Brodhead PIETENPOL Association *Newsletter*

Issue 14-02 **Second Quarter, Two Thousand Fourteen** **Spring, 2014**

Photograph courtesy Gary Boothe

Gary Boothe on a Dusk Patrol over Northern California

What's Inside...

From the Editor

By John Hofmann (Columbus, WI)

Hello Good People!

Hopefully you all have been able to survive what has to be one of the most brutal winters in recent memory. It is still cool here an hour north of Brodhead but the temperature is moderating and the leaves are starting to open. Time to pull the planes out of the hangar and get ready for the summer ahead.

It has been an interesting year for me in the area of Type Clubs. In January, while moving daughter Rachel into the University of Minnesota, I received a phone call from friend and mentor Steve Krog. Steve had become embroiled in a legal battle over the selling of his flight school business which included the Piper Cub Club, The Luscombe Association and the Taylorcraft Owner's Club. To make a long story short, Steve was able to buy the business back, along with the type clubs. That was the good news. The bad news is all of the dues from the three organizations stayed with the previous owners. So he got the clubs but none of the money to run them. That night I slept like a baby…up every four hours crying.

Steve asked if I could help him with the clubs while he rebuilt the flight school. As an aside, Cub Air, located in Hartford, WI, specializes in tail wheel instruction and learning how to really fly an airplane using the venerable J3 Cub.

I told him I would be happy to give a hand and since late February have taken over the newsletters and support of the aforementioned clubs. I truly feel honored to have Steve put that much faith in my abilities. So what does this mean for BPA?

First of all, it is why this issue is late (again). Sorry for the excuses. I have had to jump in and deliver a Cub, Luscombe, and Taylorcraft newsletter in short order. I am working on a production schedule that should get us back to normal with the July issue. I also had to redo the Cub Club website, as it is a vital part of the organization and the members were noisy. FYI, take a look at http://www.cublub.org. You will see a version of the website I am working on for BPA. For now I am spending two days a week at HXF working on the type clubs and will be incorporating BPA into that schedule.

Secondly, with the acquisition of the clubs comes the acquisition of material! I now have access to a mountain of articles, much of which applies to our needs. I am including one example with this issue. The last newsletter had an article from Mike Perez on making the tool for the propeller nut on a tapered-shaft Continental. The original article came from "Cub Clues" and I am including it in this newsletter to round out the information from the last issue.

Also, in this issue we have a great piece by Ken Bickers. He is thinking about writing a book about his Pietenpol Adventure. If this chapter is any indication, it will be a great read.

Keep sending material in for the future. Remember, it is your newsletter and if you want to see something in particular, please let me know.

John

39th Annual Brodhead Pietenpol Reunion

We look forward to seeing you this year!

July 24 - July 27, 2014.

Brodhead Pietenpol Association

2424 American Lane
Madison, WI 53704
Email: *bpa@pietenpols.org*
Web: *http://www.pietenpols.org*

Removing And Installing A Prop On A Continental Tapered Shaft Engine

By Bob Gehring & Steve Krog (Hartford, WI)

Have you ever rummaged through the many piles of used parts at a typical fly market and spotted a prop hub for a tapered shaft Continental engine? For those of you with a tapered shaft engine, you may think you've just found a "jewel" among the junk and can't wait to begin bartering for the hub.

But upon closer inspection, the hub appeared to have been used as a battering ram at some point in its long life. The prop hub nut is beaten and battered and if you had a straight edge in your pocket, you'd probably find that neither the inner nor outer face plates of the prop hub would be flat. The prop hub nut is probably unusable. And these hubs are getting very hard to find! Especially at a reasonable price.

All of this battering or hammering was unnecessary had a previous owner used the correct procedures for removing or installing the hub in the first place.

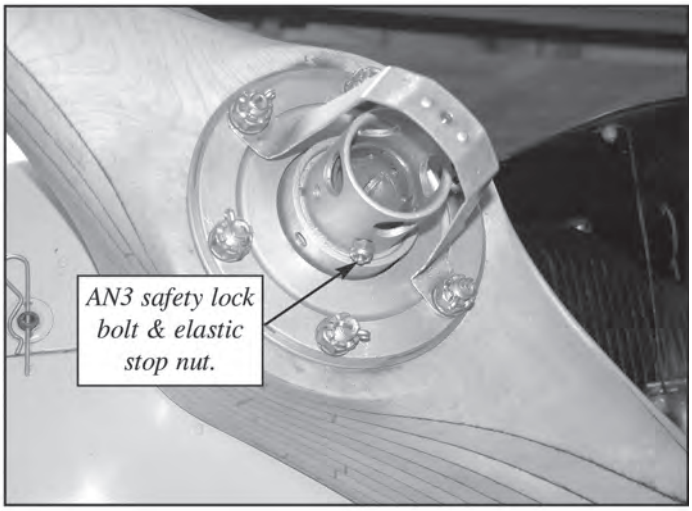
The following information and photos will explain how to properly remove and install a tapered shaft prop hub without doing damage to it. Those of you with a lot of experience in hub removal and replacement may have other procedures that you follow. And, if so, we'd like to hear from you.

Prop Hub Removal

Before beginning the process, safety first! Make sure that the magneto switch and the fuel valve are both in the "OFF" positions and the airplane is firmly chocked. Then disconnect all of the sparkplug leads from the sparkplugs. Remember, you may be rotating or rocking the prop, which could lead to the engine firing if safety procedures are not followed!

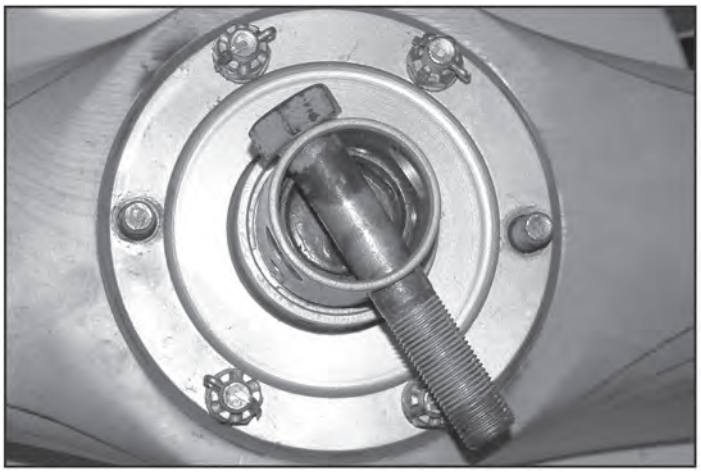
The first step is to remove the skull cap style spinner if you have one installed on your airplane. The two prop bolt nuts holding the spinner mounting bracket will also have to be removed for complete access to the prop hub.

Next, remove the safety locking bolt from the hub. This is usually an AN3 bolt held in place with an elastic stop nut.



After removing the skull cap spinner, remove the spinner attach bracket. Then remove the AN3 safety lock bolt.

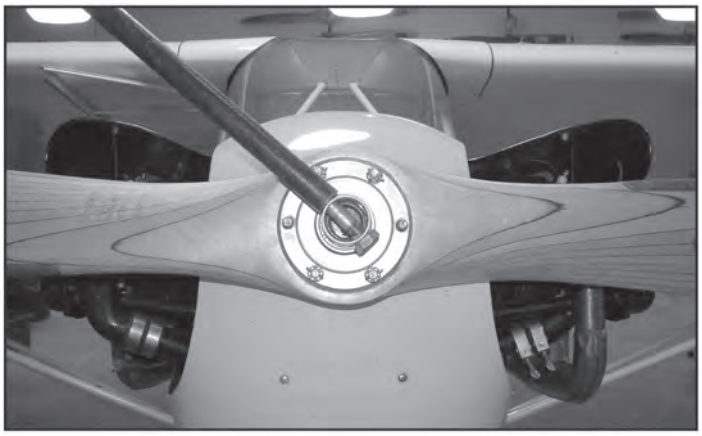
Now, insert a 5/8"x 4" grade 8 bolt (or a high strength steel rod of the approximate same dimensions) through the large round locking nut on the hub. We like to use a bolt as the bolt head helps prevent slipping when applying pressure to the locking nut. Slide a 30-36" piece of 3/4" pipe over the length of the exposed bolt.



A 5/8" x 4" Grade 8 bolt is inserted through the prop hub locking nut. Note that the spinner mounting bracket has been removed for complete access to the hub.

You're now ready to do a little grunting. If the prop hub locking nut has been installed correctly, it will have approximately 200-225 ft.lbs. of torque that has to be broken or loosened. While having someone hold the prop firmly in place, apply pressure to the pipe to break the nut loose, turning the nut no more than about 1/4 to 1/2 turn. As you face the prop hub, turn the locking nut counter-clockwise.

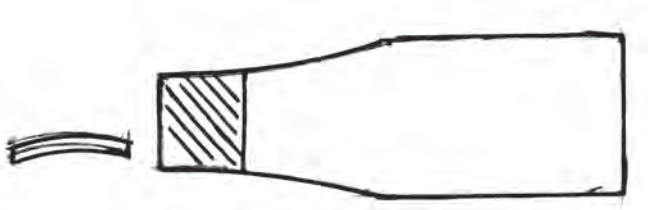
Before proceeding further, look directly into the prop hub and locate the large retaining snap ring. It should



The Grade 8 bolt has been inserted from the lower right to the upper left position in the hub nut and a 30" length of 3/4" pipe has been slipped over the extended portion of the bolt. This position is used for ease in applying downward pressure on the pipe to loosen the hub nut.

be about 1/4" inside of the outer hub ring. Insert a snap ring retention device (see retention device description below) into the open gap of the snap ring. This is very important. If you do not do this, the pressure that will be applied to loosen the locking nut will force the snap ring to pop free. Should this happen, STOP. Pop the snap ring back into place before proceeding any further. The snap ring must remain in place during prop hub removal to help "pop" the hub free of the crankshaft. If you do not do this, the hub nut simply turns free and can be removed from the prop hub, leaving the hub firmly attached to the crankshaft.

We use a small homemade tool to keep the snap ring in place.



The snap ring insert we use is made of a scrap piece of .090" chromolly steel 3" long and about 1" wide at the widest end. It is tapered to 1/4" and bent slightly in an arc equal to the arc of the prop locking nut. Grind or file the end of the tool to fit snugly into the snap ring gap.

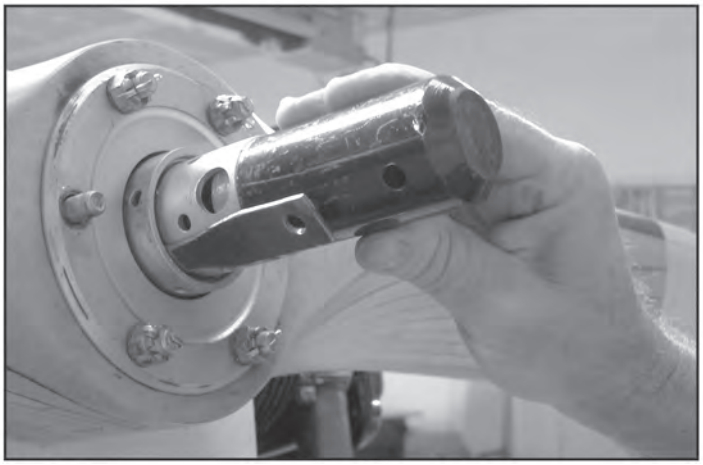
With the snap ring retention tool in place, proceed with rotating the pipe extension handle counter-clockwise, which was slid over the 4" steel bolt inserted in the prop hub locking nut. As you rotate the pipe extension handle through approximately 2 to 2-1/2 turns, you should feel the prop hub "pop." It is now free of the tapered shaft

The snap ring retention tool has been inserted into the snap ring opening and the pipe extension is in place. The prop hub nut is now ready to be rotated counter-clockwise approximately 2 – 2-1/2 turns.

and can easily be slid off of the crankshaft when the prop hub locking nut is turned all the way out to the end of the threads.

NOTE: If you do not feel the prop hub "pop" free and the nut is binding after 2 to 2-1/2 turns, STOP. It will be necessary to tap on the hub to help break it free.

To break the prop hub free without doing any damage to the prop hub locking nut (remember the hub you spotted at the fly market and how it was battered and bent on the end), insert a length of solid steel shaft inside the prop hub locking nut. The steel shaft we used was machined from a piece of 1-3/4" stock approximately 4" long. About .600" of one end was machined down to approximately 1.55" diameter to fit snugly inside the prop hub nut. It should slide into the hub nut with the shoulder of the 4" steel shaft mating flush with the flat



This photo clearly shows the snap ring tool in place and the shaft inserted into the locking hub nut. Note how the outer diameter of the steel rod rests firmly against the outer flat surface of the hub nut.

While applying light pressure to the back side of the prop, insert the steel shaft into the hub nut and tap lightly with either a rubber mallet or lead hammer. The light pressure prevents the crankshaft from banging against the engine case bearings when applying the light tapping to the inserted steel shaft.

Once the hub has popped free and the hub nut turned counter-clockwise until free of the crankshaft threads, the prop can be guided off the shaft.

surface of the hub nut and should not bottom out against the crankshaft end or its threads.

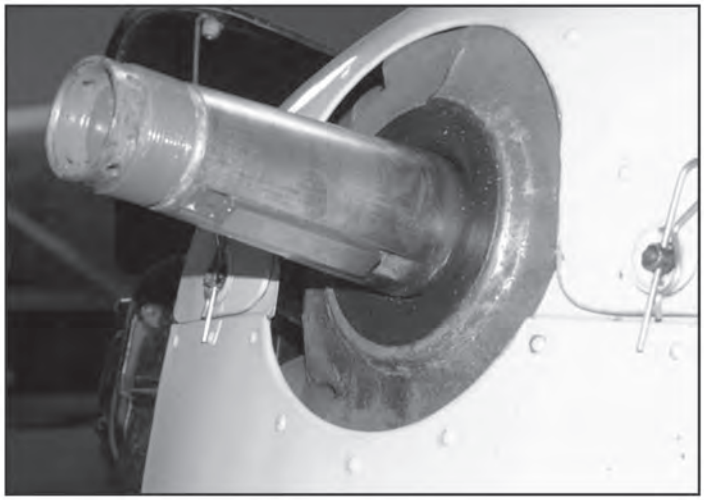
While applying light pressure or tension to the back side of the prop, insert the 4" steel shaft into the locking nut. Tap lightly on the steel shaft using either a rubber mallet or a lead hammer to break it loose. One or two light taps is all that should be needed. Once the prop hub has "popped" free, turn the locking nut the remainder of the way out until it is free of the threads on the crankshaft and with a firm grip on the prop, gently guide the prop and prop hub off of the tapered shaft.

You've now removed the prop hub without doing any damage.

Prop Hub Installation

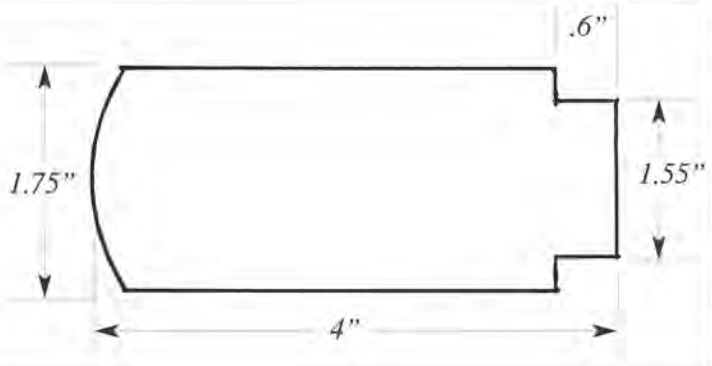
Before installing the prop and prop hub on the tapered crankshaft, inspect the crankshaft and the prop hub for dirt and corrosion. Old grease, dirt, etc., can easily be removed using a good cleaning agent such as lacquer thinner or mineral spirits, a 3M cleaning pad and a good clean cotton rag.

***Caution**: If using lacquer thinner be very careful to not splash it on the nose bowl, the outer surfaces of the prop hub or the prop itself for it will also remove paint and varnish allowing a place for corrosion or wood rot to start!*



The exposed tapered crankshaft should be inspected for corrosion, then thoroughly cleaned and lightly lubricated for prop installation.

We made this tool for helping to remove the prop hub whenever a bit of persuasion was needed to "pop" the hub free from the tapered shaft. We started with a piece of 1-3/4" scrap solid steel shaft approximately 4" long. One end was machined or necked down to approximately 1.55" in diameter so that it fit snugly inside the prop hub nut. The machined portion should be no longer than approximately .600" so that it does not touch nor bottom out against the threaded end of the crankshaft.



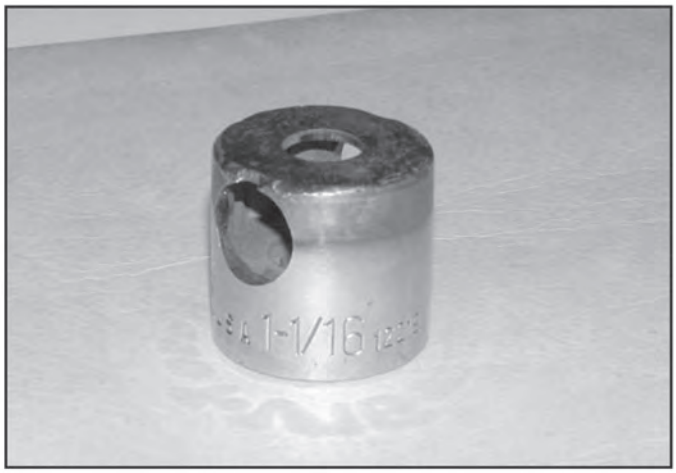
Once the tapered crankshaft and the inner prop hub have been thoroughly inspected and cleaned, use a very light lubricant, such as 3-In-1 oil, to completely lubricate the entire surfaces of each. Do not use an excess of the light lubricant. More is not better in this case as any excess will be slung out causing unsightly streaks on both the back and front hub plates.

With both surfaces cleaned and lightly lubricated you can now start the installation process. Begin by first locating the locking keyway on the tapered shaft. With a firm grip on the prop, locate the mating keyway slot on the hub and position the prop in front of the shaft aligning the hub keyway with the shaft keyway.

Slide the aligned prop and prop hub onto the shaft. Don't force it. It should slide freely onto the shaft. Then start the prop hub locking nut and finger tighten.

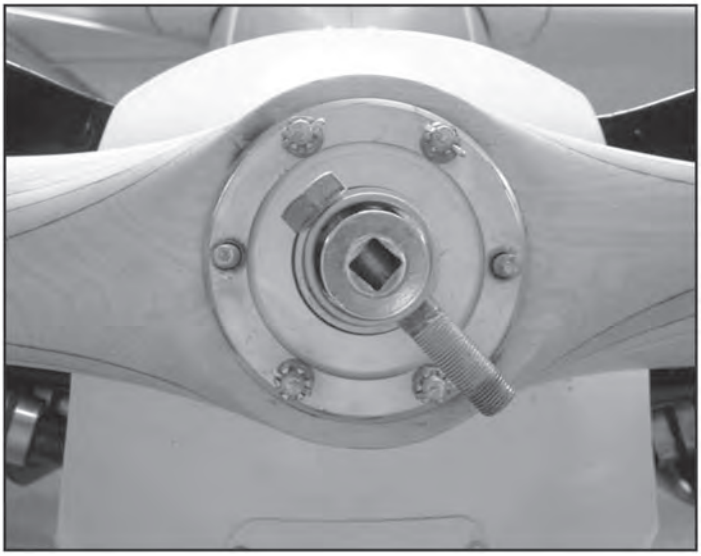
Snug down the locking nut using the 4" long Grade 8 bolt used to loosen the prop hub nut and the 30-36" length of pipe. Do not over tighten at this point, just snug it firmly.

Now it is time to properly tighten the hub locking nut to the correct 200-225 ft.lbs. of torque pressure. This is the one step that is most often done incorrectly when installing a tapered shaft prop hub, as most people don't have the correct tools for executing. Rather, they'll "guesstimate" the torque by literally hanging on the pipe extension, or, getting a longer extension to make sure it's good and tight! Over the years we've found this to be the case when trying to break loose a prop nut. It was so over torqued it was nearly impossible to break loose. This causes undue stress loads on the hub and shaft, creating a situation for cracking and rendering the hub useless.



We use another homemade tool for correctly torquing the prop hub nut as it does require 200-225 ft.lbs of torque for proper installation. This tool is made using a 1/2" drive 1-1/16" socket. A flat washer, used for rigidity, is welded over the open socket end. Then a 5/8" diameter hole was drilled completely through the socket. (See the last issue for the Michael Perez version of this tool.

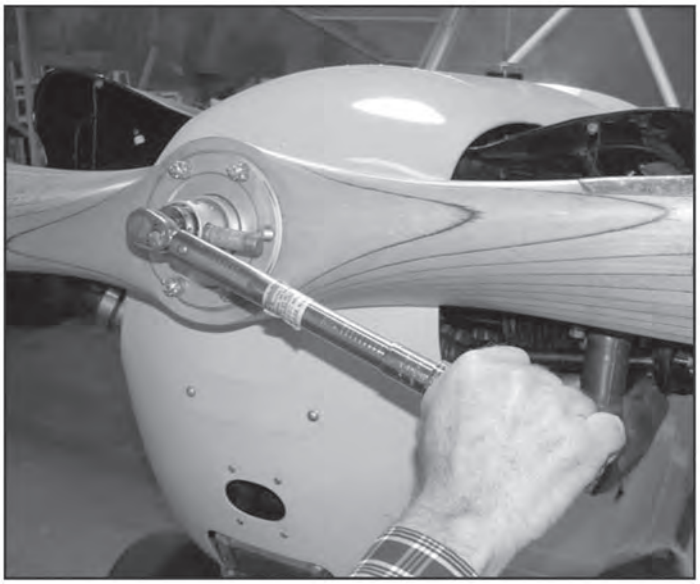
Using the special socket described, insert the socket into the hub locking nut. Align the holes with the holes in the locking nut and insert the 4" Grade 8 bolt through the nut and socket. You now have an easy to use socket for correctly torquing the locking nut. Using a torque wrench, begin tightening the locking nut beginning at about 150 ft.lbs. and work your way up to the desired 200-225 ft.lbs.



The specially designed hub socket has been inserted into the hub locking nut and the Grade 8 bolt inserted through both the nut and socket. This set up allows for properly torquing the hub nut using a torque wrench.

The installation of the prop hub is now complete and torque values are accurate, assuring long life for that valuable tapered shaft prop hub. However, the job is not yet finished.

Now is also a good time to check and re-torque the prop bolts. Remember, with the seasonal changes



The special socket is in place and correct torque values are now applied to the hub nut.

in temperatures and humidity, that beautiful (and expensive) wooden prop shrinks and swells accordingly, requiring re-torquing the prop bolts.

Remove all cotter pins from the six prop bolts (two were already removed when the skullcap spinner and spinner mounting bracket were removed) and loosen all nuts. Install the spinner bracket and snug the nuts holding it in place to finger tight.

Using the proper method for re-torquing the prop bolts, begin torquing the bolts to the desired 16-19 inch pounds. Again, use the step up method beginning at approximately 10-12 inch pounds and work your way up to the desired 16-19 inch pounds. (We use 18 inch pounds on our wooden props.)

After torquing to proper values, allow the prop and hub to sit for 10-15 minutes and then re-torque again.

The final step is then to install the cotter pins and skullcap spinner.

NOTE: It is recommended by that all wooden props have their torque values checked periodically, especially if the aircraft is kept in a climate that experiences significant seasonal changes.

This is an overhead view of the four special tools we made and use when removing and installing prop hubs on tapered shaft Continental engines.

- *The item at left is the 4" x 1-3/4" solid steel rod with one end machined down to 1-1/2". Machine down approximately 3/4" of the end of the rod. This is the portion that will be inserted into the hub nut and should not bottom out against the end of the crankshaft.*
- *The second item is the 5/8" x 4" Grade 8 bolt.*
- *The third item is the special tool made from .090" chromolly stock inserted into the snap ring gap.*
- *The final item is the 1/2" drive 1 1/16" socket with a flat washer welded over one end. A 5/8" hole is drilled through the socket.*

Notice to Members: Please keep us posted with any address changes. This newsletter will **not** be forwarded to your new address and the Post Office **does not** "hold" this newsletter along with your other mail when you request them to do so. The Post Office will return it to us and charge us an average of $1.50 per returned piece. When we track down a forwarding address, we send a new copy of the **BPA News** to the new address by First Class mail. This is a very expensive procedure for **BPA**. If you relocate with the seasons, please send us an email when you migrate.

Thanks

Gene Rambo's, NX898H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Hello Again

From Doc and Dee Mosher.

We're so happy to take this opportunity to check back in with our fellow BPA members. We've received word from a number of you asking the same question – What's Up?

As you BPA Newsletter readers know, for a few years we had been looking around for someone to pick up the BPA Newsletter and Type Club mantel. We had been publishing it for seven years and loved every minute of it – almost. The deadline for getting a copy to the printer a month before issue date was sometimes a time of numerous "discussions" in the Mosher household. Nevertheless, we met so many great people that it was always a labor of love. But because of our increasing health issues, due a lot to plain old maturity, and a few added surprises, it had gotten to the point that us two old poops just couldn't do it anymore.

So thanks to John Hofmann (and Susan) for riding in from the West and offering to assume everything Pietenpol that we had been juggling. It may have turned out to be a bit more that he originally thought, but John is managing to handle it just fine.

We agreed in July of 2013 to the request that we not make a big issue out of the transfer and make the transition as seamless as possible. Same mailing address, same amount of dues, same web site and no big announcements that a change was taking place. But that meant we didn't have the opportunity to thank all of our members for such a great ride. We know of no other group of people that are so thoughtful and down to earth.

So, THANK YOU – to each and every one of you for your interest and support - for the pats on the back and the comments of appreciation for our efforts; to the wonderful member authors who contributed such helpful and interesting articles; to Dee's sisters, Peg and Betty, her brother and his wife, Hank and Judy for their help every July with a Fly-In that seemed to grow and be more fun each year; to the Weeden family and Chapter 431 for being such generous and understanding hosts; to Ed and Barb at the Brodhead Register Print Center for being there when we needed you; to all the pilots who bring their airplanes to Brodhead every year for other builders and dreamers to touch and perhaps hitch a ride.

Best of luck to John and here's hoping that BPA will continue to prosper and grow with all of our continued support.

See you around - Doc & Dee

Chapter 11. Open Hangars

By Ken Bickers, Longmont, CO.

At my airport, I never know who is likely to show up at my hangar. This isn't much of an issue during the colder months of the year. But from mid-Spring through mid-Fall, the weather in northern Colorado can be especially nice. When it is, I like to raise the hangar door. The sights, sounds, and smells of airplanes taking off and landing are still magic, even after all these years. But at an airport, an open hangar is like a banner towed behind an airplane. It is there for everyone to see. Everyone.

To be fair, most of the people that drop by my hangar are people that I know. They've stopped in before and, if it has been awhile, I enjoy seeing them. I derive pleasure from the ones that appreciate whatever progress I've made since the last time they dropped by.

Among these visitors, a special few have a way of making me feel better about myself, my life, and my project just by coming by. Jim, for example, is a captain at a large airline company that has a hub at Denver International Airport. Together with another fellow, he built a beautiful RV-8. He has a lot of credibility, at least as far as I am concerned. He doesn't come by very often, but I look forward to the occasions when he does. He asks good questions, looks at just the right spots, and likes to say "my hat is off to anybody that builds an airplane from plans." He says that every time he visits. And I appreciate it each and every time. He knows the difference between an airplane built from a kit and one built from plans. Both are good. One is better.

Not everyone is like Jim. Some years ago, I had my hangar door open on a late fall afternoon. We were enjoying a brief, but welcome, warm spell – a respite between early fall snows and the debilitating cold sure to arrive in just a matter of weeks. I had recently completed the construction of the landing gear, a process that had taken much longer and was more complex than I had anticipated. It was gratifying to have the fuselage for the very first time sitting on its gear. Somehow it made the whole thing seem more real. Small victories are a big deal when undertaking a project of this sort. On this particular day, I was in the midst of rearranging and cleaning, in anticipation of beginning work on the wings.

That was when a very large pickup drives up. In it is an older couple. They just sit in the pickup. They don't get

out or even open the windows. After a couple of minutes, curiosity gets the better of me. As I walk over to the truck, the driver-side window slowly rolls down. The old fellow at the wheel says, "I've been trying to figure out what 'that' is."

Now, I don't think my hangar is all that unusual. But it does have lots of stuff in it. In addition to the Pietenpol fuselage that is now proudly sitting on its landing gear, there is my 1957 Piper Pacer, actually a Tri-Pacer converted back to the tailwheel configuration, which is itself a story perhaps. There is a workbench at the back of the hangar and another bench lining one of the sides of the hangar. There is a very large set of storage shelves at the back of the hangar, about 20 feet long and standing nearly 14 feet high. On the shelves are stored lots of different things. There are lots of smaller things, too. Drill press, refrigerator, couch, some old bikes – all the usuals. So I say to him "which 'that'?", as he might have been referring to one of many 'thats' in the hangar.

He points toward the Pietenpol. He says "The airplane." Without pausing, he goes on to say "At first I thought it was a Pietenpol, but then decided it wasn't." Now this is a cliff hanging kind of moment where if we were on television there would be a commercial break – an opportunity for the audience to get up and refresh their drinks or take a moment in the restroom, or both. With a cliff hanger like that the audience would be settled back in their seats before the commercials ended, ready to see where this mystery might be headed. In reality, all I could do was stutter "Yes, it is a Pietenpol."

He replies "Nope, wheels are too big." And with that, the window rolls up and the pickup drives away. My Pietenpol still uses those same wheels today. I like the way they look. I never did get his name.

Then there are the folks that have heard I am building a Pietenpol and want to come by to see it and ask me questions. These are the people who are contemplating building one themselves. I fear I'm not a very good ambassador for Pietenpols. I'd like to be, but I'm not. Usually the first question that they ask – and if not the first, then the second or third – is how long have I been working on it. When I tell them the year that I began, I watch them doing the math in their heads. Okay, this is … carry the one … subtract the … Oh my, that long? Yes, that long. I try to reassure, but my reassurances are not terribly compelling. I explain that there were many years that the project was in hiatus; that work and children had to take priority; that we had moved from Indiana to Colorado and that it was several years before I had been able to purchase a hangar suitable for storing one plane and setting up a workspace, too. All of that is true. But somehow it doesn't convey the desired message that building one of these is something that can be done in a few years working weekends and the occasional weeknight.

One prospective builder came by the hangar just at the point that all the major components had been assembled, but not yet covered with fabric. He brought his wife with him. They hadn't been married long. He was a nice young man, even repeatedly calling me sir, which mostly made me feel old. He worked in an aviation-related job and apparently was an A&P. He was confident he had the skills to build one. I suspect he did. But what he wanted was something that the two of them could fly in; something that would be fun to fly, and could also be used for transportation on occasional trips. He wanted to be able to log some hours. Given his priorities, the Pietenpol is not a very good choice.

Had he said he liked the idea of flying hot air balloons because he didn't really need to go anywhere but that the problem with balloons is that you never know where you are going to land; had he said he wanted to have an engine so that he'd be able to land back at the same airfield from which he'd launched; had he said he just wanted something fun to fly on warm summer afternoons, then the Pietenpol would have been a good choice. But that wasn't what he said. Pietenpols aren't for getting somewhere. They are not modes of transportation. Their mission is joy of flight at its most elemental.

Still I had them sit in my Pietenpol. She climbed in the forward cockpit; he got in the rear cockpit. Long after she got out, he continued to sit in that cockpit. I could see the mental gymnastics as the argument raged in his mind. He had arrived convinced that he wanted to build a Pietenpol. He was discovering that the cockpit was smaller than he had imagined. There wouldn't be much room for instruments. The visibility forward would be pretty limited. It seemed to be taking a life time for me to build mine. Would he be able to do it faster? Would children come along? If so, what impact would that have on his timeframe? And worse, what would become of the goal of using the Pietenpol as a means of transportation? The questions all pointed in one direction.

He was a nice young man. I liked him. I haven't seen him since.

Call for Volunteers

With the Pietenpol Reunion approaching in July, I am asking for a few able-bodied volunteers to help check registrations and memberships at Brodhead. I will especially need help on Saturday afternoon. This year I am the Membership Chair for the Vintage Airplane Association at Oshkosh starting on Sunday. Because of this I may be scarce on Saturday afternoon and evening. If you are willing to help let me know at bpa@pietenpols.org or 608-239-0903.

If you are also going to Oshkosh and would like to help out with VAA membership let me know. We are mixing things up a bit around the Red Barn and I am hoping it will be a lot of fun.

Submit Your Articles

Remember, this is your newsletter. If there is something you would like to see, pictures to share, articles you think would be of interest to other members please send them to bpa@pietenpols.org. I am currently collecting and getting ready to layout the April issue and could really use some more information. I am really interested in your "big adventures." Share your flying stories so we can play Walter Mitty with you.

The Air Camper Co-operative . . .

Doc Mosher 2/10/14

The veneration that Pietenpol afficionados accord to Bernard Pietenpol and Orrin Hoopman comes primarily from their enlightened admirers. The feeling is more of a personal affinity rather than any media hype for celebrity status. Orrin stated that he wanted future builders to benefit from his drawings of Bernard's "excellent airplane" and so his drawings were purposely never copyrighted. This is an example of encouraging future Air Camper builders to go ahead and use Bernard's ideas and Orrin's drafting efforts without charge. The 1933-1934 "Improved Air Camper" Hoopman drawings have been firmly in the "fair use" category for all these years. In the early 1970s, Vi Kapler was working with Bernard at Cherry Grove. With Bernard's blessing, he drew up plans for a 29 inch wide center section to which the wings could be attached. Vi never copyrighted his plans, and today they are also in the public domain. We thank Vi for that.

Back in 1983, Frank S Paviliga started the Buckeye Pietenpol Newsletter, and it immediately became the newspaper of record for Pietenpol construction and flight information. In 1990 Grant MacLaren became editor and the tradition was carried on. In 2000, the name was changed to the Brodhead Pietenpol Association Newsletter and it continued to assemble and print significant ideas which members/subscribers sent in about building and flying Air Campers. That print legacy has continued to this day. Access to that 31 year trove shows many ideas freely shared by individuals, none carrying any individual copyrights.

The keepers of the flame, then, have been the publishers (over the years) who have provided written and graphic details of these changes and who have archived the newsletters. These have included seat belt installation, brake installation, landing gear placement, Bill Rewey's Continental A-65 starter system, lengthening the cabane struts to allow better front seat entry, William Wynne's serial treatise on Center of Gravity control, Bernard's "long" Corvair fuselage, control stops, wing tank design for better gravity flow, engine mounts for various engines, types of fabric and finish, different aileron attachment, and on and on.

During their lifetimes, Bernard and Orrin made money selling the Improved Air Camper plans, and rightly so. After both Bernard and Orrin passed away, Don Pietenpol, Bernard's son, was the person of significance who continued to provide copies of the original Hoopman plans at cost or near cost, and answered questions from builders. Don has now passed on. We have lost a knowledgeable asset.

Remember, the original plans for the Improved Air Camper have never been updated. These later modifications (most good, a few not so good) have been presented, discussed, and catalogued primarily through the unbroken publishing history of the Buckeye and the Brodhead Pietenpol Association newsletters since 1983. This is thousands of pages sent to thousands of members/subscribers.

Some years ago, Matt Dralle started the Matronics internet aircraft discussion group. The section marked "Pietenpol" has the busiest action, and is the most gentlemanly.

The Matronics list provides an instant question and answer forum. Thanks, Matt. Everybody's an expert on the internet, so be careful of your advice. For a bookshelf of edited material, BPA News is probably the better archived source over a longer time.

Today, Bernard Pietenpol, Orrin Hoopman, Vi Kapler, Paul Poberezny and Wes Schmid (who reprinted the old Glider and Flight Manuals) and the many other contributing individuals are held in high esteem by all of us involved with the hoary and beloved Air Camper. That's only right. It really is a co-op!

Errata

From **Michael Perez**

Hello John. I have an addition to my Propeller Hub article printed in the last news letter.

Since my write up in the last news letter concerning the fabrication of a tapered shaft hub install/removal tool, it has been brought to my attention that I have over looked a key element. (Thanks Jack M.)

In the original article that I referenced from 2005, while trying to remove the hub nut, the snap ring may work its way out of the retaining groove. To prevent this, the author used another special made tool to hold the snap ring ends apart, thus keeping it from jumping out of the groove. (see the original article on pages 3-7 in this issue) At a later time, I will make said tool and do a follow-up article on making this tool and how to use it with the hub tool in the last article. My apologies for the mix up.

Youngest Builder with a Running Corvair

by **Willam Wynne**

At Corvair College #29, the high point of the event was the perfect engine test run of the 100 HP Corvair by 16 year old Pietenpol builder Joseph Jameson. We ran a number of engines for the first time at the College, but everyone present took notice of Joseph's achievement.

Many Pietenpol builders saw the October 2013 newsletter, which carried a nice story about Dan Helsper taking Joseph aloft for his first flight in a Pietenpol. Doc and Dee Mosher, Dan and most everyone who has met Joseph comments that he is obviously a bright and thoughtful young man, blessed with a supportive family. A few minutes in his company is enough to make anyone say something positive about the future of aviation.

Joseph has a lot of his airframe built, and is closing in on his PP check ride, but opted to dig into his Corvair engine

Father/son team the Jamesons from TX, stand beside their newly run engine. The engine is destined for a Piet that is mostly done. Dad (Kelly) is clear that the plane and engine are really the handiwork of his son, Joseph. A very bright and skilled young man.

when Kevin Purtee and Shelley Tumino hosted Corvair College#28 in Texas.

Joseph got his Corvair underway at #28, but signed up for #29 in Florida to finish and test run it. The engine is a 100HP Corvair, with a Roy, 5th bearing and Falcon heads. It is not a "spare no expense" engine, but it is an exceptionally high quality Corvair with electric start, dual ignition, stainless valves, HD oil cooler and filter and some weight reduction items like a flyweight welded deep sump pan. The engine is a bit lighter than a C-90 or an O-200.

When Joseph was done, we pre-oiled it and put it on our test stand. It started in less than 2 seconds of cranking. We put down a 30 minute run to break in the cam and lifters, followed by a second run. I have run several hundred Corvairs on the stand in the last decade, and Joseph's engine ran as well as any of them. It was smooth, didn't leak a drop of oil, and his adjustment of the hydraulic lifters was perfect. A visitor to the college asked what this young man's 'secret of success' was. I said "He actually read the book and he follows the instructions."

Hats off to Joseph for his achievement in learning and building, and special thanks to everyone in the Pietenpol community that played a positive role in assisting him. Joseph and his Dad are planning on attending Brodhead this year, if you have not met them, take a moment to do so, they are outstanding people. -ww

85th Anniversary and AirVenture

2014 marks the 85th anniversary of the Pietenpol Air Camper. The Matronics list has has a bit of banter on having a few aircraft at Oshkosh in celebration of this milestone. I was approached by a couple of members to see if we would be welcome in Vintage parking.

Since I am the membership chair for VAA during Oshkosh, I presented this to the board a couple of weeks ago. After a bit of debate the board has agreed and we are welcome to park our Air Campers in the Vintage Parking or Camping Area. I will have more information before the Brodhead 2014 issue is out in early July.

Classified Ads - - -

(Classified Ads are free to BPA members. Must contact BPA each issue in which you want the ad run.)

BPA member (Doc & Dee Mosher's sister) Betty Schoenberger - has an apartment for rent for the EAA AirVenture. It is a newly redone completely furnished 2 bedroom upper with a private entrance and room for sleeping bags. Located 7 blocks from Wittman Field and only a block to South Park (a large city park). Living room, beds (1 double, 1 twin), large full bath, fully equipped eat-in kitchen, AC, towels and bedding furnished. Parking for 2 cars. $1400.00 for the week or $200.00 per night. Contact Betty to talk about it - email is tschoenberger1@new.rr.com , phone 920-231-2235 or write to 936 West South Park Ave. Oshkosh, Wisconsin 54902.

For Sale: Pietenpol Air Camper repair project. 90% completed. Real nice. No Engine. Three piece wing. $2,900. Call **Bill Poiry** (Oak Harbor, OH) for more information, 419-898-7985 or email billar@amplex.net

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For Sale: Pietenpol Air Camper. Corvair powered. Flies like a dream. Completed in 2010 and based in South Central Virginia. 50 hours total time. 11 gallon center section fuel tank. Asking $8,500. Call **Mike Denton**, Home: 434-374-0766, Cell: 804-894-0485 or email kerrlakedocks@gmail.com.

For Sale: Bradford Sky Scout Side-By-Side fuselage prints for sale. Uses standard Pietenpol wings and tail surfaces. Call Kyle at 517-663-3083 for information.

For Sale: Pietenpol Air Camper. Ready for cover. All certified aircraft wood used in construction. Project is sitting on its landing gear. No engine. $3000. Contact **Rod Elg** (Aguila, AZ), Home: 968-685-2660, Cell 907-250-1327

For Sale: Pietenpol Construction DVDs.
I have a series of HINT DVDs that chronicle the building process of my Pietenpol. Each volume contains live action video, still pictures and narrations on the process I used, methods of construction and modifications. Please visit Karetaker Aero, (karetakeraero.com) for detailed volume information and to order.

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