thanks to the RAF's association with Tailwind Aviation Foundation.

At present, there are nearly 300 listings, and RAF state liaisons are surveying and adding listings regularly. You'll find information like lat/long, elevation, ownership, usage, and CTAF. Proximity to recreation like swimming, hiking, mountain biking, camping, lodging, horseback riding, restaurants and WiFi availability is included.

The Airfield Guide includes important Safety Briefings, some of which are required prior to landing. Some include videos of approaches and departures. Register at www.airfield.guide and begin planning your next adventure.

The Recreational Aviation Foundation advocates a high level of backcountry safety and etiquette. "We like to leave these places better than when we found them," RAF President Bill McGlynn says. "We are always aware that we share these special places with others who may be seeking quiet recreation," he added.

With your help, the Recreational Aviation Foundation can continue being an effective advocate for recreational access by air.

(Editor’s Note: I hadn’t heard of the Recreational Aviation Foundation, so I looked it up. It’s a 501 (c)(3) non-profit (like our Education Foundation), which means your donation should be tax-deductible. At any rate, they list several tiers for donations and the amounts begin at \$1. And the airfield guide is pretty comprehensive, as best as I could tell. I checked out Trigger Gap, where the Tri-Pacer in the photo is parked, and found out that the foundation “raised funds for this new 3,000 foot grass airstrip in the beautiful Ozark Mountains through private donations.” Trigger Gap, the only project listed in Arkansas, is at or near Berryville AR. The RAF created the strip in cooperation with the Nature Conservancy.

(I say “at or nearby” because I also found an airfield near Springfield. It gave the location as Springfield but research on Google Maps revealed that its address is nearby Rogersville – anyway, I had no idea the strip with the intriguing name of Flying Bar H Ranch is 8.8 miles from my house and even with snow-covered roads I could have been there in 18 minutes.)

News from SWPN advertisers

Avemco Insurance Company’s SVP Nominated for Women in Insurance Award

In May last year, Marci Veronie, Avemco Senior Vice President of Sales and Marketing, was nominated for the first annual Women in Insurance Award given by the Geneva Association, a global insurance industry think tank. This award recognizes female leaders within the insurance industry for their pioneering efforts and achievements related to climate risk, health, innovation, and inclusive insurance.

The announcement of her nomination went on to detail her accomplishments: “Marci has been recognized at each level of her career in Avemco. Her specialist knowledge, combined with her infectious passion, make her someone who is building a path for future generations in the industry. Marci also took a role in Tokio Marine HCC’s Elevating Women in Leadership Program and received the 2019 Good Company Award.

“Marci is a tireless advocate of inclusivity within the insurance industry. She is immediate past chair and a current board member of Women in Aviation International. This leading aviation organization provides education, networking, and scholarship opportunities for those with careers in the aviation and aerospace industries. She also serves as 2nd vice president of the Thurmont Lions Club in Maryland.”

(Editor’s note: Wow! The only thing that could make this a better story is if we could write that she owns a Short Wing, learned to fly in a Short Wing, or just likes . . . no make that LOVES a Short Wing! Just kidding, mostly. Congratulations!)

Reprint Corner

March-April 2002, Short Wing Piper News,
pages 141-145

Short Wing Accident Series

Stalls in a Short Wing

**By Dave Conrad, CFI - Airplane,
Instrument, & Glider**

Question: Can a Pacer, Tri-Pacer, or
Colt stall? Can yours?

Answer: Yes. Oh my, YES!

Next Question: Is there something
different about a Pacer, Tri-Pacer, or
Colt when compared to most other
light airplanes?

Answer: Yes. It has a trimmable

horizontal stabilizer, not a trim tab on
the elevator!¹

I'll say it once again to make sure
you didn't miss it. Pacers, Tri-Pacers,
and Colts have the trim "crank" in the
ceiling hooked up to a jackscrew on
the leading edge of the horizontal sta-
bilizer. "Up" trim moves the leading
edge of the horizontal stabilizer down.
This pushes the tail down and pitches

**Check the chapter reports to find
out what your fellow club members
are doing — AND to find a place for
you and your Short Wing to fly to!**

What chapter reports, you say?

**Just remember, regular chapter meetings are going-
ing to be starting up this spring and summer! (And it
can't happen too soon, right?)**

Chapters: The perfect place to find the 4-F's

See the list of chapters on pages 56-59

Flying, Fellowship, Fun, Family!

Oh, make that 5-F's

and add Food!

the nose up. Conversely: “Down” trim moves the leading edge of the horizontal stabilizer up. This allows less down force on the tail (the tail always pushes down), and pitches the nose down.

Last Question: Do we care if we have a jackscrew or a trim tab?

Answer: Yes! Or put another way... Why do you think I am writing this article?!

Some talk about pitch trim

Pitch trim’s main purpose is to relieve the elevator pressure (or pitch pressure) while flying. In most airplanes pitch trim controls the speed at which the airframe flies. For example: Choose a moderate power setting and trim the airplane for 80 mph straight and level. Take your hand off of the yoke. Reduce power and the airplane will decrease its pitch attitude and continue to seek 80 mph. The opposite is also true. Adding power will cause the pitch attitude to increase; the airplane will climb, while trying to maintain 80mph. There may be a few oscillations above and below the trimmed airspeed, but it should soon settle out.

Distilled down to the very basics: Trim equals airframe aerodynamic speed. Power on or Power off does not change the trim speed. The power setting determines whether you will be level, descending, or climbing for a given trim setting.ⁱⁱ

To take this concept one step further: Trim = Speed = Angle of Attack. Said another way, when you trim nose up, the speed decreases, and the AOA increases. When you trim nose down, the speed increases, and the AOA decreases.

Remember... Trim Equals Speed. So far so good? OK. Here is the next point.

Good pilot technique

It is important to always fly in trim. ALWAYS!ⁱⁱⁱ

Whether you are flying a B-747 or a Colt. Fly in trim! You should always be able to take your hand off the yoke (or stick) and have the airplane continue to do what it was doing before you let go. When a primary student starts flying, we spend a lot of time speeding up and slowing down. Using the trim. That is what it is there for. Use it!

A basic example of good technique can be demonstrated in the pattern. We are flying a Colt. The instructor litany would go something like this. “Straight and level, in TRIM, 100 mph, abeam the numbers, reduce power to 1700 rpm, check carb heat, maintain altitude with back pressure while TRIMMING, TRIM for 80, descend at 80, turn base, 1500 rpm, turn final, power as needed, TRIM for 75, short final (soft or short field), TRIM for 70mph.” You get the idea... use the trim to fly the desired speed. Use power to control the rate of descent.^{iv}

Trim Tab vs. Jack screw or, Let’s talk about “Pitch Authority”

An elevator trim tab helps to aerodynamically move the elevator either up or down so the pilot (or autopilot) does not have to hold a constant pressure to achieve the desired speed.^v The elevator still has the same limits of travel. Full aft yoke will still extract the same amount of nose up “pitch authority” from the airplane, regardless of the trim position. Trim will just make it easier or harder to hold the yoke all the way aft to the stop (see figures 1 & 2).

Unlike a trim tab, a jackscrew on the leading edge of the horizontal stabilizer changes the configuration of the tail. When nose up trim is selected, the horizontal stabilizer moves down. The tail now has the ability to push down more. You now have more pitch authority (see figures 3 and 4). When you pull the yoke all the way aft, you

are now able to fly at a slower airspeed... a higher pitch... a greater angle of attack!

Ah ha! When you trim with a jackscrew you change the pitch authority of the horizontal tail. When you trim with a trim tab, the pitch authority does not change (compare figure 2 with figure 4).

Why can't I stall my Short Wing?

Question: I just seem to get a mush or a mild bobble when I try to do stalls in my airplane. Why can't I get a "normal" stall break?

Answer: An educated guess is that you have not put in enough nose up trim. Put another way, you don't have enough nose up pitch authority. Piper did design these airplanes to be stallable and spinable.

When you do your next inspection on the airplane, make sure it is rigged to specifications. There are springs in the tail that connect the elevator to the pitch trim system. When properly rigged, the elevator stays in trail as the leading edge of the horizontal stabilizer is trimmed up and down. When you pull or push on the yoke, you are pulling against the springs in the tail. The further you pull, the harder it gets. This is a proper control deflection / feedback which Piper designed into the airplane. With the airplane sitting on the ramp and neutral trim, the elevator should be in trail with the horizontal stabilizer. If the elevator is hanging down, the springs are worn out. Have your mechanic check it out.

Wrong Conclusions

From all of the above, you might conclude that it might be safer to not use nose up trim, because it would prevent you from stalling the airplane. No, No, No!

Why does the airplane stall? We all know that it is because the wing has exceeded the critical angle of attack. This is most often associated with low

airspeed and high pitch, but it is possible to stall at any airspeed and any attitude.

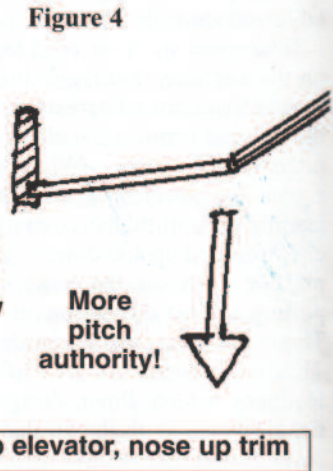
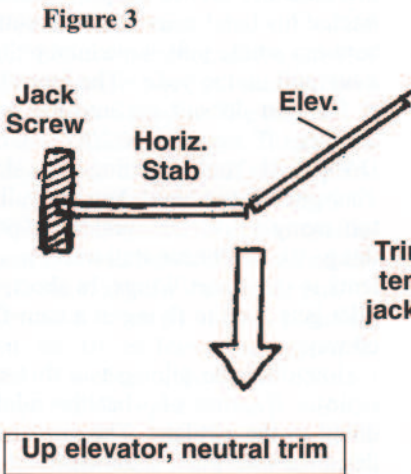
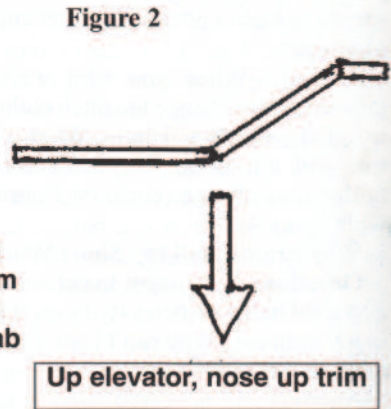
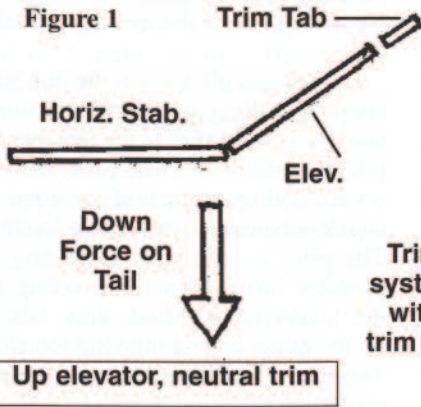
How does a pilot get in the dire situation of stalling (spinning), crashing, and dying? It comes to the fact that the pilot gets distracted. The pilot gets distracted and loses track of the angle of attack, airspeed, attitude, or g-loading. The pilot is too busy, correcting an overshot turn to final, correcting for the unanticipated wind, busy talking on the radio, or just thinking too slow. The pilot simply gets behind the airplane.

If the pilot is in the habit of holding back pressure while flying in the pattern, the pilot has set himself up for a bad outcome. When the pilot gets distracted his hand does not differentiate between a little pull, a medium pull, or a big pull on the yoke. The kinesthetic feel just doesn't get into the brain and set off any alarms. "DANGER! DANGER! You're getting too slow! Your pitch is too high! You are pulling too many G's!" Oh, yes! One other thing. We don't have stall warning systems in our Short Wings. In short, the pilot gets used to flying in a ham-fisted way.

How does the pilot get in this stall (spin)? Because of what the pilot is doing to the airplane. The airplane is designed with pitch stability. In all situations, if the pilot would simply let go of the yoke the nose would pitch forward and the airplane would recover from the stall. This is even true with full nose up trim. To get my Colt to stall you need some up trim and up elevator.

More about Good Pilot Technique

A good pilot flies in trim. A good pilot doesn't force the airplane. A good pilot leads the airplane... gently. If the pilot's workload increases, he can ease up his touch on the controls to quickly do another task, confident that



the airplane will continue on its way because it is trimmed to do so. The trim is the pilot's friend. Trim can be thought of as the poor man's autopilot.

If the pilot has good trim habits, he is less likely to get into trouble if he does get distracted. He will not be in the habit of holding pitch control pres-

ures that could inadvertently stall the wing (spin the airplane). The good pilot keeps a light touch! A good pilot flies in trim.

Conclusions

Fly like a pro! Use the trim! A properly trimmed airplane will help prevent inadvertent stalls. Flying with a

Fly safe - Learn from fellow members

light touch and using the trim will ease the workload on the pilot, allowing him time to think and be ahead of the airplane.

We have discussed the trim/stall connection. I hope I have offered you some food for thought, and maybe an insight that will help you to fly more safely.^{vi}

Next time we'll discuss the stall / spin connection. We'll try to take the mystery, and therefore fear out of spins. I hope you already feel better about an inadvertent spin. No stall... No spin!

ⁱ J-3's and Supercubs also have trimmable horizontal stabilizers. Vagabonds have a trim tab on the elevator and are not the subject of this article.

ⁱⁱ There are exceptions to this Trim = Speed rule. They include airplanes that have a thrust line not on the longi-

tudinal axis like a Lake Amphibian, or an airplane with poor dynamic stability. Most well designed, "stable" airplanes like the Short Wing Pipers do follow this rule.

ⁱⁱⁱ Well, almost always. Exceptions to always flying in trim include flying aerobatics, and not to trim slower than approach speed while doing stalls or slow flight. In gliders we trim back to just above the stall speed, because that is where we spend a lot of time while thermaling. Again these are some of the exceptions.

^{iv} Lets not get into Pitch for Speed / Power for Altitude V.S. Pitch for Altitude / Power for Speed. That is another article!

^v Speed = Pitch. Speed equates to pitch for a given power setting.

^{vi} We have not discussed the use of wing flaps and their effect on AOA. That is another article too.

Need Technical Information?

The Maintenance Data Depot is the main source of information on Short Wings and Tom Anderson is one of the most knowledgeable sources of where to find that information and how to interpret it.

Where else? There are several sources of what you might call less technical technical information: Chapter presidents, for one, who know which members of their chapter are mechanics and/or which members have done extensive work on their Short Wings. Our Panel of Technical Advisors, consisting of eight A&P/IA's, stands ready to answer your questions. The Forum on our club website and the club's website are places where questions are asked and answers are given.

In short, membership in the Short Wing Piper Club entitles you to more information than you can find anywhere else for just the cost of a few minutes time.

PLUS, the CD's and flash drives available from the Club Store (see pages 44-45 of this issue) contain the collected wisdom of years of members. Not free, but a low-cost source of invaluable info!

Short Wing Piper International Convention 2021
June 21-25, 2021 — Celebrating all Piper Short Wings
Lock Haven, PA Piper Memorial Airport (LHV)
In cooperation with the Sentimental Journey to
Cub Haven and the Piper Museum
Registration Announcement –
Activities and fees payment at this time

On the field camping or nearby RV parking
 is separate thru Sentimental Journey

Names
 Last _____
 First _____
 Last _____
 First _____
 Children's names attending with ages _____

Address _____
 City _____ State _____ Zip _____
 E-mail _____ Telephone _____
 Arrival Date _____ Departure Date _____
 Arriving by (circle) Aircraft Airlines Auto RV
 Aircraft N# _____ Year/Type _____ Judge (circle) Y N
 Accommodations (circle) Motel Campground Other
 Motel Name _____ Daily town shuttle service needed (circle) Y N
 First Time Attending a SWPC Convention (circle) Y N
 I would like to be a convention volunteer (we can always use you) (circle) Y N
 Special dietary needs? _____

Registration and Event Fees (includes the full week access to Sentimental Journey airfield and food court and includes full week access to the Piper Museum)

Adults \$90 x ___ = ___ Children under 16 \$80 x ___ = ___ Children under 6: Free

Sunday – Early arrival? (circle) Y N

Monday – Arrival all day, with Meet and Great social that afternoon/evening (included in the registration fee)

Tuesday – Fly out poker run (per hand) \$10 x ___ = ___ Drive out poker run (per hand) and scavenger hunt (visit Woolrich Outlet) \$5 x ___ = ___
 Members Lunch \$20 x ___ = ___

Wednesday – 2 stop tour, Corning Glass Museum (morning) \$17 (under age 17 free) ___ x ___ = ___ Harris Hill Sailplane Museum (afternoon) Adults \$7 Under age 18 \$4 and 6 and under free ___ x ___ = ___ Bus seats \$36 x ___ = ___

Continued on next page

Thursday – 2 stop tour, PA Tech College – Aviation Mechanic School (morning)
 Lycoming engine factory (afternoon) Both free, just bus seats
 \$18 x ___ = _____

Banquet and end of convention, Banquet Dinner \$35 x ___ = _____

Friday – First Departure Date or stay for Sentimental Journey activities
 Fly out to Eagles Meer Aviation/Car Museum \$10 (\$8 senior, under age 16 free
 ___ x ___ = _____

Saturday – Later Departure Date or stay for Sentimental Journey activities
 Sentimental Journey Banquet (Separate fee to Sentimental Journey)

Sunday – Latest Departure Date

Polo Shirts (circle size and number) XS ___ S ___ M ___ L ___ XL ___
 XXL ___ \$20 x ___ = _____
 Tee Shirts (circle size and number) XS ___ S ___ M ___ L ___ XL ___
 XXL ___ \$15 x ___ = _____
 Hats \$15 x ___ = _____
Total US Funds _____

Make checks payable to: SWPC 2021 Convention

Confirmation will be by email or telephone

Mail to:

Andy Seligson 331 Westchester Ave. Yonkers, NY 10707

Contact: 914-522-3341 andytuba@optonline.net

Note: Registration Fees are pre-registration amounts. If registering at the convention, adults will be \$100 and ages 7-16 will be \$90.

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Classified Ads

Notice to Classified Advertisers

Classified advertising is free for all members, providing it is for an ordinary buy, sell or swap transaction of a non-commercial nature. Please describe the items for sale or trade accurately so as to protect the reputation of the club and its magazine. A stipulation of the free advertising is that parts may be returned to the seller and money paid refunded, except postage, if the buyer is not satisfied with the item.

PLEASE NOTE: If an SWPC member is operating a business for profit and advertising items for sale in connection with his or her commercial enterprise, this must be considered commercial advertising and does not come under the "freebee" classification. It must be paid at the regular commercial classified rate of \$7.50 for the first inch and \$2.50 per inch for additional space, with a \$7.50 minimum.

Send all advertising to eleanormills@att.net or The Short Wing Piper News, P.O. Box 10822, Springfield, MO 65808. All classified ads, unless specified at the time of insertion, will be run one time only. If you need your ad run again, please notify Eleanor by the deadline date.

Note: If your ad is followed by "tfc" it will run as is until you tell Eleanor to pull it or change something in it. (DON'T FORGET)

If your ad is followed by JFM22 or AMJ it will run this issue only. If you want it run longer, tell Eleanor.

Note that the website is separate from the magazine. If you want your ad run in both places, make sure you send it to both places. (Website address: www.shortwing-piperclub.org and it's set up for you to put your own ad on there.)

Aircraft for Sale

Tri-Pacer: 1956 PA-22-150, TT
3250.68, TSOH 552.68. \$10,500 OBO.
Contact L.E.Wright (H) 325-651-2469,
(C) 325-234-0974, or Bob Reece, 325-
212-7111.

tfc



1954 Tri-Pacer: Max Conrad's old Tri-Pacer. He sold it to some guys who took it to Puerto Rico and to Alaska. I am the third owner. 2300 hours total time, red, white and blue paint. Full IFR panel, new hump panel King radio KX170B, good transponder, Mode C, new gyro artificial horizon, original



seats in Polar Gray and red with matching headliner, strobe light, beacon on belly, original prop. Lycoming O-290-D2, original engine 400 hours since

chrome major. \$22,000. Burt Ackerman, 952-445-7591, Shakopee MN. tfc

ORIGINAL PA-20 PACER: 160 hp engine with Dynafocal mount, engine from Cherokee, 93 hours since chrome major. Completely rebuilt. Polar Gray with red stripe, new Scott tailwheel, 58 pitch prop, overhauled. Only flown 2 hours since a 4-year restoration. Owned by me for over 10 years. Covered in poly from Stitts Radios and transponders. Pretty much all original, seats leather in black and white. \$28,000. Burt Ackerman, 952-445-7591, Shakopee MN. tfc

1957 PA-22-150, 1787 tt, \$5,000 or trade for ?? Jerry, 928-567-5625 tfc

1955 Tri-Pacer PA-22-160, \$25,000 — TT-2613, SMOH 167 by The New Firewall Forward in 2017; Centi-Lube STC (self-oiling cam), oil analysis every 25 hours, prop dynamically balanced by RedLine Props, auto fuel STC, sealed struts, Cleveland brakes, dual strobes, LED landing lights, VGs, Madras wing tips, Ceconite covering, sealed bat, Steve's fuel strainer, oil sump heater, KX125, KT76C, 4 place intercom, ACK ELT. Wheel pants (not currently installed). Fresh annual 2/20. Flown regularly. Cheyenne WY. Judd, 307-320-5685. tfc

1950 PA-20, Lyc O-320, logbooks to first flight, complete rebuild 1997, ADS=B/In, too many extras to list. This is an extremely clean classic airplane. \$27,000. Phil, 412-722-3974 tfc

Piper 1958 PA-22/20, located San Antonio TX area. Contact Randy Knodel, 210-240-4303 (cell) or 830-964-3312. Total airframe 3253 hrs. Engine Lycoming A2B-320 (150 hp). New vacuum pump, new spark plugs, mags overhauled, STC auto fuel, all new tires,

separate oil filter, dual brake assy, new headliner, new upholstery and carpet, new windshield, domer wing lift, includes Stratus 25, 2 Navcom, sealed liftstruts, audio panel – intercom, transponder. Price: \$36,000. tfc

1960 Tri-Pacer, N3405Z, Bob Fuller's Old Horse: PA-22-150, s/n 227317, fresh annual January 2019, TSMOH 1192.04, TSTOH 179.94 airframe; tach 3518, TTSN 3518. Same aircraft Bob was flying IFR but not certified for such at this time. However, loaded with more bells and whistles than any Short Wing Piper flying today. Bob had it 34 years and I have owned it 5 years. The craft is certainly among the 10 best Tri-Pacers flying today and priced for sale at \$25,000. New sealed battery and also new ELT battery in January. Located David Wayne Hooks Airport (DWH), Spring, Texas (Houston). Call 713-703-9333 for information. Dan Nicholson, 8319 Thora Lane, Hangar B-5, Spring, TX 77379. tfc

1958 Tri-Pacer 160, PRICE REDUCED TO \$22,500, fresh annual. 1900 TT, 900 SMO, 68 gal. long-range tanks, auto gas STC. Cell (915-264-5311 or home 616-712-6079. tfc

1954 TRI-PACER 135: \$17,500 or make offer. O-290-D2, 499 SMOH, TTAF 2961, sealed struts, trans/mode C, Mark 12 Nav-Com radio, 760 CH, new battery, belly strobe, Brake Booster, wheel pants, portable intercom, Airmap 2000 Moving Map GPS, ELT, autogas STC (never used auto gas), CO-2 detector, PTT on wheel. Annual till February 2017. Fabric excellent. Always hangared at Avflite YIP Michigan. Have all logbooks since new. Retired airline pilot owned. Health issues. Contact Steve, cell 248-921-1741 or home 248-305-7197. tfc

Well-kept 1959 TRI-PACER, PA-22. Flies great. 150 hp O-320 AIA, 951

SMOH, TT 3980, Auto Gas, Sensenich prop, new 2013 6.00-6 tires, disc brakes, fabric good condition, hangared last 21 years. NARCO AT 150 trans/mode C, King KX 170B nav/com radio, Sigtronic Transcom II, and GPS IFly 720. Seats and panels done prior to 2002, windshield cover for outdoor storage. Annual November 2017. Located in Northern California. Pictures available. \$24,500.00. Call Ward 928-989-5374 or email como3@aol.com

tfc

PA-16-123 CLIPPER: Cleveland brakes, sealed lift struts, Wolf oil filter, Scott tailwheel, metal filter bowl. N5318H. \$18,000. bckendrick@upper-space.net. tfc

1961 PA-22-108 Colt, 4500 TT, 1086 hours on REMAN O-235. Dual KX170B's/KI108, KT76A, PA134, PS400 intercom. New interior and recovered with Poly Fiber 2009, Daytona White with Red trim. Asking \$20,000. Email carjoe1948@yahoo.com or call Joe at 831-260-4816. tfc

1961 PA-22/20 PIPER COLT TAIL-DRAGGER: 14 hours SMOH, 5940 TT. Reconditioned crankshaft, reconditioned camshaft, new prop, Scott tailwheel, vortex generators, Cleveland wheels and brakes, Williams toe brakes and rudder pedals, oil filter and 60 amp alternator, Bogart cables, Terra nav-com, transponder. Sealed struts, wheel pants, lightweight starter, auto gas STC, Ceconite fabric good, Daytona White with Bahama Blue. \$25,000. 636-399-1400 — tfc

Projects for Sale

PA-16, 1949 PIPER CLIPPER: Wings done, new landing light, extra nose bow, new headliner. Too many parts to list. Lost medical. Best offer. Call Steve,

206-276-1309, Washington state. tfc

1959 PA-22/20 Project. N3210Z, 1685 TT; Engine: O320 B2B, 160 hp, 1685 TSN, 1004 TSMO. King KX150B Nav/Com; Genave Beta/5000 XPDR; Piper Wing Leveler/Auto pilot. Recovered with Stitts/Poly Fiber thru initial first coat. Recover not started yet on one flap and the rudder. Main gear and step welding completed with Scott 3200 tail wheel installed. Madras wing tips. New front windshield. Needs interior (headliner-seats-carpet). Extra item: 8 gal. under back seat fuel tank \$500. Tank was not originally on plane and it does not come with plane unless purchased. Will sell tank separately if someone is interested. Pictures and video available on request. \$13,000. Plane was originally taken down for fabric recover. In present condition it is ideal for customizing with various mods. Contact Robert Crawford, 405/381-2840 (home) or 405/222-8038 (cell). Tuttle, OK. (Oklahoma City area). tfc

1957 PA 22/20-135 Tail dragger project for sale: TT 3409.5 on airframe, 406 SMOH. Engine and wings removed and stored. One wing disassembled and prepped for rebuild. One wing not disassembled but kept as model for assembly. Engine and motor mount removed and stored along with easily removed parts. New set of Dakota Cub ribs purchased (still in box). Quite a lot of new hardware purchased. A&P I was working with passed away a number of years ago, stalling the project. Plane last flown in 1996. Aircraft stored at my house in Sutton, NH. Terra TXN 969 Nav/Com (1988), Collins TDR-950 encoder (1989), Scott Tail Wheel, current registration (unflyable). \$10,000 OBO, Robert O'Neil 603- 938-5325, r_oneil@conknet.com. tfc

1949 PA-16 Project for Sale: N5934H Serial No. 16-557. 2829 hours total time. 218 hours SMOH by Mattituck. Original Lycoming O-235-C1 engine. All logs since factory new in 1949. Vacuum system, gyro instruments, InterAv Alternator, B & C spin-on oil filter, Grove disc brakes installed, Stewart STC to install Lycoming O-320 engine and/or modified PA-22 fuel system. Wings, ailerons, horizontal stabilizer, elevator, and rudder removed and epoxy painted. Poly-Fiber covering on ailerons, horizontal stabilizer, elevators, and rudder. Wings ready for PA-22 fuel system install and recover. All parts, components, and documentation to complete rebuild with Poly-Fiber System. Located KLWM. Many photos available. \$10,000 OBO. Cliff Allen, (413) 551-7299, cliffalleneci@gmail.com. tfc

1953 Tri-Pacer 135 Project to complete: 822 hours SMOH on engine. New instrument panel with \$12,000 in modern instruments and radios: Two each: KY-97A VHF comm radios 760 channel, KNS-80 (VOR/RNAV/DME/ILS, KLN - 90B GPS, KI 520 indicator, annunciator/switch panel (controls which uses the KI 520 indicator, LNS-80 or KNS-90B), KMA-24 TSO w/3LMB audio channel, and PMm 1000 II intercom. MD41-244 relay and a new fabric wiring harness. Manufactured by High Desert Avionics, Inc., in Lancaster, CA. Fuselage stripped with two coats of epoxy primer, ready for covering. Covering done includes both wings, elevator, flaps and ailerons. Covered in Poly-Fiber with three coats of silver coating. PolyFiber material for covering fuselage, two gallons white PolyFiber paint, and three new tires never installed. Over \$20,000 invested in parts and material only. All parts in dry storage. Call Hal @ 760-214-4021. Asking \$15,000 or best offer considered. tfc

VAGABOND/WAGABOND FUSELAGE: New and in epoxy primer, includes door frame, two opening windows, skylight, firewall and floor panel. Fuselage has extra stringers to break up the boxy appearance. I can email 20 detailed pictures on request. Wag-Aero gets \$8,000 for the same fuselage minus door and window frames. Asking \$4,500. Free delivery within a reasonable distance from Central Wisconsin. Contact Don Halloran, 801 South Lincoln Ave., Marshfield, WI 54449. Phone 715-387-3057. Email eishal@charter.net. (20 photos available) tfc

Wanted

WANTED: 1957 PA-22-150 original set of wheel pants and associated hardware. Call 847-691-3031 or email ednewby@aol.com. tfc

Thinking of selling your Short Wing Piper? Consider donating it in memory of a loved one to the Piper Aviation Museum in Lock Haven, PA, a 501 C 3 organization. The Museum would like to have and display an assembled Clipper or Pacer. (No projects). Check with your accountant for a possible tax deduction. For more information call Phil Hoy at 860-342-3474 (leave message) or email phip007@comcast.net. If an SWPC member donates a Clipper or Pacer and it is accepted by the Museum, I will personally donate \$1,000 to the SWPC. jfm6t

Parts for Sale

PA-22/PA-20 propeller, McCauley 1A170 GM7459 low hours, like new. \$2200 plus shipping. Phone: Call Jack at 863-635-5667. tfc

PA-22-150 landing gear (3), all in good and serviceable condition. Lower cowl and other miscellaneous parts. Retains for \$4,000 plus. Will sell all for \$1,000. FOB Idaho. L. Saeger, 208-587-8932. tfc

FOR SALE OR TRADE: PA-20/22 nose wheel assembly frame: Includes steering horn off Piper Colt, oleo assembly completely rebuilt with new upper and lower bearings and new seal kit, dampener assembly and gear torque link assembly. \$900 for complete assembly or trade for other PA-22 equipment. Purchaser pays for shipping. Contact Joe Linebach, 850-529-0767 cell. tfc

TIMING INDICATOR: Eastern Technology Model E25. Used one time/in original box. Includes timing plug and directions. \$40 plus S&H. Franco Sperandeo, 479-521-2609. tfc

MANY COLT AND TRI-PACER parts for sale. Rich Waldren, 503-538-7575. tfc

TRI-PACER PARTS: left and right landing gears; 2 wheels with drum brakes, 600 x 6, complete set up; 2 elevators, uncovered; 1 stabilizer; 1 vertical fin; bell cranks for flaps and a box of flap return springs; right front door; green-tinted bubble windshield with compass mount; rudder, covered with Ceconite, new wiring and Grimes light on top; 20 amp and 35 amp generator with Lycoming mount; Sensenich 74 DM 61-pitch prop; 2 Monroe hydrosorbs with bungees mounted; lots of nav lights, green and red lenses; instrument panel with center stack radios, all reinforced. 1950 PIPER PACER PARTS: left landing gear, covered, 1-1/4 axle, with 800 x 4 wheels, tire and brakes; complete metalized left wing; bottom cowl-ing with locks, all painted Polar Gray;

tailwheel parts and springs, and 2 battery boxes. Lycoming O-290D cylinders, pistons, and 2 carburetors with accelerator pump. Burt Ackerman, 952-445-7591. tfc

AIRPATH C2300 L4 panel mount compass, lit, 12v, \$80. Franco Sperandeo, 479-521-2609. tfc

AIRBORNE vacuum regulating valve, 283-19, \$150. Franco Sperandeo, 479-521-2609. tfc

1956 Tri-Pacer fuselage. Good condition and in annual. 24440 TT, Ceconite, aux fuel tank, no rust, good interior. Logs included. \$5,550. 503-252-2836. tfc

McCAULEY IC90 LM (7146). Will fit Lycoming O-235, PA-12, PA-14, PA-16, PA-18, and PA-20-115. \$1300. Joe. jvas41@aol.com, 612-282-7824 tfc

Miscellaneous

Install the original speed mods that are on Miss Pearl, the national EAA Grand Champion. See website: www.miss-pearl.org. Available with approved 337s. Speed mods include monocoupe style wheel pants, flap hinge, aileron horn wingstrut and rudder cable fairings. All high quality, light weight, hand layout and ready to paint. Also available cowl door restraints, custom sun visor kit, vent window slide retainer, custom spring loaded rudder/elevator gap seals, and luggage gas spring mod. Also available, DER reports for left door install -- PA-22, upper split cowl, brakes, alternator/generator substitution, etc. Bungee chord install on Hydrosorbs, new Cleveland brake pad/back plate units. (Send cores). Bungee installations --- One day turn-

around. Call for prices. Call or e-mail requests for information to Frank Sperandio. Tel: 479-521-2609 or e-mail miss_pearl@cox.net tfc

FABRIC RESTORATION, tailwheel instruction, Lance Bartels, Cherry Hill Aviation, Southern Indiana (Freetown, Ind.), cherryhillaviation@yahoo.com or 812-322-6762. tfc

SPLIT NOSE COWL MOD eliminates need to remove prop to remove/install nose cowl. Two-piece nosewheel fairing mod eliminates need to remove wheel from fork to remove/install fairing. Both of these mods, with approved Form 337s and detailed descriptions of how the work was done are available from Bill Havener, 1409 6th Ave., Sterling, Ill. 61081, phone 815-626-0910. tfc

For anyone contemplating either of my modifications for their airplanes, I am letting them know, up front, what my prices are. As of April 17, 2020, these are my prices: Nosewheel Fairing: \$35 for the Nose Wheel Fairing paperwork consisting of 12 pages that include three of the approved Form 337 copies. Split Nose Cowl: \$50 for the Split Nose Cowl paperwork consisting of 13-plus pages that include six of the approved Form 337 copies; \$50 for a pair of "web angle" assemblies required for the modification. Purchase of the assemblies is optional. A \$5 shipping and handling charge for whichever mod is chosen. Bill Havener, 1409 6th Ave, Sterling IL 61081, phone 815-626-0910. AMJ

As usual, PLEASE CHECK YOUR AD, not just for errors but for the indication that follows it. If it says tfc it will run until you call to cancel it. If it says JFM2 that means it ran last issue and this issue. If it says AMJ it will run only this issue unless you tell me. That's it.

Just call 417-883-1457 or send Eleanor an email at eleanormills @att.net.

Final Reminder (at least for now) Put these on your 2021 calendar

As Kent O'Kelly said in the November Supplement, 2021 is the year for the SWPC three-fer. Not quite a three for one money, but a special three aviation events (a trifecta perhaps)!

1. Our 2021 convention in Lock Haven in conjunction with Sentimental Journey — June 21-25 or 26.

1. A special fly-in to July's Oshkosh AirVenture. Our Pacers and Tri-Pacers will be recognized for their 70th anniversaries. We'll have a mass fly-in in our aircraft to OSH from Baraboo WI.

3. And, to top off the official SWPC flying year, the Southwest Regional will be held in Page AZ in September or October.

Three events for you to meet up with fellow members!

MEMBERSHIP APPLICATION

Membership in the Short Wing Piper Club is open to all persons who own, fly or are interested in the Piper Vagabond, Clipper, Pacer, Colt, and/or Tri-Pacer. The primary objective of the club is to aid members in the preservation, restoration, maintenance, flying and enjoyment of these aircraft. The membership year is 12 calendar months from the date of acceptance. (Payments accepted in US funds only.)

Name: _____
 SWPC Member Since: _____
 Mailing Address: _____
 City _____ State: _____ Zip: _____
 Home Phone: _____ Work/cell: _____
 E-Mail: _____
 Occupation/Special Skills: _____

Individual memberships (per year):

\$ _____ **E-News only** \$40 (no matter where you live!)
 \$ _____ **With Mailed SWPN:** US \$45 USD/yr; Canada \$55 USD/yr; other foreign \$80 USD/yr. (Charges include increased postage costs)

Family memberships:

\$ _____ **E-News Only** \$50
 \$ _____ **With Mailed SWPN:** US \$55; Canada \$65 USD; other foreign \$90 USD
 Spouse/Partner name: _____ Please list children's names and ages on the back of this form

\$ _____ **Student Memberships** - high school or college under the age of 24 (E- News only and non-voting): \$20.

\$ _____ **Additional Years (at regular rate):** 1, 2, or 3 (Circle total years)

\$ _____ **Donations*:** SWPC 501(c)4 \$ _____ Club Library \$ _____
 Education Foundation 501(c)3 \$ _____

\$ _____ **Total**

Two members of the Family Membership will have full membership privileges, including telephone and mail access to the Club Library collection (including tools) and voting privileges. Only one mailed SWPN per family membership. If additional E-News is needed for one member, contact Eleanor at 417-883-1457 or eleanormills@att.net

*Dues and donations to the Club and Club Library are not tax deductible; however donations to SWP Education Foundation are deductible insofar as permitted by Federal and State Laws. Please, check with your tax representative.

I authorize The Short Wing Piper Club to charge my credit card as follows:

Total Amount \$ _____ Visa MasterCard Other _____
 Card number: _____ Exp Date: _____
 Signature: _____ Date: _____

**Mail to: Short Wing Piper Club, P.O. Box 10822,
 Springfield, MO 65808**

Gift Membership

Please enter a gift membership for one year for:

Name _____

Mailing Address _____

City _____ **State** _____ **Zip** _____

E-Mail _____ **Phone** _____

Please send a notice to the new member, indicating that the gift is from

Note: We need an email address to grant full membership benefits (access to website information)

Enclose correct amount as shown on reverse. For credit card use, fill in credit card information on the application form on the reverse.

Mail to

**Short Wing Piper Club, P.O. Box 10822, Springfield, MO
65808**

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Learn and enjoy the history of the Piper Cub and other Piper Aircraft with a private guided tour through the Piper Museum (the former Engineering Building for Piper Aircraft). The Museum is located in the beautiful mountains of Central Pennsylvania, adjacent to the Lock Haven Airport. You'll see lots of photos, videos, artifacts, and various Piper Aircraft on the hangar floor.

Be sure to check out the Museum Gift Shop where you will find gifts for all ages including T-shirts, coffee mugs, books, videos and more. See you real soon.