



# Burlington Fire Department



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<b>Section: 04 - Special Operations</b>	
<b>SOG Number: 04.04</b>	<b>Effective Date: Oct. 10, 2019</b>
<b>Subject: Motor Vehicle Crashes</b>	
<b>By Order of Fire Chief Steven A. Locke</b>	

## **I. Purpose:**

To enable the safe operation of department personnel at Motor Vehicle Crash (MVC) scenes.

## **II. Scope:**

This guideline provides fire department personnel with operational guidelines to extricate occupants from vehicles and to minimize the risk to department personnel working at the scene of a Motor Vehicle Crash. This guideline does not address the medical treatment of patients. The extent to which emergency medical treatment is given will be limited to the department members' credentials and available personal protective equipment. As with any emergency, the authority to deviate from this guideline rests with the Incident Commander and/or the Chief Engineer.

## **III. Definitions:**

Alternative Fuel Vehicle (AFV) – Vehicle which is powered by a source other than petroleum fuel. This includes but is not limited to; Electric (EV), Hybrid (HEV), Compressed Natural Gas (CNG) and/or Liquefied Petroleum Gas (LPG).

Entrapment – When the occupant or part of the occupant is being mechanically restrained, or has restricted means of egress, by a damaged vehicle.

Traffic Incident Management Area (TIMA) – The area of and around the crash scene. This includes the Advanced Warning Area, Transition Area, Activity Area and Termination Area.

Vehicle Stabilization – Providing additional support to key places between a vehicle and the ground or other solid anchor points to prevent unwanted movement.

#### **IV. Guidelines:**

##### A). Response Considerations

1. Upon receipt of alarm for an MVC, the Company Officer (CO) or SFF Riding the Seat (RTS) should consider the need for vehicle rescue equipment. If the company being dispatched is not equipped with such equipment, consideration should be given to having a properly equipped company dispatched.
2. Upon responding and/or while enroute, the CO or RTS should obtain as much information as possible from dispatch. This information should include, but is not limited to;
  - a. Exact incident location
  - b. Type and number of vehicle(s) involved
  - c. Any obvious or known hazards present
    - (1) Fire
    - (2) Fuel leaks
    - (3) Utility poles / power lines
    - (4) Vehicle cargo / possible hazardous materials
  - d. Number of persons involved / possible entrapment
  - e. Air bag deployment

##### B). Arrival / Positioning

1. Upon arrival of the first apparatus on scene, the driver shall position the apparatus in a manner to protect the scene from moving traffic.
  - a. The CO or RTS should consider having additional companies and/or BPD dispatched to assist with traffic management / scene protection as necessary. Set up of a Traffic Incident Management Area should be considered.
  - b. The transporting ambulance shall position in the “shadow” of the larger apparatus in an effort to protect the patient loading zone.

##### C). Size Up / Command

1. The CO / RTS of the first arriving apparatus shall conduct an initial / windshield size up, give a brief initial radio report and establish command prior to exiting the apparatus. The report should confirm or deny information already given in addition to any new information which should include but is not limited to;
  - a. Type and number of vehicle(s) involved
  - b. Involvement of Alternative Fuel Vehicle(s)
  - c. Actual fire present
  - d. Leaking fluids / hazardous materials

- e. Involvement of power lines or other electrocution hazards
  - f. Stability of vehicle(s)
  - g. Presence of vehicle safety systems (air bags)
  - h. Suspected condition of occupants / persons involved
2. All personnel shall don high visibility safety vests prior to exiting the apparatus. It should be noted that all personnel need to operate with a heightened sense of situational awareness while operating near moving traffic.
  3. Once it has been determined safe to exit the apparatus, the IC shall begin a more sustained size up by having information gathered by on scene personnel. This information can be gathered by walking around the scene and walking around the vehicle(s) involved. The sustained size up will further determine;
    - a. Stability of the vehicle(s)
    - b. Entrapment of vehicle occupant(s)
    - c. Occupant ejection / partial ejection
    - d. Vehicle cargo

This information will be used to determine the vehicle rescue evolutions that need to be performed. The sustained size up will continue throughout the rest of the incident and should be used to determine success or failure of techniques being used. The IC shall ensure that all personnel work with the goal of safe, quick clearance in mind.

#### D). Scene Safety and Stabilization

1. Prior to personnel operating at the scene of a motor vehicle crash the scene must be made safe. If any utility hazards are present the appropriate utility company shall be called to the scene.
2. Any vehicle involved in a motor vehicle crash shall be properly stabilized. This may involve simple efforts such as putting the transmission gear selector to the park position, setting the parking brake and removing the keys. Or it could involve complete vehicle stabilization using step chocks and/or stabilization struts. The goal of complete vehicle stabilization is to safely remove as much movement from the vehicle(s) as possible. Personnel should be aware that vehicles may have a “start stop” feature. This feature allows the vehicle engine / generator to shut down when the vehicle is stopped. By design, the engine / generator may start automatically when personnel may not expect it.
3. Efforts shall be made to locate and determine the status of the 12 volt system. 12 volt shut down shall be completed when possible. It should be understood that the 12 volt batteries may be located in many areas other than the conventional under hood area. There may also be multiple batteries located in the vehicle. Disconnecting the 12 volt system discontinues the flow of electricity in Hybrid and Electric vehicles. At no time shall personnel contact or compromise any high voltage components.

4. Efforts shall also be made to determine the presence and status of any vehicle safety systems including but not limited to;
  - a. Front air bags
  - b. Side air bags
  - c. Seat / Door mounted airbags
  - d. Seatbelt pretensionersRegardless of the status of these systems, personnel should avoid working in the area of the strike zones.
5. If determined that any motor fuel is leaking or confirmed entrapment of occupants, a 1<sup>3</sup>/<sub>4</sub>" hand line shall be deployed, charged and staffed by personnel in full personal protective clothing.

E). Gaining Access

1. Upon completion of vehicle stabilization, initial access can be made into the vehicle to assess the occupant(s) / patient(s). Initial access can be made by simply opening an unjammed door or may need to be accomplished with the use of rescue tools. Consideration shall be given to occupant placement when determining the techniques to be used for initial access.
2. Once initial access has been completed and patient care has begun, sustained access can begin to make enough room for emergency personnel to work and for the patient(s) to be removed from the vehicle.

F). Disentanglement

1. Personnel inside the vehicle shall determine if entrapment exists and communicate the extent of the entrapment to personnel outside the vehicle. This information shall be used to determine the tactics and techniques to be used for disentanglement procedures.

G). Patient Removal

1. Once it has been determined that disentanglement and sustained access procedures are adequate and proper patient packaging has been accomplished, efforts to remove the patient(s) from the vehicle can begin.
2. The patient(s) should be removed to a safe area away from moving traffic.

H). Transportation

1. The patient(s) shall be transported as necessary to UVM Medical Center by the appropriate available ambulance.

I). Scene Termination

1. Once all patients have been released or transported, scene termination can begin.

2. All department equipment shall be put back to a readiness state and properly placed back on the apparatus.
3. An appropriate towing and recovery agency may be called for by the IC if not already done by PD
3. Any fluid leaks or vehicle debris is the responsibility of the towing and recovery agency. Department personnel may assist with the cleanup. Absorbent material used for fluid leaks shall go with the damaged vehicle. Prior to any cleanup beginning, personnel shall consult with PD for permission.

**V. Responsibility:**

It is the responsibility of all members to read, understand and follow this Standard Operating Guideline

Revision History			
Revision Date	Section	Summary	Principal Author
Oct. 10, 2019		Initial release of Document. Replaces SOG 03.03 circa 1990.	Sf. K. O'Brien