

HGV Assessment Protocol

Post Crash

Implementation November 2024

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PREFACE

During the test preparation, vehicle manufacturers are encouraged to liaise with the laboratory and to check that they are satisfied with the way cars are set up for testing. Where a manufacturer feels that a particular item should be altered, they should ask the laboratory staff to make any necessary changes. Manufacturers are forbidden from making changes to any parameter that will influence the test, such as dummy positioning, vehicle setting, laboratory environment etc.

It is the responsibility of the test laboratory to ensure that any requested changes satisfy the requirements of Euro NCAP. Where a disagreement exists between the laboratory and manufacturer, the Euro NCAP secretariat should be informed immediately to pass final judgment. Where the laboratory staff suspect that a manufacturer has interfered with any of the set up, the manufacturer's representative should be warned that they are not allowed to do so themselves. They should also be informed that if another incident occurs, they will be asked to leave the test site.

Where there is a recurrence of the problem, the manufacturer's representative will be told to leave the test site and the Secretary General should be immediately informed. Any such incident may be reported by the Secretary General to the manufacturer and the person concerned may not be allowed to attend further Euro NCAP tests.

DISCLAIMER: Euro NCAP has taken all reasonable care to ensure that the information published in this protocol is accurate and reflects the technical decisions taken by the organisation. In the unlikely event that this protocol contains a typographical error or any other inaccuracy, Euro NCAP reserves the right to make corrections and determine the assessment and subsequent result of the affected requirement(s).

CONTENTS

1.	INTRODUCTION	1
2.	DEFINITIONS	2
3.	SCORING SCHEME	4
4.	RESCUE SHEETS	5
5.	EXTERNAL ENERGY LABELLING	6
6.	EXTRICATION	7
7.	E-CALL	8

1. INTRODUCTION

An analysis of European road traffic crash data (where at least one HGV was involved) revealed that around 10 % of all fatalities were truck occupants. The speed with which vehicle occupants get the appropriate medical assistance following a serious collision can be critical to the severity of the consequences. To enable fast, effective and safe rescue, first responders require detailed but easily understood information regarding the construction of individual vehicles. This is becoming more pressing as vehicles become stronger (e.g. use of high strength steels or composite materials), use different sources of power (e.g. electric/hybrid, hydrogen) and are equipped with an increasing number of safety devices (e.g. airbags, pre-tensioners, active pedestrian protection bonnets). Through the application of this protocol and the “Euro Rescue” app, Euro NCAP in collaboration with the International Association of Fire & Rescue Services (CTIF) promotes the appropriate availability of ISO 17840 compliant rescue sheets and response guides for new car models.

To further assist the extrication efforts of first responders, the correct functioning of automatic door locks, i.e., unlocking after a crash, is checked. Also, incentives are given for availability of technology that supports rescue activities and helps to prevent any further collisions with oncoming traffic or roadside structures, after the initial impact. Finally, vehicle submergence countermeasures are assessed to check if occupants can promptly exit a vehicle that has entered water and are not hindered by non-functioning door latches or side windows.

The requirements for passenger cars are divided into three areas:

1. Rescue: Information for First Responders – Rescue Sheet & Emergency Response Guide (ERG)
2. Extrication: Unlocking of automatic door locking, door opening forces, seat belt unbuckling forces, compliance with ECE regulations post-crash for EV vehicles and accuracy of eCall data. Markings on vehicles to help with disabling direct hazards by rescuers attending the vehicle.
3. Safety: Advanced e-Call, Multi Collision Brake technology and Vehicle Submergence.

At this time only the requirements under heading 1 have been fully transferred to the truck rating scheme. Placeholders relating to items 2 & 3 have been included in the points available in the post crash rating. However, at this time, no assessment against those items is undertaken because requirements appropriate to trucks have not yet been developed, and there are significant and different challenges to overcome. The points used as ‘placeholders’ for these items are sufficiently small at this time that the inability to provide a rating does not prevent any vehicle from achieving 5 stars.

As such, this protocol contains only requirements relevant to rescue sheets and emergency response guides at this time.

2. DEFINITIONS

Throughout this protocol the following terms are used:

- **Heavy Goods Vehicle (HGV):** A category N2 or N3 vehicle with gross mass exceeding 3,500 kg.
- **Vehicle Under Test (VUT):** The vehicle, or vehicle and trailer combination, assessed in accordance with this protocol.
- **Rescue Sheet (ISO 17840 part 1):** Operational Summary sheet for a vehicle produced for rescue services containing relevant information on vehicle hazards such as electrical systems, pyrotechnic devices, material location and properties (high strength steel etc), fuel storage location and properties etc. Rescue Sheet is the main document that first and second responders use at the scene of an accident.
- **Emergency Response Guide (ERG ISO 17840 part 3):** A template for more in-depth emergency response information to be used in combination with the Rescue Sheet for non-conventional engine vehicle. It is generally used by first and second responders as a source of information for training on nonconventional engine vehicles.
- **ISO standard 17840 – Road vehicles – Information for first and second responders:** Rescue sheet for passenger cars and light commercial vehicles (Part 1), buses, coaches and heavy commercial vehicles (Part 2), ERG template with all the needed pictograms in ERG and in Rescue Sheet (Part 3) and a standard for identification of the propulsion fuel or energy (Part 4).
- **Automatic Door Locking (ADL):** System in the vehicle whereby the door latches automatically lock once the vehicle has reached a certain speed. They should also automatically unlock in the event of an accident, post impact. Short term deactivation for one single journey is permitted.
- **e-Call:** System fitted to a vehicle that sends an automatic message to an emergency call centre in case of a crash of the vehicle. e-Call technology capable of sending advanced content, beyond what is legally specified (ECE 144), is referred to as e-Call+ or Advanced e-Call.
- **TPS e-Call:** Third party services supported 'e-Call' or 'TPS e-Call' means an in-vehicle emergency call to a third party service provider, made either automatically by means of the activation of in-vehicle sensors or manually, which carries, by means of public mobile wireless communications networks, the MSD and establishes an audio channel between the vehicle and the third party service provider.
- **Third party service provider:** An organisation recognised by national authorities as being allowed to receive a TPS e-Call and to forward the MSD to the e-Call PSAP.
- **Minimum Set of Data (MSD):** Contains information on the accident vehicle and is transmitted at the beginning of the call in the voice channel opened between in-vehicle system and public safety answering point. Transmitting MSD to TPS may be done by voice channel and/or SMS and/or other data coding.
- **Multi Collision Brake (MCB):** System fitted to a vehicle that applies the brakes to prevent or mitigate a subsequent impact when a vehicle has been involved in a collision. In response to a primary collision (usually if the airbag is fired), information is sent to the electronic stability control system to brake the vehicle. It must not be possible to deactivate the MCB by the driver.

- **Event Data Recorder (EDR):** A function or device installed in a vehicle that records technical vehicle and occupant information for a brief period of time before, during and after a collision, for the purpose of monitoring and assessing vehicle safety system performance.

3. SCORING SCHEME

Scores will be awarded as follows, if the detailed requirements for each individual item are met:

Rescue Sheets & Emergency Response Guide	80 points
External Energy Labelling	10 points
Occupant Extrication Criteria	5 points
e-Call	5 points

4. RESCUE SHEETS

The Rescue Sheet(s) (the model variant rated by Euro NCAP as well as other variants covered by the rating) must be submitted before inspection with additional information for the database in accordance with TB 1001 (rescue sheet in different languages and pictures of the vehicle, if available: QR Code).

These Rescue Sheets (final version after inspection) must be available to the general public for the model variant rated by Euro NCAP as well as all the other variants covered by the rating that are available at the time of publication. Each Rescue Sheet must be provided in PDF format, with the correct filename according to TB 1001, as a unique document i.e. one file per model variant and per language.

Each Rescue Sheet should be no more than four A4 sized pages when printed. Where commercial licences and/or exclusive publishing rights exist, these should not infringe on the rights of Euro NCAP and its members to make Rescue Sheets available at no cost to the general public. Rescue Sheets must be supplied in all languages covering the Euro NCAP Application Area/EAA (see TB 002). The Rescue Sheet(s) must meet ISO 17840 Part 1 format (layout, order of information and pictograms).

Content must be correct – Rescue Sheet will be checked on vehicles used for other tests in the scheme. The vehicle manufacturer will be permitted to make corrections before publication, provided all material issued by the company is updated as well.

The Emergency Rescue Guides (ERGs) must be submitted before inspection with additional information for database in accordance with TB 1001.

The ERGs must be supplied in English, German, French and Spanish following ISO 17840 Part 3. One unique ERG that covers all the HGVs from the same brand is accepted. It is possible for the OEM to produce just one ERG covering all models for a brand or one ERG for each model range, that is at the discretion of the OEM. The scope of the ERG document should clearly define which vehicle models/energy types the ERG applies to.

5. EXTERNAL ENERGY LABELLING

Vehicles will score the points in this section if they are equipped with propulsion energy identification labels in compliance with TB1001 (based on ISO 17840 compliance).

6. EXTRICATION

Under development for 2028 – no score will be possible under this heading at this time.

7. E-CALL

Under development for 2028 – no score will be possible under this heading at this time.