



HYBRID AND ELECTRIC VEHICLES

(Vehicles Equipped with Li-ion Batteries)



SAFETY & PPE

- Use the Identify, Immobilize, and Disable process.
 - Identify the vehicle using badging, labels, or recognition of high voltage components.
 - Immobilize the vehicle by using wheel chocks, setting the parking brake, and placing it in park.
 - Disable the vehicle by shutting it off and disconnecting the low voltage battery (Follow OEM specific procedures outline in their ERGs).
- Structural firefighting gear & SCBA.
- Personnel on scene should be aware of the potential for pressurized venting of flammable and toxic gases from the battery pack which can result in a jet like flame. Also be aware that if the battery case is compromised, there may be cells that are forcefully ejected as they burn.
- Do not cut or interact with high-voltage cables or damaged battery cells.
- Interior, elevated, or underground vehicle location will require additional resources & tactical considerations. Consider removing vehicle to an open area with no exposures.

RESOURCES

- Consult with CT DEEP representative or your Regional Haz-Mat Team on-call contact for possible response to the scene.



Vehicle Specific Response Guides

TACTICAL CONSIDERATIONS

- Identify & confirm if vehicle is an electric or hybrid type.
- If on fire: determine if it is the vehicle, the high-voltage battery, or both.
- Based on location, situation, water supply, etc. extinguish the vehicle fire and then determine if it is feasible to attempt to control the battery fire or let it burn.
- If the High Voltage (HV) battery is under the floor pan, consider minor lifting or tilting of the vehicle to provide better access for water application (when safe to do so).
- Consider using TIC to monitor temperature changes to battery area.
- Consider reasonable (3000-8000 gal) water supply options depending on location & type of strategy used.
- After extinguishment use low flow GPM to cool batteries.

ADDITIONAL INFORMATION

- In enclosed spaces use CGI/LEL meter to check for possibility of explosive or flammable atmosphere due to gases released from battery. Ventilate or isolate as needed.
- Notify all parties involved with the incident and post incident storage of the vehicle of the potential for reignition if the Li-Ion battery was involved. The vehicle must be isolated from other vehicles and structures.
- Remember all other hazards associated with vehicle fires.
- Consider public perception of EV fires & communicate appropriately.
- Perform structural fire decontamination procedures.