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Road vehicles — Information for first and second responders —

Part 1: Rescue sheet for passenger cars and light commercial vehicles

Véhicules routiers — Information pour les premiers et seconds intervenants —
Partie 1: Fiche de secours pour véhicules particuliers et pour véhicules utilitaires légers

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 36, *Safety aspects and impact testing*.

ISO 17840 consists of the following parts, under the general title *Road vehicles — Information for first and second responders*:

— *Part 1: Rescue sheet for passenger cars and light commercial vehicles*

The following parts are under preparation:

— *Part 2: Rescue sheet for buses, coaches and heavy commercial vehicles*

— *Part 3: Rescue and training manuals*

— *Part 4: Propulsion energy identification*

Introduction

This part of ISO 17840 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 part of ISO 17840.

This part of ISO 17840 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 this part of ISO 17840 to cover other technologies coming on the market in the future.

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

Road vehicles — Information for first and second responders —

Part 1: Rescue sheet for passenger cars and light commercial vehicles

1 Scope

This part of ISO 17840 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 can be available in paper or electronic format.

This part of ISO 17840 is applicable to passenger cars and light commercial vehicles according to ISO 3833.

The identification of the vehicle and of the model through 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 part of ISO 17840.

The rescue process or the process of handling the rescue sheets is not covered by this part of ISO 17840.

This part of ISO 17840 does not cover information related to education and training for rescue teams.

2 Terms and definitions

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

2.1
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

2.2
airbag inflator
stored gas inflator
device to create the gas (e.g. pyrotechnic), or storage for gas, used to inflate airbags or other protection devices

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

2.3
automatic roll-over protection system
occupant protection system that will deploy on vehicle roll-over

2.4
battery
low-voltage battery
power source for the low-voltage system (generally 12 V or 24 V)

2.5
compressed natural gas
CNG
natural gas which has been compressed and stored for use as a vehicle fuel

[SOURCE: ISO 15500-1:2000, 3.2]

2.6
fuel tank
tank containing fuel (e.g. gasoline or diesel) under normal atmospheric pressure

2.7
gas tank
tank containing pressurised gas (e.g. CNG or LPG)

2.8
gas strut
preloaded spring
devices designed to actuate hatch, hood, door, trunk lid, or active head restraints, which can 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.

2.9
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, 3.31; UN Regulation R100]

2.9.1
high-voltage battery pack
HV battery pack
traction battery for vehicle high-voltage system

2.9.2
fuse box disabling high voltage
box containing fuses or devices for disabling the vehicle high-voltage system

2.9.3
high-voltage disconnect
HV disconnect
feature for disabling the vehicle high-voltage system

Note 1 to entry: High-voltage disconnect may be a service plug or other features specified by the vehicle manufacturer.

2.9.4
high-voltage power cable
high-voltage component
HV power cable
HV component
cable or component for vehicle high-voltage system

2.10
left-hand drive
LHD
right-hand drive
RHD
lateral position of the steering wheel in the vehicle

2.11
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, 3.12]

2.12
low-voltage system
LV system
class A voltage system
classification of an electric component or circuit with a maximum working voltage of less than 30 V a.c. (rms) or 60 V d.c.

[SOURCE: ISO 6469-3:2011, 3.30; UN Regulation R100]

2.13
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

2.14
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 11014:2009, 3.10]

2.15
reinforcement
structural reinforcement that may influence (delay) the rescue process

2.16
roof cutting point
preferred area at which the roof can be cut

2.17
safety valve
shut-off valve, pressure relief device, etc. on the gas tank

2.18
seatbelt pretensioner
mechanism to pretension the seatbelt in an impact, included in the seatbelt retractor or mounted to buckle or lap belt anchor point

2.19
supplementary restraint system control unit
SRS control unit
control unit used for the decision of triggering the supplemental restraint systems

2.20
ultra-capacitor HV
high-voltage source of energy used in addition to the conventional low-voltage battery

2.21
ultra-capacitor LV
low-voltage source of energy used in addition to the conventional low-voltage battery

3 Pictograms for components to be considered

3.1 Colour coding principles

Colour codes according to Table 1 are applied in this part of ISO 17840.

Table 1 — Colour coding principles

Colour	RGB code[a]	Components/functions
Yellow	RGB: 255,255,0	Low-voltage electrical system/components, including SRS control unit
Orange	RGB: 255,165,0	High-voltage (class B) electrical system/components
Blue	RGB: 77,77,255	Occupant protection system, e.g. airbags
Purple	RGB: 152,43,143	Seat belt pretensioner
Red	RGB: 255,0,0	Surrounding colour for triggered systems, e.g. airbag, gas inflator, or preloaded spring actively triggered by sensor or similar
Lime green	RGB: 0,255,0	Gas, liquid and pretensioned spring components
Sea green	RGB: 0,128,128	High strength zones

[a] RGB colour components as expressed in terms of digital 8-bit per channel (from 0 to 255).

NOTE RGB colour components are also given in Table 2 with the respective component/function pictogram.

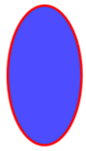
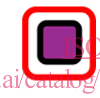
3.2 Pictogram for rescue sheet application

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 2 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.

NOTE All technologies (for propulsion, safety, material, etc.) that are not directly mentioned in this part of ISO 17840 should be treated as close as possible to the known/mentioned technologies.

Table 2 — 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: 77,77,255) — red (RGB: 255,0,0)	Pictogram can be adjusted to represent the actual size and form. Different types of airbag-related occupant protection systems can be shown using the airbag pictogram with an appropriate size and form, e.g.: — side airbag; — curtain airbag; — knee airbag; — inflatable seat belt.
Airbag inflator/ stored gas inflator	 A rounded rectangular shape coloured in blue with black contour on white background with a red surrounding. — blue (RGB: 77,77,255) — 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 air-bag in the steering wheel or in the dashboard, side airbag, knee airbag.
Seat belt pretensioner	 A rounded rectangular shape coloured in purple with black contour on white background with a red surrounding. — purple (RGB: 152,43,143) — red (RGB: 255,0,0)	If a seating position has more than one pretensioner (e.g. for lap and shoulder belt), each pretensioner location shall be indicated by pictogram. Pictogram can be adjusted to represent the actual size and form. It can also be a combination of simple forms.
Automatic roll-over protection system	 A shape coloured in lime with black contour on white background with a red surrounding. — lime green (RGB: 0,255,0) — red (RGB: 255,0,0)	Pictogram can be adjusted to represent the actual size and form.