

SUBJECT: VEHICLE FIRES**SECTION:** 301.15**REVISED:** FEBRUARY 12, 2008**PAGE(S):** 3

PURPOSE

- A. To identify operational tactics for safe handling of motor vehicle fires.

FIRE CONTROL OPERATIONS

- A. Minimum level of protection for fire fighters is full protective clothing and SCBA.
- B. Minimum size hoseline is the 1-3/4" handline.

APPARATUS PLACEMENT

- A. Apparatus should be placed upwind and uphill if possible.
- B. Consider using the apparatus as a barrier, to shield the incident scene from traffic hazards.
- C. Warning lights should be left operating.
- D. Additional consideration should be given to positioning the apparatus at an angle to better allow the removal of preconnect cross-lays.

WATER SUPPLY

- A. Consider additional water supplies when water carried will not be sufficient.
- B. Additional companies may be required.
- C. Ladder companies may be used as an improvised standpipe at incidents on elevated freeways.

FIRE ATTACK

- A. A working fire involving the interior of a vehicle passenger compartment will damage the vehicle beyond repair.
 - 1. Attack plan should consider the vehicle as a "write off" and a safe and appropriate approach and fire attack must be implemented.
- B. Where patients are trapped in the vehicle, first water should be applied to protect the patients and permit rescue.
- C. When rescue is not a factor, first water should be applied for several seconds to extinguish fire or cool down the area around any fuel tanks or fuel systems.
- D. At least one member of the attack team must have forcible entry tools in his/her possession to provide prompt and safe entry into a vehicle.

HAZARDS AND SAFETY CONSIDERATIONS

- A. Liquid Petroleum Gas (LPG) and Liquid Natural Gas (LNG)
 - 1. Pressure release devices can create a lengthy “blow torch” effect.
 - 2. A BLEVE may occur if the pressure relief device fails.
 - 3. Vehicles may not be marked to identify this hazard.
 - 4. Control the fire and cool the tank if there is flame impingement on a visible LPG/LNG storage tank.
 - 5. If vapors escaping from the storage tank relief valve has ignited, allow the LPG/LNG to burn while protecting exposures and cooling the tank.
 - 6. Flow of gas through the piping can be controlled by shutting off the valve at the storage tank.
- B. Energy Absorbing Bumpers
 - 1. Consist of gas and fluid cylinders
 - 2. Will develop high pressures when heated during a fire resulting in sudden release of the bumper assembly.
- C. Batteries
 - 1. Explosion hazard due to the presence of hydrogen vapors.
 - 2. Avoid contact
 - 3. Disconnect battery cables (ground cable first) when the situation is stable.
- D. Combustible Metals
 - 1. Some vehicles have various parts made of combustible metals, such as engine blocks, heads, wheels, etc.
 - 2. Water will intensify the fire when these metals are burning.
 - 3. Large quantities of water will cool the metal below its ignition temperature. After some initial intensification, the fire should go out.
 - 4. Dry chemical extinguishers can also be effective.
- E. Trunk/Rear Hatch/Engine Hoods
 - 1. Hold open devices may employ, along or in any combination with any of the following: springs, gas cylinders, extending arms, etc.
 - 2. Failure of these devices should be expected when exposed to heat.
 - 3. Allow sufficient clearance when releasing latches.
- F. Trunk/Cargo Area Fires
 - 1. Approached with extreme caution. Expect the worst!
 - 2. Contents may include toxic, flammable or other hazardous materials.
- G. Fuel Tanks
 - 1. May be constructed of sheet metal or plastic.
 - 2. A rapid flash fire of fuel may occur with a rupture or burn through.
 - 3. Do NOT remove the gas cap – tank may have become pressurized.
 - 4. Do NOT direct hose stream into tank.
- H. Interior
 - 1. Well sealed interiors of modern vehicles present the potential for backdraft.
 - 2. Use caution when opening doors or breaking windows.
 - 3. Have a charged handline ready before making entry.

I. Vehicle Stability

1. Tires or rims exposed to fire may explode causing the vehicle to drop suddenly.
2. Expect exploding rims parts or tire debris to be expelled outward from the sides.
3. Approach from the front or rear of vehicle for maximum protection.
4. Some larger vehicles, such as buses, employ air suspension system. When these systems are exposed to heat or flame, they may fail, causing the vehicle to SUDDENLY drop several inches.
5. Vehicles on a grade may roll – chock the wheels.