ISO 21994:2022-11 (E)

Passenger cars - Stopping distance at straight-line braking with ABS - Open-loop test method

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Principle 1

5 Variables 2
5.1 Reference system 2
5.2 Variables to be measured 2

6 Measuring equipment 2
6.1 Description 2
6.2 Transducer installation 3
6.3 Calibration 3
6.4 Data processing 3

7 Test conditions 3
7.1 General test conditions 3
7.2 General data 3
7.3 Test track 4
7.4 Environmental conditions 4
7.5 Test vehicle 4
7.5.1 General vehicle condition 4
7.5.2 Tyres 4
7.5.3 Braking system 5
7.5.4 Loading conditions of the vehicle 5

8 Test procedure 5
8.1 Test preparation 5
8.1.1 Defining the measurement distance 5
8.1.2 Conditioning tyres and brake system 5
8.2 Measurements 6
8.2.1 Brake disc temperature 6
8.2.2 Initial driving condition 6
8.2.3 Brake pedal actuation 6
8.2.4 Conditions during braking 7
8.2.5 Number of measurements 7

9 Data evaluation and presentation of results 7
9.1 General 7
9.2 Nomenclature of distances and decelerations 8
9.3 Determination of normalized stopping distance sA100,norm 8
9.3.1 Determination of mean deceleration of a single test run 8
9.3.2 Determination of the normalized stopping distance of a single test run 9
9.3.3 Determination of mean deceleration and mean normalized stopping distance 9

9.4 Determining of ABS-braking distance sL90,norm(100) (optional) 9
9.5 Determination of normalized build-up distance sF10,norm (optional) 10

Annex A (informative)Testreport-Generaldata 11

Annex B (informative)Testreport-Testconditionsandresults 13

Annex C (informative)Testsequence,specifictermsandbackgroundinformation 15

Annex D (normative) Method for determination of FABS 20

Annex E (normative) Requirements for measurements and measuring equipment 24

Annex F (normative) Structure of the stopping distance calculation 26

Bibliography 27