

Limits of Approach

(Once Contact is Made)

BP 03-2

Before you begin work in close proximity to power lines, it is important to review and understand [Part 19 Electrical Safety](#) of the WorkSafeBC Occupational Health and Safety Regulations. Additional information can also be found in the Better Practices Safe Operation Sheet *Limits of Approach BP 03-1*.

Maintaining the limits of approach will ensure you stay safe, but accidents may still occur. If your crane makes contact with a power line, always assume that it is energized. Do not assume the power line is safe just because it is not emitting sparks, moving, or humming. Even if it is not energized, power may be restored by automatic switching equipment without warning.

Electricity will flow from the source to the ground, making the ground energized and dangerous. The voltage is highest at the point of power line contact, and gradually decreases away from the surrounding area.

Assess the situation

If your crane contacts a power line, stay calm and still until help arrives. Determine if there is a fire or an immediate threat to life.

- If YES – Call 911. They will contact BC Hydro to shut off the power.
- If NO – Call 1 888 POWERON (769-3766), or *49376 on your cell, to have BC Hydro shut off the power.

Stay in your crane if it is safe to do so

If there is no fire or immediate threat to your life, stay inside your crane. You are safer inside your crane than outside on the ground.

If your crane is not damaged, not entangled with the power line, and is free from other obstructions, slowly drive until you are at least 10 metres (33 ft.) away. Drive even further away if the voltage is over 60 kV (60,000 V) or if the ground is wet.



Tires can explode after the crane contacts power lines. The crane should be kept in an isolated location away from workers and other equipment for 24 hours. Do not operate the crane again until it has been thoroughly inspected and tested by qualified personnel.

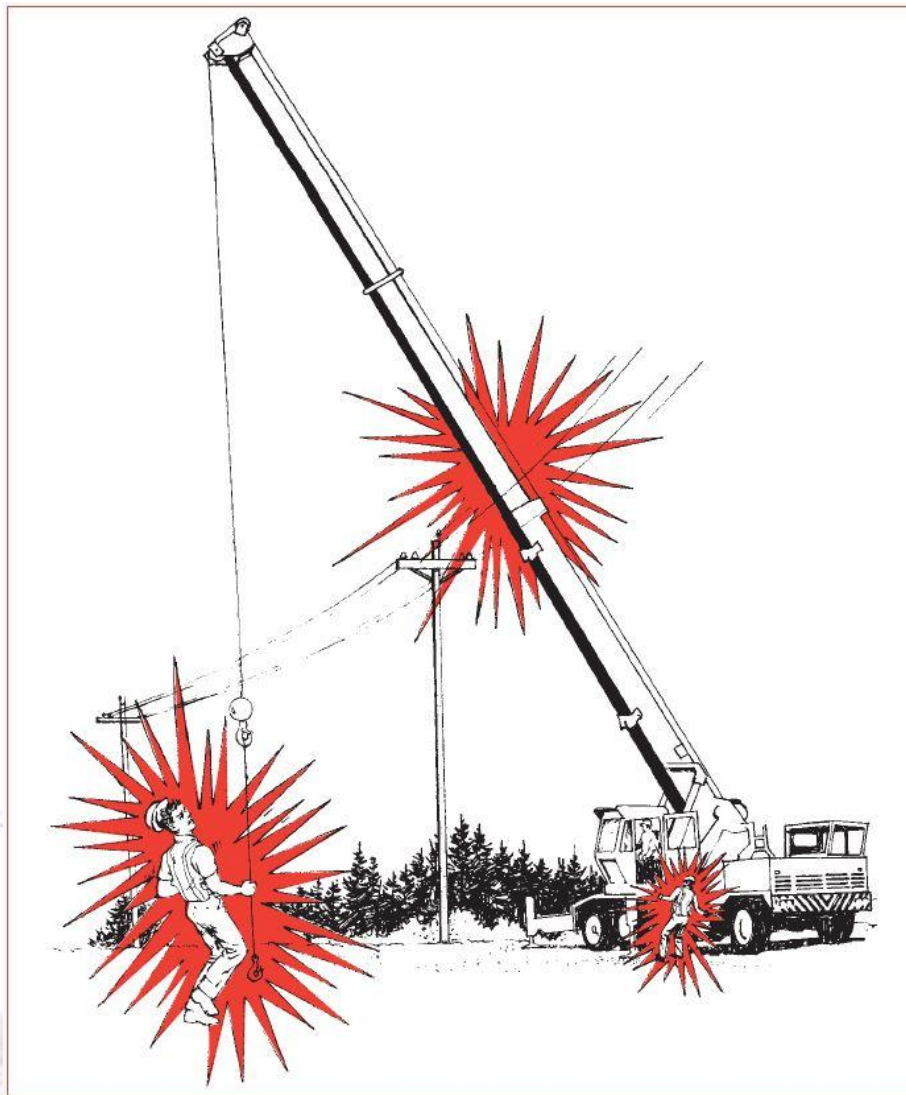
Abandon your crane if necessary

If there is an immediate threat to your life and you must abandon your crane, be aware that the ground may be energized. If you separate your feet and take even one step, there could be a difference in voltage between the ground at your left foot and the ground at your right foot. This difference in voltage between your feet is known as *step potential*, which could result in electricity flowing from the area of higher voltage to the area of lower voltage. Always keep your feet together when you are on energized ground.

Follow these steps carefully when leaving your crane:

1. Jump clear of your crane with your feet together. Do not touch any part of your crane and the ground at the same time.

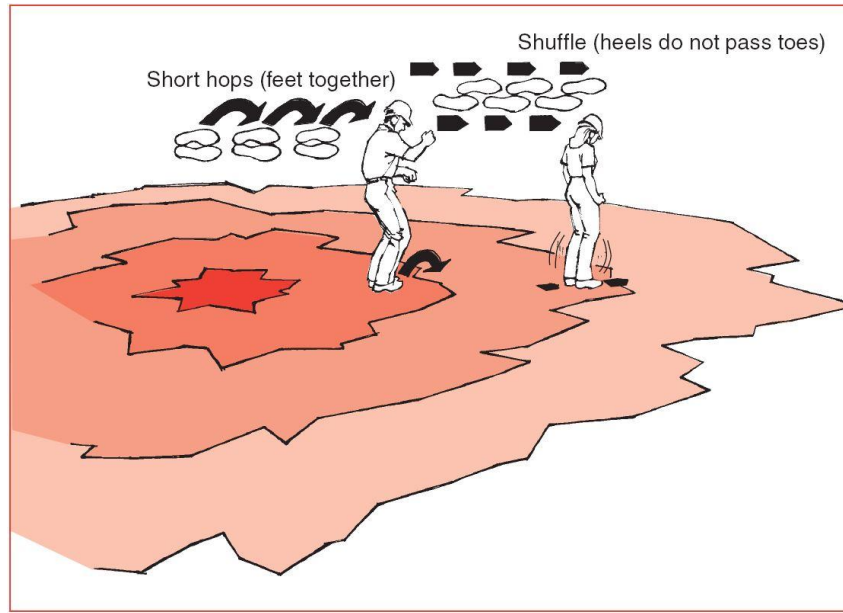
If you are standing on lower-voltage ground and you touch the higher-voltage crane, the difference in voltage will cause electricity to flow through your body. This is known as *touch potential*, and is important to keep in mind when leaving your crane.



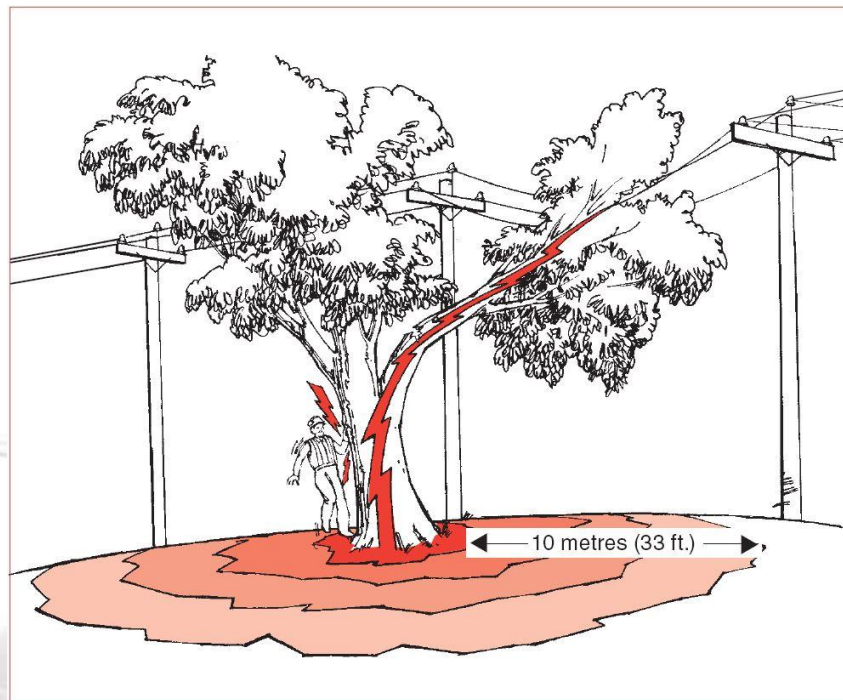
2. Shuffle away while keeping both feet close together to maintain the same voltage in both feet. If you are not able to shuffle, take short hops. Keep your feet together at all times and make sure there is no space between them.



DO NOT WALK, RUN, OR SEPARATE YOUR FEET OR YOU COULD BE ELECTROCUTED.



3. Continue shuffling or hopping until you are at least 10 metres (33 ft.) away. Stay further away if the voltage is over 60 kV (60,000 V) or if the ground is wet. Do not return to the crane for any reason.



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Power line contact by another crane or vehicle

If another crane or vehicle in the vicinity contacts a power line, follow these safety rules to make sure you stay safe:

- Stay at least 10 metres (33 ft.) away. Stay further away if the voltage is over 60 kV (60,000 V) or if the ground is wet.
- Do not approach the crane or power line.
- Do not attempt to rescue the victim.
- Warn others to stay back.
- If there is a downed power line, do not touch anything that is in contact with it, including injured workers, puddles, cranes, trees, or tools. Anything in contact with a downed power line, including the ground, is energized.
- Do not use objects such as ropes or sticks to touch energized objects as they will not protect you.
- Call 911 and the owner of the power system immediately, and make sure other workers stay clear of the energized area.