

LESSON PLAN: UKRO 2018 – Alternative Fuels

Topic of lesson (link to syllabus/specification): Dealing with fire and RTC`s for Alternative Fueled Vehicles.		Materials and equipment required: Suitable vehicles HGV , Light commercial and cars.		
Lesson Aims (lecturer`s intention): To provide input on the safe approach to alternative fuelled vehicles involved in road traffic incidents and fire.		Learning outcomes (what students should learn): The safe approach of alternative fuelled vehicles involved in road traffic incidents and fires for operational crews.		
Strategies for differentiation and equal opportunities: A mix of learning styles including technical input and practical application and instructor demonstration Provision of Handouts and WEB based information.		Assessment methods (how the learning outcome will be assessed): This workshop is non assessable		
Lesson Outline				
Duration	Subject matter/content	Teacher Activity	Learner Activity	Resources/notes differentiation
	Safe approach to vehicle incidents. Understanding fuel systems and identification of alternative fuelled vehicles.	Technical input Guided practical demonstration	Guided practical application	<ul style="list-style-type: none"> • Handouts • Web based information • Practical awareness with different alternative fuelled vehicle demonstration. (Natural gas & Hydrogen)
	Considerations when dealing with alternative fuelled vehicles. <ul style="list-style-type: none"> • Implications of fire or RTC for each fuel type • Understanding of how the vehicles fuel may influence any rescue plan • Considerations for safe working around alternative vehicles 	Technical input guided practical demonstration	Guided practical application	<ul style="list-style-type: none"> • Handouts • Web based information on UKRO website • Practical awareness with provision of different alternative fuelled vehicles. (Natural gas ,Hydrogen and Electric commercial vehicles)

Lesson Outline (continued)				
Duration	Subject matter/content	Teacher Activity	Learner Activity	Resources/notes differentiation
	<p>Inbuilt Safety Systems</p> <p>Input on important factors for vehicle safety systems for consideration when dealing with fire or RTC.</p> <p>Highlight the need for a Standard Operational procedure for each type of fueled vehicle .</p>	<p>Technical input</p> <p>Guided practical demonstration</p>	<p>Discussion / Q&A</p>	<ul style="list-style-type: none"> • Handouts and SOP • Web based information on UKRO website • Practical awareness with provision of different alternative fuelled vehicles Safety systems
	<p>Extrication path Selection</p> <p>Discuss factors to consider when selecting a extrication path including best practice for isolation and containment of alternative fuels</p>	<p>Technical input</p>	<p>Discussion/ Q&A</p>	<ul style="list-style-type: none"> • Handouts • Practical awareness with consideration for alternative extrication methods for alternative fuelled vehicles.
	<p>Enviromental factors</p> <p>Discuss the importance of being aware of local alternative fueling staions and factors to consider when attending these resources providers.</p>	<p>Discussion</p>	<p>Discussion / Q&A</p>	<ul style="list-style-type: none"> • Web based information on UKRO website • Each crew to establish the different alternative fuelled vehicles fueling staions for their Service
<p>Sources of further study:</p> <p>All attendees will be directed to the education material available on the UKRO website</p>			<p>Evaluation/Review:</p> <p>The workshop will be evaluated by reviewing the workshop feedback</p>	

Description of training

The scenario will comprise of a pre crushed car or a training dummy positioned under an overturned articulated tanker.

Aims and objectives

- To give delegates a greater understanding of considerations when working around overturned heavy vehicles
- To enable delegates to apply the lifting plan system to overturned vehicles
- To demonstrate how understanding the position of the centre of gravity will assist lifting operations
- To give delegates an understanding of the different types of heavy vehicle construction and how this can influence the rescue plan
- To enable delegates to select the correct lifting and dynamic stabilisation equipment
- Discuss the issue of carrying out extrication under the vehicle versus moving the casualty vehicle to a safe place
- Discuss the issues surrounding working alongside recovery operators/crane companies to carry out rescues.