



TRAINING TIPS

COMPRESSED NATURAL GAS (CNG) VEHICLES

2024-01

Zero-emissions programs are requiring the transport industry to utilize Alternative Fuel. This transition challenges firefighters when responding to Alternative Fuel Vehicle (AFV) related incidents. With the increase of AFV's and the exposure to firefighters, it is critical for our members to familiarize themselves with these types of fuel systems and be able to recognize the fuel type and proper approach. The following shall be reviewed by all members and taken into consideration when faced with **CNG** incidents;

ONSCENE CONSIDERATIONS

- All transit type vehicles should be treated as an AFV with tanks/cylinders under pressure until the fuel source is identified.
- Officers shall conduct a thorough size-up / 360 to identify rescue, hazards, fuel system, exposures, safety concerns, and evacuation distances based on Emergency Response Guidebook (ERG).
 - ❖ CNG cylinders with a blue "CNG" decal may be found on buses, sanitation trucks, and various types of semi-trucks.
- Mode for incoming resources: Offensive / Defensive.
- Profile for incoming resources: Rescue / Property / Exposure.
- Order additional resources to assist with Incident Objectives
 - ❖ Fire Resources/ HazMat / Squad / JHAT
 - ❖ Battalion Chief
 - ❖ LADOT / LAPD
- Communications plan shall be known by all members when response is single or multiple company.
- All members shall wear their PPE and SCBA. Use 5-gas meter to monitor Lower Explosive Limits.
- Per JHAT, establish initial perimeter of 100'. Refer to ERG guide 115 for additional CNG guidance.
- Any member operating within the 100' perimeter shall be on air if rapid extraction is necessary. Perform rapid extraction or rescue per department policy.



FIRE NOT IMPINGING ON FUEL CYLINDER

1. Approach the vehicle at a 45-degree angle.
2. Extinguish fire with normal firefighting tactics.

FIRE IMPINGING ON FUEL CYLINDER

1. **DO NOT** approach vehicle.
2. **DO NOT** apply water to CNG cylinders exposed to fire. This may cool and deactivate the Temperature Pressure Relieving Devices (T-PRD).
3. **T-PRD's are temperature controlled, NOT pressure regulated.**
4. T-PRD's release between 212 degrees and 220 degrees F.
5. T-PRD's can release with a flame length of up to 50' in any direction.
6. It may take 10-15 minutes for T-PRDs to release the tanks products.

By cooling the T-PRD, this will allow the pressure to continue to build up in the cylinder, resulting in a possible catastrophic rupture and ignition of CNG. If the T-PRD is activated, allow it to burn off the product and protect exposures from a safe distance until gas is depleted and no more flames are visible. HazMat Task Force will monitor the area and confirm the area is clear for entry. Consider the following Incident organization:

- Suppression Group
- HazMat Group
- Medical Group
- Evacuation Group
- Perimeter Control Group



[CNG Videos](#)

Please submit your ideas for Training Tips to [lafdist@lacity.org](mailto:lafdists@lacity.org)