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**Fuel injection equipment —  
Vocabulary —**

**Part 5:  
Common rail fuel injection system**

*Équipement d'injection de combustible — Vocabulaire —  
Partie 5: Système d'injection de combustible à rampe commune*



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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](http://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](http://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 of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 34, *Propulsion, powertrain, and powertrain fluids*.

This second edition cancels and replaces the first edition (ISO 7876-5:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

- additional terms, already in use worldwide, have been added to [Clause 3](#).

A list of all parts in the ISO 7876 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Since this document was published in 2004, the common rail fuel injection system has updated its functions or component performances to improve diesel engine performance and exhaust after treatment with respect to driveability, engine power, emission, fuel consumption, noise, vibration and so on. New terms are defined to describe this updated functionality.



# Fuel injection equipment — Vocabulary —

## Part 5: Common rail fuel injection system

### 1 Scope

This document establishes a vocabulary for common rail (CR) fuel injection systems for diesel (compression-ignition) engines and their components. The terms defined in this document are unique to common rail fuel injection systems, terms and definitions relating to other fuel injection systems are found in the other parts of the ISO 7876 series.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

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

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

#### 3.1

##### **common rail fuel injection system**

common rail injection system

CR fuel injection system

common rail system

CRS

high-pressure fuel injection system, comprised of the *high pressure supply pump* (3.3), the *rail* (3.9) or the *distribution block* (3.10), and the *CR injectors* (3.5).

Note 1 to entry: It is also characterized by the following features:

- the fuel pressure of a *rail* (3.9) or a *distribution block* (3.10) may be varied independently from engine speed and load and is electronically controlled;
- the start and the end of the injections are controlled by an electrical valve at the *CR injector* (3.5);
- the energy for the injections is supplied to the *CR injectors* (3.5) from a *rail* (3.9) or a *distribution block* (3.10) with highly pressurized fuel;
- The injected fuel is supplied from a *rail* (3.9) or a *distribution block* (3.10).

#### 3.2

##### **fuel feed pump**

low-pressure pump delivering fuel from the tank via one or several filters to the high-pressure-generating components