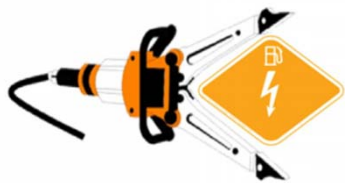


Informal document GRSG-112-06
(112th GRSG, 24-28 April 2017,
Agenda item 9.)

GRSG MEETING 2017 GENEVA



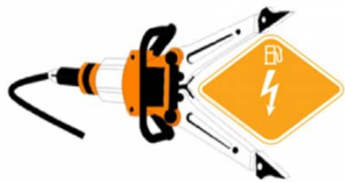
Tom Van Esbroeck
Kurt Vollmacher

COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY



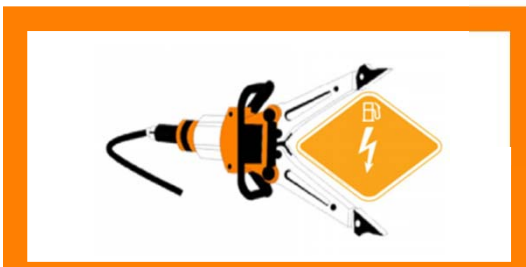
ISO propulsion energy identification

- Important : the location or position of labels on the vehicle, on the rescue sheet, or in the emergency response guide is outside the scope of the **ISO 17840-4** standard in development



Current Situation

- Different kind of pictograms are used for the same type of fuel
- No “global standardized color coding” determined by a RGB code



Current Situation

- No update on the pictograms for already many years old 'new' technology...
- We are facing a safety problem!



Hydraulic Hybrid-Vehicle



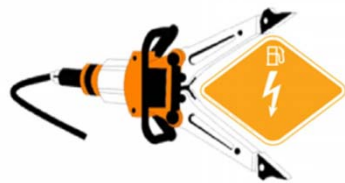
Fuel Cell Electric-Vehicle



Hybrid-Vehicle



Electric-Vehicle



Current Situation

- Need for pictograms easy to understand by first and second responders (logical approach).
- Not be able to know the type of fuel from a distance...
- Important : the location or position of labels on the vehicle, on the rescue sheet, or in the emergency response guide is outside the scope of this standard.



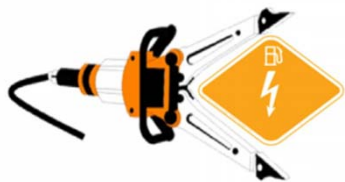
Standardization: necessary for who?

First responder

- Individual, that is authorized, trained and qualified to provide primary response to victims of a traffic accident, fire, submersion...
- Note 1 to entry: included, but not limited to, fire departments, rescue squads, emergency medical personnel, law enforcement personnel, and in some instances military personnel if the personnel is trained in assessing and treating injuries.

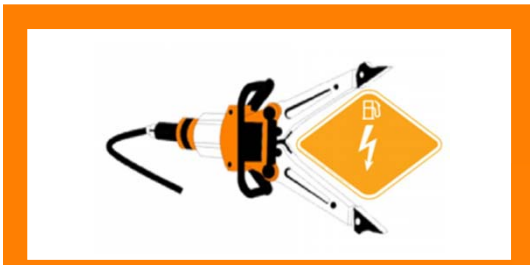
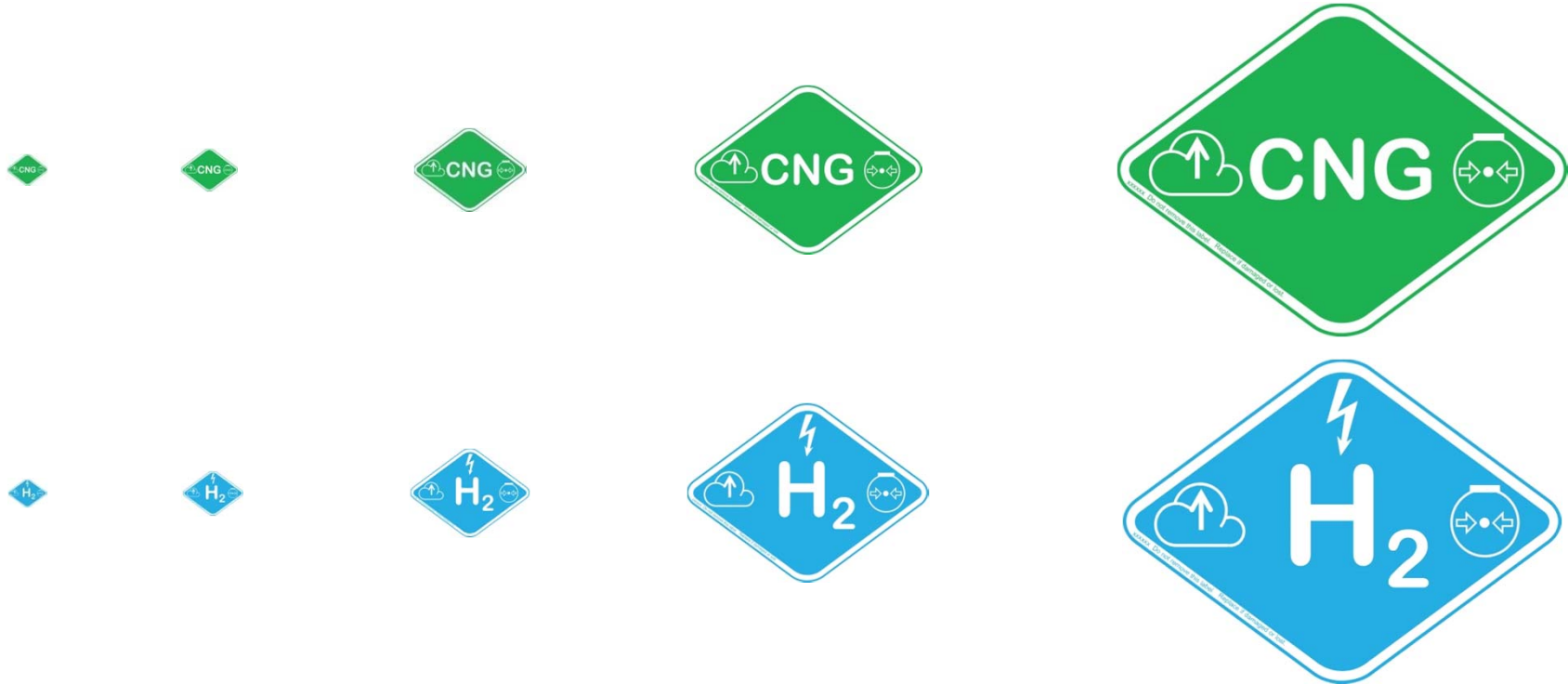
Second responder

- Individual, that is authorized, trained and qualified to take care of vehicles after they have been subject to a traffic accident, fire, submersion...
- Note 1 to entry: Included, but not limited to, tow/recovery personnel, vehicle storage operators, repair/service technicians, dismantlers and auto salvage personnel.



How it works

The closer you come, the more information you get by reading the pictogram.



ISO propulsion energy identification

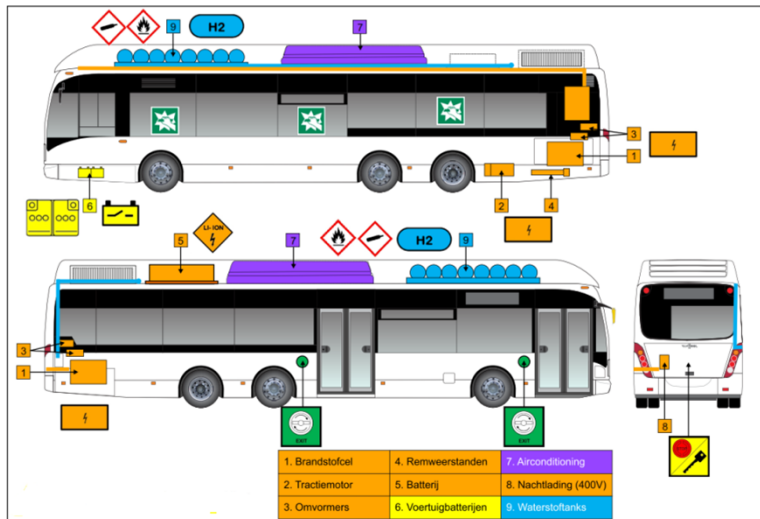
Used Colors

GREY	DIESEL
RED	GASOLINE
GREEN	GAS
WHITE	CRYOGEN LNG
BLUE	HYDROGEN
ORANGE	HIGH VOLTAGE



ISO propulsion energy identification

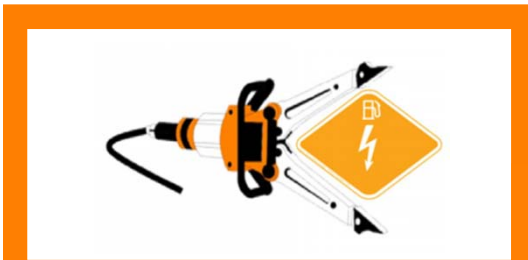
- These colors can be used in rescue information or can be used to color vehicle components in the vehicle



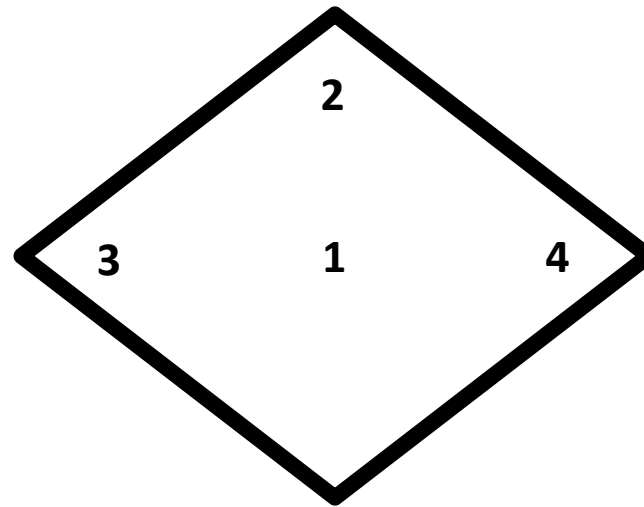
MIRAI
2014-11

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
ガス封入タンパー	シートベルトプリテンショナー (ガスシースレーター)	ボデー構造部材
エアバッグコンピューター	-	-

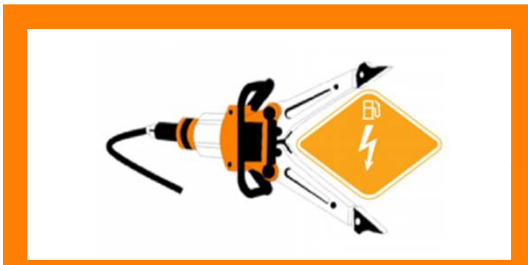
MIRAI10_3



ISO propulsion energy identification



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



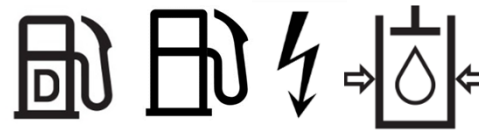
ISO propulsion energy identification

SYMBOLS

1) FIRST ENERGY SOURCE



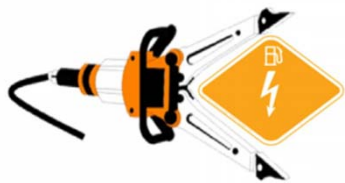
2) SECOND ENERGY SOURCE



3) DENSITY TOWARDS AIR



4) STORED STATE



ISO propulsion energy identification

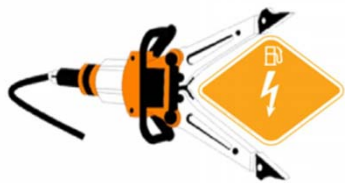
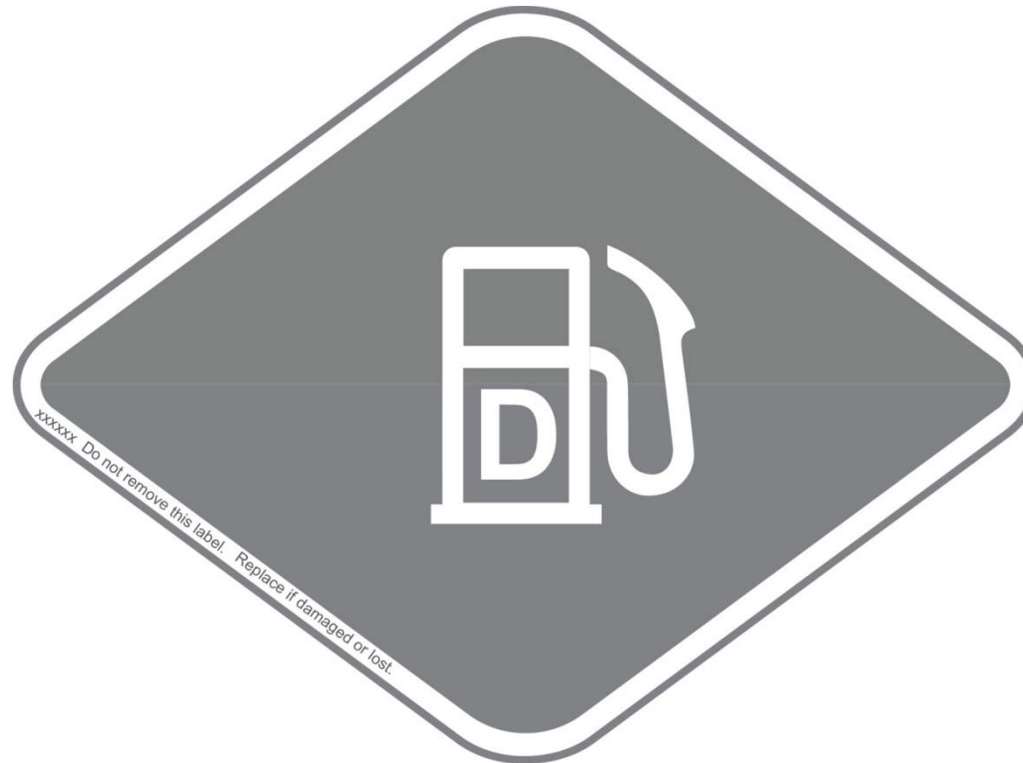
Example:

- First energy source:
 1. CNG or LPG or LNG or H2
 2. Diesel/Gasoline/Full Electric
- Second energy source
 1. Diesel/Gasoline/Full Electric/Hydraulic Hybrid



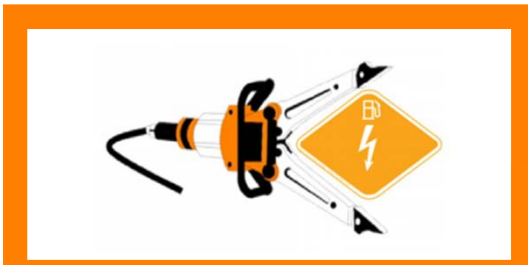
ISO propulsion energy identification

DIESEL



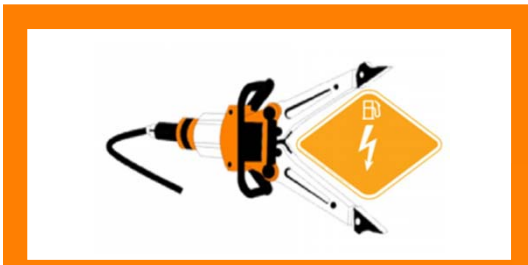
ISO propulsion energy identification

GASOLINE



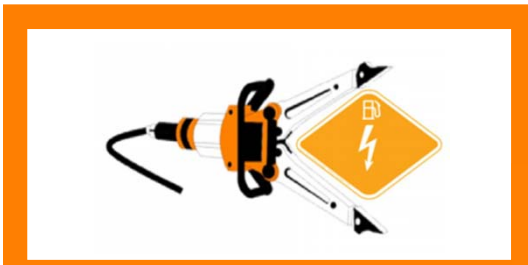
ISO propulsion energy identification

CNG



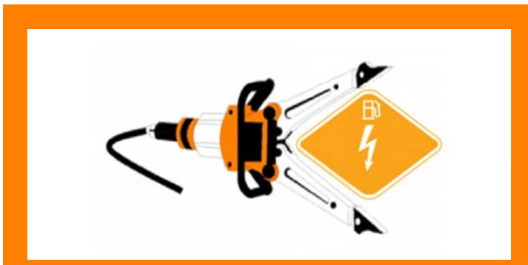
ISO propulsion energy identification

LPG



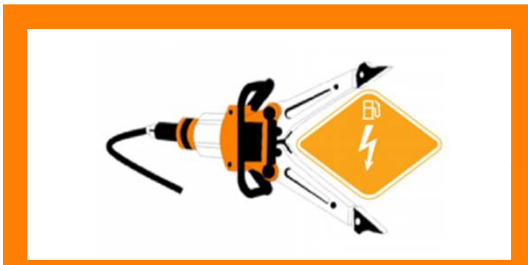
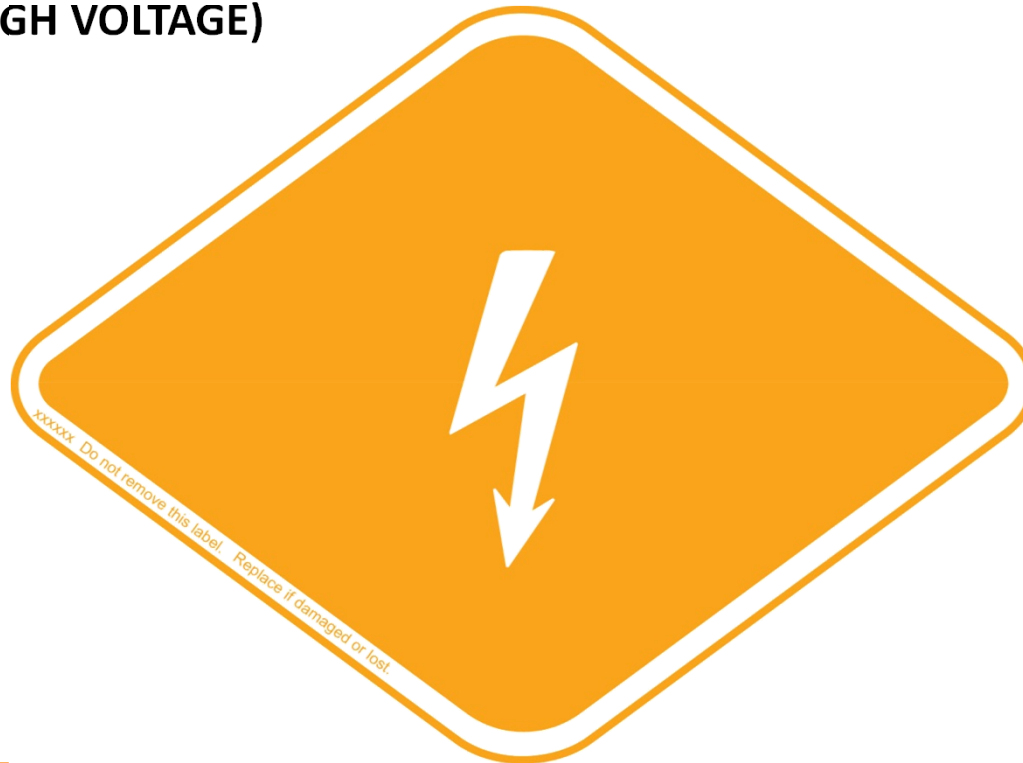
ISO propulsion energy identification

LNG



ISO propulsion energy identification

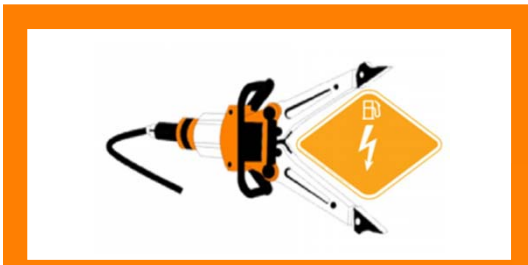
FULL ELECTRIC (HIGH VOLTAGE)



ISO propulsion energy identification

HYBRID

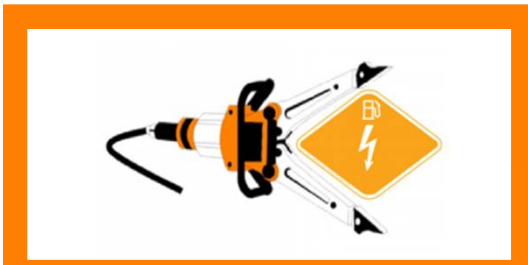
HIGH VOLTAGE and GASOLINE



ISO propulsion energy identification

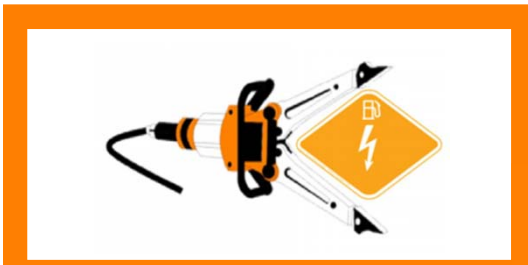
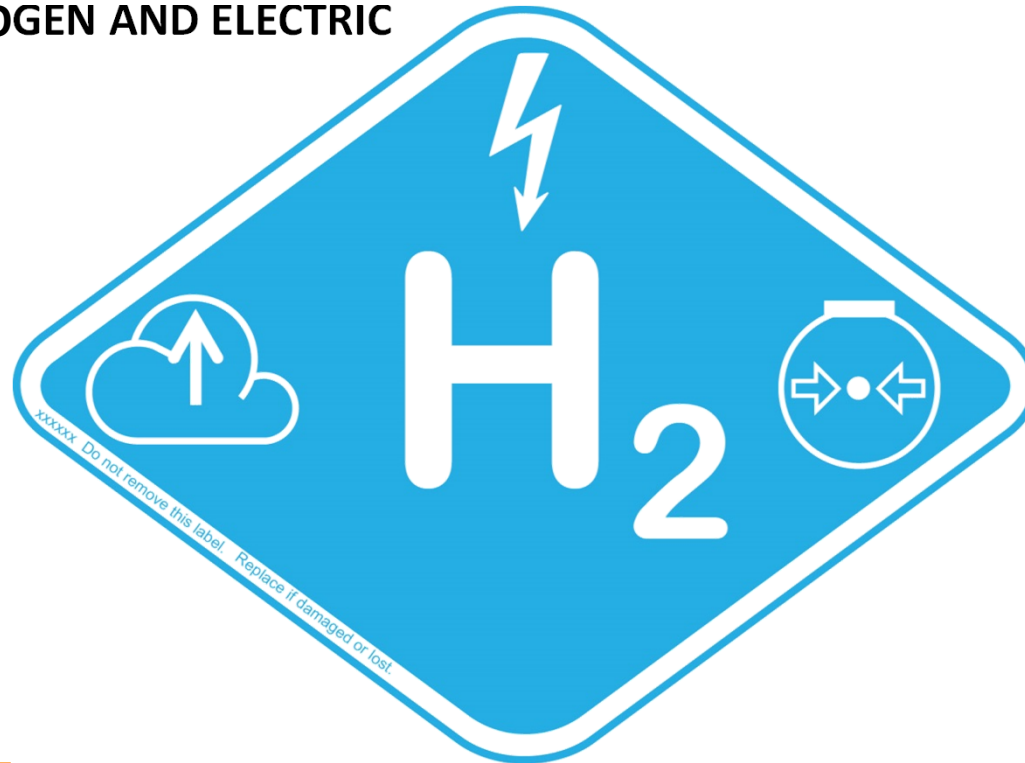
DUAL FUEL/BI FUEL:

CNG AND DIESEL



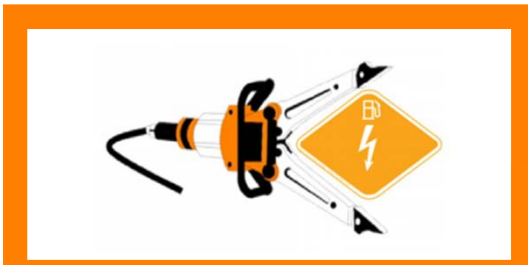
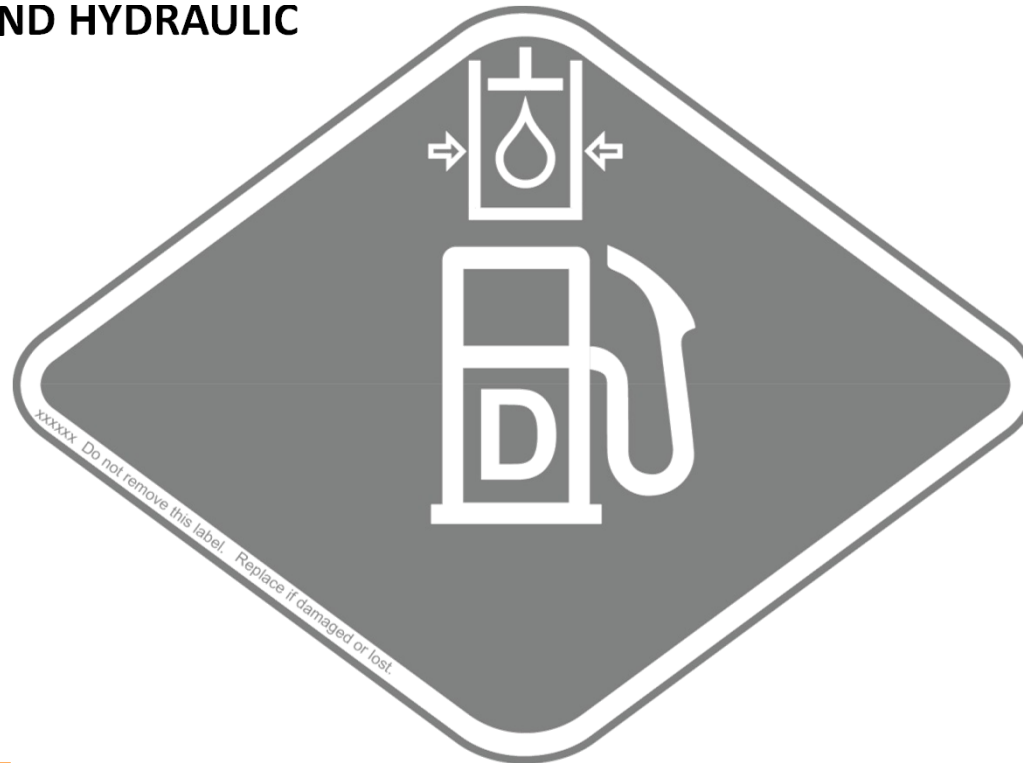
ISO propulsion energy identification

FUEL CELL: HYDROGEN AND ELECTRIC
(HIGH VOLTAGE)



ISO propulsion energy identification

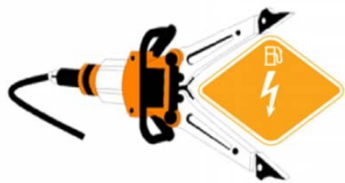
HYBRID: DIESEL AND HYDRAULIC



Questions ?



Participants Kick –off meeting ISO Project



COMMISSION FOR EXTRICATION AND NEW TECHNOLOGY

CTIF

More information?

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Project Leader Commission Kurt Vollmacher

kurt.vollmacher@brandweerzonecentrum.be

