



**EA MLA Signatory**  
**Český institut pro akreditaci, o.p.s.**  
(Czech Accreditation Institute)  
**Hájkova 2747/22, Žižkov, 130 00 Praha 3**

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products and on changes and amendments to some Acts, as amended

# CERTIFICATE OF ACCREDITATION

No. 656/2025

**ŠKODA TRANSPORTATION a.s.**  
**with registered office Emila Škody 2922/1, Jižní Předměstí, 301 00 Plzeň**  
**Company Registration No. 62623753**

for the Testing Laboratory No. 1193  
Testing Laboratory of Rolling Stock

Scope of accreditation:

Tests of rolling stock, trams, trolleybuses, special railway vehicles and their parts to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the abovementioned Accredited Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Accredited Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited conformity assessment body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 301/2023 of 12/06/2023, and/or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **07/01/2027**

Prague: 17/12/2025



Signed in the Czech original:  
Zdeňka Drdová on 17/12/2025

Jan Velíšek  
Director of the Department  
of Testing and Calibration Laboratories  
Czech Accreditation Institute

This translation of the Czech original has been issued by: Eliška Frycová

**The Appendix is an integral part of  
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*The laboratory applies a flexible approach to the scope of accreditation.*

*The current list of activities carried out within the flexible scope is available on the laboratory's website [www.skodagroup.com/cs/reference/akreditovana-zkusebni-laborator-zldv](http://www.skodagroup.com/cs/reference/akreditovana-zkusebni-laborator-zldv) in the form of the „List of activities within the flexible scope of accreditation“.*

*The laboratory provides opinions and interpretations of the test results.*

*Detailed information on activities within the scope of accreditation (source literature) is given in the section „Specification of the scope of accreditation“.*

**Tests:**

Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
1*	Static strength test - measurement of force, relative elongation and length	ZLDV 01 (TSI LOC&PAS, cl. 4.2.2.4, 4.2.3.5.1; ČSN EN 12663-1+A2; ČSN EN 12663-2+A1; ČSN EN 13749+A1; ČSN 28 1300, čl. 5.2.4; ČSN 28 1310, čl. 9.2.3; ČSN 30 0250, čl. 5.2.12; ČSN EN 17149-1; ČSN EN 17149-2; DVS 1608; DVS 1612; VDV 152; FKM Guideline); ČSN EN 12663-1+A2; ČSN EN 12663-2+A1; ČSN EN 13749+A1; VDV 152	Bodies and bogies for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
2*	Driving strength test - measurement of relative elongation and running velocity	ZLDV 02 (TSI LOC&PAS, cl. 4.2.2.4, 4.2.3.5.1; ČSN EN 12663-1+A2, cl. 5.6, 6.6.4, 6.6.5, 6.6.6, 6.7.5, 7.3, 8.3c, 9.3.3.4; ČSN EN 12663-2+A1, cl. 6.2, 9.3.3.4; ČSN EN 13749+A1; ČSN EN 17149-1; ČSN EN 17149-3; ČSN 28 1300, cl. 5.2.5; ČSN 28 1310, cl. 9.2.4;	Bodies and bogies for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
		ČSN 30 0250, cl. 5.2.12; DVS 1608; DVS 1612; VDV 152; FKM Guideline; IIWRecommendations)		
3*	Test of the vehicle adaptability to extreme distortion of the track - measurement of mass, force and length	ZLDV 03 (ČSN EN 14363+A2, cl. 6; ČSN 28 1300, cl. 5.2.6; ČSN 28 1310, cl. 9.2.8; TSI LOC&PAS, cl. 4.2.3.4.1)	Railway vehicles, tramway vehicles, special way vehicles (metro)	A, D
4*	Test of running characteristics and protection against derailing - measurement of force, acceleration and running velocity	ZLDV 04 (ČSN EN 14363+A2, cl. 7; ČSN 28 1310, cl. 9.2.9; TSI CR LOC&PAS, cl. 4.2.3.4.2; TSI LOC&PAS, cl. 4.2.3.4.2, 6.2.3.4; TSI HS RST, cl. 4.2.3.4.1, cl. 4.2.3.4.2; UIC 518); ČSN EN 14363+A2, cl. 7	Railway vehicles, tramway vehicles, special way vehicles (metro)	-
5*	Determination of equivalent conicity - length measurement	ZLDV 05 (ČSN EN 15302; UIC 519); ČSN EN 15302; UIC 519	Railway vehicles, tramway vehicles, special way vehicles (metro)	-
6*	Run quality test - measurement of acceleration and running velocity	ZLDV 06 (ČSN 28 1300, cl. 4.1.6.2, 5.2.7; ČSN 28 1310, cl. 5.1.1.3, 9.2.10; STO SDS OPŽT-05-2010)	Railway vehicles, tramway vehicles, special way vehicles (metro)	A, D

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7*	Curve passability test - length measurement	ZLDV 07 (TSI CR LOC&PAS, cl. 4.2.3.6; TSI LOC&PAS, cl. 4.2.3.6; TSI HS RST, cl. 4.2.3.7; ČSN 28 1300, cl. 5.2.8; ČSN 28 1310, cl. 9.2.7; ČSN EN 50215, cl. 8.2.2.2, 8.2.2.3; ČSN EN IEC 61133, cl. 8.2.2.2, 8.2.2.3)	Railway vehicles, tramway vehicles, special way vehicles (metro)	
8*	Measurement of length, force, time and acceleration	ZLDV 08 (TSI PRM (2008/164/ES), cl. 4.2.2.12.3.3, 4.2.2.12.3.4, 4.2.2.12.3.5, 4.2.2.12.3.6, 4.2.2.12.3.7, 4.2.2.12.3.8, 4.2.2.12.3.9; TSI PRM, cl. 4.2.2.12, 5.3.2.8, 5.3.2.9, 5.3.2.10; ČSN EN 14752, cl. 4.2.2, 4.11, 5.2.2.2, 5.4; VDV 157, cl. 4); ČSN EN 14752, cl. 4.2.2, 4.11, 5.2.2.2, 5.4; VDV 157, cl. 4	Boarding aids for railway vehicles, railway vehicles, tramway vehicles, special way vehicles (metro)	A, D
9*	Amplitude test - measurement of length and acceleration	ZLDV 09 (TNŽ 28 1010, cl. 40)	Railway vehicles, tramway vehicles, special way vehicles (metro)	-
10*	Noise test - measurement of sound pressure level, running velocity, temperature, relative humidity, atmospheric pressure and air flow velocity	ZLDV 10 (ČSN EN ISO 3381; ČSN EN ISO 3095; ČSN ISO 5128; ČSN 28 1300, cl. 4.1.5, 5.2.9; ČSN 28 1310, cl. 4.12.2, 9.2.14; ČSN 30 0250, cl. 4.2.5, 5.4.10; ČSN EN 50215; cl. 8.19, 9.17; ČSN EN IEC 61133, cl 8.19, 9.17; ČSN EN 13129-1:2004, cl. 9.4;	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
		ČSN EN 13129-2:2005, cl. 8.4; ČSN EN 14750-1, cl. 10.5; ČSN EN 14750-2, cl. 9.3; ČSN EN 14813-1+A1, cl. 10.4; ČSN EN 14813-2+A1, cl. 9.3; ČSN EN 15153-2; ČSN EN 15153-4; ČSN EN 17285; ECE 51 as amended on 01/ 06/ 1995; ECE 138; UIC 567, cl. 2.1.2.3, 2.1.2.4; UIC 553, cl. 7.2; TSI NOI; TSI LOC&PAS, cl. 2.1 p.c, 4.2.9.1.1 p.2, 4.2.9.3.4 p.5, 4.2.7.2; TSI PRM, (1300/2014), Amendment G VDV 154; VDV 230, cl. 10; OCT 24.050.18-82); ČSN EN ISO 3381; ČSN EN ISO 3095; ČSN ISO 5128; TSI NOI		
11*	Vibration test - measurement of running velocity, acceleration and time	ZLDV 11 (ČSN 28 1300, cl. 4.1.6.1, 5.2.10; ČSN 28 1310, cl. 9.2.15; ČSN 30 0250, cl. 4.1.6.1, 5.4.11; ČSN ISO 2631-1; ČSN EN ISO 5349-1; ČSN EN ISO 5349-2; ČSN EN 12299; ČSN EN 50215, cl. 8.19; ČSN EN IEC 61133, cl. 8.19; DIN 5566-1, cl. 6.1.1;	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
		OST 24.050.28-81); ČSN EN 12299		
12*	Measurement of leakage currents - voltage measurement	ZLDV 12 (ČSN 30 0250, cl. 5.3.3; ČSN 33 2000-4-41)	Trolley-bus route vehicles	-
13*	EMC test - measurement of magnetic field strength and electric field strength	ZLDV 13 (ČSN EN 50121-3-1; ČSN EN 50121-2; ČSN EN 50215, cl. 9.15; ČSN EN IEC 61133, cl. 9.15; ČSN 28 1300, cl. 5.3.16; ČSN 28 1310, cl. 9.3.12; ČSN 30 0250, cl. 5.3.11; TSI LOC&PAS, cl. 4.2.3.3.1); ČSN EN 50121-3-1; ČSN EN 50121-2	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
14*	Test by abrupt changes of supply voltage - measurement of voltage, current and running velocity	ZLDV 14 (ČSN EN 50215; cl. 9.16.2, 9.16.3; ČSN EN IEC 61133, cl. 9.16.2, 9.16.3; ČSN 28 1300, cl. 5.3.7; ČSN 28 1310, cl. 9.3.7; ČSN 30 0250, cl. 5.3.4)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
15*	Test by short circuit in the contact line - measurement of voltage, current and running velocity	ZLDV 15 (ČSN EN 50215, cl. 9.16.5; ČSN EN IEC 61133, cl. 9.16.5; ČSN 28 1300, cl. 5.3.8; ČSN 28 1310, cl. 9.3.8; ČSN 30 0250, cl. 5.3.5)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
16*	Test by short circuit - measurement of voltage, current and running velocity	ZLDV 16 (ČSN 28 1300, cl. 5.3.9.1, 5.3.9.2; ČSN 28 1310, cl. 9.3.9; ČSN 30 0250, cl. 5.3.6; TSI LOC&PAS, cl. 4.2.8.2.10; ČSN EN 50388, cl. 11); ČSN EN 50388, cl. 11	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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<b>Ordinal number<sup>1</sup></b>	<b>Test procedure / method name</b>	<b>Test procedure / method identification<sup>2</sup></b>	<b>Tested subject</b>	<b>Degrees of freedom<sup>3</sup></b>
17*	Measurement of internal overvoltage - measurement of voltage and running velocity	ZLDV 17 (TNŽ 28 1010, cl. 61; ČSN 28 1300, cl. 5.3.10; ČSN 28 1310, cl. 9.3.10; ČSN 30 0250, cl. 5.3.7; TSI LOC&PAS, cl. 4.2.8.2.10; ČSN EN 50388, cl. 11); ČSN EN 50388, cl. 11	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
18*	Measurement of voltage drops - measurement of voltage and current	ZLDV 18 (ČSN 28 1300, cl. 5.3.11; ČSN 28 1310, cl. 9.3.11; ČSN 30 0250, cl. 5.3.8)	Tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
19*	Measurement of traction and braking characteristics - measurement of running velocity, voltage, current and force	ZLDV 19 (ČSN EN 50215; cl. 9.2; ČSN EN IEC 61133, cl. 9.2; ČSN 28 1310, cl. 9.4.1; TSI LOC&PAS, cl. 4.2.8.1)	Railway vehicles, special way vehicles (metro)	A, D
20*	Measurement of energy characteristics - measurement of running velocity, voltage and current	ZLDV 20 (ČSN EN 50215, cl. 9.3; ČSN EN IEC 61133, cl. 9.3; ČSN 28 1300, cl. 5.3.15; ČSN 28 1310, cl. 9.4.2; ČSN 30 0250, cl. 5.3.10; TSI LOC&PAS, cl. 4.2.8.2)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
21*	Adhesion test - measurement of running velocity, voltage, current and force	ZLDV 21 (ČSN EN 50215, cl. 9.2; ČSN EN IEC 61133, cl. 9.2; ČSN 28 1310, cl. 9.4.1; TSI LOC&PAS, cl. 4.2.8.1)	Railway vehicles, tramway vehicles, special way vehicles (metro)	A, D
22*	Test of running resistance - measurement of running velocity	ZLDV 22 (ČSN EN 50215, cl. 9.6; ČSN EN IEC 61133, cl. 9.6; ČSN 28 1310, cl. 9.4.3; ČSN 30 0250, cl. 5.2.14)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
23*	Start-up and acceleration test - measurement of running velocity, acceleration, voltage and current	ZLDV 23 (ČSN EN 50215, cl. 9.2; ČSN EN IEC 61133, cl. 9.2; ČSN 28 1300, cl. 5.3.13; ČSN 28 1310, cl. 9.4.6; ČSN 30 0250, cl. 5.4.14, 5.4.15; TSI LOC&PAS, cl. 4.2.8.1)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
24*	Electrodynamic braking test - measurement of running velocity, acceleration, voltage, current and temperature	ZLDV 24 (ČSN EN 50215, cl. 9.4.1.8; ČSN EN IEC 61133, cl. 9.4.1.9; ČSN 28 1300, cl. 5.4.6; ČSN 28 1310, cl. 9.2.20; ČSN 30 0250, cl. 5.4.14; ČSN EN 50388, cl. 15.7; ČSN EN 50388-1; TSI LOC&PAS, cl. 4.2.8.2.3)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
25*	Test of coordination of brakes and braking-down deceleration - measurement of running velocity, acceleration, voltage, current, pressure and force	ZLDV 25 (ČSN EN 50215, cl. 8.12, 9.4; ČSN EN IEC 61133, cl. 8.12, 9.4; ČSN 28 1300, cl. 5.3.14; ČSN 28 1310, cl. 9.2.21; ČSN 30 0250, cl. 5.4.15; ČSN EN 13452-1; ČSN EN 13452-2; TSI LOC&PAS, cl. 4.2.4.5.2, 4.2.4.5.3); ČSN EN 13452-1 ČSN EN 13452-2	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
26*	Test of traction power - measurement of running velocity, voltage and current	ZLDV 26 (ČSN 30 0250, cl. 5.4.16; TSI LOC&PAS, cl. 4.2.8.1.2; ČSN EN 50388, cl. 15.3; ČSN EN 50388-1, cl. 15.3); ČSN EN 50388 ed.2, cl. 15.3; ČSN EN 50388-1, cl. 15.3	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
27*	Temperature rise test - measurement of running velocity, voltage, current, force and temperature	ZLDV 27 (ČSN EN 50215, cl. 9.5; ČSN EN IEC 61133, cl. 9.5; ČSN 28 1300, cl. 5.3.12; ČSN 28 1310, cl. 9.4.5; ČSN 30 0250, cl. 5.3.9)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
28*	Compatibility test with track circuits - measurement of current	ZLDV 28 (ČSN 34 2613; ČSN CLC/TS 50238-2); ČSN 34 2613; ČSN CLC/TS 50238-2	Railway vehicles	A, D
29*	Auxiliary power supply test - measurement of voltage, current and temperature	ZLDV 30 (ČSN EN 50215, cl. 8.13.2; ČSN EN IEC 61133, cl. 8.13.2; ČSN 28 1300, cl. 5.4.1; ČSN 28 1310, cl. 9.5.1; ČSN 30 0250, cl. 5.4.2)	Railway vehicles, tramway vehicles, trolley-bus route vehicles (metro)	-
30*	Charging test - measurement of running velocity, voltage and current	ZLDV 31 (ČSN EN 50215, cl. 8.14.2; ČSN EN IEC 61133, cl. 8.14.2; ČSN 28 1300, cl. 5.4.3; ČSN 28 1310, cl. 9.4.9; ČSN 30 0250, cl. 5.4.4)	Battery charging equipment for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	-
31*	Measurement of power consumption - measurement of running velocity, voltage and current	ZLDV 32 (ČSN EN 50215, cl. 9.3; ČSN EN IEC 61133, cl. 9.3; ČSN 28 1300, cl. 5.3.15; ČSN 28 1310, cl. 9.4.7; ČSN 30 0250, cl. 5.3.10; ČSN EN 50388, cl. 15.2; ČSN EN 50388-1, cl. 15.2; TSI LOC&PAS, cl. 4.2.8.2.4, 4.2.8.2.5, 4.2.8.2.6; TSI ENE, cl. 4.2.15, 4.2.16); ČSN EN 50388, cl. 15.2; ČSN EN 50388-1, čl. 15.2	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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32*	Vehicle steering and driving test - functional test	ZLDV 33 (ČSN EN 50215, cl. 8.15.3, 9.20; ČSN EN IEC 61133, cl. 8.15.3, 9.20; ČSN 28 1300, cl. 5.4.2; ČSN 28 1310, cl. 9.5.2; ČSN 30 0250, cl. 5.4.1; TSI LOC&PAS, cl. 4.2.5.2, 4.2.5.3, 4.2.5.4)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	-
33*	Test of speed control systems - measurement of running velocity, acceleration, voltage and current	ZLDV 34 (ČSN EN 50215, cl. 9.7; ČSN EN IEC 61133, čl. 9.7)	Railway vehicles	A, D
34*	Test of the working conditions - measurements of length, time, volume, current, voltage, temperature, relative humidity, running velocity and air flow velocity	ZLDV 35 (ČSN 28 1310, cl. 9.6.1; ČSN EN 50215, cl. 8.18.2, 9.19; ČSN EN IEC 61133, cl. 8.18.2; 9.19; TSI LOC&PAS, cl. 4.2.9.2.3, 4.2.11.2)	Driver's cab for railway vehicles, railway vehicles, tramway vehicles, special way vehicles (metro)	A, D
35*	Heating, ventilation and air conditioning test - measurement of pressure, time, current, voltage, power, temperature, length, relative humidity, running velocity, air flow velocity and CO <sub>2</sub> concentration	ZLDV 36 (ČSN EN 14750; ČSN EN 14750-1; ČSN EN 14750-2; ČSN EN 14813-1+A1; ČSN EN 14813-2+A1; ČSN 28 1300, cl. 5.4.9; ČSN 28 1310, cl. 9.5.7, 9.6.1; ČSN 30 0250, cl. 5.4.8; ČSN EN 50215, cl. 8.15.5; ČSN EN IEC 61133, cl. 8.15.5; HS TSI RST, cl. 4.2.7.7; TSI LOC&PAS, cl. 4.2.5.8, 4.2.9.1.7; UIC 553; UIC 553-1; VDV 180/2; VDV 181); ČSN EN 14750; ČSN EN 14750-1;	Heating, ventilation and air conditioning systems for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D

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		ČSN EN 14750-2; ČSN EN 14813-1+A1; ČSN EN 14813-2+A1; UIC 553; UIC 553-1		
36*	Tests of the safety of persons - measurement of impedance, voltage and current	ZLDV 37 (ČSN EN 50153, cl. 5.3, 6.2, 6.4; ČSN EN 50215, cl. 8.8; ČSN EN IEC 61133, cl. 8.8; ČSN 28 1310, cl. 9.6.2; TSI LOC&PAS, cl. 4.7)	Railway vehicles, tramway vehicles, special way vehicles (metro)	-
37*	Measurement of time, duration, intensity and sound pressure level	ZLDV 38 (TSI PRM (1300/2014), cl. 4.2.2.3; TSI LOC&PAS, cl. 4.2.5.5, 4.2.5.6; ČSN EN 14752+A1; VDV 157; ČSN 28 1300, cl. 4.2.8, 5.4.10; ČSN 28 1310, cl. 5.2.3, 9.2.7; ČSN 30 0250, cl. 4.2.6, 5.4.9; ČSN EN 50215, cl. 8.15.4; ČSN EN IEC 61133, cl. 8.15.4); ČSN EN 14752+A1; VDV 157	Doors for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	-
38*	type time table test - measurement of running velocity, voltage and current	ZLDV 39 (ČSN EN 50215, cl. 9.3; ČSN EN IEC 61133, cl. 9.3; ČSN 28 1310, cl. 9.4.8)	Railway vehicles, tramway vehicles, special way vehicles (metro)	A, D

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**ŠKODA TRANSPORTATION a.s.**

CAB number 1193, Testing Laboratory of Rolling Stock

Emila Škody 2922/1, Jižní Předměstí, 301 00 Plzeň

Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
39*	Lighting test - measurement of light intensity, duration, temperature and time	ZLDV 40 (ČSN EN 13272:2012; ČSN EN 13272-1; ČSN EN 13272-2; ČSN EN 15153-1+A1:2017; ČSN EN 15153-1; ČSN 28 1300, cl. 4.3.4, 5.4.8; ČSN 28 1310, cl. 4.11, 9.5.6; ČSN 30 0250, cl. 4.3.4., 5.4.12; ČSN EN 50215, cl. 8.15.6; ČSN EN IEC 61133, cl. 8.15.6; BOStrab; TSI LOC&PAS, cl. 4.2.7.1, 4.2.9.1.8, 4.2.10.4.1; TSI PRM (1300/2014), cl. 4.2.2.4; TSI SRT, cl. 4.2.3.3.1; MoH Regulation No. 102/1995 Coll.); ČSN EN 13272-1; ČSN EN 13272-2; ČSN EN 15153-1+A1:2017; ČSN EN 15153-1	Interior and exterior lighting for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	-
40*	Operability and maintainability test - measurement of time, length and voltage	ZLDV 41 (ČSN 28 1300, cl. 5.4.4, 5.4.5; ČSN 28 1310, cl. 9.6.4; ČSN 30 0250, cl. 5.4.5, 5.4.6; ČSN EN 50215, cl. 8.18; ČSN EN IEC 61133, cl. 8.18)	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
41*	Measurement of mass and pressure	ZLDV 42 (ČSN EN 15654-2; ČSN EN 15663+A2; ČSN 28 1300, cl. 5.2.1; ČSN 28 1310, cl. 9.2.2; ČSN EN 50215, cl. 8.5; ČSN EN IEC 61133, cl. 8.5; TSI LOC&PAS, cl. 4.2.2.10, 4.2.3.2); ČSN EN 15654-2; ČSN EN 15663+A2	Railway vehicles, tramway vehicles, special way vehicles (metro)	A, D

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Ordinal number <sup>1</sup>	Test procedure / method name	Test procedure / method identification <sup>2</sup>	Tested subject	Degrees of freedom <sup>3</sup>
42*	Functional leak test	ZLDV 43 (ČSN EN 50215, cl. 8.6; ČSN EN IEC 61133, cl. 8.6; ČSN 28 1300, cl. 5.2.2, 5.2.3; ČSN 28 1310, cl. 9.2.12; ČSN EN 50125-1, cl. 4.6; ČSN EN 60721-3-5; ČSN EN 60529)	Bodies for railway vehicles, railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
43*	Measurement of wheelset impedance - measurement of resistance, voltage and current	ZLDV 44 (TSI HS RST, cl. 4.2.3.3.1; TSI CR LOC&PAS, cl. 4.2.3.3.1.1; TSI LOC&PAS, cl. 4.2.3.3.1.1)	Railway vehicles	-
44*	Measurement of magnetic induction	ZLDV 45 (ČSN EN 50500; Council Recommendation 1999/519/EC; Directive 2013/35/EU; Act No. 258/2000 Coll.; MZDR 509/2017-19/OVZ; Government Regulation No. 291/2015 Coll.; ICNIRP 2009; ICNIRP 2010); ČSN EN 50500	Railway vehicles, tramway vehicles, trolley-bus route vehicles, special way vehicles (metro)	A, D
45*	Functional test	ZLDV 46 (ČSN EN 50215, cl. 8.15.7, 8.20; ČSN EN IEC 61133, cl. 8.15.7, 8.20)	Auxiliary systems for railway vehicles, railway vehicles, tramway vehicles, special way vehicles (metro)	A, D

<sup>1</sup> asterisk at the ordinal number identifies the tests, which the laboratory is qualified to carry out outside the permanent laboratory premises

<sup>2</sup> if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest valid edition of the specified procedure is used (including any changes)

<sup>3</sup> degrees of freedom: A – Flexibility concerning materials/products (subject of the test), B – Flexibility concerning components/parameters/characteristics, C – Flexibility concerning the performance of the method, D – Flexibility concerning the method

The laboratory can modify the test procedures with the specified degree(s) of freedom in the scope of accreditation while maintaining the principle of measurement. If no degree of freedom is specified, the laboratory cannot apply a flexible approach to the scope of accreditation for the test.

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**Specification of the scope of accreditation:**

Test ord. no.	Detailed information on activities within the scope of accreditation (source literature)
1, 2	FKM Guideline: FKM Guideline, ANALYTICAL STRENGTH ASSESSMENT OF COMPONENTS. Made of Steel, Cast Iron and Aluminium Materials in Mechanical Engineering, 6th revised Edition, Forschungskuratorium Maschinenbau (FKM). Frankfurt am Main, 2012.
1 - 4, 7, 10, 13, 16, 17, 19 - 21, 23 - 26, 31, 32, 34 - 37, 39, 41, 42	TSI LOC&PAS: Commission Regulation (EU) No. 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the "rolling stock – locomotives and passenger rolling stock" subsystem of the rail system in the European Union
2	IIW Recommendations: Hobbacher, A.: RECOMMENDATIONS FOR FATIGUE DESIGN OF WELDED JOINTS AND COMPONENTS. International Institute of Welding, doc. IIW-1823-07/XIII-2151r4-07/XV-1254r4-07. Paris, December 2008.
4, 7, 43	TSI CR LOC&PAS: Commission Decision 2011/291/EU concerning a technical specification for interoperability relating to the rolling stock subsystem — 'Locomotives and passenger rolling stock' of the trans-European conventional rail system as amended by the Commission Decision 2012/88/EU and 2012/464/EU. TSI HS RST: Commission Decision 2008/232/EC concerning a technical specification for interoperability relating to the rolling stock sub-system of the trans-European high-speed rail system as amended by the Commission Decision 2012/464/EU
6	STO SDS OPŽT-05-2010: Норм для проектирования, расчета и оценки прочности и динамики механической части вагонов метрополитена колеи 1520 мм“ (Russian Industrial Standard – Standard for design, calculation and evaluation of the strength and dynamics of mechanical parts of vehicles for metro with a gauge of 1,520 mm).
8	TSI PRM (2008/164/ES): Commission Decision 2008/164/EC concerning the technical specification of interoperability relating to persons with reduced mobility in the trans-European conventional and high-speed rail system as amended by the Commission Decision 2012/464/EU
10	OCT 24.050.18-82: Система стандартов безопасности труда. Вагоны пассажирские и рефрижераторные. Шумовые характеристики. Нормы и методы измерения (Russian Industrial Standard – System of OHS standards. Passenger and refrigerator cars. Noise characteristics. Measurement standards and methods.) TSI NOI: Commission Regulation (EU) No. 1304/2014 of 26 November 2014 on the technical specification for interoperability relating to the subsystem "rolling stock – noise", amending the Decision 2008/232/EC and repealing Decision 2011/229/EU
10, 37, 39	TSI PRM (1300/2014): Commission Regulation (EU) No. 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility
31	TSI ENE: ENE Commission Regulation (EU) 1301/2014/EU of 18. November 2014 concerning a technical specification for interoperability relating to the energy sub-system of the European rail system
39	TSI SRT: Commission Regulation (EU) No. 1303/2014 of 18 November 2014 concerning the technical specification for interoperability relating to 'safety in railway tunnels' of the rail system of the European Union

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Test ord. no.	Detailed information on activities within the scope of accreditation (source literature)
	BOStrab: Verordnung über den Bau und Betrieb der Straßenbahnen / Ordinance on the Construction and Operation of Tramways (Tram Construction and Operation Order - BOStrab) of 11 December 1987 2nd edition
44	MZDR 509/2017-19/OVZ: Guideline for the procedure pursuant to Sections 35 and 36 of Act No. 258/2000 Coll., on the protection of public health and on the amendment of certain related acts, as amended, and Government Decree no. 291/2015 coll., on the protection of health against non-ionizing radiation

**Explanatory notes:**

CLC/TS	- Cenelec/Technical Specifications
DIN	- Deutsche Industrie-Norm (German national standard)
DVS	- Deutscher Verband für Schweißen (German welding association)
ECE	- Economic Commission for Europe
ICNIRP	- International Commission on Non-Ionizing Radiation Protection
TNŽ	- Technical Standard of Railways
TSI	- Technical Specifications of Interoperability
UIC	- Union Internationale des Chemins de Fer (Regulations of the International Union of Railways in Paris, France)
VDV	- Verband Deutscher Verkehrsunternehmen (VDV) / Association of German Transport Companies
ZLDV xx	- Test method of the Testing Laboratory of Rolling Stock

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*"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself."*