Vehicle Extrication Operations

408.1 PURPOSE AND SCOPE

This procedure provides arrival and on-scene procedures for Euless Fire Department units responding to an incident involving extrication from a motor vehicle.

Corresponding Policies:

High Visibility Safety Vests
Incident Management
Personal Protective Equipment
Staging

408.2 FIRST FIVE MINUTES

The first arriving Euless Fire Department unit should:

#Contact Dispatch and provide the following information:

- Unit on-scene
- Initial scene size-up
- Unit Establishing Incident Command (IC)

#Confirm that at least one unit has been dispatched carrying full vehicle extrication tools and personnel trained in the use of the tools. This should include hydraulic extrication systems, cribbing, bracing, shoring, and blocking.

The IC should:

#Designate at least one fire suppression team and at least one extrication team with an assigned officer for each.

#Establish the department personnel accountability system.

#Perform or direct another member to perform a 360 assessment to identify:

- Hazardous materials (HAZMAT) placards.
- Badges or labels indicating hybrid, electric, or alternative fuel vehicles such as:
    - Electric vehicle (EV)
    - Hybrid
    - High voltage
    - Zero emission
    - Compressed natural gas ("CNG" in blue diamond, passenger side rear)
    - Liquid natural gas ("LNG" in black diamond on fuel tank and/or rear of vehicle)
    - Liquid propane gas ("LPG" in blue diamond on rear of vehicle)

- Liquid/compressed hydrogen ("H2" in blue diamond, rear of vehicle)

- Overhead wires or other involved utility equipment
- Leaking or venting motor fuel, liquid propane (LP) or compressed natural gas (CNG), or other HAZMAT conditions.
- Lithium-ion batteries off-gassing or showing signs of thermal runaway.
- Vehicle stability.
- Total number of victims and initial triage.
- Number of entrapped victims.
- Any other conditions that could interfere with extrication operations or create an immediately dangerous to life and health environment.

#If a commercial vehicle is involved, reasonable efforts to locate the driver should be made to determine what is being carried and the presence of hazardous materials.

#If any of the following indicators or conditions are present, develop an initial incident action plan and respond in accordance with the DOT Emergency Action Guide, alternative fuel guide used by the department, and the Hazardous Materials Initial Incident Response Procedure:

- A HAZMAT placard, material Safety Data Sheet or notice
- A visible HAZMAT
- Presence of leaking motor fuel
- Leaking or venting LP or CNG tanks
- Badges or other indicators that the vehicle is alternative fuel, electric, or hybrid
- Lithium-ion batteries off-gassing or showing signs of thermal runaway

#If it reasonably appears hazardous materials are present, including leaking or venting motor fuel, LP, or CNG, suppression and extrication operations should not begin until the IC or the Incident Safety Officer approves.

#Call for any additional resources required.

408.3 PROCEDURES

408.3.1 RESOURCE DEPLOYMENT

(a) Apparatus

1. Priority positions should be given to:
    - Units with extrication systems and equipment.
    - Fire suppression units.
    - EMS.

2. If any of these units are not yet on-scene, sufficient room should be left for approach and placement upon their arrival. Apparatus and EMS units should not be placed closer than 100 feet to any involved vehicle(s).

(b) Personnel

1. Personnel should don and remain in full PPE and remain with their assigned apparatus until otherwise directed by the IC. When advised that full PPE is not needed, extrication team personnel should wear no less than the following PPE:

(a) Helmet

(b) Eye Protection

(c) Extrication gloves with medical grade nitrile or latex gloves underneath

(d) Bunker Coat

(e) Bunker pants

(f) Boots

408.3.2 OPERATIONS

During extrication, a charged hose line, not less than 1 3/4" in size, shall be deployed with a firefighter in position at the nozzle at all times.

(a) Suppression Team

1. The fire suppression activities should be in accordance with the traffic collision and vehicle fire response procedure. In addition, the fire suppression team should:

(a) Have at least one firefighter keep a charged line trained on the extrication team and their activities.

(b) Prop open all doors, including the hood and trunk lid, accessed during pre-extrication fire suppression operations.

2. Immobilize the vehicle

- Approach the vehicle that would avoid parts that could be launched by explosions or release of high-pressure such as bumpers, tires, car parts, etc.
- Chock the wheels.
- Set the parking brake.
- Put the transmission in park.

3. Disable the vehicle

(a) Turn off the ignition

(b) Disconnect the 12-volt battery (following manufacturer instructions)

(c) If the key is located:

- Remove the key from the ignition.
- If equipped with a keyless start, move the key at least 20 feet from the vehicle to prevent unintended engagement of any proximity key functions.

(b) Extrication Team

1. The extrication team should consist of an officer and a minimum of two firefighters.

(a) The assigned extrication officer should:

1. Establish a marked extrication zone. Access to this area should be limited only to those firefighters involved in the extrication process, EMS supervisor, and no more than two EMS personnel.
2. Keep the IC informed of the status of extrication operations.
3. See that tools and extrication systems reasonably expected to be used are brought to the extrication zone and request additional tools and resources when needed.
4. Supervise extrication procedures on hybrid, electric, or alternative fuel vehicles using manufacturers' recommendations found in the alternative fuel vehicles emergency field guide used by the department, to avoid cutting into fuel delivery, high-voltage, or high-pressure components.
5. Work with EMS command to coordinate the best and most efficient means of extrication. In developing an extrication strategy, the extrication officer should consider:

(a) Scene safety.

(b) Vehicle stability.

(c) Fire and EMS personnel safety.

(d) Patient assessment and treatment.

408.4 UNIVERSAL PRACTICES

1. All department vehicles should have a current alternative fuel emergency field guide stored with the DOT Emergency Response guidbook.This guide should be used to develop an initial incident action plan and for ongoing operations.
2. Airbags can deploy without warning. Unless an airbag has deployed and is exposed or personnel are otherwise advised by the IC or extrication officer, assume every steering wheel, door, seat, pillar, window, and panel contains an undeployed airbag or curtain. To the extent possible, avoid and work around these areas.
3. Members should assume all vehicles are hybrid, electric, or alternative fuel powered until they are reasonably confirmed otherwise.

4. Due to a lack of engine noise, electric or hybrid vehicles may appear to be shut down when they are still running. Confirm the engine is shut down.
5. Pillars and panels can contain wiring and compressed gas cylinders. Remove all plastic trim to expose areas where cutting is planned.
6. Extrication activity can compromise vehicle stability without warning. Appropriate stabilization should be planned and placed prior to engaging in extrication.
7. The IC should take reasonable steps to ensure that adequate gross decontamination is performed before releasing units from any scene where personnel were exposed to potentially harmful substances including:
    - Smoke.
    - Soot.
    - Body fluids.
    - Hazardous Materials.

408.5 PROCEDURE DECISION TREE