

Electrical Shock without Warning

Responding to an incident, the engine radio receives three alert tones followed by a dispatcher stating, “Reported power lines down – acknowledge, power lines down”. This phrase and acknowledgement is a well-known warning to all of us. However, when we arrive at an incident without this warning and also at a location where energized power is not expected we can walk in trouble.

Recently, a CDF engine company was dispatched to a traffic collision with fire just after midnight. On arrival the engine company noted that the vehicle involved in the accident had rolled and, collapsed 200 feet of chain link fence and rolled onto a metal utility shed. The car was now encircled with both torn and damaged chain link fence. The fence was also connected to other properties encircling the incident. A California Highway Patrolman and two private ambulance personnel, along with a civilian, were performing emergency duties at the traffic collision. As the engine company was setting lighting and approaching the vehicle with hose lines and medical equipment, a large electrical arc was observed. It was then determined that the accident had sheered an electrical vault and bare wires had arched.

The damaged electrical vault without warning re-energized itself throwing the CHP officer approximately 20' away and one paramedic 35' away. The civilian who was on top of the fence was thrown off the fence. The civilians clothing caught fire which resulted in first, second and third degree burns to his lower extremities.

The torn chain link fence and accident debris had covered the severed electrical vault making the electrical lines difficult to see. Compounding this was the lack of lighting equipment, which was not available until the engine company arrived.

The energized fence precluded occupants of the vehicle from being extricated until the electrical vault could be de-energized. The CHP officer, paramedic and civilian were immediately treated and transported.

LESSON TO BE LEARNED

- Don't be deceived at what might appear to be a routine incident.
- Insure adequate light is available to survey the incident and permit a safe working environment during the incident.
- Do a through size up of the incident
- Carefully asses the clutter for hidden danger that are not clearly evident
- Observe structures which may have been damaged:
 - Is there a possibility of electricity?
 - Are hazardous materials stored in the metal shed?
 - Are additional resources needed?
 - Are metal fences connected to hazards?

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