INTERNATIONAL RECOMMENDATION

OIML R 134-2

Edition 2004 (E)

Automatic instruments for weighing road vehicles in motion. Total vehicle weighing

Part 2: Test Report Format

Instruments à fonctionnement automatique pour le pesage des véhicules routiers en mouvement. Pesage total du véhicule

Partie 2: Format du Rapport d'Essai

ORGANISATION INTERNATIONALE DE MÉTROLOGIE LÉGALE

INTERNATIONAL ORGANIZATION OF LEGAL METROLOGY

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Foreword

The International Organization of Legal Metrology (OIML) is a worldwide, intergovernmental organization whose primary aim is to harmonize the regulations and metrological controls applied by the national metrological services, or related organizations, of its Member States.

The two main categories of OIML publications are:

- **International Recommendations (OIML R)**, which are model regulations that establish the metrological characteristics required of certain measuring instruments and which specify methods and equipment for checking their conformity; the OIML Member States shall implement these Recommendations to the greatest possible extent;
- **International Documents (OIML D)**, which are informative in nature and intended to improve the work of the metrological services.

OIML Draft Recommendations and Documents are developed by technical committees or subcommittees which are formed by the Member States. Certain international and regional institutions also participate on a consultation basis.

Cooperative agreements are established between the OIML and certain institutions, such as ISO and the IEC, with the objective of avoiding contradictory requirements; consequently, manufacturers and users of measuring instruments, test laboratories, etc. may simultaneously apply OIML publications and those of other institutions.

International Recommendations and International Documents are published in French (F) and English (E) and are subject to periodic revision.

This publication - reference OIML R 134-2 Edition 2004 (E) - was developed by the OIML Technical Subcommittee TC 9/SC 2 *Automatic Weighing instruments*. It was approved for final publication by the International Committee of Legal Metrology in 2003 and will be submitted to the International Conference of Legal Metrology in 2004 for formal sanction.

OIML publications may be obtained from the Organization's headquarters:

Bureau International de Métrologie Légale
11, rue Turgot - 75009 Paris - France
Telephone: 33 (0)1 48 78 12 82
Fax: 33 (0)1 42 82 17 27
E-mail: biml@oiml.org
Internet: www.oiml.org

Introduction

This "Test Report Format" aims at presenting, in a standardized format, the results of the various tests and examinations to which a type of an automatic instrument for weighing road vehicles in motion (total vehicle weight) shall be submitted with a view to its approval.

The Test Report Format consists of two parts, a "Checklist" and the "Test Report" itself.

The Checklist is a summary of the examinations carried out on the instrument. It includes the conclusions of the results of the test performed, experimental or visual checks based on the requirements of R 134-1. The words or condensed sentences aim at reminding the examiner of the requirements in R 134-1 without reproducing them.

The Test Report is a record of the results of the tests carried out on the instrument. The "Test Report" forms have been produced based on the tests detailed in R 134-1.

All metrology services or laboratories evaluating types of automatic instruments for weighing road vehicles in motion (total vehicle weight) according to R 134-1 or to national or regional regulations based on this OIML Recommendation are strongly advised to use this Test Report Format, directly or after translation into a language other than English or French. Its direct use in English or in French, or in both languages, is even more strongly recommended whenever test results may be transmitted by the country performing these tests to the approving authorities of another country, under bi- or multilateral cooperation agreements. In the framework of the *OIML Certificate System for Measuring Instruments*, use of this Test Report Format is mandatory.

The "information concerning the test equipment used for type evaluation" shall cover all test equipment which has been used in determining the test results given in a report. The information may be a short list containing only essential data (name, type, reference number for purpose of traceability). For example:

- Verification standards (accuracy, or accuracy class, and no.);
- Simulator for testing of modules (name, type, traceability and no.);
- Climatic test and static temperature chamber (name, type and no.);
- Electrical tests, bursts (name of the instrument, type and no.);
- Description of the procedure of field calibration for the test of immunity to radiated electromagnetic fields.

Note concerning the numbering of the following pages

In addition to a sequential numbering: "R 134-2 page ..." at the bottom of the pages of this Publication, a special place is left at the top of each page (starting with the following page) for numbering the pages of reports established following this model; in particular, some tests (e.g. metrological performance tests) shall be repeated several times, each test being reported individually on a separate page following the relevant format; in the same way, a multiple range instrument shall be tested separately for each range and a separate form (including the general information form) shall be filled out for each range. For a given report, it is advisable to complete the sequential numbering of each page by the indication of the total number of pages of the report.

AUTOMATIC INSTRUMENTS FOR WEIGHING ROAD VEHICLES IN MOTION (TOTAL VEHICLE WEIGHING)

TEST REPORT FORMAT

EXPLANATORY NOTES

Meaning of symbols:

I = Indication
I_n = nth indication
L = Load
ΔL = Additional load to next changeover point
P = $I + ½\ d - \Delta L$ = indication prior to rounding (digital indication)
E = $I - L$ or $P - L$ = error
mpe = Maximum permissible error
EUT = Equipment under test

The name(s) or symbol(s) of the unit(s) used to express test results shall be specified in each form.

For each test, the "SUMMARY OF TYPE EVALUATION" and the "CHECKLIST" shall be completed according to this example:

	P	F
when the instrument has passed the test:	X	
when the instrument has failed the test:		X
when the test is not applicable:	/	/

P = Passed
F = Failed

The white spaces in boxes in the headings of the report should always be filled according to the following example:

	At start	At end	
Temp.:	20.5	21.1	°C
Rel. h.:			%
Date:	2004-01-29	2004-01-30	yyyy-mm-dd
Time:	16:00:05	16:30:25	hh:mm:ss

where:

Temp. = temperature
Rel. h. = relative humidity

"Date" in the test reports refers to the date on which the test was performed.

In the disturbance tests, faults greater than d are acceptable provided that they are detected and acted upon, or that they result from circumstances such that these faults shall not be considered as significant; an appropriate explanation shall be given in the column "Yes (remarks)".

Section numbers in brackets refer to the corresponding subclauses of R 134-1.

GENERAL INFORMATION CONCERNING THE TYPE

Application no.: .....

Type designation: .....

Manufacturer: .....

Applicant: .....

Instrument category: .....

☐ Full draught weighbridge ☐ Partial weighbridge

Testing on: ☐ Complete instrument ☐ Module(*)

☐ Instrument incorporates a static weighing mode

Units used : ☐ Kilogram (kg) ☐ Tonne (t)

Accuracy class: ☐ 0.2 ☐ 0.5 ☐ 1 ☐ 2 ☐ 5 ☐ 10

Max = ☐ *d* = ☐ *n* = ☐

Min = ☐

Maximum operating speed = ☐ Minimum operating speed = ☐

U_{nom} (**) = ☐ V U_{min} = ☐ V U_{max} = ☐ V *f* = ☐ Hz Battery, *U* = ☐ V

Zero-setting device:

☐ Semi-automatic

☐ Automatic zero-setting

☐ Initial zero-setting

☐ Zero-tracking

Initial zero-setting range ☐ % Temperature range ☐ °C

Printer: ☐ Built in ☐ Connected ☐ Not present but connectable ☐ No connection

(*) The test equipment (simulator or part of a complete instrument) connected to the module shall be defined in the test form(s) used.

(**) The voltage U_{nom} shall be as defined at IEC 61000-4-11 (2001) section 5.

GENERAL INFORMATION CONCERNING THE TYPE (continued)

Instrument submitted:	.....		
Load cells:	.....	.....	
	.....	.....	
	.....	.....	
Identification no.:	.....	Manufacturer:	.....
Connected equipment:	.....	Type:	.....
Remarks:		Capacity:	.....
		Number:	.....
Interfaces: (numbers, nature)	.....	Classification symbol:	.....
Remarks:	see below		
Date of report:	.....	Evaluation period:	.....
Observer:	.....		

Use this space to indicate additional remarks and/or information: other connected equipment, interfaces and load cells, choice of the manufacturer regarding protection against disturbances, etc.

IDENTIFICATION OF THE INSTRUMENT

Application no.: .....

Report date: .....

Type designation: .....

Manufacturer: .....

Serial no.: .....

Manufacturing documentation:
(Record as necessary to identify the equipment under test)

System or module name	Drawing number or software reference	Issue level	Serial no.
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Simulator documentation:

System or module name	Drawing number or software reference	Issue level	Serial no.
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Simulator function (summary):

Simulator description and drawings, block diagram, etc., should be attached to the report if available.

IDENTIFICATION OF THE INSTRUMENT (continued)

Application no.: .....

Report date: .....

Type designation: .....

Manufacturer: .....

Serial no.: .....

Description or other information pertaining to identification of the instrument:
(attach photograph here if available)

INFORMATION CONCERNING THE TEST EQUIPMENT USED FOR TYPE EVALUATION

TEST EQUIPMENT

Application no.: ....

Report date: ....

Type designation: ....

Manufacturer: ....

List all test equipment used in this report (including descriptions of the reference vehicles used for testing)

Equipment name	Manufacturer	Type no.	Serial no.	Used for (test references)
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....

CONFIGURATION FOR TEST

Application no.: .....

Report date: .....

Type designation: .....

Manufacturer: .....

Use this space for additional information relating to equipment configuration, interfaces, data rates, load cells, EMC protection options, etc., for the instrument and/or simulator.

SUMMARY OF TYPE EVALUATION

Application no.: .....

Type designation: .....

	TESTS	Report page	Passed	Failed	Remarks
1	Zero-setting				
2	Warm-up time				
3	**Influence factors**				
3.1	Static temperatures				
3.2	Temperature effect on no load indication				
3.3	Damp heat, steady state				
3.4	Power voltage variation (AC)				
4	**Disturbances**				
4.1	Voltage dips and short interruptions				
4.2	Electrical fast transients/burst immunity				
4.3	Electrostatic discharges				
4.4	Electromagnetic susceptibility				
5	**Disturbances on DC powered instruments**				
5.1	DC voltage variations				
5.2	Electrical transient conduction (supply lines)				
6	Span stability				
7	**In-motion weighing tests**				
7.1	Non-automatic tests of the control instrument:				
7.1.1	Accuracy of zero-setting				
7.1.2	Determination of weighing performance				
7.1.3	Eccentricity				
7.1.4	Discrimination				
7.2	Static weighing				
7.3	Vehicle weighing				
	EXAMINATIONS				
8	Examination of the construction				
9	Checklist				

SUMMARY OF TYPE EVALUATION (continued)

Use this page to detail remarks from the summary of the type evaluation.

1 ZERO-SETTING (3.3.1, A.5.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				
Resolution during test: (smaller than *d*)	.....				

1.1 Range of zero-setting (3.3.1, A.5.1.1)

Zero-setting mode	Positive zero limit load L_1	Negative zero limit load L_2	Range $L_1 + L_2$	% of maximum load

☐ Passed ☐ Failed

Remarks:

1.2 Accuracy of zero-setting (3.3.1, A.5.1.2)

Zero-setting mode	ΔL	$E = ½\ d - \Delta L$	mpe

☐ Passed ☐ Failed

Remarks:

2 WARM-UP TIME (4.3.5, A.6.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Duration of disconnection before test: ..... hrs

Automatic zero-setting and zero-tracking device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$
E_0 = error calculated prior to each measurement at zero or near zero (unloaded)
E_L = error calculated at load (loaded)

	Time (*)	Load L	Indication I	Add. load ΔL	Error	$E_L - E_0$
Unloaded	0 min				E_{0I} =	
Loaded					E_L =	
Unloaded	5 min				E_0 =	
Loaded					E_L =	
Unloaded	15 min				E_0 =	
Loaded					E_L =	
Unloaded	30 min				E_0 =	
Loaded					E_L =	

(*) Counted from the moment an indication has first appeared

Error(*)		mpe	
Initial zero-setting error	E_{0I}	≤ 0.25 d =	
Maximum value of error unloaded	E_0	=	
Maximum value of zero variation	$E_0 - E_{0I}$	≤ 0.25 $d \times p_i$(**) =	
Maximum value of error loaded	$E_L - E_0$	≤ 0.25 $d \times p_i$(**) =	

☐ Passed ☐ Failed

Remarks:

(*) Check that the error is less than or equal to the mpe
(**) As specified in R 134-1 5.1.3.2.1

3 INFLUENCE FACTORS

3.1 Static temperatures (2.7.1.1, A.7.2.1)

3.1.1 Reference temperature of 20 °C

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.1.2 Static temperatures (specified high)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.1.3 Static temperatures (specified low)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.1.4 Static temperatures (5 °C)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.1.5 Static temperatures (reference temperature of 20 °C)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.2 Temperature effect on no-load indication (2.7.1.2, A.7.2.2)

Application no.: .....

Type designation: .....

Observer: .....

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$P = I + ½\ d - \Delta L$

Report page (*)	Date	Time	Temp. (°C)	Zero indication *I*	Add load *ΔL*	*P*	*ΔP*	ΔTemp	Zero-change per 5 °C

ΔP = difference in *P* for two consecutive tests at different temperatures
ΔTemp = difference in temperature for two consecutive tests at different temperatures

Check if the zero-change per 5 °C is smaller than *d*

☐ Passed ☐ Failed

Remarks:

(*) Specify the report page of the relevant weighing test where weighing tests and temperature effect on no-load indication test are conducted together.

3.3 Damp heat, steady state (4.3.3, A.7.2.3)

3.3.1 Initial test (at reference temperature and 50 % relative humidity)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.3 Damp heat, steady state (continued)

3.3.2 Test at high temperature and 85 % relative humidity

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.3 Damp heat, steady state (continued)

3.3.3 Final test (at reference temperature and 50 % relative humidity)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

3.4 Power voltage variation (AC) (2.7.2, A.7.2.4)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

Marked nominal voltage U_{nom} or voltage range: ☐ V

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Voltage	Load L	Indication I	Add. load ΔL	Error E	Corrected error E_c	mpe
Reference(*)						
+ 10 %						
– 15 %						
Reference						

☐ Passed ☐ Failed

Remarks:

(*) The reference voltage shall be as defined in IEC 61000-4-11(2001) section 5

4 DISTURBANCES (4.1.2, 4.3.4, A.7.3)

4.1 Voltage dips and short interruptions (A.7.3.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Marked nominal voltage U_{nom}, or voltage range: [ ] V

Load	Disturbance				Result		
	Amplitude(*) % of U_n	Duration cycles	Number of disturbances	Repetition interval (s)	Indication *I*	Significant fault (> *d*)	
						No	Yes (remarks)
	without disturbance						
	0	0.5	10				
	50	1	10				

[ ] Passed [ ] Failed

Remarks:

(*) When a voltage-range is marked, use the average value as reference U_n

4.2 Electrical fast transients/burst immunity (A.7.3.2)

4.2.1 Power supply lines

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

Power supply lines: test voltage 1 kV, duration of the test 2 min at each polarity

Load	Connection			Polarity	Result		
	L ↓ ground	N ↓ ground	PE ↓ ground		Indication *I*	Significant fault (> *d*)	
						No	Yes (remarks)
	without disturbance						
	X			pos			
				neg			
	without disturbance						
		X		pos			
				neg			
	without disturbance						
			X	pos			
				neg			

L = Phase, N = Neutral, PE = Protective earth

☐ Passed ☐ Failed

Remarks:

4.2 Electrical fast transients/burst immunity (continued)

4.2.2 I/O circuits and communication lines

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

I/O signals, data and control lines: test voltage 0.5 kV, duration of the test 2 min at each polarity

Load	Cable/Interface	Polarity	Result		
			Indication *I*	Significant fault (> *d*)	
				No	Yes (remarks)
without disturbance					
		pos			
		neg			
without disturbance					
		pos			
		neg			
without disturbance					
		pos			
		neg			
without disturbance					
		pos			
		neg			
without disturbance					
		pos			
		neg			
without disturbance					
		pos			
		neg			

Explain or make a sketch indicating where the clamp is located on the cable; if necessary, add an additional page.

☐ Passed ☐ Failed

Remarks:

4.3 Electrostatic discharges (A.7.3.3)

4.3.1 Direct application

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

☐ Contact discharges ☐ Paint penetration

☐ Air discharges Polarity (*): ☐ pos ☐ neg

Load	Discharges			Result		
	Test voltage (kV)	Number of discharges ≥ 10	Repetition interval (s)	Indication *I*	Significant fault (> *d*)	
					No	Yes (remarks, test points)
	without disturbance					
	2					
	4					
	6					
	8 (air discharges)					

Note: If the EUT fails, the test point at which this occurs shall be recorded.

☐ Passed ☐ Failed

Remarks:

(*) IEC 61000-4-2 specifies that the test shall be conducted with the most sensitive polarity.

4.3 Electrostatic discharges (continued)

4.3.2 Indirect application (contact discharges only)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

Polarity (*): ☐ pos ☐ neg

Horizontal coupling plane

Load	Discharges			Result		
	Test voltage (kV)	Number of discharges ≥ 10	Repetition interval (s)	Indication *I*	Significant fault (> *d*)	
					No	Yes (remarks, test points)
	without disturbance					
	2					
	4					
	6					

Note: If the EUT fails, the test point at which this occurs shall be recorded.

Vertical coupling plane

Load	Discharges			Result		
	Test voltage (kV)	Number of discharges ≥ 10	Repetition interval (s)	Indication *I*	Significant fault (> *d*)	
					No	Yes (remarks, test points)
	without disturbance					
	2					
	4					
	6					

Note: If the EUT fails, the test point at which this occurs shall be recorded.

☐ Passed ☐ Failed

Remarks:

(*) IEC 61000-4-2 specifies that the test shall be conducted with the most sensitive polarity.

4.3 Electrostatic discharges (continued)

Specification of test points of the EUT (direct application), e.g. by photos or sketches

a) Direct application

Contact discharges:

Air discharges:

b) Indirect application

4.4 Electromagnetic susceptibility (A.7.3.4)

4.4.1 Radiated (A.7.3.4.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

Rate of sweep: ☐

Load: ☐ Material load: ☐

Disturbances				Result		
Antenna	Frequency range (MHz)	Polarization	Facing EUT	Indication *I*	Significant fault (> *d*)	
					No	Yes (remarks)
without disturbance						
		Vertical	Front			
			Right			
			Left			
			Rear			
		Horizontal	Front			
			Right			
			Left			
			Rear			
		Vertical	Front			
			Right			
			Left			
			Rear			
		Horizontal	Front			
			Right			
			Left			
			Rear			

Frequency range: 26 – 1000 MHz or 80 – 1000 MHz
Field strength: 3 V/m
Modulation: 80 % AM, 1 kHz sine wave

☐ Passed ☐ Failed

Remarks:

4.4 Electromagnetic susceptibility (continued)

4.4.2 Conducted (A.7.3.4.2)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss
Scale interval *d*:	.....				

Rate of sweep: ☐

Load: ☐ Material load: ☐

Frequency Range (MHz)	Cable/Interface	Level (Volts RMS)	Result		
			Indication	Significant fault (> *d*)	
				No	Yes (remarks)
without disturbance					
without disturbance					
without disturbance					
without disturbance					
without disturbance					
without disturbance					

Frequency range: 150 kHz – 80 MHz
Voltage level: 3 V RMS
Modulation: 80 % AM, 1 kHz sine wave

☐ Passed ☐ Failed

Remarks:

4.4 Electromagnetic susceptibility (continued)

Include a description of the setup of the EUT, e.g. by photos or sketches.

Note: If the EUT fails, the frequency and field strength at which this occurs must be recorded.

Radiated:

Conducted:

5 DISTURBANCES ON DC POWERED INSTRUMENTS (2.7.3, A.7.4)

5.1 DC voltage variations (A.7.4.1, 4.3.7)

5.1.1 Under-voltages and over-voltages

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Accuracy class: .....

Marked nominal voltage or voltage range: ☐ V

Voltage	*U* (DC Volts)	Load *L*	Indication *I*	Add. load *ΔL*	Error *E*	Corrected error E_c	mpe
Reference voltage							
Under-voltage							
Over-voltage							
Reference voltage							

☐ Passed ☐ Failed

Remarks:

5.1.2 Battery power supply (4.3.7)

For battery powered instruments only:

Manufacturer's specified minimum voltage value: ☐ V

When the voltage drops below the manufacturer's specified minimum value, the instrument (please tick):

☐ Continues to function

☐ Automatically goes out of service

☐ Functions with errors

☐ N/A as the instrument is not battery-powered

☐ Passed ☐ Failed

Remarks:

5.2 Electrical transient conduction (supply lines) (A.7.4.2)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Accuracy class: .....

Load: ☐

Type of pulse (e.g. 3a)	Severity level (I,II,III or IV)	Number of pulses applied / duration *	Result		
			Indication *I*	Significant fault (> *d*)	
				No	Yes (remarks)
without disturbance					
without disturbance					

* 5000 pulses required for pulses 1, 1a and 2
* 100 pulses for pulse 1b
* 1 hour duration required for pulses 3a and 3b

☐ Passed ☐ Failed

Remarks:

6 SPAN STABILITY (4.4.3, A.8)

Application no.: .....

Type designation: .....

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range

Test load: ☐

Measurement no. 1: Initial measurement

Observer: .....

Location: .....

	At start	At end	
Temp.:			°C
Rel. h.:			%
Date:			yyyy-mm-dd
Time:			hh:mm:ss

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$ Corrected value (*)
1							
2							
3							
4							
5							

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

Average error = average $(E_L - E_0)$ = ☐

$(E_L - E_0)_{max} - (E_L - E_0)_{min}$ = ☐

0.1 *d* = ☐

If $\left|(E_L - E_0)_{max} - (E_L - E_0)_{min}\right| \leq 0.1\ d$, the loading and reading will be sufficient for each of the subsequent measurements.

Remarks:

6 SPAN STABILITY (continued)

Subsequent measurements

For each of the subsequent measurements (at least 7), indicate on the "conditions of the measurement", as appropriate, if the measurement has been performed:

- after the temperature test, the EUT having been stabilized for at least 16 h;
- after the humidity test, the EUT having been stabilized for at least 16 h;
- after the EUT has been disconnected from the mains for at least 8 h and then stabilized for at least 5 h;
- after any change in the test location; or
- under any other specific condition.

Measurement no. 2:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$ Corrected value (*)
1							
2							
3							
4							
5							

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

6 SPAN STABILITY (continued)

Measurement no. 3:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

Measurement no. 4:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

6 SPAN STABILITY (continued)

Measurement no. 5:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

Measurement no. 6:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

6 SPAN STABILITY (continued)

Measurement no. 7:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

Remarks:

Measurement no. 8:

			At start	At end	
Observer:	.....	Temp.:			°C
Location:	.....	Rel. h.:			%
		Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Conditions of the measurement: .....

$E_0 = I_0 + ½\ d - \Delta L_0 - L_0$
$E_L = I_L + ½\ d - \Delta L - L$

	Indication of zero (I_0)	Add. load (ΔL_0)	E_0	Indication of load (I_L)	Add. load (ΔL)	E_L	$E_L - E_0$	Corrected value (*)
1								
2								
3								
4								
5								

(*) When applicable, necessary corrections resulting from variations of temperature, pressure, etc. See remarks.

If five loadings and reading have been performed: Average error = average ($E_L - E_0$):

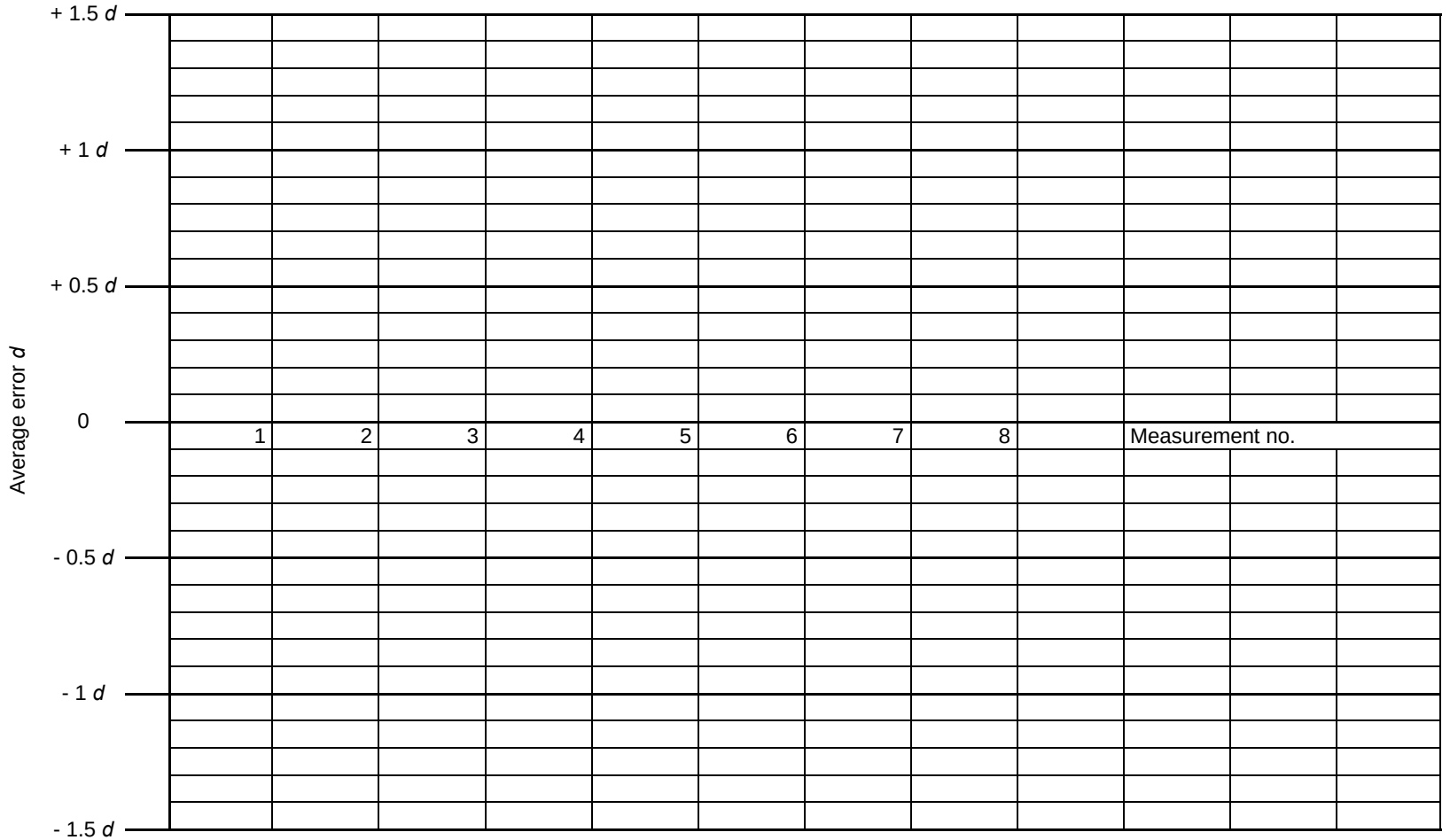
Remarks:

6 SPAN STABILITY (continued)

Application no.: .....

Type designation: .....

Plot on the diagram the indication of temperature test (T), damp heat test (D) and disconnections from the mains power supply (P)



Maximum allowable variation: ☐

☐ Passed ☐ Failed Remarks:

7 IN-MOTION WEIGHING TESTS (A.9)

7.1 Non-automatic tests of the control instrument (integral) (3.4, A.5.2, A.9.2)

7.1.1 Accuracy of zero-setting (3.4.1, A.5.2.1.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

ΔL	$E = ½\ d - \Delta L$	mpe

☐ Passed ☐ Failed

Remarks:

7.1.2 Determination of weighing performance (6.2.2, A.5.2.2.2)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

Initial zero-setting > 20 % of Max: ☐ Yes ☐ No

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

7.1.3 Eccentricity (3.4.2, 6.2.4, A.5.2.3)

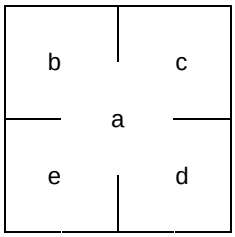
			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Load ($^1/_3$ Max) .....

Location of test loads: Mark on a sketch (see example below) the successive locations of test loads, using letters which shall be repeated in the table below.



Also indicate on the sketch the location of the display or another perceptible part of the instrument.

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range

$E = I + ½\ d - \Delta L - L$
$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Location	Indication *I*	Add. load *ΔL*	Error *E*	Corrected error E_c	mpe
(*)				(*)		

☐ Passed ☐ Failed

Remarks:

7.1.4 Discrimination (3.4.3, A.5.2.4)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Load L	Indication I_1	Remove load ΔL	Add. 1/10 *d*	Extra load = 1.4 *d*	Indication I_2	$I_2 - I_1$

☐ Passed ☐ Failed

Remarks:

7.2 Static weighing (A.9.3.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Automatic zero-setting device is:

☐ Non-existent ☐ Not in operation ☐ Out of working range ☐ In operation

$E = I + ½\ d - \Delta L - L$

$E_c = E - E_0$ with E_0 = error calculated at or near zero (*)

Load *L*	Indication *I*		Add. load *ΔL*		Error *E*		Corrected error E_c		mpe
	↓	↑	↓	↑	↓	↑	↓	↑	
(*)					(*)				

☐ Passed ☐ Failed

Remarks:

7.3 Vehicle weighing (A.9.3.2)

7.3.1 Weighing of reference vehicles (6.4, A.9.3.2.1)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Control instrument is:

☐ Integral ☐ Separate

Summary of reference vehicles:

Reference vehicle identification	Vehicle type	Number of axles	Tractor/trailer axle configuration	Tractor/trailer linkage system	Suspension system

Reference vehicle weights:

	Reference vehicle identification	Vehicle unloaded or loaded	Total vehicle weight ( )	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Note: When loaded reference vehicle weights are obtained by loading an unloaded reference vehicle of known weight with standard test loads, this should be noted in the table above.

7.3 Vehicle weighing (continued)

7.3.2 In-motion weighing (A.9.3.2.2)

			At start	At end	
Application no.:	.....	Temp.:			°C
Type designation:	.....	Rel. h.:			%
Observer:	.....	Date:			yyyy-mm-dd
		Time:			hh:mm:ss

Scale interval *d*: .....

Resolution during test: (smaller than *d*) .....

Summary of site configuration:

Maximum operating speed:		Maximum number of axles:	
Minimum operating speed:		Direction of weighing (single or dual):	

Record relevant information regarding the installation, e.g. apron construction, length, etc.:

Test number: .....

Reference vehicle identification: .....

Unloaded/loaded: .....

Direction of travel (if applicable): .....

Run	Speed (max/site/min)	Location (middle/left/right)	Indicated weight ( )	Reference weight ( )	Error	mpe
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

☐ Passed ☐ Failed

Remarks:

7.3.2 In-motion weighing (continued)

Test number: .....

Reference vehicle identification: .....

Unloaded/loaded: .....

Direction of travel (if applicable): .....

Run	Speed (max/site/min)	Location (middle/left/right)	Indicated weight ( )	Reference weight ( )	Error	mpe
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

☐ Passed ☐ Failed

Remarks:

Test number: .....

Reference vehicle identification: .....

Unloaded/loaded: .....

Direction of travel (if applicable): .....

Run	Speed (max/site/min)	Location (middle/left/right)	Indicated weight ( )	Reference weight ( )	Error	mpe
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

☐ Passed ☐ Failed

Remarks:

Note: Reproduce this page, as appropriate, for the required number of tests.

8 EXAMINATION OF THE CONSTRUCTION OF THE INSTRUMENT

Use this page to indicate any description or information pertaining to the instrument, additional to that already contained in this report and in the accompanying national type approval or OIML Certificate. This may include a picture of the complete instrument, a description of its main components, and any remark which could be useful for authorities responsible for the initial or subsequent verifications of individual instruments built according to the type. It may also include references to the manufacturer's description.

Description:

Remarks:

CHECKLIST

The Checklist has been developed based on the following principles:

- To include requirements that cannot be tested according to tests 1 through 7 above, but shall be checked experimentally or visually, e.g. the descriptive markings (3.8);

- To include requirements which indicate prohibitions of some functions, e.g. semi-automatic zero-setting devices shall not be operable during automatic operation (3.3.1);

- Not to include general requirements, e.g. suitability for use (3.1).

This Checklist is intended to serve as a summary of the results of examinations to be performed and not as a procedure. The items on this checklist are provided to recall the requirements specified in R 134-1 and they shall not be considered as a substitution for these requirements.

The requirements that are not included in this type evaluation report (tests 1 through 7 and Checklist 9) are considered to be globally covered by the type approval or OIML Certificate (e.g. classification criteria [2.1], suitability for use [3.1]).

For non-mandatory devices, the Checklist provides space to indicate whether or not the device exists and, if appropriate, its type. A cross in the box for “existent” indicates that the device exists and that it complies with the definition given in the Terminology; when indicating that a device is non-existent, also check the boxes to indicate that the tests are not applicable (see p. 5).

If appropriate, the results stated in this Checklist may be supplemented by remarks given on additional pages.

9 CHECKLIST

Application no.: .....

Type designation: .....

Requirement (R 134-1)	Test procedure	Automatic instruments for weighing road vehicles in motion	Passed	Failed	Remarks
Security of operation					
3.2.1	A.1.3	**Fraudulent use:**			
		The instrument has no characteristics likely to facilitate its fraudulent use			
3.2.2		**Accidental maladjustment:**			
		Effect of accidental breakdown or maladjustment is evident			
3.2.3		**Interlocks:**			
		Prevent use of any control device that may alter a weighing operation			
3.2.4		**Use as a non-automatic weighing instrument:** Existent [ ] Non-existent [ ]			
		Complies with the requirements of OIML R 76-1 for class III or class IIII non-automatic weighing instruments			
		Equipped with enabling device for non-automatic operation that prevents automatic operation and in-motion weighing			
2.9.2		**Scale interval for stationary load:** Existent [ ] Non-existent [ ]			
		If not equal to *d* then automatically put out of service when instrument used for weighing-in-motion			
		Shall not be readily accessible and shall only be used for static testing if instrument is not verified for use as a non-automatic weighing instrument			
3.4		**Use as a control instrument:** Existent [ ] Non-existent [ ]			
3.4.1	A.5.2.1.1	**Accuracy of zero-setting:**			
		Sets zero to within ± 0.25 of scale interval for stationary load			
3.3	A.1.3	**Zeroing devices:**			
		Zero-setting and zero-tracking Existent Non-existent			
		Initial zero-setting [ ] [ ]			
		Automatic zero-setting [ ] [ ]			
		Semi-automatic zero-setting [ ] [ ]			
		Non-automatic zero-setting [ ] [ ]			
		Zero-tracking [ ] [ ]			
3.3.1	A.5.1	**Overall effect of:**			
		Zero-setting			= %
		Initial zero-setting			= %

Requirement (R 134-1)	Test procedure	Automatic instruments for weighing road vehicles in motion		Passed	Failed	Remarks
	A.5.1.2	**Accuracy:**				
		Sets zero to within ± 0.25 *d*				
3.3.1	A.5.1	**Control of zero-setting:**				
		Semi-automatic or automatic zero-setting shall function only in stable equilibrium				
		Non-automatic or semi-automatic zero-setting shall not be operable during automatic operation				
3.3.2	A.5.1.2.2	**Zero-tracking operates only:**				
		When indication is at zero				
		Stability criteria are fulfilled				
		Corrections are not more than 0.5 *d*/second				
		Within a range of 4 % of Max around zero				
Indicating and printing devices						
3.5.1	A.1.3	**Quality of indication:**				
		Weight indication is the self-indicating type				
		Reliable, easy and unambiguous reading of results by simple juxtaposition				
		Results contain names or symbols of the units of mass				
		Scale interval in the form 1 x 10^k, 2 x 10^k or 5 x 10^k units (k being a positive or negative whole number or zero)				
3.5.2		**Printing:**				
		Printout includes: total vehicle weight, date and time, number of axles (where applicable)				
3.5.3		**Weighing range:**				
		No indication or printout where a partial weighment is less than Min or greater than Max + 9 *d*				
3.5.4		**Vehicle guide device:**				
		No indication or printout if any of the wheels of the vehicle did not pass fully over the load receptor				
		If only one direction of travel is permitted:	an error message is given if a vehicle travels in wrong direction, or			
			barriers or other traffic control prevent vehicles travelling in wrong direction			
3.5.5		**Operating speed: no indication or printout if a vehicle travels over the load receptor:**				
		At a speed outside the specified range of operating speeds, and/or				
		With a speed variation (acceleration/deceleration) that would produce a weighing result that may be subject to an excessive relative error				
Units of measurement						
2.8		kg or t				

Requirement (R 134-1)	Test procedure	Automatic instruments for weighing road vehicles in motion		Passed	Failed	Remarks
Installation						
3.6.2	A.1.3	**Drainage:**				
		Provision that no portion of the instrument becomes submerged or partially submerged in water or other liquid				
Sealing device						
3.7.1	A.2.3	**General:**				
		Components not intended to be adjusted or removed by the user are:	sealed, or			
			enclosed			
		If enclosed, the enclosure is sealed				
		Seals are easily accessible				
		Sealing provided on all parts of the measuring system which cannot be materially protected in any other way against operations liable to affect the measurement accuracy				
		Sealing devices prohibit parameters which participate in the determination of the result of measurement from being changed				
3.7.2		**Electronic sealing devices:**	Existent [ ] Non-existent [ ]			
		Access shall only be allowed to authorised people				
		Possible for at least the last intervention to be memorised				
		The record shall include the date and a characteristic element identifying the authorised person				
		Traceability of the intervention shall be assured for two years, if not over-written by a further intervention				
		Where more than one intervention is stored, the oldest is deleted to permit a new record				
Descriptive markings						
3.8.1	A.2.2	**Markings shown in full:**				
		Identification mark of the manufacturer				
		Identification mark of the importer (if applicable)				
		Type designation of the instrument				
		Serial number of the instrument (on each load receptor, if applicable)				
		Not to be used to weigh liquid products (if applicable)				
		Maximum transit speed				
		Direction of weighing (if applicable)				
		Scale interval for stationary load (if applicable)				
		Electrical power supply voltage				
		Electrical power supply frequency				

Requirement (R 134-1)	Test procedure	Automatic instruments for weighing road vehicles in motion	Passed	Failed	Remarks
		Temperature range (when not – 10 °C to + 40 °C)			
3.8.2	A.2.2	**Markings shown in code:**			
		Accuracy class			
		Maximum capacity			
		Minimum capacity			
		Scale interval			
		Maximum operating speed			
		Minimum operating speed			
		Maximum number of axles per vehicle (where applicable)			
		Type approval sign			
3.8.3		**Supplementary markings:**			
		Are required	enter in remarks		
3.8.4		**Presentation of descriptive markings:**			
		Indelible			
		Size, shape and clarity that allows easy reading			
		Grouped together in a clearly visible place			
		Plate bearing markings to be sealed, unless it cannot be removed without being destroyed			
Verification marks					
3.9.1	A.2.3	**Position:**			
		Part where verification marks are located cannot be removed from the instrument without damaging the marks			
		Allows easy application of marks without changing the metrological qualities of the instrument			
		Visible when the instrument is in service			
3.9.2		**Mounting:**			
		Verification mark support to ensure conservation of the marks			
		Support is of the correct construction			
Display check					
4.3.2		**Upon switch-on:**			
		Relevant signs of indicator are active and non-active for sufficient time to be checked by operator			
4.3.4	A.7	**Disturbances**			
		Acting upon a significant fault in case 4.1.2 b)			
		By verifying compliance with documents or by simulating faults, check that:			

Requirement (R 134-1)	Test procedure	Automatic instruments for weighing road vehicles in motion	Passed	Failed	Remarks
		Either the instrument is made inoperative automatically, or			
		A visual or audible indication is provided automatically and continues until the user takes action or the fault disappears			
4.3.5	A.6.1	**Warm-up time:**			
		No indication or transmission of weighing results			
		Automatic operation is inhibited			
4.3.6	A.7.1.2.3	**Interfaces:**			
		Instrument continues to function correctly, and			
		Metrological functions not influenced			
4.3.7	A.7.4	**Battery power supply - if voltage drops below manufacturer's specified value:**			
		Continues to function correctly, or			
		Is automatically put out of service			
Documentation					
5.1.1	A.1.1	**Documentation includes:**			
		Metrological characteristics of the instrument			
		A standard set of specifications for the instrument			
		A functional description of the components and devices			
		Drawings, diagrams and general software information (if applicable), explaining the construction and operation, and			
		Any document or other evidence that the design and construction of the instrument complies with the requirements of OIML R 134-1			
5.1.3		**Examination of:**			
		Documents			
		Functional checks			
		Test reports from other authorities			

Use this space to detail remarks from the Checklist:

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