



The Leader In Recreational Aviation

Chapter 736 Newsletter for June 2010

Cost To Equip for ADS-B Expected To Be Substantial

The FAA guidelines for required ADS-B equipment were released late last week, and though there are no real surprises for avionics manufacturers, general aviation advocates have little to cheer about. One of the sections of the report is even titled, "General Aviation: High Equipage Costs With Little Benefit." Cost to equip the GA fleet is estimated between \$1.2 billion and \$4.5 billion from 2012 to 2035, with only \$200 million in operational cost savings expected. So far, most of the research has focused on the 'Out' portion of ADS-B — that is, the requirements for equipment to broadcast an aircraft's position, altitude, course and other flight data. The requirements announced Thursday reveal that ADS-B Out will be required to operate within Class A, B and C airspace, and above 10,000 feet over all the 48 contiguous states. But without the 'In' portion of the technology, ADS-B will act as the equivalent of an expanded transponder. The enhanced technology required — the so-called "extended squitter" — adds about \$1,000 to the cost of a Garmin 330 transponder. To add ADS-B 'In' capability, aircraft operators would need to install a Garmin GTS820 at a cost of approximately \$20,000. Further development of ADS-B "In" configuration is anticipated in later meetings. On the ADS-B 'Out' requirements, the FAA said it tried to minimize the cost to GA by eliminating a proposed need for antenna diversity. That element of ADS-B is required in Europe, and adds approximately \$5,000 to the cost to re-equip an aircraft, according to Garmin. The agency also expects ADS-B will offer expanded services, including more low-altitude coverage; radar-like ATC services where radar does not currently cover; automated closing of flight plans; better search and rescue capability; and more "tailored" flight service functionality. A proposal to limit the ADS-B requirement to Class A and B airspace was considered, but in the end, the FAA said, "Failure to equip all aircraft would greatly reduce the system's benefits."

FAA: Replace Mufflers at 1,000 Hours; Please

The FAA has issued a nonbinding special airworthiness information bulletin (SAIB) urging aircraft operators to replace mufflers at 1,000 hours. It's not a noise abatement move, but rather a safety of flight issue. According to a Wichita State University study, a high percentage of aging mufflers are involved in carbon-monoxide-related incidents. In 92 percent of cases in which a CO leak was traced to a defective muffler, the muffler in question had more than 1,000 hours of service. So the SAIB suggests replacing mufflers at 1,000 hours.

FAA – Does the Left Hand Know What the Right Hand is Doing?

What follows comes from AOPA. Keep it in mind if you find yourself in a similar situation.

Question: I am an aircraft owner and have received a Triennial Aircraft Registration form 8050-73 from the FAA. It says on the form that if my information has *not* changed that I am *not* required to send it back. Is this true?

Answer: No. Even though the form's directions state that you do not need to return it if the information is correct, [14 CFR 47.51](#) requires you to return the form within 60 days of its issuance regardless of changes. Failure to do so may be cause for suspension or revocation of your certificate of aircraft registration.

To clarify, the regulations (47.51) specifically state:

(c) The holder of the Certificate of Aircraft Registration shall return the Triennial Aircraft Registration Report to the FAA Aircraft Registry within 60 days after issuance by the FAA Aircraft Registry. The report must be dated, legibly executed, and signed by the certificate holder in the manner prescribed by §47.13, except that any co-owner may sign for all co-owners.

(d) Refusal or failure to submit the Triennial Aircraft Registration Report with the information required by this section may be cause for suspension or revocation of the Certificate of Aircraft Registration in accordance with Part 13 of this chapter.

Please note that there is *no* regulatory exemption from reporting when the information on the triennial registration is current. While this is contradictory and confusing, it is worth mentioning that the directions on the triennial registration are not regulatory. Prudence should dictate that one should return the form as described in the regulations to avoid trouble in the future.

If nothing has changed, the FAA has advised AOPA that pilots should just write “no changes” on the form when they return it.

If you have moved and have not received a triennial form in the last 36 months, you will likely want to verify that the correct address is on file with the FAA's aircraft registration branch. You can check your [address on file online](#). If needed, you can [update your address](#). You can read more about [triennial registration](#) on the AOPA website

Bird Strike Technology

Bird strikes happen every day in the world of aviation. According to the FAA, there was an average of 20 reported wildlife strikes per day between 2004 and 2008. Rarely, however, does a bird strike bring down an airplane.

But the US Airways incident "really changed the landscape," Richard Dolbeer, a former USDA scientist at the department's National Wildlife Research Center in Sandusky, Ohio, said during a Jan. 12, 2010, interview on the Fox News Channel.

"The aviation community now realizes that birds are a significant and real threat to aviation, and are capable of bringing down a large plane," Dolbeer said in the interview.

Scott Philiben of Precise Flight (<http://preciseflight.com>) said he knew an incident like Flight 1549 would happen eventually. But until something like that occurred, it was hard to keep people's attention, he said.

In 1984, Precise Flight invented its Pulselite technology, which enables a plane's powerful landing lights to flicker at regular intervals. It's primarily a safety feature that gives an aircraft greater visibility both on the ground and to other pilots in the air.

Some of the early adopters of the Pulselite technology were float-plane operators in the Pacific Northwest, who started to report a decrease in bird strikes. In the mid-1990s, Precise Flight began funding research asking why, and in 1999 began collaborating with the USDA's National Wildlife Research Center.

The most recent experiment occurred last summer. A team of government and university biologists strapped some of Precise Flight's pulsating lights to a large model airplane and flew it at a pen of captive geese. In a number of passes, the geese noticeably reacted to the airplane with squawks and defensive behavior.

USDA biologist Bradley Blackwell said he and his colleagues are writing up a report on the data they collected during the experiment. In short, the results look promising for pulsating-light technology, even though the researchers can't definitively say why it works, Blackwell said.

"We can't demonstrate it, but there is definitely something going on," said Blackwell, who has previously published two peer-reviewed papers on pulsating-light technology as a bird-strike deterrent.

Steve Lima, a biology professor at Indiana State University, who flew the model airplane used in the July 2009 experiment, agreed that more work needs to be done to understand why it works, but that it generally does work.

According to Lima, birds have become accustomed to planes the same way geese have become accustomed to humans. However, a plane with flickering lights might seem abnormal to a bird, triggering a flight response. Or the wavelength of the light may just irritate them, he said.

Philiben said birds have incredible vision and that much of their brain responds to visual stimuli. The flip side is they don't have much in the way of cognizant processing capacity. The trick, therefore, is to "marry the eagle eye with the bird brain."

"Using the properties of light, you can use subtle combinations to get a knee-jerk reaction out of the birds," he said.

The best results with the Pulselite system seem to come in the early morning and late afternoon, when the ambient light is low, Philiben said. Also, those are generally the times of day birds are most active, as the low light makes it harder for predators to find them, he said. But predators, knowing their prey are most active at those times, are on the hunt.

As a result, Philiben believes one reason pulsating lights might work is because they interfere with a bird's ability to detect predators, hence triggering a behavioral response to move away from the offending lights.

Though scientists would like to do more research, Philiben is actively marketing Precise Flight's Pulselite technology as an onboard bird-strike deterrent system.

Next Meeting

Our next meeting will be held at the Weathervane Restaurant in Waterville on Tuesday, June 15. Please arrive at 6:00 pm if you plan to have dinner so that the meeting can begin at 7:30pm.

There are a number of issues and other "goings-on" regarding our upcoming fly-in that require discussion with only one more meeting after this before the event. So, if there is any possibility that you can make this meeting please do so. We need as much input as we can get.