

SCENARIO #3

REMOVING EXPOSED PROPANE TANKS FROM A STRUCTURE ON FIRE



FIGURE 8-12

A fire started in the kitchen area of a diner at an interstate highway truck stop at 8:10 A.M. The fire was reported via 911 at 8:13 A.M. At 8:15 A.M. the fire department dispatched a first alarm assignment consisting of two Engine Companies and a Water Tanker.

At 8:18 the first engine company arrives on the scene. The company officer finds the diner evacuated, with heavy fire blowing out the windows at the rear of the restaurant. The cook tells the company officer that a grease fire started on the grill and spread into the exhaust duct. The fixed extinguishing system failed to activate.

While firefighters begin establishing a water supply with the tanker, the company officer goes to the rear of the diner to size-up the situation. The officer observes two 100 gallon (420 lb.) propane tanks installed against the outside wall. Fire has burned through the wall of the diner and is venting to the outside. While the propane tanks are not directly involved in fire at this time, the company officer is concerned that the fire is rapidly spreading and the propane containers will eventually become involved.

SUMMARY OF CONSTRUCTION FEATURES

A 100 gallon (420 lb.) propane cylinder can typically hold a water capacity (w.c.) of 1,000 lb. It is commonly referred to as a 420 lb. cylinder in the propane industry.



FIGURE 8-13 100 gallon (420 lb.) propane tanks.

INCIDENT ACTION PLAN

TACTICAL OBJECTIVES

The primary tactical objectives are to cool the outside of the tank so that the internal cylinder pressure does not increase and activate the tank's pressure relief valve. The secondary objective is to disconnect and remove the two 100 gallon cylinders from the rear of the diner so that they do not become involved in the fire.

METHODS OF REMOVING CYLINDERS

If there is evidence that the tanks have been exposed to flame impingement (blistering or discoloration of paint), hoselines should be used to cool the tanks before taking additional action. If frost can be seen on the lower half of the tank, this is an indication that a large amount of gas has already been discharged from the tank byway of the pressure relief device. This may also be an indication that there has been a break in the gas line. If there is evidence of overheating, **DO NOT STAND IN THE DISCHARGE PATH OF THE PRESSURE RELIEF VALVE** since it may open at any time to relieve the tank's internal pressure.

Before attempting to move the tank, the service valve should be closed by turning it clockwise. If the valve appears to be closed already, verification can be made by opening the valve slightly (counterclockwise) and then closing it. This may alert you to the fact that the valve may be jammed open. The copper tube line can be easily disconnected and capped or cut with a bolt cutter. Two firefighters in full protective clothing and SCBA can safely move a 100 gallon tank by tipping the tank onto its side and rolling it out of the fire area. As the tank is being rolled, avoid standing over the head of the tank where the pressure relief valve is located. Remember, a 100 gallon propane tank can weigh up to 800 pounds. Be careful rolling tanks downhill.



FIGURE 8-14 Firefighters disconnect and roll away two 100 (420 lb.) gallon tanks.

Additional factors to consider for this operation include:

- Care should be taken to be sure that the cylinder's valve is actually closed and not accidentally opened while moving it. When a propane cylinder is in a horizontal position, opening the valve will allow liquid to escape. 1 part of liquid = 270 parts vapor. Use caution; liquid propane can cause freeze burns.
- Always return propane cylinders and tanks to their full upright position and secure them after they have been moved. The local propane dealer should be notified for technical assistance.

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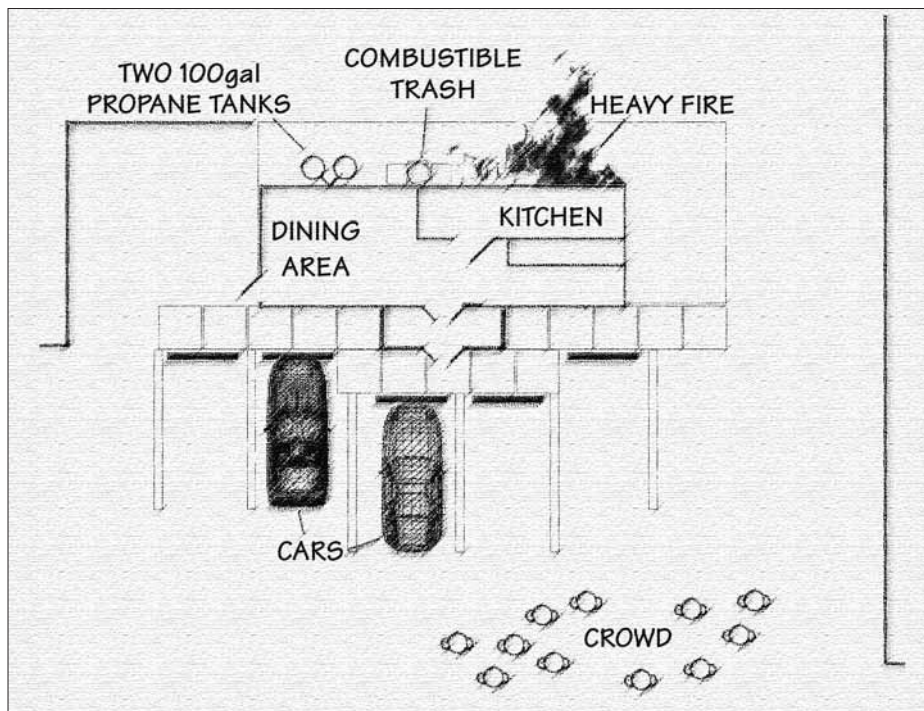


FIGURE 8-15