



**VEHICLE STANDARDS AND REGULATIONS**

# INTERNATIONAL CONFERENCE ON CONTEMPORARY TRENDS IN ROAD SAFETY

## VEHICLE STANDARDS AND REGULATIONS

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SAINT JOSEPH UNIVERSITY

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The Lebanese Standards Institution- LIBNOR

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International and European Standardization Activities

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**Lebanese Standardization activities**

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Why do we need standards/Regulations?

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# WHAT IS A STANDARD

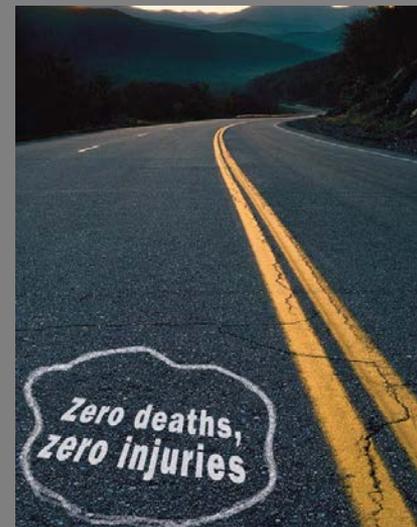
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*"A document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context."*

# STANDARDS contributing to :

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- SAFETY / SECURITY
- CONSUMER PROTECTION
- ENVIRONMENTAL PROTECTION
- FAIR TRADE OPERATIONS

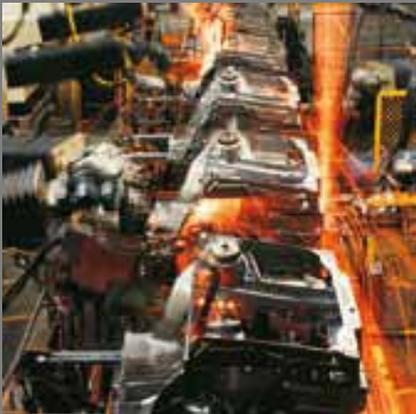


# Benefits of Standards

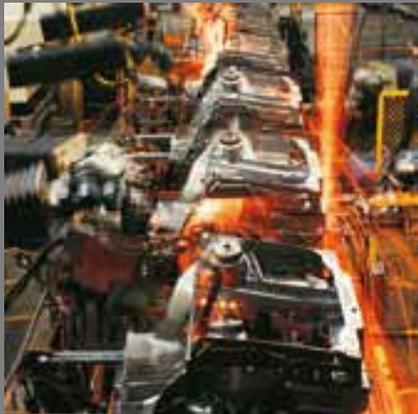


## Standards

- Lower costs of production
- Provide assurance of quality
- Eliminate unnecessary barriers to trade
- Provide a marketing advantage
- Enable rapid technology transfer



# Benefits of Standards- Road Vehicles



- For **manufacturers** and supply chain partners; **regulators** and health authorities ; **vehicle owners** and drivers, and **road users** including pedestrians
- Ensure the **safety, quality, efficiency, effectiveness and environmental friendliness** of road vehicles
- **Improve the present** by integrating road vehicles with information and communication technology infrastructures
- **Prepare for the future** by developing terminology, safety and environmental requirements for new solutions to powering road vehicles

The World Health Organization (WHO) projects that by 2030, the fifth most common reason for loss of health will be an injury generated within the road transport system



## Standardization bodies

...have devoted lot of efforts to the preparation of Standards in the field of Road Safety, vehicle Safety, design and equipment

# ROAD AND VEHICLE SAFETY Standards

*Hundreds of standards contribute to reducing injury and death on the world's roads:*

- Road Traffic Safety Management
- Road Vehicles
- Signals
- Light and Signaling
- Fuel Safety
- Information Technology
- Etc...



**Different kinds of standards available :**

- Specifications
- Safety Requirements
- Performance
- Environmental Requirements
- Harmonized Test Procedures



# Technical Regulations: How can standards help ?

When health and safety, or the environment are affected, the free market system breaks down, and the population becomes vocal:



Governments therefore need to act decisively  
Put in place a Technical Regulation System

**MANDATORY (Compulsory)**

# Technical Regulations: How can standards help ?

- Standards are developed by experts
- Standards are regularly updated
- Standards reflect the state of the art
- Standards can be used by everybody, and represent National/  
Regional/ INTERNATIONAL consensus
- Legal documents are not as easily changed as standards
- WTO Agreements

# Technical Regulations AND Standards

- HARMONIZATION OF STANDARDS AT THE REGIONAL/ INTERNATIONAL LEVELS
- TECHNICAL REGULATIONS BASED ON STANDARDS
- LESS TECHNICAL BARRIERS TO TRADE

# International and European Standardization Activities

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# THE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION- ISO

## ISO Technical Committees

- TC 22 Road Vehicles
- TC 31 Tyres, rims and valves
- TC 204 Intelligent transport systems
- TC 241 Road traffic safety management systems



## ISO TC 204 - Intelligent transport systems

### Scope:

*Created in 1993 to develop standards for transport information and control systems (TICS) in the emerging field of intelligent transportation systems (ITS).*

### Published around 134 standards:

- In-vehicle navigation systems -- Communications message set requirements*
- Adaptive Cruise Control systems -- Performance requirements and test procedures*
- Transport information and control systems -- Forward vehicle collision warning systems -- Performance requirements and test procedures.*

## ISO TC 22- *Road vehicles*

### Scope:

#### Published 700 standards and updates.

These range from standards addressing basics such as wheels, braking systems and road holding ability, to crash protection, child restraint systems and ergonomics.

- Improve compatibility, interchangeability and safety,
- Provide the requirements for harmonized test procedures for evaluating performance of the following types of road vehicles and their equipment as defined in the relevant items of Article 1 of the convention on Road Traffic, Vienna in 1968 concluded under the auspices of the United Nations: Mopeds; Motor cycles; motor vehicles; Trailers; semi-trailers; light trailers; combination vehicles ; articulated vehicles.....

## ISO TC 241

### Project Committee: Road traffic safety management systems

**ISO 39001**, Road-traffic safety management systems, developed by ISO project committee ISO/PC 241, Road safety management, is widely regarded as a major contribution to the United Nations' Decade of Action for Road Safety 2011-2020.

**Provide organizations active in road safety with the means of increasing and promoting their related safety standards.**

**ISO 39001:2012** specifies requirements for a road traffic safety (RTS) management system to enable an organization that interacts with the road traffic system to reduce death and serious injuries related to road traffic crashes which it can influence.

## ISO TC 31 -Tires, rims and valves,

Has developed some 75 standards and updates.

### ISO/TC 176, Quality management and quality assurance.

- The technical specification ISO/TS 16949 has become the global benchmark for quality management by automotive suppliers.
- Certification of conformity to ISO/TS 16949 is often required of suppliers by the automobile manufacturers as a condition to tender for participation in global supply chains.
- Up to the end of December 2010, at least 43 946 ISO/TS 16949:2002 certificates, a growth of 7 %, had been issued in 84 countries and economies.

## European Standardization Activities



**CEN/TC 354** - Ride-on, motorized vehicles intended for the transportation of persons and goods and not intended for use on public roads - Safety requirements

**CEN/TC 169** - Light and lighting

**CEN/TC 226** - Road equipment

**CEN/TC 227** - Road materials

**CEN/TC 278** - Road transport and traffic telematics

**CEN/TC 301** - Road vehicles

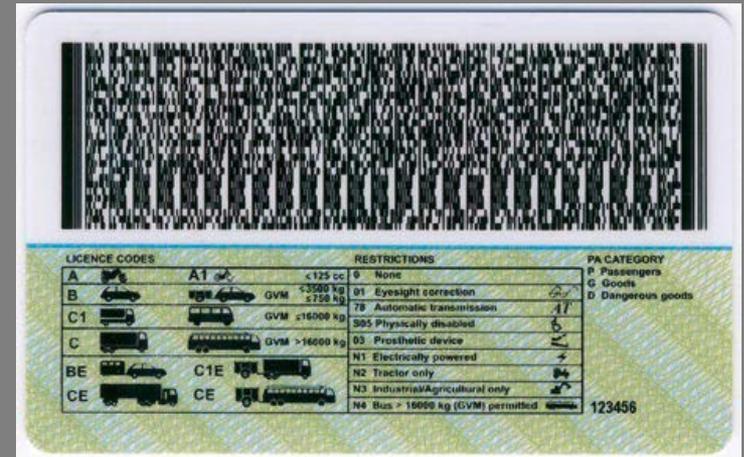
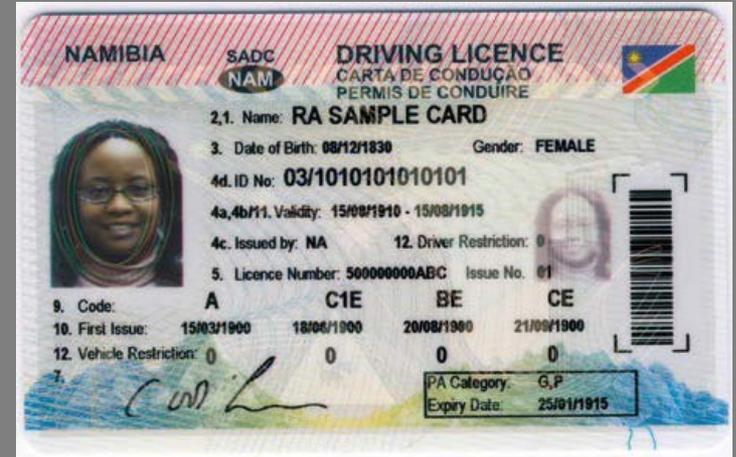
**CEN/TC 320** - Transport - Logistics and services

**CEN/TC 337** - Winter maintenance and road service area maintenance equipment

## ISO/IEC 18013

Multipart standard on *Information technology – Personal identification – ISO compliant driving licence.*

This standard facilitates global harmonization and interoperability of driving licences.



## ISO 2575

### Road vehicles -- Symbols for controls, indicators and tell-tales

Gives the familiar symbols for controls and indicators that we are accustomed to seeing on the dashboard.



**Kids come first.....**



The ISOFIX attachment system makes installing child car seats to the vehicle simple and safe thanks to **ISO 29061**.

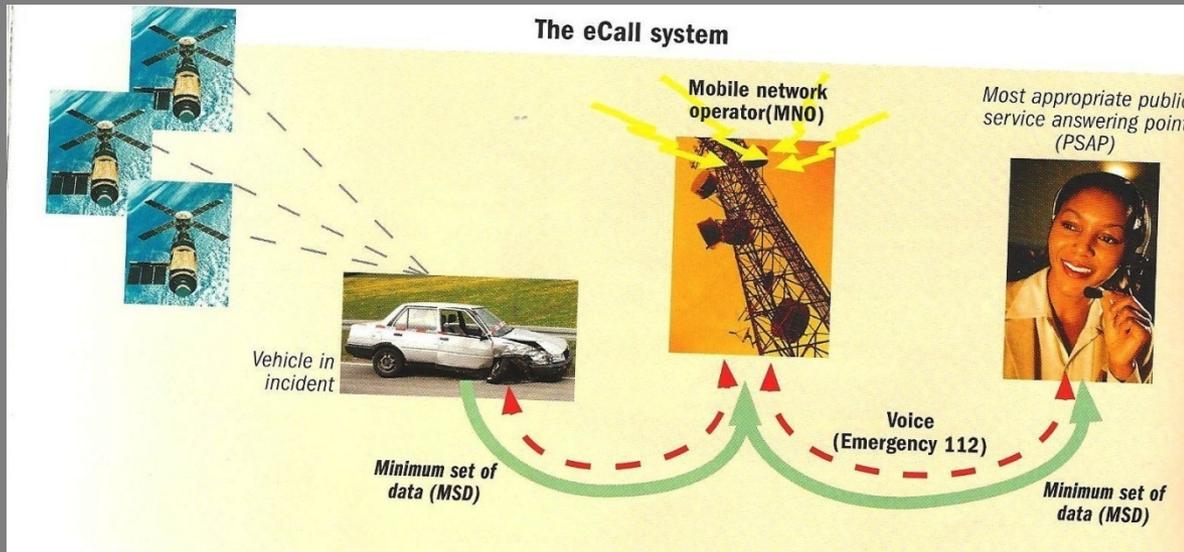
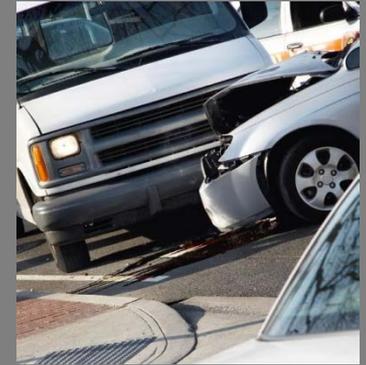
**The ISO 15830** standard provides the automotive industry with the performance specifications for the most advanced human crash test dummy for improving vehicle design and increasing passenger safety.

WorldSID (for World Side Impact Dummy), was developed to allow a single, universally accepted test device to be used for side impact testing meeting regulations worldwide.



**CEN/TS 15722:2009, Road transport and traffic telematics – ESafety – ECall minimum set of data (MSD).**

**“will help make information provided by the vehicle understandable by the emergency and rescue services.”**



**Emergency services will know exactly where the vehicle is located. This information will help victims, disoriented, in shock, not sure of where they are, or injured, to receive help.**

# REGIONAL HARMONIZATION OF STANDARDS AND REGULATIONS IN THE EU

## UNECE Regulations

### United Nations Economic Commission for Europe



UNECE's major aim is to promote pan-European economic integration. It brings together 56 countries located in the European Union, non-EU Western and Eastern Europe, South-East Europe and Commonwealth of Independent States (CIS) and North America.

All these countries dialogue and cooperate under the aegis of UNECE on economic and sectoral issues. However, all interested United Nations member States may participate in the work of UNECE. Over 70 international professional organizations and other non-governmental organizations take part in UNECE activities.

## REGIONAL HARMONIZATION OF STANDARDS AND REGULATIONS IN THE EU

Technical harmonization for motor vehicles and their trailers, implemented at Union level pursuant to Article 114 of the Treaty on the Functioning of the European Union (TFEU), is based on the EC Whole Vehicle Type-Approval system (EC WVTA).

Under this system, manufacturers can obtain approval for a vehicle type in one Member State if it meets the Community technical requirements, and then market it EU-wide with no need for further tests or checks. Registration must be granted on simple presentation of a certificate of conformity.

- Access to large markets
- Worldwide technical harmonization in the context of the United Nations Economic Commission for Europe (UNECE) offers a market which extends beyond European borders.



# **REGIONAL HARMONIZATION OF STANDARDS AND REGULATIONS IN THE EU**

## **UNECE TRANSPORT DIVISION**

**Facilitate the international movement of persons and goods by inland transport modes and improve competitiveness, safety, energy efficiency and security in the transport sector taking into account environmental protection to levels that reduce adverse environmental impact of transport activities and contribute effectively to sustainable development.**

# UNECE REGULATIONS

- Transport Facilitation and Security
- Intelligent Transport Systems
- Climate Change and sustainable transport
- UNDA Project on CO2 emissions and ForFITS
- Transport, Health, Environment (THE PEP)
- Trans-European Rail and Motorways
- Transport Infrastructure Development
- Road Traffic Safety
- Gender and transport
- Transport Economics
- Capacity Building

**Specialized areas:** Transport of Dangerous Goods and Vehicle Regulations

# UNECE REGULATIONS

Working Party on General Safety Provisions (GRSG)

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

Working Party on Passive Safety (GRSP)

Working Party on Noise (GRB)

Working Party on Brakes and Running Gear (GRRF)

Working Party on Pollution and Energy (GRPE)

Working Party on Lighting and Light-Signalling (GRE)



# Lebanese Standardization Activities

# LEBANESE STANDARDS

**Road marking**

**Road Traffic Signs**

**Road Safety Barriers**

**Road Equipments**

# **LEBANESE STANDARDS**

**Alarm Systems**

**Safety Requirements for passenger vehicles**

**Tires**

**Traffic noise reducing devices**

# LEBANESE STANDARDS

## Safety Requirements of Motor Vehicles

|   |  |   |     |    |
|---|--|---|-----|----|
| Safety requirements of motor vehicles designed for the transport of goods - Part 1: General and definitions | متطلبات السلامة في المركبات الآلية المصممة لنقل البضائع - الجزء الأول: تعريف وعموميات    | 1 | 403 | NL |
| Safety requirements of motor vehicles designed for the transport of goods - Part 2: Dimensions and weights  | متطلبات السلامة في المركبات الآلية المصممة لنقل البضائع - الجزء الثاني: الأبعاد والأوزان | 2 | 403 | NL |
| General Safety Requirements for Passenger Vehicles  | متطلبات السلامة في حافلات الركاب - الجزء الأول: تعاريف وعموميات                          | 1 | 404 | NL |
| General safety requirements for passenger vehicles – Part 2: Technical and environmental elements           | متطلبات السلامة في حافلات الركاب – الجزء الثاني: العناصر التقنية والبيئية                | 2 | 404 | NL |
| General safety requirements for passenger vehicles –Part 3: School buses                                    | متطلبات السلامة في حافلات الركاب- الجزء الثالث: باصات التلامذة                           | 3 | 404 | NL |
| General safety requirements for passenger vehicles –Part 4 : Inspection methods and periodic maintenance    | متطلبات السلامة في حافلات الركاب - الجزء الرابع: طرق المعاينة والصيانة الدورية           | 4 | 404 | NL |

# LEBANESE STANDARDS

## Motor Vehicles Using LPG

|   |  |   |     |    |
|---|--|---|-----|----|
| Motor Vehicles Using LPG - Containers                               | - المركبات العاملة على غاز النفط المسيل -<br>الجزء الأول: الخزانات                   | 1 | 663 | NL |
| Motor Vehicles Using LPG - Accessories Fitted to the Container      | - المركبات العاملة على غاز النفط المسيل -<br>الجزء الثاني: الأجهزة الملحقة بالخزانات | 2 | 663 | NL |
| Motor Vehicles Using LPG - Specific Equipment                       | - المركبات العاملة على غاز النفط المسيل -<br>الجزء الثالث: أجهزة التحويل             | 3 | 663 | NL |
| Motor Vehicles Using LPG - Test Procedures                          | - المركبات العاملة على غاز النفط المسيل -<br>الجزء الرابع: طرق فحص الأجهزة           | 4 | 663 | NL |
| Motor Vehicles Using LPG - Code of Practice for Refuelling Stations | - المركبات العاملة على غاز النفط المسيل -<br>الجزء الخامس: الإشتراطات التطبيقية      | 5 | 663 | NL |

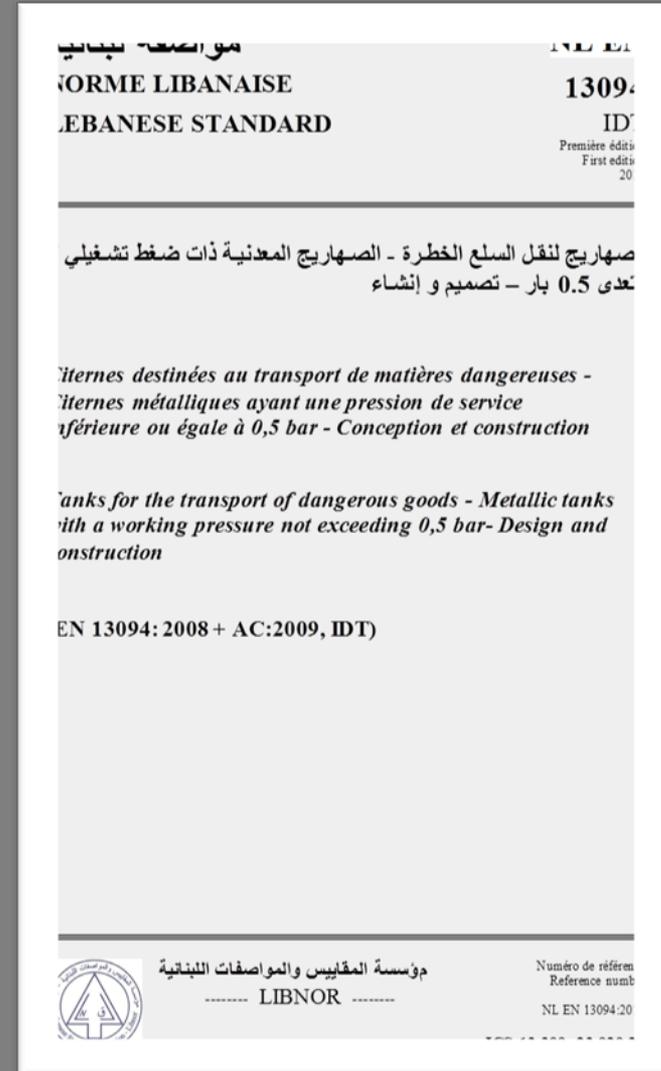
# LEBANESE STANDARDS

## Tires and Rims

|   |   |   |      |     |    |
|---|---|---|------|-----|----|
| Passenger Car Tyres and Rims - Part 1:<br>Tyres | إطارات سيارات الركاب<br>وأطواقها - الجزء الأول:<br>إطارات   | 1 | 4000 | ISO | NL |
| Passenger Car Tyres and Rims - Part 2:<br>Rims  | إطارات سيارات الركاب<br>وأطواقها - الجزء الثاني:<br>الأطواق | 2 | 4000 | ISO | NL |

# LEBANESE STANDARDS

NL EN 13094 -Tanks for the transport of dangerous goods - Metallic tanks with a working pressure not exceeding 0,5 bar - Design and construction



## LEBANESE STANDARDS - Voluntary by Definition

*However;*

*For reasons of public safety, public health, and/or national interest, and upon approval by LIBNOR's Board of Directors*

*A standard may be given a MANDATORY status by  
a decree from the Council of Ministers*

**STANDARDS**

**INNOVATION**

**GLOBAL HARMONIZATION**

**MARKET ACCESS**

**TESTED ONCE ACCEPTED EVERYWHERE**

# THANK YOU FOR YOUR ATTENTION

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