

Simplification of Lighting and Light-Signaling Regulations

The 57th Asia Expert Meeting in Thailand

Date: August 8th – 9th , 2019



JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER

1. Background & Purpose
2. Current Status
3. Next Stage
4. UI marking (Unique Identifier)
5. Change Index


1. Background & Purpose

First , I show the reason why simplification of regulations has been done, and its purpose.

Ground:

There are 147 regulations in UNECE as of August 2019. Within that, 41 regulations concerning lighting exist. As frequent amendments have been done for these regulations, administrative workload have been so high and so many errors in regulations were created.

So, at the 156th session of WP.29 (March 2012) the European Union, supported by Japan, urged WP29 to consider the simplification of the lighting regulations and to focus upon developing less technology-specific, more performance-related requirements.

Based on the decision by WP29, GRE established Informal Working Group for Simplification of Lighting regulations at 72nd GRE meeting, October 2014.  **IWG-SLR**

This IWG-SLR has determined to act in two stages.

STAGE 1: Editorial Simplification

Parts regulations for lighting will be merged into three regulations, except for light source and installation.

STAGE 2: Performance based/ Technology neutral

New regulations will be rewritten with updated performance based technical requirements

At the head of Three new regulations, these story is shown as “Introduction”.
Followings are partly extract from LSD (Light Signaling Device, R148)

Introduction

This UN Regulation combines the provisions of individual Regulations Nos. 4, 6, 7, 23, 38, 50, 77, 87 and 91 into a single Regulation, and is the outcome of the World Forum for Harmonization of Vehicle Regulations (WP.29) decision to simplify the lighting and light-signalling Regulations based on the initial proposal by the European Union and Japan.

The objective of this UN Regulation is to increase the clarity, to consolidate and Streamline the complexity of requirements in Regulations Nos. 4, 6, 7, 23, 38, 50, 77, 87 and 91 and to prepare for the future transition to performance based requirements, by reducing the number of Regulations through an editorial exercise without changing any of the detailed technical requirements already in force up to the date of entry into force of this UN Regulation.

1. Background & Purpose: For reference

Extract from SLR-01-07 about

“Analysis of Proposals for Amendment adopted by GRE from GRE-61 to GRE70”

The following provides an analysis of the proposals for amendment adopted by GRE at its sessions GRE-61 to GRE-70 in order to quantify the impact of collective amendments upon the number of proposals actually submitted to WP.29 by GRE for approval.

GRE Session	Total Number of Proposals adopted	Total Number of adopted proposals associated with a collective amendment	% of adopted proposals associated with a collective amendment	Documents at WP29 resulting from a collective amendment	Total Documents sent to WP29	% of Documents at WP29 resulting from a collective amendment
61	35	7	20	2	12	17
62	45	20	44	10	21	48
63	22	5	23	7	15	47
64	39	0	0	0	12	0
65	19	6	32	2	11	18
66	34	7	21	7	13	54
67	46	29	63	11	21	52
68	21	8	38	5	12	42
69	43	32	74	17	22	77
70	15	0	0	0	9	0
Total	319	114	36	61	148	41

Workload and meeting pace as of GRE81

29 meetings held until now:

- | | |
|---|--|
| I. 11 September 2014 in Brussels (BE) | XIX. 12-14 July 2017 in Brussels (BE) |
| II. 23 October 2014 in Geneva (CH) | XX. 4-6 October 2017 in Brussels (BE) |
| III. 14 January 2015 in Brussels (BE) | XXI. 18-21 December 2017 in Brussels (BE) |
| IV. 13 April 2015 in Geneva (CH) | XXII. 29 Jan / 1 Feb 2018 in Shenzhen (CN) |
| V. 13 October 2015 in Brussels (BE) | XXIII. 4-6 April 2018 in Brussels (BE) |
| VI. 5-6 November 2015 in Brussels (BE) | XXIV. 30 May / 1 June 2018 in Brussels (BE) |
| VII. 15-16 December 2015 in Brussels (BE) | XXV. 3-5 July 2018 in Brussels (BE) |
| VIII. 13-14 January 2016 in Brussels (BE) | XXVI. 24-26 September 2018 in Brussels (BE) |
| IX. 29 February & 1 March 2016 in Brussels (BE) | XXVII. 10-12 December 2018 in Brussels (BE) |
| X. 14-15 April 2016 in Brussels (BE) | XXVIII. 25-27 February 2019 in Brussels (BE) |
| XI. 9-10 June 2016 in Brussels (BE) | XXIX. 27-29 March 2019 in Brussels (BE) |
| XII. 5-7 September 2016 in Brussels (BE) | |
| XIII. 5-7 October 2016 in Brussels (BE) | |
| XIV. 5-7 December 2016 in Brussels (BE) | |
| XV. 21-23 February 2017 in Brussels (BE) | |
| XVI. 22-24 March 2017 in Brussels (BE) | |
| XVII. 16-18 May 2017 in Tokyo (JP) | |
| XVIII. 13-15 June 2017 in Brussels (BE) | |

Next meetings:

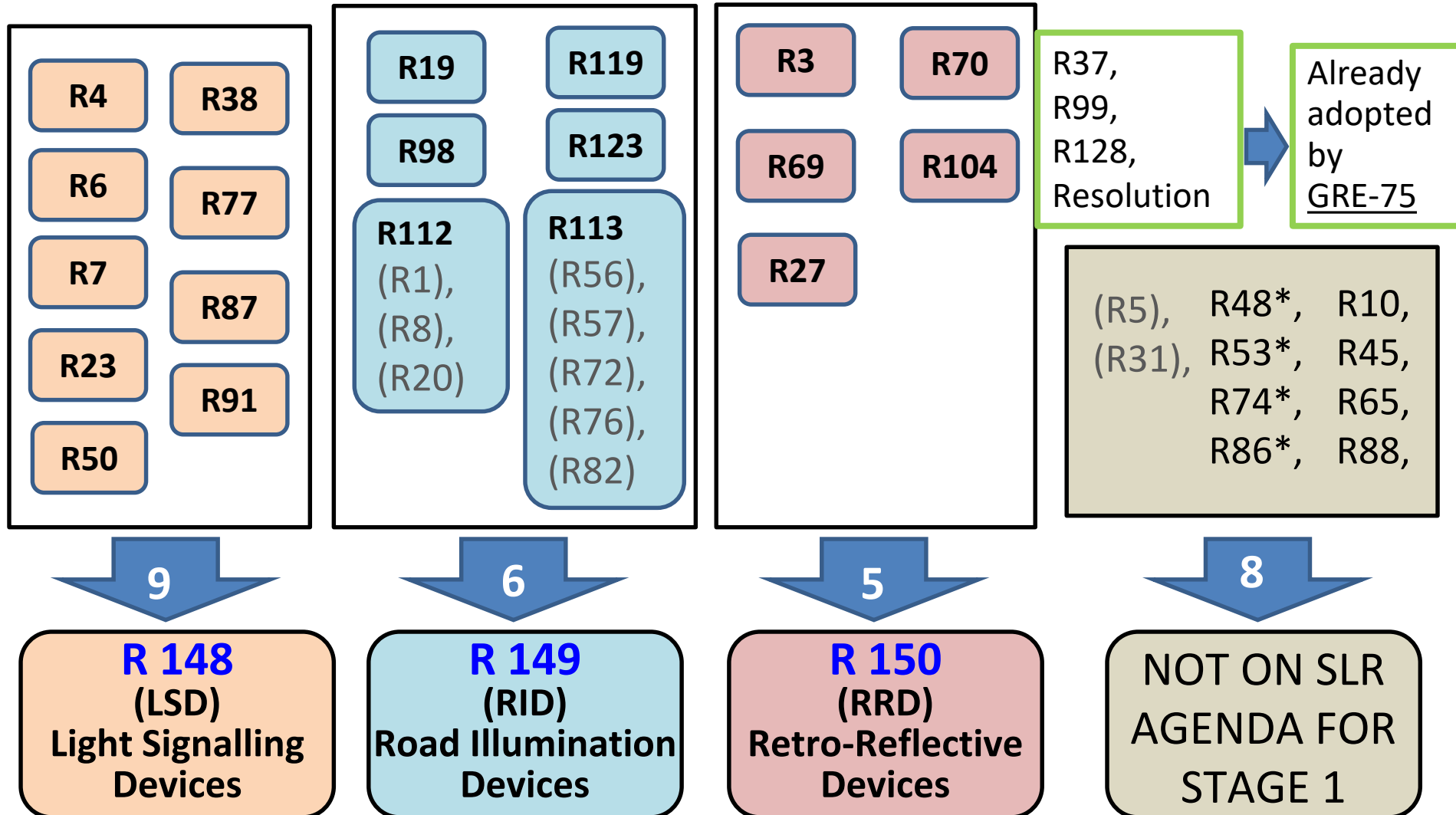
- SLR-30** on 22-24 May 2019 in Brussels (BE)
- SLR-31** on 3-5 July 2019 in Brussels (BE)
- SLR-32** on 3-5 September 2019 in Tokyo (JP)
- SLR-33** on 9-11 October 2019 in Brussels (BE)
- SLR-34** on 4-6 November 2019 in Brussels (BE)
- SLR-35** on 11-13 December 2019 in Brussels (BE)

2. Current Status

Second, I explain summary of present situation of SLR. In addition SLR makes necessity to amend existing regulation and installation regulation.

2. Current Status

GRE Regulations after Stage 1 of simplification



* Definitions and other minor editorial adjustments / synchronisation will be addressed
Regulations in parenthesis are frozen already.

2. Current Status

SLR "Stage 1"

The complete package adopted by WP.29 in March 2019

NEW SIMPLIFIED UN REGULATIONS

- Light Signalling Devices (148) → WP.29/2018/157 (*GRE/2018/36 to Nov 2019*)
- Road Illumination Devices (149) → WP.29/2018/158/**Rev.1** (*part of GRE/2018/37 to Nov 2019*)
- Retro-Reflective Devices (150) → WP.29/2018/159/**Rev.1** (*part of GRE/2018/38 to Nov 2019*)

Transitional Provisions

Collective Amendments for Regs Nos. 3, 4, 6, 7, 19, 23, 27, 38, 50, 69, 70, 77, 87, 91, 98, 104, 112, 113, 119 and 123

WP.29/2018/091/**Rev.1** to .../098/**Rev.1**, .../103/**Rev.1**, .../106/**Rev.1**, .../107/**Rev.1**, .../109/**Rev.1**, .../112/**Rev.1** to .../119/**Rev.1**

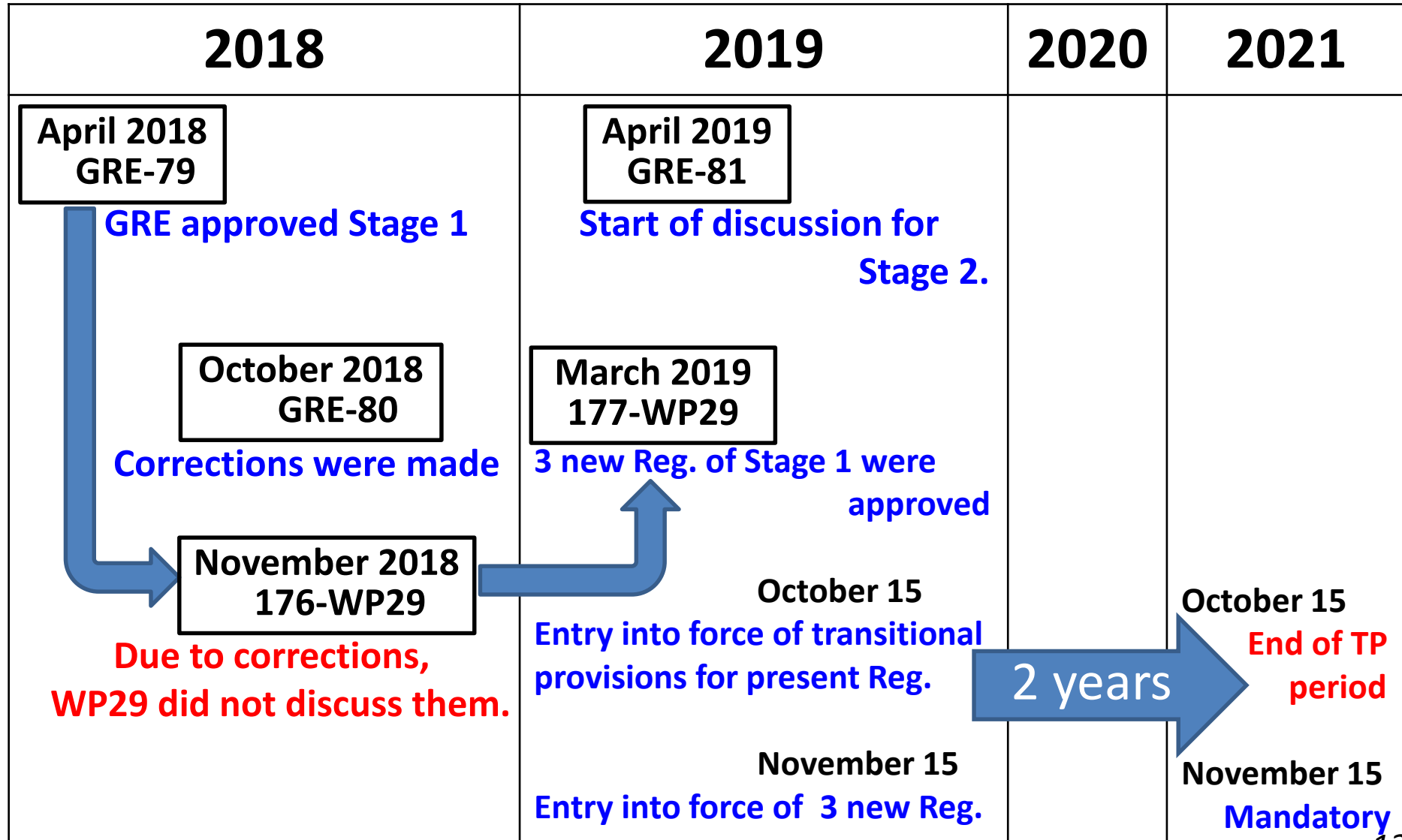
Updated References to device Regs. + Reorganized and grouped definitions

+ Use of "**Change Index**" and its definition

- R48, series 03, 04, 05 and 06 of amendments
(WP.29/2018/102, .../101, .../100/**Rev.1**, .../099/**Rev.2**)
- R53, series 01 and 02 of amendments
(WP.29/2018/105 + WP.29-177-07, .../104/**Rev.1** + *GRE-80-05 to Nov 2019*)
- R74, series 01 of amendments
(WP.29/2018/108/**Rev.2**)
- R86, series 00 and 01 of amendments
(WP.29/2018/111, .../110/**Rev.1**)

2. Current Status

The course of Stage 1 “Editorial Simplification”



Light source regulations

Scope

Administrative provisions

Technical requirements

Conformity of production

Names and addresses of Technical Services ...

Transitional provisions

Annexes

Sheets for light source categories

Communication

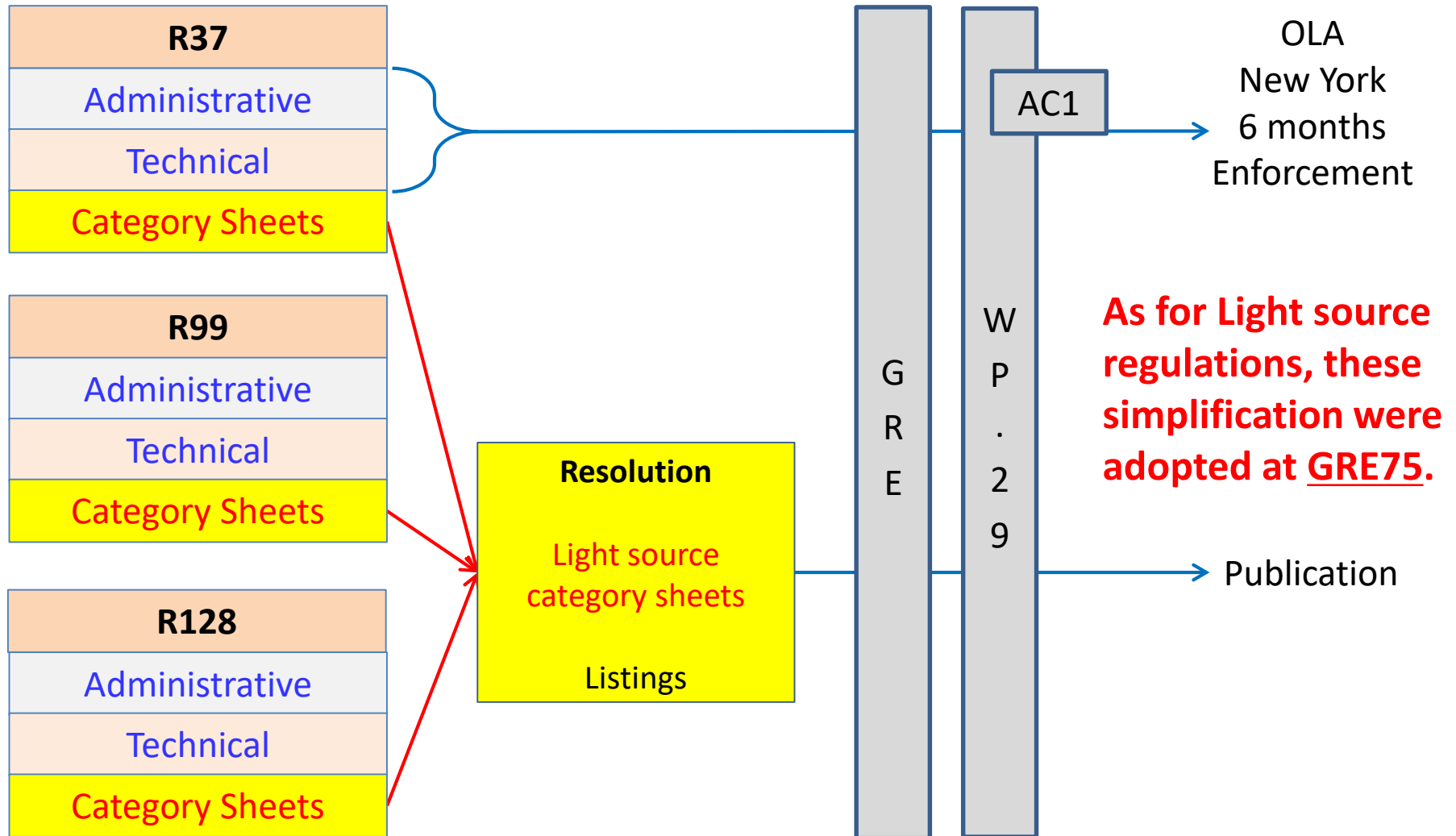
Example of the arrangement of the approval mark

Prescriptions for technical testing

Prescriptions for conformity of production

Administrative
Technical
Category Sheets

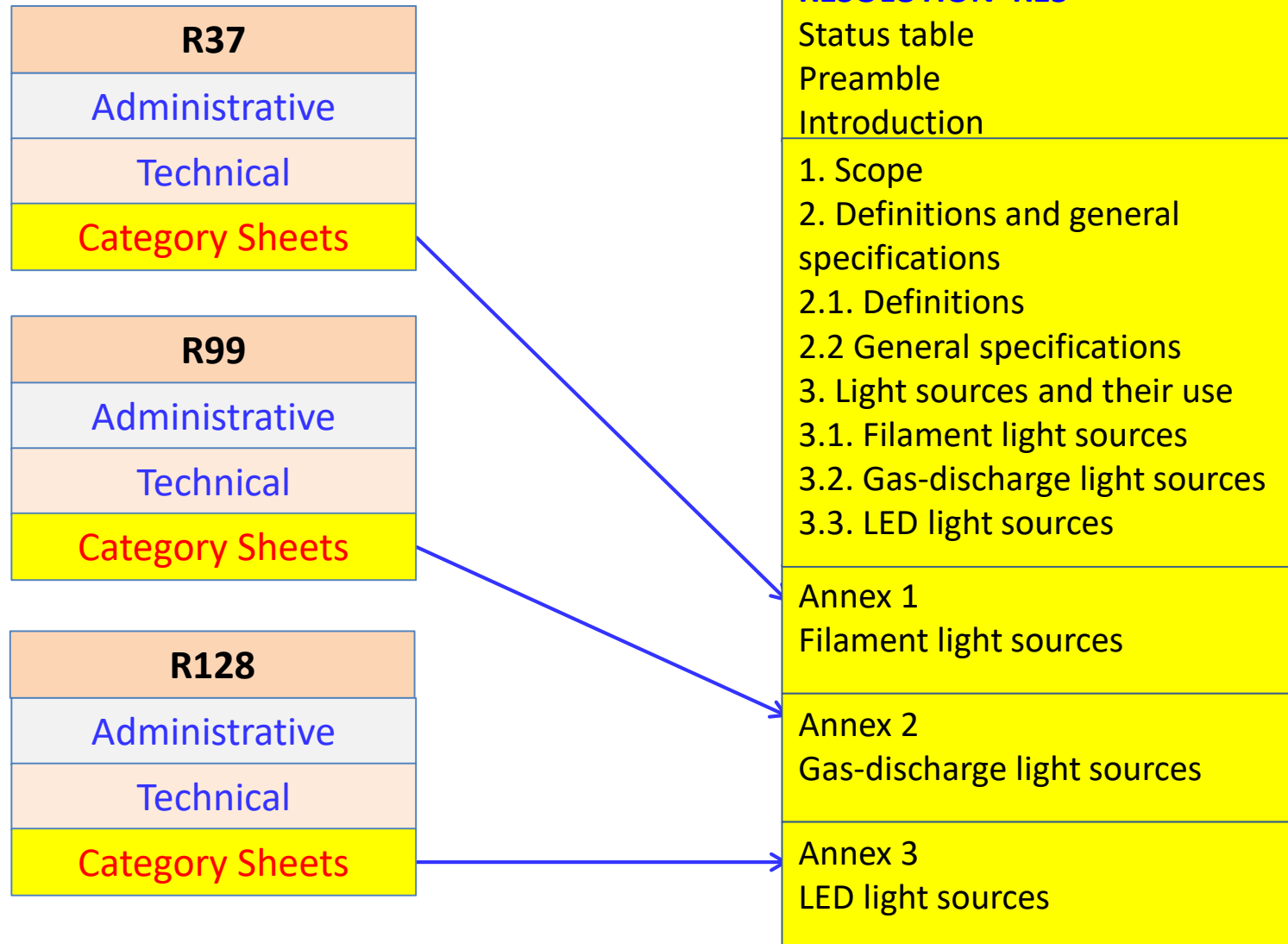
Light source regulations



2. Current Status

The amendment of the Resolution does not cause an amendment of a regulation

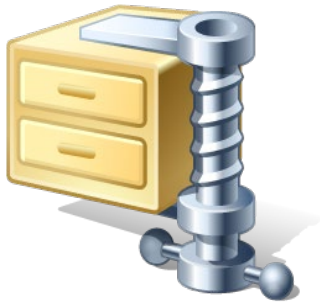
The amendment of one regulation does not cause an amendment of another regulation



2. Current Status

UN Regs

Structure of UN lighting Regulations after Stage 1



NEW REGULATIONS

R148 "Signal Lighting devices"
R149 "Road illumination devices"
R150 "Retro-reflective devices"

INSTALLATION

R-48
R-53
R-74
R-86

LIGHT SOURCES

R-37
R-99
R-128
(Simplified structure with
reference to a Resolution **RE5**)

VARIOUS

R-10
R-45
R-65
R-88

ONLY
14 Live
Regulations

1
2
3
4
5
6
7
8
19
20
23
27
31
38
50
56
57
69
70
72
76
77
80
87
91
98
104
112
113
119
123

2. Current Status

Relationship with Installation regulation

Installation regulation specifies the regulation number for each functions to which applicable functions shall be approved.

Example of headlamp in regulation 48:

6.2. Dipped-beam headlamp (Regulations Nos. 98 and 112)

6.2.1. Presence

Mandatory on motor vehicles. Prohibited on trailers.

6.2.2. Number

Two, type approved according to Regulations Nos. 98 or 112, excluding Class A headlamp.

In this case, R149 shall be specified in addition to R98 and R112, otherwise headlamp approved by new regulation “149” can not be installed. So IWG-SLR have made proposal to add “149” as follows.

Extract from [WP29/2018/99/Rev.2](#) (amendment proposal of R48-06)

Paragraph 6.2., amend to read:

"6.2. Dipped-beam headlamp (Regulations Nos. 98 and, 112 **and 149**)"

Paragraph 6.2.2., amend to read:

"6.2.2. Number

Two, type approved according to

- Regulations Nos. 98 or 112, excluding Class A headlamp,

or

- Regulation 149, Classes B and D headlamps only."

Treatment of present regulations and transitional provisions

Transitional provisions from current regulations to new regulations were proposed. Two years after entry into force of new regulations are proposed as transitional period. Within this period part approval can be gotten either by current regulations or new regulations. Following are proposal for R3 by [WP29/2018/91/Rev.1](#)

Proposal for the 03 series of amendments of Regulation No. 3₁

Paragraph 12, amend to read:

- 12.1. As from 24 months after the official date of entry into force of UN Regulation No. 150 , Contracting Parties applying this Regulation shall cease to grant approvals to this Regulation.
- 12.2. Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to this and any previous series of amendments of this Regulation.
- 12.3. Contracting Parties applying this Regulation shall continue to grant approvals for devices on basis of this and any previous series of amendments to this Regulation, provided that the devices are intended as replacements for fitting to vehicles in use.
- 12.4. Contracting Parties applying this Regulation shall continue to allow fitting or use on a vehicle in use of a device approved to this Regulation as amended by any previous series of amendments, provided that the device is intended for replacement."

2. Current Status

Approval mark defined in 1958 agreement Rev.3

1958 agreement Rev.3 specifies that approved device and/or system shall show “UI mark” or conventional approval mark. However “UI mark” will not work in short term, because of difficulties to establish the system.
So conventional approval mark will be used for the time being.
Requirements for approval mark is as follows.

1958 Agreement Rev.3, Schedule 4 Paragraph 3

Section 1

Section 2

Section 3

Section 4

Regulation number followed
by R+ series of amendment
number / number of
supplement relating to the
type approved lamp /
implementing stage,
If applicable.

E4 * 148R00/00/00 * 0221 * 00

3. Next Stage

Now, SLR group already start the work for Stage 2.
I show planed activity and schedule of Stage 2.

3. Next Stage

Work plan and time schedule for “Stage 2”

STAGE 2 = SIMPLIFIED REGULATIONS with technology neutral and performance based requirements

STAGE 2	The overarching objective is to update and harmonize the technical requirements for lighting and light-signalling to be <u>suitable for global implementation under the 1958 and 1998 Agreements</u> .	
STAGE 2 STEP 1	Revise the technical requirements of the new LSD, RID and RRD UN Regulations , to become technology neutral with performance-based and objective test requirements taking into account glare and visibility.	
	Amendments will also be required to the installation UN Regulations taking into account the work of IWG-VGL.	
	Informal submission to the eighty-second session of GRE	October 2019
	Final consideration at the eighty-third session of GRE	April 2020
STAGE 2 STEP 2	Simplify and update the technical requirements of the UN installation Regulations (Nos. 48, 53, 74, 86) , to become technology neutral with performance-based and objective test requirements	
	Informal submission to the eighty-sixth session of GRE	October 2021
	Final consideration at the eighty-seventh session of GRE	April 2022
	Adoption by WP.29	November 2022

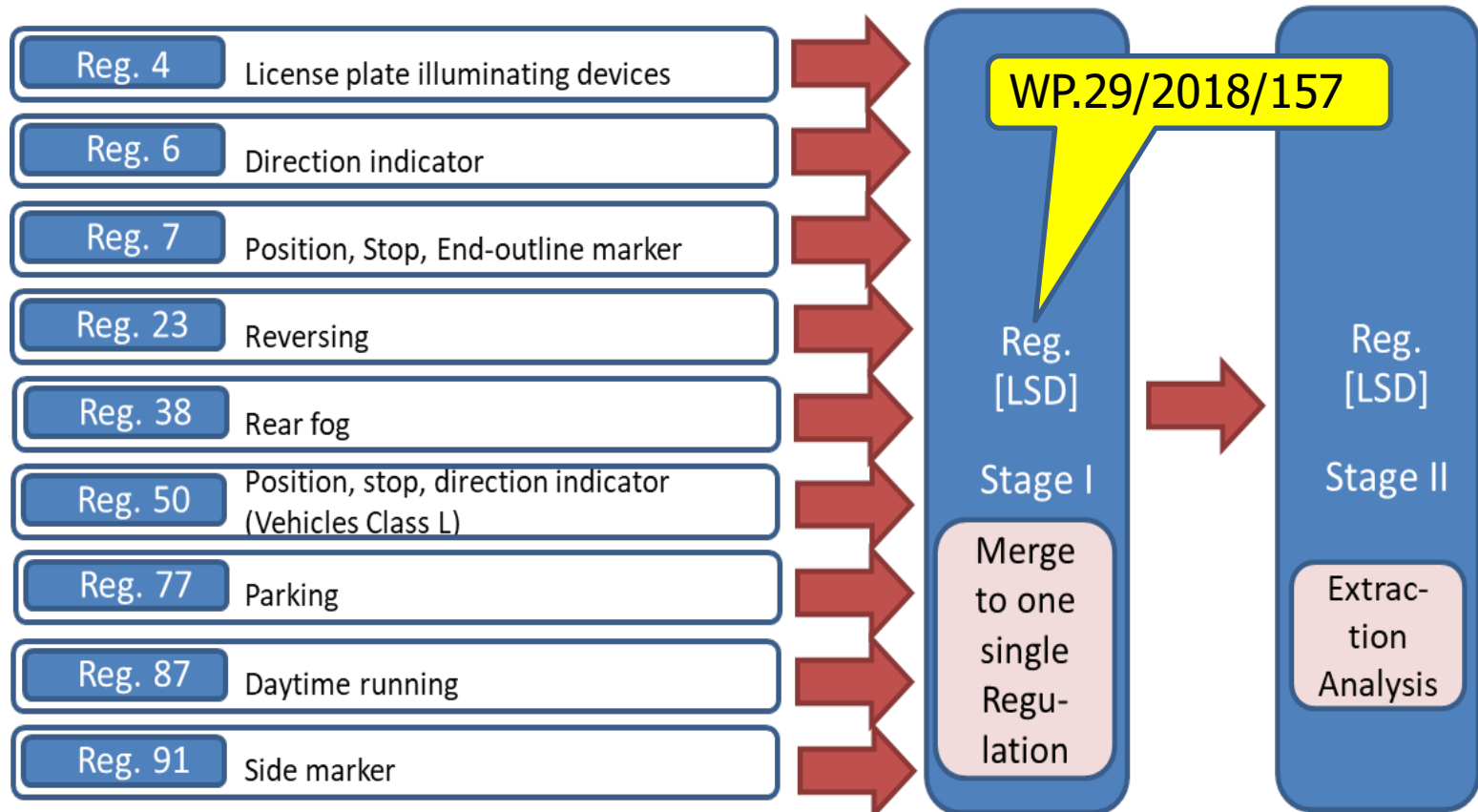
3. Next Stage

Harmonization between UN installation Regulations and Chinese GB Standards



LIGHT SIGNALLING DEVICES R148 (LSD)

Stage II – Regulation No. 148 [LSD]



SIMPLIFICATION

Technology independent

Objective test-methods

Performance
based

Stage II – Regulation No. 148 [LSD]

Main topics of work

- Rearrangement of the requirements -> §5.x.x
- Align „D“ and „Y“ lamp provisions -> §4.4
- Light source module definition -> §4.3.2.ff
- Harmonise failure provisions -> §4.6. (see also §5.4.4.ff)
- Rear registration plate lamp – harmonisation -> §5.11.
- Reversing lamp – improvement -> §5.8.
- Rear fog lamp – improvement -> §5.9.
- Additional functions -> New §x.y.
- Move requirements to main text -> Annex 2,3

Stage II – Regulation No. 148 [LSD]

Re-arrangement of the specific technical provisions in Par.5

Existing provisions for each function in Regulation No. [LSD]

Par.	Content	5.1.	5.2.	5.3.	5.4.	5.5.	5.6.	5.7.	5.8.	5.9.	5.10.	5.11.
5.x.		Front position, front end-	Rear position, rear end-outline	Parking	Daytime running	Stop	Direction indicator	Side marker	Reversing	Rear fog	Manoeuvring	Rear registration
5.x.1.	Intensity shall meet table x + table x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.x.2.	Table of photometry	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	different
5.x.3.	Colour	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.x.4.	Outside table	✓	✓	✓	✓	✓	✓	n.a.	n.a.	n.a.	n.a.	n.a.
5.x.5.	Area of apparent surface	n.a.	n.a.	n.a.	✓	n.a.	n.a.	n.a.	n.a.	✓	n.a.	n.a.
5.x.6.	Measuring procedure	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	✓
5.x.7.	Other requirements	n.a.	n.a.	n.a.	✓	n.a.	✓	n.a.	n.a.	✓	n.a.	✓

Proposal: New structure for Paragraph 5.x. including a fixed framework and empty requirements if no provision exists.

- 5.x. Name(s) and Symbol(s)
- 5.x.1. Luminous intensity:
- 5.x.2. Standard light distribution:
- 5.x.3. Colour:
- 5.x.4. Apparent surface:
- 5.x.5. Measurement:
- 5.x.6. Other requirements:

If necessary, add subparagraphs

ROAD ILLUMINATION DEVICES R149 (RID)

3. Next Stage

WP.29/2018/158/Rev.1

YESTERDAY

R112 Class A
Class B
Class AR
Class BR
R98 Class DC
Class DR
R123 Class C
Class E
Class V
Class W
Class XR
ADB
R113 Class AS
Class BS
Class CS
Class DS
Class ES
Class R-BS
Class R-CS
Class R- DS
Class R- ES
R19 Class B- F3
R119 Class K

6 Regulations
24 Beam patterns

TODAY (149 "Stage 1")

Class A
Class B
Class AR
Class BR
Class DC
Class DR
Class C
Class E
Class V
Class W
Class XR
ADB
Class AS
Class BS
Class CS
Class DS
Class ES
Class R-BS
Class R-CS
Class R- DS
Class R- ES
Class F3
Class K

1 Regulation
23 Beam patterns

TOMORROW (149 "Stage 2")

Basic /"C" Passing beam
Low speed /"V" Passing beam
Motorway/"E" Passing beam
Adverse weather passing beam
Basic Driving beam
Low speed Driving beam
ADB
AS, BS for mopeds
CS DS for motorbikes ($> 11 \text{ kW} / 125 \text{ cm}^3$)
Secondary driving beams ($> 11 \text{ kW} / 125 \text{ cm}^3$)
Auxiliary driving beam
Fog beam
Cornering beam

1 Regulation
16 Beam patterns

TC4-45 SAE J2829
Expertise of Optical engineers

Installation requirements after SLR step 1 Regulation 149



R48

Class B, BR
Class DC, DR
Class C
Class E
Class V
Class W
Class XR
ADB
Class F3
Class K



R86

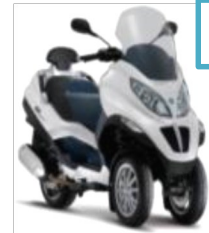
Class A, AR
Class B, BR
Class DC, DR
Class AS
Class BS, R-BS
Class CS, R-CS
Class DS, R-DS
Class ES, R-ES
Class F3
Class K



R74

< 50 Km / h

AS
BS, R-BS
CS, R-CS
DS, R-DS
ES, R-ES
A, AR
B, BR



R53

<125 cm³

CS, R-CS
DS, R-DS
ES, R-ES
Class B, BR
Class DC, DR
F3



>125 cm³

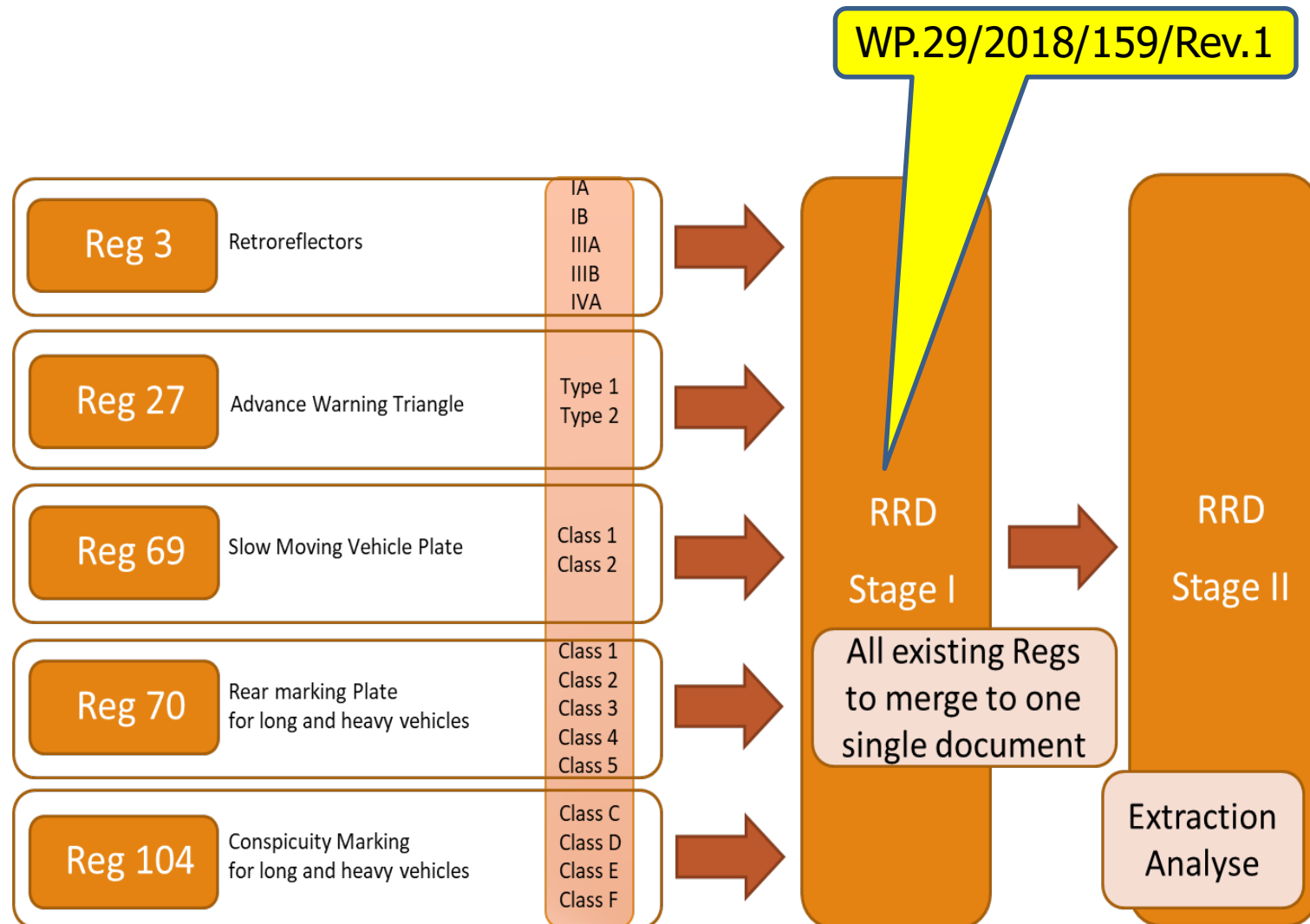
2 x CS, 2 x R-CS
DS, R-DS
ES, R-ES
A, AR
B, BR
DC, DR
F3

GREEN colour means «optional»
BLACK colour means «mandatory»

Should the beam requirements be based on the category of the vehicle?

RETRO REFLECTIVE DEVICES R150 (RRD)

Stage II – Regulation No. 150 [RRD]



Stage II – Regulation No. 150 [RRD]

Main topics to be worked on in future

- Requirements for CIL for retroreflective devices – classes
- Requirements for R' (R_A) for retroreflective devices/markings – classes
- Colorimetric requirements – daytime and nighttime visibility enhanced visibility
- Photometric measurement conditions – to define independent from device
- Water-penetration test and corrosion test independent from the device
- Weathering test (colour fastness) to adapt to state of the art testing
- Mechanical requirements to define testing independent from device
- Chemical and environmental requirements - testing independent from device
- Specific requirements and testing, which is depending on the device

4. UI marking (Unique Identifier)

58 Agreement 3rd version introduced “UI marking” under DETA system, which will be used instead of conventional approval marking.

I explain present discussion how to use it.

DETA:

(Database for the Exchange of Approval documentation)

Transmitted by IWG SLR

Informal document GRE-81-20
(81st GRE, 15-18 April 2019, agenda item 4)

UNIQUE IDENTIFIER

Impact and usage of the UI in Regulations No. 148/149/150

- Definition of the different phrases used
 - Approval marking
 - Approval number
 - Symbol
 - Additional symbol
- Introduction of different possibilities when using the Unique Identifier
- The comparison between the different options

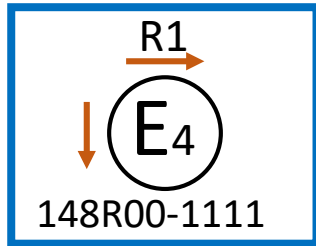
4. UI marking (Unique Identifier)

UNIQUE IDENTIFIER

Impact and usage of the UI in Regulations No. 148/149/150

Necessary markings on a single function device according to par. 3.3.2. and 3.3.4. of Regulation No. 148

Approval marking
(Par. 3.3.4.1.)



Trade name or mark
(Par. 3.3.4.2.)

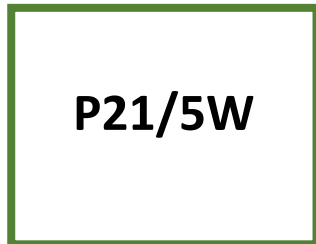


Par. 3.3.2.

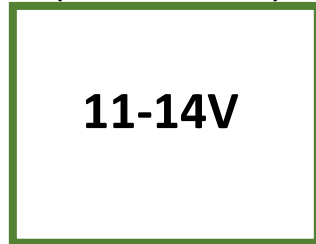
The approval marking shall consist of:

1. The circle surrounding the letter „E“ + number of authority
2. The Regulation number (148) followed by „R“, the series of amendments (00), a dash „-“ and the approval number (1111)

Light source category
(Par. 3.3.4.3.)



Rated Voltage or range
(Par. 3.3.4.4.)



1. Symbols identifying the signalling function (R1)
2. Additional symbols

1. horizontal arrows for limited mounting positions
2. „R“ or „L“
3. „D“ or „Y“ for single lamp combinations
4. Vertical arrows for limited visibility

☐ On any fixed part visible after installation (par. 3.3.4.1.1.)

☐ Anywhere on the device (par. 3.3.4.7.)

Question 1: Who is the addressee of each part of these markings?

Question 2: Which of these information parts is needed when?

4. UI marking (Unique Identifier)

UNIQUE IDENTIFIER

Impact and usage of the UI in Regulations No. 148/149/150

Current understanding and text for the usage of the Unique Identifier

Par. 3.3.2.

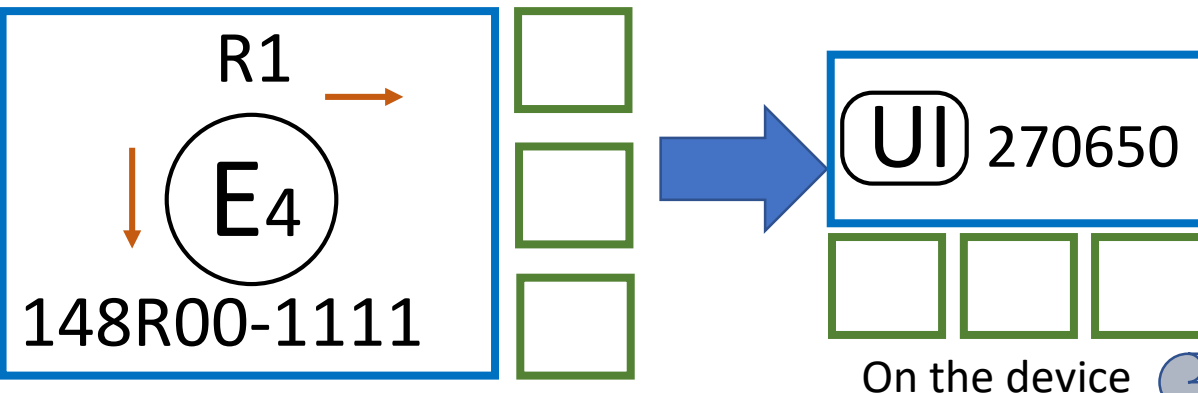
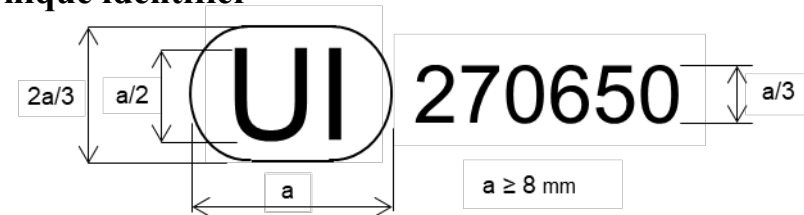
The approval marking shall consist of:

1. The circle surrounding the letter „E“ + number of authority
2. The Regulation number (148) followed by „R“, the series of amendments (00), a dash „-“ and the approval number (1111)
3. Symbols identifying the signalling function (R1)
4. Additional symbols
 1. horizontal arrows for limited mounting positions
 2. „R“ or „L“
 3. „D“ or „Y“ for single lamp combinations
 4. Vertical arrows for limited visibility

3.3.3.

The approval marking may be replaced by the Unique Identifier (UI), if available. The Unique Identifier mark shall follow the format in the example shown below:

Figure I
Unique identifier



DETA Information (Level: public?)	
Regulation No.:	[148]
Series of Amendments:	00
Authority:	Netherlands
Function(s) included:	Rear position (R1)
Approval number:	1111
Extension number:	n.a.
Mounting height:	below 750 mm
Mounting side:	Right side only
Type „D“:	No
Type „Y“:	No

In the database (internet)

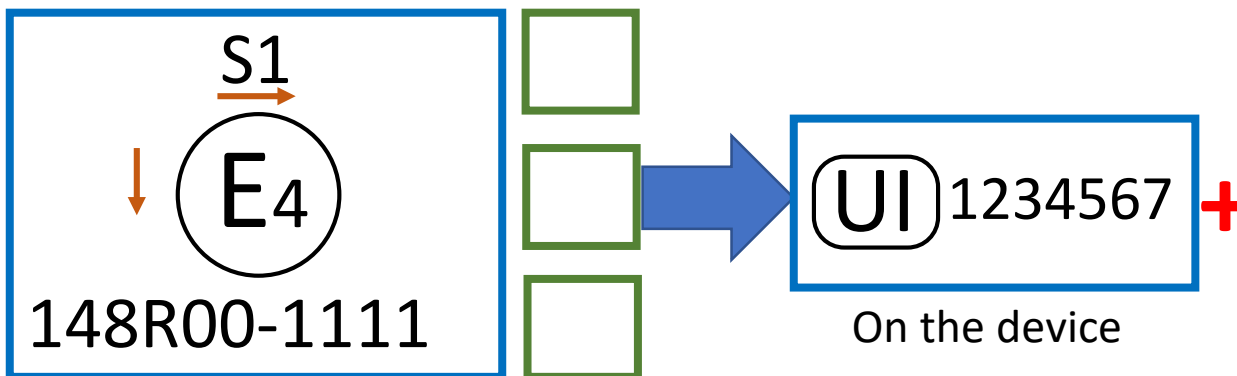
Question: Is there something like a „public“ level to the DETA?


4. UI marking (Unique Identifier)

DETA-33-08e, Par. 12, Draft Guidelines for application of the Unique Identifier (UI)

12. Utilizing the secure internet database and using the UI as marking is on a voluntary basis, unless a UN Regulation stipulates otherwise.

A UN Regulation may prohibit the use of the UI as marking for the items covered by that UN Regulation. A UN Regulation may also specify that additional symbols and information to be marked on the product can be regarded as part of the approval marking and may be replaced by the UI marking accordingly.



DETA Information (Level: public)	
Regulation No.:	[LSD]
Series of Amendments:	00
Authority:	Netherlands
Function(s) included:	Rear position(R1
Approval number:	1111
Extension number:	n.a.
Mounting height:	below 750
Mounting side:	Right side only
Type „D“:	No
Type „Y“:	No
Manufacturer logo/tm:	
Manufacturer name:	ECME
Product number:	2BA-2232-02F
Light Source(s):	P21/5W
Voltage/Voltage range:	11-14V

In the database (internet)

Question: Is this an option for lighting and light-signalling?

5. Change Index

As new SLR regulations have several functions in one regulation, once amendment occurs for one function we need to define which function will be affected.

To make it clear, change index system is introduced.

GRE Informal Working Group „Simplification of Regulation“

Change Index - Problem statement

CURRENT SITUATION:

One Regulation = One Device (function).

New series of amendments introduces higher stringency requirements to the device covered by the Regulation.

NEW SITUATION:

One Regulation covers many devices (functions).

New series of amendments may introduce higher stringency requirements to only one or more of the devices (function) covered by the Regulation.

However, according to the current system ALL devices covered by the Regulation need new type approvals following the new series of amendments.

TARGET:

Avoid unnecessary new type approvals for those devices (functions) for which a new series of amendments have not introduced higher stringency requirements.

SOLUTION:

Introduction of the „Change Index“.

5. Change Index

GRE Informal Working Group „Simplification of Regulation“

Change Index - Definition

GRE-78 Question: What is the change index?

Paragraph 2.1.6. of Regulation No. 48 (Definition) (see document GRE/2018/16)

“2.1.6. *"Change index" means a sequential number, starting from 0, specific to each lamp (function) covered by UN Regulations 148, 149 and 150. It indicates the number of times new series of amendments to the pertinent Regulation (148, 149 and 150) have posed higher stringency requirements to this lamp (function)."*

Table 2 of the Draft Regulation on Light-Signalling devices (148) (see document GRE/2018/02)

<i>Series of amendments to the Regulation</i>	<i>00</i>	<i>01</i>	<i>02</i>
<i>Function (Lamp)</i>	<i>Change Index for the specific function (lamp)</i>		
Daytime running lamp	0	1	1
Front direction indicator lamp	0	0	1
Front direction indicator lamp (Vehicle category L)	0	0	0
Front end-outline marker lamp	0	0	0

The series of amendments IS part of the approval marking

The change index is NOT part of the approval marking

GRE Informal Working Group „Simplification of Regulation“

Approval marking

Type approval marking acc. to the new simplified Regulations

Regulation No. 87

Revision 2 of the 1958 Agreement
Example of **approval marking**

RL
01 01 Series
Contracting party **E₄**
1111 4 digit seq. number



Regulation No. 148

Revision 3 of the 1958 Agreement
Requirement for **approval marking**

RL Symbol for DRL
E₄ Contracting party
148R01-1111
No. of Regulation | "R" | 4 digit seq. number
01 Series

The change index is NOT part of the approval marking

GRE Informal Working Group „Simplification of Regulation“

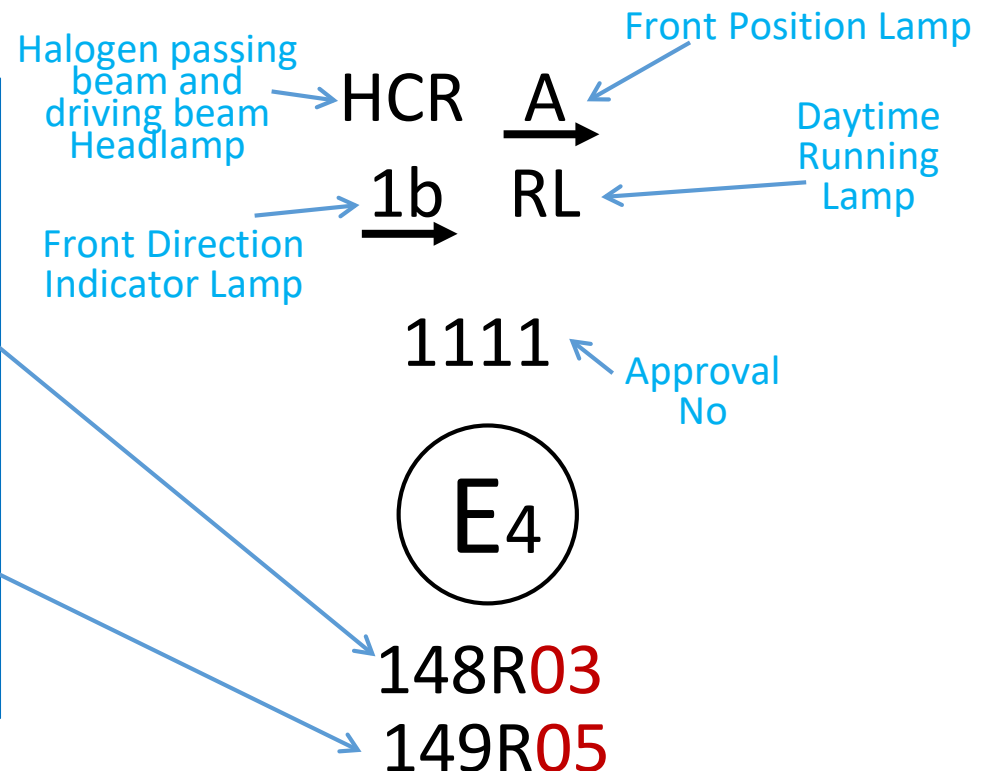
Grouped approval marking – multiple lamp (function) type approval

Example of a group of lamps (functions)
type approved according to the 148 and 149 Regulation

The change index is NOT part of the approval marking

The DRL, Front Position Lamp and Front Direction Indicator Lamp are type approved according to the **03 series (for example)** of amendments to the 148 Regulation

The Halogen Passing Beam and Driving Beam Headlamp is type approved according to the **05 series (for example)** of amendments to the 149 Regulation



The approval marking always shows the latest series of amendments of the Regulation applicable to the type approval of the specific lamp (function).

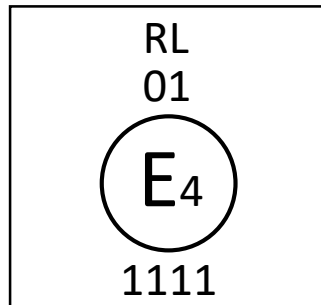
GRE Informal Working Group „Simplification of Regulation“ Approval numbering – Single Device (function) Type Approval

Type approval number acc. to the Rev.3 of 1958 Agreement

Regulation No. 87

Revision 2 of the 1958 Agreement

Example of **approval number**



E4*01*1111

Contr.
Party

01

Series

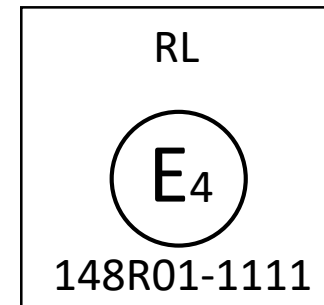
4 digit seq.
number



Regulation No. 148

Revision 3 of the 1958 Agreement

Requirement for **approval number**



E4*148R01/03*1111*00

Contr.
Party

No. of

Regulation Series

“R”

01

Series

Supp.
No.

4 digit seq.
number

Ext.
No.

The change index is NOT part of the approval numbering

The changes to the approval numbering follow the provisions of the 1958 Agreement, Schedule 4, Par. 3 (E/ECE/TRANS/505/Rev.3)

GRE Informal Working Group „Simplification of Regulation“ Change Index – Usage

What is the „change index“ needed for? - Device

Adding a paragraph 6.1.1. under subsection „Transitional Provisions“ in all three new draft Device Regulations (148, 149, 150), see document GRE-79-10:

(Source: „Draft General Guidelines for United Nations regulatory procedures and transitional provisions in UN Regulations“ WP.29/2017/107, Section 41.)

“6.1.1. Contracting Parties applying this UN Regulation shall continue to accept UN type-approvals of the lamps (functions), to any of the preceding series of amendments to this UN Regulation, which are not affected by the changes introduced by the latest series of amendments.

To verify this, the change index applicable to the pertinent lamp (function) shall not differ from its change index as indicated in the latest series of amendments.

<i>Series of amendments to the Regulation</i>	<i>00</i>	<i>01</i>	
<i>Function (Lamp)</i>	<i>Change Index for the specific function (lamp)</i>		
Daytime running lamp	0	1	
Front direction indicator lamp	0	0	
Front direction indicator lamp (Vehicle category L)	0	0	
Front end-outline marker lamp	0	0	

Daytime running lamp:
The change index differs
-> par. 6.1.1. is **NOT** valid for this function

Front direction indicator lamp:
The change index does not differ
-> par. 6.1.1. **IS** valid for this function

5. Change Index

GRE Informal Working Group „Simplification of Regulation“

Change Index – Usage

What is the „change index“ needed for? - Vehicle

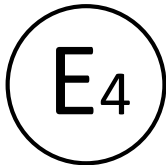
Adding a general requirement in Installation Regulations Nos. 48, 53, 74 and 86 (GRE/2018/16, ../18 and GRE-79-11)

“5.32. *A device type approved according to any preceding series of amendments to UN Regulations 148, 149 and /or 150 is deemed equivalent to one approved according to the latest series of amendments to the pertinent Regulation (148, 149 and 150), when the change indexes (defined in paragraph 2.1.6.) related to each individual lamp (function) do not differ. In this case such a device may be fitted on the vehicle to be type approved without any update of the device type approval documents and device markings”*

(example for UN Regulation No. 48)



1a



148R**00**-3456

Even if the **01 series of amendments** to Regulation No. 148 entered into force and the transitional period has expired, the device on the left side may be used for new vehicles because the change index for this function (front direction indicator), i.e. „**0**“ did not change between series **00** and **01**

<i>Series of amendments to the Regulation</i>	<i>00</i>	<i>01</i>	
<i>Function (Lamp)</i>	<i>Change Index for the specific function (lamp)</i>		
Daytime running lamp	0	1	
Front direction indicator lamp	0	0	

GRE Informal Working Group „Simplification of Regulation“

Change Index – Conclusions

- The „change index“ is merely a tool (an indicator) to support type approvals and the usage of type approved devices
- The concept of „change index“ is in line with Revision 3 of the 1958 Agreement and supported by the guidelines (accepted by WP.29 in November 2017)
- The „change index“ is not part of the approval marking nor of the approval numbering

Thank you!