



# SURFACE VEHICLE STANDARD

J1926™-2

SEP2016

Issued 1988-08  
Revised 2016-09

Superseding J1926-2 MAR2010

Connections for General Use and Fluid Power - Ports and Stud Ends with  
ASME B1.1 Threads and O-Ring Sealing - Part 2: Heavy-Duty (S Series) Stud Ends

## RATIONALE

This document was revised in order to move the optional inch hex sizes and dimensions to Appendix B.

In an effort to standardize within a global market and ensuring that companies can remain competitive in an international market, it is the intent to convert to metric hex sizes which will:

- lead to one global system
- guide users to preferred system
- reduce complexity
- eliminate duplications

The optional inch hexes now contain the note "NOT TO BE USED FOR NEW DESIGN" in accordance with the Metric Hex Resolution approved during the March 2008 FCCTC meeting.

## FOREWORD

SAE J1926 consists of the following parts, under the general title:

Connections for general use and fluid power

Ports and stud ends with ASME B1.1 threads and O-ring sealing:

- Part 1: Port with O-Ring Seal in Truncated Housing
- Part 2: Heavy-Duty (S Series) Stud Ends
- Part 3: Light-Duty (L Series) Stud Ends

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on this Technical Report, please visit  
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These standards define performance requirements, dimensions, and designs for port and stud end connections for heavy-duty in Part 2 and light-duty in Part 3. Significant testing through 25 years of use has confirmed the performance requirements of these ports and stud ends (up through size -24). SAE 1926-2 stud ends up through size -24 were originally designed for high pressure connectors of SAE J1453 (current SAE J1453-3). Size -32 was developed later with performance verification via round robin testing by FCCTC-C1 committee members.

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. In general applications, a fluid may be conveyed under pressure. Components are connected through their threaded ports by stud ends on fluid conductor fittings to tubes/pipes, or to hose fittings and hoses.

## 1. SCOPE

This part of SAE J1926 specifies dimensions, performance requirements, and test procedures for adjustable and nonadjustable heavy-duty (S series) stud ends with ASME B1.1 threads for use in fluid power and general applications and the O-rings used with them that are currently not listed in SAE J515.

Stud ends in accordance with this part of SAE J1926 may be used at working pressures up to 63 MPa for nonadjustable stud ends and up to 41.3 MPa for adjustable stud ends. The permissible working pressure depends upon materials, design, working conditions, application, etc.

For threaded ports and stud ends specified in new designs for hydraulic fluid power applications, only ISO 6149 shall be used. Threaded ports and stud ends in accordance with ISO 1179, ISO 9974, and ISO 11926 shall not be used for new design in hydraulic fluid power applications.

NOTE: This document specifies inch as well as metric hexes for the stud ends. Therefore, any product drawing specifying stud ends in accordance with this document must specify hex type, inch or metric, to assure getting intended hex.

Stud ends or parts specified before January 1, 2010 using this standard, shall be supplied with inch hexes, unless otherwise specified.

Conformance to the dimensional information does not guarantee rated performance. Each manufacturer shall perform testing according to the specification contained in this document to ensure that components made to this document comply with the performance rating.

Appendices A and B of this document are informative.

## 2. REFERENCES

### 2.1 Applicable Documents

The following standards contain provisions which, through reference in this text, constitute provisions of this document. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this document are encouraged to investigate the possibility of applying the most recent edition of the standards indicated as follows. Members of IEC and ISO maintain registers of currently valid International Standards.

#### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J515      Specification for O-ring Materials Used with Hydraulic Connectors

SAE J1926-1   Connections for General Use and Fluid Power – Ports and Stud Ends with ASME B 1.1 Threads and O-ring Sealing – Part 1: Port with O-ring Seal in Truncated Housing

SAE J2593      Information Report for the Installation of Fluid Conductors and Connectors

## 2.1.2 ISO Publications

Copies of these documents are available online at <http://webstore.ansi.org/>

ISO 4759-1 Tolerances for fasteners - Part 1: Bolts, screws and nuts with thread diameters between 1.6 (inclusive) and 150 mm (inclusive) and product grades A, B and C

ISO 5598 Fluid power systems and components vocabulary

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

## 2.1.3 ASME Publications

Available from American Society of Mechanical Engineers, 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900, Tel: 973-882-1170, [www.asme.org](http://www.asme.org).

ASME B1.1 Unified Inch Screw Threads (UN and UNR Thread Form)

## 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 (inside USA and Canada) or +1 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J1453-3 Specification for O-ring Face Seal Connectors: Part 3 - Requirements, Dimensions, and Tests for Steel Unions, Bulkheads, Swivels, Braze Sleeves, Connectors, Caps and Connectors with SAE J1926-2 Inch Stud Ends

SAE J1926-3 Connections for General Use and Fluid Power - Ports and Stud Ends with ASME B1.1 Threads and O-ring Sealing - Part 3: Light Duty (L Series) Stud Ends

SAE J1926-4 Connector for Fluid Power and General Use - Ports and Stud Ends with ASME B1.1 Threads and O-ring Seal - Part 4: External Hex and Internal Hex Inch Port Plugs - Dimensions, Design, Test Methods and Requirements