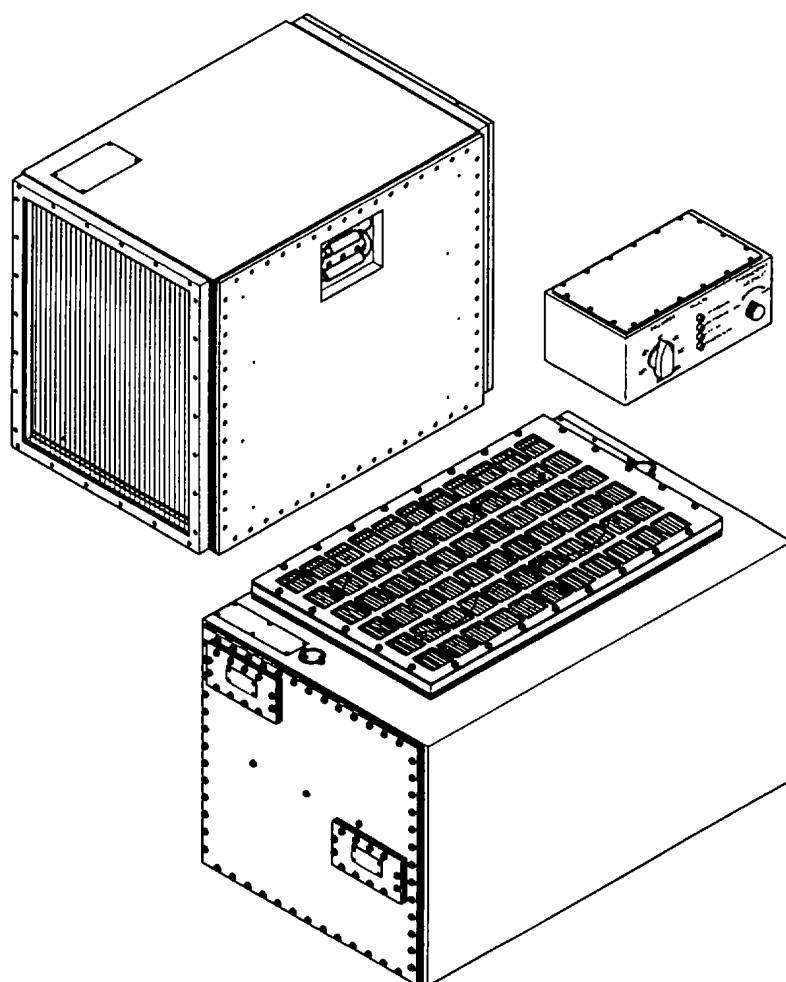

TECHNICAL MANUAL
**OPERATOR'S, UNIT, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL**


OPERATING INSTRUCTIONS	2-1	
OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)	2-2	
OPERATOR MAINTENANCE PROCEDURES	3-4	
UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)	4-3	
UNIT TROUBLESHOOTING PROCEDURES	4-7	
UNIT MAINTENANCE PROCEDURES	4-12	
DIRECT SUPPORT TROUBLESHOOTING	5-2	
DIRECT SUPPORT MAINTENANCE PROCEDURES	5-6	
GENERAL SUPPORT MAINTENANCE PROCEDURES	6-2	
MAINTENANCE ALLOCATION CHART (MAC)	B-1	
GLOSSARY	GLOSSARY-1	
INDEX	INDEX-1	

**AIR CONDITIONER:
SPLIT PACK, 30,000 BTUH
28 VDC
(NSN: 4120-01-377-7511) (EIC: FGJ)**

TECHNICAL MANUAL

NO. 9-4120-408-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D.C., 15 September 1993**OPERATORS, UNIT. DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR****AIR CONDITIONER:
SPLIT PACK, 30,000 BTUH
28VDC
(NSN: 4120-01-377-7511) (RIC: FGJ)****REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished to you.

TABLE OF CONTENTS

	Page
CHAPTER 1 INTRODUCTION	1-1
Section I General Information	1-1
Section II Equipment Description	1-3
Section III Principles of Operation	1-9
CHAPTER 2 OPERATING INSTRUCTIONS	2-1
Section I Description and Use of Operator's Controls and Indicators	2-1
Section II Operator Preventive Maintenance.....	2-2
Section III Operation Under Usual Conditions	2-13
Section IV Operation Under Unusual Conditions	2-18
CHAPTER 3 OPERATOR MAINTENANCE INSTRUCTIONS	3-1
Section I Lubrication Instructions	3-1
Section II Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	3-1
Section III Operator Troubleshooting Procedures	3-2
Section IV Operator Maintenance Procedures.....	3-4

TABLE OF CONTENTS - CONTINUED

		Page
CHAPTER 4	UNIT MAINTENANCE INSTRUCTIONS	4-1
Section I	Lubrication Instructions	4-2
Section II	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	4-2
Section III	Service Upon Receipt	4-2
Section IV	Unit Preventive Maintenance	4-3
	Checks and Services (PMCS)	
Section V	Unit Troubleshooting Procedures	4-7
Section VI	Unit Maintenance Procedures	4-12
Section VII	Preparation For Storage or Shipment	4-50
CHAPTER 5	DIRECT SUPPORT MAINTENANCE INSTRUCTIONS	5-1
Section I	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	5-2
Section II	Direct Support Troubleshooting	5-2
Section III	I Direct Support Maintenance Procedures	5-6
Section IV	Preparation for Storage and Shipment	5-74
CHAPTER 6	GENERAL SUPPORT MAINTENANCE INSTRUCTIONS	6-1
Section I	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	6-1
Section II	General Support Maintenance Procedures	6-2
APPENDIX A	REFERENCES	A-1
APPENDIX B	MAINTENANCE ALLOCATION CHART (MAC)	B-1
Section I	Introduction	B-1
Section II	Maintenance Allocation Chart	B-4
Section III	Tool and Test Equipment Requirements	B-9
Section IV	Remarks	B-10
APPENDIX C	COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST	C-1
Section I	Introduction	C-1
Section II	Components Of End Item	C-2
Section III	Basic Issue Items	C-3

TABLE OF CONTENTS - CONTINUED

	Page
APPENDIX D	ADDITIONAL AUTHORIZATION LIST D-1
Section I	Introduction..... D-1
Section II	Additional Authorization Items List D-1
APPENDIX E	EXPENDABLE AND DURABLE ITEMS LIST E-1
Section I	Introduction..... E-1
Section II	Expendable and Durable Items List..... E-1
APPENDIX F	ILLUSTRATED LIST OF MANUFACTURED ITEMS F-1
APPENDIX G	MANDATORY REPLACEMENT PARTS G-1
APPENDIX H	WIRING DIAGRAMS AND WIRE RUN TABLES..... H-1
GLOSSARY	 GLOSSARY-1
Section I	Abbreviations..... GLOSSARY-1
Section II	Definition of Unusual Terms..... GLOSSARY-2
INDEX I	 INDEX-1

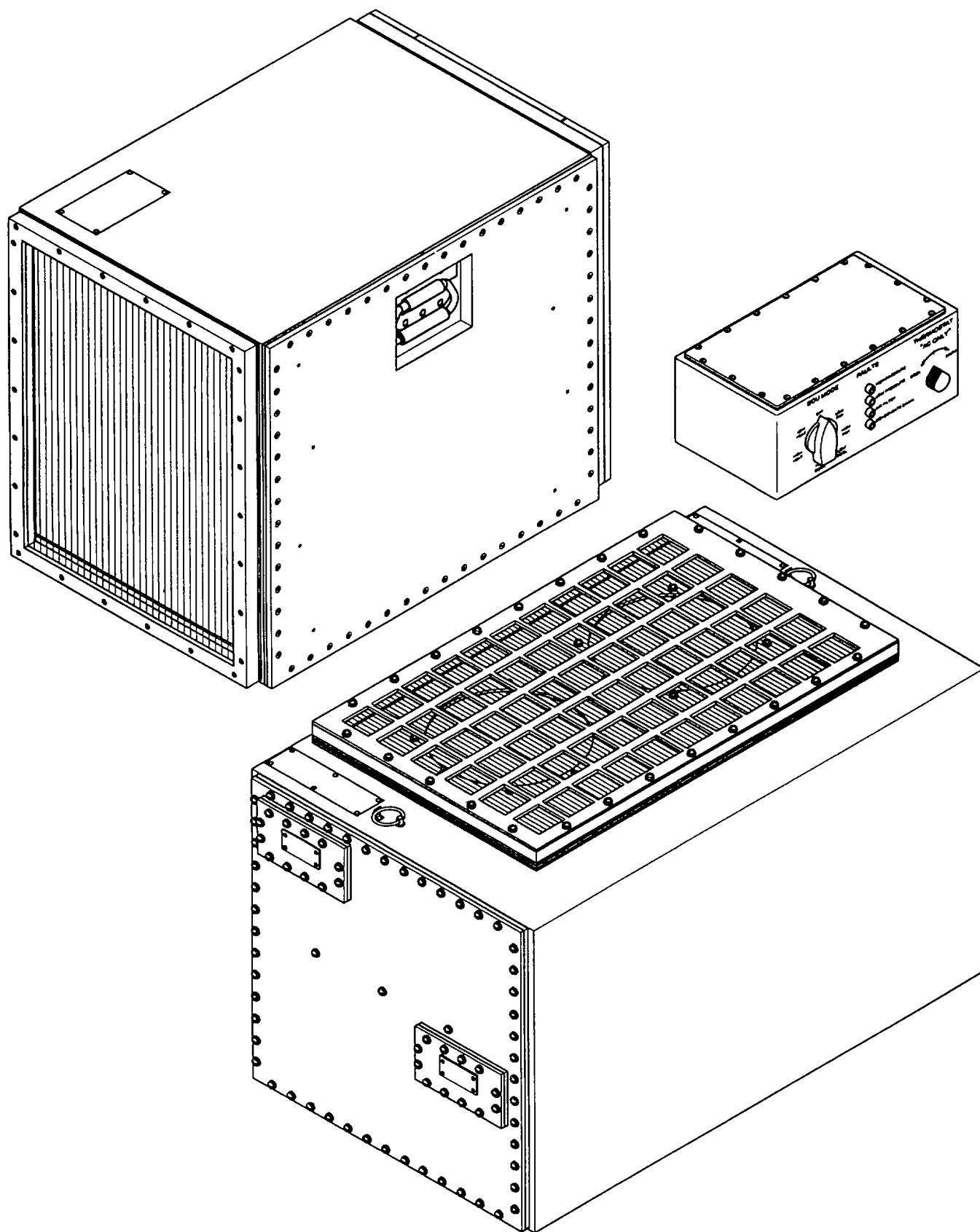


Figure 1-1. Air Conditioner: Split Pack, 30,000 BTUH, 28VDC.

CHAPTER 1

INTRODUCTION

INDEX

	PAGE
Section I. General Information.....	1-1
1-1 Scope	1-1
1-2 Maintenance Forms, Records, and Reports	1-1
1-3 Corrosion Prevention and Control	1-2
1-4 Destruction of Army Materiel to Prevent Enemy Use	1-2
1-5 Preparation for Storage and Shipment	1-2
1-6 Reporting Equipment Improvement Recommendations (EIR)	1-2
1-7 Warranty Information	1-2
1-8 Quality Assurance (QA)	1-2
1-9 Nomenclature Cross-Reference List	1-2
1-10 List of Abbreviations	1-3
1-11 Glossary	1-3
Section II. Equipment Description.....	1-3
1-12 Equipment Characteristics, Capabilities, and Features	1-3
1-13 Location and Description of Major Components	1-3
1-14 Equipment Data.....	1-8
Section III. Principles of Operation	1-9
1-15 Functional Description	1-9

SECTION I. GENERAL INFORMATION

1-1. SCOPE.

a. Type of Manual. Operator's, Unit, Direct Support, and General Support Maintenance. This manual contains detailed instructions for operating, maintaining, and repairing the air conditioner assemblies at any of the four maintenance levels.

b. Equipment Name and Model Number. Air Conditioner: Split Pack, 30,000 BTUH, 28VDC (NSN: 4120-01-377-7511). The compressor is not a component of the air conditioner. The compressor is a component of the vehicle to which the air conditioner is mounted.

c. Purpose of Equipment. The air conditioner is used to cool the Radio Receiving Set, AN/TRQ-32 (A)V. For refrigerant and electrical interconnection information and condenser assembly, evaporator assembly, and control module assembly removal and replacement refer to applicable system technical manual. For repair part information, refer to the Repair Parts and Special Tools List (RPSTL) Manual, technical manual (TM) 9-4120-408-24P.

1-2. MAINTENANCE FORMS. RECORDS AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in The Army Maintenance Management System (TAMMS).

1-3. CORROSION PREVENTION AND CONTROL.

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form (SF) 368, Product Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in Department of the Army (DA) pamphlet (PAM) 738-750.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Destruction of Army materiel to prevent enemy use shall be in accordance with TM 750-244-3.

1-5. PREPARATION FOR STORAGE AND SHIPMENT.

Refer to Chapter 5 Section IV.

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your air conditioner needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on SF 368 (Product Quality Deficiency Report). Mail it to us at: Commander U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO 4300 Goodfellow Blvd. St. Louis, MO 63120-1798. We will send you a reply.

1-7. WARRANTY INFORMATION.

No warranty exists for the Environmental Control Unit (ECU) or its components.

1-8. QUALITY ASSURANCE (QA).

Text of each quality assurance maintenance procedure in the TM is preceded and highlighted by the addition of "(QA)."

1-9. NOMENCLATURE CROSS-REFERENCE LIST.

Table 1-1 provides a cross-reference listing of the common names to official nomenclature. Common names are used in this manual to make procedures easier to read.

Table 1-1. Nomenclature Cross-Reference Limit.

Common Name	Official Nomenclature
Air Conditioner	Air Conditioner: Split Pack, 30,000 BTUH, 28VDC
Dehydrator	Filter-Drier, Refrigerant
Environmental Control Unit (ECU)	Air Conditioner: Split Pack, 30,000 BTUH, 28VDC
Evaporator	Evaporator Assembly
Evaporator Fan Motor	Motor, Direct Current, Evaporator Fan
Fan	Fan, Vane Axial, Condenser