

ARMY TM 10-4110-262-13&P

AIR FORCE TO 40R7-6-1

TECHNICAL MANUAL

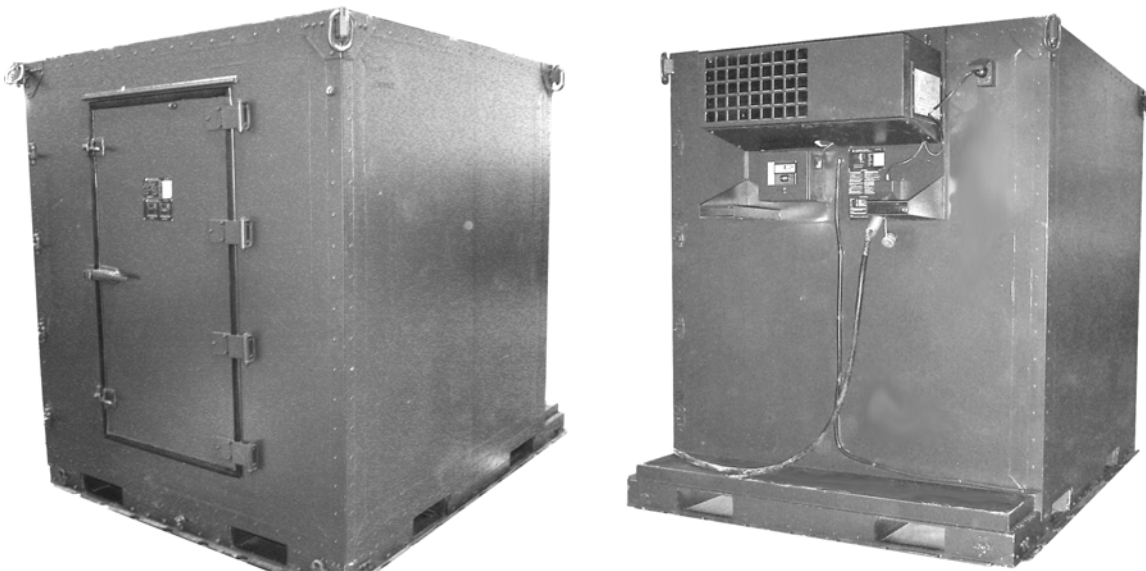
**OPERATOR'S, UNIT, AND DIRECT SUPPORT
MAINTENANCE MANUAL**

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

**ADVANCED DESIGN REFRIGERATOR, 300 Cubic Foot
(ADR-300)**

NSN 4110-01-465-4158 (Green)

NSN 4110-01-465-4564 (Tan)



DISTRIBUTION STATEMENT A-Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND AIR FORCE

31 MARCH 2004

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND AIR FORCE
WASHINGTON, D.C., 31 MARCH 2004

TECHNICAL MANUAL

OPERATOR'S, UNIT, AND DIRECT SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

ADVANCED DESIGN REFRIGERATOR (ADR-300)

NSN 4110-01-465-4158 (GREEN)

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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. For Army, mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual, directly to: Commander, U.S. Army Tank-Automotive Command and Armament Command, ATTN: AMSTA-LC-CECT, Kansas Street, Natick, MA 0176- 5052. You may also send in your recommended changes via electronic mail directly to amssbriml@natick.army.mil. A reply will be furnished to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

For Air Force - Forward AFTO Form 22, Technical Order Improvement Report and Reply, through your headquarters for routing to WR-ALC/LEET, 295 Byron Street, Robins AFB GA. 31098-1611.

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TM 10-4110-262-13&P
HOW TO USE THIS MANUAL

This manual contains General Information, Operating Instructions, Operator Preventive Maintenance Checks and Services (PMCS), Troubleshooting, and Maintenance/Repair instructions for the Advanced Design Refrigerator, 300 Cubic Feet (ADR-300).

Chapter 1 contains introductory information on the ADR-300 and its associated equipment as well as a Theory of Operation. Chapter 2 includes operating instructions under usual and unusual conditions. Chapter 3 presents troubleshooting procedures. Chapter 4 describes service requirements for a newly received ADR 300 preventive maintenance checks and service and operator maintenance. Chapters 5 and 6 outline maintenance activities that may be completed by the operators and at the unit and direct support maintenance levels, respectively. Chapter 7 contains references and other supporting information. Chapter 7 also includes the Repair Parts and Special Tools List (RPSTL) that identifies those parts or tools, which are unique to the operation and maintenance of this equipment.

Manual Organization and Page Numbering System. The manual is divided into seven major chapters that detail the topics mentioned above. Within each chapter are work packages covering a wide range of topics. Each work package is numbered sequentially starting at page 1. The work package has its own page numbering scheme and is independent of the page numbering used by other work packages. Each page of a work package is numbered according to the form XXXX YY-ZZ where XXXX is the work package number (e.g. 0010 is work package 10). In this numbering structure, YY is the revision number for that work package and ZZ represents the number of the page within that work package. A page number such as 0010 00-1/(2 Blank) means that page 1 contains information but page 2 of that work package has been intentionally left blank.

Finding Information. The Table of Contents permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The Table of Contents lists the topics contained within each chapter and the Work Package Sequence Number where it can be found.

Example: If the reader were looking for instructions on preventive maintenance, an operator maintenance topic, the user would locate the Operator Maintenance section of the Table of Contents. Scanning down the listings for Chapter 4, "Preventive Maintenance Checks and Services" information can be found in WP 0010 00 (i.e. Work Package 0010 00).

The RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of the specified maintenance level maintenance of the item name. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes. The work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts kits are listed separately in their own functional group and work package. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.

An Alphabetical Index can be found at the back of the manual. It lists specific topics with the corresponding work package. In addition, a glossary of terms is provided to assist the user in defining the terms used in the manual.

**OPERATOR'S, UNIT, AND DIRECT SUPPORT MAINTENANCE
ADVANCED DESIGN REFRIGERATOR, 300 CUBIC FOOT (ADR-300)**

4110-01-465-4158 / 4110-01-465-4564

GENERAL INFORMATION

SCOPE

This technical manual contains information and instructions for the operation, preventive maintenance and corrective maintenance of the Advanced Design Refrigerator (ADR-300), illustrated below. The ADR-300 is considered non-organizational equipment and must be requested through Air Force or Army support channels.

The purpose of the ADR-300 is to provide refrigerated storage for a wide range of commodities including food, medical supplies and cadavers that may require low temperature storage. The system also provides thermal protection for stored items during transport including air shipment. It provides 281 cubic feet of storage space and can maintain interior temperatures as low as 0 °F (-18 °C) at 110 °F ambient temperature. The system does not require any specific MOS personnel for normal operation. However, MOS 52C (Utilities Equipment Repairer), MOS 51R (Interior Electrician), and AFSC 3E1X1 (HVAC Repair) may be required for some maintenance operations. The system may be identified as follows:

Equipment Name:	Advanced Design Refrigerator (ADR-300)
Manufacturer's Model Number:	56149-000 (Green) 56249-000 (Desert Sand)



ADR-300 Front View



ADR-300 Rear View