

**TI 4100.28**

**AIRCRAFT  
MAINTENANCE AND  
ENGINEERING  
DIVISION  
ISO 9001:2000 QUALITY  
MANUAL**

**AVIATION SYSTEM STANDARDS**

**Mike Monroney Aeronautical Center  
6500 South MacArthur Blvd.  
Oklahoma City, Oklahoma 73125**

**CHANGE****U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION****TI 4100.28  
CHANGE 05**

SUBJ: AMED ISO 9001:2000 QUALITY MANUAL

---

Change 05 provides clarity for certain paragraphs and procedures regarding the AMED ISO 9001:2000 Quality Manual.

The List of Effective Pages is updated.

The Table of Contents is updated and a typographical error is corrected on Chapter VIII, Section 3, paragraph A. title.

Chapter I title changed from “ISO 9001 QUALITY MANAGEMENT SYSTEM” to “SCOPE (ISO Requirement 1)”.

Chapter I, Section 1 title is changed by deletion of “(ISO Requirement 1)”.

Chapter II title is changed by adding “(ISO Requirement 2)” for continuity purposes.

Chapter II, Section 1 title is changed by deleting “(ISO Requirement 2)”.

Chapter III, Section 1, deleted “(ISO Requirement 3)” from Section title, for continuity purposes.

Chapter III, Section 1, paragraph D added “(ISO Requirement 3)” to the paragraph title.

Chapter IV, Section 2, subparagraph C.(4)(b) adds “Chapter III” to the General Maintenance Manual (GMM) reference.

Chapter IV, Section 2, subparagraph C.(4)(c) is initiated to cover “Residual Documentation”.

Chapter V, Section 1 is revised to change “quarterly” to “annual”.

Chapter V, Section 4, subparagraphs D.(1)(a)(b) and (c) are revised for clarification.

Chapter V, Section 6, subparagraph C.(3)1 is initiated for clarification.

Chapter VII, Section 1 is revised to clarify the references to TI 4100.21 and TI 4100.36 and to delete the paragraph references.

Chapter VII, Section 3 is revised to further clarify VN Form 4100-5-X.

Chapter VII, Section 5, Paragraph B is revised to change “qualify” to “quality”.

Chapter VII, Section 5, subparagraph E.(3) is revised to change “Logistics Center” to “Aircraft Support Section, AVN-326”.

Chapter VIII, Section 5, Paragraph B is revised to identify ways corrective action is initiated.

Appendix Table of Contents is updated.

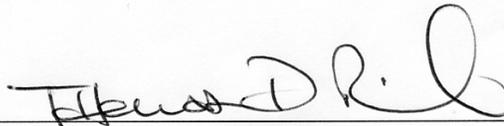
Appendix 8, is revised to reflect proper procedures for Aircraft Records Retention.

#### PAGE CONTROL CHART

Remove from			Insert In		
Chapter/ Section	Pages	Dated	Chapter/ Section	Pages	Dated
LEP	1-3	04/29/04	LEP	1-3	06/17/04
0.0	0.0.1 0.0.2-0.0.4 0.0.5-0.0.6	04/29/04 02/12/04 04/29/04	0.0	0.0.1-0.0.6	06/17/04
I.1	I.1.1	02/12/04	I.1	I.1.1	06/17/04
II.1	II.1.1	02/12/04	II.1	II.1.1	06/17/04
III.1	III.1.1-III.1.2	02/12/04	III.1	III.1.1-III.1.2	06/17/04
IV.2	IV.2.3-IV.2.4	02/12/04	IV.2	IV.2.3-IV.2.4	06/17/04
V.1	V.1.1	02/12/04	V.1	V.1.1	06/17/04
V.4	V.4.1	02/12/04	V.4	V.4.1	06/17/04
V.6	V.6.1	02/12/04	V.6	V.6.1	06/17/04
VII.1	VII.1.1	02/12/04	VII.1	VII.1.1	06/17/04
VII.3	VII.3.1	02/12/04	VII.3	VII.3.1	06/17/04
VII.5	VII.5.2-VII.5.3	02/12/04	VII.5	VII.5.2-VII.5.3	06/17/04

Remove from Chapter/ Section	Pages	Dated	Insert In Chapter/ Section	Pages	Dated
VIII.5	VIII.5.2-VIII.5.5	04/29/04	VIII.5	VIII.5.2-VIII.5.5	06/17/04
Appendix TOC	Appx. Pg. 2	04/29/04	Appendix TOC	Appx. Pg. 2	06/17/04
Appendix 8	8.8.3	02/12/04	Appendix 8	8.8.3	06/17/04

After inserting this Change, enter your initials and the date on the RECORD OF CHANGES PAGE LOCATED AT THE FRONT OF THE MANUAL. File this change notice behind the manual title page.

  
 \_\_\_\_\_  
 Thomas D. Pickle, Director of Maintenance  
 Aircraft Maintenance and Engineering Division, AVN-300

Date: 7/20/04

DISCLAIMER: This form is applicable to hard copies of the ISO-9001:2000 Quality Manual only. It does not indicate the current change status of the electronic version of the manual. Change status is indicated in the Manuals Block of the Electronic Maintenance Library.

**RECORD OF CHANGES**

DIRECTIVE NO.

**TI 4100.28**

Keep your directives current. After filing revised pages and removing obsolete pages, initial and date the block following the change number. Request any missing changes from your central distribution point.											
CHG. NO.	INITIAL	DATE	CHG. NO.	INITIAL	DATE	CHG. NO.	INITIAL	DATE	CHG. NO.	INITIAL	DATE
1			31			61			91		
2			32			62			92		
3			33			63			93		
4			34			64			94		
5			35			65			95		
6			36			66			96		
7			37			67			97		
8			38			68			98		
9			39			69			99		
10			40			70			100		
11			41			71			101		
12			42			72			102		
13			43			73			103		
14			44			74			104		
15			45			75			105		
16			46			76			106		
17			47			77			107		
18			48			78			108		
19			49			79			109		
20			50			80			110		
21			51			81			111		
22			52			82			112		
23			53			83			113		
24			54			84			114		
25			55			85			115		
26			56			86			116		
27			57			87			117		
28			58			88			118		
29			59			89			119		
30			60			90			120		

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**LIST OF EFFECTIVE PAGES**

File this List of Effective Pages behind the Record of Changes page in the front of this Manual.

<u>Manual Change Number</u>	<u>Date of Issuance</u>
01	08/17/01
02	11/27/02
03	02/12/04
04	04/29/04
*05	06/17/04

NAME	PAGE NO.	CHANGE NO.
Record of Changes	Unnumbered	03
* List of Effective Pages	1	05
*	2	05
*	3	05
Foreword	i	03
Introduction	1	03
	2	03
* Table of Contents	0.0.1	05
*	0.0.2	05
*	0.0.3	05
*	0.0.4	05
*	0.0.5	05
*	0.0.6	05
	0.0.7	04
* CHAPTER I	I.1.1	05
* CHAPTER II	II.1.1	05
* CHAPTER III	III.1.1	05
*	III.1.2	05
Terms and Definitions	III.1.3	03
CHAPTER IV - 1	IV.1.1	03
CHAPTER IV - 2	IV.2.1	03
	IV.2.2	03
*	IV.2.3	05
*	IV.2.4	05
* CHAPTER V - 1	V.1.1	05
CHAPTER V - 2	V.2.1	03
CHAPTER V - 3	V.3.1	03
* CHAPTER V - 4	V.4.1	05
CHAPTER V - 5	V.5.1	03

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

	<b>NAME</b>	<b>PAGE NO.</b>	<b>CHANGE NO.</b>
*	CHAPTER V - 6	V.6.1	05
	CHAPTER VI - 1	VI.1.1	03
	CHAPTER VI - 2	VI.2.1	03
		VI.2.2	03
		VI.2.3	03
		VI.2.4	03
		VI.2.5	03
		VI.2.6	03
		VI.2.7	03
	CHAPTER VI - 3	VI.3.1	03
	CHAPTER VI - 4	VI.4.1	03
*	CHAPTER VII - 1	VII.1.1	05
	CHAPTER VII - 2	VII.2.1	03
		VII.2.2	03
		VII.2.3	03
*	CHAPTER VII - 3	VII.3.1	05
		VII.3.2	03
	CHAPTER VII - 4	VII.4.1	03
		VII.4.2	03
	CHAPTER VII - 5	VII.5.1	03
*		VII.5.2	05
*		VII.5.3	05
	CHAPTER VII - 6	VII.6.1	03
	CHAPTER VIII - 1	VIII.1.1	03
	CHAPTER VIII - 2	VIII.2.1	04
		VIII.2.2	04
		VIII.2.3	04
		VIII.2.4	04
	CHAPTER VIII - 3	VIII.3.1	03
	CHAPTER VIII - 4	VIII.4.1	03
	CHAPTER VIII - 5	VIII.5.1	04
*		VIII.5.2	05
*		VIII.5.3	05
*		VIII.5.4	05
*		VIII.5.5	05
	APPENDIX TOC	Appendix 1	04
*		Appendix 2	05
		Appendix 3	04
	APPENDIX 1	1.1.1	03
	APPENDIX 2	2.2.1	03
		2.2.2	03
		2.2.3	03
		2.2.4	03
		2.2.5	03
		2.2.6	03

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

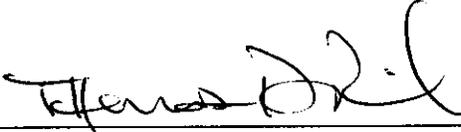
NAME	PAGE NO.	CHANGE NO.
APPENDIX 3	3.3.1	03
APPENDIX 4	4.4.1	03
APPENDIX 5	5.5.1	03
APPENDIX 6	6.6.1	04
APPENDIX 7	7.7.1	04
APPENDIX 8	8.8.1	03
	8.8.2	03
*	8.8.3	05
	8.8.4	03
	8.8.5	03
	8.8.6	03
	8.8.7	03
	8.8.8	03
	8.8.9	03
FIGURE 1 TO APPENDIX 8	8.8.10	03
	8.8.11	03
	8.8.12	03
	8.8.13	03
FIGURE 2 TO APPENDIX 8	8.8.14	03
FIGURE 3 TO APPENDIX 8	8.8.15	03
APPENDIX 9	9.9.1	03
APPENDIX 10	10.10.1	04
APPENDIX 11	11.11.1	03
APPENDIX 12	12.12.1	04
	12.12.2	04
APPENDIX 13	13.13.1	03
	13.13.2	03
APPENDIX 14	14.14.1	04
	14.14.2	03
	14.14.3	03
	14.14.4	03
	14.14.5	03
	14.14.6	03
	14.14.7	03
	14.14.8	03
	14.14.9	03
	14.14.10	03
	14.14.11	03
	14.14.12	03
	14.14.13	03
FIGURE 1 TO APPENDIX 14	14.14.14	04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**FOREWORD**

This manual describes or references procedures utilized by Aviation System Standards, Aircraft Maintenance and Engineering Division, AVN-300, to comply with the standards specified by ISO 9001:2000 and industry practices.

Approved By:  Date 02/17/04  
Thomas D. Pickle, Director of Maintenance  
Aircraft Maintenance and Engineering Division, AVN-300

## AVIATION SYSTEM STANDARDS ISO 9001 QUALITY MANUAL

---

### INTRODUCTION

This Manual describes the procedures or references a procedure which ensures the Quality Management System utilized in the Aircraft Maintenance and Engineering Division (AMED), AVN-300 is accomplished in a consistent manner that meets or exceeds the standards specified in the International Organization for Standardization (ISO) 9001:2000.

Aviation System Standards (AVN) operates and maintains a fleet of uniquely equipped aircraft in accordance with Federal Aviation Regulation (FAR) Part 135. Flight Inspection operations are conducted both domestically and internationally. They provide in-flight evaluation of both civil and military navigational aids in support of the National Airspace System (NAS).

AMED provides maintenance support for the flight inspection fleet. The AVN aircraft fleet is maintained to the high standards of a Continuous Airworthiness Maintenance Program (CAMP), which is also required and used by the civil air carrier industry.

In addition to the aircraft maintenance support requirements of the Flight Inspection Program, AMED provides maintenance and modification services to other U.S. and foreign government aircraft flight programs/operations as a Federal Aviation Administration (FAA) approved FAR Part 145 Certificated Repair Station (CRS). In addition to the maintenance services provided by the Repair Station operation, AVN has additional capabilities for accomplishment of aircraft major alteration/modification as an FAA authorized Designated Alteration Station (DAS), and aircraft major repair by authorization of Special Federal Aviation Regulation (SFAR) 36. All services provided by AMED are accomplished in accordance with the policies, procedures and guidelines required of similar civil and commercial sector activities.

The AMED main base of operation and corporate headquarters is located in Oklahoma City, Oklahoma at the Mike Monroney Aeronautical Center, Will Rogers World Airport. AMED program support is provided through the following four branches, each providing specific technical skills and abilities necessary to meet FAA and AVN organizational goals and objectives:

- Line Station Branch, AVN-310
- Quality Assurance Branch, AVN-320
- Base Maintenance Branch, AVN-330
- Engineering Branch, AVN-340

The Base Maintenance Branch, AVN-330, and the Line Station Branch, AVN-310, provide maintenance, modification, repair and alteration services (airframe, powerplants, propellers, instruments, flight inspection equipment, avionics test equipment and other aircraft accessories) for AVN flight inspection aircraft to our customers' aircraft in accordance with procedures and practices provided by the General Maintenance Manual and the Repair Station Inspection Procedures Manual.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

Quality of workmanship is ensured through established quality control processes. The quality control processes are continually monitored and evaluated to ensure their effectiveness by the Quality Assurance Branch, AVN-320. The Engineering Branch, AVN-340, provides engineering services in support of aircraft maintenance, repair and alteration of flight inspection aircraft and other customer aircraft.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
	Record of Changes	Unnumbered	
	*List of Effective Pages	1-3	05-06/17/04
	Foreword	i	03-02/12/04
	Introduction	1-2	03-02/12/04
	*Table of Contents	0.0.1-0.0.7	05-06/17/04
<b>*I.</b>	<b>SCOPE</b> (ISO Req. 1)		
*1.	SCOPE	I.1.1	05-06/17/04
A.	General (ISO Req. 1.1)	I.1.1	03-02/12/04
B.	Application (ISO Req. 1.2)	I.1.1	03-02/12/04
<b>*II.</b>	<b>NORMATIVE REFERENCE</b> (ISO Req. 2)		
*1.	NORMATIVE REFERENCE	II.1.1	05-06/17/04
<b>III.</b>	<b>MANUAL FORMAT, REVISION AND DISTRIBUTION</b>		
*1.	MANUAL FORMAT	III.1.1	05-06/17/04
A.	General	III.1.1	03-02/12/04
B.	Revision System	III.1.2	03-02/12/04
C.	Distribution and Access	III.1.2	03-02/12/04
*D.	Terms and Definitions (ISO Req. 3)	III.1.2-III.1.3	05-06/17/04
<b>IV.</b>	<b>QUALITY MANAGEMENT SYSTEM</b> (ISO Req. 4)		
1.	GENERAL (ISO Req. 4.1)	IV.1.1	03-02/12/04
2.	DOCUMENTATION REQUIREMENTS (ISO Req. 4.2)	IV.2.1	03-02/12/04
A.	General (ISO Req. 4.2.1) (a) Quality System Procedures (ISO Req. 4.2.1)	IV.2.1	03-02/12/04
B.	Quality Manual (ISO Req. 4.2.2) Figure 1 - AMED Process Interaction Chart	IV.2.1 IV.2.2	03-02/12/04 03-02/12/04
C.	(1) Control of Documents (ISO Req. 4.2.3) (a) Document & Data Approval, Reapproval & Issue *(b) Document and Data Changes *(c) Residual Documentation	IV.2.3 IV.2.3 IV.2.3 IV.2.4	03-02/12/04 03-02/12/04 05-06/17/04 05-06/17/04
D.	Control of Records (ISO Req. 4.2.4) (1) Administrative Records	IV.2.4 IV.2.4	03-02/12/04 03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
<b>V.</b>	<b>MANAGEMENT RESPONSIBILITY (ISO Req. 5)</b>		
*1.	MANAGEMENT COMMITMENT (ISO Req. 5.1)	V.1.1	05-06/17/04
2.	CUSTOMER FOCUS (ISO Req. 5.2)	V.2.1	03-02/12/04
3.	QUALITY POLICY (ISO Req. 5.3)	V.3.1	03-02/12/04
4.	QUALITY PLANNING (ISO Req. 5.4)	V.4.1	03-02/12/04
	*(1) Quality Objectives(ISO Req. 5.4.1)	V.4.1	05-06/17/04
5.	RESPONSIBILITY, AUTHORITY AND COMMUNICATION (ISO Req. 5.5)	V.5.1	03-02/12/04
	A. Responsibility and Authority (ISO Req. 5.5.1)	V.5.1	03-02/12/04
	B. Management Representative (ISO Req. 5.5.2)	V.5.1	03-02/12/04
	C. Internal Communication (ISO Req. 5.5.3)	V.5.1	03-02/12/04
6.	MANAGEMENT REVIEW (ISO Req. 5.6)	V.6.1	03-02/12/04
	A. General (ISO Req. 5.6.1)	V.6.1	03-02/12/04
	B. Review Input (ISO Req. 5.6.2)	V.6.1	03-02/12/04
	*C. Review Output (ISO Req. 5.6.3)	V.6.1	05-06/17/04
<b>VI.</b>	<b>RESOURCE MANAGEMENT (ISO Req. 6)</b>	VI.1.1	03-02/12/04
1.	PROVISION OF RESOURCES (ISO Req. 6.1)	VI.1.1	03-02/12/04
2.	HUMAN RESOURCES (ISO Req. 6.2)	VI.2.1	03-02/12/04
	A. General (ISO Req. 6.2.1)	VI.2.1	03-02/12/04
	B. Competence, Awareness and Training (ISO Req. 6.2.2)	VI.2.1	03-02/12/04
	(1) Training Requirements	VI.2.1	03-02/12/04
	(2) Processing Requests	VI.2.1	03-02/12/04
	(3) Approved Budget	VI.2.1	03-02/12/04
	(4) Enrollments "Out-of-Agency" Training	VI.2.1-VI.2.2	03-02/12/04
	(5) "In-Agency" or Academy Training	VI.2.2	03-02/12/04
	(6) Record of Training	VI.2.2	03-02/12/04
	(7) Records Retention	VI.2.2	03-02/12/04
	(8) Individual Training Records Procedures	VI.2.3	03-02/12/04
	(9) Evaluation of Training Effectiveness	VI.2.3	03-02/12/04
	Figure 1 - Training File Control Sheet, VN Form 4100-28	VI.2.4	03-02/12/04
	Figure 2 - Training Needs Assessment, VN Form 4100-29	VI.2.5	03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
	Figure 3 - Training Notification, VN Form 4100-30	VI.2.6	03-02/12/04
	Figure 4 - Course Participation Evaluation, VN Form 4100-31	VI.2.7	03-02/12/04
3.	INFRASTRUCTURE (ISO Req. 6.3)	VI.3.1	03-02/12/04
	A. General	VI.3.1	03-02/12/04
	B. Support Equipment	VI.3.1	03-02/12/04
4.	ENVIRONMENTAL (ISO Req. 6.4)	VI.4.1	03-02/12/04
<b>VII.</b>	<b>PRODUCT REALIZATION (ISO Req. 7)</b>	<b>VII.1.1</b>	<b>03-02/12/04</b>
*1.	PLANNING OF PRODUCT REALIZATION (ISO Req. 7.1)	VII.1.1	05-06/17/04
2.	CUSTOMER RELATED PROCESSES (ISO Req. 7.2)	VII.2.1	03-02/12/04
	A. Determination of Requirements Related to the Product (ISO Req. 7.2.1)	VII.2.1	03-02/12/04
	Figure 1	VII.2.2	03-02/12/04
	B. Review of Requirements Related to the Product (ISO Req. 7.2.2)	VII.2.3	03-02/12/04
	C. Customer Communication (ISO Req. 7.2.3)	VII.2.3	03-02/12/04
3.	DESIGN AND DEVELOPMENT (ISO Req. 7.3)	VII.3.1	03-02/12/04
	*A. General (ISO Req. 7.3)	VII.3.1	05-06/17/04
	(1) Design and Development Planning (ISO Req. 7.3.1)	VII.3.1	03-02/12/04
	(2) Design and Development Inputs (ISO Req. 7.3.2)	VII.3.1	03-02/12/04
	(3) Design Output (ISO Req. 7.3.3)	VII.3.1	03-02/12/04
	(4) Design Review (ISO Req. 7.3.4)	VII.3.1	03-02/12/04
	(5) Design Verification (ISO Req. 7.3.5)	VII.3.2	03-02/12/04
	(6) Design Validation (ISO Req. 7.3.6)	VII.3.2	03-02/12/04
	(7) Design Changes (ISO Req. 7.3.7)	VII.3.2	03-02/12/04
4.	PURCHASING (ISO Req. 7.4)	VII.4.1	03-02/12/04
	A. Purchasing Process (ISO Req. 7.4.1)	VII.4.1	03-02/12/04
	(1) Evaluation of Subcontractors	VII.4.1	03-02/12/04
	B. Purchasing Information (ISO Req. 7.4.2)	VII.4.1	03-02/12/04
	(1) Receiving Inspection & Testing	VII.4.1	03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
	C. Verification of Purchased Product (ISO Req. 7.4.3)	VII.4.1	03-02/12/04
	(1) Supplier Verification at Subcontractor's Premises	VII.4.1	03-02/12/04
	(2) Customer Verification of Subcontracted Products	VII.4.2	03-02/12/04
	(3) Receipt of Material by Receiving Personnel	VII.4.2	03-02/12/04
5.	PRODUCTION CONTROL (ISO Req. 7.5)	VII.5.1	03-02/12/04
	A. Control of Production Provision (ISO Req. 7.5.1)	VII.5.1	03-02/12/04
	(a) Process Control	VII.5.1	03-02/12/04
	(b) Control Procedure	VII.5.1	03-02/12/04
	(c) Control of Service Provision	VII.5.2	03-02/12/04
	*B. Validation of Processes for Production and Service Provision (ISO Req. 7.5.2)	VII.5.2	05-06/17/04
	C. Identification and Traceability (ISO Req. 7.5.3)	VII.5.2	03-02/12/04
	(1) Inspection and Test Records	VII.5.2	03-02/12/04
	(2) Electronic Forms	VII.5.2	03-02/12/04
	D. Customer Property (ISO Req. 7.5.4)	VII.5.3	03-02/12/04
	(1) Tracking of Customer Products	VII.5.3	03-02/12/04
	E. Preservation of Product (ISO Req. 7.5.5)	VII.5.3	03-02/12/04
	(1) Handling	VII.5.3	03-02/12/04
	(2) Storage	VII.5.3	03-02/12/04
	*(3) Packaging	VII.5.3	05-06/17/04
	(4) Preservation	VII.5.3	03-02/12/04
6.	CONTROL OF MONITORING AND MEASURING DEVICES (ISO Req. 7.6)	VII.6.1	03-02/12/04
	A. General	VII.6.1	03-02/12/04
	(1) Calibration Requirements	VII.6.1	03-02/12/04
	(2) Control Procedure	VII.6.1	03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
<b>VIII.</b>	<b>MEASUREMENT, ANALYSIS AND IMPROVEMENT</b> (ISO Req. 8)		
1.	GENERAL (ISO Req. 8.1)	VIII.1.1	03-02/12/04
2.	MONITORING AND MEASUREMENT (ISO Req. 8.2)	VIII.2.1	03-02/12/04
A.	Customer Satisfaction (ISO Req. 8.2.1)	VIII.2.1	03-02/12/04
B.	Internal Audit (ISO Req. 8.2.2)	VIII.2.1	04-04/29/04
	(1) Internal (Regulatory) and Vendor Audit Program	VIII.2.1	04-04/29/04
	(2) ISO 9001 Internal Audit Program	VIII.2.2-VIII.2.4	04-04/29/04
C.	Monitoring and Measurement of Processes (ISO Req. 8.2.3)	VIII.2.3	03-02/12/04
D.	Monitoring and Measurement of Product (ISO Req. 8.2.4)	VIII.2.3	03-02/12/04
	(1) Receiving Inspection and Testing	VIII.2.3	03-02/12/04
	(2) In-Process Inspection and Testing	VIII.2.4	03-02/12/04
	(3) Final Inspection and Testing	VIII.2.4	03-02/12/04
	(4) Inspection and Test Records	VIII.2.4	03-02/12/04
3.	NON-CONFORMING PRODUCT (ISO Req. 8.3)	VIII.3.1	03-02/12/04
A.	Control of Nonconforming Product	VIII.3.1	03-02/12/04
B.	Review and Disposition of Nonconforming Product	VIII.3.1	03-02/12/04
4.	ANALYSIS OF DATA (ISO Req. 8.4)	VIII.4.1	03-02/12/04
A.	Customer Satisfaction	VIII.4.1	03-02/12/04
B.	Product and Process	VIII.4.1	03-02/12/04
C.	Suppliers	VIII.4.1	03-02/12/04
5.	IMPROVEMENT (ISO Req. 8.5)	VIII.5.1	03-02/12/04
A.	Continual Improvement (ISO Req. 8.5.1)	VIII.5.1-VIII.5.2	04-04/29/04
*B.	Corrective Action (ISO Req. 8.5.2)	VIII.5.2-VIII.5.3	05-06/17/04
C.	Preventive Action (ISO Req. 8.5.3)	VIII.5.3-VIII.5.5	05-06/17/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**TABLE OF CONTENTS**

CHAPTER/ SECTION	TITLE	PAGE NO.	LATEST CHANGE/DATE
<b>APPENDIXES</b>			
	<b>*TABLE OF CONTENTS</b>	Appendix 1-3	05-06/17/04
<b>APPENDIX 1:</b>	Equipment Exceptions	1.1.1	03-02/12/04
<b>APPENDIX 2:</b>	Standard Policies for Test Equipment Maintenance	2.2.1-2.2.6	03-02/12/04
<b>APPENDIX 3:</b>	Stockroom Shelf Life Item and Time Changes	3.3.1	03-02/12/04
<b>APPENDIX 4:</b>	Stockroom Chemical Shelf Life Procedures	4.4.1	03-02/12/04
<b>APPENDIX 5:</b>	Stockroom Electro Static Discharge (ESD) Procedures	5.5.1	03-02/12/04
<b>APPENDIX 6:</b>	AVN-326 Supply Request Chart	6.6.1	04-04/29/04
<b>APPENDIX 7:</b>	AVN-326 Supply Return Chart	7.7.1	04-04/29/04
<b>APPENDIX 8:</b>	Aircraft Records Procedures	8.8.1-8.8.2	03-02/12/04
*		8.8.3	05-06/17/04
		8.8.4-8.8.15	03-02/12/04
<b>APPENDIX 9:</b>	Excess Material Disposal Procedures	9.9.1	03-02/12/04
<b>APPENDIX 10:</b>	Return and Screening of High Value Expendable Parts	10.10.1	04-04/29/04
<b>APPENDIX 11:</b>	Purchase Request Procedures for Credit Card and Purchase Order	11.11.1	03-02/12/04

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**TABLE OF CONTENTS**

<b>CHAPTER/ SECTION</b>	<b>TITLE</b>	<b>PAGE NO.</b>	<b>LATEST CHANGE/DATE</b>
	<b>*APPENDIX 12:</b> Aeronautical Reliability Report (ARR) Core Processing Procedures	12.12.1-12.12.2	04-04/29/04
	<b>APPENDIX 13:</b> Customer Aircraft Routine Work Process	13.13.1-13.13.2	03-02/12/04
	<b>*APPENDIX 14:</b> Corrective Action Reports and AVN-300 Audit Tracking Program	14.14.1-14.14.14	04-04/29/04

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

**\*CHAPTER I. SCOPE** (ISO Requirement 1)

**\*1. SCOPE**

A. GENERAL (ISO Requirement 1.1)

This manual is designed to provide procedural instruction or references a procedure to define and support the Aircraft Maintenance and Engineering Division's (AMED), AVN-300, Quality Policy to meet organizational objectives. This documented quality management system is used by AMED to demonstrate its ability to consistently provide product and services that meet our customers' requirements, as well as those requirements of any applicable regulatory agency. AMED aims to enhance customer satisfaction through:

- (1) The effective application of this system;
- (2) Continual improvement of our processes, products and services; and
- (3) Conformity to our customers' and applicable regulatory requirements.

For the purpose of ISO 9001, the scope of the organization encompasses all AMED facilities located at the Mike Monroney Aeronautical Center, Oklahoma City, Oklahoma, including the Maintenance Coordinator positions in Flight Inspection Central Operations (FICO) under the Line Station Branch, AVN-310. Line Station facilities and personnel located at sites other than Oklahoma City are not included within the scope of this manual.

B. APPLICATION (ISO Requirement 1.2)

The AMED complies with all applicable Federal regulatory and statutory requirements and to all ISO 9001:2000 requirements with the following exception: Due to the nature of AMED's activities, the ISO 9001:2000 clause 7.5.1 addressing the Control of Service Provision is excluded.

**NOTE:** All maintenance and engineering on parts and components designed and developed by AMED, as well as maintenance on customer-supplied aircraft, is a strictly regulated production process. Exclusion of servicing does not affect AMED's ability or responsibility to provide maintenance and engineering services that meet our customers' and regulatory requirements.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

**\*CHAPTER II.        NORMATIVE REFERENCE (ISO Requirement 2)**

**\*1.        NORMATIVE REFERENCE**

This Quality Manual is formatted to ensure compliance with the eight (8) clauses contained in ISO 9001:2000 by reference to manuals developed and approved or accepted for maintenance performed in accordance with Federal Aviation Regulations. The purpose of the Quality Manual is to specify or identify the procedures Aircraft Maintenance and Engineering Division (AMED), AVN-300, will follow to ensure the quality of AMED products and that the identified procedures are accomplished in a consistent manner.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

### CHAPTER III. MANUAL FORMAT, REVISION AND DISTRIBUTION

#### \*1. MANUAL FORMAT

##### A. GENERAL

The ISO 9001 Quality Manual is issued in loose-leaf and electronic form and is structured as follows:

- (1) Record of Change - Provides space for recording insertion of revisions (VN Form 4100-65).
- (2) List of Effective Pages - Provides the current manual change number, its date and a list of individual pages and their current change number.
- (3) Foreword - Self-explanatory.
- (4) Introduction - Self-explanatory.
- (5) Master Table of Contents - A Master Table of Contents, located in the front of this manual, will list the chapter and section titles and beginning page number and show change status of each page in the Master Table of Contents and Terms and Definitions. It will also show the change status of each chapter and section.
- (6) ISO 9001:2000 Standard to Chapter/Section Index - An Index is provided to facilitate which Manual Chapters/Sections correlate to the Clauses of the ISO 9001:2000 standard.
- (7) Chapters - Sequentially numbered, beginning with Roman numeral I (one).
- (8) Sections - Sequentially numbered with Arabic Numbers beginning with number one (1), as in IV.1.
- (9) Terms and Definitions - Provides terms and definitions.
- (10) Pages - Pages within each section are sequentially numbered.
  - (a) Date - Date of each page will be listed on the top of each page. This signifies the latest revision date for that page. The date format will be listed numerically as month/date/year, e.g., 08/08/00.
  - (b) Change Number - A number will be shown in the corner under the TI number, indicating the revision number of that page.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

B. REVISION SYSTEM

The Management Representative continually reviews the Quality Manual to ensure currency. Changes affecting the following items may require a revision to this manual:

- (1) A reorganization of Aircraft Maintenance and Engineering Division (AMED), AVN-300's structure or functions reassigned.
- (2) Significant changes to the AMED quality system.
- (3) Revision to International Organization for Standardization ISO 9001:2000 or replacement document.
- (4) Changes requiring revisions are submitted via electronic mail or on a Request for Action Form, VN Form 4100-170, to the Management Representative. VN Form 4100-170 is available on the FEDS website at <http://feds.faa.gov>.

C. DISTRIBUTION AND ACCESS

- (1) The ISO 9001 Quality Manual is controlled through the AMED, AVN-300 web site, Electronic Maintenance Library at "<http://avn.faa.gov/index.asp?xml=fimo/eml>".
- (2) The Program Standards Section, AVN-328, will maintain the master copy of the ISO 9001 Quality Manual, TI 4100.28.

**NOTE:** Pages downloaded or printed from the web site become uncontrolled and become the responsibility of the user to insure the currency of this document.

\*D. TERMS AND DEFINITIONS (ISO Requirement 3)

**CONTRACTOR:** Any person with whom an arrangement (informal/oral or formal/written) for the performance of any maintenance, inspection, repair or alteration involving aircraft and/or equipment.

**CUSTOMER:** An organization or individual(s) that receives a product or service from the Aircraft Maintenance and Engineering Division, AVN-300 (AMED).

**EXCHANGE AND REPAIR (E&R):** A repairable item which, when unserviceable, is returned to the FAA depot in exchange for a serviceable replacement.

**MAJOR FINDING:** Any finding that involves safety of personnel or equipment or non-compliance of a regulation.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

MINOR FINDING: Finding that does not involve safety or compliance with regulations or system orders.

NON-COMPLIANCE: Does not meet the requirements of regulatory standards.

NON-COMFORMANCE: Findings do not meet the requirements or orders, technical issuances or any other document referenced by ISO 9001:2000 Quality Manual.

OBSERVATION: Any observation that may potentially result in a major or minor finding if corrective action is not taken.

ORGANIZATION: The AMED is a group of people and facilities with an arrangement of responsibilities, authorities and relationships.

QUALITY RECORD: Any record completed to document activity affecting the quality management system. May be a form, meeting minutes or electronic program used to document activity.

QUALITY MANAGEMENT SYSTEMS (QMS): A set of interrelated or interacting resources and processes used by the AMED with regard to quality.

SUBSTANTIAL MAINTENANCE: Any activity involving a C-check or greater during a maintenance visit; any engine maintenance requiring case separation or tear down; and/or major alterations (excluding major alteration accomplished on avionics components, unless specially defined) or major repairs performed on airframes, engines and propellers.

VENDOR/DISTRIBUTOR: Person, agent or business who sells aircraft parts but is not the Approval Holder or its authorized supplier.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER IV. QUALITY MANAGEMENT SYSTEM** (ISO Requirement 4)

**1. GENERAL** (ISO Requirement 4.1)

The Aircraft Maintenance and Engineering Division (AMED), AVN-300, has established, documented and implemented a quality management system and maintains it to continually improve its effectiveness. AMED has identified the sequence, interaction and application of key organization processes and has defined the criteria and methods of production throughout the organization. AMED also provides the resources and information needed to support, control, monitor and improve these processes.

Any outsourced processes that affect product conformity are controlled as identified within this Quality Manual or related Federal Aviation Administration procedural documents.

---

---

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER IV. QUALITY MANAGEMENT SYSTEM (ISO Requirement 4)****2. DOCUMENTATION REQUIREMENTS (ISO Requirement 4.2)****A. GENERAL (ISO Requirement 4.2.1)**

The ISO 9001 Quality Management System is based upon the eight (8) clauses specified in ISO 9001:2000. The Quality System Plan is contained in the documents referenced below:

- (1) The Quality System for maintenance performed on Flight Inspection Aircraft is described in the General Maintenance Manual (GMM), TI 4100.24, Chapter III.
- (2) The Quality System for maintenance performed on Customer aircraft is described in the AVN Repair Station/Quality Control Manual, TI 4100.27, Chapter V.
- (3) The Quality System for design, fabrication and installation of parts and components through issuance of Supplemental Type Certificates, is described in the Designated Alteration Station Manual (DAS), TI 4100.21, Chapter 10.
- (4) The Quality System for the development and use of repair data not previously approved by the Administrator is described in the Special Federal Aviation Regulations (SFAR) 36 Procedures Manual, TI 4100.36, Chapter 8.0.
- (5) Any other significant process or procedure not covered in the above documents is referenced or found in this Quality Manual.

- (a) Quality System Procedures (ISO Reference 4.2.1)

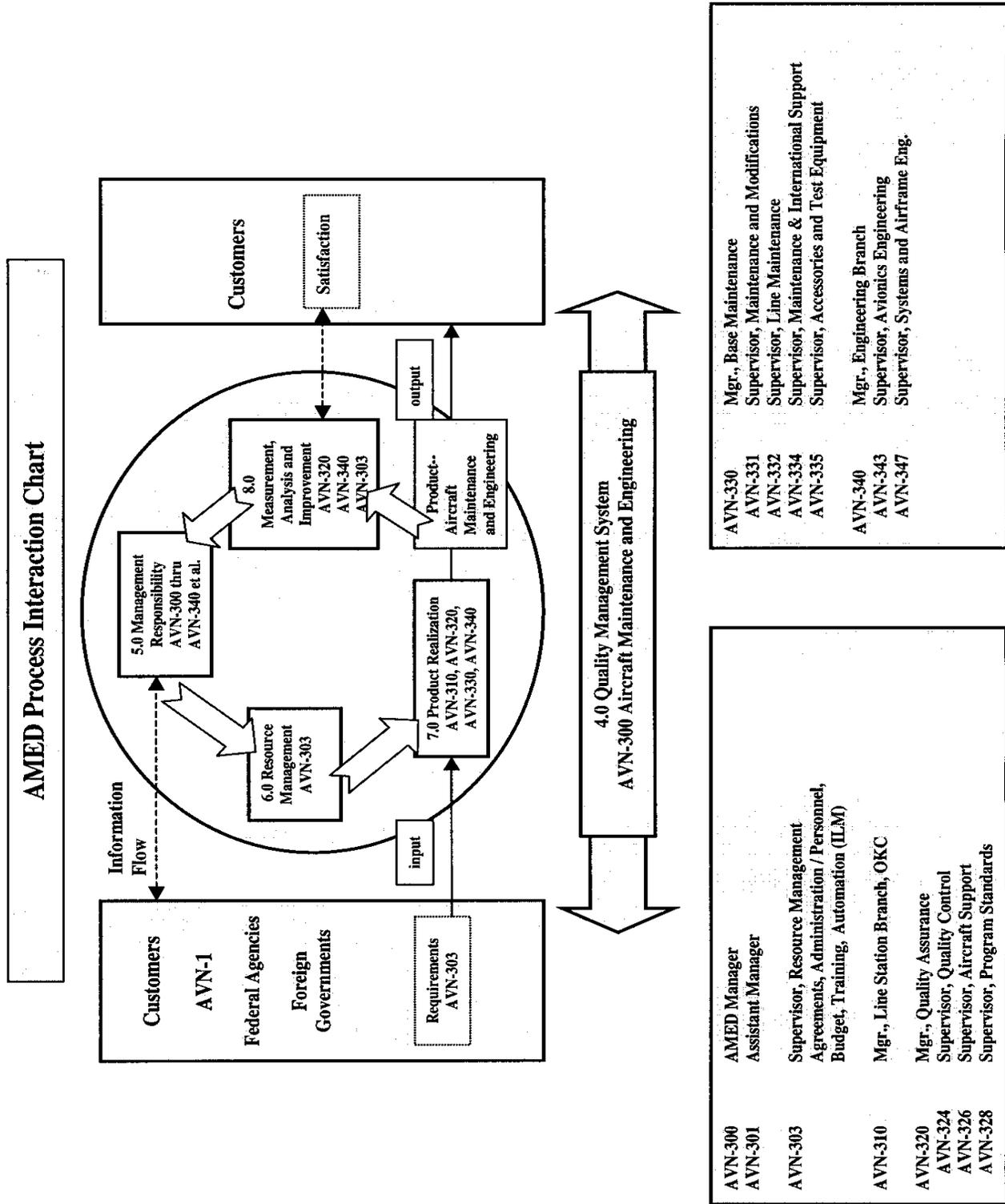
The procedures described in the above-referenced documents and all other documentation needed by AMED meet the requirements of applicable Federal Aviation Regulations that cover the operation and maintenance (including design, repair and overhaul) of aircraft. Specific sections are referenced to satisfy the requirements of ISO 9001:2000.

**B. QUALITY MANUAL (ISO Requirement 4.2.2)**

Format and maintenance of this ISO 9001 Quality Manual, including the scope of the QMS and any justified exclusions, are detailed in Chapter I of this document. Documented procedures are included or referenced in this Quality Manual and a description of the interaction between the primary processes of the AMED QMS are found in Figure 1 of this Chapter.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

FIGURE 1. AMED PROCESS INTERACTION CHART



---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

C. CONTROL OF DOCUMENTS (ISO Requirement 4.2.3)

All documents addressing AMED maintenance and engineering processes are controlled as per the specific manuals noted below. Documents are approved, reviewed, updated and re-approved as necessary. Documentation changes and revision levels are identified. Documents are legible, identifiable and available at points of use. External documents are identified as to their origin and their distribution controlled. Obsolete documents are suitably identified if retained for any purpose.

- (1) AMED Flight Inspection Maintenance Documents are controlled by the procedures contained in the GMM, TI 4100.24.
- (2) Documents for support of customer aircraft are controlled through procedures in the Repair Station/Quality Control Manual, TI 4100.27.
- (3) Documents supporting alteration are controlled by procedures in the DAS, TI 4100.21, paragraph CTL-1.
- (4) Documents supporting repair are controlled by SFAR 36 Procedures Manual, TI 4100.36, paragraph CTL-1.

A master list of documents utilized within AMED can be accessed through the AVN-300 Electronic Library at <http://avn.faa.gov/index.asp?xml=fimo/eml>. This list will provide the title, number and current revision number.

(a) Document and Data Approval, Reapproval and Issue

For approval process of Documents and Data, refer to DAS Procedures Manual, TI 4100.21, paragraph 17 and Appendix A-1. For major repair data, refer to SFAR 36 Engineering Procedures Manual, TI 4100.36, paragraph 8.2.

Procedures for issuing and distribution of Engineering Orders (EO) are contained in the GMM, TI 4100.24, Chapter III, Section 77.

\* (b) Document and Data Changes

Procedures describing control of documents containing alteration or repair data approved by EO's are specified in GMM, TI 4100.24, Chapter III, Section 77.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

\* (c) Residual Documentation

AMED considers documentation left in maintenance areas by technicians after the approved release of aircraft to be a housekeeping issue addressed by AVN-300 general policy. This condition is not noncompliant to any established FAA Regulation or the ISO 9001:2000 Standard.

The currency and applicability of all AMED maintenance and engineering documentation is traceable to current, controlled Technical Issue manuals and/or Engineering documentation issued during the performance of specific maintenance and engineering activities.

Efforts are made, by the technicians, to dispose of such documentation after completion of their duties. Residual documentation is not considered to be a noncompliance unless found to be either obsolete, unidentified or uncontrolled while used in the performance of maintenance and engineering activities.

D. CONTROL OF RECORDS (ISO Requirement 4.2.4)

AMED records are legible, identifiable and retrievable. The procedures and orders referenced below define the methods of identification, storage, protection, retrieval, retention and disposition of records.

The procedures for the control of quality records is covered in the GMM, TI 4100.24, Repair Station/Quality Control Manual, TI 4100.27, SFAR 36, TI 4100.36, and DAS TI 4100.21. Procedures for maintaining current records for repair data is contained in SFAR 36, TI 4100.36, paragraph 8. Procedures for filing and maintenance of aircraft records are contained in Appendix 8, AVN-324 desk procedures entitled Aircraft Records Procedures, as revised.

(1) Administrative Records

Administrative records will be filed and retained as per official files list approved by the Records management Officer. Records Organization, Transfer and Destruction Standards. FAA Order 1350.15B provides guidance for the development of the Official Files List.

A list of ISO 9001 Quality Records will be retained and maintained by each Branch Office Administrator (see Files Index). The records identified will provide examples of objective evidence that may demonstrate compliance with ISO 9001 and other regulations.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY** (ISO Requirement 5)

**1. MANAGEMENT COMMITMENT** (ISO Requirement 5.1)

\*Aircraft Maintenance and Engineering Division (AMED), AVN-300's top management continually communicates the importance of meeting the customer's requirements as well as statutory and regulatory requirements to AMED personnel. Top management has established a quality policy and quality objectives that are reviewed for suitability during annual, documented reviews of the quality management system, ensuring the availability of resources throughout AMED.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY** (ISO Requirement 5)

**2. CUSTOMER FOCUS** (ISO Requirement 5.2)

The Aircraft Maintenance and Engineering Division (AMED), AVN-300's management has established processes to ensure the customers' requirements are determined and met with the goal of continual enhancement of their satisfaction over a period of time. (See Chapter VII, Section 2 and Chapter VIII, Section 2 of this Quality Manual for reference to specific details.)

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY** (ISO Requirement 5)

**3. QUALITY POLICY** (ISO Requirement 5.3)

The Aircraft Maintenance and Engineering Division (AMED), AVN-300's top management reviews the quality policy to ensure that it is appropriate to the organization's purpose, complies to the requirements of the ISO standard and is used to continually improve the quality management system. It provides a framework for establishing and reviewing the organization's quality objectives and is communicated and understood within AMED.

AMED's Quality Policy is:

The Aircraft Maintenance and Engineering Division (AMED), AVN-300, provides airworthy, safe and reliable aircraft.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY** (ISO Requirement 5)

**4. QUALITY PLANNING** (ISO Requirement 5.4)

- A. The Quality Planning procedure applicable to maintenance of Flight Inspection Aircraft is described in the GMM, TI 4100.24, Chapter III, Section 21.
- B. The Quality Planning procedure applicable to maintenance of Customer Aircraft is described in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 7.
- C. The Quality Planning procedure applicable to design, fabrication and installation of parts and components for the issuance of Supplemental Type Certificates is described in the DAS Manual, TI 4100.21, paragraph 10.
- D. The Quality Planning for the development and use of repair data not previously approved by the Administrator, is described in the SFAR 36 Procedures Manual, TI 4100.36, paragraph 8.0.

(1) Quality Objectives (ISO Requirement 5.4.1)

The Aircraft Maintenance and Engineering Division (AMED), AVN-300, has identified the following objectives as part of the Quality Management System:

- \*(a) Maintain AVN dispatch reliability, scheduled completion rate and aircraft availability. This is measured by weekly reviews of domestic dispatch reliability and availability data, Dispatch Deviation Report data and Quarterly Fleet Reliability Reports.
- \*(b) Reward, employee involvement and innovative thinking. This is measured by the AVN Awards and Recognition Program and the AVN-300 Cash Incentive Program.
- \*(c) Ensure customer satisfaction through on time delivery of products and services. This is measured by review of weekly dispatch and availability data, Dispatch Deviation Report data and customer surveys.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY (ISO Requirement 5)**

**5. RESPONSIBILITY, AUTHORITY AND COMMUNICATION (ISO Requirement 5.5)**

**A. RESPONSIBILITY AND AUTHORITY (ISO Requirement 5.5.1)**

Duties and responsibilities for the AMED Management are specified in the GMM, TI 4100.24, Chapter II and the Repair Station/Quality Control Manual, TI 4100.27, Chapter IV.

**B. MANAGEMENT REPRESENTATIVE (ISO Requirement 5.5.2)**

AMED has identified and assigned an ISO Management Representative (AVN-303) who teams with the Aviation System Standard's (AVN) ISO Functional Management Representative (AVN-324). Together they have the responsibility and authority as the AMED ISO Management Team, to ensure AVN-300's compliance with the ISO 9001:2000 requirements. In addition, they work with all ISO Function Representatives in all divisions of AVN.

The AMED Function Management Representative working with the AVN ISO Management Representative, will manage AMED's ISO 9001 audit program and related quality management system. This team will ensure processes specified in this manual are established, implemented and maintained. The management representatives report directly to the Division Manager regarding the performance of the QMS and any need for improvement. They are responsible for the scheduling of audits and management reviews, tracking and analyzing corrective actions to minimize recurring discrepancies and to monitor the effectiveness of the quality system. They will also ensure awareness of customer requirements throughout AVN-300.

**C. INTERNAL COMMUNICATION (ISO Requirement 5.5.3)**

AMED's top management has ensured several methods of internal communication are established with AVN-300 and that communication takes place throughout the organization regarding the status and effectiveness of AMED's quality management system. Intranets encourage dissemination of general FAA and AVN specific information to all personnel. Meetings held on a regular basis, except for holidays and other unplanned interruptions, include bi-weekly maintenance telecoms involving all support branches of AVN-300, including AVN-310 and other Line Stations, in discussion of Aircraft Maintenance and Engineering goals and challenges. Weekly AVN-300 managers' meetings address general quality management system information. Finally, ISO management review meetings provide input into AVN's annual Business Planning Meeting and FAA's strategic planning efforts encouraging continual improvement of the system and wider AVN efforts.

---

**AVIATION SYSTEM STANDARDS**  
**ISO 9001 QUALITY MANUAL**

---

**CHAPTER V. MANAGEMENT RESPONSIBILITY** (ISO Requirement 5)**6. MANAGEMENT REVIEW** (ISO Requirement 5.6)**A. GENERAL** (5.6.1)

A management review will be accomplished on an annual basis.

The Management Team members are the AMED Manager (AVN-300), Assistant Division Manager (AVN-301), Resource Staff Manager (AVN-303), Line Station Branch Manager (AVN-310), Quality Assurance Branch Manager (AVN-320), Base Maintenance Branch Manager (AVN-330), Engineering Branch Manager (AVN-340), and the Management Representative (AVN-303) or their Designees. The Management Team will review policy objectives, corrective and preventative actions, and the proposed ISO audit schedule to ensure effectiveness of the quality system. Record of management reviews will be maintained by the Management Representative or his delegate.

**B. REVIEW INPUT** (ISO Requirement 5.6.2)

The management review agenda will list those items that impact the effectiveness of the quality plan. Agenda items will include:

- (1) Results of audits.
- (2) Customer feedback.
- (3) Process performance and product conformity.
- (4) Status of preventative and corrective actions.
- (5) Follow-up actions from previous management reviews.
- (6) Changes that could affect the quality management system.
- (7) Recommendations for improvement.

**C. REVIEW OUTPUT** (ISO Requirement 5.6.3)

The output from the management review shall include any decisions and actions related to:

- (1) Improvement of the effectiveness of the quality management system.
- (2) Improvement of product related to customer requirements.
- (3) Resource needs.

\*1 Management will assure that all action items are addressed as required by the immediacy of necessary actions. Management will review the status of incomplete action items on a quarterly basis, addressing progress and any additional resource requirements.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER VI. RESOURCE MANAGEMENT** (ISO Requirement 6)

**1. PROVISION OF RESOURCES** (ISO Requirement 6.1)

AMED determines and provides the resources to implement and maintain the QMS, improve its effectiveness and enhance the customers' satisfaction by meeting their requirements.

AMED will provide the resources to perform maintenance functions in accordance with responsibilities specified in GMM, TI 4100.24, Chapter II, Section 2, and Repair Station/Quality Control Manual, TI 4100.27, Chapter IV, Section 1.

---

---

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER VI. RESOURCE MANAGEMENT (ISO Requirement 6)****2. HUMAN RESOURCES (ISO Requirement 6.2)****A. GENERAL (ISO Requirement 6.2.1)**

AMED personnel who perform work affecting the quality of our products and services are competent on the basis of appropriate education, training, skills and experience.

**B. COMPETENCE, AWARENESS AND TRAINING (ISO Requirement 6.2.2)**

On a yearly basis, AMED determines the necessary competency for its personnel and provides the training, experience or other actions necessary to fulfill those competency needs. Records of these actions and evaluation of their effectiveness are kept through team meetings, performance reviews, supervisor and peer feedback. AMED personnel are made aware of the relevance and importance of their professional activities and how they contribute to the organization's objectives.

**(1) Training Requirements**

In the second quarter of each fiscal year, the Technical Training Coordinator, AVN-303, submits a request to each Branch Manager to identify the training requirements for personnel in their branch for the coming fiscal year.

**(2) Processing Requests**

Upon receipt, the requirements are consolidated into a spreadsheet that reflects all of the training needs and estimated budget to support the requested training. Upon completion of consolidation, a training needs review is accomplished with all Branch Managers to finalize the training requirements for the coming fiscal year. The final list is forwarded to the Budget Section, AVN-20, for inclusion in the budget request.

**(3) Approved Budget**

Upon receipt of the approved Training Budget from AVN-20, the Branch Managers finalize changes initiated to meet budgetary constraints.

**(4) Enrollments "Out-of-Agency" Training**

Training vendors are contacted to provide a copy of their training schedules and tuition costs for the coming fiscal year. Upon receipt of the vendor information, the training dates and Branch quotas are posted on the "Out-of-Agency" spreadsheet located in the AVN-300 training folder on "AVNOKCS5" drive on the Intranet. The Branches then provide names and dates for training to AVN-303 for processing.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

AVN-303 develops a training file by completion of the upper portion of the Training File Control Sheet, VN Form 4100-28 (Reference Figure 1, this section) and attaching it to the front of the file folder. The completed Needs Assessment Form, VN Form 4100-29 (Reference Figure 2, this section) is attached to the inside of the training file folder. The VN Form 4100-28 is completed as steps 1 through 7 are accomplished during the process.

(5) "In-Agency or Academy Training

Any Academy or "In-Agency" training schedules with open quota for AVN-300 employees are forwarded to AVN-303 from AVN-20. The training dates are then posted on the "In-Agency" spreadsheet located in the AVN-300 training folder on the "AVNOKCS5" drive on the Intranet. The Branches will identify the personnel for each class to the Technical Training Coordinator, AVN-303, for processing.

AVN-303 delivers the Training Notification, AVN Form 4100-30 (Reference Figure 3, this section) and the Course Participant Evaluation Form, VN Form 4100-31, to the appropriate Branch.

(6) Record of Training

Upon completion of training, the attendee will forward a copy of his/her training certificate to the Branch Secretary to be forwarded to the Technical Training Coordinator, AVN-303, for entry into the Integrated Personnel and Payroll System (IPPS). Each person attending training is provided a Course Participant Evaluation Form, VN Form 4100-31 (Reference Figure 4, this section) to document comments and evaluations, if desired. All completed Course Participant Evaluation Forms, VN Form 4100-31, will be forwarded to AVN-303 to be included in the training file.

Access to the Individual Training Records is covered under FAA Order 1280.1, Protecting Information and Individuals' Privacy Act (as revised) and are an established FAA system of records. Records must be logged out when removed from the training administrators' area.

(7) Records Retention

The training file consists of the following forms and is retained by AVN-303 for a minimum of two years:

Training File Control Sheet, VN Form 4100-28  
Training Needs Assessment Form, VN Form 4100-29  
Training Notification Form, VN Form 4100-30  
Course Participant Evaluation Form, VN Form 4100-31

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

(8) Individual Training Record Procedures

Individual training record procedures are addressed in the GMM, TI 4100-24, Chapter VII and in the IPM, TI 4100-27, Chapter III.

(9) Evaluation of Training Effectiveness

The AVN employee and supervisor meet at least twice a year for performance appraisals. In these sessions, discussions address the conformance/nonconformance with the performance measures noted in the employee's designation position description and the effective application of any necessary skills acquired through formal or on-the-job training.

In the event the employee is not in compliance, the performance review will be noted accordingly and additional training requested as specified in the FAA Supervisors' Handbook.





AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

FIGURE 3. TRAINING NOTIFICATION, VN FORM 4100-30

<b>TRAINING NOTIFICATION</b>		DATE:
TO:  Thru: Manager,		ROUTING SYMBOL:
SUBJECT: Notification of Training		
REMARKS: This is to provide notification that you are scheduled to attend:		
<p>In accordance with the FY-96 DOT Appropriations ACT (PL-104-50), employees attending training provided by or for the FAA must be given an opportunity to evaluate the training.</p> <p>In order to help determine the overall effectiveness of the subject course/seminar and to further determine if there is a continued need for this and other related types of training, we request that you complete the attached evaluation form and return it to the Training Department, AVN-303.</p> <p>Attachment</p>		
NAME:	TITLE: Training Official	
SIGNATURE:	ROUTING SYMBOL:	

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

FIGURE 4. COURSE PARTICIPANT EVALUATION, VN FORM 4100-31

**COURSE PARTICIPANT EVALUATION**

COURSE TITLE: \_\_\_\_\_

INSTRUCTOR(S): \_\_\_\_\_ DATE: \_\_\_\_\_

\_\_\_\_\_

In order to help determine the overall effectiveness of the subject course and to further determine if there is a continued need for this and other related types of training, we request that you complete the information below and return this form to the training department in AVN-303. This is used to comply with Public Law 104-50.

- |  | <u>Yes</u>               | <u>No</u>                |
|--|--------------------------|--------------------------|
| 1. Did you have a need for this training/information?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Did it provide you with knowledge and/or skills you can use on the job?                                     | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Were the purpose and objectives of the training provided to you prior to the class start time?              | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. On a scale of 1 to 5 (1= low; 5 = high), how would you rate the quality and effectiveness of the following: | <u>Rating</u>            |                          |
| a. The instructional materials?  | _____                    |                          |
| b. Method of instruction?  | _____                    |                          |
| c. Instructor?   | _____                    |                          |
| d. Course overall?   | _____                    |                          |
| 5. Other comments (may be continued on back of the page).  |                          |                          |

Thank you for completing this evaluation. Your name below is optional.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

---

---

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER VI. RESOURCE MANAGEMENT (ISO Requirement 6)****3. INFRASTRUCTURE (ISO Requirement 6.3)****A. GENERAL**

The AMED, in partnership with the FAA, determines, provides and maintains the infrastructure needed to perform aircraft maintenance and engineering services. The necessary buildings, workspace and utilities are provided and maintained as well as any necessary equipment (hardware and software) and any supporting services needed.

Facility requests are coordinated with the Program Support Staff, AVN-20, and the Office of Facility management, AMP. Automation services and Information Technology (IT) support are coordinated with the Information Technology Staff, AVN-40, and the Office of Information Services, AMI.

**B. SUPPORT EQUIPMENT**

Aircraft maintenance support equipment is divided into two categories - powered and non-powered:

- (1) Powered Support Equipment is identified as equipment that requires the consumption of non-renewable energy; i.e. Tugs, Fork Lifts, Hydraulic Mules, etc.
- (2) Non-powered Support Equipment is identified as all equipment that is not Powered Support Equipment; i.e. Work Stands, Step Stands, Tow bars, etc.

All equipment will be visually inspected for general condition prior to use. Any equipment found to be unserviceable will be removed from service and tagged. It is the responsibility of the person removing the item from service to install a Warning Tag and to notify their lead or supervisor. The VN Form 4100-86 or equivalent must contain the discrepancy and name the individual that discovered the discrepancy.

Upon notification of a discrepancy, the Lead or Supervisor will determine the corrective action and initiate the repair.

Powered Support Equipment will be maintained under a preventive maintenance schedule by AMP-300.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER VI. RESOURCE MANAGEMENT (ISO Requirement 6)****4. ENVIRONMENT (ISO Requirement 6.4)**

AMED determines and manages a safe and appropriate work environment that each employee needs to achieve conformity of the product or service within AVN-300. The work environment of all AVN-300 personnel is directed and controlled through compliance to Federal, DOT and FAA guidelines, manuals and policies, including the Environmental Protection Agency (EPA) guidelines, Occupational and Safety Hazards Administration (OSHA) guidelines, Laborer's International Union of North America (LIUNA Agreement) Article 21, Sections 1-14, and the Environmental Safety Operations Manual, TI 4100.26

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER VII. PRODUCT REALIZATION** (ISO Requirement 7)

**1. PLANNING OF PRODUCT REALIZATION** (ISO Requirement 7.1)

The AMED plans and develops the processes needed for aircraft maintenance and engineering. It identifies the resources, methods and criteria for monitoring, measuring and analyzing the processes needed to design, produce and deliver a product or service meeting the customer's requirements. Necessary action is taken to continually improve those processes producing improved products and services.

Aircraft Maintenance/Inspection procedures are described in the GMM, TI 4100.24, Chapter III, Section 21.

The Quality Planning procedure applicable to maintain Customer Aircraft is described in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 7.

\*Procedures applicable to design, fabrication and installation of parts and components for the issuance of Supplemental Type Certificates are described in the DAS Manual, TI 4100.21.

\*Procedures applicable to the development and use of repair data not previously approved by the administrator are described in the SFAR 36 Procedures Manual, TI 4100.36.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER VII. PRODUCT REALIZATION (ISO Requirement 7)**

**2. CUSTOMER RELATED PROCESSES (ISO Requirement 7.2)**

**A. DETERMINATION OF REQUIREMENTS RELATED TO THE PRODUCT  
(ISO Requirement 7.2.1)**

The AMED determines specified and unspecified customer requirements as well as any additional regulatory, statutory and organization requirements when planning for delivery of its products and services.

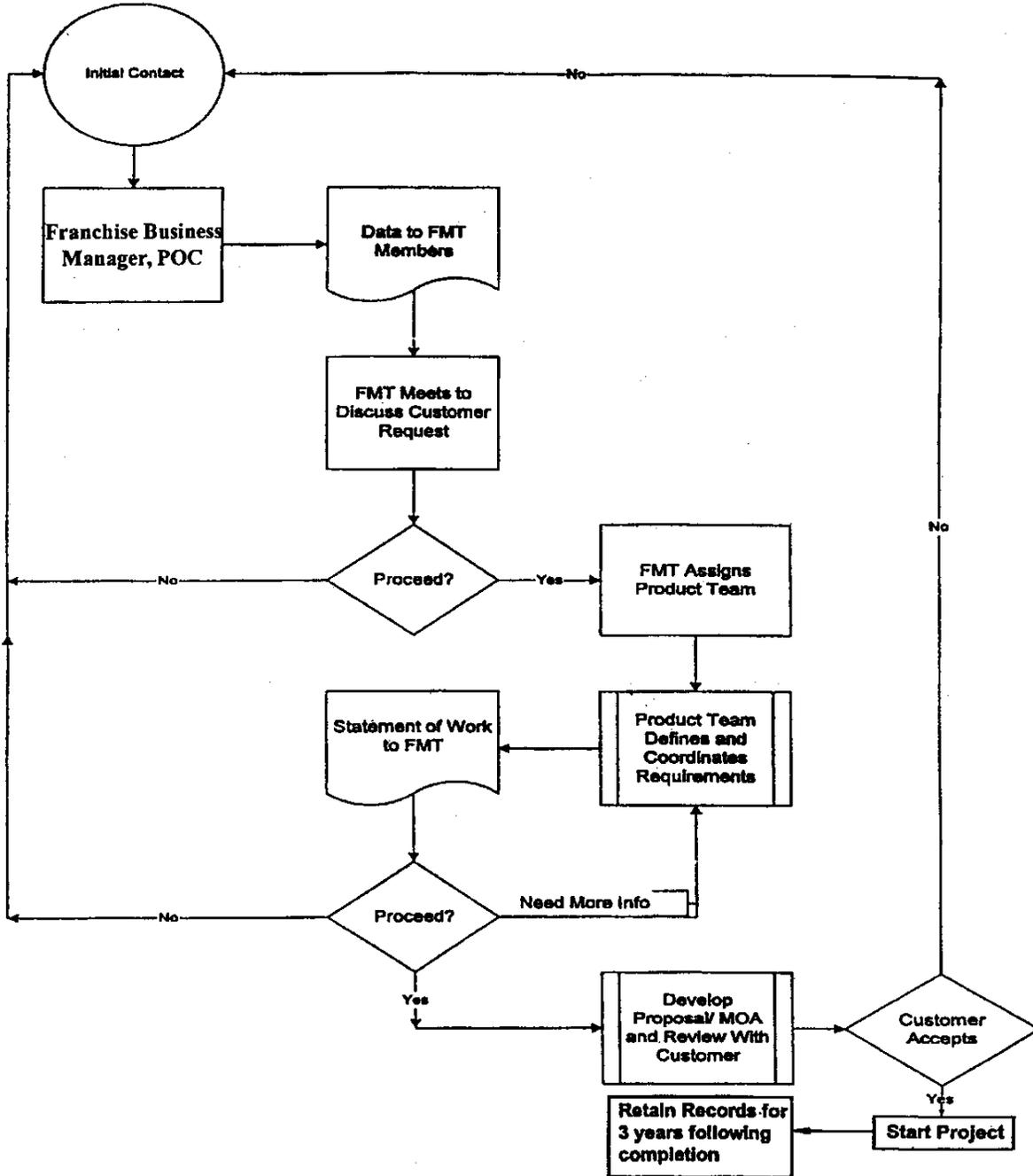
The customer's requirements are reviewed prior to tendering a commitment to supply a product or service. The Franchise Business Manager, Point of Contact (POC), and Franchise Management Team ensure the product requirements are defined, any differences are resolved with the customer and the AMED has the ability to provide the product or service. Any contractual changes are reviewed and affected documentation is amended and personnel notified. Records are kept of contract review activities.

The procedures covering coordination of contracting activities is contained in Figure 1 of Chapter VII, Section 2, as follows:

- (1) All initial contracts and requests for amendments or additional service from customers are to be referred to the Franchise Business Manager, Point of Contact (POC), AVN-300 at (405) 954-4126.
- (2) The POC collaborates with customers to define requirements and the general scope of work to be accomplished.
- (3) The POC sends information on customer requirements to the Franchise Management Team (FMT) members for review.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

FIGURE 1



---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

B. REVIEW OF REQUIREMENTS RELATED TO THE PRODUCT  
(ISO Requirement 7.2.2)

- (1) The POC calls a meeting of the FMT to discuss the customer's requirements, the division's capability to meet those requirements, cost benefits and feasibility of overall success.
- (2) The FMT will determine, by consensus, whether or not to proceed with a proposal to the customer. If not, the POC contacts the customer to decline service. If yes, the FMT assigns a product team consisting of members from the affected areas and a member of the Agreements Team from the Acquisitions Support Team, AVN-27. The FMT will assign a Product Team Lead (PTL) to act as a focal point for further coordination with the customer, which may include consideration of changes to the original product/service requirements and formulation of an appropriate Memorandum of Agreement (MOA).
- (3) The product team, on collaboration with the customer, will define requirements in writing and submit a statement of work to the FMT members for review. The FMT members will determine by consensus the appropriateness of the Statement of Work (SOW).
- (4) Once the determination is made to proceed, the Product Team Lead will coordinate with the Agreements Team, AVN-27, who will author a written MOA, coordinate agreement with the customer and obtain appropriate signatures from both parties.
- (5) If the customer acknowledges acceptance of the MOA with signature, a working copy is provided to each of the affected area managers, and the project moves to production. If the customer does not accept, AVN-27 will contact the POC, who will collaborate with the customer to determine if the customer requirements are met, or if the project is to be terminated.

**NOTE:** Transmittal of all documentation between AVN-300 and AVN-27 will be in writing, via transmittal memo or e-mail.

**NOTE:** AVN-27 acts as the office of primary responsibility for official records pertaining to MOA's. The Franchise Business Manager will maintain a working copy file for reference and correspondence purposes.

C. CUSTOMER COMMUNICATION (ISO Requirement 7.2.3)

AMED has determined the resources and implemented the processes necessary to facilitate communication with the customer. All requests for product/service information, initial contracts and requests for amendments to the contract begin with the Franchise Business Manager, Point of Contact (POC). The Franchise Business Manager maintains all records of customer feedback, including complaints.

---

---

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER VII. PRODUCT REALIZATION (ISO Requirement 7)****3. DESIGN AND DEVELOPMENT (ISO Requirement 7.3)****A. GENERAL (ISO Requirement 7.3)**

\*The Engineering Branch, AVN-340, is responsible for design specification development, acquisition oversight and maintenance support. It is a Designated Alteration Station (DAS) with authority to develop and approve data for aircraft alterations and to issue supplemental type certificates. In addition, the Branch has the authority to develop major repairs in accordance with Special Federal Airworthiness Regulations (SFAR) 36. All aspects of product design and development, including planning, determination of design inputs and verification and approval of outputs, systematic review, periodic verification, final validation and any need for changes are determined and addressed by its personnel. The principle vehicle for implementation of engineering data is the Engineering Order (EO), VN Form 4100-5-X. Several different variations of this form are found in each of the references below depending on the function of that EO under that regulatory guidance.

**(1) Design and Development Planning (ISO Requirement 7.3.1)**

Design planning and development procedures for Major Alterations are specified in DAS Procedures Manual, TI 4100.21, paragraph 10, and for Major Repairs in SFAR 36 Procedures manual, TI 4100.36, paragraph 8.

**(2) Design and Development Inputs (ISO Requirement 7.3.2)**

Design input interface procedures and records maintenance are specified in the IPM, TI 4100-27, Chapter V, Section 7; DAS Procedures Manual, TI 4100.21, paragraph 10 and SFAR 36 Procedures Manual, TI 4100.36, paragraph 8.

**(3) Design Output (ISO Requirement 7.3.3)**

Procedures to ensure that design outputs are verified and reviewed before release of product are specified in GMM, TI 4100.24, Chapter III, Section 77; DAS Procedures Manual, TI 4100.21, paragraph 10; SFAR 36 Procedures Manual, TI 4100.36, paragraph 8; and Repair Station/Quality Control Manual, Chapter V, Section 12.

**(4) Design Review (ISO Requirement 7.3.4)**

Design review procedures and records maintenance are specified in DAS Procedures Manual, TI 4100.21, paragraph 10.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

(5) Design Verification (ISO Requirement 7.3.5)

Design verification is accomplished by the Quality Assurance Branch, AVN-320, through performing Conformity Inspections as specified in the DAS Procedures Manual, TI 4100.21, paragraph 10. Records are maintained as defined in the cited procedure.

(6) Design Validation (ISO Requirement 7.3.6)

Major Alteration design validation procedures and records maintenance are specified for each project in Part 2 of the Type Inspection Authorization (TIA) per DAS Procedures Manual, TI 4100.21, paragraph 10.

(7) Design Changes (ISO Requirement 7.3.7)

Design change procedures for major alterations and major repairs and maintenance records are described in GMM, TI 4100.24, Chapter III, Section 77.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER VII. PRODUCT REALIZATION (ISO Requirement 7)**

**4. PURCHASING (ISO Requirement 7.4)**

**A. PURCHASING PROCESS (ISO Requirement 7.4.1)**

The AMED ensures that purchased products and services conform to specified requirements. Purchased products and services are controlled depending on their subsequent effect on the final product or service. Suppliers are evaluated and re-evaluated through the vendor audit program and related inspections. Records of vendor evaluation and re-evaluation will be kept in the vendor audit program files.

Procedures for purchasing aeronautical parts and components are described in the GMM, TI 4100.24, Chapter III, Section 40.

(1) Evaluation of Subcontractors

Only those contractors providing service of aircraft involving substantial maintenance or identified on an "as needed" basis are covered by the vendor audit program as described in the GMM, TI 4100.24, Chapter III, Section 70.

**B. PURCHASING INFORMATION (ISO Requirement 7.4.2)**

Information that must be provided for items purchased by AMED are described in the GMM, TI 4100.24, Chapter III, Section 40.

(1) Receiving Inspection and Testing

Receiving inspection procedures are described in the GMM, TI 4100.24, Chapter III, Section 41 and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 5.

**C. VERIFICATION OF PURCHASED PRODUCT (ISO Requirement 7.4.3)**

Procedures for the receipt of material and products in AMED are described in the GMM, TI 4100.24, Chapter III, Section 41.

(1) Supplier Verification at Subcontractor's Premises

Only those contractors providing service of aircraft involving substantial maintenance or identified on an "as needed" basis are covered by the vendor audit program as described in the GMM, TI 4100.24, Chapter III, Section 70.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

(2) Customer Verification of Subcontracted Products

Customer verification is provided as a standard clause for contracts exceeding \$500,000.00.

(3) Receipt Of Material By Receiving Personnel

The Quality Control Section, AVN-324, provides notification of receipt of material to other FAA organizations as necessary.

The procedure is as follows:

(a) The Office of Acquisition Services, AMQ-300, supplies four copies of the purchase order from "Award for Supplies or Services" consisting of one advance and three regular copies.

(b) The Quality Control receiver will indicate the quantity received for each line item listed in the "Line Description" block of the purchase order. A partial shipment will be indicated by the letter "P"; the sequence number of the partial shipment and the quantity received for each line item.

The first shipment received for one line item and three each is indicated by P 1-3. A second shipment of five each is received at a later date and is indicated by P 2-5. In the block entitled "Receiving Report" on the reverse side of the purchase order, the receiver will check the blocks marked "inspected" and "accepted" (NOT the block marked "received"). Also, indicate the status of the order by circling "partial" or "final" and sign and date.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER VII. PRODUCT REALIZATION** (ISO Requirement 7)

**5. PRODUCTION CONTROL** (ISO Requirement 7.5)

**A. CONTROL OF PRODUCTION PROVISION** (ISO Requirement 7.5.1)

The AMED plans and carries out production under control conditions ensuring personnel have:

- (1) The information and necessary work instructions needed to produce the intended product or service.
- (2) Suitable production equipment and working environment.
- (3) The availability and use of monitoring and measuring equipment.
- (4) Methods and evidence of release, delivery and post-delivery activities.

Process Control procedures are described through the GMM, TI 4100.24, Chapter III and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

Under our FAR Certificates, parts are fabricated by the AMED and installed in aircraft in work at the AMED; however, if the part is fabricated for other organizations, then the part(s) are delivered to each customer through Logistics Center packing and shipping procedures.

(a) Process Control

Process Control procedures are described throughout the GMM, TI 4100.24, Chapter III and the Repair Station/Quality Control Manual, TI 4100.27, Chapters I and V.

(b) Control Procedure

To ensure the quality of maintenance for Flight Inspection (FI) aircraft, the inspection requirements are specified on Task Cards. Those items that could severely impact the operation of FI aircraft are addressed in the Required Inspection Item (RII) procedures specified in GMM, TI 4100.24, Chapter III, Section 29. Process Control procedures to support customer aircraft are specified in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section.7.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

(c) Control Of Service Provision (Ref. 1.2 Justified Exclusion)

The AMED does not service products that have been designed and developed within this organization. "Servicing" is a maintenance function, not Warantee Work, as defined by the standard.

B. VALIDATION OF PROCESSES FOR PRODUCTION AND SERVICE PROVISION  
(ISO Requirement 7.5.2)

\*To ensure the quality of maintenance for Flight Inspection (FI) aircraft, the inspection requirements are specified on Task Cards. Those items that could severely impact the operation of FI aircraft are addressed in the Required Inspection Item (RII) procedures specified in GMM, TI 4100.24, Chapter III, Section 29. Process Control procedures to support customer aircraft are specified in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V. Records are maintained in the Inventory, Logistics and Maintenance (ILM) electronic database.

C. IDENTIFICATION AND TRACEABILITY (ISO Requirement 7.5.3)

Procedure for controlling the inspection and test status of maintenance on flight inspection aircraft is described in the GMM, TI 4100.24, Chapter III, Section 23. Procedures utilized for maintenance on customer aircraft are described in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V. Control procedures used for parts fabricated during alteration are described in the DAS, TI 4100.21, paragraph 10.

Inspection and Testing are described in the GMM, TI 4100.24, Chapter III, Section 21 and in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

(1) Inspection And Test Records

Inspection and test records are described in GMM, TI 4100.24, Chapter IV and in Repair Station/Quality Control Manual, TI 4100.27, Chapter VI. Procedures for maintaining inspection and test records are described in GMM, TI 4100.24, Chapter III, Section 73 and Repair Station/Quality Control Manual, TI 4100.27, Chapter VI.

(2) Electronic Forms

Electronic forms may be accessed through the FAA Electronic Document System (FEDS) at <http://feds.faa.gov>, or the AVN-300 Electronic Library at <http://avn.faa.gov/index.asp?xml=fimo/eml> in the forms section.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

D. CUSTOMER PROPERTY (ISO Requirement 7.5.4)

Customer supplied products are received and controlled in the same manner as any part or component received in the AMED stockroom. The receiving and receiving inspection procedures are specified in the GMM, TI 4100.24, Chapter III, Section 41, Chapter III, Section 21, Chapter V, Section 3 and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 5. The Base Maintenance Branch, AVN-330, will notify customers in the event of damage or loss while in the possession of AMED.

(1) Tracking Of Customer Products

The Inventory, Logistics and Maintenance (ILM) module will assign a stocking location and track all customer supplied parts and components.

E. PRESERVATION OF PRODUCT (ISO Requirement 7.5.5)

Procedures for handling, storage, packaging and preservation of products throughout the AMED are described in the GMM, TI 4100.24, Chapter III, Section 41, and will also be found in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

(1) Handling

Items procured for maintenance of Flight Inspection aircraft will be handled in accordance with procedures specified in GMM, TI 4100.24, Chapter III. Items procured for maintenance of customer aircraft will be handled in accordance with procedures specified in the Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

(2) Storage

Storage procedures are described in GMM, TI 4100.24, Chapter V and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 15.

\*(3) Packaging

Aircraft Support Section, AVN-326, personnel accomplish packaging of products for AMED.

(4) Preservation

Procedures for preservation of parts is described in GMM, TI 4100.24, Chapter V, Section 3 and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 15.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER VII. PRODUCT REALIZATION** (ISO Requirement 7)

**6. CONTROL OF MONITORING AND MEASURING DEVICES** (ISO Requirement 7.6)

**A. GENERAL**

The AMED consistently monitors and measures product conformity and process performance implementing specific monitoring and measurement processes and devices. AMED will assure that measuring devices, including computer software are calibrated at specific intervals or prior to use against traceable and/or defined measurement standards. The devices will be adjusted or re-adjusted as necessary, identified as to calibration status and safeguarded against invalidating adjustments. Monitoring and measurement devices will be protected from damage during handling, maintenance and storage. Calibration records will be kept.

(1) Calibration Requirements

Requirements for calibration procedures are described in GMM, TI 4100.24, Chapter III, Section 99, Repair Station/Quality Control Manual, TI 4100.27, Chapter V and ISO Quality Manual, TI 4100.28, Appendix 2.

(2) Control Procedure

Control procedures are described in GMM, TI 4100.24, Chapter III, Section 99, Repair Station/Quality Control Manual, TI 4100.27, Chapter V and ISO Quality Manual, TI 4100.28, Appendix 2.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

**CHAPTER VIII. MEASUREMENT, ANALYSIS AND IMPROVEMENT** (ISO Requirement 8)

**1. GENERAL** (ISO Requirement 8.1)

AMED plans and implements the monitoring, measurement, analysis and improvement processes needed to demonstrate the conformity of our products. We assure the conformity and continual improvement of our QMS and its effectiveness. AMED uses a variety of methods to measure, analyze and improve the processes and products.

Inspection and Testing are described in the GMM, TI 4100.24, Chapter III, Section 21 and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

---

---

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

---

**CHAPTER VIII. MEASUREMENT, ANALYSIS AND IMPROVEMENT (ISO Requirement 8)****2. MONITORING AND MEASUREMENT (ISO Requirement 8.2)****A. CUSTOMER SATISFACTION (ISO Requirement 8.2.1)**

AMED collects and monitors information relating to our customers perception as to whether we have met their requirements. AMED uses a variety of methods to determine this information.

AVN-300 utilizes a semi-annual, detailed, customer survey of all end users of our services. This provides a broad picture of customer perspective with sufficient data to chart trends. In addition, we provide non-routine customers with abbreviated on the spot surveys upon delivery of services. These are utilized to provide real-time feedback of the customer's satisfaction with services rendered.

**B. INTERNAL AUDIT (ISO Requirement 8.2.2)**

\*In the last quarter of each fiscal year, AVN-320 will coordinate and publish an annual audit schedule which includes AVN-320 internal audit functions, AVN-320 ISO 9001 audit functions and vendor audit requirements. AVN-300 Audits Coordinator will update, as necessary, and assign processes to be audited during each scheduled internal audit visit. Prior to publication, the audit schedule will be coordinated with all AVN-300 branches and approved by the Division Manager.

Audits are planned, taking into account the status and importance of specific processes, areas to be audited and the results of previous audits. AMED conducts internal audits to ensure its quality management system conforms to planned arrangements that ensure regulatory compliance, assure the system is maintained and performing effectively and to monitor, correct and improve the processes used in the division.

Audit findings are tracked and stored in an automated Audit Tracking Program (ATP) that is maintained by the Quality Assurance Branch, AVN-320. The ATP is used to record, track, resolve, analyze and report quality management system audit findings. Detailed instructions for the use of this Audit Tracking Program are found in Appendix 14 of this manual.

**\*(1) Internal (Regulatory) And Vendor Audit Program**

The AVN-300 Internal and Vendor Audit Programs are conducted to evaluate the FAR Part 135, FAR Part 145, DAS and SFAR Part 36 functions. Program procedures are described in the GMM, TI 4100.24, Chapter III, Section 71. Findings are recorded in accordance with the process found in Appendix 14 of this Manual.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

(2) \*ISO 9001 Internal Audit Program

\*The ISO 9001 Management Representative, in coordination with AVN-320, will schedule ISO internal audits. Prior to publication, the audit schedule will be coordinated with all AVN-300 branches.

\*(a) Every AMED activity or process related to the organization's ISO quality management system is audited at least once a year. Selected activities and processes may be audited more frequently, depending on their importance and audit performance history. ISO auditors cannot audit their own work. The ISO Lead Internal Auditor or qualified designee supervises the audit(s) and assists the ISO auditors when necessary. Auditors prepare for audits by reviewing applicable documents, records, standards, regulations and processes and prepare questions based on their preparation.

\*(b) ISO Auditors seek objective evidence by observing activities, sampling, interviewing personnel and examining documentation and records. Any non-conformances, nonconformities and observations are noted by the auditor(s), documented and recorded using the Audit/Corrective Action Report, VN Form 4100-26. The AMED Lead Auditor, AVN-324 Audit Coordinator or designee enters the documented evidence into the Audit Tracking Program as per Appendix 14 of this manual. The ATP is the official source of all ISO auditing data. Paper copies of VN Form 4100-26 may be used during all stages of processing the ISO audit finding, but are used only as reference worksheets throughout the audit process.

\*(c) If corrective action is necessary, the AMED Management Representative, Lead Auditor or designee and the appropriate Branch Manager or Supervisor first review the finding to assure relevance and, if required, assign the documented finding to the appropriate department personnel for corrective action and determine a projected completion date.

If deemed necessary, because of recurrence of the audit finding or safety issues, the Lead Internal Auditor and/or the Branch Manager will implement root cause analysis to identify the primary reason why nonconformity repeatedly occurs.

\*(d) Once corrective action has been taken, the AMED Lead Auditor, AVN-324 Audit Coordinator or designee, is informed and a competent ISO auditor is reassigned to audit the corrective action, confirming whether the action was effective.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

- \* (e) Records of ISO internal audits are retained in the ISO Audit Tracking Program. The AMED Management Representative maintains records of the audit schedule and management reports. All records are kept for a minimum of three years. Any uncontrolled paper records are recycled and the corresponding portion of the official ISO Audit Tracking database is deleted.
- \* (f) AMED's Management representative will present a summary of all ISO internal audit results during the management review or sooner if necessary. Top management will allocate the proper resources to ensure the proper and effective performance of ISO internal audits.

\*

\*

C. MONITORING AND MEASUREMENT OF PROCESSES (ISO Requirement 8.2.3)

AMED has planned and applied methods for monitoring and when needed, measuring key processes that affect the quality of our products and services. These methods demonstrate the ability of the processes to meet process requirements. When these process requirements are not met, corrective action is taken as appropriate to ensure conformity of the process(es) and resulting product. The Maintenance Reliability Manual, TI 4100.25, describes how these processes are monitored and measured.

D. MONITORING AND MEASUREMENT OF PRODUCT (ISO Requirement 8.2.4)

AMED monitors and measures product characteristics to verify that we are meeting our product requirements. Monitoring and measurement of product characteristics are carried out at appropriate stages (see the following) to ensure we meet planned arrangements. We retain records of product conformity indicating the personnel authorizing inspection and release of the product. Because of the critical nature of our service, components of our products/services are not released or compromised in any way without suitable approval by a relevant authority, and, if necessary, the customer.

(1) Receiving Inspection and Testing

Receiving inspection procedures are described in GMM, TI 4100.24, Chapter III, Section 41 and in Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 5.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

(2) In-Process Inspection And Testing

In-process inspection and testing procedures are described as conformity inspection in GMM, TI 4100.24, Chapter III, Section 77, Repair Station/Quality Control Manual, TI 4100.27, Chapter V and in Designated Alteration Station Manual (DAS), TI 4100.21, paragraph 10.

(3) Final Inspection And Testing

Final inspection and testing procedures for maintenance and fabrication of parts for flight inspection aircraft are described in GMM, TI 4100.24, Chapter III, Section 21. Final inspection and testing procedures for customer aircraft are described in Repair Station/Quality Control Manual, TI 4100.27, Chapter V.

(4) Inspection And Test Records

Inspection and test records are described in GMM, TI 4100.24, Chapter IV and Repair Station/Quality Control Manual, TI 4100.27, Chapter VI. Procedures for maintaining inspection and test records are described in GMM, TI 4100.24, Chapter III, Section 73 and in Repair Station/Quality Control Manual, TI 4100.27, Chapter VI.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER VIII. MEASUREMENT, ANALYSIS AND IMPROVEMENT (ISO Requirement 8)**

**3. NON-CONFORMING PRODUCT (ISO Requirement 8.3)**

AMED ensures that product not meeting product requirements is identified and controlled to prevent its unintended use or delivery. Records identifying the nature of the nonconformity and action taken will be maintained. The controls, including action taken, review and disposition, authorized use and related authorities and responsibilities are defined in the manuals listed in the following paragraphs:

**A. CONTROL OF NONCONFORMING PRODUCT**

The Aviation System Standards (AVN) will use the procedures found in GMM, TI 4100.24, Chapter III, Section 41 and the Repair Station/Quality Control Manual, TI 4100.27, Chapter V, Section 5 to ensure a nonconforming product is not installed on AVN or customer aircraft. All corrected nonconforming product is verified to demonstrate conformity to specified requirements. If nonconforming product or a product component is identified after installation or delivery, AMED takes appropriate action.

**B. REVIEW AND DISPOSITION OF NONCONFORMING PRODUCT**

Review and disposition of Nonconforming products are covered in the Suspected Unapproved Parts reporting program as described in GMM, TI 4100.24, Chapter III, Section 41.

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL**

---

**CHAPTER VIII. MEASUREMENT, ANALYSIS AND IMPROVEMENT (ISO Requirement 8)**

**4. ANALYSIS OF DATA (ISO Requirement 8.4)**

AMED collects data through monitoring and measurement of our products, processes, customers and suppliers. Analysis of this collected data leads to continual improvement.

**A. CUSTOMER SATISFACTION**

Analysis of customer satisfaction is completed at a minimum of semi-annually with customer surveys. (See Chapter VIII, Section 2).

**B. PRODUCT AND PROCESS**

The Aviation System Standards (AVN) will use the procedures found in the FAA Maintenance Reliability Program Manual, TI 4100.25, to gather and analyze failure data for aircraft components.

**C. SUPPLIERS**

AVN's acquisitions department generates data regarding supplier performance and supplied product.

All other audited data will be tracked and analyzed using the Audit Tracking Program identified in Appendix 14 of this Quality Manual

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

**CHAPTER VIII. MANAGEMENT, ANALYSIS AND IMPROVEMENT** (ISO Requirement 8)

**5. IMPROVEMENT** (ISO Requirement 8.5)

\*A. CONTINUAL IMPROVEMENT (ISO Requirement 8.5.1)

AVN-300 has implemented several processes to assure continual improvement. During the annual ISO Management Review, top management reviews the quality policy and objectives, audit results and analysis of specific data regarding customers, processes, products and suppliers to identify opportunities for improvement. Additionally, the status of AMED's corrective and preventive actions are reviewed in the Management Review meeting to assure the quality management system's continuing suitability, adequacy and effectiveness including opportunities for improvement. Records are kept of the results of this meeting and any action items are assigned to responsible AMED personnel. The minutes of Management Review include evidence that management has considered:

- (1) Recommendations for improvement of AMED's quality management system.
- (2) Improvement of the effectiveness of AMED's quality management system and its processes.
- (3) Improvement of aircraft maintenance and engineering related to customer requirements.

A description of AMED's daily methods of continual improvement are defined in TI 4100.24 General Maintenance Manual (GMM), Chapter III which includes the Continuing Analysis and Surveillance Program (CASP) and in the Maintenance Reliability Program described by the TI 4100.25 Maintenance Reliability Program Manual (MRPM).

The Maintenance Reliability Program provides a significant role in administering a Continuing Analysis Surveillance System (CASS) required by FAR 135.431. Process performance and product conformity data are summarized and reviewed weekly with the cumulative data analyzed on a quarterly basis during the Fleet Reliability Report meeting. Records of the meeting and action items are maintained as defined for Committee and Conference records in FAA Order 1350.15C.

## AVIATION SYSTEM STANDARDS ISO 9001 QUALITY MANUAL

---

AMED continually improves its supplier response and performance through ordering parts directly from the appropriate vendor. In some cases, manufacturer's representatives and inventory are located with AMED's maintenance facilities. AVN-324 and AVN-326 work closely with the vendors to ensure clear communication and coordination of fleet maintenance. CSPS (Parts by the Hour contract) is used specifically for Lear and Challenger parts and Raytheon's Rapid Ordering System is used for Beech and Hawker parts. Other vendors are used based on performance history and best available cost. Vendor Audit programs defined in the GMM, TI 4100.24, Chapter III, Section 71, and in this Manual, Chapter VIII, Section 2, allow AVN-300 to monitor its vendors' performance and identify potential areas of improvement.

Customer surveys (see Chapter VIII, Section 2 of this Manual) and a comprehensive training program (Chapter VI, Section 2 of this manual) both administered by AVN-303, provide customer data and ongoing personnel competency that lead to continual improvement of AVN-300's quality management system.

### B. CORRECTIVE ACTION (ISO Requirement 8.5.2)

AMED continually takes action to eliminate the causes of nonconformity and prevent recurrence. Corrective action is appropriate to the nonconformity found and its effect on the quality of our aircraft maintenance and engineering services.

\*AMED reviews nonconformities from multiple sources such as; the findings from aircraft inspections performed under the Part 145 repair station, aircraft defects as reported by the aircrews, the Part 135 Internal Evaluation Program (IEP), the reliability program customer complaints and internal audits/evaluations conducted expressly for ISO, EOSH and AVN-6 IEP program compliance and those shortcomings reported by our employees. From these sources, AMED analyzes the findings and determines the causes of those nonconformities. The need for action to prevent recurrence is determined as well as any necessary action. Corrective actions are reviewed on a regular basis and records are kept of any action items assigned.

\*Corrective action is initiated when a nonconformity or non-compliance is identified from AVN-320, Part 135 IEP (See GMM, TI 4100.24, Chapter III, Sections 70-71) or ISO 9001:2000 audits (See this manual, TI 4100.28, Chapter VIII, Section 2). Corrective action resulting from data analysis is described in the AVN Maintenance Reliability Program Manual (MRPM), TI 4100.25, Chapter IV, Section 1 and Chapter V, Section 1.

Findings identified by ISO audits are recorded and tracked through Audit/Corrective Action Report (CAR) Forms (VN Form 4100-26 or electronic equivalent), and the AVN-300 Audit Tracker Program (ATP) database. Findings identified through the Maintenance Reliability Program are logged and tracked as defined in the General Maintenance Manual, Chapter III, Section 70, with follow-up as required by FAR 135.415 using the guidelines provided in the GMM, TI 4100.24, Chapter III, Section 61.

---

---

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL

---

---

\*Findings related to content or processes found in Technical Issuance (TI) documents are reported and corrected through the use of the AVN Form 4100-170 "Request for Action". The AVN Part 135 IEP and ISO corrective action program identifies items requiring follow-up action from an on-going audit, previous audits or verifications of closing actions. Instructions for accessing audit data from the ATP or entering audit data into the ATP are found in Appendix 14 of this Manual.

**NOTE:** The Safety and Quality Assurance staff, AVN-6, also conducts an evaluation activity identified as an Internal Evaluation Program (IEP) that is not to be confused with the AMED's Part 135 IEP audit program. The AVN-6 IEP is defined by AVN Order VN 1800.1D and FAA Order 4040.9 (currently in draft). AVN-6 IEP evaluation findings are entered into the AVN Audit Tracking Program (ATP) and processed in identical manner as ISO 9001 audit findings and Part 135 IEP findings as defined in TI 4100.28, Appendix 14. Records of the AVN-6 evaluations of AVN-300 are maintained in the ATP and deleted after 3 years.

Upon the completion of an IEP or ISO audit, the auditor compiles all of the findings and forwards them to AVN-324's Audit Coordinator who assigns each of them a CAR number as identified in Appendix 14 of this Manual and enters it into the ATP database. The CAR entry is electronically forwarded to the responsible Manager or Supervisor who responds with a plan of action and projected completion date back to the Lead Auditor or designee within 14 working days. Repeat non-conformities that may affect the safety and/or performance of an aircraft, equipment and crew may require root cause analysis as determined by the Branch Manager and/or Supervisor.

\*The responsible Manager or Supervisor assigns an individual to investigate each CAR, recommend and implement corrective or preventive action and then forward this information to the lead auditor or designee. Notification of the results of the investigation or completion of corrective actions may be either electronic or paper media. When notified, the lead auditor or designee enters the corrective action and investigative information into the ATP. Hard copies of Corrective Action Reports from the ATP shall be retained for no more than three (3) years from the date of printing. Electronic Version of these reports shall be retained for no less than three years, up to indefinitely with adequate storage media.

C. PREVENTIVE ACTION (ISO Requirement 8.5.3)

The main focus of AMED is action directed toward preventing potential aviation discrepancies in any of the fleet's aircraft before they occur. AMED's terminology for this continuous activity is "corrective action" which, in its intent, is identical to ISO 9001:2000's definition of preventive action: "action to eliminate the cause of a potential nonconformity or other undesirable potential situation."

## AVIATION SYSTEM STANDARDS ISO 9001 QUALITY MANUAL

---

There are several of these preventive action processes used by AMED; the Franchise Business Manager and the Franchise Management Team initiate preventive action through the thorough review of the customers' requirements prior to tendering a commitment to supply maintenance and engineering services. This Manual, TI 4100.28, Chapter VII, Section 2, Customer Related Processes, describes this process, its related documentation and records.

The General Maintenance Manual (GMM), TI 4100.24, Chapter III describes the Maintenance and Inspection program and related procedures followed that initiate preventive and corrective actions. The Continuing Analysis and Surveillance Program (CASP) contained in Chapter III.70, Section 1, meets the requirements of FAR 135.431 for the operation of aircraft utilizing a Continuous Airworthiness Maintenance Program (CAMP). The CASP provides full analysis and surveillance capability for the FAA CAMP. The program applies to all FAA maintenance organizations and the assigned aircraft, appliances, systems and equipment, including avionics and test equipment. The CASP, using the audit and analysis systems, provides an overall assessment of the FAA maintenance organizations and equipment for their compliance with prescribed policies, procedures and effectiveness of the CAMP.

The AVN-320 Quality Assurance Branch, with input from all other AMED branches, continually monitors and analyzes the performance of the AVN fleet's aircraft, engine systems and associated components. Preventive action is initiated when specific data and management deem it necessary. The ultimate objective of this activity is the prevention of nonconformity and the continual improvement of the maintenance and inspection program, providing optimum levels of safety, reliability and economic efficiency for the AVN aircraft fleet. AVN-300 exceeds regulatory requirements for preventive action and continual improvement by establishing the AVN Maintenance Reliability Program Manual (MRPM) TI 4100.25. Chapter III specifically identifies a wide variety of sources of data that, through continual measurement and analysis, leads to prevention of aircraft discrepancies and the improvement of the maintenance and engineering processes found in AMED.

Reliability Performance Parameters described in the Maintenance Reliability Program Manual, TI 4100.25, Chapter IV, Section 1 describes how reliability analysis is conducted through comparison of actual aircraft and powerplant performance statistical data to designated performance parameters. Summarization of this data, detailed in the Fleet Reliability Report, is issued and reviewed on a quarterly basis by AMED management with preventive actions issued if Alert Levels are exceeded or trending indicates a process is moving toward unacceptable aircraft discrepancy. The issuances of a Maintenance Advisory Directive (MAD) and/or Maintenance Analysis Bulletin (MAB) are methods by which all AVN Line Stations and other stakeholders are notified to correct the recurrence or prevent the occurrence of aircraft discrepancy (non-conformity). The Reliability Analysis Flow diagram, TI 4100.25, Chapter IV, Section 1 describes the Reliability Analysis process and related documentation.

## AVIATION SYSTEM STANDARDS ISO 9001 QUALITY MANUAL

---

FAA Order 4040.9 requires that each FAA Flight Program develop and implement an Internal Evaluation Program (IEP) in order to ensure continued compliance with applicable Federal Aviation Regulations and to make timely improvements to all programs that operate Government aircraft. The Safety and Quality Assurance staff, AVN-6, has established AVN Order VN 1800.1D that establishes an Aviation System Standards (AVN) Internal Evaluation Program that is designed to provide management insight regarding potential problem areas before noncompliance occurs, and allow managers sufficient time to respond in a proactive manner. Evidence and performance records of the AVN-6 IEP program are maintained in the AVN-300 Audit Tracking Program (ATP).

Additionally, anyone in AVN-300 can initiate corrective or preventive action by using the Request for Action System (VN Form 4100-170) monitor its progress and maintain the records of such action. TI 4100.24, Chapter IV, Section 99 describes the process.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

**TABLE OF CONTENTS**

<b>CHAPTER/ISO REFERENCE</b>	<b>TITLE</b>	<b>PAGE NO.</b>	<b>LATEST CHANGE/DATE</b>
<b>APPENDIX 1</b>	<b>EQUIPMENT EXCEPTIONS</b>		03-02/12/04
	1. Equipment Exceptions	1.1.1	03-02/12/04
	1.1 Avionics Items	1.1.1	03-02/12/04
<b>APPENDIX 2</b>	<b>STANDARD POLICIES FOR TEST EQUIPMENT MAINTENANCE</b>		03-02/12/04
	2. Standard Policies for Test Equipment Maintenance	2.2.1	03-02/12/04
	2.1 Purpose	2.2.1	03-02/12/04
	2.2 Definitions		
	2.2.1 Measurement Standards	2.2.1	03-02/12/04
	2.2.2 Test Equipment	2.2.1	03-02/12/04
	2.2.3 Precision Measuring Equipment	2.2.1	03-02/12/04
	2.2.4 Calibration	2.2.1	03-02/12/04
	2.2.5 Traceability	2.2.1	03-02/12/04
	2.2.6 Calibration Interval	2.2.2	03-02/12/04
	2.3 General Policies	2.2.2	03-02/12/04
	2.4 Responsibilities	2.2.2	03-02/12/04
	2.4.1 Test Equipment & PME Shops	2.2.2-2.2.5	03-02/12/04
	2.4.2 Users	2.2.5-2.2.6	03-02/12/04
	2.4.3 Engineering	2.2.6	03-02/12/04
<b>APPENDIX 3</b>	<b>STOCKROOM SHELF LIFE ITEM AND TIME CHANGES</b>		03-02/12/04
	3. Stockroom Shelf Life Item and Time Changes	3.3.1	03-02/12/04
	3.1 Receipt of GMM Change	3.3.1	03-02/12/04
<b>APPENDIX 4</b>	<b>STOCKROOM CHEMICAL SHELF LIFE PROCEDURES</b>	4.4.1	03-02/12/04
<b>APPENDIX 5</b>	<b>STOCKROOM ELECTRO STATIC DISCHARGE (ESD) PROCEDURES</b>	5.5.1	03-02/12/04
<b>*APPENDIX 6</b>	<b>AVN-326 SUPPLY REQUEST CHART</b>	6.6.1	04-04/29/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

**TABLE OF CONTENTS**

<b>CHAPTER/ISO REFERENCE</b>	<b>TITLE</b>	<b>PAGE NO.</b>	<b>LATEST CHANGE/DATE</b>
<b>APPENDIX 7</b>	<b>AVN-326 SUPPLY RETURN CHART</b>	7.7.1	04-04/29/04
<b>APPENDIX 8</b>	<b>AIRCRAFT RECORDS PROCEDURES</b>		03-02/12/04
	8. Aircraft Records Procedures	8.8.1	03-02/12/04
	8.1 Daily Mail	8.8.1-8.8.3	03-02/12/04
	*8.2 Monthly Records Purge	8.8.3	05-06/17/04
	8.3 ILM Entry	8.8.4	03-02/12/04
	8.4 ILM Entry (Reserved)	8.8.4-8.8.5	03-02/12/04
	8.5 Reconciliation	8.8.5-8.8.6	03-02/12/04
	8.6 Airframe Drawer Contents	8.8.6	03-02/12/04
	8.7 Other Drawer Contents	8.8.7	03-02/12/04
	8.8 Engine & Prop Drawer Contents	8.8.7	03-02/12/04
	8.9 Archive Files	8.8.7	03-02/12/04
	8.10 Setting-Up Files	8.8.7	03-02/12/04
	8.11 Reserved	8.8.7	03-02/12/04
	8.12 Special Notes	8.8.7	03-02/12/04
	8.13 Engine Changes	8.8.8-8.8.9	03-02/12/04
	Figure 1- Airframe Drawer	8.8.10-8.8.13	03-02/12/04
	Figure 2 - Engine Folder	8.8.14	03-02/12/04
	Figure 3 - Propeller Folder	8.8.15	03-02/12/04
<b>APPENDIX 9</b>	<b>EXCESS MATERIAL DISPOSAL PROCEDURES</b>		03-02/12/04
	9. Excess Material Disposal Procedures	9.9.1	03-02/12/04
	9.1 Life Limited With Expired Time	9.9.1	03-02/12/04
	9.2 Sale Site	9.9.1	03-02/12/04
	9.3 Hazardous Materials Disposal	9.9.1	03-02/12/04
<b>APPENDIX 10</b>	<b>RETURN AND SCREENING OF HIGH VALUE EXPENDABLE PARTS</b>		03-02/12/04
	10. Return and Screening of High Value Expendable Parts	10.10.1	03-02/12/04
	10.1 Returned Parts	10.10.1	03-02/12/04
	10.2 Expendable Parts	10.10.1	03-02/12/04
	10.3 Screening of Parts	10.10.1	04-04/29/04
	10.4 Disposition	10.10.1	03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

**TABLE OF CONTENTS**

<b>CHAPTER/ISO REFERENCE</b>	<b>TITLE</b>	<b>PAGE NO.</b>	<b>LATEST CHANGE/DATE</b>
<b>APPENDIX 11</b>	<b>PURCHASE REQUEST PROCEDURES FOR CREDIT CARD AND PURCHASE ORDER</b>		03-02/12/04
	11. Purchase Request Procedures for Credit Card and Purchase Order	11.11.1	03-02/12/04
	11.1 Procedures	11.11.1	03-02/12/04
<b>*APPENDIX 12</b>	<b>AERONAUTICAL RELIABILITY REPORT (ARR) CORE PROCESSING PROCEDURES</b>	12.12.1-12.12.2	04-04/29/04
<b>APPENDIX 13</b>	<b>CUSTOMER AIRCRAFT ROUTINE WORK PROCESS</b>	13.13.1-13.13.2	03-02/12/04
<b>APPENDIX 14</b>	<b>CORRECTIVE ACTION REPORTS AND AVN-300 AUDIT TRACKING PROGRAM</b>		
	*14. Corrective Action Reports and AVN-300 Audit Tracking Program	14.14.1	04-04/29/04
	14.1 Instructions for the AVN-300 Audit Tracking Program	14.14.1-14.14.10	03-02/12/04
	14.2 Audit Report and CAR Numbering System	14.14.10-14.14.13	03-02/12/04
	14.3 Instructions for Completing Audit/Corrective Action Report, VN Form 4100-26	14.14.13	03-02/12/04
	Figure 1. VN Form 4100-26	14.14.14	03-02/12/04

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 1.****1. EQUIPMENT EXCEPTIONS**

## 1.1 Avionics Items

There are Standard Operation Procedures used in the Avionics Shop for identifying equipment not covered by a work order or Engineering Order. Occasionally, items other than repairable, will be processed in the Avionics Shop. When these exceptions occur, a Serviceable Part Acceptance Tag, VN Form 4100-301, will be used in the following manner:

The repairable part section will be attached to the item and necessary entries made to control equipment use and identify the current status of each item.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 2.****2. STANDARD POLICIES FOR TEST EQUIPMENT MAINTENANCE**

## 2.1 Purpose

This establishes the policies and procedures for the calibration system and the process to calibrate and maintain Measurement Standards, Test Equipment and Precision Measuring Equipment (PME).

## 2.2 Definitions

## 2.2.1 Measurement Standards

Equipment used to provide traceability to National Institute of Standards and Technology (NIST) and for the calibration and maintenance of Test Equipment and PME to assure conformance to requirements.

## 2.2.2 Test Equipment

Equipment used for the calibration and maintenance of other Test Equipment, specialized measuring equipment, electronic airborne equipment, and electrical equipment assuring conformance to requirements.

## 2.2.3 Precision Measuring Equipment

All equipment listed in TI 4150.1, Federal Aviation Administration (FAA) Aircraft Ground Support Test Equipment Index.

## 2.2.4 Calibration

The set of operations which establishes, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system and the corresponding standard or known values derived from the standard.

## 2.2.5 Traceability

The ability to relate individual measurement results through equipment whose accuracy has been established via an unbroken chain of calibration records to a standard derived from NIST, equipment manufacturer or other standard acceptable to the administrator.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

### 2.2.6 Calibration Interval

The maximum calendar time a calibrated item may be used without scheduled recalibration.

## 2.3 General Policies

All equipment used to verify conformance to manufacturers' requirements of product or other equipment will be calibrated in accordance with this procedure. Under no condition will non-calibrated equipment be used for this purpose.

## 2.4 Responsibilities

### 2.4.1 Test Equipment and PME Shops

- (a) Utilize the applicable TI 4150 and TI 4160 series (calibration procedures) which contain the measurements to be taken, the accuracy or uncertainty of each measurement and equipment necessary to make these measurements for each piece of equipment or parameter being calibrated or verified.
- (b) If the test equipment called for in the Technical Issuance (TI) is not available, the Base Maintenance Branch, AVN-330, with the assistance of the Engineering Branch, AVN-340, as necessary, is authorized to make test equipment equivalency substitution and notify the Program Standards Section, AVN-328, of any test equipment substitutions.
- (c) The equipment maintained in the Test Equipment Shops are grouped into three categories:
  - Measurement Standards
  - Test Equipment
  - Precision Measuring Equipment

Measurement Standards are periodically sent to the manufacturer or other calibration laboratory that will be able to supply a NIST traceable calibration and/or certification. These certificates will be kept on file by AVN-330.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

Test Equipment and Precision Measuring Equipment is used in the normal day-to-day operation within the Aircraft Maintenance and Engineering Division, AVN-300, and for calibration within the Test Equipment Shops.

- (d) Ensure that the environmental conditions are suitable for the calibrations/verifications to be performed. When using gage blocks as standards, the equipment being calibrated will be allowed to "temper" to the same temperature as the gage blocks for at least eight hours.
- 1 PMS shop temperature must be between 66° and 81°F and humidity must be below 65%.
  - 2 Charts used to monitor temperature and humidity in the PME shop will have start and stop dates clearly noted and be retained for a minimum of two years.
- (e) A calibration sticker will be placed on all calibrated Measurement Standards (VN Form 4100-204-1, color-green) and Test Equipment/Precision Measuring Equipment (VN Form 4100-204-3, color-blue). The sticker will include serial number, work order number, date calibrated and calibration due date.
- (f) Test Equipment/Precision Measuring Equipment which is not required to be calibrated due to usage, shall be identified with VN Form 4100-204-4, color-orange.
- (g) Establish and maintain a control system that will track all equipment due for calibration and to maintain calibration records. As a minimum, a record of the asset number, model, calibration interval, and location will be maintained and the following will be reported:
- 1 Calibration Coming Due Notices - Twice monthly. Will be sent to responsible areas in OKC, and Test Equipment Shops Manager. Line Stations will generate Calibration Coming Due Notices locally.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

2 Calibration Overdue Listing - Weekly

- a The first overdue report (1 to 6 days) for OKC items will be sent to users in OKC. Line Stations will generate their overdue reports locally.
- b The second overdue report (7 to 14 days) for OKC items will be sent to the AVN-330 Section Manager in OKC.
- c The third overdue report (greater than 14 days) for any item will be sent to responsible Branch Manager (AVN-310 or AVN-330) for determination of equipment disposition.
- d Equipment located at overseas locations or at contractor facilities will be handled on a case basis and instructions for disposition will be annotated in METRACK remarks section.

3 Total Inventory Listing - As needed.

- (h) Calibration interval adjustments will be coordinated through the Maintenance Review Board (MRB).

Calibration intervals for Measurement Standards, Test Equipment, Precision Measuring Equipment and other specialized tools and devices will be described in TI 4150.1 and TI 4160.1 manuals. Also, these same time intervals will be found in the control system (METRACK) which is maintained by AVN-330.

With regard to the control system, it is understood that the 90 day, 180 day, 360 day and 720 day time intervals contained in TI 4160.1, equates to 3 months, 6 months, 12 months and 24 months, respectively.

- (i) The Test Equipment Shops will notify the user, through the Test Equipment Shops Management, of any out-of-tolerance equipment or parameter found during calibration.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

The user can then make the determination whether the out-of-tolerance condition could have an impact on product quality based on the significance of the error. The user will document the impact on product quality, if any, caused by the out-of-tolerance condition and any corrective action taken. Records of out-of-tolerance modification and user corrective action will be maintained in the Test Equipment Shop for at least two years.

If any calibration equipment is found to be in an out-of-tolerance condition, the Test Equipment Shops will utilize the control and recall system to determine the affect, if any, on user calibrated items. On those items found, the user will be notified of the out-of-tolerance condition, the equipment involved and the need for the Test Equipment Shops to reevaluate that equipment so the user can determine what action may be necessary.

A record of these out-of-tolerance conditions will be made a part of the calibration records.

- (j) Ensure that equipment waiting calibration is maintained in a suitable environment so as not to affect the accuracy.

#### 2.4.2 Users

- (a) Ensure that all calibrated Test Equipment and Precision Measuring Equipment has a current calibration label attached and the equipment is in serviceable condition. (VN Form 4100-204-1 or VN Form 4100-204-3).
- (b) Use only equipment capable of meeting the accuracy requirements of the application.
- (c) Whenever equipment is subjected to conditions that may adversely affect the accuracy, or if the calibration is not current, the equipment should be removed from service and tagged, VN Form 4100-301, as repairable.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

- (d) Ensure that all calibrated equipment is used properly and is stored and transported in such a way that the accuracy is maintained.
  - 1 Equipment protected by a separate carrying case or shipping container may be stacked one atop the other providing the weight of the stack does not pose a threat to the item at the bottom and the height of the stack does not pose a toppling hazard.
  - 2 Equipment that is configured to be stacked may be so providing the height of the stacked equipment does not pose a toppling hazard.
  - 3 Equipment that does not have a case and contains exposed components that could be damaged by stacking will not be stacked.
  - 4 Equipment placed in storage will be protected from the elements and stored in such a manner that it will not be damaged.
  - 5 If a cart is used to transport calibrated equipment, it will have sides and a padded bed.
- (e) Use equipment in a suitable environmental condition so as not to affect the accuracy.
- (f) Users of Automatic Test Equipment (ATE) must confirm that they are using appropriate software as defined in software configuration control manual TI 4160.1-6-1, or applicable TI manual for ATE.

#### 2.4.3 Engineering

- (a) Providing assistance to AVN-330, as requested, in determining test equipment requirements and equivalency, developing calibration procedures and providing other technical assistance as may be necessary.
- (b) Developing, validating and maintaining master copies of all ATE software.
- (c) Maintaining a software configuration control manual for ATE software.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 3.****3. STOCKROOM SHELF LIFE ITEM AND TIME CHANGES****3.1 Receipt of General Maintenance Manual (GMM) Change**

On receipt of a GMM change, Shelf Life Monitor will identify any changes of Shelf Life items and times.

- (a) Refer to GMM, Time Limit Procedures are contained in Chapter V.
- (b) Ensure that items stocked in the electronic database have proper shelf life period. Enter or change as needed.
- (c) Inventory each changed item's Bin Location for overhaul/shelf life dates and enter as appropriate in the electronic database.
- (d) If items in stock have expired, follow disposal procedures below:
  - 1 On an as needed basis.
  - 2 Receiving inspection will enter shelf life items on receipt of new items.
  - 3 All Stock Room personnel will monitor items as they are issued and pull oldest items first.
  - 4 Stockroom Shelf Life Monitor will run Asset Shelf Life Report on monthly basis.
  - 5 Using this report, Monitor will move expired items to expired holding area. Monitor will ensure the electronic database transactions and stock re-order are accomplished.
  - 6 If item is expendable, dispose of it using proper disposal methods.
  - 7 If E&R, route to shop or notify item manager as appropriate. Completing necessary repair or delivery.
  - 8 After annotating actions taken on report, the monitor will sign and date report.
  - 9 The report will be retained by the monitor until superceded or duplicated by a subsequent check.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 4.****4. STOCKROOM CHEMICAL SHELF LIFE PROCEDURES**

- 4.1 On a monthly basis, the specialist assigned to the tool room will check all chemicals in the tool room area for expired or close shelf life dates. The specialist will use a current copy of the GMM, TI 4100.24, Chapter V, Section 4 as a checklist, however, all chemicals will be checked, not just those on the list.
- 4.2 Expired items will be removed to the expired life cabinet.
- 4.3 Tool room specialists will send AVN-300 Safety Representative a listing of all newly expired chemicals placed in the cabinet.
- 4.4 The checklist used will be signed and dated after compliance with the above. This document will be retained in the tool room until superceded or duplicated by a subsequent check.
- 4.5 AVN-300 Safety Representative will initiate proper disposal of the products.
- 4.6 Tool room specialists will reorder chemicals as necessary.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

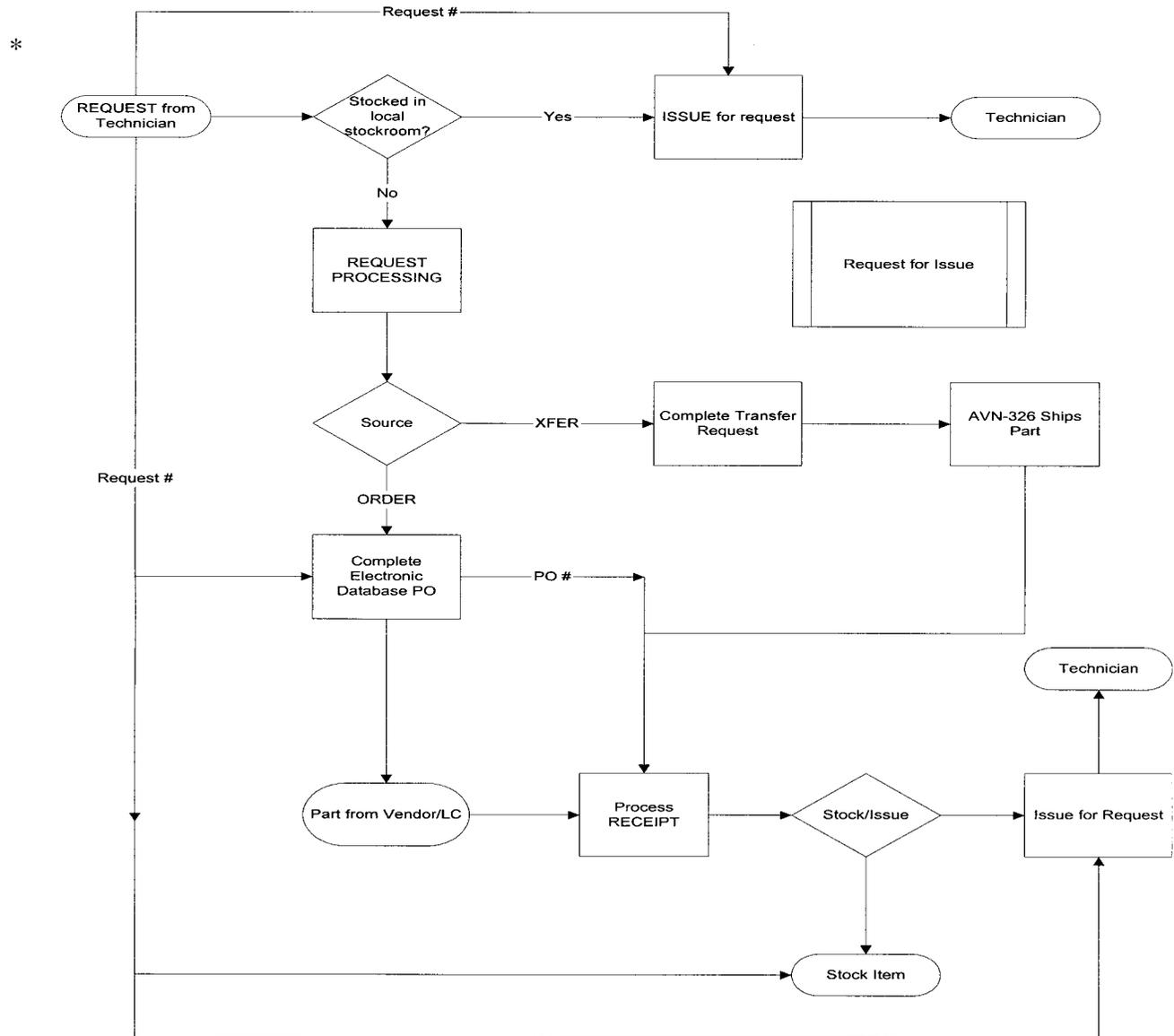
---

**APPENDIX 5.****5. STOCKROOM ELECTRO STATIC DISCHARGE (ESD) PROCEDURES**

- 5.1 Stockroom shelving is equipped with anti-static mats. Most sensitive electronic items are packaged in anti-static bags and/or equipped with conductive connector covers. All packaging will be preserved by stockroom personnel. If a package has been opened, employees will secure the open item. Additional protection of items is ensured by following the ESD procedures specified in the ESD Control Program Manual, TI 4100.29.
- 5.2 Special Instructions:
  - 5.2.1 Ensure electronic components are stored on anti-static mats or in pink or other identified anti-static bags as delivered from vendor or AVN shops.
  - 5.2.2 Ensure electronic component connectors are covered.
  - 5.2.3 Report any electronic component that does not comply with items 1 and 2 to the Avionics Shop for resolution.
  - 5.2.4 Any questions on ESD handling for a particular item should be directed to Avionics Shop personnel.

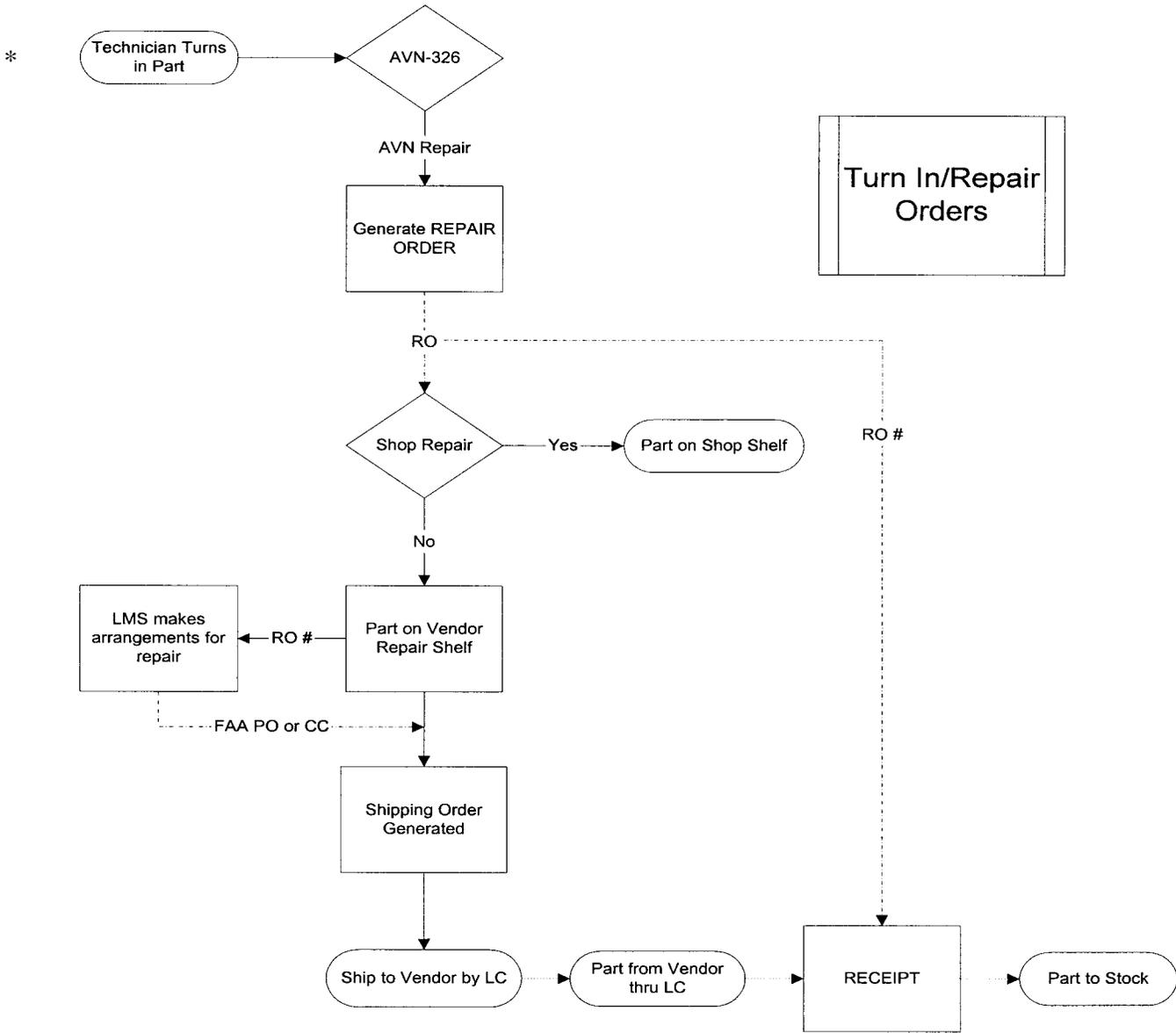
AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

APPENDIX 6. AVN-326 SUPPLY REQUEST CHART



AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

APPENDIX 7. AVN-326 SUPPLY RETURN CHART



AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 8.****8. AIRCRAFT RECORDS PROCEDURES**

## 8.1 Daily Mail

Pick up paperwork in top drawer of the two-drawer filing cabinet in the Operations Area, Stockroom, AVN-320/324 mail "IN" box, and Production Control, AVN-335, Room 115, in Hangar 9. Nonroutines or other maintenance work not received in a work package should be routed to AVN-328 before filing in the Maintenance Work folder. VN Form 4100-135, Job Order, route to AVN-328. When a Deferred Discrepancy List is received, discard it. Deferred discrepancies are stamped and signed off on the log sheets.

- 8.1.1 Separate the blue log sheets from the white log sheets and place the white log sheets in AVN-328's mailbox. Analyze the information contained on the Serviceable Part Tag, VN Form 4100-301, against the blue log sheet entries to ensure the part being installed and the part being removed data entered on the blue log sheet match the information entered on the tag. Ensure the Airline Transportation Association (ATA) Code and/or position number is on the tag.
- 8.1.2 Analyze the VN Form 4100-301 for aircraft N#, ATA or position number, aircraft total time, work done, stock acceptance signature, maintenance release and work order. Analyze the certification documentation (maintenance and work order) information to ensure the information contained matches the information on the VN Form 4100-301, i.e., repair, overhaul, functional test, Time Since Overhaul (TSO) unit total time, etc. Ensure that all Hard Time (HT) components are marked HT and the On Condition (OC) components are marked OC on VN Form 4100-301. HT tags are entered into the Inventory Logistics and Maintenance (ILM) by the maintenance technicians. Aircraft records will analyze the information for quality control purposes and notify the appropriate personnel for changes, corrections or deletions of the information, as required. C90/F90 tags are entered by aircraft records personnel in the Excel spreadsheet. Print a copy of the Assembly by Tail Report in ILM or a copy of the Excel spreadsheet and file in the back of the appropriate aircraft drawer. IML Assembly by Tail Report: Reports/assembly/assembly by tail/N#/run report.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

Work packages received from the Flight Inspection Area Offices (FIAO's) are sent to AVN-328. Remove all tags, Major Engineering Orders (EO's) and Major Alteration (MA) and Repairs (MR) (Form 337's), before sending to AVN-328. All Minor EO's, Service Bulletins, Airworthiness Directives (AD)/Maintenance Alert Directives (MAD's) remain in the work package. Date and initial the work package in the bottom right-hand corner. All HT Tags received from the FIAO's should be reviewed in ILM to ensure they were entered correctly before filing. C90/F90 work packages tags should be entered on the Excel program spreadsheet. Run a new copy of the Assembly by Tail Report or the Excel spreadsheet and file it in the back of the aircraft drawer. Ensure work packages picked up from Production Control are initialed and dated by the Production Controller as ILM entered and that AVN-328 has initialed it also. To review HT tags in ILM, Maintenance/planning/maintenance planner/, select N number, take end date block out about 10-15 years, scroll down to HT requirements (use CTRL F as a shortcut and enter the part number or serial number) view tracking requirements (yellow triangles)/maintenance tracking.

**NOTE:** See the appropriate .1 Manual or Approved Aircraft Inspection Program (AAIP) Manual for hardcopy of the regulatory component tracking requirements, as necessary.

All Minor EO's, Service Bulletins, and AD/MAD's received, and not filed in a work package, are filed in the Maintenance Work folder located in the aircraft drawer and are purged after 13 calendar months.

If a FAA Form 337 (Major Alteration or Repair) is removed from the work package, update the MA/MR Master List located in the computer Excel program files by aircraft number or by prop/engine serial number. Print a copy of the updated listing and file it and the Form 337 in the Form 337 folder in the aircraft drawer. The same procedure applies if a Form 337 is received not in a work package.

**NOTE:** The Form 337's and MA/MR Master List for the props and engines are filed in the prop and engine folders.

If a Major EO is removed from the work package, file it in the folder in the aircraft drawer. Print a new EO report and file it in the EO Master folder located in the drawer. If a Major EO is received not filed in a work package, the same procedures apply.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

Work Card 0002 for the Lear, Challenger and Hawker require an entry in the Auxiliary Power Unit (APU) database to update the APU information. Click on the "Shortcut" to APU Tracking located on the computer desktop. Click on the appropriate aircraft tab and then use the forward and backward arrow keys to locate the correct aircraft number. Doublecheck to ensure the APU serial number is correct then enter the APU hours and cycles with the information provided on the work card. Enter the date from the work card. The APU Data button will give you a report listing the APU hours and TSO.

**NOTE:** When a new APU is installed on an aircraft, update the APU database with the new APU information.

To print an EO, AD, major alteration and repair or technical bulletin report in ILM, maintenance/quality/aircraft records/search history/select N#/select maintenance type you are requesting/select requirements type you are requesting/file/print (change printing to landscape by selecting the properties tab/basics/landscape).

## 8.2 Monthly Records Purge, and/or File as Required

Periodically (at least once every 3 months), review On Condition (OC) parts tags on file and purge tags over 13 months old and file in the records archives. Purged OC and Hard Time (HT) tags/certs are filed in the records archives for 13 calendar months, then discarded.

Maintenance Work Folders and Non-Routine Work Order, VN Form 4100-155, are retained in active files for 13 months, purged, filed in the records archives for another 13 calendar months, then discarded.

Inspection Work packages are retained until the work is repeated or superseded by other work or for one (1) year after the work is performed, then discarded.

\*Blue Flight Log Sheets, VN Form 4100-8, are retained in active files for 24 months, then moved to the archive files and are retained indefinitely.

\*Completed Flight Log Books (yellow pages) are retained for a period of six (6) months, then discarded.

Major Engineering Orders (EO's), FAA Form 337, (List on File) are retained indefinitely.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

### 8.3 Inventory Logistics and Maintenance (ILM) Entry

The OC tags are filed by aircraft N# and ATA. Review the serial number removed information at the bottom of the tag (if available) and pull the serial number removed component from the OC drawer. Write "VOID" on the tag in green marker and file it in the archive OC files.

The HT tags are filed by aircraft N# and position number except for the C90/F90 components. Verify ILM entry for the HT tag by position number and part number, verify if repair, overhaul, or new part, time since overhaul (TSO) data for part being installed and part being removed. The HT component maintenance release should list either repair or overhaul. When tag reflects overhaul, TSO should be "0"; when repaired, the tag should list TSO or time since new (TSN). New components must have traceability (invoice) back to the Production Approval Holder (PAH). Some engines and components have TSN or cycles since new (CSN) requirements. Ensure this data is available prior to filing. Review the removed part data on VN Form 4100-301 tag for component being installed, pull the removed component part tag out of the drawer. Write "VOID" on the tag in green marker and file it in the HT archive files.

OC and HT Tags stamped MA or MR in red indicate a major repair or alteration. Update the MA/MR Master List located in the Excel program files by aircraft number on the computer. Print a copy of the updated MA/MR Master List and file it in the Form 337 folder in the aircraft drawer. If the MA/MR is for an engine or prop, the MA/MR Master List is filed in each engine and prop folder. The engine and prop MA/MR Master List is located in the computer Excel program files by engine or prop serial number.

### 8.4 Inventory Logistics and Maintenance (ILM) Entry (Reserved)

The C90 and F90 components are being tracked on an Excel spreadsheet. Use the "F90final2xl" shortcut located on the desktop to access the spreadsheet. Enter the password. Use the tabs located at the bottom of the screen to locate the aircraft. Aircraft Records portion of this spreadsheet is highlighted in yellow. Enter the newly installed component information on the spreadsheet. Print a new copy of the spreadsheet and file it in the back of the drawer labeled C90 or F90 Component Tracking. File the tag and certification documentation by ATA code. The components that are not tracking on the spreadsheet are filed the same as the OC components.

To find an EO already complied with or scheduled to be complied with:

Maintenance/quality/aircraft records/search (to be complied with) or search history (already complied with), select N#/select maintenance type you are requesting/select engineering orders/file/print (change printing to landscape by selecting the properties tab/basics/landscape).

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

To obtain a list of technical bulletins already complied with or scheduled to be complied with: Maintenance/quality/aircraft records/search (to be complied with) or search history (already complied with)/select N#/select maintenance type you are requesting/select technical bulletins/file/print (change printing to landscape by selecting the properties tab/basics/landscape).

To obtain a list of AD's already complied with or scheduled to be complied with: Maintenance/quality/aircraft records/search (to be complied with) or search history (already complied with)/select N#/select maintenance type you are requesting/select airworthiness directives/file/print (change printing to landscape by selecting the properties tab/basics/landscape).

To obtain maintenance due requirements: Maintenance/engineering/ maintenance requirements/search/select requirement type, select N#, type in part number and/or serial number (if known).

**NOTE:** The maintenance requirements for the HT components are established in ILM against the part number.

## 8.5 Reconciliation

Reconcile all OKC based aircraft daily. Start with last reconciled aircraft log sheet and ensure each page is in numerical order. Check the "landings credited" block on each aircraft log sheet. Utilize the aircraft reconciliation computer program by clicking on the "reconciliation" icon and clicking on filename: reconcile.xls. Input the most current hobbs meter reading and it will give you the number of hours flown. Enter the number of hours flown in the column located under the starting Time In Service (TIS), and the new TIS will be computed automatically. Manually, add each landing from the last reconciled log sheet to the most current and enter the landings in the column located under the starting landings and the computer will compute the new landings total. For the C90/F90 aircraft, manually add each cycle from the last reconciled log sheet to the most current and enter the cycles in the column located under the starting cycles and the computer will compute the new cycles total. Doublecheck the region and FIAO's reconciliation about once a week.

Upon reconciling the aircraft, enter "A/C Reconciled" in blue ink on the log sheet in the upper right-hand corner. Carry the new hobbs meter reading, landings, TIS and cycles (C90/F90) hours forward to the next log sheet. Enter "TT Fwd" in the upper right-hand corner. If the aircraft is located in OKC, update the ILM with the new TIS and landings for each aircraft reconciled, except F90 and C90 aircraft. For aircraft located at each FIAO, updating the ILM is not required. To Update the ILM, maintenance/quality/aircraft master/search/model (list all)/select N#/edit/review/general info/update the current information/save and close.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

The C90 and F90 aircraft TIS and cycles (not landings) should be entered into ILM and on the Excel spreadsheet.

Hobbs meter changes are entered by inputting your readings into the computer up to the page just before the hobbs meter change occurs. Enter the new hobbs meter time leaving the aircraft TIS and landings the same to restart the math.

To correct a hobbs meter error, reconcile the logbook up to the page just before the error occurs. Enter the new hobbs meter reading in the reconciliation program to restart the math using the same TIS as the previously reconciled page.

**NOTE:** When a hobbs meter runs while not in flight (i.e., while on jacks, etc.), the hobbs meter time has to be readjusted since the aircraft has not flown.

8.6 Airframe Drawer Contents (Reference Figure 1, 333AFDOC)

8.6.1 Status inquiry folder contains EO Master List, FAA Forms 337 w/MA/MR Master List. The Engine and Prop Form 337's and MA/MR Master List are filed in each engine and prop folder.

8.6.2 EO folder contains major EO's.

8.6.3 The Flight Log folder contains blue aircraft log sheets filed in numerical sequence. Retain the current year and previous year in the active file drawer.

8.6.4 The daily/weekly/monthly folder contains CARD 0001 (Daily Sheet), CARD 0002 (Weekly), CARD 0103 (Service Check). When a new Card is received, the previous Card is purged and discarded.

**NOTE:** Update the APU database for work card 0002.

8.6.5 Maintenance work folder contains FAX's, Master Nonroutine Index and Work Cards, Minor EO's, Service Bulletins, AD's/MAD's (not received in work packages). Maintenance Work Cards other than 001, 002 and 0103.

8.6.6 Work packages folder contains work packages.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

8.7 Other Drawer Contents

Yellow flight logs (keep 6 months and destroy), phased out aircraft, NonFAA Aircraft, Engines, Props, Contract Maintenance.

8.8 Engine and Prop Drawer Contents (Reference Figure 2, 333EPDOC and Figure 3, 333PROPDOC).

8.9 Archive Files

The OC and HT tags are filed together by ATA code in the archive files. An OC or HT tag filed with the word "VOID" on it indicates it was replaced by another component and is no longer installed on the aircraft. An OC tag filed without the word "VOID" on it is a purged tag. There are no purged HT tags on file in archives. The only time a HT tag is placed in the archive files is when it is replaced by another component on the aircraft.

8.10 Setting-Up Files

Label folders and file in an appropriate order. File the aircraft log sheets. If over two years old, file in the archives. Review each aircraft record sent and file it in the appropriate folder. File the work packages. If over 13 calendar months old, discard. Review each work package for Major EO's, and Form 337's and file them in the appropriate folders. Print an EO report. Update the Form 337 Master List and file in the appropriate folder. Assemble and label engine and prop folders and file the Form 337 and Master List in the appropriate folders. Equipment lists, aircraft and engine logbooks are filed in archives. Yellow flight logs are filed in the yellow log drawer. Weight & balance sheets go to Quality Control (QC), AVN-324.

8.11 Reserved

8.12 Special Notes

Dual position items are tracked by different TBO values and indicators.

A = Left Side/B = Right Side

1 = A/C Hrs, 2 = Months (Date On), 4 = Landings, 5 = Days (Date On),

6 = Months (Date OH or Mfg.)

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

### 8.13 Engine Changes

The engines are tracked in ILM as an assembly. You can view the assembly template for each aircraft in ILM by:

- 8.13.1 Maintenance/quality/assembly template/N#/edit assembly/open each plus sign for a breakdown in each area of the aircraft until it lists the serial number installed on the aircraft.
- 8.13.2 The following chart lists the HT engine assembly components for each type of engine:

**HAWKER (TFE 731)**

Basic Engine  
Fan Spinner  
Fuel Pump  
Fuel Control  
Oil Pump  
Fuel Comptr DEEC

**LEAR (PW305A)**

Basic Engine

**BEECH 300 (PT6A)**

Basic Engine  
Prop Gov  
Fuel Control  
Ignition Exciter

The following engines are tracked in the Excel spreadsheet:

**BEECH F90**

Basic Engine (Overhaul and HSI)  
Prop Gov  
Starter Generator (May be changed)  
Overspeed Governor (May be changed)

**BEECH C90**

Basic Engine (Overhaul and HSI)  
Prop Governor  
Overspeed Governor (May be changed)  
Starter Generator (May be changed)

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

**BEECH 200 (PT6A)**

Basic Engine (OH & HSI)

Prop Gov

When an engine is changed/installed on the aircraft, we receive one HT tag for the basic engine. Obtain the engine paperwork from the engine folder located in the drawer and finish filling out the rest of the HT tags using the data from the basic engine HT tag. Check the entries completed in ILM, print an assembly by tail report, and file the HT tag and report in the drawer, except for the C90/F90 engines. If a Form 337 or certs indicating a major alteration or repair is received, update the MA/MR Master List and file it and the major alteration/repair paperwork in the engine folder. The C90/F90 engine changed/installed entries are entered on the Excel spreadsheet and a copy of the newly updated spreadsheet is filed in the drawer.

**NOTE:** TFE731 Engines: A Core Zone Inspection (CZI) and Major Periodic Inspection (MPI) do not zero time the subcomponents (time continues). If the subcomponent itself is overhauled or new replacement made when sent out for CZI or MPI, then the component goes back to zero time. The TFE731 engine is never overhauled (total time always continues). An Hot Section Inspection (HSI) is not performed on TFE731 engines.

All Other Engines: An HSI does not zero time subcomponents (time continues). If the subcomponent itself is overhauled or new replacement made when sent out for HSI, then the component goes back to zero time. An overhaul performed on the engine will zero time the HSI.

All "C" engine component positions are tracked in ILM for reliability purposes only. Certification documentation is preferred; however, it is not required IAW the GMM.

N15/N17 - technician supplies copies of component tags and sends the originals to the Region offices.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

**FIGURE 1: AIRFRAME DRAWER CONTENTS (333AFDOC)**

**Abbreviations:**

- a. ILM      Inventory Logistics and Maintenance
- b. EO      Engineering Order
- c. AL      Aircraft Log

**1. STATUS INQUIRY Folder**

**a. Airframe Information Documents Folder**

FAR REQUIREMENT	METHOD OF TRACKING		REMARKS
(1) Issuance of Airworthiness Release			Blue copies of AL, VN Form 4100-8. Service Part Tag, VN Form 4100-301 (HT card file).
(2) Total Time in Service of the Aircraft (and Landings)	ILM	Quality/Aircraft Master/Search	By Request. Copies of the blue pages of AL, VN Form 4100-8. AL blue pages retained for two calendar years.
(3) Current Records of Life-Limited Airframe Parts	ILM	(a) Reports/Assembly/Assembly by Tail  (b) 41xx[a/c type] .1	Identifies a portion of the life-limited and HT (overhaul) components. The remaining life-limited and HT parts are identified in Chapter 5 of the Applicable Work Contents Document. These parts are Card controlled through Program Standards, AVN-328, and the accomplished cards are filed in Records. Generates two status reports; one of the aircraft and one of the installed time-controlled, external components. Produces a status list <b>per aircraft of the following:</b>  A/C Hrs, TSO, Tail #, A/C Serial No., A/C Cycles & Landings. Generates a list of installed time-controlled, external components <u>indicating the following info:</u> System (ATA), nomenclature, S/N, Total in Use, Date O/H, Purchase Order. TSN, P/N, CSN, CSO, and previous OH. Description of work performed, and the name of the person performing the (work order).

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

<p>(4) Current Inspection Records for the Aircraft.</p>	<p>ILM</p>	<p>Planning/ Maintenance Planner or Engineering/ Maintenance Requirements</p>	<p>By Request. Tracks current aircraft inspection status with the following info: Req. No., i.e., A Check, Card xxxx, HSI job no., EO no., Req. Title Ref-Num, i.e., HT, Chap 5 Req, Adxxxxxx, etc. Not to exceed Based-On, i.e., Hrs., Mo., etc, Time To Go. Copies of completed maintenance work packages including required inspections. Work packages for engines and propellers. (HSI, MPI/CZI supporting documentation is filed with the individual engine/prop records.) Individual Task Cards. Work packages are retained until the work is superseded or for 13 months.</p>
<p>(5) List of Current Major Alterations and Repairs for Airframe and Appliances</p>	<p>ILM</p>	<p>Maintenance/ Quality/Air- craft Records/ Search</p>	<p>Note: Engine &amp; Prop 337's are maintained with individual engine or prop record files.</p> <p>=====</p> <p>Current Master List produced at time of EO (MA) filing. Minor Repair EO's (MR) are archived. Records File: <b>Status inquiry</b> file. Completed FAA Form 337. Records File: <b>Status Inquiry</b> file. A master list is compiled manually and updated upon receipt of 337. Original 337's are filed with the Master list. A copy of appliance major repairs will include the Job Order Form, VN Form 4100-135, and a Serviceable Part Tag, VN Form 4100-301 or FAA Form 337.</p>

**AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX**

(6) Airworthiness Directives Current status of applicable AD's including method of compliance and recurring inspections	ILM	Maintenance/ Quality/Air- craft Records/ Search	By Request. Copies of EO AD's and EO MAD's are filed with EO's.
(7) FAA Form 337			Records File: <b>Status Inquiry</b> Master List manually maintained upon receipt of 337. Original 337's are filed with the Master List. (Eng. & Prop. 337's are filed with individual engine and prop files.)
<b>INFORMATION:</b> For further information regarding ILM, consult the GMM, TI 4100.24, Chapter III, Section 73, or the Aircraft Records Internal Desk Procedures book.			

**2. EO Folder**

Type of EO	Filing Status
Major Alternations/Repairs (in compliance) Minor Alterations/Repairs (in Compliance)	<b>Filed:</b> Chronologically <b>Filed:</b> In Archives, sorted chronologically by N no.
<b>FAA AD or FAA MAD</b>	<b>Filed:</b> Chronologically.

**a. EO FAA AD's and FAA MAD's** **Filed:** Chronologically

**3. AIRCRAFT LOG SHEETS Folder**

Type	Retention
VN Form 4100-8 Blue original aircraft log sheets.	Records: Latest 2 calendar years. Previous to 2 calendar years are located in Archives per A/C No. (Per GMM, TI 4100.24 - 13 months.)

**4. DAILY/WEEKLY/MONTHLY SERVICE CHECK Folder**

Name	Task Card No.	Retention
Daily	No. 0001/0103	Until Superseded.
Weekly	Nos. 0001/0103	Until Superseded.
Monthly	Nos. 0103	Until Superseded or 2 calendar months.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

5. **MAINTENANCE WORK** Folder: This section is comprised of maintenance task cards compiled without a complete work package. (Per GMM, TI 4100.24, Superseded or 1 year from time work was performed.
6. **WORK PACKAGES** Folder: All received work packages including A, B, C, and Service Checks, etc., are retained in active files until superseded or transferred to archives after retention of 13 months.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**FIGURE 2: ENGINE FOLDER CONTENTS (333EFDOC)**

- 1. ILM INQUIRY and FAA Form 337** - Upon request, the following ILM inquiries will provide a current printout of respective reports.

Maintenance/Quality/Aircraft Records/Search History/Select N#, select maintenance type requested/select requirements type requested/file/print.

For a status list per engine of config group, position number, part #, serial number, TSN, TSO, CSN, CSO and previous OH, life limited/time controlled and internal engine components:

Reports/Assembly/assembly by tail/N#/run report.

- 2. ENGINE FOLDER SECTIONS:**

**Section #1:  
FAA Form 337**

An engine master list is manually updated upon receipt of each FAA Form 337 (Major Alteration or Repair) and the original engine 337's are filed with the master 337 list.

**Section #2:  
LAST OVERHAUL RECORDS**

Maintenance Release, Description of Work Performed, Documentation supporting TSO, TSN and CSN for the engines and applicable components received.

**Section #3:  
HOT SECTION (HSI) or CORE ZONE INSPECTION (CZI) and MAJOR PERIODIC INSPECTION (MPI).**

Major Periodic Inspection and Core Zone Inspection documentation for engines: Maintenance Release of the last repair accomplished, Description of Work Performed, Documentation supporting TSO, TSN and CSN for the engines and applicable components received.

**Section #4:  
REPAIR RECORDS:**

Maintenance Release of the last repair accomplished, Description of Work Performed, Documentation supporting TSO, TSN and CSN for the engines and applicable items.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**FIGURE 3: PROPELLER FOLDER CONTENTS (333PROPDOG)**

**1. FAA Form 337**

All major alterations or repairs (FAA Form 337) received from contractor repair facilities will be listed and filed in Section 1 of the propeller folder.

**2. Records of the Last Overhaul Accomplished**

- a. Maintenance Release.
- b. Description of work performed.
- c. Any non hard time or life limited component documents that have been included in the maintenance package. These include FAA Form 8130-3, Airworthiness Approvals, maintenance releases, and descriptions of maintenance performed.

The documents include TSO, TTSN, CSN.

**3. Records of the Last Repair Accomplished.**

- a. Maintenance Release.
- b. Description of work performed.
- c. Any non hard time or life limited component documents that have been included in maintenance package. These include 8130s, maintenance releases, and descriptions of maintenance performed.

The documents include TSO, TTSN, CSN.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 9.****9. EXCESS MATERIAL DISPOSAL PROCEDURE**

Items identified as excess will be removed from stock and placed in a segregated area until disposition determination is made. The following disposal methods will be utilized:

- 9.1 Life Limited with expired time - Item will be turned over to the Logistics Center Redistribution and Marketing Section for destruction in accordance with Advisory Circular 21-38, Disposition of Unsalvageable Aircraft Parts and Materials.
- 9.2 Sale Site - Items no longer required, which are serviceable, or have value as a repairable item, shall be transferred to the Sale Site in the electronic database and relocated to the sales storage area for disposition/sale under exchange sale authority.
- 9.3 Hazardous Materials Disposal - Items identified as hazardous materials shall be scrapped in the electronic database and disposed of in accordance with hazardous materials disposal procedures contained in the Chemical Shelf Life Procedures.

All parts and materials not in the specific sale site will be identified with one of the appropriate tags as defined in the General Maintenance Manual, TI 4100.24, Chapter IV, Section 111.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 10.****10. RETURN AND SCREENING OF HIGH VALUE EXPENDABLE PARTS**

- 10.1 Returned Parts - All parts returned to the stockroom will be checked for proper disposition.
- 10.2 Expendable Parts - All expendable parts that have a value of greater than \$200 will be held in the assigned review area. All of lesser value will be disposed of as trash or if any items have readily apparent metal value, in metal scrap bins.
- \*10.3 Screening of Parts - When an accumulation of material is identified, the Quality Control Section Supervisor, AVN-324, and the Aircraft Support Section Supervisor, AVN-326, or their designees, will screen the held material for further action. They will decide which items warrant further investigation by AVN-330 technicians and which to direct to sale.
- 10.4 Disposition - Items not worth recycling in some manner will be disposed of as trash or scrap, whichever is deemed appropriate.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 11.****11. PURCHASE REQUEST PROCEDURES FOR CREDIT CARD AND PURCHASE ORDER**

11.1 Procedures are as follows:

- 11.1.1 Analyst receives formal or informal request from user.
- 11.1.2 Analyst and user research and define any need for certification or other specific deliverables.
- 11.1.3 Analyst clarifies, as necessary, the requirement with requester including any approval needed from requester's supervisor.
- 11.1.4 Analyst prepares Procurement Request (PR) using PR tracker program for Aircraft Maintenance and Engineering Division (AMED) fiscal tracking, ensuring all requirements and necessary clearances are placed on the PR. Guide for clearances is in the Office of Acquisition (AMQ) regulations.
- 11.1.5 Analyst obtains necessary clearances, fund certification and purchase approval on the PR as required.
- 11.1.6 If a credit card, analyst places the order in accordance with AMQ credit card procedures.
- 11.1.7 If a Purchase Order is required, analyst places the order using the Acquire software program.
- 11.1.8 Item(s) purchased are received either by analyst or by Receiving Inspection personnel, as appropriate.
- 11.1.9 Item(s) are delivered to user.
- 11.1.10 Analyst annotates delivery and makes any needed corrections to the PR Tracker database. This includes Date Received, Items Delivered, price, Appropriation Code and Total Cost.
- 11.1.11 The analyst will conduct discrepant item follow-up with the vendor to ensure receipt of proper items and associated requirements. Follow-up will be documented and filed with the PR transaction paperwork.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 12.****12. AERONAUTICAL RELIABILITY REPORT (ARR) CORE PROCESSING PROCEDURES**

12.1 Procedures are as follows:

- \*12.1.1 The Aircraft Support Section, AVN-326, will receive all aircraft related Aeronautical Reliability Report (ARR) parts.
- \*12.1.2 All Line Station Maintenance Sections (LSMS) will return all ARR parts to AVN-326 by utilization of an electronic database Shipping Order.
- 12.1.3 Upon receipt of the item, Supply personnel will verify if the item is an FAA Logistics Center or AVN Controlled item. Time and date of receipt will be annotated on the ARR paperwork. Indication of AVN/Logistics Center item will be written in RED. If the item is a Logistics Center item, then a copy of the Equipment Return Document, FAA Form 4250-5, will be attached to the ARR paperwork. Both are handled the same until the item is received back from the Program Standards Section, AVN-328.
  - \*(a) The part can either be an E&R or non E&R. If the part is a Logistics Center E&R, it will have a FAA Form 4250-5 attached. The part will be shipped from the LSMS by utilization of a Shipping Order to AVN-326. Supply personnel, upon receipt of the part, will close the Shipping Order, and prepare a Repair Order to the ARR Vendor and the part will be placed in the ARR holding area in AVN-326. At this time, an email message will be sent to AVN-328 and the Item Manager (ARR Monitor) for notification.
- 12.1.4 AVN-328 will extract (print) the Repair Orders from the electronic database periodically to see the status of parts in the ARR holding area.
- 12.1.5 Upon returning an item from evaluation, AVN-328 will forward evaluation notes to the Item Manager in Repair Information "Problem Summary".
  - \*(a) AVN-328 will also enter into the "NOTES" section their decision on the part, i.e., SEND TO VENDOR FOR REPAIR, SEND TO AVIONICS SHOPS IN THE MAINTENANCE AND MODIFICATION SECTION, AVN-331, ETC. If needed, a repair report request will be entered in the "NOTES" section of the repair order.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

- (b) AVN-328 will complete and attach to the ARR item, ARR Parts Disposition Form, VN Form 4100-57.
- (c) AVN-328 will notify, by email, Quality Control Receiving to close the Repair Order, and also notify the Item Manager and Supply AAR Monitor with disposition instructions.

\*12.1.6 On return of the asset from AVN-328, the Supply ARR Monitor will place the item in the appropriate holding area. At this time, Supply Personnel will do the transaction in the electronic database to have the item repaired or disposed. If the item is to be repaired under warranty, it will be held in the holding area until the paper work is completed to ship the item to the Vendor.

**\*NOTE:** Item Managers will report the status of AVN-326 actions in the Repair Line Items "Notes" section.

- (a) If the item is AVN controlled, Supply personnel will place the part in the "AVN Controlled Items" holding area and take appropriate action as indicated by AVN-328.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 13.****13. CUSTOMER AIRCRAFT ROUTINE WORK PROCESS**

The following procedures define the flow of the customer work package from monthly tracking to completing final check of work/inspection package for documentation and records, for all work sites within the Aircraft Maintenance and Engineering Division (AMED), AVN-300.

- 13.1 To plan for upcoming maintenance events, the assigned Production Controller will monitor the customer Approved Aircraft Inspection Program (AAIP) spreadsheet once a week for inspection/maintenance items due.
- 13.2 The following items will be accomplished at one month prior to routine maintenance start date.
  - (a) Production Controller notifies the Long Range Scheduler a minimum of one month prior to maintenance due.
  - (b) Production Controller prepares Special Inspection/Component Replacement work requirements and Materials Requirement List (MRL) from alerts to projected maintenance requirements on AAIP spreadsheet and planned Modification list.
  - (c) Production Controller issues the MRL to Parts/Material Management (Supply) to order required items.
  - (d) Production Controller must submit work package to Quality Control (QC) for cursory review.
  - (e) QC will review the Customer database for Airworthiness Directives (AD's), compliance requirements and new AD's. In addition, will complete the AD research block in the Phase Inspection Package to current date.
  - (f) QC will also review the Customer spreadsheet for any Special Requirements. The monitoring QC inspector will stamp Special Requirements block in Phase Inspection Package to current date.
  - (g) QC Inspector will return the Inspection Package to Production Control.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

- 13.3 Production Controller will review the Inspection Package and issue it to the Base or Line Maintenance Facility a minimum of two weeks prior to scheduled start of the inspection. In addition, Production Controller will ensure the MRL was shipped, as applicable.
- 13.4 Upon start of Inspection Phase:
- (a) Inspection (maintenance) Lead will generate a 145 Repair Station Work Order, VN Form 4100-145, to document inspection. In addition, maintenance will forward all Aircraft Log, VN Form 4100-8, blue sheets to Aircraft Records, AVN-324, for reconciliation.  
  
**NOTE:** Line Station Maintenance facilities will use fastest means to ship Aircraft Log sheets. Express overnight is preferred.
  - (b) After performing reconciliation of Aircraft Log, VN Form 4100-8, sheets, Aircraft Records will provide a confirming time status sheet. This status sheet may be electronic format or other means to the Inspection Maintenance Lead in charge of the Inspection event and Quality Control Inspector assigned to the aircraft.
  - (c) The Inspection Maintenance Lead will generate non-routine work cards from any DDL items.
  - (d) The Inspection Maintenance Lead will ensure that the inspection phase has been completed and sign the Work Order. Also, the Quality Control Inspector will ensure Inspection Package items, Aircraft Log entries are complete, and make any corrections using reconciled hours and cycles provided by Aircraft Records.
  - (e) Line Station Maintenance facilities will forward the completed Work Order form to Production Control by electronic means. This will provide them the information to complete interim update on customer spreadsheet data to reflect aircraft status.
- 13.5 Inspection Maintenance Lead will return completed work package to Aircraft Records by most expeditious means. Overnight is preferred.
- 13.6 Aircraft Records completes all required entries to spreadsheet (items marked "AR"), then forwards the Work Package to Production Controller.
- 13.7 Production Controller completes all required entries to spreadsheet (items marked "PC"), then forwards completed work package to Aircraft Records for filing.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

**APPENDIX 14.****14. CORRECTIVE ACTION REPORTS AND AVN-300 AUDIT TRACKING PROGRAM**

\*To be effective, all quality systems require a method of identifying, recording, resolving, analyzing and reporting system non-compliances. In AVN-300 this is accomplished through Corrective Action Reports (CAR) and an ACCESS based software called THE AVN-300 AUDIT TRACKING PROGRAM (ATP). There are three forms of the CAR document. The primary format is electronic and contained in ATP. In the ATP, the CAR form is further divided into either a SUMMARY or DETAILED format. The third is a paper copy of the CAR form, VN Form 4100-26, to be used as a hard copy backup, for recording input data, while conducting an audit at a location that does not have access to the FAA/AVN web site. Detailed instructions for use of each of these forms and the ATP follow:

**14.1 Instructions for Use of the AVN-300 AUDIT TRACKING PROGRAM (ATP) Software.**

\*The ATP is a Microsoft ACCESS based program used to compile and report the status of all types of audit findings. It is found in: U:\AVN300\ISO9000\CAR Tracking. The Tracker provides two basic functions (1) storing data from findings, and (2) reporting on findings. When you open the program you will see four self-explanatory buttons labeled:

Open Form to Add Record(s)  
Open Form to Edit and/or Review Record(s)  
Report Options  
EXIT DATABASE

**14.1.1 Open Form to Add Record(s)**

This is principle function used to input new data into the program. When the button is selected, it presents a basic data input screen labeled "Audit Detail". There are three additional tabs labeled "Audit Findings", "Audit Investigation" and "Audit Corrective Actions" for the input of detailed information.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

(a) Audit Detail Input Fields

- 1 Tracking System Number: This is the next available sequential number in the ATP. This number may be found by either going to the last file in the "Open Form To Edit and/or Review Record(s)" button or from the "Audit Number Tracking Log" found in the "Report Options" section. This number **MUST** be filled in to save the data.
- 2 Corrective Action CAR #: This is the finding or Corrective Action Report number as assigned by the auditor in accordance with the numbering system found in this Appendix.
- 3 Corrective/Preventive/Best Practice: This is a pull-down list to select the appropriate description of this finding.
- 4 Major/Minor Finding/Observation: This is a pull-down list to select the appropriate description of this finding.
- 5 Audit Number: This is an auto-fill number that will match the Tracking System Number. It is critical that you note this number when working on the other data input tabs.
- 6 Audit Status: This is a pull-down tab to select the appropriate status of the audit finding - Open, Action, Long Term or Closed.
- 7 Type of Audit: This is a pull-down tab identifying the appropriate type of audit being reported.
- 8 Lead Auditor: Enter the last name of the lead auditor.
- 9 Audit Date: Enter the completion date of the audit in the mm/dd/yyyy format.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

- 10 ISO Element Number: Enter the appropriate ISO element of clause number.
- 11 Branch Audited: This is a pull-down tab; select the branch that is being audited.
- 12 Section Audited: This is a pull-down tab; select the section that is being audited. If the audit is confined to the branch level, type in the branch number Assigned To:
- 13 Assigned To: This is an auto fill block that will repeat the section assigned to review and take action on the CAR.
- 14 Date Assigned: Enter the date, in mm/dd/yyyy format, that the CAR was assigned to the Branch/Section for review and action.
- 15 Reply Due Date: This is an auto fill block that will compute the 14-day working time that the assigned section has to review the CAR and submit a proposed course of action.
- 16 Reply Received Date: AVN-324 will enter the actual date the reply was received.
- 17 Implementation Date: Enter the date, in mm/dd/yyyy format, that the assigned Branch/Section expects to implement the changes proposed in CAR.
- 18 Implementation Verified By: Enter the last name of the auditor verifying that implementation has taken place.
- 19 Effectiveness Evaluation Due: This is an auto fill block that will compute the 90-day interval when the auditor will return and verify that the implementation has been effective.
- 20 Effectiveness Verified/Closure Date: This is actual date when the auditor returned and verified that the implementation was effective.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

- 21 Effectiveness Verified By: Enter the last name of the auditor verifying that implementation has taken effect.
- (b) Audit Findings Input Fields: At the top of the field you will find four tabs. The second tab opens the Audit Findings screen. This page is used to record the details of this particular audit finding. CAUTION: if your mouse is equipped with a BACK or FORWARD button or wheel function, you can move between DIFFERENT TRACKING SYSTEM NUMBER REPORTS by using these buttons or wheels. THIS WILL ALLOW YOU TO **EDIT THE FIELDS IN WRONG CAR IF YOU ARE NOT CAREFUL!** Verify that the AUDIT NUMBER in the upper left-hand corner of the screen is the CAR that you are working.
- 1 Requirement Number: Enter the ISO element or other document number containing the requirement being audited.
- 2 Requirement: Enter the actual requirement text being used as the audit standard.
- 3 Finding (Brief Description): Enter a short descriptive sentence stating the finding.
- 4 Finding Detail: Enter a complete detailed description of the finding. Include specific details as required, such as room number and individuals spoken to.
- (c) Audit Investigation Input Fields: At the top of the field you will find four tabs. The third tab opens the Audit Investigation screen. This page is used to record the details of this particular audit finding. CAUTION: if your mouse is equipped with a BACK or FORWARD button or wheel function, you can move between DIFFERENT TRACKING SYSTEM NUMBER REPORTS by using these buttons or wheels. THIS WILL ALLOW YOU TO **EDIT THE FIELDS IN WRONG CAR IF YOU ARE NOT CAREFUL!** Verify that the AUDIT NUMBER in the upper left-hand corner of the screen is the CAR that you are working.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

- 1 Investigation: Enter the date and reason the audit was being conducted and the methodology used to identify the non-compliance, i.e., records review, interview, witnessing, etc.
  - 2 Process Controls: Identify the processes that are to be used in complying with the Requirements entered on the previous page. This process should clearly identify the cause of finding.
  - 3 Root Cause Analysis: Provide a detailed analysis of why the process is not being followed:
- (d) Audit Corrective Action Input Fields: At the top of the field you will find four tabs. The fourth tab opens the Audit Corrective Action screen. This page is used to record the proposed solutions to this particular audit finding. **CAUTION:** If your mouse is equipped with a BACK or FORWARD button or wheel function, you can move between DIFFERENT TRACKING SYSTEM NUMBER REPORTS by using these buttons or wheels. **THIS WILL ALLOW YOU TO EDIT THE FIELDS IN WRONG CAR IF YOU ARE NOT CAREFUL!** Verify that the AUDIT NUMBER in the upper left-hand corner of the screen is the CAR that you are working.
- 1 Immediate Action: If the non-conformance is a potential hazard to life or property, **TAKE IMMEDIATE ACTION** to stop or correct the situation and record those actions here.
  - 2 Permanent Corrective Action: Enter the proposed course of action to permanently correct the non-compliance and indicate a date that this change will be implemented.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

#### 14.1.2 Open Form to Edit and/or Review Record(s)

This function is used to edit and/or review data in the program. Its functions are identical to the above Open Form To Add Record(s) button with the addition of being able to search for a specific record in the database by using the buttons at the bottom of the screen. Input functions and fields are identical to the above functions. See (c) above for details. **CAUTION: If your mouse is equipped with a BACK or FORWARD button or wheel function, you can move between DIFFERENT TRACKING SYSTEM NUMBER REPORTS by using these buttons or wheels. THIS WILL ALLOW YOU TO EDIT THE FIELDS IN WRONG CAR IF YOU ARE NOT CAREFUL!** Verify that the AUDIT NUMBER in the upper left-hand corner of the screen is the CAR that you are working.

#### 14.1.3 Report Options

The principle function of the program is to report on findings in an orderly manner. This task is performed through the Report Option. Select the report options button and you will be presented with a screen that links you to the various general and detailed reports options.

##### (a) General Reporting Features

- 1 Graphic Analysis 1: Press the **Graphic Analysis 1** icon to the left of center at the bottom of the screen and the program will display the "Open or Action Needed Audits by Area" graph which indicates those AVN-300 branches or sections that have audits needing some form of response. Below this graph is a plot of ALL of the audits on record and their current status, i.e., awaiting action, closed, long term or open. To exit this graphic, select the "CLOSE" button on the command line or the "X" on the top bar.
- 2 Graphic Analysis 2: Press the **Graphic Analysis 2** icon to the right of center at the bottom of the screen and the program will display the "Type of Audit Finding Summary" graph which indicates how many total audits of

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

various types (i.e., ISO, OSHA, etc.) have been recorded. Below this graph is a plot of ALL of the audits on record and their current status, i.e., awaiting action, closed, long term or open sorted by responsible AVN-300 branches or sections. To exit this graphic, select the "CLOSED" button on the command line or the "X" in the top bar.

- 3 Audit Number Tracking Log: Other general reports are contained in the center row of three squares on the Reports Option page. To the far left is the Audit Number Tracking Log. Press this button and the program will display a simple table of all of the recorded findings sorted latest to oldest. This is meant to be a tabular quick look at all of the data. To exit this table, select the "CLOSE" button on the command line or the "X" on the top bar.
- 4 Audit Status Report: Just below the Audit Number Tracking Log is a button for the Audit Status Report. Press this button and the program will display a query field requesting the status of reports (ACTION, CLOSED, LONG TERM or OPEN) you wish to view. If requesting OPEN, be sure to use the letter "O" and not the number "0" (zero). To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.
- 5 Open Implementation or Effectiveness Dates: In the center field, the upper button provides a list of audits that have Open Implementation or Effectiveness Dates. This is the first time the CAR summary report form is used. This report generates a summary report of each finding that either needs a response to move it from OPEN to ACTION or LONG TERM. There are no closed findings under this report field. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

- 6 Reply Past Due Report: Just below the Open Implementation or Effectiveness Dates is a button for the Reply Past Due Report. Press this button and the program will display a summary report for those OPEN findings that have not received an action plan in the allowed 14 working days. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.
- 7 Preview Total CAR Log: In the right field of the middle row, the upper button generates a report showing summary report of all findings regardless of the status of that finding. The feature may be used to locate findings created on a specific date. When the button is selected, the first screen will be a beginning search date. Input the date in the mm/dd/yy format and hit enter. (AVN-300 report tracking started on 09/27/00, so there is no need to start searching at an earlier date.) The next screen is an end search date in the mm/dd/yy format. If you desire all of the reports, use the current date and hit enter. CAUTION DO NOT use the PRINT icon in the tool bar to print this report. Using this icon will print ALL of the pages in the report. Use the FILE-PRINT commands to select the desired pages. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.
- 8 Long Term Actions Report: Just below the Open Implementation or Effectiveness Dates is a button for the Reply Past Due Report. Press this button and the program will display a summary report for those OPEN findings that have not received an action plan in the allowed 14 working days. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

(b) Specific Reporting Features

- 1 Type Audit Detailed Findings: In the upper and lower rows of the Reports Option page, you will find buttons that will generate Detailed and Summary Reports for each of the different types of audits conducted by AVN-300. These reports are limited to audits or evaluations conducted in the areas of: FAR Part 135 or FAR Part 145 compliance, ISO 9001, the AVN-1 Internal Evaluation Program (IEP), the Aircraft Certification System Evaluation Program (ACSEP) findings or Occupational Safety and Health Administration (OSHA) findings. Like the TOTAL CAR Log preview function, each of these reports may be screened by date. When the button is selected, the first screen will be a beginning search date. Input a date in the mm/dd/yy format and hit enter. (AVN-300 report tracking started on 09/27/00, so there is no need to start searching an earlier date.) The next screen is an end search date in the mm/dd/yy format. If you desire all of the reports, use the current date and hit enter. You will be presented with all of the reports for the selected type of audit for the specified range of dates. Each page will contain one complete report. CAUTION DO NOT use the PRINT icon in the tool bar to print this report. Using this icon will print ALL of the pages in the report. Use the FILE-PRINT commands to select the desired pages. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.
- 2 Type Audit Summary Findings: The lower button in the upper and lower rows of the Reports Option page will generate Summary Reports for each of the different types of audits conducted by AVN-300. These reports are limited to audits or evaluations conducted in the areas of: FAR Part 135 or FAR Part 145 compliance, ISO 9001, the AVN-1 Internal Evaluation Program (IEP), the

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

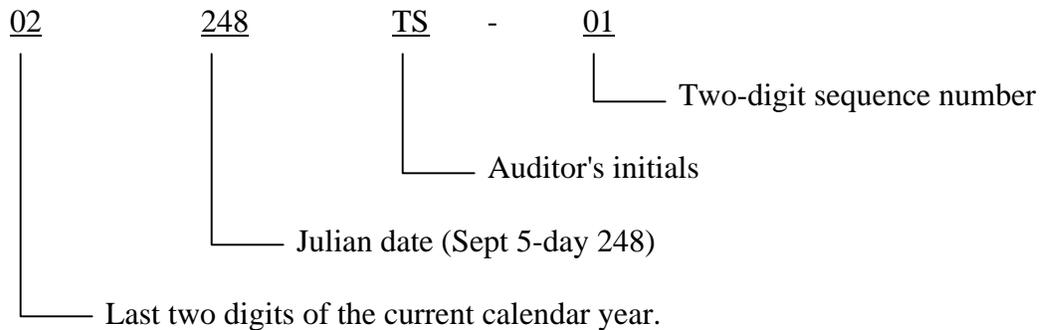
---

Aircraft Certification System Evaluation Program (ACSEP) findings or Occupational Safety and Health Administration (OSHA) findings. When the button is selected, you will be presented with a summary report for all of the reports for the selected type. Each page will contain four cursory reports. CAUTION DO NOT use the PRINT icon in the tool bar to print this report. Using this icon will print ALL of the pages in the report. Use the FILE-PRINT commands to select the desired pages. To exit this page, select the "CLOSE" button on the command line or the "X" in the top bar.

14.2 Audit Report Number and CAR Numbering System

14.2.1 All AVN-300 internal audits will have an audit report number consisting of the last two digits of the current calendar year, the Julian date, the auditors initials (up to 3), a dash and a two-digit numbering system beginning with 00. A CAR number ending in "00" will record the occurrence of an audit being performed on that day by that auditor. If this audit results in findings, then each of the findings will be recorded with the same report number, but now ending in -01 through -99.

EXAMPLE:





AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

**NOTE:** Reports filed under the earlier numbering systems have been updated as follows:

OLD CAR #	REVISED CAR#	OLD CAR #	REVISED CAR#	OLD CAR #	REVISED CAR #
0	*00	PL04	01109PL-04	73125-5	73125-05
1	*01	PL05	01109PL-05	73125-6	73125-06
2	*02	PL06	01109PL-06	73125-7	73125-07
3	*03	SG1143-02	01143SG-02	73125-8	73125-08
4	*04	SG1143-03	01143SG-03	73125-9	73125-09
5	*05	SG1143-04	01143SG-04	73125-10	73125-10
6	*06	SG1143-05	01143SG-05	73125-11	73125-11
7	*07	WEB1164-01	01164WEB-01	73125-12	73125-12
8	*08	WEB1290-01	01164WEB-02	73125-13	73125-13
9	*09	WEB1290-02	01164WEB-03	73125-14	73125-14
10	*10	WEB1290-03	01164WEB-04	73125-15	73125-15
11	*11	WEB1290-04	01164WEB-05	73125-16	73125-16
12	*12	JP1166-01	01166JP-01	73125-17	73125-17
13	*13	JP1166-02	01166JP-02	73125-18	73125-18
14	*14	JP1166-03	01166JP-03	73125-19	73125-19
15	*15	SG1177-01	01177SG-01	73125-20	73125-20
16	*16	SG1177-02	01177SG-02	73125-21	73125-21
17	*17	PVB1187-01	01187PVB-01	73169-1	73169-01
18	*18	ALW #1	01211ALW-01	73169-2	73169-02
19	*19	ALW #2	01211ALW-02	73169-3	73169-03
20	*20	TS1310-01	01310TS-01	73169-4	73169-04
21	*21	TS1310-02	01310TS-02	73169-5	73169-05
JP01	01053JP-01	2001-01	01319UNK-01	73169-6	73169-06
JP02	01053JP-02	2001-02	01319UNK-02	73169-7	73169-07
JP03	01053JP-03	2001-03	01319UNK-03	73169-8	73169-08
JP04	01053JP-04	73125-1	73125-01	73169-9	73169-09
PL01	01109PL-01	73125-2	73125-02	73169-10	73169-10
PL02	01109PL-02	73125-3	73125-03	73169-11	73169-11
PL03	01109PL-03	73125-4	73125-04		

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

---

---

- 14.3 Instructions for completing the AUDIT/CORRECTIVE ACTION REPORT, VN Form 4100-26:
- (a) Audit Report Number: Enter the report number as described in paragraph 14.2.
  - (b) Type of Action: Select and check the appropriate block.
  - (c) Type of Finding: Select and check the appropriate block.
  - (d) Type of Audit: Select and check the appropriate block.
  - (e) Lead Auditor: Print and sign the name of the auditor generating the report.
  - (f) Audit Date: Self-explanatory.
  - (g) ISO Element: Identify the ISO 9001 element being audited.
  - (h) Branch/Section Audited: Print the appropriate office symbol.
  - (i) Audit Status: Select and check the appropriate block.
  - (j) Requirement/Document Number: Identify the requirement number of document number containing procedures being audited.
  - (k) Requirement: Enter the applicable requirement procedure or text.
  - (l) Finding: Clearly explain the difference between the requirement and the way the process is being accomplished.

AVIATION SYSTEM STANDARDS  
ISO 9001 QUALITY MANUAL  
APPENDIX

FIGURE 1. - AUDIT/CORRECTIVE ACTION REPORT, VN FORM 4100-26.

\*

<b>AUDIT/CORRECTIVE ACTION REPORT</b>			
<b>Audit Report Number:</b>			
<b>Type of Action:</b> Corrective <input type="checkbox"/> Preventive <input type="checkbox"/> Best Practice <input type="checkbox"/>			
<b>Type of Finding:</b> Major Finding <input type="checkbox"/> Minor Finding <input type="checkbox"/> Observation <input type="checkbox"/>			
<b>Type of Audit:</b>	ISO <input type="checkbox"/>	ACSEP <input type="checkbox"/>	
	FAR Part 135 <input type="checkbox"/>	AVN -1 IEP <input type="checkbox"/>	
	FAR Part 145 <input type="checkbox"/>	Other <input type="checkbox"/>	
	OSHA <input type="checkbox"/>		
<b>Lead Auditor:</b>		<b>Audit Date:</b>	
<b>ISO Clause:</b>		<b>Branch/Section Audit:</b>	
<b>Audit Status:</b> Open <input type="checkbox"/> Active <input type="checkbox"/> Long Term <input type="checkbox"/> Closed <input type="checkbox"/>			
<b>Requirement/Document Number:</b>			
<b>Requirement:</b>			
<b>Finding:</b>			