

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT
SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL

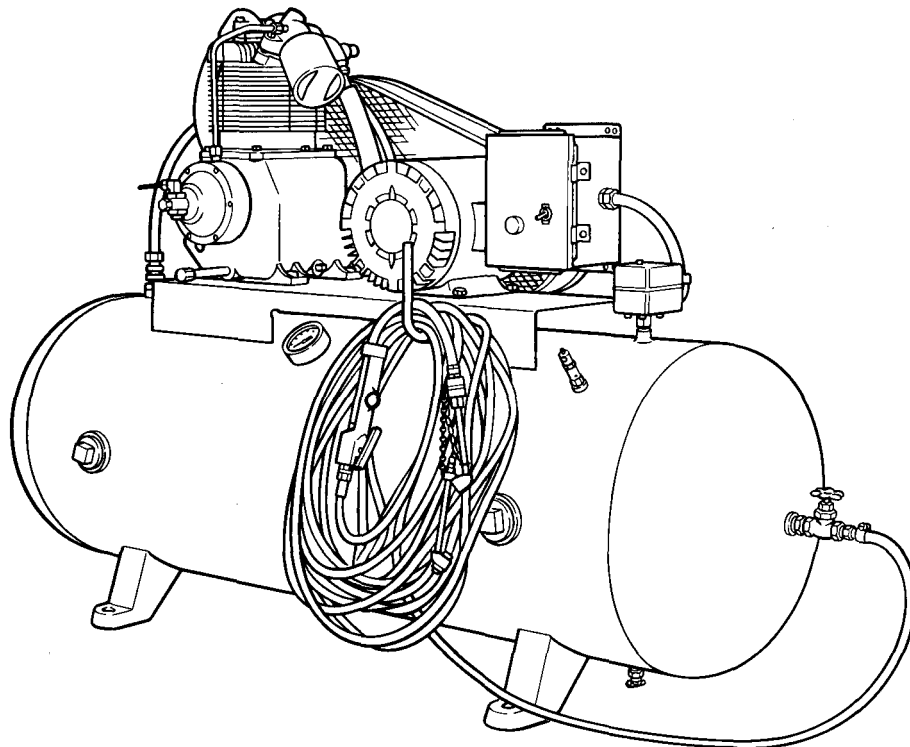
FOR

COMPRESSOR, RECIPROCATING, AIR:
ELECTRIC MOTOR DRIVEN

15 CFM, 175 PSI

C & H MODEL 20-912

NSN 4310-01-120-7669



HEADQUARTERS, DEPARTMENT OF THE ARMY

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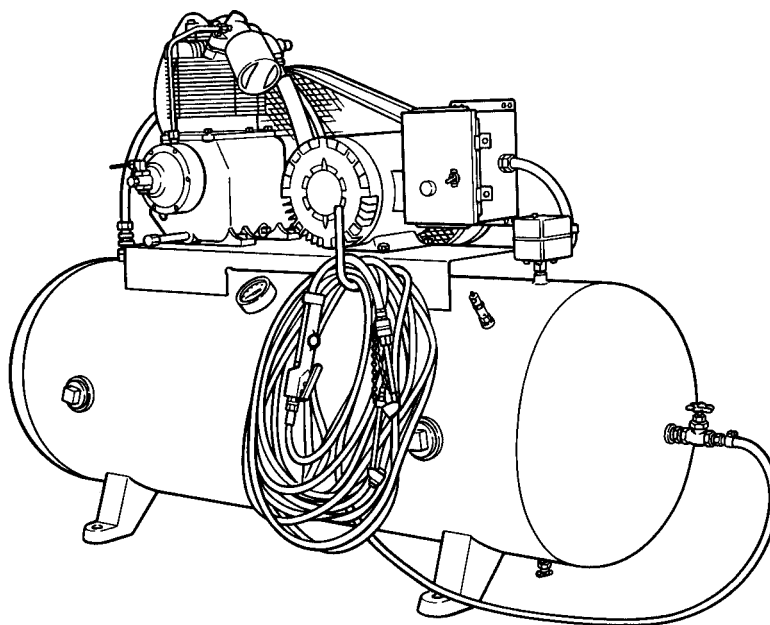
REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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

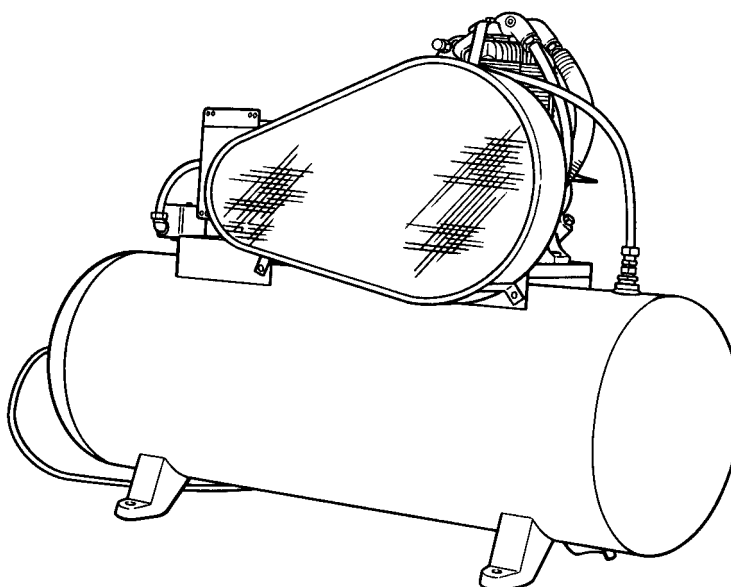
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Compressor Unit - Starter Side View



Compressor Unit - Belt Guard View

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. **SCOPE.** This manual is for your use in operating and maintaining the model 20-912 air compressor unit. Chapters 2 and 3 provide information on operation, preventive maintenance services, and operator's maintenance of equipment, accessories, components and attachments. Chapters 4 through 5 provide maintenance information for the Organizational, Direct and General Support levels.

Also included are descriptions of all components.

1-2. **MAINTENANCE FORMS AND RECORDS.** Equipment maintenance forms and procedures for their use are contained in TM 38-750, The Army Maintenance Management System (TAMMS).

1-3. **REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S).** EIR can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to perform a procedure, just simply tell why the design is unfavorable or why a procedure is difficult. EIR may be submitted on SF 368 (Quality Deficiency Report). Instructions for preparing EIR'S are provided in TM 38-750, The Army Maintenance Management System. Mail directly to Commander, Headquarters, U.S. Army Troop Support and Aviation Material Readiness Command, ATTN: DRSTS-MPSD, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished directly to you.

1-4. **HAND RECEIPT.** Hand receipts for Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL) items are published to aid in property accountability and is available through: Commander, US Army Adjutant General, 2800 Eastern Blvd., Baltimore, MD 21220.

1-5. **WARRANTY INFORMATION.** All components of the Air Compressor Unit are warranted by C & H Distributors Inc. for a period of 12 months. The warranty starts on the date found in block 23, DA Form 2408-9, in the log-book. Report all defects in material or workmanship to your supervisor who will take appropriate action through your organizational maintenance shop.

1-6. **Destruction of army material to prevent enemy use.** Refer to TM 750-244-3.

Section II. EQUIPMENT DESCRIPTION

1-7. **PURPOSE OF THE AIR COMPRESSOR UNIT.** An electric motor driven compressor for general shop use.

1-8. **CAPABILITIES AND FEATURES.**

- 2 stage compressor provides compressed air at 15 cfm and 175 psi
- Electric motor driven
- Motor starter with thermal relay protects motor against overload
- Pressure switch provides for automatic compressor cut-in at 160 psi and cut-out at 180 psi
- Two safety relief valves to prevent damage to compressor and injury to personnel.
- Air discharge system with inflator gage can be used to directly inflate tires to proper pressure
- Tank mounted pressure gage gives constant reading of air pressure in tank

NOTE

To help you find components and eliminate confusion, certain overall views of the air compressor unit will be called Belt Guard View and Starter View instead of "front" or "rear."

The component parts of the air compressor unit will be referred to by their proper names, eg. "electric motor" refers only to the electric motor.

1-9. **LOCATION AND DESCRIPTION OF MOTOR COMPONENTS.** (Figures 1-1 and 1-2.)

PRESSURE SWITCH (1). Diaphragm senses pressure and opens and closes switch contacts. Cut-out pressure and pressure difference between cut-in and cut-out are adjustable with 2 screws.

MOTOR STARTER (2). Contacts are magnetically closed when power is applied. Also contains a thermal or melting relay which opens the circuit when a current overload is sensed.

BELT GUARD (3). Steel mesh and sheet metal construction protects belts and personnel.

COMPRESSOR (4). Dual stage, two piston, air cooled with 15 cfm capacity. Includes interstage safety valve, inter-cooler, aftercooler and air inlet filter as well as centrifugal unloader for no load starting.

ELECTRIC MOTOR (5). Three phase, 5 HP induction motor.