

# Agricultural Equipment Enclosure Pressurization System Test Procedure – SAE J1012 MAR80

SAE Recommended Practice  
Editorial Change March 1980

SAENORM.COM : Click to view the full PDF of J1012-198002  
**S.A.E.  
LIBRARY**

THIS IS A PREPRINT WHICH IS  
SUBJECT TO REVISIONS AND  
CORRECTIONS. THE FINAL  
VERSION WILL APPEAR IN THE  
1981 EDITION OF THE SAE  
HANDBOOK.

Society of Automotive Engineers, Inc.  
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096



**PREPRINT**

SAENORM.COM : Click to view the full PDF of J1012\_198003

**AGRICULTURAL EQUIPMENT ENCLOSURE  
PRESSURIZATION SYSTEM TEST  
PROCEDURE—SAE J1012 MAR80**

**SAE Recommended Practice**

Report of the Tractor Technical Committee, approved May 1973, editorial change March 1980.

*ed.* 1. **Purpose**—The purpose of this recommendation is to outline for agricultural equipment a procedure which will provide a uniform measurement of operator enclosure pressurization.

2. **Scope**—This recommendation establishes a uniform test procedure for evaluating performance of agricultural equipment operator enclosure pressurization systems.

3. **Definitions**

3.1 **Agricultural Equipment**—Agriculture tractors and self-propelled implements designed primarily for use in agricultural operations.

3.2 **Pressurization**—The pressure differential between the static pressure inside and outside of the operator enclosure as expressed by the height of a column of water or pascals.

3.3 **Pressurization System**—Means used to pressurize the operator enclosure and should include any components which will influence the performance of the system. Blowers, filters, duct work, heat exchangers, etc., shall be included if the pressurizer is used to provide flow through these units.

4. **Pressurization Test**—Test equipment:

4.1 A manometer to measure pressurization. Its maximum error should not exceed 10% of the reading (Ref. 7.1).

4.2 If an electrically driven blower is used, a voltmeter to monitor voltage in the system during the test is required. Its maximum error should not exceed 2% of the reading (Ref. 7.2).

4.3 If a hydraulically driven blower is used, a pressure gage to monitor hydraulic system pressure is required. Its maximum error should not exceed 2% of the reading (Ref. 7.1).

5. **Test Conditions**

5.1 The pressurizer system shall be completely powered by standard equipment on the test machine. *ed.*

5.2 All machine accessories pertinent to the operation of the enclosure, enclosure components, filters, and blowers shall be standard production parts or equivalent, adjusted within the machine manufacturer's specification limits. *ed.*

5.3 No more than one occupant may be inside the operator enclosure during the test.

6. **Test Procedure**

6.1 The operator enclosure shall be equipped with all applicable equipment, see paragraph 3.3. The pressurizer system shall be operated using maximum outside air, with maximum blower speed setting, and any automatic pressurization controls shall not be locked out. This pressurization system shall be in operation for a minimum of 15 min prior to obtaining data.

6.2 To obtain uniform results, neither the cooling nor heating systems shall be in operation during the pressurization system tests.

6.3 The ambient temperature and barometric pressure shall be recorded for reference only.

6.4 Record enclosure pressurization. **NOTE:** Avoid velocity head on manometer by keeping its outlets away from air streams.

7. **References**

7.1 ASME Power Test Code, Pressure Measurements, PTC 19.2—1972.

7.2 ASME Power Test Code, Electrical Measurements, PTC 19.6—1955.

7.3 ISO 3737—Agricultural Tractors and Self-Propelled Machines—Test Methods for Enclosure Pressurization Systems. *ed.*

SAENORM.COM : Click to view the full PDF of SAE J1012-1980