ISO 4138:2021-09 (E)

Passenger cars - Steady-state circular driving behaviour - Open-loop test methods

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Principle 1
4.1 Test methods 1
4.2 Equivalence of test methods 2

5 Variables 2
5.1 Reference system 2
5.2 Measurement 2

6 Measuring equipment 3
6.1 Description 3
6.2 Transducer installation 3
6.3 Data processing 3

7 Test conditions 3

8 Test procedure 4
8.1 Warm-up 4
8.2 Initial driving condition 4
8.3 General test description 4
8.4 Method 1 -- Constant radius 4
8.4.1 Description 4
8.4.2 Procedure 5
8.5 Method 2 -- Constant steering-wheel angle 5
8.5.1 Description 5
8.5.2 Procedure 5
8.6 Method 3 -- Constant speed 6
8.6.1 Description 6
8.6.2 Procedure 6

9 Data analysis 7
9.1 General 7
9.2 Lateral acceleration 7
9.3 Path radius 8

10 Data evaluation and presentation of results 8
10.1 General 8
10.2 Plotted results (see also Annex A) 8
10.3 Evaluation of characteristic values 8
10.3.1 General 8
10.3.2 Evaluation of gradients -- Differentiation 9
10.3.3 Normalization of results -- Comparison of results from different vehicles 10
10.3.4 Normalized steady-state properties 11

Annex A (normative) Presentation of results 13

Annex B (normative) Determination of overall (static) steering ratio 19

Annex C (informative) General information -- Theoretical basis for the test methods 20

Bibliography 21