Safety Alert Bulletin  SAB001

**Electrical Continuity Hazard**

Always wear insulated protective equipment, use conductor cover-ups, and maintain required clearances when in the vicinity of energized conductors.

Aerial devices and digger derricks with insulated booms can only isolate the operator from grounding through the boom and vehicle. They cannot provide protection against phase-to-phase or phase-to-ground contacts occurring at the boom-tip, above the insulated boom sections.

Boom-tips of aerial devices and digger derricks, of necessity, must contain metal components. Metal conducts electricity. Moreover, under certain circumstances, and to varying degrees, electricity will track across or through non-metallic components (fiberglass covers and structures, hoses, etc.). Electricity can even arc through air. Thus, the boom-tip of an aerial device or a digger derrick must be considered conductive!

If any part of the boom-tip contacts an energized conductor, the entire boom-tip, including the control handle, must be considered energized.

If any part of the boom-tip contacts a grounded object, the entire boom-tip, including the control handle, must be considered grounded.

Hydraulic fluid is flammable. If electricity flows through the boom-tip, it can cause the hydraulic fluid to burn or to explode. Contact by any part of the boom-tip with an energized conductor while the boom-tip also is in contact with another energized source or a grounded object can cause the hydraulic fluid at the boom-tip to burn or explode.

These are among the reasons aerial devices and digger derricks are never considered primary protection for the operator from electrical contact. An operator's primary protection comes through use of protective equipment (insulated gloves, insulated sleeves, conductor cover-ups) and maintenance of appropriate clearances.

Do not rely on the boom-tip of an aerial device or digger derrick to protect you from an energized conductor or a ground. It cannot do so. Rely, instead, on the only things that can protect you, use of appropriate protective equipment and maintenance of appropriate clearances.

\(^1\)Except ANSI Category A units

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