Air Transport Association

October 16, 2001

Docket Management System
U.S. Department of Transportation Dockets
Room Plaza 401
400 Seventh Street SW.
Washington, DC 20590-0001

Subject: Docket No. FAA-2001-10428, re: **SFAR No. 89 - Digital Flight Data Recorder Resolution Requirements**; Final Rule, 66 Fed. Reg., Vol. 163, August 22, 2001

Ladies/Gentlemen:

FAA published Special Federal Aviation Regulation (SFAR) No. 89 to provide relief, until August 18, 2003, from resolution requirements of Amendment Nos. 121-266, 125-30, 129-27, 135-69, the "'97 Flight Data Recorder Rule". The relief is applicable to a limited number of parameters in B717, B757, and B767 airplanes, and to other parameters in certain other airplanes. The SFAR was adopted without prior public comment, and FAA solicited comments upon its issuance.

On behalf of its members[1/], the Air Transport Association, on September 21, 2001, forwarded comments regarding the proposal to Docket No. FAA-2001-10428. Subsequently, the attached comments were received, and we request that they be included as part of our submission to the docket. These additional comments are consistent with our earlier submission, and provide specific recommendations for amending FAR 121.344, Appendix M, with respect to B757 and B767 airplanes.

We appreciate the opportunity to contribute comments to this rulemaking and thank you for your consideration of these views.

Sincerely,

Joe White
Director, Aircraft Systems Engineering

1/ ATA's members are Airborne Express, Alaska Airlines, Aloha Airlines, America West Airlines, American Airlines, American Trans Air, Continental Airlines, Delta Air Lines, DHL Airways, Emery Worldwide, Evergreen International Airlines, FedEx Corporation, Hawaiian Airlines, Jet Blue Airlines, Midwest Express Airlines, Northwest Airlines, Polar Air Cargo, Southwest Airlines, United Airlines, United Parcel Service and US Airways. Our associate members are Aeromexico, Air Canada, KLM Royal Dutch Airlines, and Mexicana.

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Attachment

/01Aem091

Delta

Delta Air Lines, Inc.
Post Office Box 20706
Atlanta, Georgia 30320-6001

October 2, 2001

Mr. Joe White
Director, Aircraft Systems Engineering
Air Transport Association of America
1301 Pennsylvania Ave., NW
Suite 1100
Washington, DC 20004-1707

SUBJECT: 01-AE-091: SFAR No. 89, Digital Flight Data Recorder Resolution

Dear Mr. White:

The FAA has published Special Federal Aviation Regulation (SFAR) No. 89, to provide temporary relief to operators of B717, B757, and B767 airplanes. Specifically, the SFAR suspends the resolution requirements contained in Appendix M to Federal Aviation Regulation (FAR) Part 121 for certain Flight Data Recorder (FDR) parameters.

The scope of Delta's comments and related information is limited to the B757 and B767 models since Delta does not operate the B717. The parameters being discussed are specifically: 12a. Pitch Control(s) position (non-fly-by-wire), 14a. Yaw Control position(s) (non-fly-by-wire), 16. Lateral Control Surface(s) Position, 19. Pitch Trim Surface Position, and 23. Ground Spoiler Position or Speed Brake Selection.

Delta previously retrofitted approximately 209 airplanes within its fleet of over 230 B757 and B767 model airplanes to add the new parameters to meet the intent of the '97 rule. The designs employed were as consistent as possible to those utilized by Boeing during production and recommended by them via technical documents (Service Letters, Service Bulletins, etc.) and conversations with Boeing staff. This approach was taken to realize standardization to the greatest extent possible, to minimize duplication of effort, and to minimize technical risk and costs.

Delta believes Appendix M should be revised for the applicable Boeing products in a similar manner as previously done for certain Airbus products. Based on data and comments provided by Boeing, the resolution relief needed in absolute terms (i.e. disregarding percent full range) for the Boeing products is no greater than that previously granted for the applicable Airbus airplanes. Regarding the Airbus product changes to Appendix M: "...FAA determined that changes to Appendix M were an appropriate means to account for differences in Airbus DFDR equipment..." (Ref. SFAR 89 Preamble - Page 4). Given the scope of the Boeing changes, revision to Appendix M is an appropriate means to account for the differences in DFDR equipment.

Even when considering resolution in terms of percent full range, the Boeing proposed changes are consistent with considerations made previously for certain Airbus airplanes. Review the case of parameter 16, Aileron Position, for the A330/A340 models. The change from 0.2% to 0.704% granted by footnote \7\ represents more than a 250% deviation in full range resolution. Another case is parameter 14, Yaw Control Position. The relief granted Airbus for A330/A340 airplanes is an almost 600% deviation in full range resolution. The greatest deviation needed for the Boeing airplanes is on the order of 126%. Again, this is only in the context of resolution in terms of percent of full range. The absolute resolution in terms of degrees for the Boeing airplanes is the same or better than the relief granted for the Airbus products.

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Revision to Appendix M to include the applicable Boeing airplanes clearly falls within the intent and spirit of the original rule (Ref. Page 4 of SFAR preamble "...undergo major equipment retrofits, a circumstance the rule explicitly tried to avoid.."). To retrofit B757/B767 airplane DFDR systems to match the current resolution requirements (discounting SFAR 89) would require extensive major retrofits which offer insignificant benefits/improvements at significant cost. Revision to Appendix M as proposed will also facilitate equitable application of the requirements to the two primary commercial air transport manufacturers, and subsequently to the numerous operators.

Specifics of the proposed revision to Appendix M Airplane Flight Recorder Specifications are as follows:

Add:

"\3\" footnote flag to 12a Pitch Control Position (non-fly-by-wire systems).

Change footnote \3\ to read:

\3\For A318/A319/A320/A321 series airplanes, resolution=0.275% (0.088 deg.>0.064 deg.). For B757/B767 series airplanes, resolution=0.451% (0.088 deg.>0.064 deg.).

Change footnote \5\ to read:

\5\For A318/A319/A320/A321 series airplanes, resolution=0.21% (0.088 deg.>0.84 deg.). For B757/B767 series airplanes, resolution=0.24% (0.088 deg.>0.064 deg.).

Change footnote \7\ to read:

\7\For A330/A340 series airplanes, aileron resolution=0.704% (0.352 deg.>0.100 deg.). For B767 series airplanes, aileron resolution=0.202% (0.087 deg.>0.086 deg.).

Change footnote \9\ to read:

\9\For all Airbus airplanes, resolution=0.518% (0.088 deg.>0.051 deg.). For B757/B767 series airplanes, resolution=0.574% (0.088 deg.>0.043 deg.).

Change footnote \12\ to read:

\12\For A300-600/A310 series airplanes, speed brake resolution=0.224% (0.112 deg.>0.100 deg.). For A330 /A340 series airplanes, spoiler resolution=1.406% (0.703 deg.>0.100 deg.). For B757/B767 series airplanes, speed brake resolution=0.451% (0.352 deg.>0.156 deg.).

Permanent incorporation of these changes to Appendix M will eliminate the need to rework over 210 airplanes in Delta's fleet at significant cost. The resolution currently provided by the parameters is more than sufficient to satisfy any investigative purpose. Delta believes that higher resolution for the applicable parameters is not warranted nor cost effective.

Please forward these comments to the FAA on our behalf. If you have any further questions on this subject, contact Rhamy Nipper, B 737-800 Program Manager - Regulatory Compliance, at (404) 714-0667 or rhamy.nipper@delta.com.

Sincerely,

for Richard S. Reagan
General Manager - Regulatory Compliance
Department 595