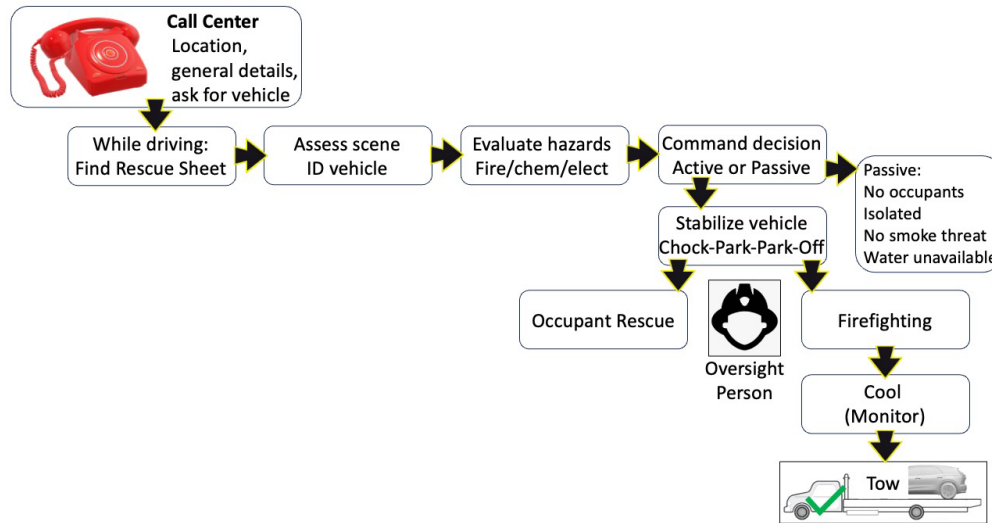


EV Firefighting process



<https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/training-high-voltage/story.html#html5.html>

1. Don't get complacent. Remember the warning signs of sight, sound, and smell:
 - a. Popping, whistling, or other venting sounds
 - b. Exposed battery or orange-colored parts
 - c. Smoke
 - d. Flame
 - e. Fluid leaks
2. Vehicle identification: Watch for vehicle labels, charge ports, and orange colored components.
3. EVs and hybrids have TWO batteries – One 12V and one high voltage (typ. 400+ Volts)
 - a. Cut Loop tags mark 12V control circuits and are **not** high voltage
4. Is there room to work?
 - a. Immobilize as-is or after moving because EVs can move silently.
 - b. CHOCK wheels, PARK brake, PARK shifter, OFF power
 - c. Don't get trapped in confined spaces and have an oversight person.
5. Fuels: 1. Vehicle interior and plastics. 2. Batteries. 3. Gas/diesel. 4. Surrounding structure
6. Use SCBA and cover all skin. Batteries can spit sticky burning material.
 - a. Smoke can be flammable and may contain acids or metals. Protect bystanders.
7. DANGER - Arc flash hazard and energy stranded in battery case are invisible dangers.
 - a. Heat and impact damage destroy battery internal insulating materials.
 - b. Do not puncture or put any pressure on a potentially damaged battery.
 - c. Do not handle anything orange or exposed battery internals.
 - d. Batteries have re-ignited both hours and days after being extinguished.
 - e. Even if no longer smoking do not trust a battery which has undergone thermal runaway.
8. High voltage batteries may require cooling bottom of vehicle to extinguish.
 - a. Electricity found to not travel up a water stream to nozzle.
 - b. Water stream into vehicle interior does not reach a burning/smoking battery beneath.
 - c. If battery is breached, train water stream INTO casing to flood and cool cells.
9. Fire blankets can be used to prevent daisy chain" events but flammable gasses can accumulate.
10. Can cover door sill and rocker panel during extrication for protection from potential venting flames.
11. Turn off electrical power to charge station(s) at source. Damaged cabinets may be energized.
12. Resources:

EnergySecurityAgency (ESA)

24/7 Response Center

855-372-7233

EV Rescue App for ERGs on phone or tablet:

www.autorescueapp.com

NFPA ERGs:

Google search: EV ERG NFPA or

www.EVSafetyTraining.org

Railroad App for firefighters:

www.askrail.us

Underwriter Laboratories:

www.ulfirefightersafety.org

Australian Government:

www.EVFireSafe.com