Hellenic Accreditation System

Annex F2/11 to the Certificate No. **500**-5

SCOPE of ACCREDITATION

of the

Calibration Laboratory

of

"AUTOVISION SAKAR S.A.
Private Technical Inspection of Vehicles -Certifications"

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Dimensional measurements			
Motor vehicles side slip measurement devices	-15 m/km ... +15 m/km		Calibration according to manufacturer's inspection instructions. Calibration is performed on-site.
		0,09 m/km	Actia Automotive S.A. (Actia Muller S.A., Muller BEM). Laboratory method code: ΓΔ.ΕΔ.020.
		0,12 m/km	Beissbarth GmbH. Laboratory method code: ΓΔ.ΕΔ.020B.
		0,20 m/km	MAHA Mashinenbau Haldenwang GmbH. Laboratory method code: ΓΔ.ΕΔ.020M.
Motor vehicles tires tread wear gauges	0 mm … 3 mm	0,17 mm	Laboratory method code: ΓΔ.ΕΔ.020. Calibration can be performed on-site.
Motor vehicles headlights beam vertical inclination measurement devices	0% … 4%	0,12%	Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020. Calibration can be performed on-site.

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Force measurements			
Two-wheeled motor vehicles brake force measurement devices	[0 N … 0,5 kN) [0,5 kN … 1 kN) [1 kN … 2 kN) [2 kN … 2,7 kN]	7 N 8 N 11 N 14 N	Manufacturer: Actia Automotive (Actia Muller, Muller). Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020. Calibration is performed on-site.
Light motor vehicles brake force measurement devices	[0 N … 1,1 kN) [1,1 kN … 2,2 kN) [2,2 kN … 3,3 kN) [3,3 kN … 4,4 kN) [4,4 kN … 5,5 kN]	6,6 N 7,4 N 9,4 N 12,0 N 15,6 N	
Heavy motor vehicles brake force measurement devices	[0 N … 11,1 kN) [11,1 kN … 22,2 kN) [22,2 kN … 33,3 kN) [33,3 kN … 44,4 kN]	59 N 0,11 kN 0,16 kN 0,21 kN	
Light motor vehicles brake force measurement devices	[0 N … 1,2 kN) [1,2 kN … 2,5 kN) [2,5 kN … 3,7 kN) [3,7 kN … 5,0 kN) [5,0 kN … 6,2 kN]	25 N 22 N 24 N 25 N 23 N	Manufacturer: Beissbarth. Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020Β. Calibration is performed on-site.
Heavy motor vehicles brake force measurement devices	[0 N … 12,5 kN) [12,5 kN … 31,0 kN) [31,0 kN … 40,0 kN]	0,31 kN 0,32 kN 0,33 kN	
Two-wheeled motor vehicles brake force measurement devices	[0 N ... 1,5 kN) [1,5 kN … 2,5 kN]	12 N 13 N	Manufacturer: MAHA. Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020Μ. Calibration is performed on-site.
Light motor vehicles brake force measurement devices	[0 N … 3 kN) [3 kN … 4 kN) [4 kN … 5 kN) [5 kN … 6 kN]	32 N 33 N 34 N 35 N	
Heavy motor vehicles brake force measurement devices	[0 N … 3 kN) [3,0 kN … 3,75 kN) [3,75 kN … 6 kN) [6,0 kN … 10,0 kN) [10,0 kN … 12,5 kN) [12,5 kN … 20,0 kN) [20,0 kN … 30,0 kN]	74 N 77 N 87 N 0,11 kN 0,13 kN 0,19 kN 0,28 kN	

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Motor vehicles suspension testers			Calibration according to manufacturer's inspection instructions. Calibration is performed on-site.
	0 N … 5900 N per wheel	17 N	Actia Automotive S.A. (Actia Muller S.A., Muller BEM). Laboratory method code: ΓΔ.ΕΔ.020.
		45 N	Beissbarth GmbH. Laboratory method code: ΓΔ.ΕΔ.020B.
		32 N	MAHA Mashinenbau Haldenwang GmbH. Laboratory method code: ΓΔ.ΕΔ.020M.
Two-wheeled motor vehicles weighing devices	1470 N … 4420 N	12 N	Calibration according to manufacturer's inspection instructions. Manufacturer: – Actia Automotive (Actia Muller, Muller). Laboratory method code: ΓΔ.ΕΔ.020. – MAHA Mashinenbau Haldenwang GmbH. Laboratory method code: ΓΔ.ΕΔ.020M. Calibration is performed on-site.
Photometric measurements			
Motor vehicles headlight beam illuminance measurement devices	6 lx … 144 lx (passing beams) 32 lx … 240 lx (driving beams)	2,5 lx 7,7 lx	Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020. Calibration is performed on-site.
Exhaust emission measurements			
Exhaust emission analyzers of class 0, I, and II, for motor vehicles operating with petrol	[CO] 0,5 % vol … 5 % vol	94×10^{-4} % vol.	Calibration according to manufacturer's inspection instructions. Laboratory method code: ΓΔ.ΕΔ.020. Maximum tolerance errors according to recommendation OIML R 99-1&2:2008, par. 5.5.2, table 4. Calibration can be performed on-site.
	[CO_2] 4 % vol … 16 % vol	62×10^{-3} % vol.	
	[C_3H_8] 200 ppm vol ... 4000 ppm vol	11 ppm vol	

Measurand / Calibration item	Range of measurement	Calibration & Measurement Capability (k=2)*	Remarks
Exhaust emission analyzers for motor vehicles operating with diesel	Opacity (N) 0% … 100% Absorption coefficient (k) 0 m^{-1} … 9,99 m^{-1}	0,69% 0,016 m^{-1}	Calibration according to Directive 72/306/ΕΟΚ, Annex VII, par 3.6. Laboratory method code: ΓΔ.ΕΔ.020. Calibration can be performed on-site.
Pressure measurements			
Motor vehicles tires pressure measurement devices	100 kPa … 1100 kPa	14 kPa	Calibration according to Guide DKD-R 6-1:2014. Laboratory method code: ΓΔ.ΕΔ.020. Calibration can be performed on-site.
Pressure measurement devices of compressed air brake systems of heavy motor vehicles	0 kPa … 1200 kPa	10 kPa	

** Where uncertainty is accompanied by the corresponding unit, it is absolute, while where it is not accompanied by a unit, it is relative.*

Site of assessment: **Permanent Laboratory premises, 77, Rovertou Galli str., 163 46 Ilioupoli, Greece.**
Approved Signatory: **D.Katsaros.**

This Scope of Accreditation replaces the previous one dated 27.11.2020.
The Accreditation Certificate No. **500**-5, to ELOT EN ISO/IEC 17025:2017, is valid until 19.01.2025.

Athens, 8.09.2021

Spyridon Podaras
Managing Director of ESYD