

# ISO 15037-3:2022-05 (E)

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

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>v</b>
<b>Introduction</b> .....		<b>vi</b>
<b>1 Scope</b> .....		<b>1</b>
<b>2 Normative references</b> .....		<b>1</b>
<b>3 Terms and definitions</b> .....		<b>1</b>
<b>4 Variables</b> .....		<b>2</b>
4.1 Reference system.....		2
4.2 Variables to be determined.....		2
<b>5 Measuring equipment</b> .....		<b>2</b>
5.1 Description.....		2
5.2 Transducer installations.....		3
5.3 Data processing.....		4
<b>6 Test conditions</b> .....		<b>4</b>
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
<b>7 Test methods</b> .....		<b>6</b>
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
<b>8 Data analysis</b> .....		<b>7</b>
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**