

## Definitions in UN Regulations

The secretariat would like to inform GRSG experts about the possible incoherence of definitions used in UN Regulations under the responsibility of GRSG.

### Contents

A-PILLAR (GRSP, GRSG).....	3
ACCESS PASSAGE (GRSG) .....	3
ACCESSORIES FITTED TO THE CONTAINER (GRSG).....	3
ACTUAL TORSO ANGLE (GRSP, GRSG) .....	3
AGRICULTURAL TRACTOR (GRSG).....	4
APPROVAL OF A VEHICLE (GRB, GRE, GRPE, GRRF, GRSG, GRSP) .....	4
APPROVAL OF A VEHICLE TYPE (GRSG, GRRF).....	5
ARTICULATED VEHICLE (GRSG) .....	5
BUMPER (GRSG, GRSP).....	6
COMBINATION (GRSG).....	6
COMMON SPACE (GRRF, GRSG).....	6
CONTAINER (GRSG) .....	6
CONTROL (GRRF, GRSG).....	6
CONTROL EQUIPMENT (GRSG) .....	7
DEVICE (GRE, GRSG).....	7
DOUBLE WINDOW (GRSG).....	7
DRIVER OPERATED SERVICE DOOR (GRSG).....	7
DRIVER’S COMPARTMENT (GRSG) .....	7
ELECTRONIC CONTROL UNIT (GRSG, GRPE).....	7
EMERGENCY DOOR (GRSG).....	7
ESCAPE HATCH (GRSG).....	8
EXIT (GRSG) .....	8
EXTERNAL SURFACE (GRSG) .....	8
EXTREME OUTER EDGE (GRSG, GRE) .....	8
FIELD OF VISION (GRSG) .....	8
FILLING UNIT (GRSG) .....	9
FLOOR (GRSP, GRSG).....	9
FLOOR LINE (GRSG).....	9
GANGWAY (GRSG).....	9

"H" POINT (GRSP, GRSG) .....	10
HEAD INJURY CRITERIA "HIC" (GRSG, GRSP) .....	10
IMMOBILIZER (GRSG).....	11
INDICATOR (GRSG) .....	11
LADEN VEHICLE (GRRF, GRE, GRSG) .....	11
LOW FLOOR VEHICLE (GRSG).....	11
MANUFACTURER (GRPE, GRRF, GRSG).....	11
MASS OF A VEHICLE IN RUNNING ORDER "MRO" (GRSP, GRB, GRSG).....	11
MAXIMUM MASS (GRRF, GRE, GRSG, GRPE) .....	12
PASSENGER COMPARTMENT (GRSP, GRSG).....	12
PASSENGER WITH REDUCED MOBILITY (GRSG).....	12
PRESSURE REGULATOR (GRSG) .....	13
PRINCIPAL RADII OF CURVATURE AT ONE POINT OBTAINED ON THE REFLECTING SURFACE ( $r_i$ ) AND ( $r'_i$ ) (GRSG) .....	13
REFERENCE PLANE (GRSP, GRSG).....	13
REFERENCE POINT (GRB, GRSG) .....	14
RIGID PLASTIC GLAZING (GRSG, GRRF, GRB).....	14
SEAT (GRSP, GRSG) .....	15
SEATING REFERENCE POINT, "R" POINT (GRSP, GRSG).....	15
SEPARATE TECHNICAL UNIT (GRSG).....	15
STEERING (GRSG).....	15
SUPERSTRUCTURE (GRSG) .....	16
TEST PRESSURE "P <sub>test</sub> " (GRRF, GRSG).....	16
TRANSVERSE PLANE (GRSP, GRSG, GRE).....	16
TYPE OF CONTAINER (GRSG) .....	16
UNLADEN KERB MASS "M <sub>k</sub> " (GRSG, GRSP).....	16
UNLADEN MASS "M <sub>V</sub> " (GRSG, GRPE, GRRF, GRSP).....	16
UNLADEN VEHICLE (GRSG, GRE).....	17
VEHICLE (GRSG, GRPE).....	17
VEHICLE TYPE (GRB, GRE, GRPE, GRRF, GRSG, GRSP) .....	18
WINDSCREEN (GRSP, GRSG) .....	24
WORKING PRESSURE (GRSG) .....	24

## **A-PILLAR (GRSP, GRSG)**

*(UN, Reg.29)* means the foremost and outermost roof support.

*(UN, Reg.125)* means any roof support forward of the vertical transverse plane located 68 mm in front of the V points and includes non-transparent items such as windscreen mouldings and door frames, attached or contiguous to such a support.

*(UN, Reg.127)* means the foremost and outermost roof support extending from the chassis to the roof of the vehicle.

## **ACCESS PASSAGE (GRSG)**

*(UN, Reg.36 and 52)* means the space extending inwards into the vehicle from the service door up to the outermost edge of the upper step, edge of the gangway.

Where there is no step at the door, the space to be considered as access passage shall be that which is measured up to a distance of 30 cm from the starting position of the inner face of the dual panel.

*(UN, Reg.107)* means the space extending inwards into the vehicle from the service door up to the outermost edge of the upper step (edge of the gangway), intercommunication staircase or half-staircase. Where there is no step at the door, the space to be considered as access passage shall be that which is measured up to a distance of 300 mm from the starting position of the inner face of the test gauge.

## **ACCESSORIES FITTED TO THE CONTAINER (GRSG)**

*(UN, Reg.67)* means the following equipment which may be either separate or combined:

- 80 per cent stop valve, a device that limits the filling at maximum 80 per cent of the capacity of the container.
- Level indicator, a device to verify the level of liquid in the container.
- Pressure relief valve, a device to limit the pressure build-up in the container.
- Remotely controlled service valve with excess flow valve, a device which allows the establishment and interruption of LPG supply to the evaporator/pressure regulator; remotely controlled means that the service valve is controlled by the electronic control unit; when the engine of the vehicle is not running the valve is closed; an excess flow valve means a device to limit the flow of LPG.
- Fuel pump, a device to establish the supply of liquid LPG to the engine by increasing the pressure of the container with the fuel pump supply pressure.
- Multivalve, a device consisting of all or part of the accessories.
- Gas-tight housing, a device to protect the accessories and to vent any leakages to the open air.
- Power supply bushing.
- Non-return valve, a device to allow the flow of liquid LPG in one direction and to prevent the flow of liquid LPG in the opposite direction.
- Pressure relief device, a device aimed to protect the container from burst which can occur in case of fire, by venting the LPG contained.

*(UN, Reg.110)* means the following components, but not limited to them, either separate or combined, when fitted to the container:

- Manual valve.
- Pressure sensor/indicator.
- Pressure relief valve (discharge valve).
- Pressure relief device (temperature triggered).
- Automatic cylinder valve.
- Excess flow valve.
  - Gas-tight housing.

## **ACTUAL TORSO ANGLE (GRSP, GRSG)**

*(UN, Reg.14 and 43)* means the angle measured between a vertical line through the "H" point and the torso line using the back angle quadrant on the 3-D H machine. The actual torso angle corresponds theoretically to the design torso angle.

The relative positions of the "R" point and the "H" point and the relationship between the design torso angle and the actual torso angle shall be considered satisfactory for the seating position in question if the "H" point, as defined by its co-ordinates, lies within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the "R" point, and if the actual torso angle is within 5° of the design torso angle.

(UN, Reg.17, 94 and 95) means the angle measured between a vertical line through the "H" point and the torso line using the back angle quadrant on the 3-D H machine. The actual torso angle corresponds theoretically to the design torso angle.

#### **AGRICULTURAL TRACTOR (GRSG)**

(UN, Reg.71) means any power-driven vehicle, either wheeled or track laying, which has at least two axles, whose function depends essentially on its tractive power, and which is specially designed to pull, push, carry or actuate certain implements, machines or trailers intended for use in agriculture or forestry. Such a tractor may be arranged to carry a load and attendants.

(UN, RE3) means a vehicle specifically designed to deliver a high tractive effort at slow speeds, for the purposes of hauling a trailer or machinery.

#### **APPROVAL OF A VEHICLE (GRB, GRE, GRPE, GRRF, GRSG, GRSP)**

(UN, Reg.9) means the type with regard to the noise level and the original exhaust system as a technical unit.

(UN, Reg.11) means the approval of a vehicle type with regard to door latches and door retention components.

(UN, Reg.12) means the approval of a vehicle type with regard to the protection of the driver against the steering mechanism in the event of impact.

(UN, Reg.13 and 13H) means the approval of a vehicle type with regard to braking.

(UN, Reg.14) means the approval of a vehicle type equipped with anchorages for given types of safety-belts.

(UN, Reg.17) means the approval of a vehicle type with regard to the strength of the seats and their anchorages, the design of the rear parts of the seat backs and the characteristics of their head restraints.

(UN, Reg.18) means the approval of a vehicle type with regard to its protection against unauthorized use.

(UN, Reg.21) means the approval of a vehicle type with regard to its interior fittings.

(UN, Reg.24) means the approval of a vehicle type with regard to the installation of type approved engines for the limitation of visible pollutants from the engine. Also means the approval of a vehicle type with regard to limitation of the emission of visible pollutants from the engine.

(UN, Reg.26) means the approval of a vehicle type with regard to its external projections.

(UN, Reg.29) means the approval of a vehicle type with regard to the protection of the occupants of the cab of a vehicle in the event of head-on impact or of overturning.

(UN, Reg.32) means the approval of a vehicle type with regard to the behaviour of the structure of the passenger compartment in a rear-end collision.

(UN, Reg.33) means the approval of a vehicle type with regard to the behaviour of the structure of the passenger compartment in a head-on collision.

(UN, Reg.34) means the approval of a vehicle type with regard to the foot controls.

(UN, Reg.35) means the approval of a vehicle type with regard to the liquid fuel tanks.

(UN, Reg.36) means the approval of a vehicle type with regard to the constructional features.

(UN, Reg.39) means the approval of a vehicle type with regard to the speedometer equipment including its installation.

(UN, Reg.40) means the approval of a vehicle type with regard to the limitation of the emission of gaseous pollutants from the engine.

(UN, Reg.42) means the approval of a vehicle type with regard to the behaviour of certain parts of its front and rear structure in the event of a collision at low speed.

(UN, Reg.45) means approval of a vehicle type with regard to headlamp cleaners.

(UN, Reg.47) means the approval of a vehicle type with regard to the limitation of the emission of gaseous pollutants from the engine.

(UN, Reg.48) means the approval of a vehicle type with regard to the number and mode of installation of the lighting and light-signalling devices.

(UN, Reg.49) means the approval of vehicle type with regard to the level of the emission of gaseous and particulate pollutants and smoke by its engine as well as the on-board diagnostic "OBD" system and the engine installation on the vehicle.

(UN, Reg.50, 53, 74 and 113) means the approval of a vehicle type with regard to the number and mode of installation of the lighting and light-signalling devices.

(UN, Reg.51) means the approval of a vehicle type with regard to noise.

(UN, Reg.52) means the approval of a vehicle type with regard to the constructional features.

(UN, Reg.58) means the approval of a vehicle type with regard to the installation of an RUPD of an approved type.

(UN, Reg.60) means the approval of a vehicle type with regard to driver-operated controls, where such controls are fitted and to their identification.

(UN, Reg.61) means the approval of a vehicle type with regard to its protection against unauthorized use.

(UN, Reg.64) means the approval of a vehicle type with regard to its temporary use spare wheel and tyre unit.  
(UN, Reg.67) means the approval of a vehicle type with regard to the installation of its specific equipment for the use of liquefied petroleum gases in its propulsion system.

(UN, Reg.68) means the approval of a vehicle type as regards measurement of the maximum speed indicated by the manufacturer.

(UN, Reg.73) means the approval of a complete, incomplete or completed vehicle type with regard to its lateral protection.

(UN, Reg.78) means the approval of a vehicle type with regard to braking.

(UN, Reg.79) means the approval of a vehicle type with regard to its steering equipment.

(UN, Reg.80) means an approval of a vehicle type with regard to the strength of the parts of the vehicle structure to which seats are to be secured, and with regard to the installation of seats.

(UN, Reg.83) means the approval of a vehicle type with regard to the limitation of the following conditions:  
Limitation of exhaust emissions by the vehicle, evaporative emissions, crankcase emissions, durability of pollution control devices, cold start pollutant emissions and on-board diagnostics of vehicles fuelled with unleaded petrol, or which can be fuelled with either unleaded petrol and LPG or NG/biomethane or biofuels (Approval B).

Limitation of emissions of gaseous and particulate pollutants, durability of pollution control devices and on-board diagnostics of vehicles fuelled with diesel fuel (Approval C) or which can be fuelled with either diesel fuel and biofuel or biofuel.

Limitation of emissions of gaseous pollutants by the engine, crankcase emissions, durability of pollution control devices, cold start emissions and on-board diagnostics of vehicles fuelled with LPG or NG/biomethane (Approval D).

(UN, Reg.84) means the approval of a vehicle type with regard to the measurement of the fuel consumption.

(UN, Reg.89) means the approval of a vehicle type with regard to speed limitation and the installation of the device.

(UN, Reg.93) means the approval of a vehicle type with regard to its FUPD and the installation of an FUPD.

(UN, Reg.95) means the approval of a vehicle type with regard to the behaviour of the structure of the passenger compartment in a lateral collision.

(UN, Reg.101) means the approval of a vehicle type with regard to the measurement of energy consumption (fuel or electric energy).

(UN, Reg.102) means the approval of a vehicle with regard to the fitting of an approved close-coupling device.

(UN, Reg.111) means approval of a vehicle type with regard to rollover stability.

(UN, Reg.121) means the approval of a vehicle type with regard to the mode of installation, graphical design, legibility, colour, and brightness of controls, tell-tales, and indicators.

(UN, Reg.127) means the full procedure whereby a Contracting Party to the Agreement certifies that a vehicle type meets the technical requirements of pedestrian safety.

#### **APPROVAL OF A VEHICLE TYPE (GRSG, GRRF)**

(UN, Reg.66) means the whole official process in which the vehicle type is checked and tested to prove that it meets all the requirements.

(UN, Reg.125) means the full procedure whereby a Contracting Party to the Agreement certifies that a vehicle type meets the technical requirements.

(UN, Reg.130) means the full procedure whereby a Contracting Party to the Agreement certifies that a vehicle type meets the technical requirements.

#### **ARTICULATED VEHICLE (GRSG)**

(UN, Reg.66 and 107) means a vehicle which consists of two or more rigid sections which articulate to one another, the passenger compartments of each section intercommunicate so that passengers can move freely between them; the rigid sections are permanently connected so that they can only be separated by an operation involving facilities which are normally only found in a workshop.

(UN, RE3) means a combination of vehicles comprising a motor vehicle and semi-trailer coupled to the motor vehicle.

### **BUMPER (GRSG, GRSP)**

*(UN, Reg.26 and 61)* means the front or rear, lower, outer structure of a vehicle. It includes all structures that are intended to give protection to a vehicle when involved in a low speed frontal or rear collision and also any attachments to this structure.

*(UN, Reg.127)* means the front, lower, outer structure of a vehicle. It includes all structures that are intended to give protection to a vehicle when involved in a low speed frontal collision and also any attachments to this structure. The reference height and lateral limits of the bumper are identified by the corners and the bumper reference lines.

### **COMBINATION (GRSG)**

*(UN, Reg.18 and 62)* means one of the specifically planned and constructed variations of a locking system which, when properly activated, permits operation of the locking system.

*(UN, Reg.116)* means one of the specifically developed and constructed variations of a locking system which, when properly activated, permits operation of the locking system.

### **COMMON SPACE (GRRF, GRSG)**

*(UN, Reg.13H)* means an area on which more than one tell-tale; indicator, identification symbol, or other message may be displayed but not simultaneously.

*(UN, Reg.121, 130 and 131)* means an area on which two or more information functions (e.g. symbol) may be displayed but not simultaneously.

### **CONTAINER (GRSG)**

*(UN, Reg.67)* means any vessel used for the storage of liquefied petroleum gas. A container can be:

- A standard cylindrical container with a cylindrical shell, two dished ends either torispherical or elliptical and the required openings.
- A special container: other containers than standard cylindrical containers

*(UN, Reg.110)* means any vessel used for the storage of compressed natural gas;

A container can be:

- CNG-1 metal.
- CNG-2 metal liner reinforced with resin impregnated continuous filament (hoop wrapped).
- CNG-3 metal liner reinforced with resin impregnated continuous filament (fully wrapped).
- CNG-4 resin impregnated continuous filament with a non-metallic liner (all composite).

### **CONTROL (GRRF, GRSG)**

*(UN, Reg.13)* means the part actuated directly by the driver, or in the case of some trailers, by an assistant, to furnish to the transmission the energy required for braking or controlling it. This energy may be the muscular energy of the driver, or energy from another source controlled by the driver or in appropriate cases the kinetic energy of a trailer, or a combination of these various kinds of energy.

*(UN, Reg.13H)* means the part actuated directly by the driver to furnish to the transmission the energy required for braking or controlling it. This energy may be the muscular energy of the driver, or energy from another source controlled by the driver, or a combination of these various kinds of energy.

*(UN, Reg.60)* means any part of the vehicle or a device directly actuated by the driver which changes the state or functioning of the vehicle or any part thereof.

*(UN, Reg.78)* means the part actuated directly by the rider in order to supply or control the energy required for breaking the vehicle to the transmission.

*(UN, Reg.121)* means that hand-operated part of a device that enables the driver to bring about a change in the state or functioning of a vehicle or vehicle's subsystem.

### **CONTROL EQUIPMENT (GRSG)**

*(UN, Reg.97)* means equipment necessary for the setting, unsetting and testing of a VAS and for sending an alarm condition to warning devices.

*(UN, Reg.116)* means equipment necessary for the setting and/or unsetting of an immobilizer.

### **DEVICE (GRE, GRSG)**

*(UN, Reg.48, 65, 77, 87, 91, 98, 104, 112, 121 and 123)* means an element or an assembly of elements used to perform one or more functions.

*(UN, Reg.50, 53, 74 and 113)* means a component or combination of components used in order to perform one or several functions.

### **DOUBLE WINDOW (GRSG)**

*(UN, Reg.36 and 52)* means an emergency window which, when divided into two by an imaginary vertical line (or plane), exhibits two parts each of which complies as to dimensions and access with the requirements applicable to a normal emergency window.

*(UN, Reg.43)* means an assembly of two panes separately installed within the same opening of the vehicle.

### **DRIVER OPERATED SERVICE DOOR (GRSG)**

*(UN, Reg.36 and 52)* means a service door which normally is opened and closed by the driver.

Unless otherwise stated, all measurements shall be made when the vehicle is at its unladen kerb mass (MK) (kg) and it is standing on a smooth and horizontal ground surface. If a kneeling system is fitted to the vehicle, it shall not be in operation.

Wherever there is a requirement for a surface in the vehicle to be horizontal or at a specific angle when the vehicle is at its unladen kerb mass (MK) (kg), in the case of a vehicle with mechanical suspension, the surface may exceed this slope or possess a slope when the vehicle is at its unladen kerb mass (MK) (kg), provided that this requirement is met when the vehicle is in the loading condition declared by the manufacturer. If a kneeling system is fitted to the vehicle, it shall not be in operation.

*(UN, Reg.107)* means a service door which normally is opened and closed by the driver.

### **DRIVER'S COMPARTMENT (GRSG)**

*(UN, Reg.36, 52 and 107)* means the space intended for the driver's exclusive use, except in emergency, and containing the steering wheel, controls, instruments and other devices necessary for driving the vehicle.

*(UN, Reg.66)* means the space intended for the driver's exclusive use and containing the driver's seat, the steering wheel, controls, instruments and other devices necessary for driving the vehicle.

### **ELECTRONIC CONTROL UNIT (GRSG, GRPE)**

*(UN, Reg.67)* means a device which controls the LPG demand of the engine and cuts off automatically the power to the shut-off valves of the LPG-system in case of a broken fuel supply pipe caused by an accident, or by stalling of the engine.

*(UN, Reg.96)* means an engine's electronic device that uses data from engine sensors to control engine parameters.

### **EMERGENCY DOOR (GRSG)**

*(UN, Reg.36 and 52)* means a door additional to the service door(s) intended for use by passengers as an exit only exceptionally and, in particular, in an emergency.

*(UN, Reg.107)* means a door intended for use by passengers as an exit only exceptionally and in particular in an emergency.

**ESCAPE HATCH (GRSG)**

(UN, Reg.36 and 107) means an opening in the roof or the floor intended for use as an emergency exit by passengers in an emergency only.

(UN, Reg.52) means a roof-opening intended for use as an exit by passengers in an emergency only.

**EXIT (GRSG)**

(UN, Reg.36 and 52) means a service door or emergency exit.

(UN, Reg.107) means a service door, intercommunication staircase, half-staircase or emergency exit.

**EXTERNAL SURFACE (GRSG)**

(UN, Reg.26) means the outside of the vehicle including the bonnet, the lid of the luggage compartment, the doors, the wings, the roof, the lighting and light-signalling devices and the visible strengthening components.

(UN, Reg.61) means that part of the vehicle forward of the cab rear panel, with the exception of the rear panel itself, and includes such items as the front wings, front bumpers and front wheels.

**EXTREME OUTER EDGE (GRSG, GRE)**

(UN, Reg.26) of the vehicle, means, in relation to the sides of the vehicle, the plane parallel to the median longitudinal plane of the vehicle coinciding with its outer lateral edge, and, in relation to the front and rear ends, the perpendicular transverse plane of the vehicle coinciding with its outer front and rear edges, account not being taken of the projection:

- Of tyres near their point of contact with the ground, and connections for tyre pressure gauges; of any anti-skid devices which may be mounted on the wheels.
- Of rear-view mirrors.
- Of side direction indicator lamps, end outline marker lamps, front and rear position (side) lamps and parking lamps.
- In relation to the front and rear ends, of parts mounted on the bumpers, of towing devices and of exhaust pipes.

(UN, Reg.50, 53 and 113) on either side of the vehicle means the plane parallel to the median longitudinal plane of the vehicle and touching the lateral extremity of the vehicle, disregarding the projection or projections:

- Of rear-view mirrors.
- Of direction-indicator lamps.
- Of front and rear position lamps and retro-reflectors.

(UN, Reg.74 and 113) on either side of the vehicle means the plane parallel to the median longitudinal plane of the vehicle and tangent to the latter's lateral outer edge, disregarding rear-view mirrors, direction indicators, position lamps and retro-reflectors.

(UN, Reg.86) on either side of the tractor means the plane parallel with the median longitudinal plane of the tractor and coinciding with its lateral outer edge, disregarding the projection:

- Of tyres near their point of contact with the ground and connections for tyre-pressure gauges.
- Of any anti-skid devices which may be mounted on the wheels.
- Of rear-view mirrors.
- Of side direction indicator lamps, end-outline marker lamps, front and rear position (side) lamps, parking lamps and lateral reflex reflectors.
- Of customs seals affixed to the tractor and devices for securing and protecting such seals.

**FIELD OF VISION (GRSG)**

(UN, Reg.46) means the section of the tri-dimensional space which is monitored with the help of a device for indirect vision. Unless otherwise stated, this is based on the view on ground level offered by a device and/or devices other than mirrors. This may be limited by the relevant detection distance corresponding to the critical object.

(UN, Reg.71) means the aggregate of forward and side directions in which the tractor driver can see.



### **FILLING UNIT (GRSG)**

(UN, Reg.67) means a device to allow filling of the container; the filling unit can be realised by integration in the 80 per cent stop valve of the container or by a remote filling unit at the outside of the vehicle.

(UN, Reg.110) means a device fitted in the vehicle external or internal (engine compartment) used to fill the container in the filling station.

### **FLOOR (GRSP, GRSG)**

(UN, Reg.14) means the lower part of the vehicle body-work connecting the vehicle side walls. In this context it includes ribs, swages and possibly other reinforcements, even if they are below the floor, such as longitudinal and transverse members.

(UN, Reg.107) means that part of the bodywork whose upper surface supports standing passengers, the feet of seated passengers and the driver and any crew member, and may support the seat mountings.

### **FLOOR LINE (GRSG)**

(UN, Reg.26) means the line determined as follows:

Successively position round a laden vehicle a cone with a vertical axis the height of which is not defined, and with a half angle of 30° in such a way that it contacts, constantly and as low as possible, the external surface of the vehicle. The floor line is the geometric trace of these points of contact. In determining the floor line, the jacking points, exhaust pipes or wheels shall not be taken into consideration. The gaps of the wheel arches are assumed to be filled in by an imaginary surface forming a smooth continuation of the surrounding external surface. At both ends of the vehicle the bumper shall be taken into consideration when establishing the floor line. Dependent upon the particular vehicle the floor line trace may occur at the bumper section extremity or at the body panel below the bumper. Where two or more points of contact occur simultaneously, the lower point of contact shall be used to determine the floor line.

(UN, Reg.61) means a line determined as follows:

When a vertical-axis cone of undetermined height having its side at an angle of 15° to the vertical is moved about the external surface of the loaded vehicle so as to remain in contact with the geometrical trace of the points of contact.

In determining the floor line, no account shall be taken of the exhaust pipes or wheels, or of functional mechanism features attached to under-body such as jacking points, suspension mountings or attachments for use in towing or in case of breakdown. In the spaces at the outside of wheel arches an imaginary surface extending the adjacent external surfaces without change of position shall be assumed. The front bumpers shall be taken into account in determining the floor line. Depending on the type of vehicle, the trace of the floor line may be at either the outer edge of the bumper profile or at the body panel below the bumper. Where there are two or more points of contact at the same time, the lowest point of contact shall be used to determine the floor line.

### **GANGWAY (GRSG)**

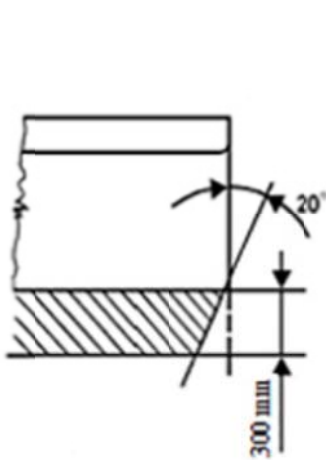
(UN, Reg.36 and 52) means the space providing access by passengers from any seat or row of seats to any other seat or row of seats or to any access passage from or to any service door and any area for standing passengers; it does not include:

- The space extending 30 cm in front of any seat.
- The space above the surface of any step or staircase at the doors.
- Any space which affords access solely to one seat or one row of seats.

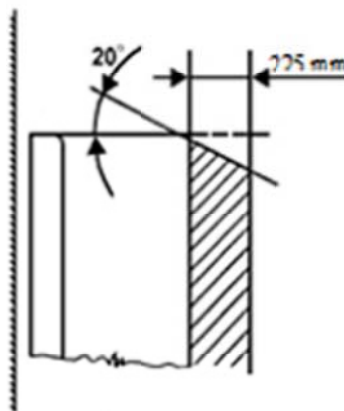
(UN, Reg.107) means the space providing access by passengers from any seat or row of seats or each special area for wheelchair users to any other seat or row of seats or each special area for wheelchair users or to any access passage from or to any service door or intercommunication staircase and any area for standing passengers; it does not include:

- The space extending 300 mm in front of any seat, except where a sideways-facing seat is situated above a wheel arch, in which case this dimension may be reduced to 225 mm.

Transverse seat



Longitudinal seat



- The space above the surface of any step or staircase (except where the surface of the step is contiguous with that of a gangway or access passageway).
- Any space which affords access solely to one seat or row of seats or a facing pair of transverse seats or row of seats.

### "H" POINT (GRSP, GRSG)

(UN, Reg.14 and 43) means the pivot centre of the torso and thigh of the 3-D H machine installed in the vehicle seat. The "H" point is located in the centre of the centreline of the device which is between the "H" point sight buttons on either side of the 3-D H machine. The "H" point corresponds theoretically to the "R" point. The relative positions of the "R" point and the "H" point and the relationship between the design torso angle and the actual torso angle shall be considered satisfactory for the seating position in question if the "H" point, as defined by its co-ordinates, lies within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the "R" point, and if the actual torso angle is within 5° of the design torso angle. Once determined, the "H" point is considered fixed in relation to the seat-cushion structure and to move with it when the seat is adjusted.

(UN, Reg.17) means the pivot centre of the torso and thigh of the 3 D H machine installed in the vehicle seat. The "H" point is located in the centre of the centreline of the device which is between the "H" point sight buttons on either side of the 3-D H machine. The "H" point corresponds theoretically to the "R" point. Once determined in accordance with the procedure, the "H" point is considered fixed in relation to the seat-cushion structure and to move with it when the seat is adjusted.

(UN, Reg.94 and 95) means the pivot centre of the torso and the thigh of the 3-D H machine installed in the vehicle seat. The "H" point is located in the centre of the centreline of the device which is between the "H" point sight buttons on either side of the 3-D H machine. The "H" point corresponds theoretically to the "R" point. Once determined, the "H" point is considered fixed in relation to the seat-cushion structure and to move with it when the seat is adjusted.

### HEAD INJURY CRITERIA "HIC" (GRSG, GRSP)

(UN, Reg.43) means a value for the characteristics of skull-brain injury arising from the deceleration forces which result from a blunt perpendicular impact with the glazing.

(UN, Reg.127) means the calculated result of accelerometer time histories using the following formula:

$$HIC = \left[ \frac{1}{t_2 - t_1} \int_{t_1}^{t_2} a \, dt \right]^{2.5} (t_2 - t_1)$$

Where:

a is the resultant acceleration measured in units of gravity "g".

"t<sub>1</sub>" and "t<sub>2</sub>" are the two time instants (expressed in seconds) during the impact, defining an interval between the beginning and the end of the recording period for which the value of HIC is a maximum (t<sub>2</sub> - t<sub>1</sub> ≤ 15 ms).

**IMMOBILIZER (GRSG)**

(UN, Reg.97) means a device which is intended to prevent the vehicle being driven away powered by its own engine.

(UN, Reg.116) means a device which is intended to prevent normal driving away of a vehicle under its own power, prevention of unauthorized use.

**INDICATOR (GRSG)**

(UN, Reg.60) means a device which presents the information on the functioning or situation of a system or a part of a system, for example a fluid level.

(UN, Reg.121) means a device that shows the magnitude of the physical characteristics that the instrument is designed to sense.

**LADEN VEHICLE (GRRF, GRE, GRSG)**

(UN, Reg.13, 13H and 111) means, except where otherwise stated, a vehicle so laden as to attain its "maximum mass".

(UN, Reg.26) means the vehicle laden to the maximum permitted technical mass. Vehicles equipped with hydropneumatic, hydraulic or pneumatic suspension or a device for automatic levelling according to load shall be tested with the vehicle in the most adverse normal running condition specified by the manufacturer.

(UN, Reg.48, 65, 77, 87, 91, 98, 104, 112 and 123) means a vehicle loaded to its technically permissible maximum mass, as stated by the manufacturer, who shall also fix the distribution of this mass between the axles.

**LOW FLOOR VEHICLE (GRSG)**

(UN, Reg.52) means a vehicle in which at least 35 per cent of the area available for standing passengers forms a single area without steps, reached through at least one service door by a single step from the ground.

(UN, Reg.107) is a vehicle of class I, II or A in which at least 35 per cent of the area available for standing passengers (or in its forward section in the case of articulated vehicles, or in its lower deck in the case of double-decker vehicles) forms an area without steps and includes access to at least one service door.

**MANUFACTURER (GRPE, GRRF, GRSG)**

(UN, Reg.49) means the person or body who is responsible to the approval authority for all aspects of the type-approval or authorisation process and for ensuring conformity of production. It is not essential that the person or body be directly involved in all stages of the construction of the vehicle, system, component or separate technical unit which is the subject of the approval process.

(UN, Reg.90) means the organization which can assume technical responsibility for the brake lining assemblies or drum brake linings or brake drums and discs and can demonstrate that it possesses the necessary means to achieve conformity of production.

(UN, Reg.116, 118, 121, 122 and RE3) means the person or body who is responsible to the approval authority for all aspects of the type approval process and for ensuring conformity of production. It is not essential that the person or body is directly involved in all stage of the construction of the vehicle, system, component or separate technical unit which is the subject of the approval process.

(UN, Reg.132) means the person or body who is responsible to the Type Approval Authority for all aspects of the type-approval and can demonstrate that it possesses the features required and the necessary means to achieve quality assessment and conformity of production. It is not essential that the person or body be directly involved in all stages of the construction of the vehicle, system, component or separate technical unit which is the subject of the approval process.

**MASS OF A VEHICLE IN RUNNING ORDER "MRO" (GRSP, GRB, GRSG)**

(UN, Reg.12) means the mass of the vehicle unoccupied and unladen but complete with fuel, coolant, lubricant tools and spare wheel, if provided as standard equipment by the vehicle manufacturer, and RESS.

(UN, Reg.51) means the mass of an unloaded vehicle with bodywork, and with coupling device in the case of a towing vehicle, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or

coupling device, including coolant, oils, 90 per cent of fuel, 100 per cent of other liquids except used waters, tools, spare wheel, driver (75 kg) and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle.

*(UN, Reg.107 and RE3)* means the mass of the unladen vehicle with bodywork, and with coupling device in the case of a towing vehicle, in running order, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or coupling device including coolant, oils, 90 per cent fuel, 100 per cent other liquids except used waters, tools, spare wheel and driver (75 kg), and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle.

*(UN, Reg.133)* means the mass of an unladen vehicle with bodywork, and with coupling device in the case of a towing vehicle, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or coupling device, including coolant, oils, 90 per cent of fuel, 100 per cent of other liquids except used waters, tools, spare wheel, excluding the driver (75 kg).

#### **MAXIMUM MASS (GRRF, GRE, GRSG, GRPE)**

*(UN, Reg.13, 13H, 58 and 64)* means the maximum mass stated by the vehicle manufacturer to be technically permissible. This mass may be higher than the "permissible maximum mass" laid down by the national administration.

*(UN, Reg. 50, 53, 78 and 113)* see "Gross vehicle mass" definition.

*(UN, Reg.51, 83 and 84)* means the technically permissible maximum mass declared by the vehicle manufacturer. This mass may be greater than the maximum mass authorized by the national administration.

*(UN, Reg.73 and 93)* means the mass stated by the vehicle manufacturer to be technically permissible. This mass may be higher than the "permissible maximum mass" laid down by the national administration.

*(UN, Reg.101)* means the technically permissible maximum mass declared by the manufacturer. This mass may be greater than the maximum mass authorized by the national administration.

*(UN, Reg.111)* means the technically permissible maximum mass stated by the vehicle manufacturer. This mass may be higher than the "permissible maximum mass" laid down by the national administration.

#### **PASSENGER COMPARTMENT (GRSP, GRSG)**

*(UN, Reg.32, 33, 34 and 95)* means the space for occupant accommodation, bounded by the roof, floor, side walls, doors, outside glazing, front bulkhead and the plane of the rear compartment bulkhead or the plane of the rear seat back support.

*(UN, Reg.36, 52, 66 and 107)* means the space intended for passengers use excluding any space occupied by fixed appliances such as bars, kitchenettes or toilets or luggage compartment.

*(UN, Reg.100)* means the space for occupant accommodation, bounded by the roof, floor, side walls, doors, window glass, front bulkhead and rear bulkhead, or rear gate, as well as by the barriers and enclosures provided for protecting the power train from direct contact with live parts.

*(UN, Reg.118)* means the space for occupants' accommodation including bar, kitchen, toilet, etc.), bounded by:

- The roof.
- The floor.
- The side walls.
- The doors.
- The outside glazing.
- The rear compartment bulkhead or the plane of the rear seat.
- Back support.
- The driver's side of the longitudinal vertical median plane of the vehicle, the vertical transversal plane through the driver's R-point.
- The opposite side of the longitudinal vertical median plane of the vehicle, the front bulkhead.

*(UN, Reg.122)* means the interior part of the vehicle used to accommodate the driver and any passengers.

#### **PASSENGER WITH REDUCED MOBILITY (GRSG)**

*(UN, Reg.36 and 52)* means all passengers who have a special difficulty when using public transport, especially elderly and disabled people. Reduced mobility does not necessarily imply any form of medical impairment.

*(UN, Reg.107)* means all passengers who have a difficulty when using public transport, such as disabled people, including people with sensory and intellectual impairments, and wheelchair users, people with limb

impairments, people of small stature, people with heavy luggage, elderly people, pregnant women, people with shopping trolleys, and people with children, including children seated in pushchairs.

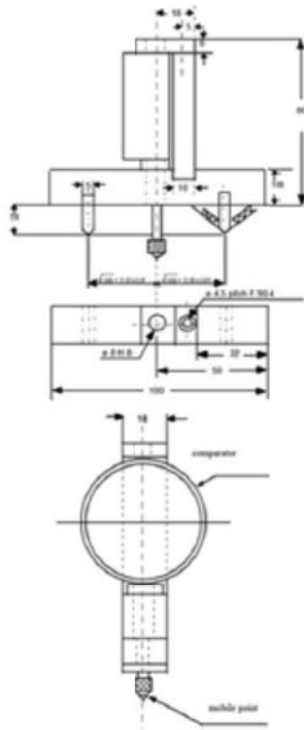
### **PRESSURE REGULATOR (GRSG)**

(UN, Reg.67) means a device intended for reducing and regulating the pressure of liquefied petroleum gas.

(UN, Reg.110) means a device used to control the delivery pressure of gaseous fuel to the engine.

### **PRINCIPAL RADII OF CURVATURE AT ONE POINT OBTAINED ON THE REFLECTING SURFACE (r<sub>i</sub>) AND (r'<sub>i</sub>) (GRSG)**

(UN, Reg.46) means the values obtained with the apparatus in the figure below, the spherometer, measured on the arc of the reflecting surface passing through the centre of this surface parallel to the segment b, is a segment which is parallel to the height of the rectangle and the length of which and is expressed in millimetres, and on the arc perpendicular to this segment.



(UN, Reg.81) means the values obtained using the spherometer, measured on the arc of the reflecting surface contained in a plane parallel to the greatest dimension of the mirror and passing through its centre and on the arc perpendicular to it.

### **REFERENCE PLANE (GRSP, GRSG)**

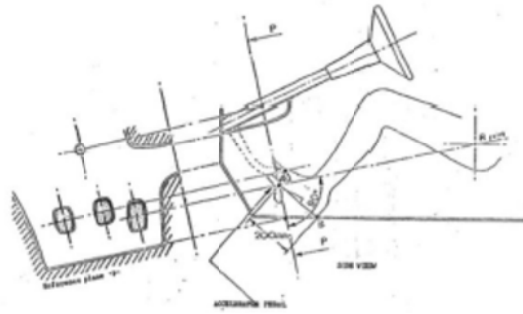
(UN, Reg.22) means a construction plane parallel to the basic plane of the headform at a distance from it which is a function of the size of the headform.

(UN, Reg.32 and 33) is a plane related to the vehicle and horizontal when the vehicle is unladen kerb weight.

(UN, Reg.35) "P" means a transverse plane perpendicular to the straight line connecting point "R" to point "A".

• "A" is a point on the surface of the accelerator pedal 200 mm from point "B".

- "B" is the fixed point on the vehicle corresponding to the heel point, as established by the vehicle manufacturer.



*(UN, Reg.61)* means a horizontal plane passing through the centre of the front wheels or a horizontal plane situated at the height of 50 cm above the ground, whichever is lower.

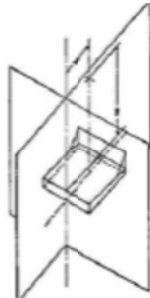
*(UN, Reg.80)* means the plane passing through the points of contact of the heels of the manikin, used for the determination of the H point and the actual angle of torso for the seating position of motor vehicles.

#### **REFERENCE POINT (GRB, GRSG)**

*(UN, Reg.51)* means a point which is defined as follows:

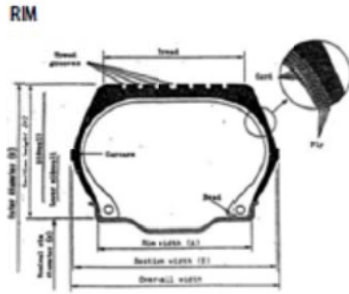
- Category M1, N1:
  - For front engine vehicles: the front end of the vehicle;
  - For mid engine vehicles: the centre of the vehicle;
  - For rear engine vehicles: the rear end of the vehicle.
- Category M2, M3, N2, N3: The border of the engine closest to the front of the vehicle.

*(UN, Reg.71)* means the point which is situated in the plane parallel to the median longitudinal plane of the tractor passing through the middle of the seat, at a position 700 mm along the vertical above the line of intersection of that plane with the surface of the seat and 270 mm - in the direction of the pelvis support - from the vertical plane tangential to the front edge of the seat surface and perpendicular to the median longitudinal plane of the tractor (see figure below); the reference point as thus determined applies to an empty seat adjusted in the average position prescribed by the tractor manufacturer.



#### **RIGID PLASTIC GLAZING (GRSG, GRRF, GRB)**

*(UN, Reg.43)* means a plastic glazing material which does not deflect vertically more than 50 mm in the flexibility test.



*(UN, Reg.30, 54, 75, 106 and 117)* means the support for a tyre-and-tube assembly, or for a tubeless tyre, on which the tyre beads are seated.

*(UN, Reg.108 and 109)* means the support, either for a tyre-and-tube assembly or for a tubeless tyre, on which the tyre beads are seated.

*(UN, Reg.124)* means that part of the wheel on which the tyre is mounted and supported.

### **SEAT (GRSP, GRSG)**

*(UN, Reg.14, 16, 17, 118 and 126)* means a structure which may or may not be integral with the vehicle structure, complete with trim, intended to seat one adult person. The term covers both an individual seat and part of a bench seat intended to seat one adult person.

*(UN, Reg.80)* means a structure likely to be anchored to the vehicle structure, including its trim and attachment fittings, intended to be used in a vehicle, and to seat one or more adult persons.

### **SEATING REFERENCE POINT, "R" POINT (GRSP, GRSG)**

*(UN, Reg.14, 17, 29, 43 and 94)* means a design point defined by a vehicle manufacturer for each seating position and established with respect to the three-dimensional reference system.

*(UN, Reg.95)* means the reference point specified by the vehicle manufacturer which:

- Has co-ordinates determined in relation to the vehicle structure.
- Corresponds to the theoretical position of the point of torso/thighs rotation "H point" for the lowest and most rearward normal driving position or position of use given by the vehicle manufacturer for each seating position specified by him.

### **SEPARATE TECHNICAL UNIT (GRSG)**

*(UN, Reg.97 and 116)* means a device subject to the requirements of this regulation and intended to be part of a vehicle, which may be type-approved separately, but only in relation to one or more specified types of vehicle where this regulation makes express provisions for so doing.

*(UN, Reg.107)* means a device intended to be part of a vehicle, which may be type-approved separately but only in relation to one or more specified types of vehicle.

### **STEERING (GRSG)**

*(UN, Reg.18)* means the steering control, the steering column and its accessory cladding, the steering shaft, the steering gearbox and all other components which directly affect the effectiveness of the protective device.

*(UN, Reg.61)* means the steering control (handlebars), the steering head and its accessory cladding, the steering shaft and all other components which directly affect the effectiveness of the protective device.

*(UN, Reg.116)* means the steering control, the steering column and its accessory cladding, the steering shaft, the steering gearbox and all other components which directly affect the effectiveness of the device to prevent unauthorized use.

### **SUPERSTRUCTURE (GRSG)**

(UN, Reg.66) means the load-bearing components of the bodywork as defined by the manufacturer, containing those coherent parts and elements which contribute to the strength and energy absorbing capability of the bodywork, and preserve the residual space in the rollover test.

(UN, Reg.107) means the part of the bodywork which contributes to the strength of the vehicle in the event of a roll-over accident.

### **TEST PRESSURE "P<sub>test</sub>" (GRRF, GRSG)**

(UN, Reg.64) means the actual pressure of the tyre(s) selected for each tyre position after deflation during the test procedure.

(UN, Reg.67) means the pressure to which the component is subjected during the approval test.

(UN, Reg.110) means the pressure to which a component is taken during acceptance testing.

### **TRANSVERSE PLANE (GRSP, GRSG, GRE)**

(UN, Reg.17, 29, 32, 33, 34, 35, 48, 50, 53, 65, 74, 77, 87, 91, 95, 98, 104, 112, 113 and 123) means a vertical plane perpendicular to the median longitudinal plane of the vehicle.

(UN, Reg.86) means a vertical plane perpendicular to the median longitudinal plane of the tractor.

### **TYPE OF CONTAINER (GRSG)**

(UN, Reg.67) means containers which do not differ in respect to the following characteristics:

- The trade name(s) or trade mark(s).
- The shape (cylindrical, special shape).
- The openings (plate for accessories/metal ring).
- The material.
- The welding process (in case of metal containers).
- The heat treatment (in case of metal containers).
- The production line.
- The nominal wall thickness.
- The diameter.
- The height (in case of special containers).

(UN, Reg.110) means containers which do not differ in respect of the dimensional and material characteristics.

### **UNLADEN KERB MASS "M<sub>k</sub>" (GRSG, GRSP)**

(UN, Reg.36, 52 and 66) means the mass of the vehicle in running order, unoccupied and unladen but with the addition of 75 kg for the mass of the driver, the mass of fuel corresponding to 90 per cent of the capacity of the fuel tank specified by the manufacturer, and the masses of coolant, lubricant, tools and spare wheel, if any.

(UN, Reg.94 and 114) means the mass of the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricant, tools and a spare wheel, if these are provided as standard equipment by the vehicle manufacturer.

(UN, RE3) means the mass of the vehicle in running order, without occupant or load, but with fuel, coolant, lubricant, tool-kit and spare wheel, if normally provided by the manufacturer.

### **UNLADEN MASS "M<sub>V</sub>" (GRSG, GRPE, GRRF, GRSP)**

(UN, Reg.34 and 73) means the mass of the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricants, tools and a spare wheel, if it is provided as standard equipment by the vehicle manufacturer.

(UN, Reg.36 and 52) means the unladen kerb mass (MK) (kg) of the vehicle, with the addition of 75 kg for the mass of the crew member corresponding to the seat, if any, specially assigned to this crew member. The vehicle shall be complete with 90 per cent of the capacity of all additional liquid tanks. Where facilities such as a kitchen or toilet are fitted, the fresh water tanks shall be full and the waste tanks empty.



(UN, Reg.49 and 83) means the mass of the vehicle in running order without the uniform mass of the driver of 75 kg, passenger or load, but with the fuel tank 90 per cent full and the usual set of tools and spare wheel on board, where applicable.

(UN, Reg.58) means the mass of the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricant, tools and a spare wheel, if provided as standard equipment by the vehicle manufacturer.

(UN, Reg.68) means the mass of the vehicle in running order without occupants or load, but with the fuel tank full (if any), cooling liquid, service and traction batteries, oils, onboard charger, portable charger, tools and spare wheel, if provided in series by the manufacturer of the vehicle.

(UN, Reg.84 and 89) means the mass of the vehicle in running order without crew, passengers or load, but with the fuel tank full and the usual set of tools and spare wheel on board, where applicable.

(UN, Reg.95) means the mass of the vehicle in running order without driver, passengers or load, but with the fuel tank filled to 90 per cent of its capacity and the usual set of tools and spare wheel on board, where applicable.

(UN, Reg.101) means the mass of the vehicle in running order without crew, passengers or load, but with the fuel tank full (if any), cooling liquid, service and traction batteries, oils, onboard charger, portable charger, tools and spare wheel, whatever is appropriate for the vehicle considered and if provided by the manufacturer of the vehicle.

### UNLADEN VEHICLE (GRSG, GRE)

(UN, Reg.39) means the vehicle in running order, complete with fuel, coolant, lubricant, tools and a spare wheel, if provided as standard equipment by the vehicle manufacturer, carrying a driver weighing 75 kg, but no driver's mate, optional accessories or load.

(UN, Reg.48, 65, 77, 87, 91, 98, 104, 112 and 123) means a vehicle without driver, crew, passengers and load, but with a full supply of fuel, spare wheel and the tools normally carried.

(UN, Reg.50, 53 and 113) means a vehicle without a driver, or passenger, and unladen, but with its fuel tank full and its normal complement of tools.

(UN, Reg.93) means the vehicle in running order unoccupied and unladen but complete with fuel, coolant, lubricant, tools and a spare wheel, if provided as standard equipment by the vehicle manufacturer.

### VEHICLE (GRSG, GRPE)

(UN, Reg.36) means a single deck vehicle designed and equipped for the transport of more than 22 passengers. There are three Classes of vehicles. A vehicle may be regarded as belonging in more than one class. In such a case it may be approved for each class to which it corresponds.

- Class I: Vehicles constructed with areas for standing passengers, to allow frequent passenger movement.
- Class II: Vehicles constructed principally for the carriage of seated passengers, and designed to allow the carriage of standing passengers in the gangway and/or in a standing area which does not exceed the space provided for two double seats.
- Class III: Vehicles constructed exclusively for the carriage of seated passengers.
- Trolleybus: A vehicle of Classes I, II, or III, electrically driven by energy from external wires.
- Articulated vehicle: A vehicle which consists of two or more rigid sections which articulate relative to one another; the passenger compartments of each section intercommunicate so that passengers can move freely between them; the rigid sections are permanently connected so that they can only be separated by an operation involving facilities which are normally only found in a workshop.
- Low floor vehicle: A vehicle in which at least 35 per cent of the area available for standing passengers, or of its forward section in the case of articulated vehicles, forms a single area without steps, reached through at least one service door by a single step from the ground.

(UN, Reg.52) means a single-deck vehicle of category M<sub>2</sub> or M<sub>3</sub> designed and constructed for the carriage of seated, or seated and standing persons and having a capacity not exceeding 22 passengers in addition to the driver.

There are two classes of vehicles:

- Class A: Vehicles designed to carry standing passengers; a vehicle of this class has seats and may have provision for standing passengers.
- Class B: Vehicles not designed to carry standing passengers; a vehicle of this class has no provisions for standing passengers.

(UN, Reg.60) means a two-wheeled motor cycle or a two-wheeled moped.

(UN, Reg.66) means a bus or coach designed and equipped for transportation of passengers. The vehicle is an individual representative of a vehicle type.

(UN, Reg.107) means a vehicle of category M<sub>2</sub> or M<sub>3</sub> within the scope defined every single-deck, double-deck, rigid or articulated vehicle of category M<sub>2</sub> or M<sub>3</sub>.

(UN, Reg.122) means a vehicle of category M, N or O in which a heating system is fitted.

(UN, *RE3*) means a moped or a motor-cycle as defined in the Vienna Convention on Road Traffic, 1968, article 1 (m) and (n) respectively, to the exclusion of vehicles equipped with side-cars or having three wheels.

(UN, *Reg.43*) means any motor vehicle and its trailer, intended for use on the road, having at least four wheels and a maximum design speed exceeding 25 km/h, with the exception of vehicles which run on rails and all mobile machinery.

(UN, *Reg.133*) means any power-driven vehicle which is normally used for carrying persons or goods by road or for drawing, on the road, vehicles used for the carriage of persons or goods. This term embraces trolley-buses, that is to say, vehicles connected to an electric conductor and not rail-borne. It does not cover vehicles such as agricultural tractors, which are only incidentally used for carrying persons or goods by road or for drawing, on the road, vehicles used for the carriage of persons or goods.

#### **VEHICLE TYPE (GRB, GRE, GRPE, GRRF, GRSG, GRSP)**

(UN, *Reg.9*) means a category of motor vehicles which do not differ in such essential respects as:

- The lines and constituent materials of the body, more particularly the engine compartment and its soundproofing.
- The length and width of the vehicle.
- The type of engine (positive ignition or compression ignition; reciprocating or rotary piston; number and capacity of cylinders; number and type of carburettors or injection systems, arrangement of valves; maximum net power and corresponding engine speed). For rotary piston engines, the cubic capacity should be taken to be double of the volume of the chamber.
- Number and ratios of gears.
- The number, type and arrangement of exhaust systems.

(UN, *Reg.10*) in relation to electromagnetic compatibility includes all vehicles, which do not differ essentially in such respects as:

- The overall size and shape of the engine compartment.
- The general arrangement of the electrical and/or electronic components and the general wiring arrangement.
- The primary material of which the body or shell of the vehicle is constructed (for example, a steel, aluminium or fibreglass body shell). The presence of panels of different material does not change the vehicle type provided the primary material of the body is unchanged. However, such variations must be notified.

(UN, *Reg.11*) means a category of motor vehicles which do not differ in such essential respects as:

Designation of the vehicle type by the manufacturer;

- The type of latch;
- The type of door retention component;
- The way in which the latches and door retention components are fitted to and retained by the structure of the vehicle;
- Type of sliding doors;

(UN, *Reg.12*) means a category of motor vehicles which do not differ in such essential respects as:

- Vehicle powered by an internal combustion engine.
  - i. The structure, dimensions, lines and constituent materials of that part of the vehicle forward of the steering control.
  - ii. The mass of vehicle in running order.
- Vehicle powered by an electric engine
  - iii. The structure, dimensions, lines and constituent materials of that part of the vehicle forward of the steering control.
  - iv. The locations of the Rechargeable Energy Storage Systems (RESS), in so far as they have a negative effect on the result of the impact test.
  - v. Mass of the vehicle in running order.

(UN, *Reg.13*) means a category of vehicles which do not differ in such essential respects as:

- In the case of power-driven vehicle.
  - i. The vehicle category.
  - ii. The maximum mass.
  - iii. The distribution of mass among the axles.
  - iv. The maximum design speed.
  - v. A different type of braking equipment, with more particular reference to the presence or otherwise of equipment for braking a trailer, or any presence of an electric regenerative braking system.
  - vi. The number and arrangement of the axles.
  - vii. The engine type.
  - viii. The number and ratios of gears.
  - ix. The final drive ratios.
  - x. The tyre dimensions.
- In the case of trailers.
  - xi. The vehicle category.
  - xii. The maximum mass.
  - xiii. The distribution of mass among the axles.

- xiv. A different type of braking equipment.
- xv. The number and arrangement of the axles.
- xvi. The tyre dimensions.

**(UN, Reg.13H)** means a category of vehicles which do not differ in such essential respects as:

- The maximum mass.
- The distribution of mass among the axles.
- The maximum design speed.
- A different type of braking equipment, with more particular reference to the presence or otherwise of equipment for braking a trailer or any presence of electric braking system.
- The engine type.
- The number and ratios of gears.
- The final drive ratios.
- The tyre dimensions.

**(UN, Reg.14)** means a category of power-driven vehicles, which do not differ in such essential respects as the dimensions, lines and materials of components of the vehicle structure or seat structure to which the safety-belts anchorages and the ISOFIX anchorages systems and ISOFIX top tether anchorages if any are attached and, if the anchorages strength is tested according to the dynamic test, the characteristics of any component of the restraint system, especially the load limiter function, having an influence on the forces applying to the safety-belt anchorages.

**(UN, Reg.17)** means a category of motor vehicles which do not differ in such essential respects as: the structure, shape, dimensions, materials and the mass of the seats, although the seats may differ in covering and colour; differences not exceeding 5 per cent in the mass of the approved seat type shall not be considered significant; the type and dimensions of the adjustment, displacement and locking systems of the seat-back and seats and their parts; the type and dimensions of the seat anchorages; the dimensions, frame, materials and padding of head restraints, although they may differ in colour and covering; the type and dimensions of the attachments of the head restraint and the characteristics of the part of the vehicle to which the head restraint is attached, in the case of a separate head restraint.

**(UN, Reg.18)** means a category of motor vehicles of categories M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub> and N<sub>3</sub> which do not differ in such essential respects as:

- The manufacturer's indications of the vehicle type.
- The arrangement and design of the vehicle component or components on which the protective device acts.
- The type of protective device.

**(UN, Reg.21)** with regard to the interior fittings of the passenger compartment, means power-driven vehicles which do not differ in such essential respects as:

- The lines and constituent materials of the bodywork of the passenger compartment.
- The arrangement of the controls.
- The performance of the protective system, if the reference zone within the head impact zone determined according to annex 8 (dynamic evaluation) is chosen by the applicant. Vehicles that differ only in the performance of the protective system(s) belong to the same vehicle type if they offer an equal or better protection for the occupants compared with the system or vehicle submitted to the technical service responsible for conducting the approval tests.

**(UN, Reg.24)** means a category of power-driven vehicles which do not differ in such essential respects as the vehicle and engine characteristics.

- Vehicle characteristics:

i. Make.

ii. Type.

iii. Name and address of manufacturer.

iv. Engine Type and approval No.

- Engine characteristics

v. Make.

vi. Trade mark.

vii. Name and address of manufacturer.

viii. Type(s).

ix. Cycle: four-stroke/two-stroke/others.

x. Bore: in millimetres

xi. Stroke: in millimetres

xii. Cylinder capacity: in cm<sup>3</sup>

xiii. Number and layout of cylinders and firing order.

xiv. Combustion system: description.

xv. Drawings of combustion chamber and piston crown.

xvi. Compression ratio.

xvii. Minimum cross-section area of inlet and outlet ports.

**(UN, Reg.25)** means a category of power driven vehicles which do not differ in such essential respects as:

- The lines and internal dimensions of the bodywork constituting the passenger compartment.
- The types and dimensions of the seats.
- Type and dimensions of head restraint attachment and of the relevant parts of the vehicle structure in the case of head restraint directly anchored to the vehicle structure.

(UN, Reg.26) means a category of motor vehicles which do not differ in such essential respects as, shape or materials of the external surface.

(UN, Reg.28) shall be understood to mean vehicles not essentially different from another with respect to such matters as:

- the number and type(s) of warning devices fitted on the vehicle.
- the mountings used to fit the warning devices to the vehicle.
  - the position of the warning devices on the vehicle.
  - the rigidity of the parts of the structure on which the warning device(s) is (are) mounted.
  - The shape and materials of the bodywork at the front of the vehicle which might affect the level of the sound emitted by the warning device(s) and have a masking effect.

(UN, Reg.29) means a category of motor vehicle which does not differ in such essential respects as:

- The dimensions, shapes and materials of the components of the vehicle cab.
- The manner of attachment of the cab to the chassis frame.

(UN, Reg.32) means a category of power-driven vehicles which do not differ in such essential respects as:

- The length and width of the vehicle in so far as they have an effect on the results of the impact test.
- The structure, dimensions, lines and materials of the part of the vehicle rearward of the transverse plane through the "R" point of the rearmost seat.
- The lines and inside dimensions of the passenger compartment in so far as they have an effect on the results of the impact test.
- The sitting of the engine, front, rear or centre.

(UN, Reg.33) means a category of power-driven vehicles which do not differ in such essential respects as:

- The length and width of the vehicle in so far as they have an effect on the results of the impact test.
- The structure, dimensions, lines and materials of the part of the vehicle forward of the transverse plane through the "R" point of the driver's seat.
- The lines and inside dimensions of the passenger compartment in so far as they have an effect on the results of the impact test.
- The sitting of the engine, front, rear or centre.

(UN, Reg.34) means vehicles which do not differ in such essential respects as:

- The manufacturer's type designation.
- In vehicles of category M<sub>1</sub> the position of the tank(s) in the vehicle in so far as it has a negative effect. Tanks shall be installed in such a way as to be protected from the consequences of a collision to the front or the rear of the vehicle; there shall be no protruding parts, sharp edges, etc. near the tank.
- The structure, shape, dimensions and materials, metal or plastic, of the tank(s).
- The characteristics and sitting of the fuel feed system.
- The characteristics and sitting of the electrical installation in as far as they have an effect on the results of the collision tests.

(UN, Reg.35) means a category of motor vehicles which do not differ in respect of the structure and internal arrangements which may affect the location and operation of the foot controls.

(UN, Reg.36) means vehicles which do not differ essentially with regard to the constructional features.

(UN, Reg.39) means vehicles which do not among themselves display any essential differences, where those differences can apply, in particular, to the following:

- The size designation of the tyres chosen from the range of tyres normally fitted.
- The overall transmission ratio, including any reduction drives, to the speedometer.
- The type of speedometer as characterised by:
  - i. The tolerance of the speedometer's measuring mechanism.
  - ii. The technical constant of the speedometer.
  - iii. The range of speeds displayed.

(UN, Reg.40 and 47) means a category of power-driven vehicles which do not differ in such essential respects as:

- The equivalent inertia determined in relation to the reference weight as prescribed in the following table.

Reference weight (kg)	Equivalent inertia (kg)	Power absorbed (kW)
R < 105		0.88
105 < R < 115		0.90
115 < R < 125		0.91
125 < R < 135		0.93
135 < R < 150		0.94
150 < R < 165		0.96
165 < R < 185		0.99
185 < R < 205		1.02
205 < R < 225	1.00110120130e+50	1.05
225 < R < 245		1.09
245 < R < 270		1.14

270 < R < 300	1.17
300 < R < 330	1.21
330 < R < 360	1.26
360 < R < 395	1.33
395 < R < 435	1.37
435 < R < 475	1.44

- The engine and vehicle characteristics.
  - (*UN, Reg.42*) means a category of power-driven vehicles which do not differ in such essential respects as:
    - The length and width of the vehicle, and the structure, dimensions, lines and materials of the front and rear parts of the vehicle in so far as they have an effect on the results of the impact test.
    - The sitting, front, rear or centre and weight of the engine.
    - The characteristics of the suspension, to the extent that they affect the results of the impact test.
  - (*UN, Reg.45*) means vehicles which do not differ in such essential respects as:
    - The type of headlamp cleaner.
    - The geometric arrangement of the headlamp cleaning equipment, if this implies any modification of its operation.
  - Capacity class of the fluid container.
    - (*UN, Reg.49*) means a category of power driven vehicles which do not differ in such essential respects as the vehicle and engine:
      - Make, name of undertaking
      - Type and commercial description, mention any variants
      - Means and location of identification of type, if marked on the vehicle
      - Category of vehicle, if applicable
      - Category of engine: diesel/NG fuelled/LPG fuelled/ethanol fuelled
      - Name and address of manufacturer
        - Location of statutory plates and inscriptions and method of affixing
        - In the case of components and separate technical units, location and method of affixing of the ECE approval mark
        - Address(es) of assembly plant(s)
    - (*UN, Reg.50, 53, 74 and 113*) means a category of vehicles which do not differ from each other in such essential respects as:
      - The dimensions and external shape of the vehicle.
      - The number and position of the devices.
      - The following shall likewise not be deemed to be "vehicles of a different type":
        - Vehicles which differ within the meaning of either the dimensions and external shape of the vehicle or the number and position of the devices, but not in such a way as to entail a change in the kind, number, position and geometric visibility of the lamps prescribed for the vehicle type in question.
        - Vehicles on which lamps approved under one of the Regulations annexed to the 1958 Agreement, or lamps allowed in the country in which the vehicles are registered, are fitted, or are absent where their fitting is optional.
    - (*UN, Reg.51*) means a category of motor vehicles which do not differ in such essential respects as:
      - The shape or materials of the bodywork (particularly the engine compartment and its soundproofing);
    - The length and width of the vehicle;
    - The type of engine (positive or compression ignition, two- or four-stroke, reciprocating or rotary piston), number and capacity of cylinders, number and type of carburettors or injection system, arrangement of valves, rated maximum power and corresponding engine speed(s), or the type of electric motor;
    - The transmission system, the number of gears and ratios;
    - The noise reduction system.
    - Vehicles other than those in categories M<sub>1</sub> and N<sub>1</sub> having the same type of engine and/or different overall gear ratios, may be regarded as vehicles of the same type. However, if the above differences provide for a different test method, these differences are to be considered as a change of type.
  - (*UN, Reg.52*) means a category of vehicles which do not differ essentially with regard to the constructional features.
  - (*UN, Reg.55*) means vehicles which do not differ in such essential respects as the structure, dimensions, shape and materials in areas to which the mechanical coupling device or component is affixed. This applies to both the towing vehicle and trailer.
  - (*UN, Reg.58*) means vehicles which do not differ in such essential aspects as:
    - The width of the rear axle.
    - The structure, the dimensions, the shape and the height from the ground of the rear part of the vehicle and the characteristics of the suspension.
    - The approved RUPDs fitted to the vehicle.
  - (*UN, Reg.59*) means a category of motor vehicles which do not differ significantly in such respects as:
    - The lines and constituent materials of the body (more particularly the engine compartment and its soundproofing).
    - The length and width of the vehicle.

- The type of engine (positive ignition, compression ignition, two stroke or four stroke, reciprocating or rotary, hybrid-electric engine type), number and capacity of cylinders, number of carburettors or injection system, arrangement of valves, rated maximum power and corresponding engine speed (rpm) or the type of the electric motor.
  - Number and ratios of gears, total ratio of the transmission.
  - The number, type and arrangement of the exhaust systems.
  - The number, type and arrangement of the intake systems.
- (UN, Reg.60)** means a category of power-driven vehicles which do not differ in respect of the arrangements which may affect the function or position of the driver-operated controls.
- (UN, Reg.61)** means motor vehicles which do not differ in such essential respects as the external projections.
- (UN, Reg.62)** means a category of power-driven vehicles which do not differ in such essential respects as:
- The manufacturer's indications of the vehicle type
  - The arrangements and design of the vehicle component or components on which the protective device acts.
  - The type of protective device.
- (UN, Reg.64)** means a category of vehicles which do not differ significantly in such essential aspects as:
- Vehicle type with regard to its temporary-use spare unit:
    - i. The maximum axle loads of the vehicle.
    - ii. The characteristics of the temporary-use spare wheel and tyre unit.
    - iii. The method of drive, front wheel, rear wheel, four wheels.
    - iv. The suspension.
    - v. The braking system.
    - vi. The wheel size/tyre size.
    - vii. The wheel offset.
  - Vehicle type with regard to its tyre pressure monitoring system:
    - viii. The manufacturer's trade name or mark.
    - ix. Vehicle features which significantly influence the performances of the tyre pressure monitoring system.
    - x. The type and design of the tyre pressure monitoring system.
- (UN, Reg.66)** means a category of vehicles produced with the same design technical specification, main dimensions and constructional arrangement. The vehicle type shall be defined by the vehicle manufacturer.
- (UN, Reg.67)** means a vehicle or a family of vehicles fitted with specific equipment for the use of LPG in its propulsion system, which do not differ with respect to the following conditions:
- The manufacturer.
  - The type designation established by the manufacturer.
  - The essential aspects of design and construction.
  - Chassis/floor pan (obvious and fundamental differences).
    - Installation of the LPG equipment (obvious and fundamental differences).
- (UN, Reg.73)** means vehicles which do not differ in such essential aspects as:
- The width of the rear axle.
  - The structure, the dimensions, the shape and the height from the ground of the sides of the vehicle and the characteristics of the suspension.
  - The approved LPD fitted to the vehicle.
- (UN, Reg.78)** means a sub-category of L-category vehicles which do not differ in such essential respects as:
- The vehicle category.
  - The gross vehicle mass.
  - The distribution of the mass between the axles.
  - Vmax.
  - A different type of braking device.
  - The number and arrangement of the axles.
  - The engine type.
  - The number and ratios of gears.
  - The final drive ratios.
  - The tyre dimensions.
- (UN, Reg.79)** means a vehicle which does not differ with respect to the manufacturer's designation of the vehicle type and in essential characteristics such as:
- Type of steering equipment, steering control, steering transmission, steered wheels, and energy source.
- (UN, Reg.80)** means vehicles which do not differ essentially in respect of:
- The constructional features.
  - The type or types of type approved seat(s) fitted to the vehicle, if any.
- (UN, Reg.83 and 103)** means a group of vehicles that do not differ in the following respects:
- The equivalent inertia determined in relation to the reference mass as prescribed in the table below:

Reference mass of vehicle RW (kg)	Equivalent inertia kg	Power and load absorbed by the dynamometer at 80 km/h		Road Load Coefficients	
		kW	N	a (N)	b(N/kph)
RW ≤ 480	455	3.8	171	3.8	0.0261
480 < RW ≤ 540	510	4.1	185	4.2	0.0282
540 < RW ≤ 595	570	4.3	194	4.4	0.0296
595 < RW ≤ 650	625	4.5	203	4.6	0.0309
650 < RW ≤ 710	680	4.7	212	4.8	0.0323
710 < RW ≤ 765	740	4.9	221	5.0	0.0337
765 < RW ≤ 850	800	5.1	230	5.2	0.0351
850 < RW ≤ 965	910	5.6	252	5.7	0.0385
965 < RW ≤ 1080	1020	6.0	270	6.1	0.0412
1080 < RW ≤ 1190	1130	6.3	284	6.4	0.0433
1190 < RW ≤ 1305	1250	6.7	302	6.8	0.0460
1305 < RW ≤ 1420	1360	7.0	315	7.1	0.0481
1420 < RW ≤ 1530	1470	7.3	329	7.4	0.0502
1530 < RW ≤ 1640	1590	7.5	338	7.6	0.0515
1640 < RW ≤ 1760	1700	7.8	351	7.9	0.0536
1760 < RW ≤ 1870	1810	8.1	365	8.2	0.0557
1870 < RW ≤ 1980	1930	8.4	378	8.5	0.0577
1980 < RW ≤ 2100	2040	8.6	387	8.7	0.0591
2100 < RW ≤ 2210	2150	8.8	396	8.9	0.0605
2210 < RW ≤ 2380	2270	9.0	405	9.1	0.0619
2380 < RW ≤ 2610	2270	9.4	423	9.5	0.0646
2610 < RW	2270	9.8	441	9.9	0.0674

(UN, Reg.84) means a category of power-driven vehicles which do not differ in such essential respects as: body, engine, transmission, tyres and unladen mass.

(UN, Reg.89) means vehicles which do not differ in such essential respects as:

- The make and type of the SLD.
- The range of speeds at which the limitation may be set within the range established for the test vehicle.
  - The ratio of maximum engine power/unladen mass, less than or equal to that of the tested vehicle.
  - The highest ratio of engine speed/vehicle speed in top gear, less than or equal to that of the tested vehicle.

(UN, Reg.93) means vehicles which do not differ in such respects as:

- The width of the foremost axle measured at the outermost part of the tyres excluding the bulging of tyres close to the ground.
- The structure, the dimensions, the shape and materials of the front part of the vehicle.
- The approved FUPDs fitted to the vehicle.
- The maximum mass of the vehicle type.

(UN, Reg.94) means a category of power-driven vehicles which do not differ in such essential respects as:

- The length and width of the vehicle, in so far as they have a negative effect on the results of the impact test.
- The structure, dimensions, lines and materials of the part of the vehicle forward of the transverse plane through the "R" point of the driver's seat, in so far as they have a negative effect on the results of the impact test.
- The lines and inside dimensions of the passenger compartment and the type of protective system, in so far as they have a negative effect on the results of the impact test.
- The sitting (front, rear or centre) and the orientation (transversal or longitudinal) of the engine, in so far as they have a negative effect on the result of the impact test.
- The unladen mass, in so far as there is a negative effect on the result of the impact test.
- The optional arrangements or fittings provided by the manufacturer, in so far as they have a negative effect on the result of the impact test.
  - The locations of the RESS, in so far as they have a negative effect on the result of the impact test.

(UN, Reg.95) means a category of power-driven vehicles which do not differ in such essential respects as:

- The length, width and ground clearance of the vehicle.
- The structure, dimensions, lines and materials of the side walls of the passenger compartment.
- The lines and inside dimensions of the passenger compartment and the type of protective systems.
- The sitting of the engine, front, rear or centre, and the orientation, transversal or longitudinal, of the engine.
- The unladen mass.
- The optional arrangements or interior fittings.
- The type of front seat(s) and position of the "R" point.
- The locations of the RESS.

(UN, Reg.100) means vehicles which do not differ in such essential aspects as:

- Installation of the electric power train and the galvanically connected high voltage bus.
- Nature and type of electric power train and the galvanically connected high voltage components.

(UN, Reg.101) means a category of power driven vehicles which do not differ in such essential respects as body, power train, transmission, traction battery (if applicable), tyres and unladen mass.

(UN, Reg.102) means vehicles which do not differ in such essential respects as:

- The make and type of the close-coupling device.
- The length and width of the vehicles.
- The mass of the vehicles.
- The points of attachment of the close-coupling device.
- The vehicle description (e.g. truck, tractor, trailer, semi-trailer, centre-axle trailer).
- Steering equipment (e.g. auxiliary steering equipment, steering equipment of the trailer).

(UN, Reg.107) means vehicles, which do not differ in the following essential aspects:

- Bodywork manufacturer.
- Chassis manufacturer.
- Vehicle concept (> 22 passengers or ≤ 22 passengers).
- Bodywork concept (single / double-deck, articulated, low-floor).
- Bodywork type if the bodywork has been approved as a separate technical unit.

(UN, Reg.111) means a category of vehicle which does not differ in such essential respects as:

- Vehicle category, (N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> and O<sub>4</sub> intended for the carriage of dangerous goods as defined in the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR agreements) and type (truck, full trailer, semi-trailer, centre-axle trailer).
- Maximum mass.
- Cross-section profile of the tank (circular, elliptical, maxi volume).
- Maximum height of the centre of gravity of the laden vehicle.
- Distribution of mass among the axles (including fifth wheel).
- Number and arrangement of the axles (including axle spacing).
- Suspension arrangements in relation to roll characteristics.
  - Tyre size and structure (radial ply, diagonal ply or bias belted).
  - Track width.
  - Wheel base.

(UN, Reg.114) means a category of power-driven vehicles, which do not differ in such essential respects in so far as they have an effect on the results of the impact tests:

- The structure, dimension, body version and materials of the vehicle.
- The unladen kerb mass.
- The steering control, the seat and the safety-belt system and other restraint systems.
- The sitting and orientation of the engine.
- The parts and optional arrangements or fittings of the vehicle which influence the performance of the airbag.

(UN, Reg.116) means a category of motor vehicles which do not differ in such essential respects as:

- The manufacturer's type designation.
- The arrangement and design of the vehicle component or components on which the device to prevent unauthorized use acts.
- The type of device to prevent unauthorized use.

(UN, Reg.118) means vehicles that do not differ in such essential respects as the manufacturer's type designation.

(UN, Reg.121) means motor vehicles, which do not differ in respect of the internal arrangements, which may affect the identification of symbols for controls, tell-tales, and indicators and operation of controls.

(UN, Reg.133) means vehicles of a particular category which do not differ in at least the following essential respects:

- The manufacturer.
- The manufacturer's type designation.
- Essential aspects of construction and design.
  - Chassis/floor pan (obvious and fundamental differences).

## **WINDSCREEN (GRSP, GRSG)**

(UN, Reg.29 and 127) means the frontal glazing of the vehicle situated between the A-pillars.

(UN, Reg.43) means the glazing in front of the driver through which the driver views the road ahead.

## **WORKING PRESSURE (GRSG)**

(UN, Reg.67) means the maximum pressure to which the component is designed to be subjected and on the basis of which its strength is determined.

(UN, Reg.110) means the maximum pressure to which a component is designed to be subjected to and which is the basis for determining the strength of the component under consideration.