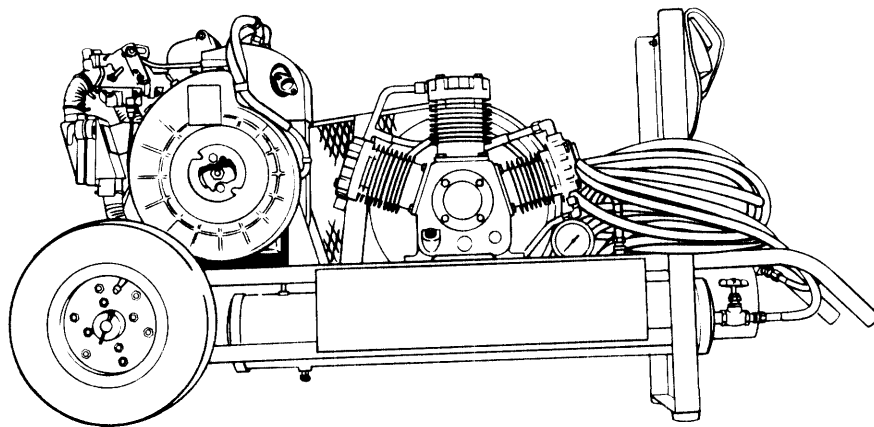


TM 5-4310-367-14

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



COMPRESSOR, RECIPROCATING: AIR
HANDTRUCK MOUNTED, GASOLINE
ENGINE DRIVEN, 8 CFM, 175 PSI
(C & H DISTRIBUTORS MODEL 20-905)
NSN 4310-01-079-8878

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TECHNICAL MANUAL }
 No. 5-4310-367-14 }

HEADQUARTERS
 DEPARTMENT OF THE ARMY

Washington, D.C. **10 June 1980**

**Operator's, Organizational, Direct Support, and General Support
 Maintenance Manual**

**COMPRESSOR, RECIPROCATING: AIR, HANDTRUCK
 MOUNTED, GASOLINE ENGINE DRIVEN
 (C& H DISTRIBUTORS MODEL 20-905, 8 CFM, 175 PSI)
 NSN 4310-01-079-8878
 (C&H DISTRIBUTORS MODEL 20-910, 5 CFM, 175 PSI)
 NSN 4310-01-105-5794**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of any 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 Troop Support & Aviation Materiel Readiness Command, ATTN: DRSTS-MTT, 4300 Goodfellow Boulevard, St. Louis, MO 63120. A reply will be furnished directly to you.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. SCOPE. This manual is for your use in operating and maintaining the Models 20-905 and 20-910 Reciprocating Air Compressor, Chapters 2 and 3 provide information on operation, preventive maintenance services, and operator's maintenance of equipment, accessories, components and attachments. Chapters 4 through 6 provide maintenance information for the organizational, DS and GS levels. Maintenance for each major functional group is covered in a separate chapter. Also included are descriptions of main units and their functions in relationship to other components.

1-2. MAINTENANCE FORMS AND RECORDS.

- a. Equipment maintenance forms and procedures for their use are contained in TM 38-750, The Army Maintenance Management System (TAMMS).
- b. Hand receipts for the End Item/Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL) items are published in a Hand Receipt Manual. The Hand Receipt Manual numerical designation is the same as the related Technical Manual with the letters HR added to the number. These manuals are published to aid in property accountability and are

available through: Commander, US Army Adjutant General Publication Center, ATTN: AGDL-OD, 1655 Woodson Road, St. Louis, MO 63114.

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 Managements System. Mail directly to Commander Headquarters, U.S. Army Troop Support and Aviation Materiel Readiness Command, ATTN: DRSTS-MEM, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished directly to you.

1-4. WARRANTY INFORMATION. All components of the Reciprocating Air Compressor with the exception of the engine are warranted by C & H Distributors Inc. for a period of 17 months. The warranty starts on the date found in block 23, DA Form 2408-9, in the logbook. Report all defects in material or workmanship to your supervisor, who will take appropriate action through your organizational maintenance shop.

Section II. EQUIPMENT DESCRIPTION

1-5. PURPOSE OF THE AIR COMPRESSOR. A portable, handtruck mounted air compressor for inflating tires and running pneumatic equipment in the field.

1-6. CAPABILITIES AND FEATURES.

- Model 20-905 delivers 8 cfm of air at 175 psi
- Model 20-910 delivers 5 cfm of air at 175 psi
- Handtruck mounted
- Gasoline engine driven
- Incorporates air hose and inflator gage
- All weather operational
- Highly portable

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS ENGINE (1).

- a. Model 20-905- Two cylinder, 4 cycle, air cooled 3 hp gasoline engine. Refer to TM 5-2805-257-14 for detailed description.
- b. Model 20-910- One cylinder, 4 cycle, 1-1/2 hp, air cooled gasoline engine. Refer to TM 5-2805-256-14 for detailed description.

AIR CLEANER (2). Dry type. Element may be removed and cleaned.

COMPRESSOR (3).

- a. Model 20-905 - Two stage design, 8 cfm, 175 psi output.
- b. Model 20-910 - Two stage design, 5 cfm, 175 psi output.

HANDTRUCK (4).

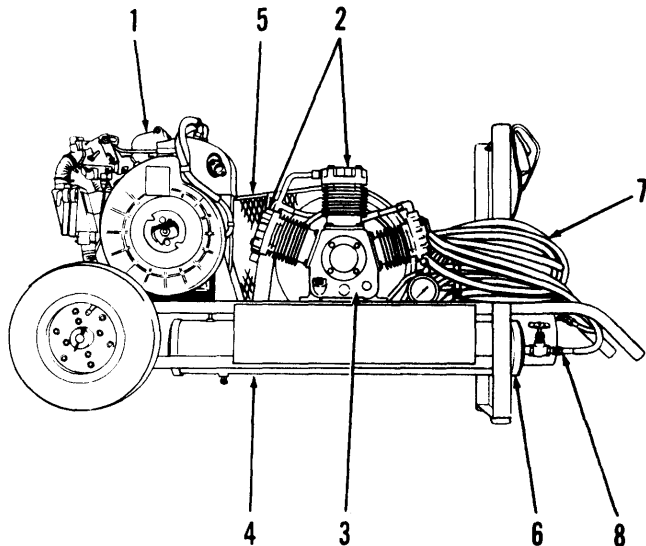
- a. Model 20-905 - Welded aluminum frame with pneumatic tires.
- b. Model 20-910 - Welded steel frame with pneumatic tires.

COMPRESSOR DRIVE AND BELT GUARD (5). Two matched V-belts transmit power. Belt guard protects operator as well as pulleys and flywheels.

AIR TANK (6). Welded construction tank with pressure gage, drain cock, shutoff valve, and unloader valve.

AIR HOSE AND INFLATOR GAGE (7). Fifty-foot rubber hose. Inflator gage equipped with regular and jumbo size air chucks.

FUEL TANK (8). Welded construction with strainer type fill opening.



1-8. DIFFERENCES BETWEEN MODELS. This manual covers models 20-905 and 20-910 air compressors manufactured by C and H distributors. See paragraph 1-9 for performance data and differences.

1-9. PERFORMANCE DATA.

a. Air compressor unit.

Manufacturer C & H Distributors, Inc.
 Models 20-905 and 20-910
 Operating Pressure 175 psi
 output (20-905)8 CFM
 (20-910)5 CFM
 Type Gas Engine Driven handtruck, mtd

b. Engine.

Make Military Standard
 Model (20-905) 2A016-3
 (20-910) 1A08-3
 Type 4 cycle, gasoline, overhead valve,
 air cooled
 No. of cylinders (20-905). 2
 (20-910). 1
 Bore 2250 cu. in. (5.715 cm)
 Stroke 2 in. (5.08 cm)
 Piston displacement8 cu. in. (131 cc)
 Compression ratio 6:1
 Horsepower @ 3600 rpm (20-905) 3
 (20-910) 1-1/2

c. Air compressor.

Manufacturer (20-905) Champion Co.
 (20-910) C & H Distributors
 Model (20-905) CAW-1
 (20-910) 86-131 (modified Champion
 Model CAW-1)
 Type 3 cylinder, 2 stage

1-10. MAINTENANCE DATA.

a. Compressor.

(1) Air hose.
 Length 50 feet (15.2m)
 Diameter, inside 5/16" (7.9 mm)
 Maximum pressure 200 psi (14 kg/sq cm)

(2) Compressor dimensions and weight.

Length 54-1/2" (138.5 cm)
 Width 22" (56cm)
 Height 25" (63.5 cm)
 Weight, net 165.75 lb. (75 kg.)
 Shipping weight 315.75 lb. (143 kg.)

b. Engine.

1. Model 2A016-3 – See TM 5-2805-257-14 for detailed specifications.
2. Model 1A08-3 – See TM 5-2805-256-14 for detailed specifications.

1-11. COMPRESSOR REPAIR AND REPLACEMENT STANDARDS. Table 1-1 lists the manufacturer's sizes, tolerances, desired clearances and maximum allowable wear for the Air Compressor, Model CAW 1.

NOTE

The manufacturer's dimensions and tolerances are given in inches and centimeters. Centimeters are enclosed in parentheses.