# ARMY AVIATION MAINTENANCE

DISTRIBUTION RESTRICTION: Approved for public release; distribution unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

Headquarters
Department of the Army
Washington, DC, 26 September 2000

# **Army Aviation Maintenance**

# **Contents**

		Page
	PREFACE	vi
Chapter 1	THE BATTLEFIELD	1-1
	Section I - Doctrine Fundamentals	1-1
	Power Projection	1-1
	Sustainment Imperatives	1-1
	Section II - Combat Service Support of Aviation Operations	1-3
	Planning	1-3
	Combat Mission	1-4
	Modularization	1-5
	Section III - The Treat to Aviation Maintenance	1-7
	Aviation Maintenance Vulnerability	1-7
	Characteristics of Threat Forces	1-7
	Types of Threat	1-8
	Threat Capabilities	1-8
Chapter 2	AVIATION MAINTENANCE OPERATIONS	2-1
	Section I - Aviation Maintenance	2-1
	General	2-1
	Three-Level Maintenance System	2-1
	Sustainment Maintenance	2-2

**DISTRIBUTION RESTRICTION:** Approved for public release; distribution is unlimited.

<sup>\*</sup>This publication supersedes FM 3-04.500(1-500), 27 January 1995

		Page
	Section II - Aviation Unit Maintenance Operations	2-2
	General	2-2
	Aviation Unit Maintenance Functions	2-3
	Section III - Aviation Intermediate Maintenance Operations	2-9
	Divisional Aviation Intermediate Maintenance Company	2-9
	Divisional Aviation Intermediate Maintenance Functions	2-10
	Corps Aviation Intermediate Maintenance Operations	2-12
	Corps Aviation Maintenance Battalion Headquarters and Headquarters	
	Detachment Operations	2-13
	Echelons Above Corps Aviation Unit Maintenance Operations-Theater Sup	port
	Command	2-14
	Section IV - Aviation Depot, Theater Aviation Maintenance Program, a Aviation Depot Maintenance Round-out Unit Operations	
	Corpus Christi Army Depot	
	Theater Aviation Maintenance Program	
	Aviation Depot Maintenance Round-out Unit Program	
Chapter 3	COMMAND, CONTROL, AND COMMUNICATIONS	3-1
	Section I - Command and Control	3-1
	Aviation Brigade and/or Battalion Staff	3-1
	Command Posts	3-3
	Supporting Commands and Staffs	3-4
	Section II - Communications and/or Data	3-7
	Communications	3-7
	Automatic Data Processing Continuity-of-Operations Plan	3-8
Chapter 4	MAINTENANCE MANAGEMENT	4-0
	Section I - Maintenance Management Philosophy	4-0
	General	4-0
	Logistics Preparation of the Theater	4-3
	Section II - Maintenance Management Functions	4-4
	Aviation Unit Maintenance/Aviation Intermediate Maintenance Platoon/Sect Duties	
	Aviation Unit Maintenance Responsibilities	4-10
	Aviation Intermediate Maintenance Responsibilities	
	Section III - Aircraft Maintenance	
	Scheduled Aircraft Maintenance	4-15

		Page
	Unscheduled Aircraft Maintenance	4-17
	Tenets of Phase and/or Periodic Inspections	4-18
	Section IV - Reports and Estimates	4-20
	Reports	4-20
	Estimates	4-22
Chapter 5	MAINTENANCE ACTIVITIES	5-0
	Section I - Miscellaneous Activities	5-0
	Army Warranty Program	5-0
	Army Oil Analysis Program	5-0
	Ground Support Equipment	5-1
	Section II - Logistics and/or Maintenance Assistance	5-3
	Logistics Assistance Program	5-3
	United States Army Aviation and Missile Command	5-5
	Maintenance Assistance and Instruction Team	5-5
	Aviation Resource Management Survey	5-6
	Aviation Intermediate Maintenance Logistics Assistance	5-6
	Requests for Logistics Assistance	5-6
Chapter 6	SUPPLY AND MATERIEL OPERATIONS	6-0
	Section I - Supply Terms and Definitions	6-0
	Classes of Supply	6-0
	Categories of Supply	6-1
	Types of Supply	6-1
	Methods of Distribution	6-2
	Exchange Systems	6-2
	Stock Funding of Depot-Level Repairable	6-4
	Aviation Intensive Management Items	6-4
	Section II - Supply Procedures	6-5
	Types of Authorized Aviation Repair Parts Stockage	6-5
	Administration	6-6
	Requisition	6-7
	Supply Management	6-9
	Performance Indicators	6-12
	Section III - Automated Supply Management Systems	6-13
	Unit Level Logistics System	6-13
	Standard Army Maintenance System	6-14
	Standard Army Retail Supply System-Objective	6-15

		Page
	Global Combat Support System-Army	6-17
	Section IV - Materiel Management Centers	6-18
	Division Materiel Management Center	6-18
	Corps Support Command Materiel Management Center	6-19
	Theater Support Command Materiel Management Center	6-22
Chapter 7	AVIATION MAINTENANCE IN UNUSUAL ENVIRONMENTS	7-0
	Section I - Desert, Jungle, Mountain, and Cold Weather	7-0
	General	7-0
	Desert Operations	7-0
	Jungle Operations	7-3
	Mountain Operations	7-4
	Cold Weather Operations	7-4
	Section II - Night Aircraft Maintenance	7-5
	Doctrine	7-5
	Light Discipline	7-5
	Effects on Personnel and Maintenance	7-6
	Section III - Nuclear, Biological, and Chemical Operations	7-8
	Nuclear, Biological, and Chemical Threat	7-8
	Aircraft Decontamination	7-8
	Impact on Maintenance	7-10
	Maintenance Support Operations	7-12
Chapter 8	QUALITY CONTROL AND PUBLICATIONS	8-1
	Section I - Quality Control Operations	8-1
	Technical Inspector	8-1
	Quality Control Duties	8-1
	General Technical Inspection Procedures	8-9
	Quality Control Aircraft Inspection	8-12
	Forms and Records Inspection	8-14
	Technical Compliance	8-16
	Section II - Publications	8-17
	Types of Publications	8-17
	Changed/Revised/Rescinded Publications	8-21
	Technical Libraries	8-24
	Interservice Publications Accounts	8-25

		Page
Appendix A	UNIT LEVEL LOGISTICS SYSTEM-AVIATION	A-1
Appendix B	SAMPLE AVIATION UNIT MAINTENANCE/AVIATION INTERMEDIAT	E
	INTERNAL STANDING OPERATING PROCEDURE	B-0
Appendix C	SAMPLE AVIATION UNIT MAINTENANCE EXTERNAL STANDING	
	OPERATING PROCEDURE	
Appendix D	MAINTENANCE MANAGEMENT TOOLS	D-0
Appendix E	SAFETY	E-0
Appendix F	RECOVERY AND EVACUATION OF AIRCRAFT	F-0
Appendix G	SPECIAL EQUIPMENT PACKAGES	G-0
Appendix H	DEPLOYMENT	H-0
Appendix I	AVIATION MAINTENANCE COMMANDER'S CHECKLIST	I-1
Appendix J	COMMUNICATIONS NETS	J-1
Appendix K	CALIBRATION	K-0
Appendix L	SITE SELECTION	L-0
Appendix M	RECONSTITUTION	M-0
Appendix N	ENVIRONMENTAL ISSUES	N-1
Appendix O	CONTRACTORS	O-0
	GLOSSARY	Glossary-1
	BIBLIOGRAPHY	Bibliography-1
	INDEX	Index-0

## **Preface**

Aviation maintenance activities are organized to provide commanders with the maximum number of safe, mission-capable aircraft. These activities must be dedicated to fast, continuous, and reliable aviation maintenance support in the highly mobile, integrated battlefield expected in future combat.

Each aviation unit is responsible for performing AVUM on its assigned aircraft. Divisional and nondivisional AVIM units provide a single level of support maintenance between unit and depot levels. Divisional AVIM units (division aviation support battalion or organic AVIM battalion/company) provide support for aircraft assigned to the division. Nondivisional AVIM units are deployed on an area basis and assigned to the corps support command, ACR, or the TSC.

This manual provides doctrinal guidance concerning aviation maintenance organizations and functions. It is designed for use by commanders and their staffs, small-unit leaders, and technicians who have an aviation maintenance responsibility. Appendixes A through 0 provide supplemental material on unit level logistics system-aviation, sample AVUM/AVIM internal SOP, sample AVIM external SOP, maintenance management tools, safety, recovery and evacuation of aircraft, special equipment packages, deployment, aviation maintenance commander's checklist, communications nets, calibration, site selection, reconstitution, environmental issues, and contractors.

The proponent for this publication is HQ TRADOC. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, U.S. Army Aviation Center, ATTN: ATZQ-TDS-D, Fort Rucker, Alabama 36362-5263.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

This manual has been reviewed for operations security considerations.

#### **Chapter 1**

### THE BATTLEFIELD

This chapter covers the basic doctrine fundamentals of aviation units on the battlefield. It discusses the CSS needed by aviation units to function effectively and sustain combat capability. It also discusses the need for modularity in AVIM units, the combat mission for aviation maintenance units and the threat forces most likely to be used against them.

### **SECTION I – DOCTRINE FUNDAMENTALS**

#### POWER PROJECTION

1-1. The dramatically changing world environment during the past several years has led to a revision of the national military strategy that calls for fewer forward deployed forces and greater reliance on CONUS-based contingency forces. Hence, the centerpiece for this new strategy is rapid force projection to meet growing regional threats and crises. The credibility of our new strategy depends on our ability to deploy, in a timely manner, an appropriate military force that is versatile, lethal, and sustainable. The Army must be prepared to rapidly deploy up to a five-division contingency force in support of national military objectives. The Army has responded to this mission with a program that will support this new mobility-oriented strategy. This program, called the ASMP, is designed to lead to the development of a total fort-to-foxhole system that provides the necessary capability to meet the deployment goals of the CONUS-based contingency force.

1-2. FM 3-0(100-5) is the Army's keystone doctrinal manual. It outlines how the Army will fight with CONUS-based contingency forces.

#### SUSTAINMENT IMPERATIVES

1-3. Sustaining the battle will require aviation commanders and staffs to adhere to the CSS characteristics—responsiveness, simplicity, flexibility, attainability, sustainability, survivability, economy, and integration. These characteristics apply to war, military operations other than war, and stability operations and/or support operations and are discussed in detail in FM 3-0(100-5) and FM 4-0(100-10).

#### RESPONSIVENESS

1-4. Responsiveness is the key characteristic of CSS. It means providing the right support in the right place at the right time, and the ability to meet changing requirements on short notice. Responsiveness includes the ability to anticipate operational requirements. Aviation logisticians must anticipate future events and requirements by understanding the aviation commander's plan and by foreseeing events as operations develop. While continuing to support current operations, they must plan for future operations and attempt to foresee unexpected changes in the course of the battle. This