

City of Belleville Fire Department

Number: 1032

POLICY:

It is the policy of the Belleville Fire Department that prudent practice be exercised to reduce the risk of injury to personnel when responding to Hybrid and Electric Vehicle accidents, fires or other instances.

Date S.O.G. Comes Into Effect: January 12, 2007

Date S.O.G. Revised: May 16, 2018

Date Committee Approved S.O.G.: November 9, 2006

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GUIDELINE

1:00 **Purpose:**

1:01 To provide all personnel with guidelines for responding to Hybrid and Electric Vehicle accidents, fires or other instances.

2:00 **Procedures:**

2:01 Hybrid and Electric Vehicles are automobiles powered by a combination of internal combustion and electric motors that also include large battery packs. These vehicles are being produced in several different car manufacturer models. All Hybrid and Electric Vehicles have markings on them to indicate this. These markings will vary in location from manufacturer to manufacturer. The Officer in Charge shall determine if the vehicle is a Hybrid or Electric Vehicle during the initial size-up.

2:02 Hybrid and Electric Vehicles have a number of safety features and devices to prevent electrical shock to their operators but the high voltage system can pose hazards to Fire Fighters after a collision or fire.

2:03 The Hybrid and Electric Vehicle has a high voltage cable that commonly runs under the vehicle chassis. This cable is colour coded **orange** to distinguish it from the remaining 12 volt system. Fire fighters need to be aware of the hazard when cutting into, lifting or stabilizing Hybrid/Electric or Electric vehicles.

- 2:04 The first step at any incident involving a Hybrid or Electric vehicle is to turn off the ignition or power to the vehicle, place the transmission in park (or neutral if a standard transmission), set the emergency brake and chock the wheels. Remove the ignition key or key fob from the vehicle and move to a safe distance away (at least 20' or more, preferably on the dash of the pump) to prevent accidental power up.
- 2:05 The high voltage **orange** cable shall not be cut or disconnected. It is recommended to disconnect the high voltage battery pack switch that is typically located near the high voltage battery unit. These switches may be readily accessible or they may be buried beneath upholstery or bolted covers. It is imperative to neutralize the 12 volt system to remove the air bag hazard. This should be done by disconnecting (rather than cutting) the positive terminal of the 12 volt battery. Location of all batteries will vary from manufacturer to manufacturer of vehicles.
- 2:06 If the vehicle catches fire, use a class ABC fire extinguisher or large amount of water to extinguish the fire. Trying to extinguish the fire using only a small amount of water can be more dangerous than effective.
- 2:07 If the vehicle is partially submerged in water, do not touch the service plug or any of the high voltage components and cables because of the danger of electrocution. If you need to touch them do so only after pulling the vehicle completely out of the water. Make sure you have insulated gloves on any time you are touching the high voltage components or cables.
- 2:08 If there is any leakage from the Hybrid or Electric Vehicle battery do not attempt to touch. This liquid could be the alkaline electrolyte that is hazardous to all human body tissues. A qualified spills agency should be contacted to clean up liquids and dispose of the damaged Hybrid or Electric Vehicle battery.
- 3:00 **Scope:**
- 3:01 It shall be the responsibility of the Captain/ Officer in charge of each shift to ensure that this guideline is explained and followed.
- 3:02 It shall be the responsibility of **all employees** to understand and adhere to this guideline.

THIS GUIDELINE IS NOT EXPECTED TO SUBSTITUTE FOR GOOD JUDGEMENT AND EXPERIENCE UNDER UNUSUAL CONDITIONS.