

ISO 15031-4:2014-02 (E)

Road vehicles - Communication between vehicle and external equipment for emissions-related diagnostics - Part 4: External test equipment

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols, and abbreviated terms	2
3.1	Terms and definitions	2
3.2	Abbreviated terms	2
3.3	Symbols	3
4	Conventions	3
5	Document overview	3
6	Required functions of the external test equipment	5
7	Communication protocols	5
8	Connections to the vehicle	5
9	Network access	6
9.1	Automatic determination of communication interface	6
9.2	Multiple tester communication	7
9.3	Handling of no response from the vehicle	8
9.4	Handling of multiple responses from the vehicle	8
9.5	Message structure	9
9.6	Diagnostic trouble codes monitoring	9
9.7	Obtaining and displaying OBD emissions-related current data, freeze frame data, and test parameters and results	9
9.8	Code clearing	10
9.9	On-board diagnostic evaluations	10
9.10	Use of StopCommunication service associated with ISO 14230-4 (optional)	10
10	User interface	10
10.1	Display	10
10.2	User input	11
11	Power requirements	11
11.1	Vehicle battery voltage support	11
11.2	Vehicle battery current consumption	12
12	Electromagnetic compatibility (EMC)	12
13	Conformance testing	12
Annex A (informative)	Recommended external test equipment common user interfaced displays	13
Annex B (normative)	Initialization and identification of ISO 14230-4/ISO 9141-2 protocols	26
Bibliography		31