



SURFACE VEHICLE STANDARD

J2682™

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Connections for General Use and Fluid Power - Test Methods - Threadless Connections

RATIONALE

Various test clauses - 2.1.3, 5.3, 5.4, and 5.7 - require revision.

2.1.3 Military Publications:

Remove Revision H and Test Method Number since both have changed.

Change to: MIL-STD-810 Environmental Engineering Considerations and Laboratory Tests, Sand and Dust.

FOREWORD

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Threadless connections must be designed to meet these requirements under varying conditions. Testing of threadless connections to meet performance requirements provides users with a basis of assurance for determining design application and for checking compliance with their stated requirements. This standard also provides a means to evaluate functional requirements of new threadless connector configurations not yet in the marketplace.

WARNING: Some of the tests described in this document are considered hazardous; it is therefore essential that, in conducting these tests, all appropriate safety precautions are strictly adhered to. Attention is drawn to the danger of burst, fine jets (which can penetrate the skin), and energy release of expanding gases. To reduce the hazard to energy release, bleed air out of test specimens prior to pressure testing. Tests shall be set up and performed by properly trained personnel. These connectors shall not be disconnected under pressure.

1. SCOPE

This SAE Standard specifies uniform methods for the testing of threadless connections for hydraulic fluid power applications.

These connections are intended for general application and hydraulic systems on industrial equipment and commercial products. These connections shall be capable of providing leakproof connections in hydraulic systems operating from 95 kPa vacuum to working pressures specified by the manufacturer.

Since many factors influence the pressure at which a hydraulic system will or will not perform satisfactorily, it is recommended that sufficient testing be conducted and reviewed by both the user and manufacturer to ensure that required performance levels are met.

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Documents



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2. REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (U.S. and Canada only) or +1 724-776-4970 (Outside U.S. and Canada), www.sae.org.

SAE J1176 External Leakage Classifications for Hydraulic Systems

2.1.2 ISO Publications

Copies of these documents are available online at www.iso.org/store.

ISO 5598 Fluid power systems and components - Vocabulary

ISO 18869 Hydraulic fluid power - Test methods for couplings actuated with or without tools

ISO 19879 Metallic tube connections for fluid power and general use - Test methods for hydraulic fluid power connections

NOTE: Currently, there is no equivalent ISO Standard to SAE J2682; however, ISO 19879 and ISO 18869 are referenced in the test methods.

2.1.3 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

MIL-STD-810 Environmental Engineering Considerations and Laboratory Tests, Sand and Dust

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (U.S. and Canada only) or +1 724-776-4970 (Outside U.S. and Canada), www.sae.org.

SAE J2551-2 Recommended Practices for Fluid Conductor Carbon, Alloy and High Strength Low Alloy Steel Tubing Applications - Part 2: General Specifications and Performance Requirements

2.2.2 ISO Publications

Copies of these documents are available online at www.iso.org/store.

ISO 3448 Industrial liquid lubricants - ISO viscosity classification

3. DEFINITIONS

For the purpose of this document, the definitions given in ISO 5598 shall apply.