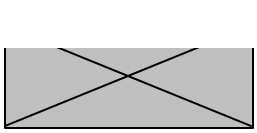
Phone: (202) 857-1140 1200 19th Street NW
Fax: (202) 429-5113 Suite 300
Email: david_lotterer@dc.sba.com Washington, DC 20036-2422



February 11, 2000

U.S. Department of Transportation, Dockets
Docket No. FAA-1999-6411
400 Seventh Street SW., Room Plaza 401
Washington DC 20590.

PROPOSED RULE: Transport Airplane Fuel Tank System Design Review, Flammability Reduction, and Maintenance and Inspection Requirements (Docket No. FAA-1999-6411; Notice No. 99-18)

Gentlemen/Madam:

The Regional Airline Association (RAA) submits the following comments to the subject proposed rule on behalf of its membership (attachment A). RAA encouraged its members to submit comments directly to the docket. RAA comments should be considered as supplemental to any comments individually submitted to the docket by RAA members.

RAA participated in recent discussions with the members of the Air Transport Association (ATA) and affected airframe manufacturers (OEM) in developing a "consensus industry response" to the proposal. RAA supports the consensus industry response. Our comments will highlight the industry positions of particular significance to the regional air carriers. We will also respond to the FAA's request for comments regarding alternatives to the applicability of the proposal.

RAA requests that the applicability of adopted rule be determined by identified safety hazards.

The proposal notes the FAA considered several approaches in carrying out its responsibility for aviation safety and requests specific comments for three alternatives to the proposed rule:

Alternative 1: All airplanes in commercial service
Alternative 2: All airplanes with 10 or more seats in commercial service
Alternative 3: Only turbojet airplanes in commercial service

The FAA decision to issue the proposal rather than one of the alternatives seemed to focus primarily on cost impact issues independently of the benefits associated with the varying airplane types. We do not understand how the cost of rulemaking can be disassociated from the benefits. RAA believes the primary focus in deciding which airplanes are affected should be based upon the potential safety hazards associated with ignition sources that may exist for fuel tank systems for the specific airplane types. Based upon the proposal and the accompanying cost benefit analysis, RAA

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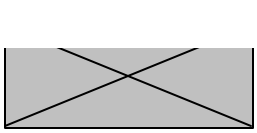

identifies the relative safety hazards as follows:

1. Does the airplane type have fuel tanks near adjacent heat sources? The Boeing 747 accident that precipitated this proposal, is of course an airplane with a center fuel tank and a potential adjacent heat source (air conditioning packs). The ARAC group for fuel tank harmonization attempted to quantify the relative risks associated with potential heat sources near the fuel tanks by stating "Thermal analysis has shown that all generic fuel tank designs have some exposure to flammable fuel vapor. Tanks without adjacent heat sources independent of location (wing or fuselage), have equivalent exposure of approximately 5%. Tanks with adjacent heat sources have exposure of approximately 30%." The typical regional airplane, both turboprop and turbojet, does not have center fuel tank(s). The engines on a Bombardier and Embraer regional jet airplanes which constitute over 90% of the regional jet fleet, are installed on the aft fuselage, a considerable distance from the wing fuel tanks. The wing fuel tanks for turboprop airplanes during taxi conditions are further cooled by the propeller air stream. RAA suspects that the "5% exposure" cited in the ARAC report does not represent turboprop operations nor typical regional jet operations. We view the probabilities that a wing fuel tank on regional airplanes could experience heat increases from adjacent heat source, as extremely low.

1. Is the airplane type of sufficient age such that the aging of fuel tank components, system wiring, ground wires, etc. could contribute to the development of potential ignition sources? The average age of the U.S. regional fleet is under 6 years of age. While the potential for degradation of wiring and components may in the future, affect the regional fleet, we do not view the concerns associated with aging systems, as characteristic of the present regional fleet. As for future safety concerns, RAA believes that the expected recommendations of the Aging Transport Systems Rulemaking Advisory Committee should by itself, address potential safety concerns associated with aging systems.

1. Does the airplane type have wiring or electrical components adjacent to critical fuel system wiring such that wear or chafing of wiring could potentially induce increased voltages into the fuel tank system wiring? This concern seems to be the impetus to review the installation of STC holders. In our review of the 62 listed TC holders affected by this proposal (Regulatory Evaluation document, Appendix A), there were no STC's that affected the regional fleet. It is quite common for regional airplane types to retain their original certification configurations unlike the larger airplane types where passenger seating configurations and other modifications are more frequent. While subsequent modifications of the TC holder mandated by airworthiness directives, could also potentially affect current fuel tank systems, we consider it very unlikely, given the age of the regional fleet. It must also be noted that the relative simplicity of the fuel systems on the smaller transport and non-transport airplanes would lead to less risk that that a potentially unsafe condition could exist. If there are fewer pumps, fewer sensor wiring circuits and smaller tanks on the smaller airplane types, it seems reasonable to expect that there is less probability that wiring chafing/wear hazards would exist.

1. Does the airplane type have a potential fuel vent protection concern? This of course is the same

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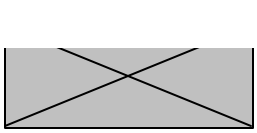

safety concern addressed by the Fuel System Vent Fire Protection NPRM (Docket No. 24251, published 2/2/95). In our comments to the docket (24251), RAA noted that there have been never been any accidents/incidents in the regional fleet to justify adoption and that the proposed retrofit would introduce additional safety hazards such as a fuel supply interruption caused ice or foreign object damage injection of a flame arrest system.

RAA therefore considers that in deciding to how much of the regional fleet should be affected by the proposal, a qualitative assessment on relative risks associated with each fleet type needs to be conducted. If the potential safety hazards is limited to those identified in the above list, then RAA considers the existence of safety hazards on regional airplane types to be significantly less than those associated with the larger transport airplanes and the applicability of the proposal should be revised accordingly.

RAA requests that the Cost Benefit Analysis be revised to reflect more realistic benefits to the regional operators

The cost benefit analysis cited two accidents that occurred in the past 10 years (a Boeing 747 and a Boeing 737) and apparently concluded that the safety hazards that may have contributed to the two accidents (we still don't have a conclusive explanation for these accidents) are equivalent for the regional fleet. RAA has not accomplished a comprehensive assessment to dispute your conclusion but given our cursory assessment of the above safety hazards, we consider the hazards to be significantly less on the regional fleet when compared to the large transport category fleet. Since the regional airframe OEM's have expressed support for a design review, RAA is confident their findings will identify the respective safety hazards and that the regional operators will respond with corrective actions accordingly.

The Cost Benefit Analysis noted the two assumptions that were made to quantify potential benefits; the first was to use the Boeing 747 accident and the potential number of lives that could be lost in a fuel tank explosion on a Boeing 747 (288 fatalities) and the second was to construct an "average" air carrier flight as the model for the potential number of lives that could be lost in a fuel tank explosion. The "average" flight would have 130 passengers and a crew of 7 onboard. RAA considers neither assumption as relevant in constructing a realistic cost benefit analysis for the regional fleet. The "average" seating capacity for the regional fleet that carries 30 or more passenger in 1998 was 38.6 seats (see Attachment B for more detailed seating data) so that if the Boeing 747 scenario was used, the proposed regional fleet that is affected would have to avoid 10 fuel tank explosion accidents in the next 10 years to derive an equivalent benefit (based upon a 70% seat occupancy). The "average" flight scenario would equate to avoiding 5 fuel tank explosion accidents in the next 10 years. The regional fleet has never had a fuel tank explosion accident and as mentioned above, we view the identified hazards for potentially having a fuel tank explosion accident as considerably less for the regional fleet. We therefore request that the benefits portion of the cost benefit analysis be revised to more accurately reflect the variety of seating capacity that exists within the FAR 121 operations.

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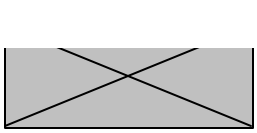

Consistent with the "consensus industry response", RAA requests that the proposed operating rule changes (FAR 91/121/129) be withdrawn and after assessment of the SFAR reports, replaced with Airworthiness Directives (AD's) for each of the affected airplane types.

Issuing individual AD's in lieu of a "blanket" operating rule offers numerous advantages to the FAA and industry:

1. The affected operators cannot adequately comment on the expected maintenance and inspection instructions until they are actually developed. In the past the FAA has simply requested information from the TC holder (e.g. thrust reverser, worn brakes, ice protection systems, etc.) and once the information is provided, an AD against a specific airplane type would be proposed to the operators. By providing a comment period for a proposed AD, the operators were given the opportunity to comment on the adequacy of the proposal that affected them. In this instance we are not given that opportunity since none of the airframe OEM's have begin the SFAR assessment. We would of course expect that the proposed AD's would mandate the proposed inspections to be incorporated into an operator's maintenance program and AD sign-off would be accomplished once the operator revised their maintenance program (similar to the worn brake AD's, SSID AD's, etc.).

1. The release of individual AD's would provide more flexibility for the FAA in completing their assessment of the SFAR documents and approving the individual operator maintenance programs. The proposed operating rule will most likely led to a sizable number of requests to extend the compliance period since operator compliance depends upon many factors beyond their control (timely completion by the airframe OEM's of the design review report, timely approvals by the FAA of the design review reports, etc.).

1. The release of individual AD's would more closely align to a realistic cost benefit analysis. RAA believes that the applicable safety hazards to be significantly less on the regional fleet when compared to the large transport category fleet but at this time, we have no data to support our belief. However the data derived the proposed design review program may point out that certain regional airplane types need closer scrutiny. The use of AD's for targeting the higher risk airplane type will be a more effective regulatory process than the proposed blanket operational rule.

If the consensus industry request for individual AD's is denied, then RAA requests that the proposed operating rule be limited to large transport category airplanes only (60 or more passenger seats or 14,000 or more pound payload)

The above comments provide our assessment that the applicable safety hazards are significantly less on the regional fleet when compared to the large transport category fleet. We also expressed our belief that the cost benefit analysis is not relevant to the regional fleet. This would lead to a conclusion that there are no benefits to having the proposal apply to the regional fleet.

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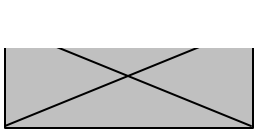

Consistent with the "consensus industry response", RAA requests that a one time inspection of the configuration be conducted in lieu of a quantitative design review assessment of proposed STC's that are not Fuel System STC's (ATA Code 28). Safety hazards that may exist as a result of "field approvals" or "airplane modifications" would also be addressed by the one time configuration inspection. The configuration inspection would be mandated by an AD and accomplished on a heavy maintenance visit.

The cost benefit analysis identified fuel tank system STC's but the supplementary comments of the proposal referred to STC's that "affect the fuel tank systems", "field repairs", "modifications that affect the fuel tank system" as actions to be included in the design review assessment. Obviously, the list of what the FAA considers should be reviewed and assessed could get quite large depending on how "affects" is defined. The effort and expense of compiling records from past airplane owners, previous modifications, etc. is simply not productive and as we have seen from past accidents, not effective. A more effective approach is to simply accomplish a one time inspection of the fuel tank system wiring to determine if subsequent wires were installed in adjacent areas. This could be mandated by AD and accomplished when the operator has gained access to the affected areas.

Consistent with the "consensus industry response", RAA requests that the proposed FAR Part 25.981(b) be revised to remove the requirement to install "placards, decals or other visible means" at "critical design" areas of the airplane.

A requirement to affix placards on and around the "critical" areas of the fuel tank system wiring to address a future concern that a subsequent alteration could affect the integrity of the fuel tank system, is technically unsound. Future alterations are of course installed by configuration drawings provided by an engineering orders, STC's, etc. Maintenance manuals or other design reference materials (SAE standards, etc.) which describe the appropriate hazards is a more effective place to describe warnings for the design engineer. In many cases the "design engineer" may not even look at a physical airplane in developing the alteration. Maintaining the placards of course would impose additional expense on the operators and if the precedent is established that this is necessary for a "critical" system, then other FAA certification staff will be requiring that similar placards be affixed to protect the integrity of their critical systems.

RAA notes that the data used to identify the regional fleet in the cost benefit analysis was dated.

Attachment C is provided to provide you more current information on the regional fleet.

Your consideration of the comments and requests of RAA and its member's, is appreciated.

Sincerely,

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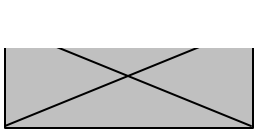
Washington, DC 20036-2422



David Lotterer
Vice President - Technical Services

Attachments

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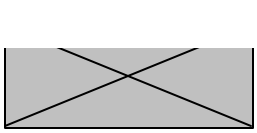

ATTACHMENT A:

Company	City, State	Company	City, State
Aeromar *	Mexico City, DF	Midway Airlines	RDU Int'l Airport, NC
Air Midwest	Wichita, KS	Ozark Airlines	Columbia, MO
AirNet Systems	Columbus, OH	Pan Pacific	Mount Vernon, WA
Air Nova *	Enfield, Nova Scotia, Canada	Piedmont Airlines	Salisbury, MD
Air Ontario*	London, Ontario	PSA Airlines	Vandalia, OH
Air Serv	Redlands, CA	Scenic Airlines	N. Las Vegas, NV
Air Wisconsin	Appleton, Wis	Seaborne Aviation	Christiansted, USVI
Allegheny	Middletown, PA	Servicios Aereos Litoral*	San Antonio, TX
American Eagle	Dallas, TX	Sedona (Aaron)	Seattle, WA
Atlantic Coast Airlines	Dulles, VA	Shuttle America	Windsor Locks, CT
Atlantic Southeast	Atlanta, GA	Skymark	Spokane, WA
Austin Express	Austin, TX	Skyway Airlines	Oak Creek WI
Big Sky Airlines	Billings, MT	Skywest	St. George, UT
Business Express	Dover, NH	Sunworld Int'l Airlines	Ft. Mitchell, KY
Cape Air	Hyannis, MA	Tie Aviation	Jamaica, NY
CCAIR	Charlotte, NC	Triton Air	Mesa, AZ
Champlain Air	Plattsburgh, NY	Trans States	St. Louis, MO
Chautauqua Airlines	Indianapolis, IN	Universal Airways	Houston, TX
Chicago Express	Chicago, Il.	Walker's Int'l	Ft. Lauderdale, FL
Colgan Air	Manassas, VA		
Comair	Cincinnati, OH		
CommutAir	Plattsburgh, NY		
Continental Express	Houston, TX		
Corporate Air	Billings, Montana		
Corporate Express	Nashville, TN		
Eagle Aviation	Las Vegas, NV		
Empire Airlines	Coeur d'Alene, ID		
ERA Aviation	Anchorage, AS		
Executive Airlines Inc.	San Juan, P.R.		
Executive Airlines	Farmingdale, NY		
Express Airlines I	Memphis, TN		
Falcon Express	Tulsa, OK		
Federal Express	Memphis, TN		
First Air	Dallas, TX		
Grand Canyon	Grand Canyon, AZ		
Great Lakes Aviation	Bloomington, MN		
Gulfstream Int'l	Miami Springs, FL		
Horizon Air	Seattle, WA		
Island Air	Honolulu, HI		

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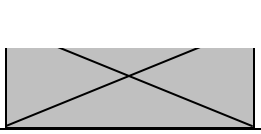

Mesa Air	Phoenix, AZ		
Mesaba	Minneapolis, MN		

ATTACHMENT B

Top Regional Aircraft for 1998

Rank	Manufacturer	Model	Total Aircraft in Airline Service	Total Seats	Percent of Total Fleet Seating Capacity
1	Saab	340	272	9,157	15.4
2	Bombardier	Regional Jet	140	7,000	11.8
3	Embraer	Brasilia	203	6,090	10.2
4	Bombardier	Dash 8-100/200	159	5,883	9.9
5	Raytheon	1900*	247	4,693	7.9
6	Aerospatiale	ATR72	60	3,840	6.5
7	Aerospatiale	ATR42	79	3,706	6.2
8	Embraer	ERJ145	63	3,150	5.3
9	BAe/Avro	146/RJ85	36	2,884	4.8
10	BAe	J31/32*	121	2,299	3.9
11	BAe	J41	57	1,653	2.8
12	Fokker	F28	20	1,240	2.1
Total-Top Aircraft			1,457	51,595	86.7%

*The 1900 and J31/32 airplanes are non-transport category (19 passenger seat) airplanes