

Experimental Aircraft Association



Chapter 23



Salt Lake City, Utah

MARCH 2009 NEWSLETTER

Minutes of Last Meeting

13th February - The chapter meeting was held in the CAP building, with a presentation by Irene Brady. She started flying before WWII, and was a "Wanda the Welder" for Boeing working on B17's and B29's. It was a great program.

Next Meetings

Saturday 14th March - The chapter meeting will be held at 10:00am to Noon in Bill Letcher's hanger located at 1983 Thunderbird Dr. #B, at Bountiful Skypark Airport. Danny Sorenson will talk about flight testing. Glen Olsen and Doug Benson will demonstrate how to open an oil filter to examine it for engine wear.



Saturday 10th April - 9:00a Chapter Meeting at Bill Letcher's hanger. We're planning on having a pancake breakfast before the meeting.

Saturday 9th May - Chapter Meeting

Saturday, 13th June - Chapter Meeting

Upcoming Events

- **April 21st - 26th - Sun-n-Fun Fly-In**
For info see www.sun-n-fun.org
- **May 27th - June 1st B17 to Ogden**
For info see www.b17.org
- **June 12th - 14th - Golden West Regional Fly-In**
For info see www.goldenwestflyin.org
- **Air Academy**
Young Eagles Camp - Ages 12 and 13
Session 1: June 15 – 19, 2009
Session 2: June 21 – 25, 2009
Fee: \$675 for non-EAA member
Fee: \$600 for EAA member, or member in family.
Basic Camp - Ages 14 – 15
Session 1: June 27 – July 2, 2009
Session 2: July 6 – July 11, 2009
Session 3: July 13 – July 18, 2009
Fee: \$875 for non-EAA members
Fee: \$800 for EAA member, or member in family.
Advanced Camp - Ages 16, 17 and 18
Session 1: July 21 – 29, 2009
Session 2: July 31 - August 8, 2009
Fee: \$1,075 for non-EAA member
Fee: \$1,000 for EAA member, or member in family.
Applications and scholarship information:
www.young eagles.org/programs/airacademy/
- **July 8th - 12th - Northwest EAA Fly-In**
For info see www.nweaa.org
- **July 27th - August 2nd - AirVenture**
For info see www.airventure.org
- **August 22nd & 23rd Rocky Mountain Regional Fly-In**
For info see www.rmrfi.org
- **October 22nd - 25th - Copperstate EAA Regional Fly-In**
For info see www.copperstate.org

Articles

Presidents Message

Another month has gone by and most of it has been lousy flying weather. We are really looking forward to better weather.

Dana and I were very impressed with our guest speaker last month. We were impressed with her life experiences and all the great flyers she knew. Did you notice she did not wear glasses while looking at her notes? I can't even see to shave without glasses. (Thus the beard.)

All the bad weather has slowed the progress on the hanger. The floor won't be painted and the new lights won't be up for the first meeting. The important stuff will be done. The bathroom is finished and there should be hot water by then. The Grill won't be finished for the next meeting, so there won't be breakfast at this meeting. Hopefully, the next one.

With the economy in a down turn and all of us holding our breath it is nice that our chapter keeps us together to celebrate our love of flying and our friendships with each other. There is a lot to be said about camaraderie in the good times and the hard times. Now more than ever we need to stay focused on programs such as Young Eagles to keep the interest in aviation going.

We want to congratulate the Cosman's on their second first new flight in the flutter bug and applaud their hard work. For the rest of us, some have our planes finished, others hard at work on them, and some are still in the dreaming stage. One thing that is certain, we all share the love of flying.

The best to you and your families, we look forward to seeing you at the next meeting.

Bill

Why is it Called "B" Nut?

Article from the EAA "Safety Wire" Newsletter

I'm sure many of you have heard, and maybe used, the term "B Nut" when referring to an AN818 fitting. The question of why it's called a "B Nut" might have even crossed your mind. Well, here's the story.

The term "B Nut" goes back to the early days of standardization of aviation hardware for the military. For tubing and plumbing, the terminology that was adopted came from the leading supplier of aviation products at the time, the Parker Appliance Company. Parker published a book called "Maintenance of Aircraft Tubing Systems". I'm not sure when the first edition of this book was published, but I am aware of a "second edition" that was published in 1939, and the copy we have in the EAA library was published in 1943.

There is a section of this book titled "Flared Tubing Fittings". It is in this section that references to a "B Nut" are found. It is interesting to note that the AN818 coupling fitting commonly referred to these days as a "B Nut" is not actually a "B Nut". It is actually a "BT Nut". The AN819 sleeve that is used with the AN818 coupling is a "T Sleeve".

There is a "B Nut" mentioned in the book, and it is also used for flared fittings. However, the "B Nut" is a male thread

nut that is made to be used in a matching female thread receptacle. This combination was called the "AC810 series fitting" and to my knowledge was not included when the move was made to the "AN" series fittings that we know today. The "BT Nut" and "T Sleeve" that became the AN818 and AN819 fittings we use today were referred to as the AC811 series in the Parker book. In the 1943 edition of the book, the AC810 series (including the "B Nut") is referred to as "obsolete".

Whether you call it a "B Nut" or an AN818 fitting, you need to make sure to use the proper torque when tightening it. Use this table as a guide and pass this info along to builders when you make your Technical Counselor visits. Info on proper tightening torque may also be found in AC 4313 and in the Standard Aircraft Handbook.

Found in the Field

The following is an excerpt from an article published in EAA Chapter 818's newsletter. While this article speaks specifically about new production Light-Sport Aircraft (SLSA) it serves as a good reminder to Technical Counselors who are visiting members' projects...

At the recent Chapter 818 meeting our program featured a local FBO talking about maintenance services they are able to provide to owners of Experimental aircraft and LSA. A question was asked regarding what maintenance problems had been encountered with the new LSAs that are becoming more common on the flight line. The FBO reported that numerous cases had been found where wiring and tubing were not

Torque Specification Guidelines		
Nut Size	Minimum Torque ¹	Maximum Torque ¹
-02	50	80
-03	70	105
-04	100	140
-05	130	180
-06	150	195
-08	270	350
-10	360	430
-12	460	550
-16	700	840
-20	850	1020
-24	900	1000
-32	1800	2000

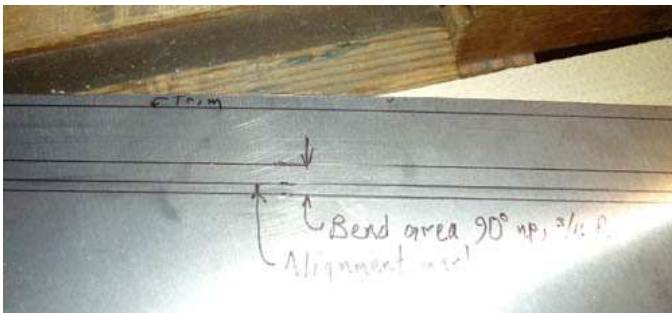
¹Torque values are shown in inch pounds for aluminum fittings.

satisfactorily located or secured in the engine compartment to prevent chafing, and wires or tubes/hoses passing through holes in composite panels were left unprotected for chafing. Avoiding loss of electrical system function through broken wires or short circuits and the potential for fires or loss of fuel due to fuel leaks suggest the importance of careful inspection of new or in-service aircraft beyond normal preflight inspections. The use of clamps and standoffs in the engine compartment to protect wires and tubes and the appropriate use of rubber grommets to protect wires and tubes running through panels was noted as being good maintenance practice. It was suggested that, when dealing with factory-built SLSA, this should not constitute a modification to the manufacturer's design needing approval by the aircraft manufacturer. The speaker noted that maintenance problems that were detected on SLSA were readily received by the various manufacturers who were agreeable to appropriate fixes if they hadn't already identified the problem/fix.

Bending Metal

By Roger Cole EAA #520298, EAA Chapter 153

I recently had to bend a piece of 0.063-inch-thick, 6061T6 aluminum that was almost 2 feet long. If you have ever tried to bend that thickness without a brake, you know how much it resists bending. Here is how I did it. The bend required a 3/16-inch radius to avoid cracking the metal. To make a bending form I routed a notch in the edge of a 2x6. A 3/8-inch diameter aluminum rod with screws at each end fits in the notch. I also cut the edge at an angle to allow for spring-back on a 90° bend. A second 2x6 forms a clamp for the metal. Next, I marked the area of the bend on the metal. The width of the bend is $w = \pi * \text{radius} / 2$ for a 90° bend. For a 3/16 radius the width is 0.29 inches. I also marked an alignment line 3/16 inch from the beginning of the bend.

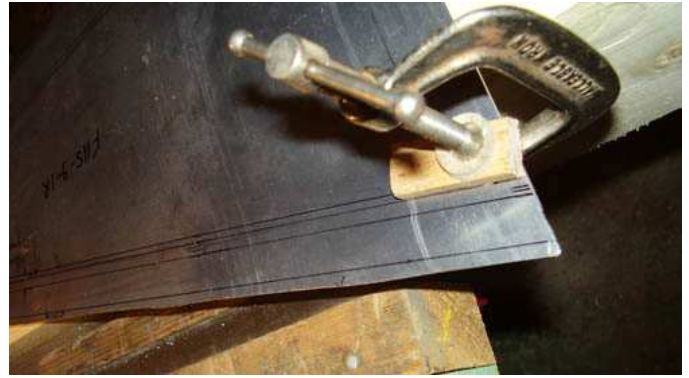


I clamped two small pieces of wood to the metal so the edges of the wood were on the alignment line. The pieces of wood are used to align the metal with the bending form and will be removed later.



The metal was set on the bending form so the two pieces of wood rest on the aluminum rod, and the vise was tightened. This procedure ensures that the aluminum rod touches the metal exactly on the line that marks the beginning of the bend.

With the metal clamped tightly in the vise, the two pieces of wood are removed. Two large C-clamps hold the ends of the 2x6s to keep them from spreading under the force of the bending.



A ratchet strap clamped to the top of the metal and running to the back of the workbench starts the bend. A soft-faced, dead-blow mallet does the bending. Hit close to the bend and distribute the blows so the bend is uniform. Thin metal can be bent by hand with the mallet used only enough to wrap the metal tightly around the aluminum rod.

If I were to do this again, I would laminate pieces of plywood together with glue to a thickness of about 2 inches. This would eliminate the tendency of the 2x6s to split along the grain.

Classifieds (usually run for 2 newsletters)

March Ads

ICOM IC-A210 for Sale

I have a new (Still in the Box) Icom IC-A210 Transceiver, that I want to sell. I am asking \$1,000.00 for the unit, so if any one is interested they can call me at home 908-7955 (evenings) or Cell 870-4206 anytime.
Rod Marshall

Hanger Space for Rent

I have a twin hanger at SL No.II. I have space available for one small plane up to about a 30 foot wingspan. Right now it's storing a Titan Tornado in one corner and I have had another Titan in there until last weekend. We would need to do a test fit with any prospects. I'm asking for \$180.00 per month.

Contact Leo Dyksman at 801-599-0399

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