INTERNATIONAL STANDARD

ISO 20080

First edition
2019-03

AMENDMENT 1
2021-11

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

AMENDMENT 1

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

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Reference number
ISO 20080:2019/Amd.1:2021(E)

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Published in Switzerland

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

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Annex A

Replace Annex A with the following:

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Annex A
(informative)

Implementation based on ISO 20078 – Road Vehicles – Extended Vehicle (ExVe) – Web Services

A.1 Introduction

A.1.1 General

This annex contains a web service specification of the use cases listed in this document. The web service specification is based on the ISO 20078:2021 series. All web services are defined as REST APIs, using JSON for the transfer of content.

The ISO 20078:2021 series is indispensable for implementing web services according to this annex.

A.1.2 Security

All REST APIs are using OAuth2 compatible framework for access control, OpenID Connect compatible framework for identification purposes and HTTPS for securing the transfer, see ISO 20078-3:2021 for details. The exact details of how to obtain access is described by each offering party.

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A.1.3 Error codes

A.1.3.1 ISO 20078

The HTTP status codes (error codes) listed for each REST API are described in ISO 20078-2:2021.

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A.1.3.2 General error conditions

General error conditions are valid for all use cases. Table A.1 presents the mapping of error conditions in 5.5 to REST API errors:

Table A.1 — Mapping of error conditions to REST API

Error condition	HTTP status code	ExveErrorId	Example
Request currently not possible to perform by the ExVe	503	20080-1000	{ "dtcReadout": { "id": "abcde-12345-ghjke-67474", "messageTimestamp": "2016-02-24T09:23:46Z", "exveErrorId": "20080-1000", "exveErrorMsg": "Request currently not possible to perform by the ExVe", "vehicleId": "12345678909876543" } }

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A.1.3.3 Use case specific error conditions

Use case specific errors are mapped to HTTP status codes in each REST API.

A.2 Resources

A web service is exposing access to one or more resources. To be able to access a resource through a web service, access needs to be granted. This can be done either directly to the resource or through a container.

Table A.2 maps the ISO 20080 (this document) use cases to REST APIs and resources. In some cases, mapping of a use case to a REST API provides little standardization benefit, as it is highly offering party specific.

Table A.2 — Mapping of use cases to REST APIs

UC	Use case name	REST API	Resource(s)	Comment
01	Use case discovery	resourceReadout	Not applicable	
02	Identify ECUs installed in the vehicle	ecuReadouts	ECU readout	
03	Read diagnostic trouble codes (DTCs)	dtcReadouts	DTC readout	
04	Read readiness codes	readinessCodeReadouts	Readiness code readout	
05	Read DTC snapshot data	dtcSnapshotReadout	DTC snapshot readout	
06	Read selected diagnostic parametric dynamic data	parameterReadout	Parameter readout	
07	Read malfunction indicator status	malfunctionIndicatorReadout	Malfunction indicator readout	
08	Clear DTCs	clearDtcJob	Clear DTC job	
09	Adjust the settings of a selected system	Not applicable/no standardized API due to differences between offering parties.	Not applicable	System setting input and result are offering party specific.
10	Activation of actuators	Not applicable/no standardized API due to differences between offering parties.	Not applicable	Actuator input and result are offering party specific.
11	Activate a self-test routine	Not applicable/no standardized API due to differences between offering parties.	Not applicable	Self-test input and result are offering party specific.

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ISO 20078-2:2021 defines new syntax for resource versioning (used in Accept and Content-Type HTTP headers). Existing implementations of ISO 20080 based on the ISO 20078:2019 series version can still be used. For new implementations, support of the ISO 20078:2021 series is recommended (see Table A.3 for details).

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