

TM 5-4310-281-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT,
GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

COMPRESSOR, RECIPROCATING, AIR, RECEIVER
MOUNTED ELECTRIC MOTOR DRIVEN, 5 CFM, 175 PSI
(CHAMPION PNEUMATIC MODEL 60CAW20HM-1)

FSN 4310-930-7147

(CHAMPION PNEUMATIC MODEL 60CAW20HM-2)

FSN 4310-832-9868



HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1968

TECHNICAL MANUAL

HEADQUARTERS

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No. 5-4310-281-15

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Including Repair Parts and Special Tools List

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Electric Motor Driven, 5 CFM, 175 PSI,
(Champion Pneumatic Model 60CAW20HM-1)
FSN 4310-930-7147
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	Page No.
General Description -----	1
Installation -----	2
Location and Mounting -----	2
Heat Coil Selection -----	2
Electrical Connections -----	2
Preparation for Use -----	3
Operation -----	3
Preventive Maintenance -----	3
Lubrication -----	4
Repair and Replacement -----	4
Special Tools -----	4
Disassembly -----	4
Belt Guard Assembly -----	4
V Belts -----	4
Pressure Switch Assmbly -----	4
Magnetic Motor Starter -----	4
Valve Assemblies -----	4
Crankshaft -----	4
Bearing Assemblies -----	4
Piston Connecting Rods -----	4
Oil Seal -----	4
Cleaning -----	4
Inspection -----	4
Repair -----	4
Reassmbly -----	4
Pressure Switch Assmbly -----	4
Magnetic Motor Starter -----	4
Valve Assemblies -----	5
Crankcase Hand Hole Plate -----	5
Crankshaft Bearing Assemblies -----	5
Piston Connecting Rods -----	5
Piston Rings -----	5
Test Procedure -----	5
Adjustment -----	5
Trouble Shooting -----	5
APPENDIX A. BASIC ISSUE ITEMS LIST -----	13
B. MAINTENANCE ALLOCATION CHART -----	18
C. REPAIR PARTS AND SPECIAL TOOLS LIST -----	30

1. GENERAL DESCRIPTION

The 60CAW20HM-1,-2 (fig. 1) is a three cylinder, reciprocating type air compressor capable of delivering 5 cubic feet per minute. The compressor assembly and associated electric motor are mounted on a frame which is welded to the air receiver, a 60 gallon steel tank. The electric motor drives the compressor assembly by means of a matched pair of V belts.

The pressure switch assembly determines cut-in and cut-out pressure for the compressor assembly. The switch can be adjusted for cut-out pressures over the range of 140 to 175 psi. The switch can also be adjusted for a 35 psi to 65 psi differential between cut-in and cut-out pressure. The safety valve assembly releases when air receiver pressure exceeds 200 psi.

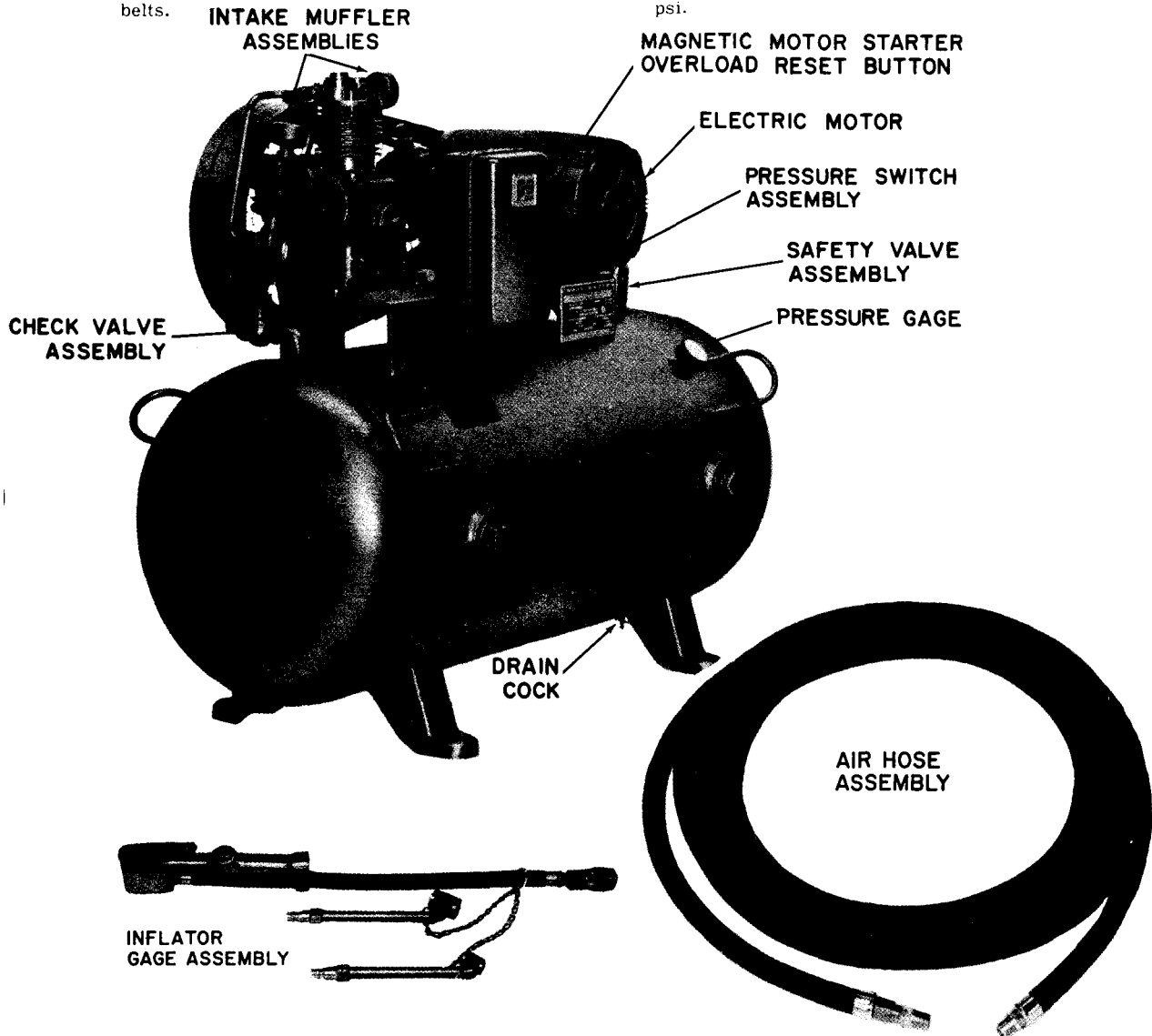


Figure 1. 60CAW20HM-1,-2) Air Compressor

Table 1. Tabulated Data (For Model 60CAW20HM-1)

Bore and Stroke	2-5/8 x 2 first stage (2 cyl); 1-3/4 x 2 second stage
CU. FT/REV	0.01252
Air Receiver Working Pressure	200 psi at -25° to +450°F
Displacement	.93 CFM
Delivery	.65 CFM
Crankcase capacity	1 pint
Shipping weight	282 lbs
Overall Dimensions	39" x 22" x 52"
Power Requirements	208-220 or 416-440 volts, 60 cps, 3 phase

2. INSTALLATION

3. LOCATION AND MOUNTING

Installation should be accomplished on a solid, level base, preferably concrete, with at least 14 inches clearance at the belt guard assembly. Figure 2 shows drilling dimensions for bolting or lagging down through bolt holes in the base feet. Shims should be used where the base is uneven. Base feet should never be pulled down to the base as this results in abnormal vibration.

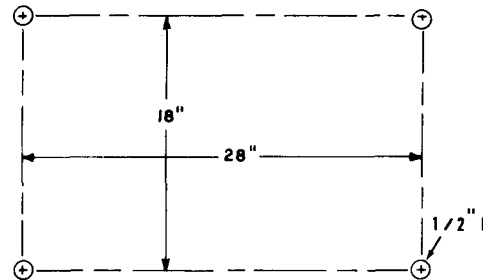


Figure 2. Drilling Dimensions for Mounting

4. HEAT COIL SELECTION (See figure 3)

The magnetic motor starter contains two pairs of overload heat coils. One pair is for 208-220 volt service and the other pair is for 416-440 volt service. Install the correct heat coils on the two thermal overloads (5 & 8, fig. 6). Secure the remaining pair of heat coils inside the magnetic motor starter box for possible future use.

5. ELECTRICAL CONNECTIONS

Ascertain that available electrical service is 208-220 or 416-440 volts, 60 cps, 3 phase. Shut off electrical service and make wiring connections shown in figure 4. Be sure that V, M, and W terminal wiring corresponds to available voltage.

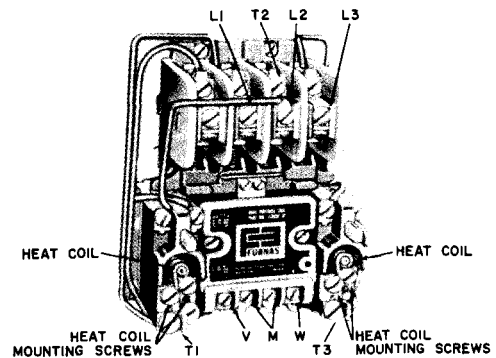


Figure 3. Magnetic Motor Starter

CAUTION

Do not allow electrical service to be turned on until crankcase has been filled with oil.

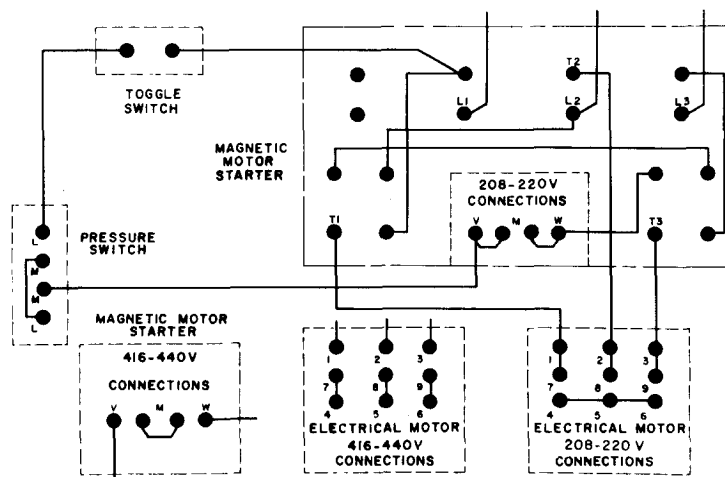


Figure 4. Electrical Wiring