

**Direct Support, General Support,
and Depot Maintenance Manual**

**COMPRESSOR, AIR, RECIPROCATING, BASE MOUNTED, 4CFM, 3000 PSI,
ELECTRIC MOTOR DRIVEN, (WALTER KIDDE MODEL 895026.
FSN 4310-460-2184
(BOGUE ELECTRIC MODEL 6703)
FSN 4310-181-8895**

This reprint includes all changes in effect at the time of publication; changes 1 and 2.
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DIRECT SUPPORT, GENERAL SUPPORT AND
DEPOT MAINTENANCE MANUAL
COMPRESSOR, AIR, RECIPROCATING, BASE MOUNTED,
4 CFM, 3000 PSI, ELECTRIC MOTOR DRIVEN
(WALTER KIDDE MODEL 895026)
FSN 4310-460-2184

NOTE

The maintenance instructions for operator and organizational maintenance of the end item are covered in TM 9-2350-230-12. The format of this manual is not in accordance with established Department of the Army specifications because of the short lead time involved. Portions of Chapter 1, plus Chapters 2 and 3, and portions of Chapter 4 have been intentionally omitted from this manual. The technical content has been provided by the manufacturer and is adequate for Direct Support, General Support and Depot Maintenance of the compressor.

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1-8. Tabulated Data.

a. General.

(1) Compressor specifications

Length, overall-----22 in.

Width, overall -----10 in.

Height, overall -----11.5 in.

Weight, dry (max.) -----58.6 lb.

(2) Compressor (basic)

Type ----- Reciprocating, radial

Stages -----4

Cylinders-----4

Weight -----34.7 lbs. dry

Bores:

1st stage-----2.5000 in.

2nd stage-----1.0620 in.

3rd stage -----0.4375 in.

4th stage -----0.3000 in.

Stroke -----0.750 in.

Rotation (facing fan end)------Clockwise

Speed (rated) -----3750 rpm max.

Operating Pressure -----3,000 psi

Capacity-----4.0 scfm with an inlet condition of
29.92 in. mercury absolute, an
ambient temperature of +60°F
and a speed of 3750 rpm max.

Temperature range ----- -65°F to +1600°F

Lubrication ----- Pressure feed

Lubricating oil - ----- FSN 9150-753-4667, use following formulation
only: Formulation 01D manufactured
by Lehigh Chemical Products Co.,
Formulation L245X manufactured by
Anderson Oil Company FSN 9150-753-4667

Oil sump capacity- ----- 3/4 pints approx.

Inlet air filter ----- 40 micron

(3) Moisture separator

Operating pressure ----- 3300 psi

Proof pressure - ----- 4950 psi

Minimum burst pressure ----- 8250 psi

Minimum accumulated water capacity - ----- 13.5 cu. in.

Temperature range ----- -65°F to +160°F

Dump ----- Automatic at compressor stop
----- and timer controlled

(4) Back pressure valve

Back pressure setting ----- 1700 ±100 psig

Proof pressure ----- 5000 psig

Burst pressure ----- 12000 psig

(5) Oil pump

Lubricant ----- FSN 9150-753-4667

Speed ----- 4200 rpm (max)

Capacity ----- 0.3 gpm at 4200 rpm

(6) Relief valve, 2nd stage

Relief pressure - ----- 550 psig

(7) Dump timer

(8) Pressure switch/relief

Operating pressure ----- 3000 psig

(1) Compressor unit

Weight (Dry)	3.8 lbs.
Burst pressure (safety disc)	5,700 to 6,700 PSIG
Air leakage at dump port	3 cc/min. maximum
Air leakage at other points	3 cc/hr
Oil leakage past sensing piston	1 cc/hr throughout 30 to 120 PSIG range.
Mounting position	Within 30% vertical position.

(5) *DC motor*

Manufacturer	Bogue Electric Mfg. Co.
Part No	MS11DA4-1
Type	Series wound
Input power required	27 VDC, nominal, 150 amps.
RPM (nominal).....	3600
Horsepower (output)	4 HP
Duty.....	Continuous
Insulation	Class F
Number of poles	4
Number of brushes	8
Mounting position	Horizontal
Method of cooling.....	Self-ventilated
Fungus resistance	Per MIL-F-13927

(6) *Timer (K2)*

Manufacturer	Tempo Instruments Inc		
Part no.	92950		
Operating voltage	18-30 VDC (27 VDC	Nom)	
Contact rating	2 amperes		
Timing cycle (timer energized)	Contacts closed for 30 minutes		
± 4.5 min.	Contacts open for 10 seconds		
± 1 sec.			

(7) *Filter assembly (electrical)*

ManufacturerBogue Electric Mfg. Co.
Part no.....B-37389

(8) *Filter capacitor (FL-1)*

Manufacturer.....Cornell Dubilier
Part no.....NF10305
Type.....Feed-thru (radio noise)
Location.....Mounted in control box

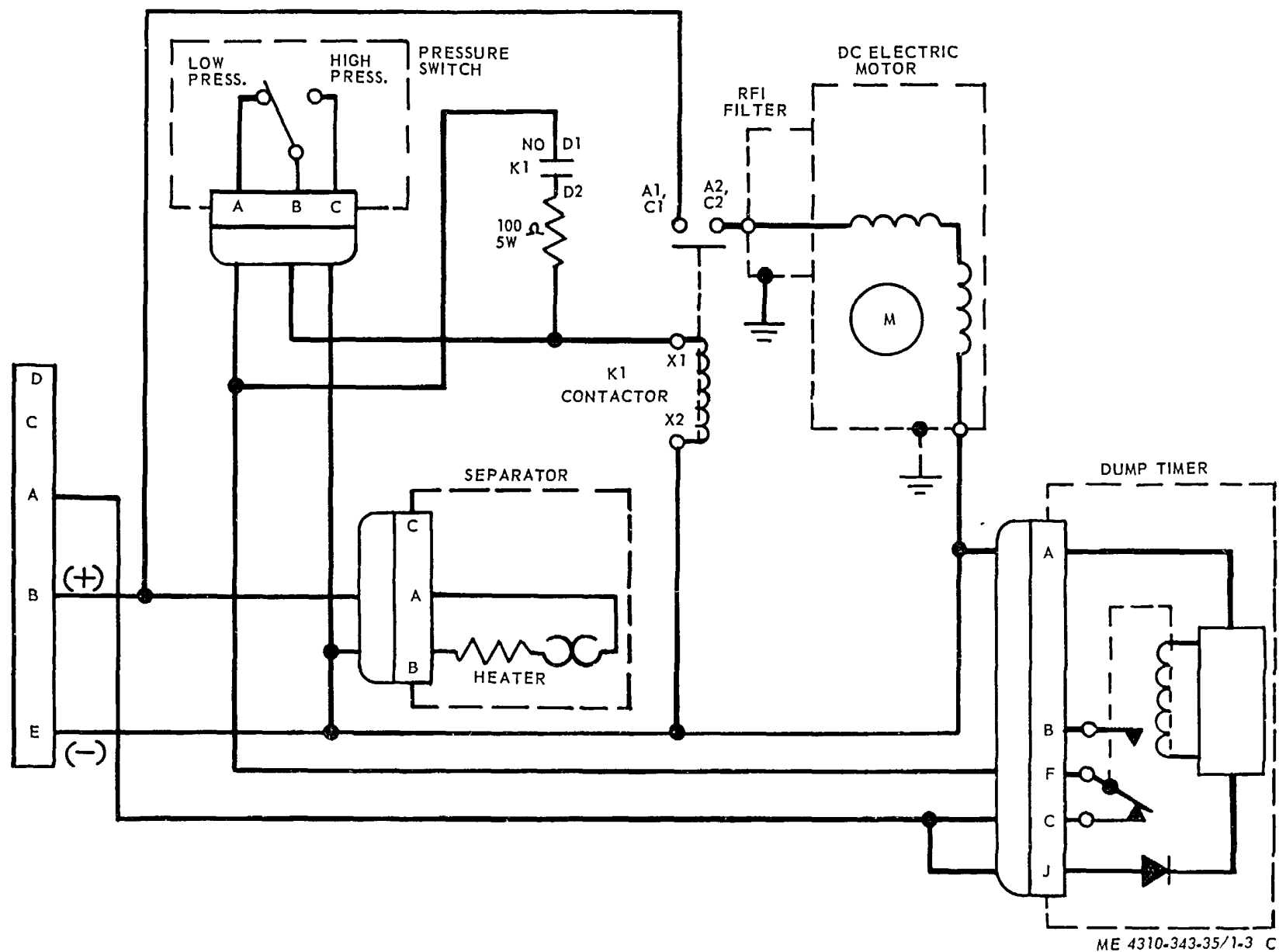
(9) *Contactor (K3)*

ManufacturerCutler Hammer
Type6041H-215
Operating voltage18-30 VDC (27 VDC Nom)
Specification.....MS24171D-1
LocationMounted in control box

(10) Relay (K1)

ManufacturerSigma Instruments Inc.
 Operating voltage18-30 VDC (27 VDC Nom)
 Part no.....33RJL1200 NC-SIL
 LocationMounted in control box

(11) *Wiring diagram*. (see figure 1-3 for wiring of Walter Kidde Model 895026).



CHAPTER 4**MAINTENANCE AND TROUBLESHOOTING****4-4. Brushes**

Inspect brushes on motor after 1,000 hours operation to determine wear factor. Do not permit brushes to become worn shorter than 7/16 inch as damage to the commutator may occur. When replacing brushes, it is most important that they be properly "seated" to the contour of the commutator. Always check to make sure that brushes are free to move in the brush holders and that the brush springs have the proper tension (14-16 oz.)

4-5. Brush Seating

To correctly seat a brush, insert a strip of thin, fine (No. 000) sandpaper, approximately 1 x 12 inches, between the brush and the commutator, with the abrasive side toward the brush. DO NOT USE EMERY. With the brush in the holder and under pressure, withdraw the sandpaper in the direction of rotation of the motor, keeping it close to the contour of the commutator. Release pressure on the brush before returning the sandpaper for the next stroke. Check progress of seating by running the machine several minutes at no load, with brushes riding on the bare commutator and observe the area of seat polished by contact. Continue sanding until at least 80% of the area of the seat shows contact when checked in this manner. Reseating of the brushes is required if brush holders are moved or replaced, or if the commutator is resurface

4-6. Commutator

Under normal operating conditions, the commutator rarely require attention. It should be kept clean and free from dirt or oil. If it becomes slightly rough or grooved due to foreign deposits, it may be polished with fine (No. 000) sandpaper or a commutator polishing stone. DO NOT USE EMERY. If the defects cannot be removed in this manner, the commutator must be turned down in a lathe. Refer to paragraph 5-6.4.

4-7. Bearings

Motor bearings should not require any maintenance during the life of the machine, however, should a bearing become defective producing excessive heating, vibration, or clicking noises, the bearing should be replaced. Refer to paragraph 5-6.3 for method of replacing defective bearings.

4-8. Control Components

Control components such as relays, timer, valves, diodes, capacitors, and resistors employed in the control circuits are considered non-repair items and should be replaced when found defective