HJR

33

No. 1
Bill Version: CSHJR 33(TRA)
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FISCAL NOTE

STATE OF ALASKA
1997 LEGISLATIVE SESSION

Revision Date:
Title: FAA Approval of Tundra Tires
Dept. Affected: DOT&PF
BRU:
Component:
Sponsor: House Transportation
Requester: House Transportation
COMPONENT SERIAL NO.

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY97) cost: $

POSITIONS

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

Prepared by: Pete Ecklund
Phone: 465-7424
Division: House Transportation
Date: 4/3/97
Approved by Commissioner: William K. Williams
Date: 4/3/97
Agency: Chair, House Transportation

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Sponsor Statement
HJR 33

HJR 33 was introduced in response to a recent Federal Aviation Administration rule discontinuing the practice of allowing Aviation Safety Inspectors to issue field approvals for planes equipped with tundra tires.

Tundra tires are common equipment on many light aircraft throughout Alaska and are essentially a matter of safety in many flight situations over much of the State. Many of Alaska's rural airports and other flight destinations do not offer the niceties provided by modern airports with paved runways. Many rural airports have to get by with gravel strips built with less than desirable materials causing such hazards as potholes and large rocks from the subgrade. These conditions are dangerous when planes utilizing standard gear land or take off on such runways. Tundra tires play an important part in allowing safe operations in those conditions.

There are also large areas of Alaska that would not be accessible by planes without tundra tires. Many Alaskans have traditionally traveled to many remote areas of the state and can safely do so due to the use of tundra tires. Many rivers have gravel bars upon which planes equipped with tundra tires can land safely.

In conducting tests for the use of tundra tire equipped planes, the FAA found that there was no appreciable safety problems associated with tundra tires. That being the case it appears unreasonable for them to institute a program basically denying Alaskans the use of these types of tires.

The use of tundra tires has a long tradition in Alaskan aviation history. Their use has allowed Alaskans to pioneer the remote reaches of Alaska and to continue to access those areas safely. HJR 33 is needed to allow that tradition to continue.

Info On Tundra Tires in Alaska

To Whom It May Concern

This document is in reference to the ongoing tundra tire controversy that has been around Alaska since the Air Streak tire came on the scene about 1978 and was increased in the spring of 1995 by the NTSB staff member in Anc Mr. Tim Borson and his fixation that somehow tundra tires were causing PA-18 'Super Cub'type aircraft to crash.His insistence that the FAA do a study NTSB safety recommendation A-95-13 has been the single greatest detriment to the big tire controversy. The gentelman has since left Alaska and traveled to NTSBWash. D.C.

There was an NTSB meeting in ANC May,24,1996 that the public was effectively shut out by the NTSB since all the allotted time was taken up by speakers they choose and which was moderated by Mr. Tim Borson There were actually two meetings one in Juneau which had the big tire issue on the agenda which was hard to understand because that is essentially float country the pilots tried to have that item talked about at the ANC NTSB meeting but to no avail.

The tundra tires have been in use in Alaska since approx. 1959. In 1960 Safeway Airways at Merrill field Anc Alaska was issuedS.T.C. SA 5-39 to install 25X11X4 tires on PA-18 type A/C .These tires have provided a margin of safety and reduced stress on aircraft components ie. gear bolts,wing struts,landing gear hydra-sorb units etc.

The other tundra tire that was manufactured in San Diego named Air Streak were not a TSO tire but were built to TSO C62B standards and were field approved for 18 years, since about 1978, these tires have also provided an extra measure of safety for aircraft flying on gravel, sand mud rocks etc and have had thousands of hours of safe flying and no documented evidence by anyone that they are unsafe or caused aircraft to crash.

Mr Borson's recommendation pitted the engineering section of the FAA against the FSDO section that was field approving the big tires against engineering sections wishes.

In April of 1995 the engineering people had one of there people come from the Atlanta office that was not qualified to fly a PA-18 a/c checked him out and chartered a PA-18 from Mr.Gene Zerkel and flew it for 19 hours with a Bell 206B N227EH as chase plane on three of the flights, and determined there were no adverese charateristics from the THREE model tires flown at that time.None being the 30' Air streaks because the engineering people would not field approve a set even tho at that time there were at least 200 a/c flying in Alaska with the 30' Air Streaks field approved by the FSDO office with no problems.

SEE FAA report dated May 3,1995 SP1493AT-3 April 4,1995 A.Administrative para A.it list THREE TIRES flown,see FAA letter Jan,21,97 order 8300.10 Bulletin HBAW 97-01 were it states there is no problemm but in para. A.. last two lines it infers other bigger tires were tested and they in fact were not on that set of flights. The author might br referring to a flight test that was conducted on the same a/c in july 96 in the experimental category when Schneider racing slicks 14.0x32.0 x15 and Goodyear Airwheels 35 x15.0 x6 where flight tested.With pretty much the same results.

Then in para C [2] the administrator forbids any field office from approving any tire bigger than original manufacture on the planes.

Now to further compound the situation the FAA is coming up with a procedure that is going to be extremely cumbersome and exspensive for all concerned to approve only large tires that have a TSO. It is interesting to note the one large tire flown on the test A/C McCreary 29X10X10 is a heavy tire that has limited flexibility and will transfer landing gear shock more to the airframe than the controversial 30'tundra Air Streak

Some of the procedures are as follows which are going to be in FAA letter 97-01A.

1. The FAA inspectors are going to have a course at Oklahoma traing center on tundra tire approval.Only those inspectors will be allowed to field approve the tire installations if they want to.

2.Only a TSO tire will be field approved.

3.The rigging of the aircraft will have to be checked to see if it is set correctly.

4. The most forward and aft C.G. will have to be checked.

5.There will have to be two maintenance flights performed.

6. Proper type of tail surfaces installed

In summary it is hard to understand why all the public money has been spent on this issue when in fact there has been only a problem in some ones mind that has not had very much experience in Alaska flying operations and no documented evidence to substantiate the Draconian procedures that are being written at this time by the FAA in the name of SAFETY. That are going to cost the public a lot of money for nothing and inccrease the work load of the FAA maint. inspectors.

And eliminate all the present tires that have been manufactured in previous years that do not have the TSO and have been doing an excellent job for the aircraft industry.

Incidentally there a lot of items being put on A/C and being field approved by the FAA that do not have TSO certification.

ORDER: 8300.10

APPENDIX 3

BULLETIN TYPE Flight Standards Handbook Bulletin for Airworthiness (HBAW)

BULLETIN NUMBER: HBAW 97-01

BULLETIN TITLE: Approval Criteria for Tundra Tire Installations

EFFECTIVE DATE: 01-21-97

TRACKING NUMBER NTSB Recommendation A-95-13

1 PURPOSE To inform all Flight Standards Field Office Managers, Supervisors, and Aviation Safety Inspectors (ASI)(airworthiness), that ASI'S are no longer authorized to issue Field Approvals for tundra tire installations.

2. BACKGROUND This handbook bulletin is in response to the FAA Administrator's September 6, 1996 decision to close out the National Transportation Safety Board (NTSB) safety recommendation A-95-13 dated, February 7, 1995. The NTSB'S safety recommendation raised safety concerns about tundra tire equipped aircraft.

3. DISCUSSION Because of numerous low altitude, stall/spin accidents with aircraft modified with tundra tires, the NTSB issued safety recommendation A-95-13 dated, February 7, 1995. The NTSB's safety recommendation asked the FAA to perform flight tests with an aircraft equipped with tundra tires and investigate the tundra tire field approval process. Some tundra tire field approvals were issued without requiring the owner/operator to perform a flight test or supply other data on the aerodynamic effects of the larger tires and wheels.

A. FAA flight tests that were completed in April 1995, found that the effects of a tundra tire installation regarding handling and stall characteristics on the test aircraft (Piper PA-18) to be either negligible or within satisfactory limits, and did not represent a hazard to safety. Additional flight tests on the aircraft with even larger tundra tires found similar results.

B. The major cause of tundra tire equipped aircraft accidents appeared to be pilot error. The most common accident scenario

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was the pilot allowing the airspeed to drop, in a steep turn, with his or her attention focused outside of the cockpit. Other stall/spin accidents with tundra tires were caused by operators of PA-18 150, who, without FAA approval, removed the 2 5 degrees of washout at each wing tip.

C. To close out the NTSB's safety recommendation the FAA Administrator made two decisions.

(1) His first decision was for the FAA to issue an advisory circular (AC) on Tundra Tires. This was accomplished on October 10, 1996 when AC 23.733-1, Tundra Tires was published. The AC covers the result of the FAA tundra tires flight tests, and identifies possible hazards with a tundra tire installation. The last section of the AC provides general information about the certification process and provides a compliance checklist for aircraft that has a Civil Air Regulation (CAR) Part 3 Certification Basis.

(2) The Administrator's second decision was to prohibit Flight Standards district office ASI's from field-approved tundra tire installations.

4. ACTION. ASI's are no longer authorized to approve tundra tire installations using the field approval process. Individuals who wish to install tundra tires on their aircraft should be directed to AC 23.733-1, Tundra Tire and given the address and telephone number of the nearest Aircraft Certification Office.

5. INQUIRIES. This bulletin was developed by AFS-340. Any questions concerning this bulletin should be directed to AFS-340 at (202) 267-3796.

6. LOCATION. The material in this bulletin will be incorporated in FAA Order 8300.10 volume 2, chapter 1, paragraph 7, Perform Field Approval of Major Repairs and Major Alterations, to reflect this handbook bulletin in the next revision of the Order.

/s/ David E. Hegy
Acting Manager, Aircraft Maintenance Division

the Anchorage Federal Building. Please, do this well in advance of modifying your airplane. The certification process is straight for ward but it usually cannot be completed overnight. In this meeting we can discuss the implications of your modification and what types of testing and/or engineering data that will be required. We can also provide you with a more detailed guide to the STC process than the general information that you will get from this article. At the end of this meeting, you can submit an application for your modification and we will assign a project number and an engineer to your project. If you can't come into our office, we can discuss this over the phone and we will mail the information to you. Our phone number is (907) 271-2668.

Second, you will need to describe, in writing, drawings, and photographs, how the modification is made. What separates a "multiple" STC from a "one-only" STC is basically the quality of the descriptive information. If your plans are only to modify one airplane, you can describe it using sketches and photographs. If you want tosell this STC to others so that they can make the same modification, this requires engineering drawings and installation/ modification information with sufficient detail to allow someone else to make the same modification without error. Third, you will be required to show that the airplane still meets the original certification standards after the modification has been performed. This means to modify a PA-18 you must show that the airplane still meets the design certification requirements that were in place in 1949. We (that's you and the FAA engineer) will evaluate your modification to determinewhat certification regulations could be affected by your modification. Once we determine which regulation sections need to be addressed you will need to prove through tests and/or engineering analysis, that the altered aircraft still meets the affected original certification standards. The FAA will check the information you provide, and if all looks good, we will issue you an STC. With this STC and a completed FAA Form 337 your IA can return your airplane to service.

For the first timers, or for the more complex modifications we recommend that you hire a Designated Engineering Representative. These individuals can speed the process significantly. They have been through the STC approval process and have the authority to approve certain engineering data for the FAA. We can provide you a list of qualified Designated Engineering Representatives to assist with your alteration approval.

If you decide that you want to market your Supplemental Type Certificated modification and supply parts that you manufacture there are a few more steps involved. You will need to get a Parts Manufacture Approval. We can discuss those requirements during your initial visit.

Sometimes simple modifications may be more complex than they seem on the surface. The owner of a newly purchased airplane decided it needed a door lock. He went to the local hardware store, bought a lock, and installed it. That afternoon he went flying. When he got back to the airport later that evening and tried to get out of his airplane he was quite surprised. The door lock was designed to automatically lock when the door was closed and there was no way to unlock it from the inside. Three hours later his wife camelooking for him and unlocked the door. He thought about calling the Flight Service Station for help but couldn't bring himself to tell them that he locked himself in his airplane. He was lucky, if he had crashed or had a carburetor fire while starting his airplane this would have been a more serious mistake. The major alteration process is in place so that we can improve our airplanes safely. Remember, the design standards of the FAA are to provide us with a minimum level of safety. Those standards have come about through years of aviation experience. Using them can save your life.

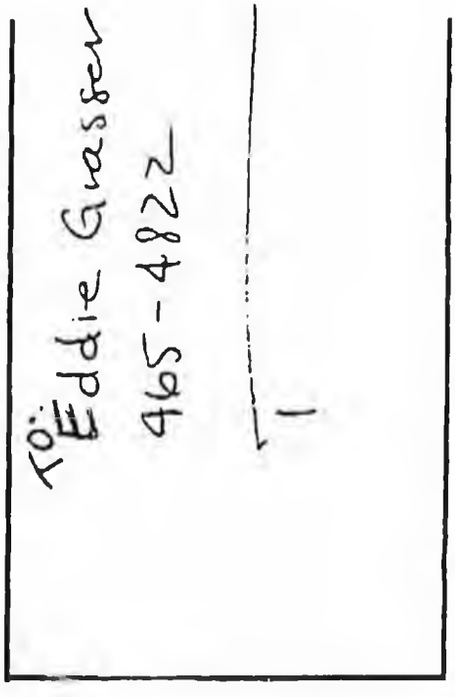
By August A. Asay
Aviation Safety Engineer for the
Anchorage Aircraft Certification Office,
FAA

STATUS OF TUNDRA TIRE FIELD APPROVALS ON LIGHT AIRCRAFT IN ALASKA

Currently national guidance prohibits Aviation Safety Inspectors from approving the installation of tires that are not approved by either the aircraft's type certificate, or by the Supplemental Type Certificate (STC) process. At the present time, individuals who wish to install tundra tires on their aircraft should follow guidance Advisory Circular, AC 23.733-1, and are required to work with the Federal Aviation Administration's (FAA's) Aircraft Certification Office (ACO).

History - Because of numerous low altitude stall/spin accidents with aircraft modified with tundra tires, the National Transportation Safety Board (NTSB) issued a safety recommendation dated February 7, 1995. One of the recommendations was to review the tundra tire field approval process. To comply with the NTSB's recommendations the FAA issued AC 23.733-1, tundra tires, on 10/10/96. In addition a Handbook Bulletin was issued to the Airworthiness Inspectors Handbook, 97-01, outlining the approval process of tundra tires on aircraft. Both of these documents presently limit the ability of individual aviation safety inspector to field approve tundra tires.

Presently the Alaskan Region Flight Standards Division is working with the FAA Headquarters to modify the new process. During the week of March 31, 1997, Richard Gordon, the Alaska Regional Flight Standards Division Manager, will travel to Washington D.C. to work to resolve the issue.



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