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Road vehicles — Rescue sheet

Véhicules routiers — Fiche d'aide à la désincarcération

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17840 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection systems*.

Annexes A, B, and C are normative. Annexes D, E and F are for information only.

Introduction

This standard provides necessary and useful information about a vehicle involved in an accident to support the rescue team (or first responders) extricating the occupants as fast and as safe as possible. The information is provided to ensure that rescue teams are aware of special design elements and position of components to be considered.

Information used for training, where the rescue teams have time to go into the details and learn the generic approach and where to find and how to read the specific information that will be needed in case of an accident are not in the scope of this standard.

This standard has been created in order to cover the following types of vehicle propulsion:

- Conventional powertrains (Diesel, Gasoline)
- Liquefied Petroleum Gas (LPG)
- Compressed Natural Gas (CNG)
- Electric
- Hybrid electric

It is intended to update the document to cover other technologies coming on the market in the future.

Road vehicles — Rescue sheet

1 Scope

This international standard defines the content and the layout of the rescue sheet providing necessary and useful information about a vehicle involved in an accident to support the rescue team extricating the occupants as fast and as safe as possible. The contents and layout takes into account that the rescue sheet has to be easy to use by rescue teams of all over the world and may be available in paper or electronic format.

This standard is applicable to passenger cars and light commercial vehicles according to ISO 3833.

The identification of the vehicle and of the model via a database using the license plate, the VIN number, an automatic emergency call systems (e.g. eCall) system or other identifiers (e.g. bar code or QR code) is not covered by this standard.

The rescue process or the process of handling the rescue sheets is not covered by this standard.

This standard does not cover information related to education and training for rescue teams.

2 Normative references

The following referenced documents are indispensable for the application of this document. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*

ISO 3780, *Road vehicles — World manufacturer identifier (WMI) code*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms and definitions apply.

3.1
airbag
airbag assembly
airbag module consisting of at least an inflator and a bag for all airbag applications, such as front airbag, seat-mounted side airbag, knee airbag, inflatable curtain, inflatable seat belt

3.2
automatic roll-over protection system
occupant protection system that will deploy on vehicle roll-over

3.3
battery
low voltage battery
power source for the low voltage system (generally 12 or 24 V)

3.4
compressed natural gas
CNG
natural gas which has been compressed and stored for use as a vehicle fuel

[Source: ISO 15500-1:2000, term 3.2]

3.5
fuel tank
tank containing liquid fuel under normal pressure

3.6
gas tank
tank containing CNG or LPG under increased pressure

3.7
gas strut and/or preloaded spring
devices designed to actuate hatch, hood, door, trunk lid or active head restraints, which may be of danger when directly cut during an extrication or put into pressure during a fire

Note 1 to entry: These devices may occur independently or in combination with each other.

3.8
high voltage system
HV system
class B voltage system
classification of an electric component or circuit with a maximum working voltage between 30 V a.c. (rms) and 1 000 V a.c. (rms) or between 60 V d.c. and 1 500 V d.c.

[Source: ISO 6469-3:2011, term 3.31]

3.8.1
high voltage battery pack
HV battery pack
traction battery for vehicle high voltage system

3.8.2
high voltage fuse box
HV fuse box
box containing fuses or devices for disabling the vehicle high voltage system

3.8.3
high voltage disconnect
HV disconnect
feature for disabling the vehicle high voltage system

3.8.4
high voltage power cable/component
HV power cable/component
cable or component for vehicle high voltage system

3.9
liquefied petroleum gas
LPG
mixture of light hydrocarbons, gaseous under normal atmospheric conditions which can be liquefied by increased pressure or decreased temperature, the main components of which are propane, propane, butane and butane isomers

[Source: ISO 20826:2006, term 3.12]

3.10
pedestrian protection active system
protection system designed to actively (e.g. pyrotechnically) deploy parts of the vehicle in order to mitigate the injury outcome in case of a collision with a pedestrian

3.11
pictogram
graphical composition that may include a symbol plus other graphic elements, such as a border, background pattern or colour that is intended to convey specific information

[Source: ISO 11014, term 3.10]

3.12
reinforcement
structural reinforcement that may influence (delay) the rescue process

3.13
roof cutting point
preferred area at which the roof can be cut

3.14
safety valve
shut-off valve, pressure relief device etc. on the gas tank

3.15
seatbelt pretensioner
mechanism to pretension the seatbelt in an impact, included in the seatbelt retractor or mounted to buckle or lap belt anchor point

3.16
stored gas inflator
storage for gas used to inflate airbags

Note 1 to entry: The term is used when necessary in conjunction with airbag systems where the stored gas inflator is not an integrated part of the airbag assembly, e.g. for inflatable curtain, knee airbag or pedestrian protection active system.

3.17
supplementary restraint system control unit
SRS control unit
control unit used for the decision of triggering the supplemental restraint systems

3.18
ultra-capacitor HV
high voltage source of energy used in addition to the conventional low voltage battery

3.19
ultra-capacitor LV
low voltage source of energy used in addition to the conventional low voltage battery

3.20
left-hand drive, LHD
right-hand drive, RHD
lateral position of the steering wheel in the vehicle

4 Pictograms for components to be considered

4.1 Colour coding principles

The following colour codes are applied in this standard:

— Yellow for low voltage;

— Orange for high voltage (class B);

— Lime for gas and liquid;

— Blue for restraint system (airbag and seat belt equipment, including SRS control unit);

— Red contour (surrounding) for triggered systems e.g. airbag, gas inflator or preloaded spring actively triggered by sensor or similar;

— Cyan for high strength zones.

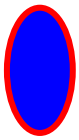
NOTE RGB colour coordinates are given in Table 1 as a guideline.

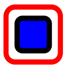
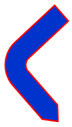
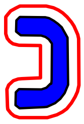
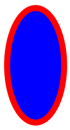
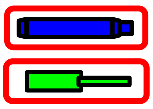
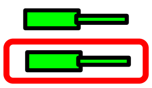
4.2 Pictogram for rescue sheet application

Components/functions to be taken into account during the rescue procedure are represented by dedicated pictograms. These pictograms are used to indicate the location of the respective components/functions in the vehicle.

Table 1 lists the pictograms for the components to be considered. See Annex C for application in the rescue sheet legend. When applicable, all components are mandatory to be shown in the rescue sheet, except when explicitly stated otherwise.

Table 1 — Pictograms for rescue sheet application

Component /function	Pictogram (top and side view)	Remarks
Airbag	 A shape coloured in blue with a red surrounding: — Blue (RGB: 0,0,255); — Red (RGB: 255,0,0).	Pictogram can be adjusted to represent the actual size and form.
Stored gas inflator	 A rounded rectangular shape coloured in blue with black contour on white background with a red surrounding: — Blue (RGB: 0,0,255); — Red (RGB: 255,0,0).	Pictogram can be adjusted to represent the actual size and form. Pictogram is used to show the location of the stored gas inflator for e.g. inflatable curtains or pedestrian protection active system. This pictogram should not be shown for conventional airbag systems with integrated gas inflator, such as frontal airbag in the steering wheel or in the dashboard, side airbag, knee airbag.

Component /function	Pictogram (top and side view)	Remarks
Seat belt preten-sioner	 A rounded squared shape coloured in blue with black contour on white background with a red surrounding: — Blue (RGB: 0,0,255); — Red (RGB: 255,0,0).	
Inflatable seat belt	 A 90° angle shape coloured in blue with a red surrounding: — Blue (RGB: 0,0,255); — Red (RGB: 255,0,0).	The arrow end represents the location of the buckle.
Automatic roll-over protection system	 A shape coloured in blue with black contour on white background with a red surrounding: — Blue (RGB: 0,0,255); — Red (RGB: 255,0,0).	Pictogram can be adjusted to represent the actual size and form.
Pedestrian protec-tion active system	 A rounded squared shape in white with a red surrounding and figure as shown: — Red (RGB: 255,0,0). Pictogram may be used in combination with ac-tual technical solution (below) inserted at the appropriate location in the vehicle.  	Pictogram for pedestrian protection system shall be used to inform that the vehicle is equipped with a system that may deploy the bonnet/hood. It may be linked to the activation mechanism (airbag, gas inflator, gas strut, preloaded spring) for deploying the bonnet/hood.
Gas strut **Preloaded spring**	 A rectangular shape coloured in lime with black contour. If triggered, on white background with a red surrounding: — Lime (RGB: 0,255,0); — Red (RGB: 255,0,0).	Red surrounding is used only if the device is triggered.