

# Hagerstown Technical Seminar Flyin Report

by Mark Smith

**O**n July 24, 2004 the NE Tribe held a technical seminar at Hagerstown, MD. Hagerstown is the home to Hagerstown Aircraft Services. Be advised though, there are two FBO's on the field which are very close in name. Hagerstown Aircraft Services is a huge place at the Papa turnoff. Tracey Potter, the owner of the facility opened up his entire place for the NE Tribe and many people, not only had a good time, but walked away smarter about their aircraft.



*Attendees look on as FAA Aviation Safety Inspector, Anthony Serio presents.*

The day started out with donuts and coffee around 10am and quickly got into the thick of things. The first presentation was from Anthony Serio, an official FAA Aviation Safety Inspector. He had a professional quality presentation. He discussed many of the pitfalls that owners fall into while trying to save money. His knowledge comes complete from after the fact analysis of failures. He included anecdotal stories. He flat out stated that many parts not explicitly made for aviation are simply the wrong part to put in. He included automotive light bulbs replacements and screws and bolts in his list of wrong parts. He was clearly a good guy with an extensive knowledge base trying to help out GA pilots.

The next two presentations were about what you should be looking for in our aircraft. Both were made by Joeseeph Hart, a long time employee at Hagerstown Aircraft Services. He is not only fully qualified to be working on the comanche aircraft, but is also a comanche pilot as well. He does not own one, but more than one owner permits him to fly their comanche for ferrying purposes.

His first presentation was all about some common AD's. His style was down to earth and had an air of knowledge. He would talk some about an AD and then quiz the audience on how well they knew the regulations surrounding their own aircraft. Many people knew almost all the answers: how many hours in between inspections for such and such an AD? who can perform this work? and so on. The audience also felt comfortable making comments and providing personal anecdotal situations to add spice to the presentation.

About half way through the presentation, we paused for a wonderful catered lunch including drinks and some pretty good vittles. Meats, cheeses, bread, and vegetables were combined with enough soda and bottled water to fulfill any appetite.

At lunch time, many members got up to stretch their legs and walk around outside and to check out each other's comanche's. And there were 13 to look at with six being of the two engine variety. There should have been more, but the cold front that had just passed the night before made for sloppy flying to the east of the Maryland location. In fact, of the dozen or so people signed up only about half made it. The flyin coordinators, Bill and Nancy Harris, did an excellent job of estimating attendance. The majority of the people who did show up were not even on the roster. Luckily, we had food and seats enough for all.

Eventually, we got back to the seminar portion of the flyin. Mr. Hart continued where he had left off with more discussion regarding AD's. The most interesting thing, I think, for the seminar was the fact that the comanche lineage as a whole was discussed. Sure, anybody could look up the AD's available for a specific aircraft, but the people who were presenting could talk knowledgeably about the whole line of comanche's: what AD's are in common, what AD's apply to one, what AD's only apply to one, but should apply to two, and so on.

He also strongly pointed out that the final say in AD compliance was the owner. The mechanic will most definitely try to do their best job, but sometimes certain recurring AD's are out of their hands. There are more than a few AD's which will most likely occur inbetween annuals and for the most part, many of us will not perform complying actions between AD's. For instance, many of us fly our comanche's over 50 hours a year, but a 50 hour recurring inspection still needs to be performed.

In this same vein, Mr. Hart also made some interesting comments. He stated that the first organization in line to look at your logbooks after an incident is the FAA, but the second group waiting patiently is your insurance agency. He reported that he has seen claims not paid out because a recurring AD had not been complied within the specified timeframe even if it was out of compliance by only a few hours.



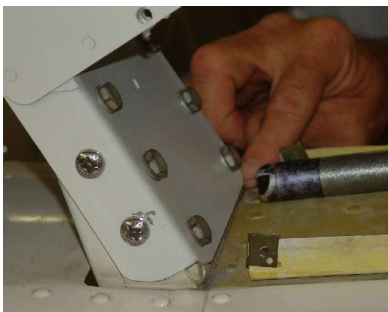
*Joeseeph Hart (with clipboard) discusses issues on the comanche wing.*

Next, two brave owners had put their aircraft up on display. Stanley Miller's beautiful N8807P was not only up jacks in order to look at the gear system, but a few of the important access panels were opened to facilitate AD inspections. We started by looking at the fuel system. It was noted that the fuel cell inspection panel covered not only the fueling inlet, but also the fuel guage sender unit; if your gasket is inadequate to keep out moisture, the water making it's way in there had no place to go and hence made a strong candidate location for corrosion.

We next went to the aileron for inspection which was quickly followed by an extensive set of comments regarding the gear system. We looked at certain aspects of the gear system and since we were up on jacks, it was possible to unload the system to see how it worked. Later on, more than a few folks volunteered to do emergency gear drops and to inspect certain aspects of the system from the cockpit.



*Mr. Hart's finger points out gear linkage while attendees lookon.*



*Rudder spar inspection.*

Walking around aft we looked at the rudder spar inspection point. A magnifying glass and flashlight were conveniently placed there for our usage. At the same time, we also looked at possible corrosion points for the torque tube. We also talked more about AD's and what is applicable in the area we were currently at.

We also took a moment to look into the tail section to inspect and discuss the torque tube mounting brackets. A quick and dirty test is grab the lateral points of the tail and to try and move it fore and aft. It should not move within the confines of the joint to which it is connected. The mounting brackets you are inspecting are visible through the inspection just fore of the elevator. Just stick your head in there and look left.



*Torque tube mounting braces.*

After these useful discussions some of went on to doing some gear swings. I watched one and grabbed some video of the discussion. Perhaps at one point, I'll put it up on the ComancheFlyer website somewhere.



*Christos "Chief" Chavis talks about avionics while a group of attendees look on.*

That was the end of Mr. Hart's presentation, but that wasn't the end of the seminar yet. Christos "Chief" Chavis, presented some useful information about avionics. A very important point that he brought up was that the low bidder on your avionics may not be the best choice. Wiring bundles, connectors, and inter-avionics communications is making the job of avionics harder and harder. A single error somewhere in the many yards of wiring up and behind the panel can make for a very annoying problem.

We were able to share some opinions about different types of instruments. Mr. Chavis noted that more than a few of the Garmin GDL-49 customers were unhappy with their units. The picture above shows a display unit consisting of a Garmin-430, an Apollo MX-20, and a WSI satellite weather download unit.

The next item on the agenda was the full tour of the Hagerstown Aircraft Services facility by the owner, Tracey Potter. This shop, by any standards is a complete maintenance repair shop. It consists of a set of offices, numerous hangars, a strip shop, a paint shop, a fabrication shop, an avionics shop, and an engine shop. We were already in the general maintenance hangar and it was filled with comanche's. The next stop was the strip shop. Mr. Potter currently had a comanche in there being taken down to raw metal. He explained the process and his reasoning behind each of the steps. He explained some of the technologies used such as a process that caused stripper to be removed via magnetic properties.



*A comanche being prepared for painting.*

The natural progression after the strip shop was the paint shop. Two aircraft were in there getting their coats put back on. Again, Mr. Potter explained, very effectively, in laymen's terms what the process was in getting a fine coat of paint on an aircraft.

The next hangar over was the fabrication shop. Mr. Potter explained that he had the capability to build an aircraft around a data plate if that's what was necessary. Hagerstown Aircraft Services are known in the area for their ability to do metal work among other things. Mr. Potter explains that he has an employee that has been in the same hangar for decades and has performed several thousand operations. He further explains that he's "one of those guys" who you can put into a room filled with airplane ribs and he could tell you the part number and the station for the part. Hopefully, this won't be a test that he'll be eager to put to the challenge, but it's probably a useful trait.

Mr. Potter shows us two aircraft. The first one, a Cessna-310, is missing a nose gear. He explains that the nose gear collapsed after the normal mechanic for the 310 didn't properly attached the doors. When the doors closed they crushed into place and didn't allow for the gear to come back down. The other aircraft is a beautiful Mooney. He describes the aircraft as having overrun the runway. In both cases, the engines are removed and the aircraft up on jacks.

The next stop is the avionics hangar. There are numerous aircraft in there in different states of repair. This is where his avionics guys work. They work with many different types of general aviation aircraft working on many different types of avionics. One of their employees, Clarence Cannon, has been employed at the same for decades and is well known as a very knowledgeable avionics expert.



*Tracey Potter, owner, talks about their engine shop.*

The final stop on the tour is the engine shop. The shop is very clean with each part clearly in its place. There are some rolling carts which have entire engines completely disassembled in them. In the case of a Cessna-310 engine that is in there, two engines are kept right next to each other; this is the very same engines that were on the Cessna-310 fuselage outside.

Mr. Potter explains that he keeps his engine shop employed full time processing two engines a month. He proudly explains that his engines have an additional STC in them which spray oil up into the top of the engine after only a few spins in order to lubricate hard to reach places that are normally only reached via splashing. He

further comments that Textron-Lycoming is interesting in acquiring the STC from the owner (not him).

His engine shop also includes a magnaflux machine which is used to check parts for tolerances. He relates to us a story about his ferry pilot, Joseph Hart (from the previous presentations) repositioning an aircraft to their shop after a sudden stoppage. After the subsequent teardown, the camshaft was found to be cracked nearly half-way through.

When asked if pilots should keep their engines in service after TBO, he answered definitely no. The reason was explained that some engine parts will give you warning in SOAP (spectrographic oil analysis program), or higher oil consumption, or in filings in the oil filter, but some parts don't do this. For instance, a broken crankshaft may not give any warnings and failure in this mode is catastrophic.

After the tour, we adjourned to our original hangar to conduct ICS business; our annual NE Tribe meeting and elections were to be held. Unfortunately, John Dunning, our tribe chief was unable to attend because of last minute mechanical problems encountered on the flight over. In fact, he had started the trip before he turned around. In addition, Bill Roberts, our treasurer, was unable to make it due to weather. So, although we had a good turnout otherwise, two of our four executive members were missing. Bill Harris, our assistant tribe chief and Mark Smith, tribe scribe, took up the task.

Mark Smith had created and duplicated several handouts for the meeting which included a year end review which included all of our trip reports, last years annual meeting, the status of our 2005 convention, and a one page executive summary. In addition, three more handouts were available including: a previously published writeup for the flyin to Block Island (downloaded from the [comancheflyer.com](http://comancheflyer.com) website), a writeup in living color explaining the rationale of our 2005 convention selection (to be published shortly in the Flyer), and lastly a treasurer report created by the Bill Roberts.

Bill Harris discussed general tribe business including flyin's coming up. One of the things that Mr. Harris asked of the assembled membership was as follows: is this seminar/flyin what they wanted out of their membership? There was a strong show of support for these kinds of flyin's and a hope that they would continue. The greatest interest was for another Larkin seminar and/or CFI operational instruction.

Mark Smith was given the floor who then reviewed the year in summary. Afterwards, he talked in detail about the 2005 Convention, supplied details, gathered consensus and opinions about how things should be done, not the least of which is a working schedule.

The last note of point regarding our meeting was the annual elections. The existing slate of officers were unanimously voted in for another year of duty (information about the elections and other facts can be found in greater details in the meeting minutes). There was nothing left to talk about and the meeting was adjourned.

The best was yet to come. This author has been to Nick's On The Field before, but unfortunately was not able to attend this particular dinner. A dozen people including Tracey Potter and his wife went to dinner. Nick's at a very fine restaurant that is about 100 feet from the secured area at the airport. The restaurant is very good eating and is in an ideal place for getting that 100 dollar hamburger.

And so ends another successful seminar/flyin for the NE Tribe.

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