# ISO 20077-1:2017-12 (E)

## Road Vehicles - Extended vehicle (ExVe) methodology - Part 1: General information

## Contents

Page


**Foreword** ..... **iv**

**Introduction** ..... **v**

**1 Scope** ..... **1**

**2 Normative references** ..... **1**

**3 Terms and definitions** ..... **1**

**4 Abbreviated terms** ..... **5**

**5 The extended vehicle** ..... **5**
5.1 Background ..... 5
5.2 The “extended vehicle” concept ..... 7
5.3 The design constraints applicable to an extended vehicle ..... 10
5.4 The areas where the extended vehicles are expected to be used ..... 10

**6 ISO standards dealing with the extended vehicles** ..... **11**
6.1 General ..... 11
6.2 Generic ExVe standards: The ISO 20077 series ..... 12
6.2.1 Content of the ISO 20077 series ..... 12
6.2.2 ISO 20077-2: The ISO methodology standard for designing an extended vehicle ..... 12
6.3 Standards related to ExVe interfaces ..... 14
6.3.1 Content of the standards related to ExVe interfaces ..... 14
6.3.2 Standards defining an ExVe interface in the case of web services ..... 14
6.4 Standards related to ExVe use case clusters ..... 15
6.4.1 Content of the standards related to ExVe use case clusters ..... 15
6.4.2 Example of the ISO 20080 project on remote diagnostics ..... 15
6.5 Practical usage of the extended vehicles standards ..... 15
6.5.1 Example of designing an extended vehicle for remote diagnostics purposes ..... 15
6.5.2 Generalization ..... 17

**Annex A** (informative) **Diagnostic and prognostic processes — Practical cases: The malfunction of an air conditioning system** ..... **18**

**Annex B** (informative) **Practical usage of the extended vehicles standards (Generalization)** ..... **21**

**Bibliography** ..... **23**