

TECHNICAL MANUAL

**DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL**

**COMPRESSOR, RECIPROCATING; ELECTRIC,
MOTOR DRIVEN; 4CFM; 3000 PSI
(STEWART-WARNER MDL 12010A)
FSN 4310-196-1617**

HEADQUARTERS, DEPARTMENT OF THE ARMY

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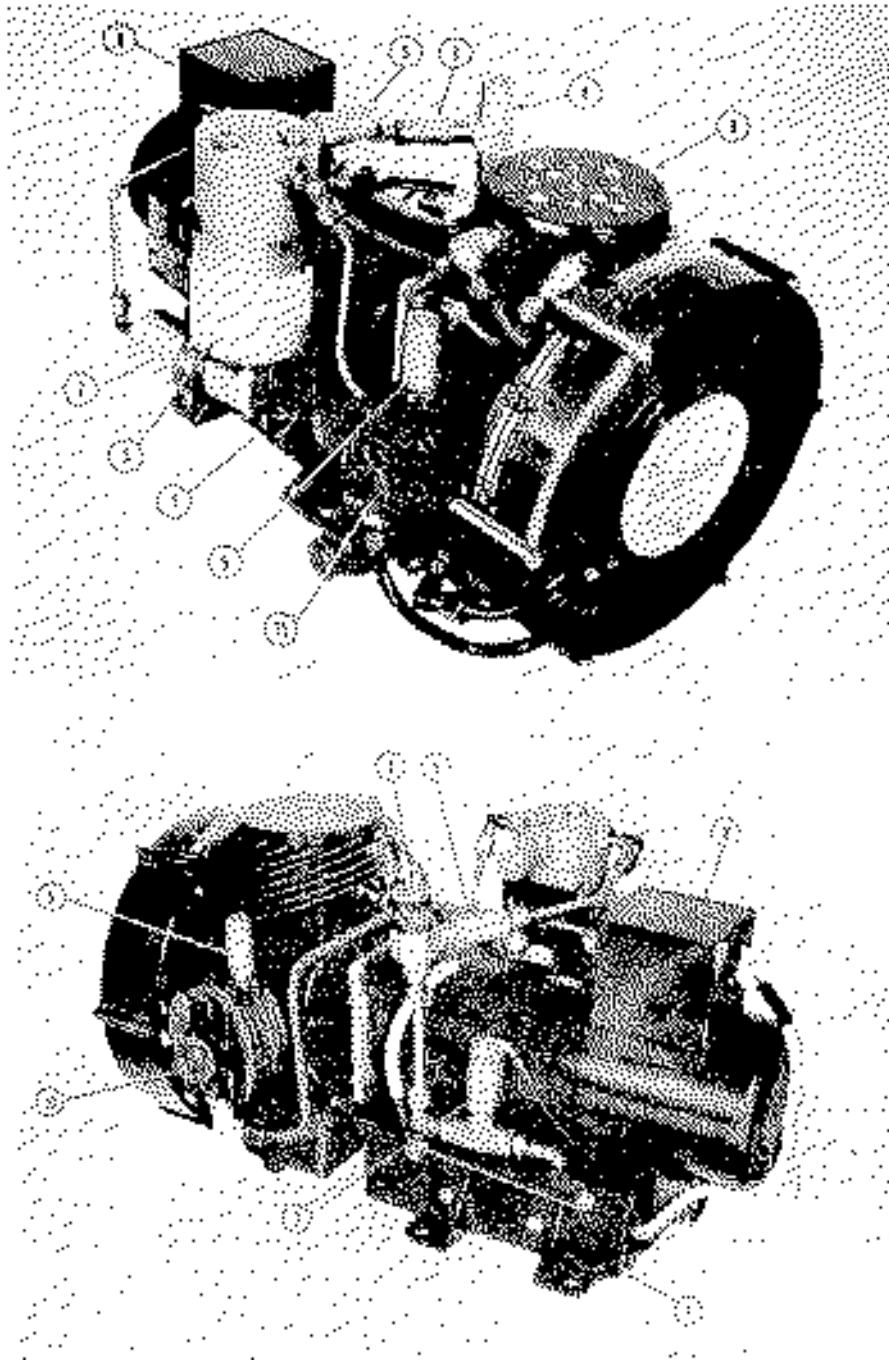
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|------------------------|--------------------|------------------------------------|
| 1. Control box | 5. Relief valve | 8. Noise filter |
| 2. Dump valve | 6. Check valve | 9. 1 st Stage cylinder |
| 3. Moisture separator | 7. Pressure switch | 10. 2 nd Stage cylinder |
| 4. Back pressure valve | | 11. 3 rd Stage cylinder |

Figure 1. Compressor Assembly

SECTION I**DESCRIPTION****1-1. INTRODUCTION**

a. Scope. These instructions are published for the information and guidance of personnel to whom the compressor is issued. Information is provided on the operation, preventive maintenance services and the direct support and general support maintenance of the equipment, accessories and components.

b. Demolition and Administrative Storage.

1. For information on the administrative storage of this equipment, refer to TM 740-90-1.
2. For information on the demolition of this equipment, refer to TM 750-244-3.

c. Direct reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to: Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Missouri 63120.

1-2. DESCRIPTION (Refer to figures 1-1 and 1-2 for schematics.)

a. The compressor assembly consists basically of a radial, three-stage, reciprocating piston-type air compressor which is directly coupled to, and driven by, a direct-current electric motor.

b. The complete package includes:

1. A moisture separator assembly which removes moisture and oil vapor from the high-pressure discharge air. The condensate collecting in the moisture separator is removed periodically during compressor operation by a

dump valve installed in the bottom of the separator chamber. The moisture separator is enclosed in an electric heater that prevents ice from forming in the separator as compressed air expands. A relief valve is installed on the moisture separator. It will protect the unit if the pressure switch fails. This relief valve will open at 3950 psig (Max.) and provide rated-flow relief.

2. A pressure switch which is installed at the outlet port will stop the motor and compressor when the system pressure reaches 3200 ± 100 psig and restart the motor when the pressure drops to 2800 psig (min.).
3. A check valve, installed upstream of back pressure valve, prevents reverse air flow to the moisture separator.
4. Pressure relief valves installed in the high-pressure pneumatic line open automatically to

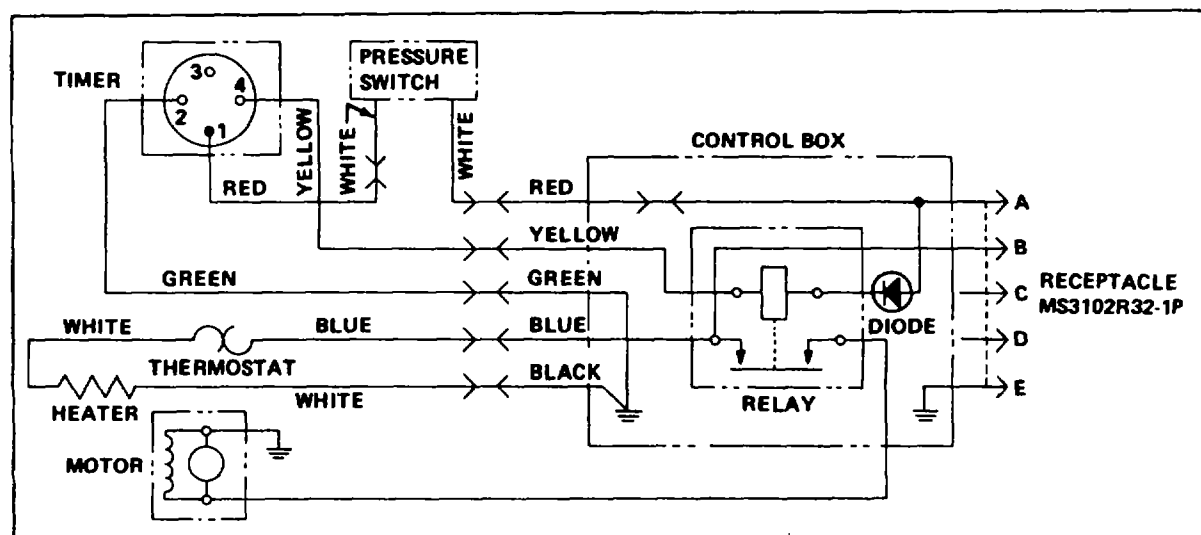


Figure 1-1. Electrical Schematic