

# Our Comments on the Proposed Turbo-charged Exhaust AD

Federal Aviation Administration (FAA)  
Central Region, Office of the Regional Counsel  
Attention: Rules Docket No. 97-CE-67-AD  
601 E. 12<sup>th</sup> Street, Room 1558  
Kansas City, MO 64106

July 22, 1999

Dear Sir:

The Twin Cessna Flyer is an owner's organization that represents approximately 700 turbo-charged twin Cessna aircraft. Through our technical support system, which includes Anthony R. Saxton, President of TAS Aviation, Inc., we are privileged to have the maintenance information available to us on over 200 twin Cessna aircraft per year.

The proposed Airworthiness Directive on turbo-charged twin Cessna aircraft has been a long time in the making. Quite possibly, there should have been some action earlier that may have directly affected the accident rate and could have even saved some lives. It is our feeling that because of a lack of action by some operators in the past, there now must be some action by all owners in the immediate future.

It goes without comment that the cost for any action of this magnitude is extreme, however, anyone complaining about the cost to replace parts on their aircraft that are not airworthy or could lead to an unsafe condition should go without recognition.

In talking with field representatives of Certified Repair Stations that have PMA authority for replacement exhaust parts, we are told that the probability of aircraft being grounded or waiting for parts is real. If you take 6,500 twins representing 13,000 exhaust systems, that means that someone must test and certify 10 engine exhaust systems per working day for the 24 calendar months following the date of the proposed

There is a lot of confusion in the field at this time on what the testing parameters are for pass/fail status of the exhaust as removed under paragraph (f) from any given aircraft. Definite parameters should be made available to the

AD. Because all of us are less than willing to part with our money until we absolutely have to, we foresee a tremendous backlog getting all of the aircraft inspected and flying at the end of the 24 month period. Also the cost mentioned in the NPRM of approximately \$60,000.00 per airplane for full exhaust parts replacement is approximately 4 times the real cost as of this writing. If one had to replace all four engine rails, both canted bulkheads, and all exhaust parts aft of the engine risers through the tailpipe, the cost should still run well below the \$60,000 mentioned.

We find through many years of actual hands-on experience with both Inconel and stainless steel that the fail rate is just as high on Inconel parts. If you bank on Inconel being better than stainless steel, people are going to continue to be hurt. We feel that there should be absolutely no differentiation between the two materials. If you look at Figure 1, the Compliance Table, the test for Inconel and stainless steel does not occur until the 500 hour removal listed under paragraph (f). Until this time it would be much easier to combine paragraphs (b) and (e) and simply pressure test and visually inspect all exhaust systems every 50 hours.

The removal of the tailpipe under paragraph (c) and the visual inspection of the engine beams and canted bulkheads at 100 hours and 500 hours consecutively, paragraph (d) should reflect some changes. Under paragraph (d) (1), the words, "...replace the firewall and the aluminum fuel lines behind the firewall..." should read remove the inspection panel in the firewall and replace the aluminum fuel lines behind the firewall. Replacement of the firewall is extreme and should be accomplished only in those conditions where a repair is not possible. Replacement of the aluminum fuel lines with the stainless steel lines should be mandatory.

Certified Repair Facilities mentioned. The inspection described under paragraph (f) must be accomplished by one of only three repair stations mentioned but according to the inspection listed in paragraph (i), any repair station can complete the

inspection.

Under paragraph (g) it states that all V-band clamps must be replaced as per the appropriate Cessna Service Manual. Under AD 75-23-08 R5, the words “multi-segment” V-band clamps (FIGURE 3) are only those that apply. This represents either 3 or 4 clamps per aircraft. Replacement of all V-band clamps including the one-piece clamps (FIGURE 4) would represent up to 11 clamps on certain models. It has been our experience that all one-piece V-band clamps fail very infrequently and should be allowed to stay in service rather than being a time-life item.

Under paragraph (f), the exhaust must be removed and inspected within 500 hours by a Certified Repair Facility and under paragraph (i), the exhaust must be removed within 2,200 hours and inspected by a Certified Repair Facility. Does this mean that under two inspections the exhaust could accumulate 2,700 hours total time in service? If it passes the initial 500 hour inspection and the

next 2,200 hour inspection, does this mean that the exhaust will not need to be removed for another inspection until it has accumulated 4,900 hours total time in service? Asking any person or facility to sign off on that responsibility may be asking too much.

Thank you for your attention.

Sincerely,

Larry A. Ball, President

*If I get one more call from a disgruntled owner harping about the cost to comply with this AD and how Cessna forced the FAA into this just so they could get more money by selling parts, I may hang up! Cessna had nothing to do with this Airworthiness Directive other than the work they did with the local FAA examiners proving that the original design of the turbo-charged system was sound and in furnishing some necessary and solicited information. It is our understanding that Cessna does not have now and quite possibly will never have enough exhaust parts to satisfy the needs of this AD. No one should complain about the cost to remove unairworthy exhaust parts.*