RECORD OF COMMUNICATION

Michael Huhn
Air Safety Investigator
Western Pacific Region

Date: November 20, 2015
Person Contacted: Mr. Dan Withers (Program Manager, FAA Continued Operational Safety, ICT ACO)
NTSB Accident Number: WPR14LA271

Narrative: The following information was provided in email exchanges between the NTSB IIC and the two FAA personnel regarding STC-related performance data.

Initial NTSB Query:

As you can see, the subject airplane had numerous mods, including SA485SW. (Peterson canards)

My basic issue and questions center on the fact that the Katmai (Peterson) conversion is [advertised] on the Peterson website as a STOL conversion (complete with stall speeds and T/O & landing distances), yet there are NO associated POH changes made by that STC –

But my questions center around the "what performance data (speeds, distances, etc) is the pilot supposed to use?" standpoint. Isn't the pilot supposed to use the POH/book speeds/performance? If so, then s/he won't reap the supposed benefits of the mods- so in essence the mods and their advertising drives the pilots away from the book speeds/performance, and to me that seems like an FAA issue-

FAA Response:

You are correct there is no published SAFM or AFMS for this STC. As you probably recognized, the original STC issue date was 1965 for this particular one. We don't have quick and easy access to the STC data file..., but in discussing the question with a couple of our engineers who are somewhat familiar with the STOL kits by Peterson and a number of other companies such as Horton, Avcon, Bush, the company's approach to many of these modifications is to state something to the effect:

"The airplane performance is equal to or better than the standard (unmodified) airplane."

The costs and resources involved in proving a performance gain were not worth it to those STC applicants and so they chose the 'as good or better' route. The STC companies can't claim credit in the FAA type certification program without proof and any POH/AFM supplements will typically note as such, thereby

referring the operator to the basic Owner's Manual and POH/AFM of the airplane for performance information.

In the past, we have received calls from operators who have questioned statements made on STC company websites claiming better speeds and performance. What we continually explain in those calls is that type design and SAFM/AMFS data does not reflect any such performance change and therefore the basic Owner's Manual and AFM/POH should be used by the operator. Unfortunately, we can't control what companies claim or 'advertise' on marketing brochures or websites. We would continue to reiterate to operators or pilots that the basic Owner's Manual and AFM/POH is what they must follow.

NTSB IIC Reply/Follow-up:

I think its safe to say that most of these owners/pilots who expend big $ for such supposed perf[ormance] gains are not going to follow the 'defunct' but still FAA-legal Cessna speeds, and in essence become test pilots operating in the gray regions, and outside the approved envelope. In this accident case, the pilot stalled the airplane while turning base to final. His stated pattern speeds were the same as the Cessna book speeds... But of course there's insufficient evidence to know what speeds he was really flying.

Its disappointing to hear that the FAA cannot somehow influence or limit what the STC holders put in their advertising material, particularly when it comes to safety-related info such as performance data.

Im wondering if there aren't some avenues to either put that pressure on the STC holders, and/or better ensure that the pilot/owners who obtain these STC mods are very clearly aware of the actual performance capabilities & limitations

In my...[opinion]...one approach that might be hard on a retroactive basis, but maybe possible on a go-forward basis, is that the FAA could include conditional provisions in any STC that preclude such [unrepresentative advertisements] by the STC holder, with some predetermined consequences strong enough to discourage the STC holder from doing so. In other words, some STC-granting language that states that if the STC grantee exceeds certain specified boundaries, the FAA can take some action (perhaps such as rescinding the STC and making the grantee apply all over again, similar to a certificate revocation). In my mind, this clause should only be applicable to safety-related claims (but of course even that can become a very fuzzy line.)

On the pilot/owner warning/education side, one idea would be for the AFMS to have a very large/visible warning/disclaimer about what the STC does or does not do -for example, instead of the tiny print "no changes" under the relevant AFM/AFMS section, perhaps a much more visible and explicit statement making it clear that the stock book/envelope speeds still apply, regardless of what the STC holder's advertising may claim.

I also toyed with the idea of cockpit placards/warnings, but IMO they 'become part of the scenery' and are not very effective in guiding pilot behavior.

I'm going to reach out to the STC holder (Peterson) again and ask what basis/justification they have for claiming 31 [knot] stall speed on the web site, particularly in view of the fact that there are no official perf[ormance] changes.