FREWSBURG FIRE DISTRICT OPERATIONAL POLICY	Section 7	EMERGENCY OPERATIONS	
	SUBJECT	VEHICLE FIRES	
	Policy 7-08	PAGE 1 OF 3	DATE: 01-01-2023

I. SCOPE

This procedure applies to all Frewsburg Fire District personnel operating at emergency scenes that involve vehicle fires.

II. PURPOSE

The purpose of this Standard Operating Procedure is to provide specific information and procedures for personnel of Frewsburg Fire District to use in responding to vehicle fires.

III. PERSONAL PROTECTIVE EQUIPMENT

Full structural firefighting personal protective equipment (PPE) shall be used for fighting vehicle fires. Self-contained breathing apparatus (SCBA) shall be used when fighting vehicle fires. Safety vests are not needed for those using full PPE to include SCBA.

IV. APPARATUS PLACEMENT

1. To afford protection from hazardous liquids and vapors and to reduce smoke in the work area, apparatus should be placed upwind and uphill of the incident if possible.
2. Consideration must be given to using an apparatus as a barrier, to shield the incident scene and the pump operator from traffic hazards.
3. Warning lights should be left operating, in conjunction with the use of traffic cones where needed.
4. Traffic cones and traffic delineators can be used to direct traffic flow, close lane (s) and define safe work areas as needed.

V. WATER SUPPLY

1. Water of sufficient quantity, flow rate, and pressure should be used to meet suppression objectives and ensure firefighter safety. If available and needed for large vehicles or vehicles threatening exposures water supply should be considered.
2. The use of foam can be considered for vehicle fires, care should be taken to ensure that the foam used is compatible with Class B and Alcohol blended fuels.

VI. FIRE ATTACK

1. A free burning stage fire involving the interior of the vehicle passenger compartment can quickly damage the vehicle beyond repair. As such, the plan of attack should consider the vehicle as not salvageable (unless there are victims entrapped inside the vehicle) and a safe and appropriate approach and fire attack must be implemented.
2. Where occupants are trapped in the vehicle, water or extinguishing agent should first be applied to protect the occupants and permit rescue.
3. When attacking a vehicle fire, responders should approach from a 45-degree angle towards the side of the vehicle. This will reduce the potential of being struck by exploding energy absorbing bumpers or hold open devices.
4. When rescue is not a factor, water should first be applied for several seconds to cool hazard areas, i.e.: fuel tanks, shock absorbing bumpers, tires, posts that could contain pre-tensioners, etc.
5. When possible, a chock block should be placed around the tires to prevent the burning vehicle from rolling or lurching forward.

VII. HAZARD AND SAFETY CONSIDERATIONS

1. **Liquid Petroleum Gas (LPG) and Liquid Natural Gas (LNG)**: If there is flame impingement on an LPG/LNG storage tank, take action to control the fire and cool the tank to prevent a BLEVE. If vapors escaping from the storage tank relief valve have ignited, allow the LPG/LNG to burn while protecting exposures and cooling the tank.
2. **Energy Absorbing Bumpers and Hold Open Devices**: When heated, bumpers and hold open devices may develop high pressures sufficient to cause a violent release of the bumper assembly and/or hold open cylinders.
3. **Batteries:** Flammable hydrogen vapors may cause explosion. Contact with battery acid should be avoided.
    a. Hybrid vehicles contain large batteries, this should be a note of concern during mop up.
4. **Combustible Metals:** Large quantities of water will cool the combustible metal below its ignition temperature. Dry chemical extinguishers can also be effective on combustible metals.

   a. Special consideration should be given to magnesium, which can burn and will react violently with water. Fight the fire, initially, from a distance, using the full reach of the stream.

1. **Interior:** Well sealed interiors of modern vehicles present the potential for backdraft.
2. **Vehicle Stability:** Tires or split rims exposed to fire may explode, releasing projectiles and causing the vehicle to drop suddenly.
3. **Airbags:** To avoid injury, firefighters should follow the 5-10-20 rule (airbags can deploy even after the key has been removed and the battery disconnected) for un-deployed airbags:
   a. Maintain a minimum of 5 inches from side impact airbags.
   b. Maintain a minimum of 10 inches from driver side frontal airbags.
   c. Maintain a minimum of 20 inches from passenger side frontal airbags.
4. **Composite Materials:** These materials can fray, splinter, and become airborne particles becoming a respiratory hazard.
   a. SCBAs shall be utilized throughout the operation to include mopping up.
5. **Environmental Considerations**: Every effort should be made to prevent spills and runoff that may be hazardous to the environment by damming and/or using absorbent pads and other spill containment material.