

# (WING-TIPS)

The Official Monthly Electronic Newsletter of the

**Southern Nevada EAA Chapter 1300**

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## **Next Meeting Location:**

The next meeting will be at the HND Airport Terminal at 7:30 PM on Wednesday, April 14th, 2010. Please join us for our informal dinner before the meeting at the Landings Restaurant in the terminal at 6:00PM, or when you can make it!

## **2010 Officers and Directors:**

President:	Roger Hansen
Vice President:	Terry Frazier
Secretary:	Sebastian (Seb) Trost
Treasurer:	Brian Prinzavalli
Director:	Dean Herrington
Director:	Kathleen Jones
Director:	Randy Holland

## **Presidents Corner**

While I was not present for March's meeting, I did get plenty of good feedback from those that did attend. We had Kelly Rudy, Air Traffic Operations Mgr. who, as I understand, was inundated with questions and a worthwhile individual to have back at another time. We'll keep that in mind for a fall meeting.

April's meeting was planned for a visit to McCarran tower; however, we were just notified that Kelly would not be available and that they were short on personnel on the Wednesday night of our meeting. Kelly did recommend that we come on a Sunday since there is a lot of activity going on and he had enough personnel to handle us. Speaking of "us", only pilots will be allowed to go up in the tower and you will need to provide your driver's license number prior to arrival. I assume they need that for a background check . . .this process and the limiting of pilots only is a result of the "underwear bomber" last

Christmas. In any case, we can talk about it at the April meeting to see if we have enough interest in setting up a Sunday visit in the future.

Since we aren't going to the tower after Wednesday's meeting, we decided to have a gentleman from the National Weather Bureau (located on Dean Martin Dr. just north of Blue Diamond) talk to us about how they interact with ATC and FSS.

While I was gone, Terry Frazier got the ball rolling on our TechSoup software purchase. If you are interested and haven't sent your request to Terry, ([fraziernv@earthlink.net](mailto:fraziernv@earthlink.net)) bring a check with you and fill in a form (we'll bring some to the meeting) as we will be placing the order following the meeting.

One last item of interest, I just received notice that the scales have arrived in Las Vegas and should be delivered on Monday, April 5<sup>th</sup>. We'll bring them so you can check them out.

Join us for dinner at 6:00 PM upstairs at the Landings. All are welcome for pre-meeting "hangar flying". See you on the 14<sup>th</sup> at 7:30 PM.

Roger Hansen  
President, EAA 1300

So where was I during the March meeting? See if you can guess from the picture below.



### **EAA Chapter 1300 Meeting Minutes March 10th, 2010**

Called to order at 7:34PM by Vice President Terry Frasier

## **Welcome**

All members and guests introduced themselves

## **Guests**

Bob Burke – Flying Zlin in Sandy Valley – AA Pilot

## **New Members**

Bob McKenna – sim instructor and various other flying

Dick McCuen –joined again after several years

## **50/50 drawing**

New Member Bob McKenna won \$ 45.00

## **Treasurer's Report – by Brian Prinzavalli**

Beginning Balance \$2702.47

### Income:

50/50	46.00
Dues	60.00
Name Badges	9.50
Donation	.50
Misc	<u>5.00</u>
	121.00

### Expenses:

Name Badges	<u>55.13</u>
	(55.13)

End Balance \$2768.34

Ralph Millard motion to accept, Fred Wilson to second - Passed

## **Minutes from last meeting**

Motion to approve - Mike Smith      2<sup>nd</sup> - Ralph Millard - passed

## **Old Business-**

### Membership drive

Kathleen Jones and Selina Herrington tracked down 200 phone numbers from the list of 400 local members

Terry and Ralph Millard worked on script

Dean Herrington massaged the script

Looking for volunteers to call

Most names were taken by volunteers

Volunteers to report by next meeting

May 15<sup>th</sup> Open House at Henderson Airport

Still coming along

Looking for a hangar to host the open house

Dean suggested a new member may have a hangar to use for displays

Scales

Potential used scales we were looking at are not for sale, so chapter will order new ones at the end of March when Roger returns unless we can find another used set

Chapter 163 meeting last week

FAA FSDO people in attendance

They are going to get a list of links for experimental registration requirements

They only have 4 inspectors for the entire state for Airworthiness Inspections

8130.1F is guidance for inspectors

Suzan Reed looking for Young Eagles for homeschoolers – Ralph is working on getting a date set for them or in conjunction with another event

Tech Soup

Have list of software most likely to be interested in

Fill out form and return to Terry before the next meeting at the latest

Members tool library

Still have a placeholder on the web

If you have a tool for the list, send an e-mail to Randy with info and contacts

**Young Eagles at Mesquite – April 17<sup>th</sup>**

Still working on final details

Event going to be with Ercoupe group

**New Business-**

First Flight for Rich Gnocci in RV-7A 2 weeks ago – chase by Mike Smith

Vince and Ann Cappizzi

On way back from Lake Mead had an issue with a trailer getting away, and Ann cracked her pelvis – wish her well

Terry rolled his own LED position lights – see him if you're interested

Update on Roger in Australia

Next Meeting April 14<sup>th</sup>      Program TBD

Speaker for tonight's program

Kelly Rudy – Operations Supervisor for Las Vegas Tracon  
Pilot since 1981  
Controller since 1987

Adjourned at 9:17PM

Submitted by Seb Trost, Secretary

### **Webpage Material:**

Everyone is encouraged to submit material, information, or pictures of interest for publication on the Chapter's Webpage. Send whatever you have to Randy Holland, webmaster (randy@randyandrachael.com). The chapter webpage URL is <http://www.eaa1300.org>. Be sure to update any bookmarks.

### **Notes from the Newsletter Editor:**

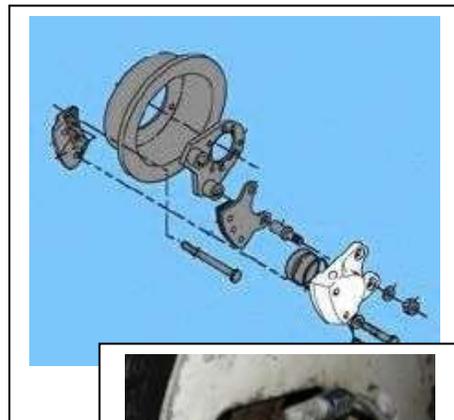
I'm going to try to add some more content to our newsletter from EAA National, other newsletters, or the Web as I find it. Please let me know how you like what I put in, or give me suggestions for what you like to see. Thanks!  
Seb Trost

## **Give Me A Brake!**

by Dave VanDenburg EAA#559792, EAA Chapter 439 (UP, Michigan)

The brakes on our aircraft are something many of us take for granted, as they work good, and last a long time. Eventually however, the friction surfaces will wear out and must be replaced. This month I would like to discuss replacing the pads on Cleveland hydraulic disc brakes, which are very common on light GA aircraft and very popular with amateur aircraft builders. First though, lets examine how the system works.

The modern hydraulic disc brake assembly usually consists of a sliding piston which fits into a housing and is sealed against leakage with an "O" ring. Fluid pressure in the brake system is created when the pilot presses on the brake pedal, and is transmitted through the brake fluid to this housing. That pressure is applied to one side of the piston, forcing the brake pad against a steel disc which rotates with the wheel. A fixed brake pad is held against the other side of the rotating disc. This enables the two brake pads to squeeze the disc and the friction created converts the energy of the moving aircraft to heat energy, slowing the aircraft. Figure 1 is an exploded view of the brake assembly and disc.



**Figure 2**

These brake pads, which are consumable, are riveted to steel backing plates, which are not. When the brake pads are worn out (usually considered worn out when the lining thickness is less than 0.10 inch thick), they can be removed from the backing plates and replaced with new pads. This involves driving out the rivets which hold the pads to the backing plates and riveting new pads onto the plates. Before we can do that, however, we must remove the brake pads and backing plates from the aircraft.

Removing the brake pads and backing plates from the brake caliper assembly is very easy. First, remove the wheel fairing (if so equipped) so as to expose the brake assembly. Then, simply cut the safety wire and remove the two bolts holding the assembly together. Figure 2 shows a typical brake assembly and these bolts. Do not disconnect any hydraulic lines as this is not necessary and will simply make a mess. It will also require “bleeding” the brakes and lines to remove any air that may be introduced. Remove the “fixed” backing plate (the one between the disc and the wheel), then pull the caliper slightly away from the disc and remove the “moveable” backing plate from the pins upon which it slides. You should now have two backing plates in hand.

Once the brake pads and backing plates are removed from the brake housing (which should remain connected to the aircraft by the brake line), we can remove and replace the pads. This is another of those jobs which really require the proper tool. Luckily, the tool is neither expensive nor hard to find. It can be obtained from any of our usual aircraft suppliers such as Aviall, Wicks, or Spruce. Figure 3 shows this tool, a new brake pad, and some rivets.

To remove the pads from the backing plate, put the tool in a vise, place the backing plate and pad in the tool (pad down), and use the punch supplied with the tool to drive the rivets out. Do this with all the rivets holding the pad to the backing plate. Figure 4 shows how this is done. Once the rivets are all driven out, the pad can be separated from the backing plate, and we can rivet a new brake pad to the plate.

Riveting new pads to the backing plate is just as easy. Begin by placing the anvil (the little round piece that came with the brake tool) into the hole in the base of the tool. This gives us a firm surface against which we can set the new rivets that will hold the new pads to the backing plate. Then hold the new pad against the backing plate (the writing on the pad should be against the backing plate) and place a new rivet in the holes (lined up) of the pad and backing plate. The flat side of the rivet (manufacturers head) should be in the recess



Figure 3



Figure 5

counter bored in the brake pad. Now place the brake pad and backing plate assembly over the anvil in the brake tool. The anvil should fit nicely into the counter bore of the brake pad and ride against the flat head of the rivet. Next we use the setting tool supplied with the brake tool to form the shop head of the rivet. Figure 5 shows this operation. We simply repeat the procedure for the remaining rivets and the pads and backing plate assembly are ready to reinstall.

Reinstalling the new pads and backing plate assembly is just the reverse of removing them. Put the moveable backing plate over the pins so the backing plate is against the piston and the pad faces the disk. Then hold the fixed backing plate in place (on the other side of the disc) and replace the bolts holding the assembly together. Be sure to properly torque and safety the bolts. The wheel should now turn freely with only a slight brake drag. Replace the wheel fairing (if so equipped) and most of the job is done. The new pads however, must be reconditioned prior to use.

Breaking in or “conditioning” new brake pads is easy but very important. The conditioning procedure will wear off any high spots and generate enough heat to create a thin layer of glazed material on the lining friction surface. To condition the lining, proceed as follows.

If you have installed non-asbestos organic linings (most common), taxi the aircraft for about 1500 feet with the engine set at 1700 RPM. While doing this, apply enough brake pressure to maintain a 5 to 10 MPH taxi speed. Then allow the brakes to cool for 10 to 15 minutes and do a static run-up. If the brakes will hold the aircraft at a high power setting, they are properly conditioned and ready for service. If the brakes will not hold the aircraft at a high power setting, allow them to cool completely and reaccomplish the procedure. Also note, in service, light brake usage may cause the glaze to wear off and thus require reconditioning, and this procedure may be done whenever necessary to restore effective braking.

If you have installed metallic linings, simply make two consecutive full stops from a speed of 30 to 35 MPH. Do not allow the linings to cool between these stops. Then allow the brakes to cool for 10 minutes and try a static run-up. If the brakes will hold at a high power setting they are ready for service. If they will not, allow the brakes to cool and repeat the above procedure.

This all sounds complicated but and once you do a “brake job” you will be amazed at just how easy it really is.