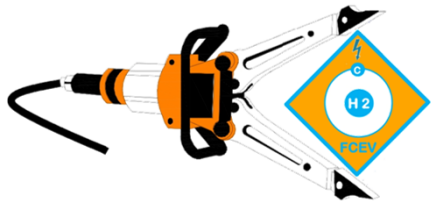


Informal document GRSG-111-31  
(111th GRSG, 11-14 October 2016,  
Agenda items 7 and 9)

# GRSG meeting Geneva 2016



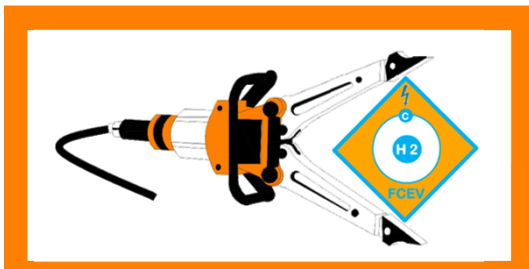
COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY

**CTIF** 

# CTIF

## INTERNATIONAL ASSOCIATION OF FIRE AND RESCUE SERVICES

### Member countries

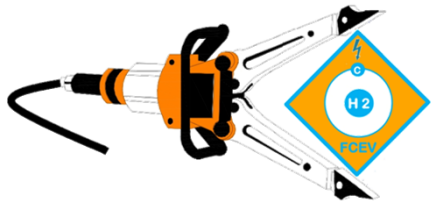


COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY



# CTIF

- Several commissions and working groups.
- Commission for Extrication and New Technology.
- Commission's objectives:
  - Availability of crucial information for every firefighter worldwide & free of charge.
  - Create a band of trust between manufacturers, government and other organizations.
  - Assure safe working conditions.
  - Focus on the victims during rescue operations.

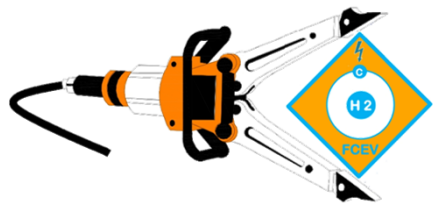


COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY

**CTIF** 

# CTIF

- How?
  - Working together with Euro NCAP!
  - Standardization information through ISO!
    - **Going further than part 1 (rescue sheet)**
      - Propulsion energy identification
      - Standard template rescue sheet for buses and trucks
      - Standard template **Emergency Response Guide**
      - By using the same 10 'ISO chapters'
      - Best practice procedures concerning the power source in a vehicle(Li-ion batteries, CNG, Hydrogen...), return of experience, lessons learned...



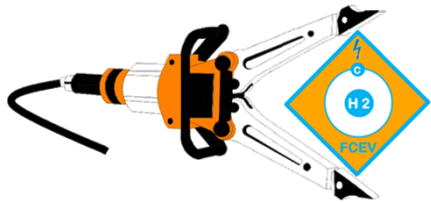
COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY

**CTIF** 

# Euro NCAP vs Proposal CTIF



Encourage car manufacturers to take into account rescuers interventions by integrating in EuroNCap ratings all actions led to improve their safety



COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY



# Euro NCAP vs Proposal CTIF

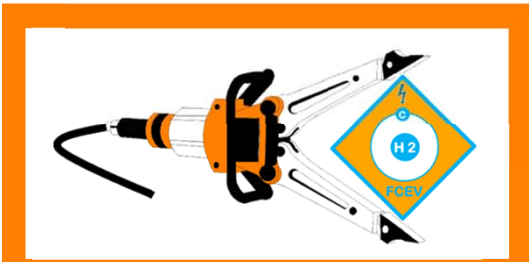


tools useful  
for  
identification

tools to help  
decision

tools to help  
rescuer  
actions

Vehicle  
intrinsic  
safety



# Euro NCAP vs Proposal CTIF

**CTIF NEWS**  
INTERNATIONAL ASSOCIATION OF FIRE & RESCUE

**Extra**

Gas car explodes:  
Driver dead, ten firefighters injured

From LN-estilo.de Translated summary for CTIF 2014-08-27

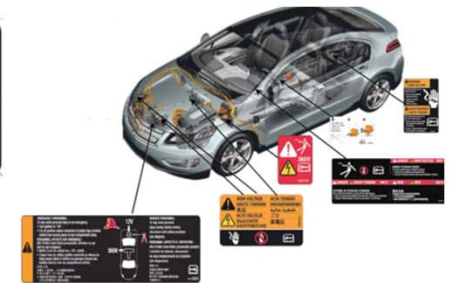


**EMERGENCY PERSONNEL:**  
To help service personnel (only) in an emergency:  
• Turn ignition to "OFF"  
• Call all positive cables connected to positive frame (located behind front access panel) in rear compartment area.

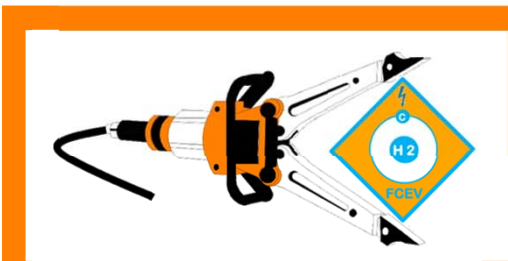
**PERSONNEL AFFECTÉ AUX URGENCES:**  
une charge avant usage personnel, uniquement en cas  
d'urgence.  
• Mettre le contact sur - OFF - avant.  
• Couper tous les câbles positifs connectés au niveau de  
l'arrière dans l'habitacle de l'arrière du véhicule via  
l'accès situé dans le coin du compartiment arrière.

**PERSONNEL AFFECTÉ À L'ENTRETIEN:**  
Après d'autres travaux, éteindre personnellement pendant  
l'entretien du véhicule, désconnecter les deux emplacements de la batterie  
par diagramme.

12V  
360V



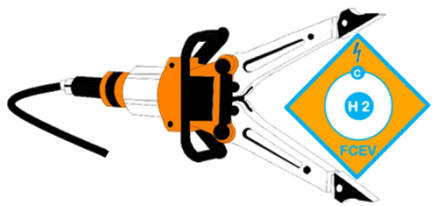
1. Identification / recognition	Page ...
2. Identification / identification / IDtag	Page ...
3. Identify direct hazards / safety regulations	Page ...
4. Access to the occupants	Page ...
5. Stored energy / liquids / gases / solids	Page ...
6. To read of substitution	Page ...
7. Tracing / transportation / storage	Page ...
8. Important additional information	Page ...
9. Explanation of pictograms used	Page ...



# ISO propulsion energy identification

## Used Colors

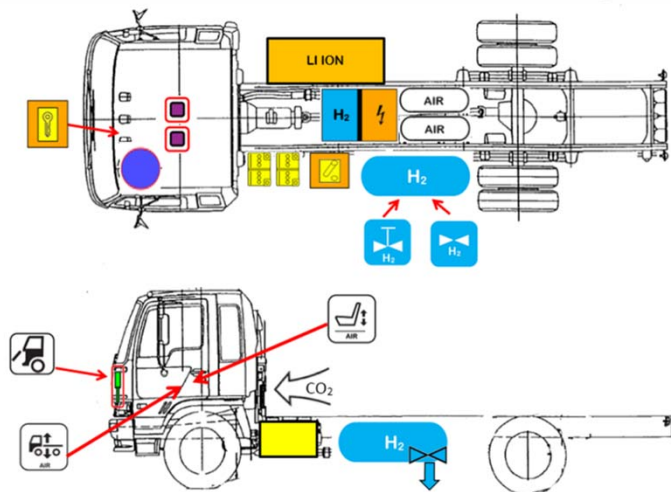
<b>GREY</b>	<b>DIESEL</b>
<b>RED</b>	<b>GASOLINE</b>
<b>GREEN</b>	<b>CNG</b>
<b>WHITE</b>	<b>CRYOGEN LNG</b>
<b>BLUE</b>	<b>HYDROGEN</b>
<b>ORANGE</b>	<b>HIGH VOLTAGE</b>
<b>WHITE</b>	<b>LPG</b>





# ISO propulsion energy identification

- These colors are also used in Rescue Information and to color vehicle components



**MIRAI**

2014-11

TOYOTA

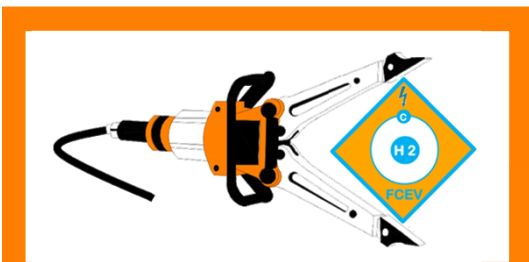
FUEL CELL

NI-MH

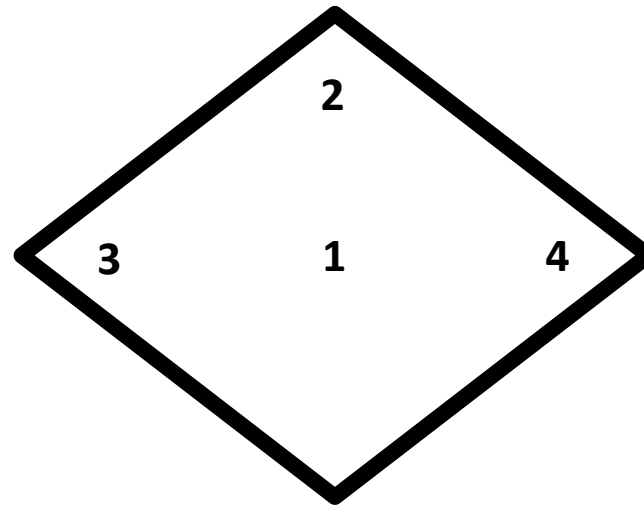
  

	IG/POWER スイッチ		ヒューズボックス		12V バッテリー
	エアバッグ (インフレーター含む)		インフレーター		高電圧バッテリー
	高電圧機器		水素タンク		水素機器
	ガス封入ダンパー		シートベルトプレテンショナー (肘スジセンサー)		ボデー構造部材
	エアバッグコンピューター	-	-	-	-

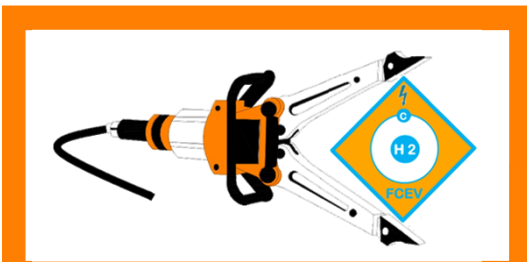
MIRAI10\_3



# ISO propulsion energy identification



1	First energy source
2	Second energy source
3	Density towards air
4	Stored state



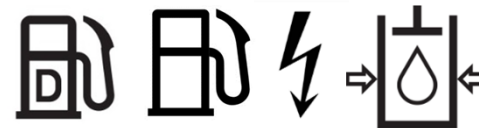
# ISO propulsion energy identification

## SYMBOLS

1) FIRST ENERGY SOURCE



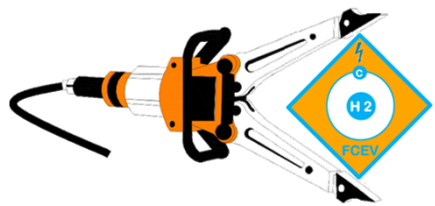
2) SECOND ENERGY SOURCE



3) DENSITY TOWARDS AIR

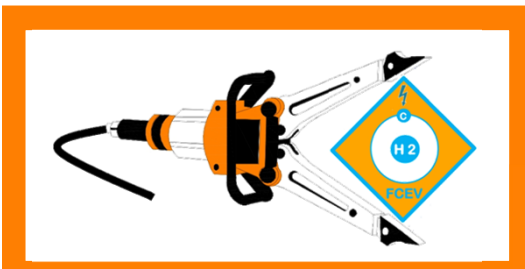


4) STORED STATE



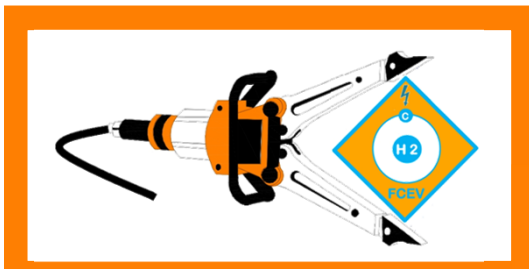
# ISO propulsion energy identification

## DIESEL



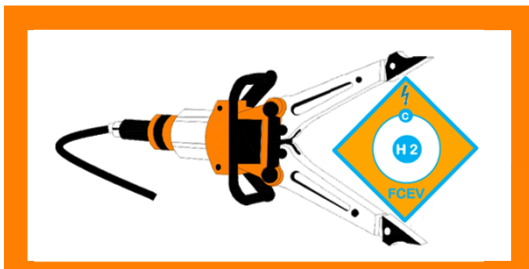
# ISO propulsion energy identification

## GASOLINE



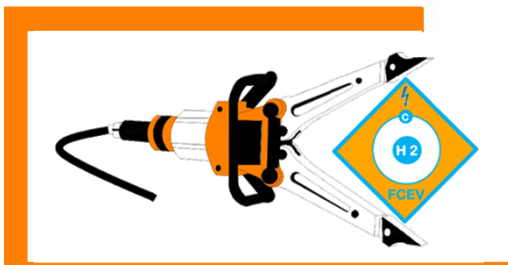
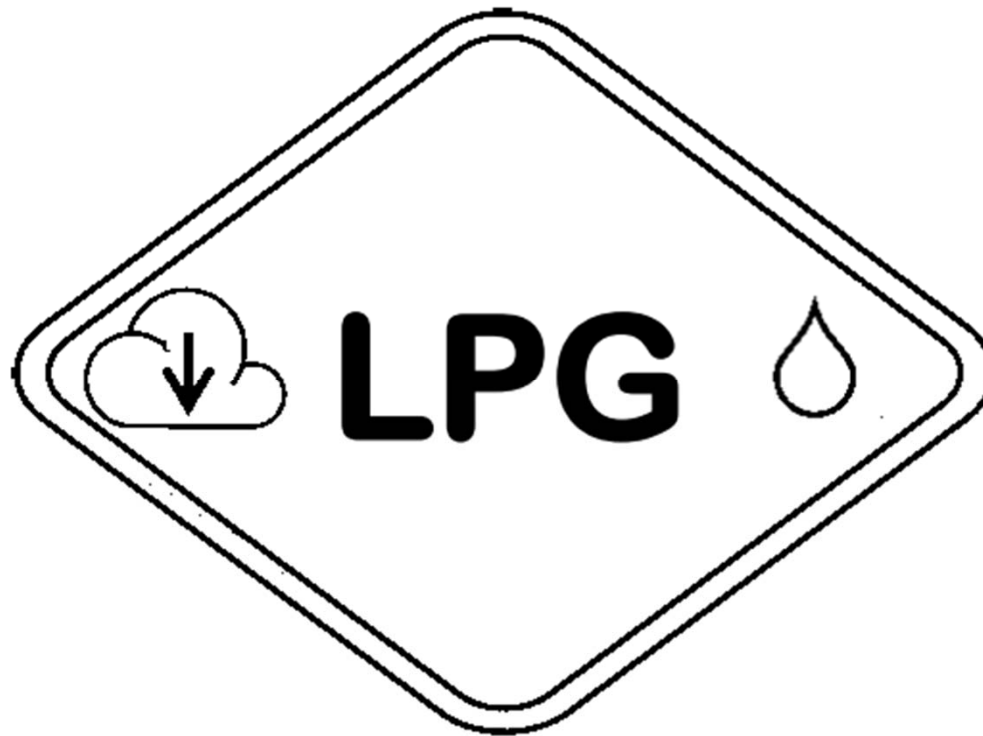
# ISO propulsion energy identification

## CNG



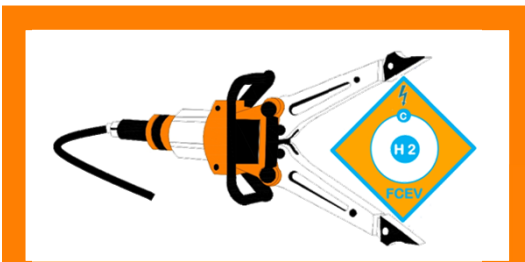
# ISO propulsion energy identification

LPG



# ISO propulsion energy identification

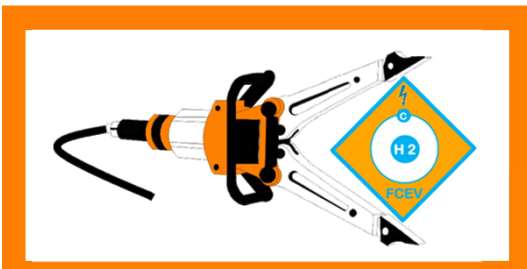
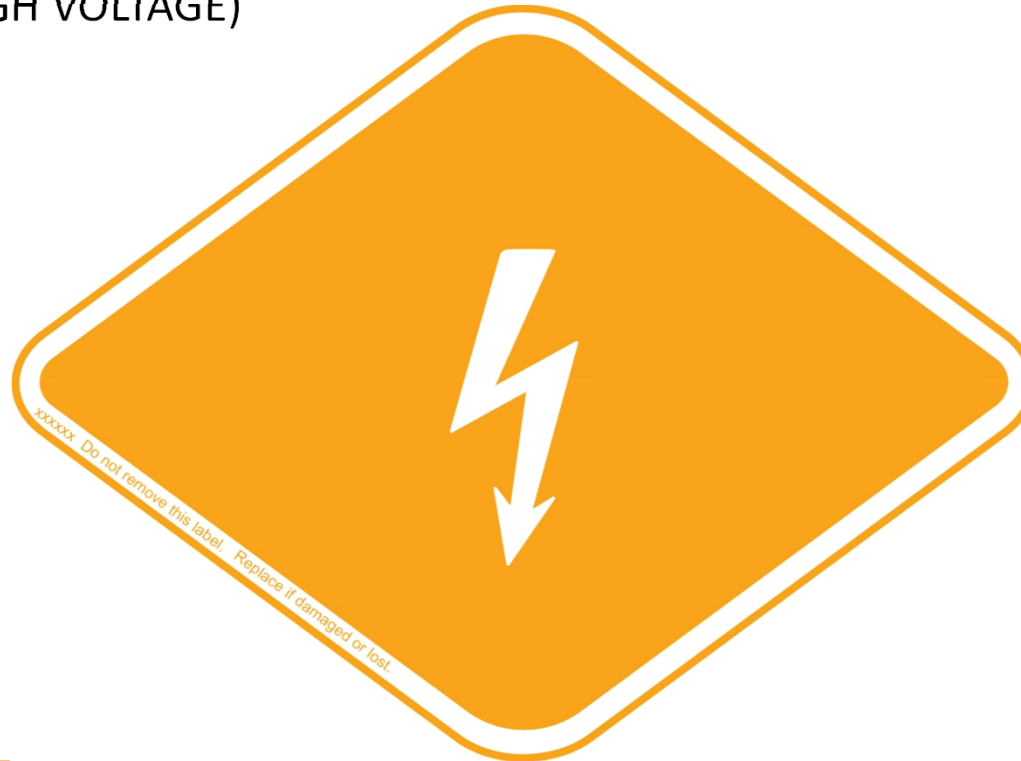
## LNG





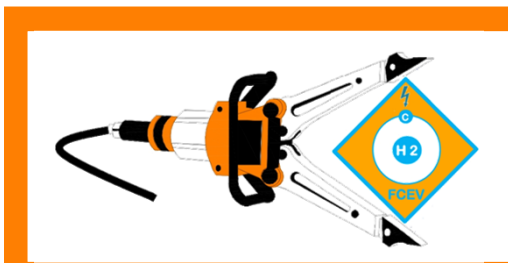
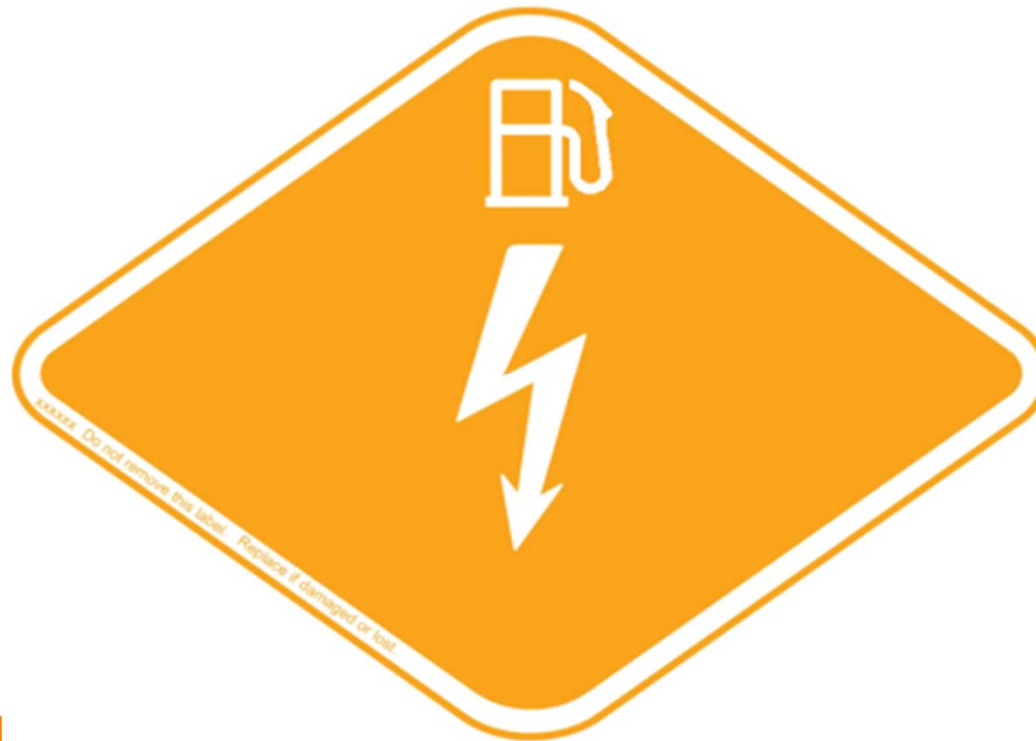
# ISO propulsion energy identification

FULL ELECTRIC (HIGH VOLTAGE)



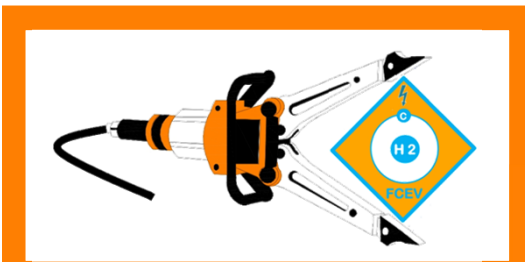
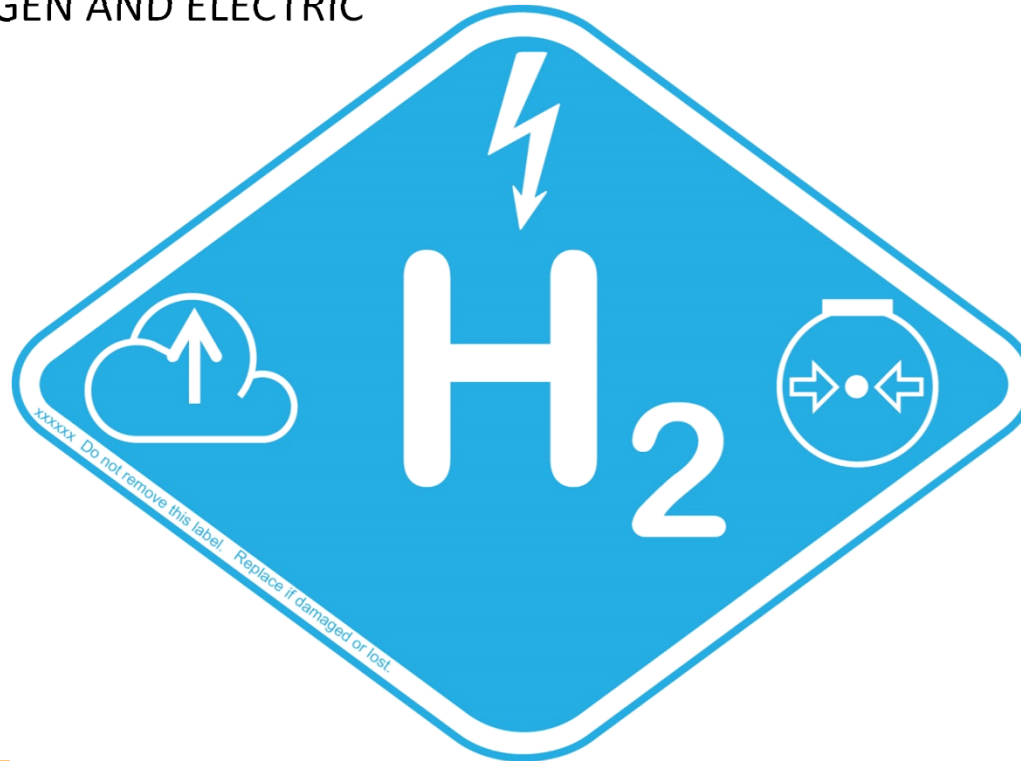
# ISO propulsion energy identification

HYBRID: GASOLINE AND ELECTRIC  
(HIGH VOLTAGE)



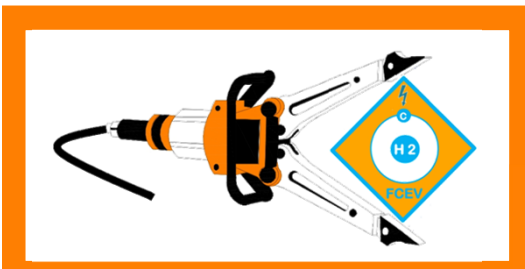
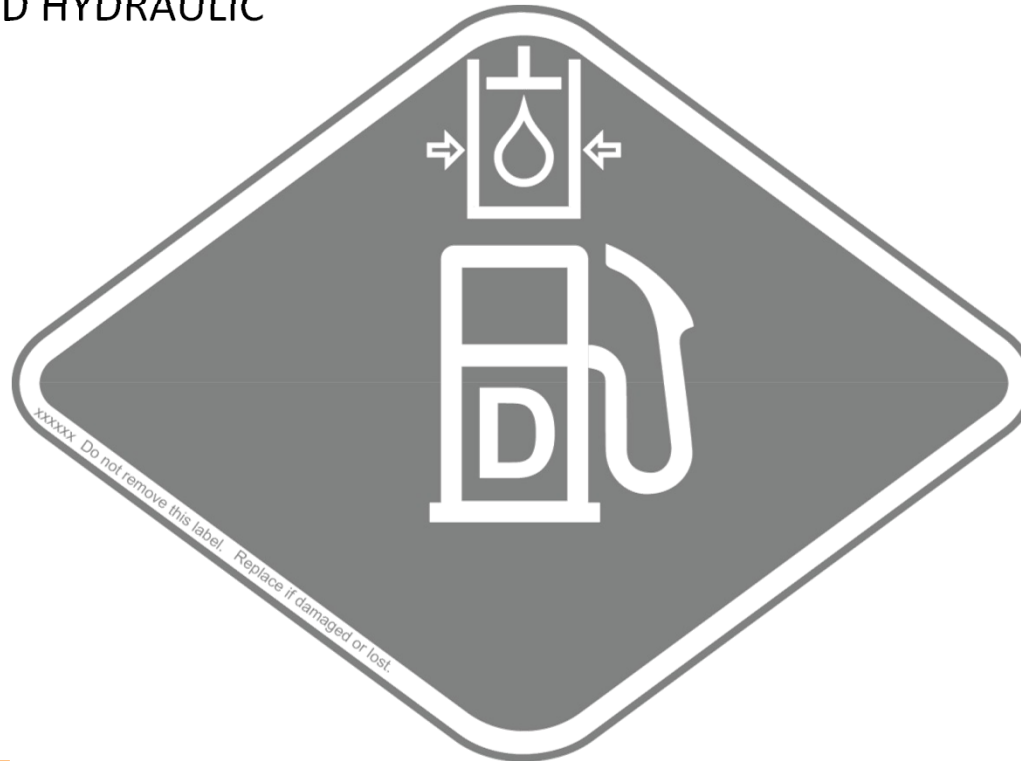
# ISO propulsion energy identification

FUEL CELL: HYDROGEN AND ELECTRIC  
(HIGH VOLTAGE)



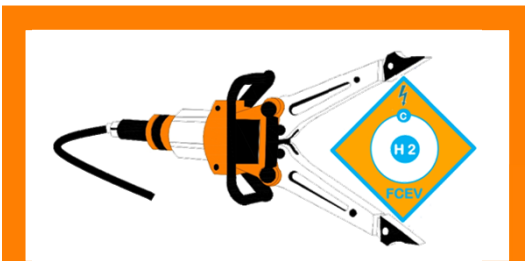
# ISO propulsion energy identification

HYBRID: DIESEL AND HYDRAULIC



# 10 ISO chapters template

1. Identification / recognition
2. Immobilisation / stabilisation / lifting
3. Disable direct hazards / safety regulations
4. Access to the occupants
5. Stored liquids / gases / solids
6. In case of fire
7. In case of submersion
8. Towing / transportation / storage
9. Important additional information
10. Explanation of pictograms used



# Standard secondary pages rescue sheet(data sheet) versus ISO ERG

## Quick rescue information

**Identification**



No exhaust tube  
No petrol hatch

**EV**

**Immobilisation/stabilisation/lifting**



**Disable direct hazards/safety regulations/PPE**



High voltage disconnect service plug

**Dangers in case of fire/safety regulations/PPE**

LI-Ion



Fireman access under the rear seat

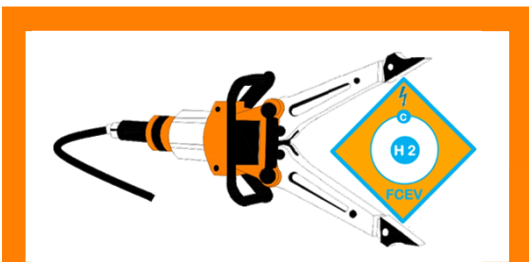
**Dangers / contents stored liquids / gasses / solids / PPE**

LI-Ion

**Symbols**

Marque	Modèle	Phase	Année de lancement	Reference interne	Date creation	Date mise à jour	N° de version
Renault	Kangoo ZE H2	1	2015	RSE-FAD-Kangoo ZE H2 2015v1	01/08/2015		1

## Rescue Sheet



## Detailed rescue information

RENAULT ZOE  
FULL ELECTRIC VEHICLE

**CONTENT**

1. Recognition/type/fuel	Page 3
2. Structure/overview important vehicle parts/access to them	Page 7
3. Disable direct hazards/safety regulations/ PPE	Page 12
4. Access to the occupants	Page 19
5. Dangers/contents stored liquids/gasses/solids/ PPE	Page 21
6. Dangers in case of fire/safety regulations/PPE	Page 24
7. Dangers in case of water submersion/safety regulations/PPE	Page 27
8. Guidelines concerning immobilisation/stabilisation/lifting	Page 29
9. Information for towing-services	Page 30
10. Explanation used symbols	Page 37

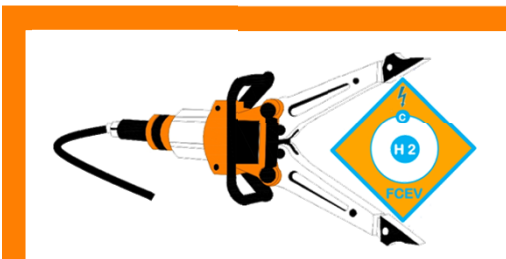
Note:  
First responders: Fire Fighters, Police, Medical personal, EMT  
Second responders: Towing and maintenance personnel



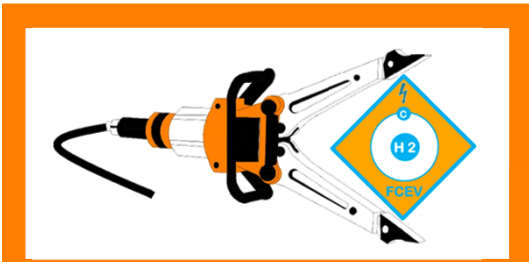
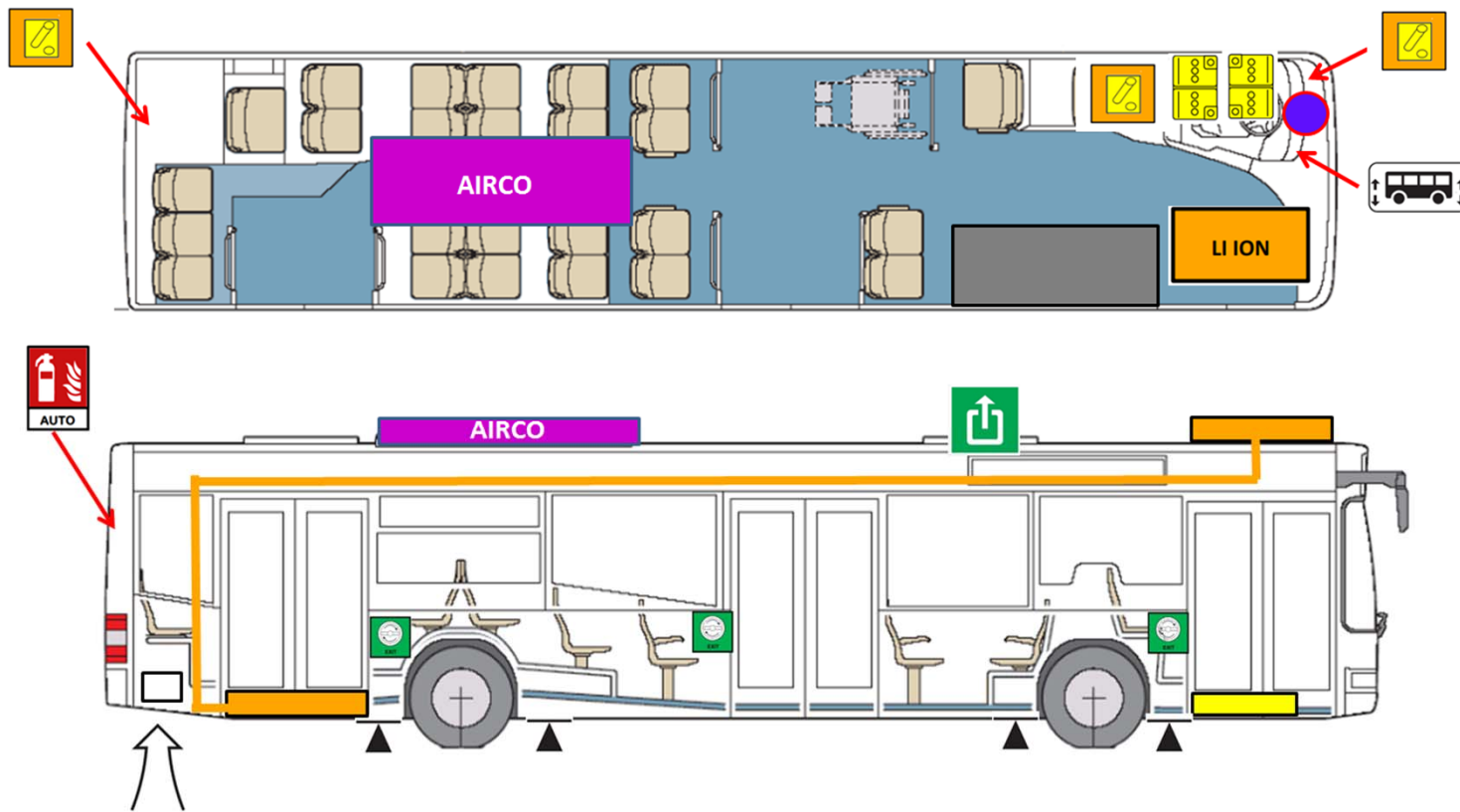
## Emergency response guide (ERG)

# 10 ISO chapters template used in ISO ERG

Usable for all means of transport: car /bus /truck /train/tram/ airplane...



# Rescue sheet bus front page



COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY





# Rescue sheet bus secondary page(s)

## 1. Identification / recognition



## 2. Immobilisation / stabilisation / lifting



## 3. Disable direct hazards / safety regulations



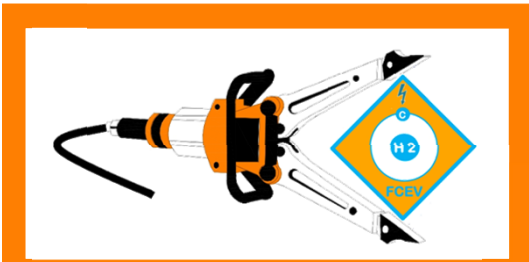
## 4. Access to the occupants



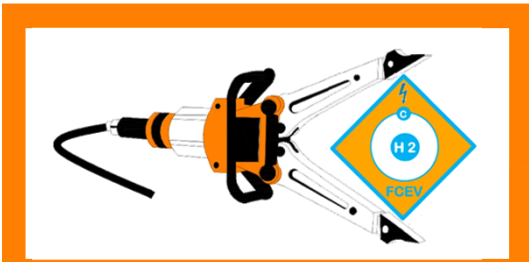
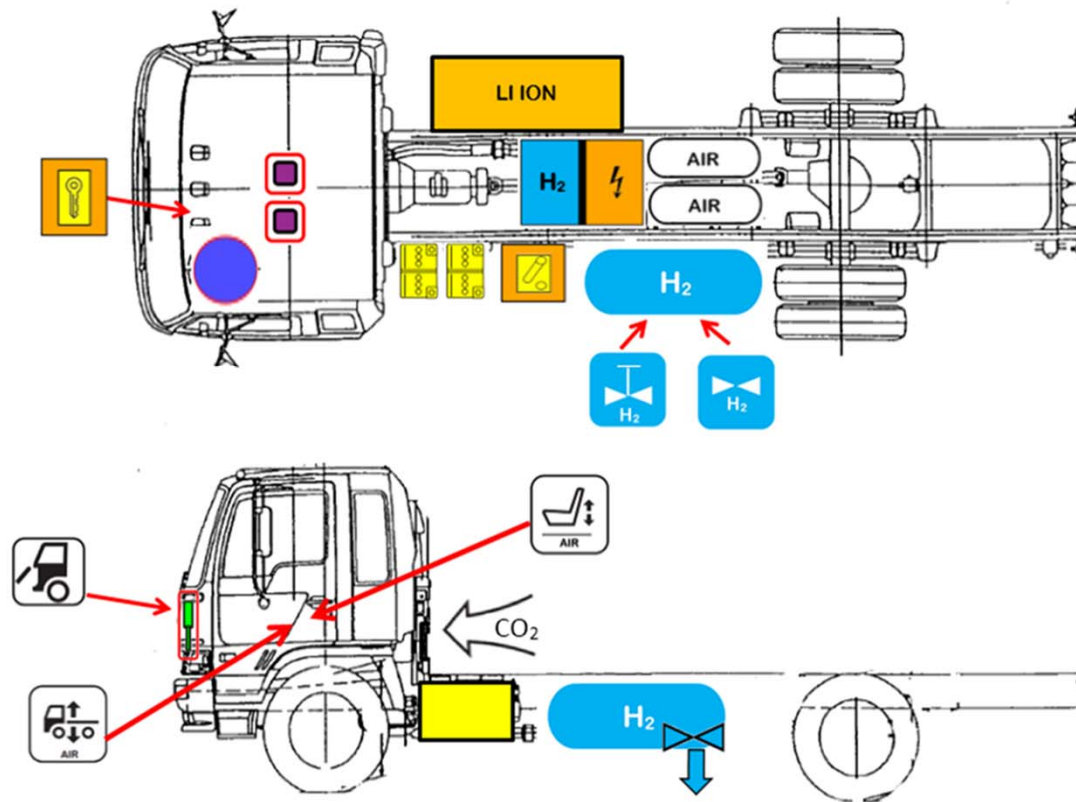
## 5. Stored energy / liquids / gases / solids



## 6. In case of fire



# Rescue sheet truck front page

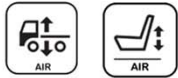


# Rescue sheet bus secondary page(s)

1. Identification / recognition



2. Immobilisation / stabilisation / lifting



3. Disable direct hazards / safety regulations



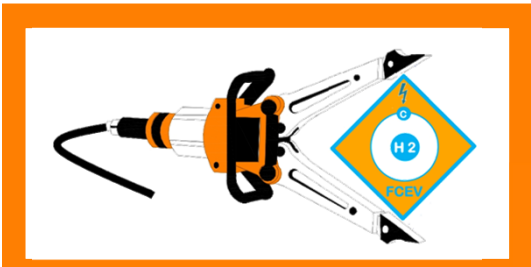
5. Stored energy / liquids / gases / solids



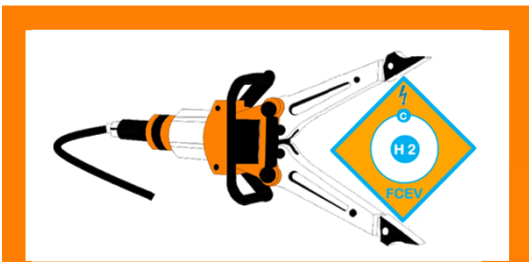
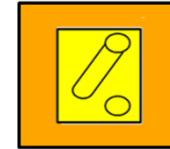
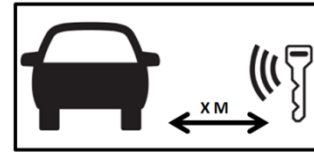
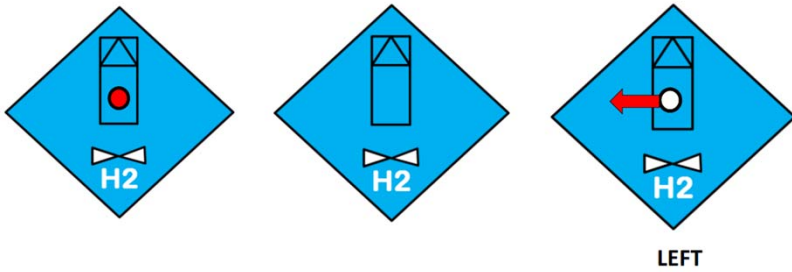
6. In case of fire



8. Towing / transportation / storage



# New designed symbols



# Interested to become a Commission member?

Every (official) representative of any country is welcome in our commission!

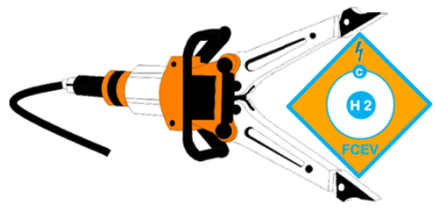
Please contact:

Chairman: Major Tom Van Esbroeck

[tom.vanesbroeck@brandweerzonecentrum.be](mailto:tom.vanesbroeck@brandweerzonecentrum.be)

ISO Project Leader: Kurt Vollmacher

[kurt.vollmacher@brandweerzonecentrum.be](mailto:kurt.vollmacher@brandweerzonecentrum.be)



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