

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INSPECTION AND TEST OF AIR AND OTHER
GAS COMPRESSORS

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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•This technical bulletin supersedes TB 43-0151, 24 August 1984.

Section I. INTRODUCTION

1. Purpose and Scope. This bulletin prescribes the inspection requirements and criteria for testing air and gas compressors up to 6000 psi (421.8 kg/sq cm) and designates the standard testing equipment (on liquid oxygen generating and charging plants, this applies only to the air compressor and air compressor accessories). This bulletin does not apply to special purpose installed systems. This bulletin is also not applicable to airbrake, air conditioners, compressed gas cylinders, or paint and insecticide systems. Inspections and tests described herein are supplementary to the prescribed preventive maintenance services performed by the using unit.

2. Use. This bulletin is to be used as a guide by qualified maintenance personnel in the periodic testing of air and gas compressors and accessories. The inspections and tests prescribed in this bulletin shall be accomplished by the appropriate using units and/or Direct Support Facilities. Recommend requirements in paragraph 3, except for checking operation of the Safety Valve, be performed by Unit Maintenance, and requirements in paragraphs 4 and 5 be performed by Direct Support Maintenance.

Section II. TEST INTERVALS AND REQUIREMENTS

3. Low Pressure Compressors (Below 500 psi (35.1 kg/sq cm)). Inspect and test at 12 month intervals or at any time a malfunction or erratic operation indicates the need (a through d below).

a. Make a detailed visual inspection of the entire unit. Particular attention should be given to the exterior conditions of the receiver, gages, unloaders, relief devices, fittings, valves, hoses, etc.

b. Install a calibrated gage on the receiver discharge shutoff valve. Suggest a Dial Pressure Gage, NSN 6685-00-063-9708 or equal.

c. Operate the compressor and check the operational gages for accuracy by comparing the pressure reading to the calibrated gage pressure reading (para 7 c). Check the operation of all valves and ensure proper operation of the unloader (para 7 b). Check the operation of the safety valve (para 4 f(4) through (13)). Utilize the above calibrated gage for the gage requirements in paragraph 4 f(5).

d. Components of the low pressure compressors shall not be removed during tests unless they are found to be defective. If removal of components or accessories is required, they shall be tested in accordance with paragraph 7 below.

4. High Pressure Compressors (501-6000 psi (35.2-421.8 kg/sq cm)).

a. The following critical components shall be removed from the compressors and tested at 12 month intervals or at any time a malfunction or erratic operation indicates the need:

- (1) All safety valves and pressure release devices.
- (2) All pressure gages.
- (3) High pressure service hoses exceeding 500 psi (35.1 kg/sq cm).