

THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

Voted to Top Ten Newsletters, 1997, 1998 McKillop Award Competition

President	*could be you!*	800-555-1000
Vice-President	*could be you!*	800-555-1000
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Newsletter Editor	*could be you!*	800-555-1000

<http://www.eaa1000.av.org>

November 2021

Chapter 1000 meets monthly on the third Tuesday of the month in the USAF Test Pilot School Scobee Auditorium, Edwards AFB, CA at 1700 or 5:00 PM, whichever you prefer. Any changes of meeting venue will be announced in the newsletter. Offer void where prohibited. Your mileage may vary. Open to military and civilian alike.

This Month's Non-Meeting:



Mission Complete!

You
Any Random Tuesday
Any Time
Any Where You Want

As mentioned last month, EAA Chapter 1000 will no longer be meeting. All **Project Police Officers** have been transferred to the Retired Reserve. **This will be your last official EAA Chapter 1000 newsletter.** Imagine our embarrassment at being outlived by **EAA Chapter 1**, who are just like us except they have three less zeroes in their chapter.

This final newsletter is being published to complete an orderly shutdown and publish the remainder of stuff we had in the queue.

So how did this demise come about? Participation in chapter events has been slowly decreasing over the years. In fact, there is a high probability that if you are reading this, you are one of the chapter members who ceased participating in chapter events. The triggering event was when **Kommandant For Life Gary "Paco" Aldrich** abdicated the position, having decided to leave the People's Republik of Kalifornia for the Great State of Texas, making him unavailable to preside over chapter events.

But he wasn't the only one. Long-serving **Vice Kommandant Hellmuth Steinlin** decided that he was too advanced in years to safely participate in aviation any more, and has recently moved to Florida to take up sailing.

Our **Secretary, aka Minister of Propaganda Kent "Cobra" Troxel**, has only been intermittently available for the last several years, having chosen to pursue the siren

song of **filthy lucre**, brought on by the opportunity to instruct young minds full of mush on "How To Be Successful In Business". No mention of if "Really Trying" is required. **Cobra** announced his resignation several months ago, but rumor is the **Kommandant** never accepted his resignation.

While **Treasurer George "Knife" Gennuso** has not officially announced termination of his position, what's the point of sticking around if everyone else is leaving?

Finally, **Newsletter Editor Russ "Erbman" Erb** took the job temporarily in October 1996 when **Vern Saxon** asked him to cover the newsletter duties for a few months while he got treatment for skin cancer. He promised he would take the newsletter back as soon as he got better. Sadly, **Vern** passed away in April 1997. Undaunted, **Erbman** kept waiting for him to recover and resume his post. Meanwhile, after defeat by **Buzz Lightyear** in **Toy Story 2** in 1999, **Evil Emperor Zurg** agreed through a plea bargain to take up a new job as **Evil Editor Zurg**, where he ran roughshod over **Erbman** in the editorial room. After 25 years of waiting, approximately 300 newsletters published, and ongoing rough treatment under **EEZ**, **Erbman** has decided that he is done waiting for **Vern's** health to improve and, following the example of the **Kommandant**, is abdicating his post. Facing a lack of employment, **Evil Editor Zurg** will now be commuting between Fort Worth Texas where **PPO Stormy Weathers** has been suckered in to serving as Newsletter Editor for EAA Chapter 661 (Denton TX), and Shelbyville Tennessee where **PPO Randy "Kanard" Kelly** has similarly succumbed to the pressure to be Newsletter Editor for EAA Chapter 1326. Clearly these two can't learn from the pain of others.

With no one stepping up to take over the leadership of the chapter after many years of opportunities, your Board of Directors have no remaining option but to let EAA Chapter 1000 go **dormant**. Even so, it is worth a moment of your time to remember a few of the things that your chapter has accomplished.

EAA Chapter 1000 had its first meeting in November 1991. **Doug "Opie" Dodson** was there. **Erbman** would not show up until a couple of months later. The early history of EAA Chapter 1000 from 1991 to 1997 is well documented at <http://www.eaa1000.av.org/history/history.htm>, so I won't rehash it here.

Perhaps the most significant event during this era was

President **Jim Piavis'** column in the newsletter that spawned the concept of the *Project Police*. The *Project Police* would go on to sponsor 25 consecutive annual Fly-Ins, usually titled with some form of "nth Annual Scotty Horowitz Going Away Fly-In" from 1992 to 2016. Having reached the magic number of 25 and in light of declining attendance, the *Project Police* shifted their focus to having an annual Fly-Out. In 2017 we had an extremely successful fly-out to the Palm Springs Air Museum, where **JDIII's** old squadron commander just happened to be one of the docents. In 2018 a few of us flew to **Hellmuth's** house in Adelanto. For 2019 we had planned a fly-out to the Estrella Warbirds Museum in Paso Robles, but that was cancelled due to excessively high winds. I will leave you to guess what happened to the fly-outs for 2020 and 2021.

The nominal purpose of an EAA Chapter is to provide support to its members who are building Experimental Amateur Built Aircraft, aka "Homebuilts". Over the years EAA Chapter 1000 had a number of First Flights, listed here in roughly chronological order, as best as I can recall:

Scott Horowitz Tri Q-200

Jim Piavis Boredom Fighter (and later RV-7)

Brian Martinez Q-200

George Gennuso Pulsar

Howard Judd/Dave Vanhoy Giles G-202

Vince Sei F1 Rocket

Russ Erb Bearhawk

Frosty Wyatt RV-9

Doug Dodson Glasair IIFT

Notably absent from this list is **Scott "Stormy" Weathers** RV-8A, which is still stuck at a Total Rivet Count (TRC) of **7609**.

Other notable aircraft in the chapter were the **Kommandant's** VC-180 "Fightin' Skywagon" and **Dave Vanhoy's** North American T-6 Texan.

Another unusual characteristic of EAA Chapter 1000 was that members would move away but would remain members of the chapter, with their only remaining benefits being to read this newsletter and brag about being a member of the *Project Police*. This led to the formation of the EAA Chapter 1000 Detachments, or "Dets". Sadly, some of these Dets are now more active than the home Chapter.

Also unusual was the chapter members' appreciation of fine aviation art, brought about by the many outstanding presentations by world famous aviation artist **PPO Mike Machat**.

One of the dangerous things about having a "Bucket List" is what happens when you cross off all of the things on your Bucket List. EAA Chapter 1000 had at least three things remaining on its Bucket List at the beginning of the pandemic.

1. Find a way to broadcast the meeting programs so that members of the Dets could still participate. This was suggested many years ago by **PPO Chuck Firth**, who suggested using "Microsoft NetMeeting". Thanks to the pandemic, the necessary technology became available and meetings were streamed over Zoom. Complete.

2. Find a suitable meeting location off base to eliminate base access problems. I had hoped that the Flight Test Museum would be completed outside the West Gate so that we could meet there. This has still not progressed beyond a foundation. Following the lead of the Daedalians, we held two chapter meetings in the patio area of Guido's @ the Hangar at Rosamond Skypark, complete with Zoom. Complete.

3. The EAA Chapter 1000 Bylaws exist only in paper copy. The electronic file was lost back in the 1990s. The **Kommandant** wanted to get the Bylaws in electronic form but wasn't willing to retype them all. At this point, it seems pointless to complete this item. Besides, we never paid attention to the Bylaws anyway. Cancelled due to lack of interest.

Having nothing left on the Bucket List, it is time for EAA Chapter 1000 to go dormant. There will be no more scheduled meetings with interesting programs. There will be no more monthly newsletters delivered on time for your reading enjoyment. We may occasionally have a Zoom meeting to catch up with each other, but no one will be required to come up with a program. I or others may get the itch to write a story which will be sent out to the former membership, but it won't have the fancy formatting of this newsletter. If time and interest allow, I may revamp the chapter website as a historical record of the chapter, mostly consisting of 30 years of newsletters. I might even write the history of the chapter after 1997. The previous history ended in 1997 because that was when I wrote it.

Finally, you don't need to worry about contacting **Erbman** to arrange base access because you can't get on the base anyway and there is no reason to anymore.

- **Erbman**

Subbing for the "vacant" **Vice Kommandant**

Last Month's Meeting

EAA Chapter 1000

Guido's @ the Hangar

Rosamond CA

Zoomland, USA

19 October 2021

Gary Aldrich, Presiding

The final meeting of EAA Chapter 1000 commenced around 1800 PDT in the back room of Guido's @ the Hangar. Present were chapter stalwarts **Kommandant Emeritus Gary "Paco" Aldrich**, **Aviation Celebrity Jimmy "JDIII" Doolittle**, **Secretary Emeritus Kent "Cobra" Troxel**, and **Treasurer Emeritus George "Knife" Gennuso**. Attending as program speaker was **Newsletter Editor Emeritus Russ "Erbman" Erb**, joined by **Schmoozemistress Satoka "Tuki" Erb** and **EAA Chapter 1000 Mascot Emeritus Emily "Emmy" Erb**. On the Zoom were remote speaker **"Angry" Karl Major**, with participants **L. Charles "Chuck" Firth**, **Vice President Emeritus Scott "Stormy" Weathers**, **Randy "Kanard" Kelly** and **Murry "insert call sign here"**

Rozansky. The fact that I can recall from memory three weeks later all who were there should tell you something about the reduced participation amongst the membership.

The program for this meeting was “Mr. Bearhawk’s Wild Ride”, an account by **Russ Erb** and **Karl Major** of their encounter with an invisible mountain wave rotor that happened exactly two years prior. You probably won’t remember that this presentation was originally planned for EAA Chapter 1000 in March 2020. The reason that the presentation didn’t happen then is left as an exercise to the reader. We held on to the presentation, wanting to save it for when it could be presented in person. With nothing else to offer, we decided to present it this month as at least it could be done semi-in-person. If you’ve caught on to the theme of this newsletter, it’s a good thing we got it in before there was nobody to present to.

I could tell you all about what was presented in the presentation by the presenters, but there are far more efficient ways for you to find out for yourself. First, the entire story was written up and published in KITPLANES and released on the web at <https://www.kitplanes.com/mr-bearhawks-wild-ride/>. Your second option is to watch the video of the meeting at <https://youtu.be/bbFjyuXWPHs>. You’ll need that link because the video is unlisted and won’t show up in your recommended videos or in a search.

After the presentation, the **Kommandant** declared “Victory!” for the final time, and the remaining **Project Police Officers** disappeared quietly into the night.

Most of this is true.

- **Russ “Erbman” Erb**

Emergency Backup Minister of Propaganda
Chapter 1000 of the Experimental Aircraft Association of these United States of America and Occupied Territories
“We have more zeroes in our chapter than any other!”

Kommandant’s Korner

Why are you looking here? By now, the **Kommandant Emeritus** has departed the fix, having temporarily taken up the position of itinerant house guest while waiting for the new **Kommandant Emeritus’ Kwarters** to be completed in San Antonio TX. If we could have convinced him to write this last column, he would have said something like “It’s been a great ride” and how he is proud of everything we have accomplished as a chapter. Then he would tell you about what is coming up in the future, except there is nothing coming up to talk about. Then he would review an applicable safety topic, reminding you “Don’t do nuttin’ dumb”. Finally, as always, he would remind you...

Fly safe, and Check 6!

-(for) **Gary Aldrich**
Kommandant Emeritus



Lois’ (Skylane) 2020 Annual, or How I learned why A&Ps get paid so much for cylinder replacement

Chapter 3. Re-assembly

Lois is a production aircraft, and although the FAA doesn’t care WHO takes a production airplane apart, putting it back together is another story. The good news is ANYBODY can put it together – as long as they are appropriately “supervised” by a licensed A&P or IA mechanic. This is the essence of the famous “owner assisted annual” inspection concept which is a GREAT way to save money. However, DO NOT expect to ask any shop or mechanic if they will allow you to do this as the level of trust a mechanic will give you to do ANYTHING that they have not watched like a hawk is highly dependent on their knowledge of your mechanical skills and trust in what you’ll do when they aren’t watching you.

Over the past 20 years my mechanic had watched me do a lot of things (right and wrong) and we had developed a pretty good level of trust. Anything “non-routine” (i.e. nothing specifically noted as owner allowed maintenance in the FARs) I asked him about first, told him what I thought I’d like to do, and asked what he was willing to let me do. If I encountered something I didn’t expect, or an obvious problem, I stopped until I had talked with him and he either gave me a simple workaround or came by and showed me what needed to be done.

When it came to working on a Continental O-470, I had the Continental rebuild and parts manual. Whenever we talked about doing something on that engine, the manual was the first reference. Even if I’ve done something, if there were “intermediate assembly” steps, I would have him inspect before I went to the next phase. Read this as – he wouldn’t allow me to do anything he hadn’t shown me how to do or had seen me do before under his supervision. Working on anything like this is time consuming – BUT it is the only legal way for a non A&P to do anything not authorized under the FAA’s owner maintenance regulations. Over the years I had watched cylinders get replaced, but I’d never done that, so this was going to be a slow process. In this case, not only did I have the Continental rebuild manual available, but I’d written an “informal” checklist of all the steps I’d done to pull the cylinders off to start with, and ready access to an A&P and IA willing to “supervise” me.

The first thing we did was open up the new cylinder boxes to make sure what all we had, and to segregate all the supplied parts to make sure we had enough of everything we needed to reassemble and reattach all six cylinders.

Next, we put all the cylinders on a table, lubed and put the rubber cylinder/case o-ring on the cylinders, and he had me pull the piston out of the cylinder barrel enough to get the piston pin in.

This was the first humbling lesson of the day. Lubing and mounting an o-ring is trivial, but carefully pulling a piston far enough out of the cylinder bore to expose the piston pin hole without pulling the whole piston out (which



Inventorying the cylinder boxes



Cylinder assembly line



Piston rings in cylinder, but pulled out far enough to install piston pin

requires you to have to have a piston ring compressor to re-install) requires both some strength and control. Unlike the pistons that we removed from Lois, the new ones had rings on the bottom skirt as well as the top, which meant we'd need a ring compressor anyway to install the cylinders on the block.

There was no reason at this point to go get a ring compressor since we were just revealing the piston pin holes until the first piston stuck and when I tugged again, I pulled the whole thing out, meaning we now needed a ring compressor for this step. **Mr Bill** has stronger hands and upper body strength than me, so this was a task better accomplished by him with my assistance "damping" the piston to avoid pulling another one out again completely. We pre-positioned the pistons for the remaining cylinders then Bill went back to the shop to get his ring compressor so we could reinstall the piston I'd accidentally pulled out, plus we needed it for the next step anyway.

The next step was a two-person job regardless of who did it, as it required removing the **Mike Busch** recommended "blocks" we'd used to keep tension on the crankcase, rotating the crankshaft to fully expose a piston connecting rod, aligning the rod and piston pin hole, inserting the pin, using the ring compressor to compress the piston skirt ring, then pushing the piston into the

cylinder, removing the compressor then pushing the cylinder into the block and onto the mounting bolts.



First cylinder installed

It sounds complicated, but it was relatively simple with two of us, and we had mounted all the cylinders in less than an hour after we picked the first one off the prep table.



All cylinders installed

After discussing the next steps, my “homework” was to install and “snug” down all the cylinder head bolts at which point Bill would return to check the work and torques. I was also cleared to install the rocker arm shafts (though I obviously couldn’t install the rocker arms without installing the pushrod/tubes, which also make access to the cylinder bolts even more difficult.

Well, installing nuts and snugging down the cylinders sounded pretty easy, but now, the “lessons” began. Installing the nuts was easy as I have small fingers, but when you start trying to snug nuts down to “through bolts” and don’t carefully monitor how much of the bolt is protruding on each side, you end up pulling the bolt through the crankcase, and then you don’t have enough clearance to get the special cylinder nut wrench OFF of the nut on the side you’re working on. Then you have to loosen up the nut on the stud you’re working on, then get another open-end wrench on the nut on the other side to pull the bolt back through the crankcase. And so went lesson #1.

Lesson #2, the “new improved” Millennium cylinders apparently have more fins for cooling, or at least the fins

are mounted closer to the crankcase side to facilitate cooling. As a result of this, the bottom fin of the cylinder #6 (front left side) ran up against the clamp securing the top of the propeller governor, so I couldn’t tighten the nuts for #6 to seat that cylinder. Time to call **Mr Bill** to discuss the problem and propose a solution.



Prop governor/cylinder interference

The simple solution was to “relock” the clamp to put the nut on the other side of the prop governor housing – which is a two person job because if you take the clamp off the prop governor case you risk changing the “phasing” of the prop governor adjustment plus risk spilling the guts of the governor onto the ground. So **Mr Bill** and I relocked the governor and I completed the nut installation and cylinder “seating”.

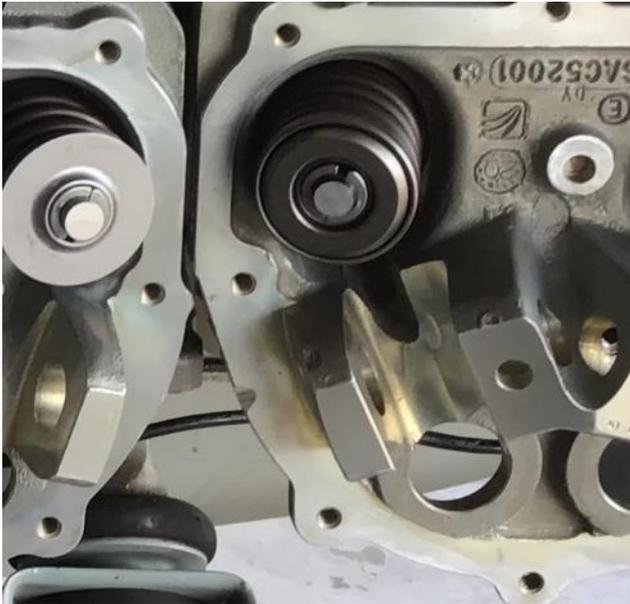


Governor clamp relocked to remove interference

Next simple lesson – the new Millennium cylinders are machined so that the chamfer on the rocker arm shaft is “just right” to allow installing the shafts after installing the cylinders.

Unfortunately, the laws of probability (aka the “Law of the 3 Bears”) dictate that not all spacings will be “just right”. Some will be “too loose” and some will be “too tight”. “Too loose” is NOT a problem (dirty minds stay away from that one), but the “too tight” option meant some of the shafts required “persuasion” and one wouldn’t go in at all. This problem was totally unanticipated by either me or **Mr Bill** so the simple solution of “install the rocker arm shafts before installing the cylinders” was a lesson to both

of us. Together, **Mr Bill** and I “persuaded” the worst offender to go into place using 4 hands, multiple rags, and some steel channel lock pliers (more on that later).



Before installing rocker arm shafts

With that done, we proceeded to torque down the cylinder nuts. I discovered this was ANOTHER task where superior upper body strength and finesse made the task much easier, so Bill did all the final torqueing of the cylinder head nuts to the specifications of the Continental rebuild manual. (Yes, you torque everything at least twice to make sure you did it right.)

The next homework assignment was to install the pushrod tubes, pushrods, and valve rocker arms. If you've never installed a Continental push-rod tube before, there is a “hard way”, and “easier way”, and “the easiest/right way” to do that. The “hard way”, which I already knew NOT to do, is to install the interior metal bushings in the bases of the pushrod tube seats, install the “rubber doughnut oil seals” on both ends, mount the exterior bushings on the ends of the pushrod tube and tension spring (sorry I don't have a picture) and “man handle” the tube to get the tube into the receptacles on the cylinder and the crankcase. The easier way is to use a “crows foot” wrench appropriately sized big enough to slip around the pushrod tube but smaller than the spacing of the pushrod tension spring flange and use that to compress the tension spring side of the tube into the crankcase until you can get the other end into the hole of the rubber doughnut oil seal on the side of the top of the cylinder. This works very well, but it's not the best way. The best way is to use a special tool to compress the spring and lock it down with a clip so you can gently slide one end of the pushrod tube into the oil seal on the top of the cylinder, align the other end of the tube with the compressed tube with the doughnut on the crankcase side of the tube then pull the clip releasing the spring. Fortunately, another one of the Skypark A&Ps, **Bill “Bubba” Francis** had “the special tool” and allowed me to use it. This turned the ugly “manhandling” the tubes into place task into a relatively painless hour to install all 12

pushrod tubes. With pushrod tubes in place, installing the pushrods was a “no brainer”.

Installing the rocker arms was relatively simple – you turn the prop until the pushrod is at its lowest point on the cam, then “juggle” the two thrust bearings, the rocker arm, and rocker arm shaft until the shaft goes all the way through the rocker arm and thrust bearings, line up the hole of the bolt that secures the shaft, put in the bolt, and snug it down. Remember that one rocker arm shaft that required “persuasion” (with rubber padding, channel locks, liberal applications of oil and two people persuading it at the same time)? Well, that shaft required even more persuasion to line everything up and push the shaft through the rocker arms, thrust bearings, and into position to line up the retaining bolt. At least everything went together. I torqued the retaining bolts to the torque **Mr Bill** told me to use and called him to check my assembly and torques, which he was happy with.

The next assignment was reassembling the exhaust and intake manifolds, but Bill told me to first check the valve lash of all the intake and exhaust valves. Having grown up working on lawn mowers, cars, and motorcycles, checking valve lash was NOT a mystery, and I even still had feeler gauges in my tool collection. Move the prop till both valves close, go to top dead center and measure the spacing between the rocker arm head and the end of the valve. Yep – piece of cake, until I get to #5 exhaust valve, which was the one that needed the “persuasion” to get the rocker arm shaft into the mount. Where ALL the other rocker arms “rocked” easily when their rods were on the “flat” of the cam, #5 rocker arm was VERY stiff and wouldn't rock on its own without force. Damn. Something was binding and I was going to have to disassemble that rocker arm assembly and clean it up.

Getting #5's shaft OUT should have been as simple as using a brass drift to drive out the shaft, but I couldn't afford to damage any of the parts. The solution was finding a wooden dowel smaller than the rocker arm shaft and cutting slices which I could use as buffer shims to avoid marring either the shaft, the inside of the channel, or the inside of the rocker arm. I'd put a shim up against the end of the rocker arm shaft, put a penny on top of that to give me a solid surface, then tap the shaft out maybe ¼ of an inch, then add more shims. After about 30 mins of this routine I was able to get the rocker arm and thrust bearings out, but the shaft was still binding in the bore, which seemed to indicate some galling in the bore or somehow an aluminum sliver was in between the shaft and the bore. I already knew the clearance between the shaft and the adjacent cylinder was too tight, and after discussion with Bill we decided to gently file the pre-cut chamfer on the adjacent cylinder to increase the clearance between the cylinder and the rocker arm shaft, and we were finally able to gently tap the shaft out.

A careful dismantling of #5 revealed the problem. The apparently slightly larger outside dimensions of the new Millennium cylinders and the normal variance of pieces made the clearance between the cylinders insufficient to give enough space to line up the rocker arm shaft with the bores. The slight misalignment between the steel shaft and

the aluminum bores caused a slight galling of the bore making the shaft too tight. Additionally, our use of channel-lock pliers to apply pressure in line with the pin longitudinal axis marred the bearing surface between the bore face and the thrust bearings making the thrust bearings too tight. Using very fine sandpaper (about 1000 grit) with lots of oil, and a jeweler's file, I was able to smooth out the imperfections and repolish the surfaces both inside the bore for the rocker arm shaft and the surface the thrust bearing mated against. Everything went back together much easier (though it was still tighter than the other valves) and the rocker arm would rock with only slight pressure.

Next were the intake manifold tubes. I lubricated the rubber tubes between the intake manifold sections and reassembled the intake manifold side tubes and reattached them to the cylinders. That sounds simple, but it basically involves "loosely" assembling all the pieces "in place" and sliding the whole side tube assembly and "jostling" the individual cylinder manifolds to get all the manifolds in place so they seat on the cylinder intake manifold studs and can be bolted down. After getting the side/cylinder tubes assembled, I then discovered that the new position of the clamp nut on the prop governor which now allowed #6 cylinder to seat, would NOT allow the front balance tube of the intake manifold to be put on.



Governor/intake manifold interference

This was a stop work action and required more coordination with **Bill**. This time I temporarily mounted all the other stuff (baffles, cables, etc) that would be in that area to check clearances before getting Bill to come over so we could "re-clock" the clamp on the prop governor again.

That done, I was cleared to reassemble the exhaust manifold and torque all the intake and exhaust manifold nuts. This was another "easier said than done" action as you DON'T have straight shots at all the nuts and so about half of them you have to use sockets that have been ground down both in length and outside diameter to get to the nuts, and you have to use either "wobble" drives or a 1/4"

universal joint socket. This makes a torque wrench inaccurate, so you have to "calibrate" your wrist to the appropriate torque then torque the nuts by feel.

Bill came by and checked the manifolds and torques and was happy, and gave me my next assignment to start reassembling the engine baffles. I reviewed the procedure and showed him the parts, and then it hit me. Remember earlier when I said we started to remove the cylinder, then discovered we had to remove the "intercylinder baffles"? When that happened, I forgot to write that step in my checklist. Since intercylinder baffles are only installed when the engine is installed, and NOT during engine assembly on an engine stand, that step is not in the Continental engine rebuild manual checklist either. Double damn! Plus **Bill** admitted HE had forgotten that. Triple damn! Now all the manifolds had to come back off again so I could install the intercylinder baffles and then reinstall the manifolds.

Two workdays later, after removing the manifolds, I started remounting the intercylinder baffles. Fortunately, that's a rather simple procedure just involving one long bolt that extends down from a spacer on top of the cylinders to a nutplate tying together two baffles under the cylinders to force the air to go through the fins instead of in between the cylinders. Three of them went in without a problem, but the pilot's side rear baffle was worn down where it touched the cylinders so much that it wouldn't seat properly, so – it's off to the Internet to find a replacement. The baffle is essentially a 6 inch square piece of aluminum with some stamped ridges for strength and some cutouts. The price from Cessna was OBSCENE, Aircraft Spruce didn't have the exact part, nor did MacFarlane, although both of them had a part that was easily modifiable into the configuration required (that's another story). \$60 to MacFarlane, a 3 days wait, some work with some tinsnips and a rivet squeezer and I had a \$260 Cessna intercylinder baffle to install – a 10 minute job.

Now I got to reinstall the manifolds for a second time (2 evenings work) and have **Bill** check the torques. My final homework assignments were to install the upper baffles and hook the SCAT tubing for the heaters back up. **Mr Bill** did a quick check of that work, checked the magneto timing, and the engine work for the annual was done.

I poured in 11 quarts of oil and the next time **Bill** came over was for the initial engine run. I primed her, pulled through a couple blades to loosen stuff up and tried the starter. She started on about the 4th blade on the first starter cycle. Yay!! I got oil pressure and ran for about 30 seconds. I shut her down, we checked for leaks, and did another short engine run (per the Millennium cylinder website instructions), checking the mags and cycling the prop governor once. I lost power on one cylinder during the mag check, but everything else looked fine, so it looked like one of my reconditioned plugs was bad.

Over the next couple days I finished the final items of the owner assisted annual and **Bill** signed off the logs. The next day we did the initial break-in flight, running at 75% power for the first hour, then dropping back to about 65% and all the temperatures looked good. Back on the ground,

Bill and I pulled the cowlings to take a look at everything. All the pieces appeared to be in the same place and no sign of any significant oil leaks. I remarked something like “Thank God that’s over with” and thanked **Bill** profusely for all the help. **Bill** laughed and said something like “no problem – YOU did most of the work. **Now you know why mechanics charge so much to replace cylinders.**” Yes, I do indeed understand that. ;-)



Engine reassembled and ready to start

I did about 3 more local flights checking the engine and making sure all the avionics worked before declaring her ready for her ferry flight to our new home in Tennessee. Unfortunately, the two windows of opportunity I had in my work and “family” schedule available for me to fly **Lois** to Tennessee both got weathered out. With a little help from the pilot services folks at AOPA we found a commercial pilot available to ferry **Lois** to TN. (A woman airline pilot and member of the “99s” who had lots of additional time on her hands because of the COVID rollbacks.) Long story short, the commercial pilot flew **Lois** to Tennessee in late November 2020 (including a couple hours of night IMC) with no mechanical problems (75% power most of the way). She only burned 1 quart of mineral oil the whole flight, so we think the break-in should be about done. Two days after leaving California, **Lois** was sitting cozy in a community hangar (no private hangars available, but we’re on the waiting list) in Tennessee.

Leigh and I finished packing up the household goods and drove to Tennessee mid-January 2021 but it was still another month or so before the weather was amenable to having them pull **Lois** out of her comfy hangar. So after sitting without a charge for over three months, I accomplished my “cold priming” procedure, and **Lois** cranked right up again after 3 or 4 blades and we went flying. We had a nasty stretch of weather for a couple months and I had a run in with some dental problems, making me lose powered aircraft currency (I had maintained my glider currency). Spring finally arrived, and **Lois** has been getting out on a regular basis. She hasn’t burned any oil, but #1 cylinder still runs hotter than the others, especially on climb out and during touch and goes.

- **Randy “Kanard” Kelly**
EAA Chapter 1000 Det 15, Shelbyville TN

B-29 visits Chuck Firth

On 26 June 2021 the Commemorative Air Force B-29 “Fifi” sallied forth from its home in Fort Worth TX to visit Nashua NH. Ever alert **PPO Chuck Firth** was on the scene to execute a no-notice inspection to ensure that the CAF were doing everything correctly with this historical treasure.

Chuck forwarded the following pictures to **Evil Editor Zurg**, however, his expertly written comments were not found in Dropbox until after this was written. Therefore, you get **Erbman’s** recreation the report, in spite of the fact that he was not there. Then again, that’s well within the editorial policy of this publication.



Starboard side of Fifi forward fuselage



Nose showing bombardier station



Norden bombsight in the center and a gun director just to the upper left. The bombsight was a gift to the CAF from the 1950's 60's entertainer Tennessee Ernie Ford. He was a B-29 bombardier during WWII and his work as a bombardier and instructor was so good that Gen. Curtis Lemay gifted the sight to him.



Starboard side sighting blister for remote gun sight



Port side of aft fuselage. Note transparent blisters aft of wing



Wright R-3350 engine of approximately 2200 HP, driving a "B-29 Prop". It seems every wind tunnel I ever visited, including the Texas A&M Low Speed Wind Tunnel where I did my graduate school, used a "B-29 Prop" as the wind tunnel fan. I guess there was a surplus of propellers after the war



Port side sighting blister for remote gun sight



Aft end of #2 engine nacelle, including main landing gear



Yes, the B-29 comes with a tail skid, but technically it is not considered to be a “tail dragger”. At least the maintenance crews prefer you not drag the tail



Tail gunner position to discourage attacks from behind. The tail gunner sat in his own pressurized compartment, and could only move to other parts of the airplane while the fuselage was depressurized at low altitude



Looking up past the tail gunner to the rudder. The rudder leading edge shape allows for the rudder to use a set-back hinge line for aerodynamic balancing without the leading edge of the rudder sticking out into the airstream causing drag



Far side remote gun sight through bubble of near side remote gun sight



Top remote gun sight through bubble of near side remote gun sight



Fire extinguisher, forms, and passenger seats in rear pressurized compartment. This view is looking through a large hole normally filled by the pressurization hatch



Rear unpressurized compartment between remote gun sights and pressurized tail gunner position. On wall on right side of picture is the auxiliary power unit, a small gas engine driving an electrical generator. This engine was referred to officially as the “Putt Putt” in training documents and placards. It provided electrical power for engine start and other purposes. During the rescue of the Kee Bird from Greenland, the putt-putt caught fire and burned the entire airplane.



Looking up the nose gear well at the crew entrance ladder. Covered arms in the foreground were contacted by the retracting nose gear, causing the gear doors to close



Fake 500 pound bombs in the forward bomb bay, painted as real bombs (yellow stripes). Note wing spar box behind and crew tunnel above



Front wing spar in bomb bay. Note sight gauge for auxiliary oil tank with a capacity of at least 188 gallons of oil. This tank was added by the CAF to have enough spare oil for events



Looking through the pressurized tunnel between the cockpit and rear pressurized compartment. It appears the CAF is currently storing a ladder in the tunnel. Rumor has it that crews were scared of using this tunnel in flight, thinking that if they were in the tunnel during a rapid decompression they would become a projectile in a giant gun



Radio operator's station at the rear of the cockpit pressurized compartment. Radios of this era were crystal controlled, unlike today's modern tuners. Choosing a frequency required connecting to a box with the correct crystal, hence the large number of boxes



The navigator's station located immediately behind the pilot's seat. Imagine Stormy or Kanard here with their dividers, plotter, and E-6B



Looking forward between the pilots' seats; pilot on the left and copilot on the right with an aisle between them. In front of both pilots in the center nose was the bombardier's station.



Immediately behind the copilot's seat was the flight engineer's station. For reasons unknown, Boeing decided to have the flight engineer facing aft, which meant that all of the engine controls had Engine 4 on the flight engineer's left and Engine 1 on his right.

This led to no end of confusion for many a flight engineer. To learn more about the flight engineer's duties, watch the WWII training film at https://youtu.be/R5D1f_1XU8w



Modification to the bomb bay doors to accommodate the tail of a Fat Man nuclear bomb.

Finally Revealed: "The Sky Trap" Production Secrets

Many years ago, Walt Disney shot a made-for-TV movie titled *The Sky Trap* for *Walt Disney's Wonderful World of Color* on Sunday night. Though set at a mythical airfield in Arizona, it was actually filmed at **Rosamond Skypark (L00)** because **Bill Aronson**, owner of the FBO, had many connections in Hollywood.

We had planned to show the movie at the February 2019 chapter meeting, but hardly anyone showed up, and we decided to go to dinner at Burger King instead. But fear not! Thanks to the generous people at Google, you can watch the movie yourself at your own convenience at <https://youtu.be/OfvjK3haWM8> in glorious Standard Definition.

When I was doing my private pilot training in 1991, **Bill Aronson** lent me a VHS tape of the movie to watch, and told me a bunch of stories about the movie production. I have sat on these stories for years, waiting for a chapter viewing to present them at. Since it is pretty apparent that such a viewing isn't going to happen, I invite you to go watch the movie, then read the following paragraphs. WARNING: Contains spoilers.

1. Though set in Arizona, the actual airport is Rosamond Skypark (L00), back before the Skypark houses were built. Back in those days, the Aronson's FBO featured glider operations. In fact, the current sectional still shows glider operations at L00, even though there haven't been any gliders (other than Jim Payne's) since sometime before 1991.

2. The airport office was the actual office of Aronson's Air Service at L00.

3. Bill Aronson was the technical advisor for the production. Disney shot the movie at L00 because Bill had contacts in Hollywood and invited them up to the airport. This was not the only movie shot at L00. If you can force yourself to watch the first few minutes of *Iron Eagle*, you will see the main protagonist race a Cessna 150 (or something like that) against his buddy in a fast car (a

pointless risky activity that some screen writer thought would be exciting). The airport he flew out of was L00.

4. The glider used in the movie was a LET L-13 Blanik. This all-metal glider was built in Czechoslovakia for the Soviet Union to use for initial pilot training. It became a very popular type around the world. **Erbman** flew one as a TPS student back in 1989 and the **Kommandant** taught spins in that same glider at one time. Today you are more likely to see a LET L-23 Super Blanik, which was an upgrade of the L-13 to make it more attractive to the civilian market.

5. "Picnic Valley", scene of the climax of the movie, was filmed at Brite Lake in Tehachapi.

6. In the movie, passage between Mexico and the U.S. was noted by flying past a monument that supposedly marked the border. This monument was actually erected on a local hillside near Rosamond.

7. **Art Scholl** did the majority of the flying, especially the stunt flying. He actually plays himself in one scene where he just happens to appear flying off the wing of the protagonist's glider.

8. I seem to remember that **Bill Aronson** had a cameo part on screen, but I can't remember exactly where.

9. In the first scene of the airport (L00), we see Mrs. Stone, the airport owner and manager, taxiing up to park in a Piper Tomahawk. This taxi scene lasts less than 15 seconds, but **Bill Aronson** told me that he spent hours with the actress teaching her simply how to taxi the airplane.

10. When the glider is stolen and found sitting on a dry lake in Mexico, it is then recovered by launching via auto-tow. All of this action actually happened on Rosamond dry lake on Edwards AFB.

11. In the opening scenes, a Piper Lance smuggling drugs is forced down in the desert by customs officials. This "crash" was accomplished by landing on a dirt strip hidden from the camera by a berm. This berm conveniently blocked view of the extended landing gear, and the propeller was out of frame of the camera. After the landing, the airplane was lifted up by a crane, the landing gear was retracted, and the airplane was set back down. Brush conveniently covered up the propeller so that the camera would not see that it was undamaged.

12. The smugglers hide out was the old Tropico Gold Mine that can still be seen from Rosamond Boulevard today.

- Russ "Erbman" Erb

Project Police Aircraft Spotters Quiz - Correction



(This is what happens when you write stuff quickly off the top of your head. I could never keep the Skyraider designations straight anyway...)

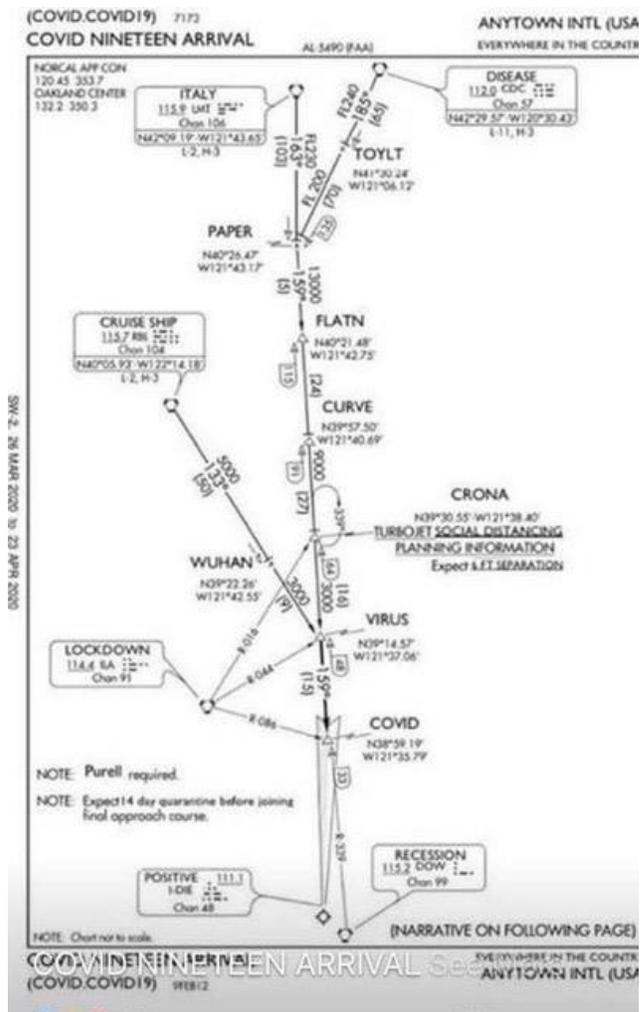
Dear Russ,

I know that **Evil Editor Zurg** would only

want correct aircraft designations in his newsletter, so please advise him that the Douglas Skyraider JD3 saw at OSH was an A-1H, not an AD-1. "AD-1" was the airplane's original 1948 Navy designation (**A**ttack **D**ouglas, first model), while the USAF version used in 'Nam was the A-1. The Air Force's single-seat A-1H was an AD-6 in the Navy.

Thanks,
Mike Machat

COVID NINETEEN ARRIVAL



Web Site Update



Just a reminder that the EAA Chapter 1000 Web Site is hosted courtesy of Quantum Networking Solutions, Inc.

You can find out more about Qnet at <http://www.qnet.com> or at 661-538-2028.

Chapter 1000 Calendar

EAA Chapter 1000 Board of Directors Meetings are now held on an unscheduled, as needed basis. If you need to know when, you're already on the e-mail notification list. (661) 609-0942

Dec 15: CNX EAA Chapter 1000 Festivus Etc Celebration, 6:00 p.m., Kommandant's Kwarters, 42370 61st Street West, Quail Hill CA. (661) 609-0942

Jan 19: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Feb 16: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Mar 16: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Apr 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

May 15: EAA Chapter 1000 Innovation Event, currently accepting ideas for 2011. (661) 609-0942

Jun 15: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 20: EAA Chapter 1000 Monthly Meeting, Cancelled in lieu of Air Show. (661) 609-0942

Aug 15: EAA Chapter 1000 Baseball Meeting, 6:00 p.m., The Hangar. (661) 609-0942.

Sep 21: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Oct 19: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

To join Chapter 1000, send your name, address, EAA number, and \$20 dues to: EAA Chapter 1000, George Gennuso, 3119 Lennox Ct, Palmdale CA 93551. Membership in National EAA (\$40, 1-800-843-3612) is required.

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Inputs for the newsletter or any comments can be sent to Russ Erb, 661-754-0524, by e-mail to erbman@pobox.com

From the Project Police legal section: As you probably suspected, contents of The Leading Edge are the viewpoints of the authors. No claim is made and no liability is assumed, expressed or implied as to the technical accuracy or safety of the material presented. The viewpoints expressed are not necessarily those of Chapter 1000 or the Experimental Aircraft Association. Project Police reports are printed as they are received, with no attempt made to determine if they contain the minimum daily allowance of truth. So there!

CANCELLED

**THE LEADING EDGE
MUROC EAA CHAPTER 1000 NEWSLETTER**

**C/O Russ Erb
3435 Desert Cloud Ave
Rosamond CA 93560-7692
<http://www.eaa1000.av.org>**

ADDRESS SERVICE REQUESTED

**THIS MONTH'S HIGHLIGHTS:
EAA CHAPTER 1000 GOES DORMANT; FINAL NEWSLETTER
FINISHING LOIS' TOP OVERHAUL
CHUCK FIRTH INSPECTS FIFI
"SKY TRAP" PRODUCTION NOTES**

