

## FIRE FIGHTERS GUIDANCE NOTE # 6-19

### ISSUE: HYBRID VEHICLE SAFETY ISSUES

Hybrid Vehicles are automobiles powered by a combination of internal combustion and electric motors. Hybrid vehicles are becoming more popular in North America and are being introduced in several different car manufacturer models.

Although manufacturers build into their vehicles a number of safety features and devices to prevent accidental shock to the driving public, the Hybrid Vehicle's high voltage system can pose a hazard to the safety of fire fighting after a vehicle collision, fire or other disaster.

Fire Departments should conduct a risk hazard analysis and take appropriate action in developing SOG/SOPs and training for the safety of their firefighters.

Common fire fighting procedures recommended by NFPA/IFSTA will extinguish hybrid vehicle fires.

#### **Common safety concerns of hybrid vehicles that all firefighters need to be aware of:**

- Do Not Cut, Disconnect or Handle High Voltage cable that is color-coded orange;
- Be aware that high voltage cable commonly runs under the vehicle chassis. Firefighters need to be aware of this hazard when lifting or stabilizing hybrid vehicles;
- High Voltage systems need to be shut down by any of the several means provided by manufacturers before firefighters enter damaged hybrid vehicles or before starting extrication procedures. This also prevents accidental movement of the vehicle because there may be no engine noise even though a hybrid vehicle is powered;
- Extrication procedures may vary from manufacturer to manufacturer;
- Markings to indicate hybrid vehicles vary from manufacturer to manufacturer.

Reference material: Ontario Fire Marshal Communiqué 2000-19.