

ISO 15037-3:2022-05 (E)

Road vehicles - Vehicle dynamics test methods - Part 3: General conditions for passenger cars ride comfort tests

Contents		Page
Foreword		v
Introduction		vi
1 Scope		1
2 Normative references		1
3 Terms and definitions		1
4 Variables		2
4.1 Reference system.....		2
4.2 Variables to be determined.....		2
5 Measuring equipment		2
5.1 Description.....		2
5.2 Transducer installations.....		3
5.3 Data processing.....		4
6 Test conditions		4
6.1 General.....		4
6.2 Test track.....		4
6.3 Wind velocity.....		4
6.4 Test vehicle.....		4
6.4.1 General data.....		4
6.4.2 Tyres.....		5
6.4.3 Operating components.....		5
6.4.4 Loading conditions of the vehicle.....		5
6.4.5 Drivetrain conditions of the vehicle.....		5
6.4.6 Active systems.....		6
7 Test methods		6
7.1 General.....		6
7.2 Primary ride.....		6
7.2.1 General.....		6
7.2.2 Random disturbances.....		6
7.3 Secondary ride.....		6
7.3.1 General.....		6
7.3.2 Random disturbances.....		7
7.3.3 Periodic disturbances.....		7
7.4 Impact isolation.....		7
8 Data analysis		7
8.1 Frequency weighting filters application (see ISO 2631, ISO 8041 and ISO 5349).....		7
8.1.1 General.....		7
8.1.2 Health application.....		8
8.1.3 Comfort application.....		8
8.1.4 Perception application.....		8
8.1.5 Motion sickness application.....		8
8.2 Analysis techniques for random input tests: frequency domain.....		8
8.2.1 Power spectral density.....		8
8.2.2 Transfer function.....		9
8.3 Analysis techniques for single events: time domain.....		10
8.3.1 Overall characterization - Global energy parameters.....		10
8.3.2 Single axle characterization.....		11

Annex A (normative) Test report — General data 12
Annex B (normative) Test report — Test conditions..... 16
Annex C (informative) Transducers and their installations..... 18
Bibliography..... 20