
**Road vehicles — Information for
remote diagnostic support —
General requirements, definitions
and use cases**

*Véhicules routiers — Information pour support de diagnostic à
distance — Exigences générales, définitions et cas d'utilisation*

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 20080:2019

<https://standards.iteh.ai/catalog/standards/iso/823a5108-cb29-42e6-969f-809fd08b3b89/iso-20080-2019>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 20080:2019

<https://standards.iteh.ai/catalog/standards/iso/823a5108-cb29-42e6-969f-809fd08b3b89/iso-20080-2019>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Actors.....	2
4 Symbols and abbreviated terms	4
5 Overview and general requirements for the remote diagnostic process and support	5
5.1 Remote diagnostic application and ExVe interaction.....	5
5.2 Content and use case scenarios.....	5
5.2.1 Capability to perform use cases.....	5
5.2.2 Use case scenarios.....	5
5.3 Basic principles.....	5
5.4 Access to information for remote diagnostic support.....	6
5.5 Error conditions and handling.....	6
5.5.1 General.....	6
5.5.2 Communication interface specific errors.....	7
5.5.3 General errors for use cases.....	7
5.5.4 Specific errors for use cases.....	7
5.6 Conditions for conformance with this document.....	7
6 Use cases for remote diagnostic support	7
6.1 General.....	7
6.2 Use Case 01 — Use case discovery.....	8
6.3 Use Case 02 — Identify ECUs installed in the vehicle.....	9
6.4 Use Case 03 — Read Diagnostic Trouble Codes (DTCs).....	10
6.5 Use Case 04 — Read readiness codes.....	12
6.6 Use Case 05 — Read DTC snapshot data.....	13
6.7 Use Case 06 — Read selected diagnostic parametric dynamic data.....	14
6.8 Use Case 07 — Read malfunction indicator status.....	15
6.9 Use Case 08 — Clear DTCs.....	16
6.10 Use Case 09 — Adjust the setting of a selected system.....	17
6.11 Use Case 10 — Activation of actuator(s).....	18
6.12 Use Case 11 — Activate a self-test routine.....	19
Annex A (informative) Implementation based on ISO 20078 — Road Vehicles — Extended Vehicle (ExVe) — Web Services	20
Bibliography	61

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 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.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

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.

<https://standards.iteh.ai/catalog/standards/iso/823a5108-cb29-42e6-969f-809fd08b3b89/iso-20080-2019>

Introduction

Remote diagnostic support is used for diagnosing vehicles at a distance prior to repair work, thereby minimizing the time spent in workshops, reducing disturbances on the road network, reducing inconvenience for the vehicle users and reducing cost for vehicle owners.

This document defines remote diagnostic support and the constraints that need to be respected. This document may also serve as a reference for other standards that relate to remote diagnostic support.

This document will facilitate exchange of information for remote diagnostic support between the different stakeholders (including vehicle manufacturers and independent operators) of the vehicle repair industry.

iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO 20080:2019

<https://standards.iteh.ai/catalog/standards/iso/823a5108-cb29-42e6-969f-809fd08b3b89/iso-20080-2019>

Road vehicles — Information for remote diagnostic support — General requirements, definitions and use cases

1 Scope

This document specifies general requirements and constraints applicable to a remote diagnostic process, the use cases and scenarios to support the implementation of a remote diagnostic process using a standardized interface of the ExVe.

It concerns:

- the road vehicles with four or more wheels designed and constructed primarily for the carriage of persons that are defined as Category 1 vehicles in the United Nations Special Resolution No.1 in TRANS/WP.29/1045, as last amended on 19 June 2012, and
- the road vehicle with four or more wheels designed and constructed primarily for the carriage of goods that are defined as Category 2 vehicles in the United Nations Special Resolution No.1 in TRANS/WP.29/1045, as last amended on 19 June 2012,

where these road vehicles are still in accordance with the specifications of the vehicle manufacturer.

This document does not define the interfaces provided by the ExVe nor the internal implementation inside the ExVe.

Processes like repair, prognostics, monitoring, configuration, re-programming and variant coding are not part of this document.

The prerequisites (e.g. authentication and authorization) for all use cases are not covered within this document. A possible specification of the required content for the implementation of a remote diagnostic application using the web interface of the ExVe according to ISO 20078 is given in [Annex A](#).

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 20077-1:2017, *Road Vehicles — Extended vehicle (ExVe) methodology — Part 1: General information*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 <https://www.iso.org/obp>