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UNITED KINGDOM RESCUE ORGANISATION



Chair: Dave Webb QFSM, MA, BSc (Hons)

LGV Rescue Scenarios

UKRO Workshop
October 2010
Eastleigh, Hants



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LGV Rescue Scenarios

- The purpose of this presentation is to assist Operational crews in the challenges that could be faced in an LGV rescue scenario.

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LGV Rescue Scenarios

- Side under run
- Rear under run
- Cab/ Body stabilisation

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Considerations

- Vehicle parking brake applied (various methods)?
- Air suspension compromised/ managed? } **Safety?**
- Dynamics of entrapment, i.e. by axle or vehicle body/ chassis? What do we need to lift/ stabilise?
- Vehicle weight, is it loaded? Load shifted?
- Road/ ground surface condition?
- Capacities of equipment. Within specified WLL?

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Considerations

- Vehicle condition, body/ chassis corrosion?
- Access for equipment. substantial structure?
- Backing up protocol.
- Paratech/ Powershore/ Air shore/ Stabfast etc
- Sufficient resources? Is a 2nd Rescue Tender or specialist lifting support required?



Vehicle parking brake

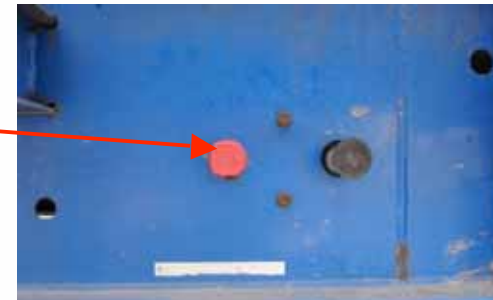
Is it applied? (Towing vehicles)



- The parking brake lever (Handbrake) will lock in the ON position.



- Red park button (applies trailer parking brakes)



(Removing the red emergency line will immediately apply the trailer parking brakes)



Vehicle parking brake

Is it applied? (Rigid vehicles)



- Multiple applications of the drivers foot valve (until low air warning buzzer sounds).

- The parking brake lever (Handbrake) will lock in the ON position.

- Manual draining of air tanks (until low air warning buzzer sounds).



(These techniques can also be used on vehicles with trailers if required)

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Vehicle parking brake

Is it applied?



Apply wheel chocks

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Air suspension

Suspension air bags prone to failure.



Ensure vehicle chassis propped, **before** working beneath an air suspended chassis.

Air suspension and air brake pipe work made of plastic (easily damaged in an impact)

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Side under run



- Car has impacted side of LGV between tractor unit and trailer axles, possibly through under run protection rails.
- Air supply pipe work or components may be compromised, causing suspension to lower.
- Possible load shift making vehicle unstable.
- Occupants of car trapped under LGV chassis.

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Side under run

- Ensure vehicle parking brakes applied/ wheel chocks.
- Stabilise chassis asap using vehicle stabilisation equipment.
- Lower trailer landing legs if required.
- Consider lifting requirement if necessary.





Rear Under run



- Car has impacted LGV behind the rearmost axle, either at rear bumper area (1), or between rearmost axle and bumper (2).
- Trailer air suspension may well be compromised.
- Possible load shift making vehicle unstable.
- Occupants of car trapped under LGV chassis or bumper assembly.

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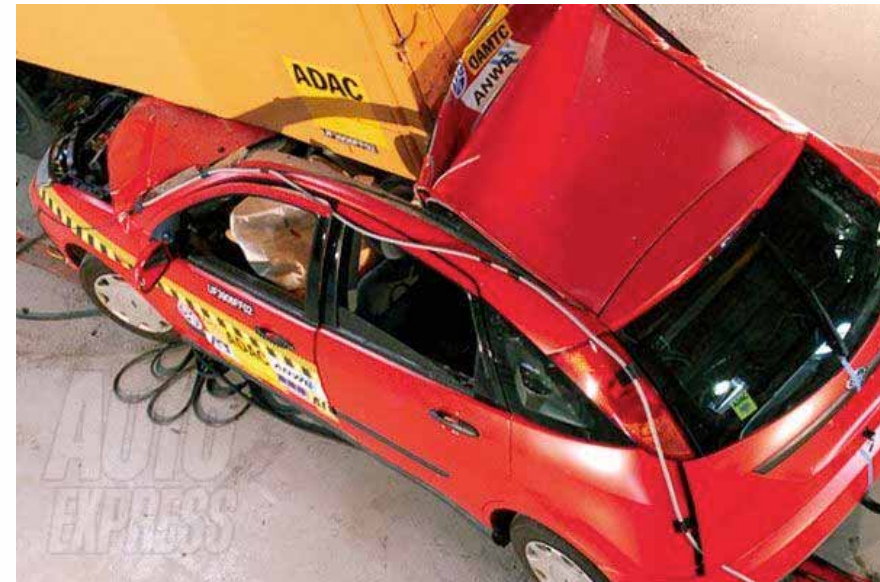
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Rear Under run

- Ensure vehicle parking brakes applied/ wheel chocks.
- Stabilise chassis asap using vehicle stabilisation equipment.
- Use trailer landing legs with care, excessive use may cause rear of trailer to lower.
- Consider lifting requirement if necessary.



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Cab/ Body stabilisation



- Car has been forced down and under the front of an LGV cab during an impact.
- LGV cab will be unstable, requiring attention prior to cab access.
- Potential fluid loss from LGV onto car/ road surface.
- Vehicles air system may well have been damaged.

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Cab/ Body stabilisation



- Ensure vehicle parking brakes applied/ wheel chocks.
- Stabilise cab asap using vehicle stabilisation equipment
- If LGV driver injured, drivers seat will require managing.



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Safety points



- Vehicle parking brake applied/ wheels chocked.
- Chassis propped **before** going under chassis.
- Chassis/ body checked for integral strength.
- Vehicle properly stabilised using vehicle stabilisation equipment.
- If lifting is required, equipment backed up for safety.
- Ensure all equipment within WLL.

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Safety points

- LGV air systems operate up to 10 bar pressure.
- Suspension air bags can fail without warning.
- Leaks in the air suspension system may cause vehicle to lower over a prolonged period.
- Tyre sidewall may be weakened if impacted.



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LGV Information

- For further information on all aspects of LGV construction, component operation and operational techniques, please visit http://www.ukro.org/education/ukro_workshops/

WWW.UKRO.ORG

