BY ORDER OF THE COMMANDER
452D AIR MOBILITY WING

452D AIR MOBILITY WING INSTRUCTION 21-105

25 SEPTEMBER 2013
Certified Current 22 September 2020
Maintenance

AIRCRAFT STRUCTURAL INTEGRITY PROGRAM

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 452 MXG/MXQ

Certified by: 452 MXG/CC
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Supersedes: MARCHARBI21-105, 16 September 2010

Pages: 5

This Instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance*. This instruction extends the guidance of Air Force Instruction 21-101, *Aircraft and Equipment Maintenance Management*. This instruction establishes responsibilities and procedures for Aircraft Structural Integrity Program (ASIP). The 452 AMW does not have any ASIP aircraft assigned and will follow procedures in accordance with (IAW) Technical Order (TO) 1C-135-38, *Aircraft Structural Integrity Program USAF Series -135 Aircraft*, TO 1C-17A-6, *Inspection Requirements Manual*, TO 1C-17A-6WC-2, *Home Station Check Workcards*, TO 1C-17A-2-31JG-30-1, *Indicating and Recording Systems Recorders*, and this instruction for the Individual Aircraft Tracking Program (IATP). This instruction applies to all personnel, military and civilians, within the 452d Air Mobility Wing. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF IMT 847 from the field through Major Command (MAJCOM) publications/forms managers. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-f61a/afrims/afrims/** . The use of the name or mark of any specific manufacturer, commercial product, commodity or service in this publication does not imply endorsement by the Air Force.

1. Aircraft Structural Integrity Program (ASIP) Project Officer.

1.1. The 452 MXG/CC will appoint a primary and alternate ASIP/IATP project officer from within the 452d Maintenance Group (MXG).

1.1.1. The ASIP/IATP project officers will also serve as the ASIP/IATP monitors.

2. The ASIP/IATP Project Officer will: Develop and maintain a system to file notifications from the Aircraft Structural Integrity Management Information System (ASIMIS) website showing the files were uploaded to verify compliance.

3. Individual Aircraft Tracking Program (IATP).

3.1. The KC-135 and C-17 IATP programs were developed to monitor the aircrafts' structural integrity. The computer programs calculate the safe life expectancy of different aircraft structural components. The end products of the IATP aid in evaluating airframe service life, as well as facilitating decisions concerning aircraft inspection and maintenance modification. The IATP is also used to calculate service usage on individual aircraft based on damage and accrued wear.

4. Storage Media.

4.1. 452 AMW KC-135R aircraft storage media for ASIP data is the Flight Data Recorder and Cockpit Voice Recorder (FDR/CVR) records and stores individual aircraft usage data.

4.1.1. Data is downloaded and transferred using Personal Computer Memory Card International Association (PCMCIA). PCMCIA cards will be controlled using TC-Max.

4.2. 452 AMW C-17A aircraft storage media for ASIP data is the Standard Flight Data Recorder (SFDR).

5. Deployed Procedures.

5.1. Units will comply with the same procedures in this instruction while deployed.

6. ASIP Training Requirements.

6.1. Individual users of Aircraft Data Acquisition and Distribution System (ADADS) and ASIMIS will receive cascade training from individuals qualified to make inputs into the system. Training will consist of On the Job Training (OJT) and will be documented on an AF IMT 797, *Job Qualification Standard Continuation,* or other appropriate means.

7. KC-135R Responsibilities.

7.1. Aircraft Maintenance Squadron (AMXS):

7.1.1. AMXS personnel shall be responsible to maintain and repair and will download FDR/CVR data after each flight and as otherwise required in TO 1C-135-6WC-1. They will also transfer the data into the ADADS.

7.2. Engine Manager:

7.2.1. The Engine manager shall be responsible for ensuring each flight has been loaded and that the data is valid for transfer to the Comprehensive Engine Trending and Diagnostic System (CETADS).

8. C-17 Responsibilities.

8.1. The Aircraft Maintenance Squadron (AMXS) will download data from the aircraft's SFDR to a laptop computer that is configured with the ADADS Program. Data is then uploaded to the ASIMIS website that calculates the safe life expectancy of different aircraft structural components; it is therefore imperative that maintenance technicians accurately

capture and upload the recorded data from the SFDR. The ASIP/IATP project officer is responsible to ensure data is uploaded to the ASIMIS website located at Tinker Air Force Base, Oklahoma, **https://asimisweb.tinker.af.mil**.

8.2. Frequency of SFDR downloads.

8.2.1. Accomplished every HSC.

8.2.2. Accomplished within 10 flying hours of hard landing.

8.2.3. Accomplished for severe turbulence inspection.

8.2.4. Accomplished for over G maneuver outside of the design flight envelope.

8.2.5. Accomplished when aircraft exceeds 195,000 pounds vertical load on landing or taxi.

8.2.6. Accomplished when "FDR MEMORY 80% FULL" is displayed on the maintenance monitor panel.

8.2.7. Accomplished when "FDR SPECIAL EVENT" is displayed on the maintenance monitor panel.

8.2.8. Accomplished when "WCC-LFPFFDR80" is displayed on non-avionics fault list.

8.2.9. Accomplished when "WCC-FDRSPEVT" is displayed on non-avionics fault list.

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Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

AFI 21-101, *Aircraft and Equipment Maintenance Management,* 26 July 2010

AFI 21-101 AFRC SUP 1, *Aircraft and Equipment Maintenance Management,* 13 January 2011

AFI 63-1001, *Aircraft Structural Integrity Program, 18 April 2002*

TO 1C-135-38 *Aircraft Structural Integrity Program USAF Series -135 Aircraft,* 25 July 2012

TO 1C-17A-6, *Inspection Requirements Manual*, 01 March 2012

TO 1C-17A-6WC-2, *Home Station Check Workcards*, 25 September 2012

TO 1C-17A-2-31JG-30-1, *Indicating and Recording Systems Recorders,* 30 August 2012

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 797, *Job Qualification Standard Continuation/Command JQS*

Abbreviations and Acronyms

ADADS—Aircraft Data Acquisition and Distribution System

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AFTO—Air Force Technical Order

AMXS—Aircraft Maintenance Squadron

AMW—Air Mobility Wing

AMWI—Air Mobility Wing Instruction

ASIMIS—Aircraft Structural Integrity Management Information System

ASIP—Aircraft Structural Integrity Program

CC—Commander

CETADS—Comprehensive Engine Trending and Diagnostic System

CVR—Cockpit Voice Recorder

FDR—Flight Data Recorder

HSC—Home Station Check

IATP—Individual Aircraft Tracking Program

IAW—In Accordance With

MARBI—March Air Reserve Base Instruction

MXG—Maintenance Group

OJT—On the Job Training

OPR—Office of Primary Responsibility

PCMCIA—Personal Computer Memory Card International Association

RDS—Records Disposition Schedule

SFDR—Standard Flight Data Recorder

TO—Technical Order