

## Appendix K

### Summary of Aging Aircraft Programs (Structures) (8/16/01)

**Repair Assessment Program** – Notice of Proposed Rulemaking (NPRM) (Notice No. 97-16) proposing operational rules affecting part 91, 121, 125 & 129 operators was issued on December 22, 1997 and published in the Federal Register (FR) on January 2, 1998. The comment period closed on July 3, 1998. The proposed rule would require that a damage tolerance (DT) assessment be accomplished for all repairs to the fuselage pressure boundary (i.e. fuselage skins, door skins and bulkhead webs). Applicable to original eleven aging aircraft (i.e. Airbus A300, BAC 1-11, Boeing 707/720, 727, 737, 747, McDonnell Douglas DC-8, DC-9/MD-80, DC-10, Lockheed L1011, Fokker F-28). The proposed rule states that no operator may operate these airplanes beyond the applicable flight cycle implementation time (listed in rule for each model) or one year after effective date of the amendment, whichever occurs later, unless its operations specifications have been revised to reference repair assessment guidelines (RAGs). The cognizant FAA Aircraft Certification Office (ACO) approves the RAGs. All manufacturers have already issued RAGs to be followed by the operators and are nearly complete with revising their Structural Repair Manuals (SRMs) to include DT based repairs.

An Advisory Circular (AC) has been developed to accompany the operational rules and a FAA Order is being developed.

**Issuance** – The final rule was issued on April 18, 2000, published in the FR on April 25, 2000 and is effective May 25, 2000. AC 120-73 was issued on December 14, 2000.

**Widespread Fatigue Damage (WFD) and the Aging Aircraft Program** – The Aviation Rulemaking Advisory Committee (ARAC) was tasked several months ago to develop a draft NPRM proposing operational rules (parts 91, 121, 125, 129 & 135) to ensure that one year after the effective date of the rule no large transport category airplane (>75,000 lbs. Maximum Gross Take Off Weight) may be operated beyond the flight cycle limits to be specified in the Airworthiness Limitation Section (ALS) of the Instructions for Continued Airworthiness (ICA) unless an Aging Aircraft Program has been incorporated into the operators maintenance program. The Aging Aircraft Program will cover: supplemental structural inspection program (SSIP)/ALS, structural modifications, corrosion prevention and control program (CPCP), structural repairs and a program to preclude WFD from the fleet. ARAC has requested the Airworthiness Assurance Working Group (AAWG) to complete the tasking. Aircraft that don't currently have an ALS would be required to have one.

The regulations would require a limit of validity (in flight cycles or hours) of the structural maintenance program, where additional inspections and/or modifications must be incorporated into the operators maintenance programs in order to allow continued operation.

The inspection/modification program for the baseline aircraft would be provided in most cases by the Type Certificate Holder (TCH) and for major structural repairs, alterations (multiple

frame bays) and modifications (e.g. Supplemental Type Certificates (STC's)) by the STC holder or operator.

A Draft AC has been developed by the AAWG and will be issued for public comment concurrently with the NPRM.

**Status:** Task 6-Aging Aircraft Program (Widespread Fatigue Damage) was issued December 9, 1999 and published December 15, 1999, (FR Docket 99-32462). The tasking was for 9 months. TOGAA and AAWG have agreed to a version of the draft NPRM and AC. The draft NPRM and AC was reviewed by Transport Airplane Directorate (TAD) legal (ANM-7). The economic assessment sans regulatory flexibility analysis was delivered to TAD on April 30, 2001. On May 23, 2001 the AAWG unanimously agreed to forward draft NPRM and AC to the Transport Airplane and Engines Issues Group (TAEIG) of ARAC for their consideration. TAEIG voted on June 26-27, 2001 to forward draft NPRM and AC to FAA.

**Issuance:** The goal is to issue the NPRM and draft AC by February 2002. Issuance date could be much later depending on how long it takes to get clearance from the Office of Secretary of Transportation (OST) and Office of Management and Budget (OMB).

**Aging Airplane Safety Rule** – This was issued as an NPRM (Notice No. 99-02) on April 2, 1999 and the comment period was supposed to close August 2, 1999 but the FAA extended the comment period until October 18, 1999. This NPRM was developed to comply with the Aging Aircraft Safety Act of 1991. The NPRM helps ensure the continued airworthiness of aging airplanes operating in air transportation by applying damage tolerance (DT) analysis and inspection techniques to older airplanes structures that were certificated before such techniques were available, and through mandatory records reviews and inspections after the 14<sup>th</sup> year in service. The DT based supplemental inspections would be applicable to the baseline airplane structure (as built by TCH) and all major structural repairs, alterations and modifications (e.g. STC's), as well. The DT based supplemental inspections would be required 4 years after the effective date of the proposed rule with certain exceptions for airplanes with mandated AC 91-60 service based supplemental inspection programs or for airplanes whose design life goal has been listed in the provided tables in the proposed rule.

The NPRM was applicable to all airplanes operated in part 121, all US registered multi-engine airplanes operated in part 129 and all multi-engine airplanes operated in scheduled operations under part 135.

Two draft AC's have been developed and will be issued for public comment concurrently with the final rule.

**Status:** The FAA has received many comments and the vast majority was very negative, especially from part 135 operators. From all indications there will probably not be a supplemental notice. The final rule went to OST on March 8, 2001. The final rule went to OMB on July 27, 2001.

**Issuance:** The goal is to issue the final rule 16 months after the comment period closed. Final rule and draft AC's will be issued by FAA after clearance is received from OST and OMB.

**Corrosion Prevention and Control Program (CPCP)** – This will be issued as an NPRM to require that maintenance or inspection programs for all airplanes operated under part 121, all U.S. registered multi-engine airplanes operated in common carriage by foreign air carriers or foreign persons under part 129 and all multi-engine airplanes operated under part 135 used in scheduled operations include an FAA-approved CPCP. This NPRM is being issued in response to the Aging Aircraft Safety Act of 1991. This NPRM would give operator's two years after the effective date of the final rule to implement a CPCP program into their maintenance or inspection program.

A Draft AC has been jointly developed by the FAA/JAA and will be issued for public comment concurrently with the NPRM.

**Status:** The NPRM moved from OST to OMB on January 10, 2001. A revised regulatory evaluation was sent to OMB on April 8, 2001.

**Issuance:** NPRM and draft AC will be issued after receiving clearance from OMB.

**Supplemental Structural Inspection Programs (SSIPs)** – Developing SSIPs for the aging aircraft fleet was one of the original aging aircraft initiatives following the Aloha Airlines accident in 1988. All of the manufacturers of the original 11 large transport airplanes developed supplemental structural inspection documents (SSIDs) per AC 91-56 that were referenced in airworthiness directives (ADs) for most of the applicable models. Since the manufacturers developed their own programs independently the programs vary significantly.

Some of the programs were changed recently by AD supersedure and now there is a question whether all of the mandated SIDs meet the intent of AC 91-56A which replaced AC 91-56. A SSID Team has been chartered to look at all of the AD mandated SSID programs to ensure that they all meet the intent of AC 91-56A. The team will be developing information regarding differences in the SSID programs and ADs and whether any changes need to be made to the current ADs to ensure standardization. The team will also review the Repair Assessment Program and Aging Airplane Safety Rule to determine the impact of these operating rules on the mandated SSID programs.

Based on team's recommendations certain AD's may be superseded to standardize the approach that is being mandated for SSIPs

**Status:** The Team has issued a report containing their recommendations to the TAD. A memorandum was signed on March 29, 2001 to address recommendations from the SSID Team to standardize language in SACO and LAACO SSID ADs.