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Safety Net

MSI at Oshkosh AirVenture and Smoketown Aviation Fair

by Jon Egeler

Along with many other mission aviation agencies, MSI has become more involved in aviation expositions throughout the year. The reason for this is to represent MSI to the general public and to mission representatives who attend these events. This certainly is different than our normal ministry services and may not seem as exciting or exotic as traveling half-way around the world to put on a safety seminar or audit. But it has become a very important part of what MSI does. Without the contacts, support, and information we get from such activities, our ministry would be somewhat constrained. We are very grateful to the volunteers who help us with these events, as well as so many who give of their time, talents and resources.

We've featured our participation at the Oshkosh EAA AirVenture for the past several years in Safety Net. For the third year now, MSI has also maintained a presence at the Smoketown Aviation Fair in the Lancaster, PA, area. In this issue we're combining these two events into one article. Some aspects of both of these events are similar, many are distinctly different. . . What's similar is that both events include airplanes and people. In just about every other aspect, the differences clearly show.

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Valuing Instructions

How many of us, when faced with assembling a new piece of furniture or equipment, like to dive right in, and only read the instructions "if all else fails?" Even if you are the meticulous type that loves to analyze and carefully research before making a decision, you have to admit that there are times when you feel like you are familiar enough with something that you don't need someone to tell you what to do, or how to do it.

This independent streak seems to be a part of human nature, and perhaps is the result of God designing us to be able to make choices, and giving us the freedom to do so. However, this characteristic has its pitfalls, especially when combined with our age-old enemy—pride.

Someone has said that free advice is worth what you paid for it (nothing). However, in everyday life, we are often faced with decisions that others have wrestled with before us. These predecessors of ours often wish to see us make better choices or avoid the negative consequences, and so they leave us instructions.

In aviation, where lives are at stake, "doing it right" by following the instructions (otherwise known as rules, regulations and procedures) is absolutely essential. Yet we find ourselves and others cutting corners, skipping steps, or "finding a better way," often with tragic results. Why is this?

We already alluded to pride and human nature, but I think there is also an insidious disease infecting most of us. It is very common to observe and hear comments that indicate that there is a prevailing attitude that rules keep us from getting things done, and that it is OK to break them or at least bend them, as long as we don't get caught. The culture of the world around us exhibits this constantly, from widespread cheating in schools or taxes, to exceeding speed limits, to fudging the numbers a little. Unfortunately, the attitudes of the culture around us do rub off on us if we are not extremely aware and fight against it.

So what is the real problem? In short, I am seeing way too many people exhibit or express an attitude that the standard operating procedures or operations manual is there to box them in or keep them from maximum efficiency. They are seen as limitations only. This is not a healthy attitude, and will eventually get them in trouble, either by venturing into unsafe territory, or by getting them in trouble with the people in authority over them.

What is the solution? Psalm 119 gives us very good guidance. In that Psalm, joy, delight, and gratitude for God's laws and instructions are expressed. The Psalmist recognizes that the laws and instructions are given for his benefit, to ensure his success, so he gratefully accepts them as the gift they are. Just like the Psalmist, we need to view instructions as a gift for our benefit. Rather than a hindrance, the rules, regulations, and policies that exist in aviation are gifts given to ensure our success, often coming at a great price to our predecessors. As we gratefully acknowledge them as the gifts they are, our attitude toward them will change, allowing us to realize the full benefit of following and using them.

What is MSI doing to address these attitudes? We are pointing out the misconceptions and poor attitudes as we encounter them in our safety audits, teaching and instructing in our safety seminars and publications, and trying to stimulate discussion and reevaluation of sometimes long-held beliefs. Of special note is our work with the aviation schools, trying to help them establish healthy attitudes and understanding in their students, long before their habit patterns and ways of thinking are cemented into place.

Steve Quigg Photo

As we all strive for clearer thinking that will result in better decisions and actions, we will see the benefits and blessings that are bound to come. Let us all check our attitudes, making sure we properly value instructions as we strive to

Make Safety a Way of Life!

Jon Egeler

Jon Egeler
President

Jon Egeler Photo

Jon Egeler Photo

EAA AirVenture bills itself as the "World's Greatest Aviation Celebration." Indeed it is a celebration of historic aircraft—this year all the way from a replica of the WWI German Dreidecker (triplane) to the latest U.S. military Global Hawk drone. New aircraft designs always appear, including the Transition, a roadable airplane. The Quest Kodiak, now certified on floats, was there. The latest in aviation instrumentality and gadgetry boggles the mind. Top this off with aerobatic demonstrations by the world's top airshow pilots, how-to demonstrations, and presentations by key aviation athorities and you have an idea of what all EAA AirVenture is. Upwards of 10,000 airplanes and 500,000 people make it an astounding yearly event.

Jon Egeler Photo

This year AirVenture started out with torrential rains the week leading up to the event that caused a lot of logistical headaches for everybody, with widespread flooding and lots of wet, muddy ground. The event took place despite the rainy beginning, however, and was again a very good experience. As before, MSI had a display set up in the International Association of Missionary Aviation (IAMA) tent, where we talked to hundreds of people, ranging from some who had never heard of missionary aviation to old friends that came looking for us specifically. MSI always gets a lot of benefit from attending. We are there to do research on new and developing technology, network and conduct business with other mission agencies, share our faith, and be an influence on people's lives. It also gives us opportunities to speak in some area churches and Bible study groups. Many faithful supporters have graced us through our participation at Oshkosh.

As usual, Mission Aviation Support Association (MASA) did a wonderful job of arranging housing, meals, and speaking opportunities for all the representatives from the various mission groups displaying in the IAMA tent. Compared to last year, the numbers were down—both in the overall AirVenture attendance and in mission representation—so it was a bit less stressful for all of us. However, even though fewer people came by, we had a lot of quality conversations and contacts.

Unless otherwise noted, EAA pictures by Steve Quigg

Smoketown

In the past several years a large group of Christian churches and individuals in the Lancaster, PA, area have hosted the Smoketown Aviation Fair, so called because of the name of the nearby Lancaster airport. This event is associated with Missions Fest Lancaster and usually scheduled after Oshkosh AirVenture. This large missions emphasis effort by these churches is designed to increase mission awareness and opportunity for service among Christians. Many of the mission agencies that participated in the AirVenture also participated in the Smoketown Aviation Fair. These were joined by other exhibitors offering services ancillary to mission aviation, such as colleges and other learning opportunities.

The Smoketown Aviation Fair theme this year focused on the "little guys," those agencies or missionaries who may have only one airplane and not the large organizations with new Kodiaks coming on stream. It was entirely fitting this year that Steve Saint (Itec) should be a featured speaker. Steve was there with his replica of his father's PA-14, lost in the 1956 effort to reach the Waronis (Aucas) and shared his passion for creating technologies useful for less affluent indigineous groups.

In contrast to Oshkosh with a total attendance of nearly half a million, only a few thousand people attended Smoketown along with a few mission airplanes. But for us the signifiant difference between Oshkosh and Smoketown isn't in the number of attendees or airplanes, but most of all in our purpose. Where Oshkosh had us explaining missions to people who knew about aviation, Smoketown had us explaining the role of aviation to people who knew about missions. The Lancaster area has long been a very strong Christian community that was very supportive of mission work, and that holds true today. Even though fewer people may have stopped by our display, those who did were more likely to get involved in MSI's ministry in some way. We also had many opportunities to touch base with our mission colleagues there, too.

It does take personnel, time, and money to participate in these special public aviation events. We see these as opportunitues to further extend the witness to our Lord around the world. We are so grateful to the volunteers who help us with these events, as well as so many who give of their time, talents and resources to the work of missions through MSI. We believe our combined efforts are not in vain.

All Smoketown Pictures by Jon Egeler

Summits and their Consequences

"Summit" connotes the peak of something—usually a mountain top with the exhilarating experience of having 360 degree vision and getting a perspective on the layout of all the land below. Indeed, one can get perspectives that are impossible to get when not on the mountain top. There is nothing like a mountain-top experience!

But one cannot stay on the mountain-top forever. One has to descend to the hills, valleys, fields, and streams below and once again relate to the realities below. But coming down off the mountain top, one brings something that one has seen or learned while on the mountain top. This is the motivation that generates the desire to make things better than they have been. That's why mountain top expereinces have their consequences.

This mountain top metaphor is a very valid context in which to understand the several MSI Safety Summit conferences already held. The concept is simple—assemble the safety leadership of mission aviation around the world in one place and gain perspective on where mission aviation has come from, where it is now, and where it seems to be headed. In the process, significant issues surface and hard questions need to be asked and answered. The result of all this interaction is to come up with stratgies that are workable toward the goal of making mission aviation sustainable and safe around the world.

MSI Safety Summits are not held on an annual basis. There have only been four Safety Summits to date, starting in 2003 with Safety Summit I at Moody Aviation in Elizabethton, TN. This initial event was attended by many representatives who found that there was great profit in thinking together periodically.

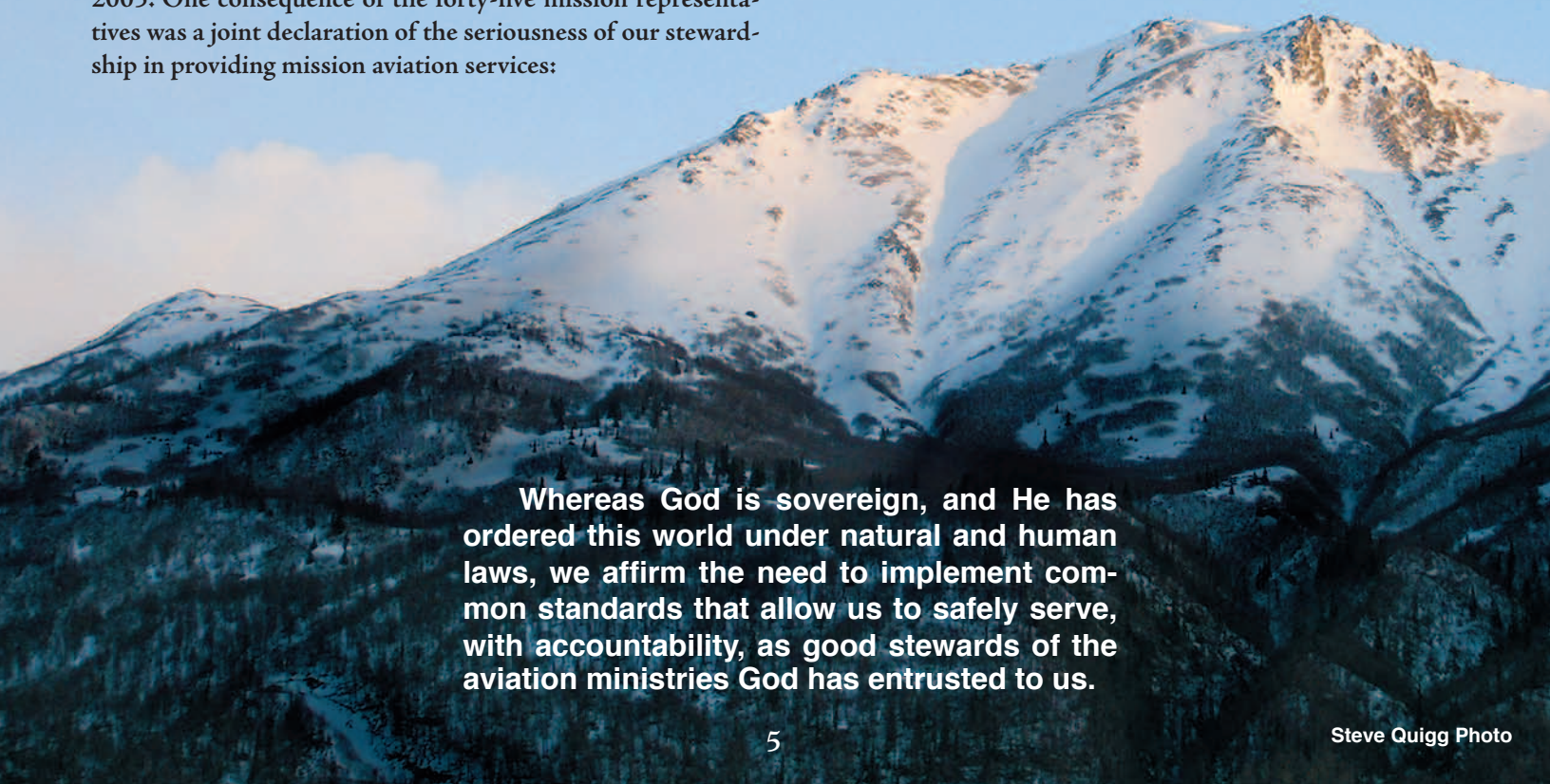
Safety Summit II was held in Waxhaw, NC, at JAARS in 2005. One consequence of the forty-five mission representatives was a joint declaration of the seriousness of our stewardship in providing mission aviation services:

Safety Summit III was held in the Netherlands in February 2008. One outcome of this summit was the fleshing out and design of the Regional Safety Verification Program and the RSVP Manual.

Safety Summit IV was held in Tucson, AZ, in March 2010. Twenty-three representatives from eighteen different organizations gathered to discuss safety issues and concerns, and what could be done about them. After getting reports from each organization represented, the discussion focused on:

- Recent trends and concerns
- The Regional Safety Verification Program (RSVP) and how it is working
- Integrating RSVP into the existing safety programs of larger organizations
- Forming a RSVP group for the missionary aviation schools
- Improving MSI's services to mission organizations
- Attitudes and how they influence safety
- The importance of understanding purpose
- Online reporting systems and database
- Safety Management Systems
- The spiritual side of safety
- Jay Hopkin's AESOP technique

Feedback from participants in these MSI Safety Summit experiences continue to express their pleasure to be a part of the Summit process, their desire that they continue, and to share the hope that their participation will indeed result in positive consequences for the broad mission aviation community.



Whereas God is sovereign, and He has ordered this world under natural and human laws, we affirm the need to implement common standards that allow us to safely serve, with accountability, as good stewards of the aviation ministries God has entrusted to us.

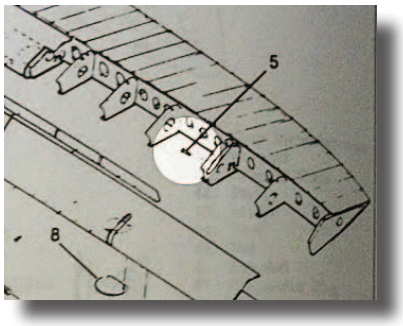
Steve Quigg Photo

From the Files

Even though this month's From the Files incident happened many years ago, it is hoped that this event may be a refresher that there are simple but fundamental things that one should be aware of when working on airplanes. Effective communications, use of checklists, double checking, never leaving a task half-done unless clearly so identified, thorough inspections, always verifying—never assuming—are some of the effective strategies to assure maintenance is carried out safely.

Ailerons Loose — Cessna 206

A team was sent to another base for a special project. The purpose was to assist in a 1000 hour inspection of a Cessna 206. After returning home from the six-week project, the team was notified that disaster was narrowly averted when the pilot of the 206, during takeoff, noted limited aileron travel, and aborted the takeoff. Five of the six bolts attaching both ailerons were found to be either loose, not engaged in the nut, or in one case, missing altogether. Apparently, the aircraft had already made at least one flight because the report indicated 1.5 hours since new or overhaul in the time in service box.



IPhone picture by Cecil Bedford

The problem boiled down to two different understandings of the use of the inspection form. Signatures on the 1000 hour form apparently meant one thing to the visiting team and another thing to the local staff.

The visiting team was using their standard shop procedure of initialing the form to show that the part (in this case the aileron) was inspected. The fact that cracks were found which needed repair was listed on a separate discrepancy form. It was their understanding that the discrepancy form sign off would be the final requirement for return to service.

The local staff apparently assumed the signatures on the 1000 hour inspection form relating to ailerons meant that they were not only inspected, but repaired and completely reinstalled.

After the ailerons were inspected and the inspection signed off, they were removed for repair. The repair was performed by one of the local mission mechanics. A member of the visiting team then put the ailerons in place for the purpose of checking clearances after the repair. He says that he was told by one of the local mission pilot-mechanics to not reinstall the ailerons since they would be painted first. He left them in place with the bolts not secured.

Jay Hopkins' Comment:

TORQUE IT OR TAG IT!

This near tragedy started with a lack of communication or careful planning. The fact that there would be people from two different locations working together should have set off warning alarms for those involved. This is the kind of problem a pre-project AESOP Huddle can bring to light. Under either Obstacles or Personnel someone would hopefully point out the need to establish how the inspection is to be conducted and the procedures for signing items off.

The final link in the chain occurred when the ailerons were put back on the wing but the bolts were not tightened. This seems to be such a common cause of accidents and near misses that I propose the following rule:

TORQUE IT OR TAG IT!

Anything that is put in place on an airplane or any other aviation component must be completely installed with all bolts fully torqued and safety wires attached, or a red tag must be attached warning of the incomplete status of the repair.

This incident also highlights the importance of a careful preflight inspection. It is easy to get complacent, rushed or distracted. After any maintenance was accomplished, the pilot needs to do a particularly careful and complete inspection. This is true even if the pilot accomplished the inspection and signed it off.

Finally, when verifying control freedom, don't just wiggle the control wheel back and forth a little. "Box the controls" by moving the control wheel full forward, full left, full aft, full right, full forward and finally back to center and then back to neutral. This process checks all control surfaces and cables at their maximum positions. I have personally had the control wheel jam on a Piper Cherokee when trying to return to neutral from the full right position. We found a screwdriver in the wing. If the ailerons had jammed in flight, especially when fighting a crosswind on final, I might not have been here to write this article, so it was fortunate I fully boxed the controls like I always do.

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