
**Diesel engines — Fuel injection
pumps and fuel injector low-pressure
connections —**

**Part 2:
Non-threaded (push-on) connections**

*Moteurs diesels — Raccords basse pression pour pompes d'injection
de combustible et porte-injecteurs de combustible complets —*

Partie 2: Raccords non filetés (à pression)

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 34, *Propulsion, powertrain and powertrain fluids*.

This third edition cancels and replaces the second edition (ISO 13948-2:2012), which has been technically revised with the following changes:

— a normative reference has been made to ISO 4288 for the measurement of surface texture.

A list of all the parts in the ISO 13948 series can be found on the ISO website.

Introduction

It is recognized that a large variety of low-pressure connections exist on fuel injection equipment, using different sealing principles, as well as designs. This document attempts to provide the user with a common set of preferred types.

This document is divided into two parts, covering threaded connections (ISO 13948-1) and non-threaded (push-on) connections (ISO 13948-2) for use with low-pressure fuel supply and return, boost air pressure and lubricating oil supply and return.

Diesel engines — Fuel injection pumps and fuel injector low-pressure connections —

Part 2: Non-threaded (push-on) connections

1 Scope

This document specifies requirements for the connection ends of push-on connections used with fuel injection equipment.

Three types of push-on connections (types A, B and C) are described in this document.

NOTE Low-pressure connections to fuel filters are covered in other International Standards; see the bibliography. High-pressure end-connections for pumps and injectors are covered in ISO 2974 and ISO 13296.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4288, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture*.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7876 (all parts) apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Connection designs and applications

4.1 Type A: nipple connection

EXAMPLE See [Figure 1](#).

This design is intended for use directly with the mating hose (2) or in conjunction with a retaining clip around the hose (not shown) for a more secure connection.

The nipple (1) can be machined (see [Figure 4](#)), formed (see [Figure 5](#) and [Figure 6](#)) or moulded (see [Figure 7](#)).