Workshop on the UN Agreements for Vehicle Regulations and Transport of Dangerous Goods (Ulan Bator, 28-30 June 2017)

UN vehicle regulations agreements

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I. WP.29
   a) WP.29 Activities
   b) WP.29 scope and organization

II. The tools of WP.29
   a) Vehicle approval: the 1958 Agreement
   b) Vehicle certification: the 1998 Agreement

III. Better vehicles by implementation of the UN Vehicle Agreements
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III. Better vehicles by implementation of the UN Vehicle Agreements
Why a worldwide regulatory framework for vehicles is needed?

• Regulatory framework: Nationally or internationally?
• The automotive industry became a global industry
• Main contributor to economical growth
• Mitigate negative effects (accidents, pollutants, climate change, trade barriers)

Mandate: Development of worldwide harmonized regulations resulting:
  - in safer and cleaner vehicles and
  - in the reduction of technical barriers to trade and of costs for consumers
The World Forum for Harmonization of Vehicle Regulations (WP.29)

- UNECE Sustainable Transport Division: secretariat to WP.29 for more than 60 years
- WP.29 is:
  - the unique worldwide regulatory forum for the automotive sector
  - administrating three Multilateral UN Agreements

**Construction regulations**

**1958 Agreement** – Type Approval Regulations with mutual recognition of the type approvals

**1998 Agreement** – Global Technical Regulations

**In Use PTI regulations**

**1997 Agreement** – Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspection
Historical background of WP.29

- 1949: Convention on Road Traffic
  -> Resolution No. 45
- 1952: Establishment of WP.29
- 1958: ‘58 Agreement
- 1997: ‘97 Agreement
- 1998: ‘98 Agreement
- 2000: World Forum
WP.29 administers 3 Agreements

‘58 Agreement
Uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for *reciprocal recognition* of approvals granted on the basis of these prescriptions
(54 Contracting Parties, [144] UN Regulations)

‘98 Agreement
Establishing of Global Technical Regulations (gtrs) for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicle
(36 Contracting Parties, 18 UN gtrs)

‘97 Agreement
Uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections
(13 Contracting Parties, 17 signatories pending ratification, 2 UN Rules)
Agreements open to all Nations of the UN
Participation open to States, Governmental Organizations (GOs) and NGOs, but
Decisions are taken by Governments (of CPs)

No other worldwide organization covers this area
The WP.29 structure

World Forum for Harmonization of Vehicle Regulations (WP.29)

- **Active Safety**
  - GRE: Lighting & light signalling e.g. AFS
  - GRRF: Brakes and running gear e.g. Self steering vehicles

- **Passive Safety**
  - GRSP: Passive safety e.g. Crash tests Child restraint

- **General Safety**
  - GRSG: General safety e.g. Safety of buses Glazing materials, Rear view mirrors

- **Environmental protection**
  - GRPE: Pollution & energy e.g. WLTP, HILS
  - GRB: Noise e.g. Method B, ASEP

and ~40 non-permanent technical groups
What is WP.29 doing?

- Emissions of pollutants and CO₂
- General safety
- Passive safety
- Noise
- Active safety
- Lighting and light signalling
Environmental Protection

**GRPE Activities on pollution and energy:**
- Battery Electrical Vehicles (EV): 1996
- Measurement procedure for CO2 emissions (Fuel consumption): 1997
- Hybrid/Electric Vehicles (HEV): 2004
- Market Fuel Quality (FQ): 2010
- Environmentally Friendly vehicles (EFV) – Feasibility: 2011
- Retrofit Emission Control Devices (REC): 2014

**GRB Activities on noise:**
- Tyre rolling noise and wet grip adhesion: 2007
- Tyres Rolling Resistance: 2010
- Quiet Road Transport Vehicles (audible warning devices): 2016
Active Safety

GRE Activities on lighting and light-signalling:
Conspicuity/Contour markings: 2006
Daytime Running Lamps (DRL): 2007
LED headlamps: 2008

GRRF Activities on brakes and running gear:
Anti-lock braking systems (ABS): 1990
Regenerative braking systems: 2008
Electronic Stability Control (ESC) / Brake Assist system (BAS): 2008/2017
Tyre Pressure Monitoring Systems (TPMS): 2010
Lane Departure Warning Systems (LDWs): 2012
Tyre installation: 2016

WP.29 informal group on:
Intelligent Transport Systems – Automated Driving (ITS-AD)
Passive Safety (GRSP)

- Safety belts: 1970
- Protective helmets: 1972
- Frontal and lateral crash tests: 1995
- Pedestrian safety GTR: 2008
- ISOFIX anchorages: 2002
- Safety-belt reminders: 2009
- Electric vehicle safety: 2010/2013
- Pole side impact: 2015
General Safety (GRSG)

- Safety glazing materials and their installation: 1981/2008/2014
- Rear Underrun Protection: 1982/2015
- Superstructure of buses and coaches: 1986/2010
- Liquefied Petroleum Gas (LPG): 1987
- Vehicle alarm systems/immobilizer: 1997
- Compressed/Liquefied Natural Gas (CNG/LNG): 2000/2013
- Burning behaviour: 2005
- Fire detection and suppression systems: 2016
- Accident Emergency Call Systems: (2017)
- Panoramic Sunroof Glazing (PSG): (2018)
The Agenda 2030 and Road Safety
The Sustainable Development Goals (SDGs)

Two targets are directly relevant for road safety

3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents.

11.2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
UN decade of action for road safety 2011-2020

The plan

The 5 pillars

- Road safety management
- Safer roads and mobility
- Safer vehicles
- Safer road users
- Post-crash response

X X
WP.29 is unique and transparent

All regulations and rules, calendar of meetings, agenda, working documents and reports are freely available at the WP.29 website: [www.unece.org/trans/main/welcwp29.htm](http://www.unece.org/trans/main/welcwp29.htm)

(including the Terms of Reference & Rules of Procedures as well as the status documents of the 3 Agreements)

Questions to the structure and organization of WP.29?
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III. Better vehicles by implementation of the UN Vehicle Agreements
Principal Elements of the 1958 Agreement

Eligible Contracting Parties to the 1958 Agreement:
- Members of UN

The 1958 Agreement provides:
- Legal framework for the adoption of uniform UN Regulations on the vehicle construction
- Reciprocal recognition of Type Approval: Approved once and accepted everywhere (CPs)
- Elimination of barriers to trade
Principal Elements of the 1958 Agreement

• All vehicle parts and systems approved according to UN Regulations under the 1958 Agreement bear the unique \( E \)-marking

\( E \) stands for Excellence Effective Economic Efficient...

• The Type-Approval with an approval number and the approval date + test reports
The ‘58 Agreement (1)

Key Provisions:
- all Regulations are annexed to the Agreement and therefore part of it; they are considered as international law
- CPs are free to be bound by all, some or no Regulation
- a Regulation apply to a type of vehicles, equipment or parts as specified in the scope of the Regulation
- a new Regulation is adopted by a 2/3 majority of the Administrative Committee (AC.1 = representatives of CPs)
- UN SG notifies a new Regulation to all CPs
- a Regulations applies to each CP that does not notify to the SG its objection or intention to cease the application
- same procedure applies to amendments of Regulations (i.e. to adapt to the technical progress an existing Regulation)
The ‘58 Agreement (2)

UNECE Regulations include:
• technical prescriptions regarding the testing method
• conditions (performance requirements) for granting a type approval (e.g. limit values)
• conditions for the mutual recognition of the type approvals
• requirements for the E-marking
• prescriptions for conformity of production
The ‘58 Agreement (3)

Type Approval Procedure:
• manufacturer shall address the application to a Designated Administrative Department (type approval authority)
• tests are conducted by an accredited Technical Service
• the Designated Administrative Department grant the type-approval, if test results comply with the requirements
• the type approval is mutually recognized by all other CPs applying that Regulation
• the manufacturer may bring his E-marked product to the market without any further tests
• the manufacturer and the Designated Administrative Department have to ensure the conformity of production according to the provisions of the Regulation
Revision 3 to the 1958 Agreement: Objectives

- A CP applying a UN Regulation may issue type-approvals pursuant to earlier versions of the UN Regulation (i.e. pursuant to preceding series of amendments or the original version of the UN Regulation). However, other CPs applying the UN Regulation are be obliged to accept such type-approvals (ease accession by countries from emerging economies to join).

- All CPs applying a UN Regulation shall mutually recognize type-approvals granted according to the latest version of the UN Regulation (keep principle of mutual recognition).

- Insertion of the new scheme for the International Whole Vehicle Type Approval (IWVTA) into draft UN Regulation No. 0.

- Developing of a Database for the Exchange of Type Approval documentation (DETA) between all CPs (hosted with UNECE).

- Modified voting procedure and conditions (4/5 majority instead of 2/3 majority).
International Whole Vehicle Type Approval (IWVTA)

• Definition: “International whole vehicle type approval” means that all type approvals granted pursuant to applicable UN Regulations for the systems, components and parts of a vehicle are integrated into a single approval of the whole vehicle according to the administrative provisions of UN Regulation No. 0.

• Scope: First step is the IWVTA of category M1 vehicles (passenger cars).

• Structure:
  - New UN Regulation No. 0 on IWVTA (listing all UN Regulations to which the type of vehicle has to comply with).
  - New “Schedules” under the 1958 Agreement (Annex with a list of administrative and technical procedures).
Revision 3 to the 1958 Agreement: Next steps

WP.29 agreed on ECE/TRANS/WP.29/2016/2 in June 2016:

• Draft Revision 3 to the 1958 Agreement


EU notification to the UN Secretary-General in November 2016
S-G notification to all CP in Dec. 2016 (6-month period of possible objections)
Date of Entry into Force expected mid of September 2017

• Draft UN Regulation No. 0 expected to adopted in November 2017

Entry into force expected in mid/end of 2018
Principal Elements of the **1998** Agreement

Eligible Contracting Parties to the **1998** Agreement:

Members of UN

The **1998** Agreement provides:

Legal framework for the adoption of uniform Global Technical Regulations - UN GTRs -

No administrative provisions (for self-certification and homologation)
Principal Elements of the 1998 Agreement

Contracting Parties to the 1998 Agreement

Commit themselves to implement a GTR into national legislation, when voting in favour

Need a system/agency for market surveillance and enforcement of production compliance

The 1998 Agreement requests

Regular reporting by Contracting Parties on the implementation of GTRs in their national law
The ‘98 Agreement (1)

Key provisions:
• Compendium of Candidate gtrs: national regulations
• Develop gtr at the highest level of stringency
• gtrs may specify alternative non-global levels of stringency as well as alternative test procedures when needed to facilitate the regulatory activities of developing countries
• Adoption of gtrs by consensus vote of the Executive Committee (AC.3) of the Agreement, present and voting
• Registry of global technical regulations: established gtr
• Initiate adoption into national/regional legislation
• Periodical reports to the SG on adoption
The ‘98 Agreement (2)

gtrs include:
• technical prescriptions regarding the testing method (eventually alternative methods)
• performance requirements (e.g. limit values)

No certification procedure
No conformity of production
No reciprocal recognition
The ‘98 Agreement (3)

Compendium of Candidate gtrs:
• Catalogue of regulations that are candidates for the development of gtr (UNECE Regulations are candidates)
• Any CP may suggest listing any technical regulation in the Compendium
• Voting in AC.3: At least 1/3 of the CPs presenting and voting, with a positive vote by USA, EC or Japan
The ‘98 Agreement (4)

Global Registry:
• The Global Registry contains all established gtrs
• Adoption by consensus vote of CPs present and voting
• New gtrs considered to be established in the Registry on the date of the consensus vote by AC.3 in favour of the gtr
• CPs objecting shall provide explanations within 60 days, otherwise they are considered as voting in favour
• The Secretariat creates and maintains the Global Registry
• 11 gtrs established in the Global Registry
• the gtrs can be transposed into national law with amendments
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Implementation of 1958 Agreement

• Amendments to national legislation
  • Requirements for vehicle approval (e.g. reference to UN Regulations)
  • Requirements for reciprocal recognition of UN Type Approvals
  • Requirements for vehicle registration (e.g. vehicle approval as prerequisite)
  • Responsibilities and sanctions

• Type Approval Authority
  • Administrative procedures for granting, extending, suspension of approvals
  • Assessment, designation and notification of technical services
  • Conformity of production procedures
  • Acting as liaison point to other TAAs and the WP.29 secretariat

• Technical Services
  • May also be private or located outside the country/in any other Contracting Party
Type Approval

- **Testing**
  - Submission of the information document (documentation of the product)
  - Performance of the tests prescribed
  - (According to the provisions of the Regulation)

- **Approval**
  - Test report and documentation checked
  - Type approval issued by the Authority

- **COP**
  - Conformity of Production (COP) process and checks (QM / QA)
  - COP audit by the Authorities

- **In Use**
  - Some regulations require «in use» testing of products (e.g. in the field of emissions)

- **End or life**
  - One regulation is dedicated to the recyclability of vehicles
Implementation of 1998 Agreement

- Amendments to national legislation
  - Full transposition of the UN GTR into national legislation
  - Introduce provisions for self-certification or homologation
  - Requirements for vehicle registration (e.g. vehicle certification as prerequisite)
  - Responsibilities and sanctions

- National Authority for market surveillance and enforcement of production compliance
  - Procedures for market surveillance and enforcement of production compliance
  - Technical capacity for performing compliance tests once vehicle models are put on the market
  - Enforcement of recall activities and sanctions against manufacturers
  - Acting as liaison point to the WP.29 secretariat
  - Mandatory status report to AC.3
Why does it matter?

Why vehicle regulations?

Several versions of a given model, because:

• Left Hand Drive
• Right Hand Drive
• The US/Canada version
• The Rest of the World (e.g. for countries with low fuel quality)...
The most important UN Vehicle Regulations to make a change to road safety

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How are used UN type approvals / certificates

System approvals

Whole Vehicle Type Approval

Certificate for a given vehicle

Registration
The advantage of an international regulation

For the business sector:
- The "safe harbor"
- Harmonized requirements
- Simpler export (less/no technical barrier)
- Less uncertainty about market acceptance

For Countries and their citizens:
- Safety
- Better trade
- Interoperability
- Facilitated border crossing
The 3 Agreements administered by WP.29:

- Established by consensus
- The Depositary is the S-G
- Follow well-established UN legal procedures
- Open to all UN Member States and REIO
- No accession fee
- Amended as the needs arise (innovative technologies)
- Many non-ECE States are already Parties
- To become a Party, deposit an instrument with the S-G
Why to become a Contracting Party?

- Participation in the regulatory harmonization process
- Approvals granted are recognized by the other CPs applying the Regulation
- Accession to database for the Exchange of Type Approval documentation (DETA)
- Information of non-compliant automotive products
- Exchange of know-how at expert and governmental level
- Possible participation in R&D projects
How to become a CP to an Agreement

Requirements for a valid instrument of accession:

- Identify the Agreement
- Declaration of undertaking. Expression of intent of the Government to be bound by the Agreement and to undertake faithfully to observe and implement its provisions
- Issued and signed by:
  Head of State or Government or the Minister of Foreign Affairs (MFA) or by a person exercising the power of one of these authorities *ad interim.*
- Dated
- Addressed to the UN Secretary General in New York
Model of an instrument of accession

• WHEREAS the [title of agreement] was concluded [adopted, etc.] at [place] on [date],

• NOW THEREFORE I, [name and title of the head of State or Government or MFA], declare that the Government of [name of State], having considered the above mentioned [agreement], accedes to the same and undertakes faithfully to perform and carry out the stipulations therein contained.

• IN WITNESS WHEREOF I have signed this instrument of accession at [place] on [date].
Leaflets and Publications

• Child restraint systems

• Motorcycle helmets
WP.29: How it works
- How to join it?
Practical exercise: using vehicles with the right driver seating position (e.g. produced for Japan) in right-hand traffic

• Do you agree that such vehicles pose some challenges for road safety, compared to “regular” cars with the left-side steering wheel?

• Which shortcoming of such vehicles for road safety can you identify?

• Do you think that using vehicles with the right driver seating position in Mongolia:
  • Should be allowed without any restriction?
  • Should be prohibited?
  • Could be tolerated for a certain period, but phased out in the future?

• Which step-by-step measures can you envisage to discourage people and companies from buying and importing such cars?
THANK YOU FOR YOUR ATTENTION

UNECE Sustainable Transport Division

http://www.unece.org/trans

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