

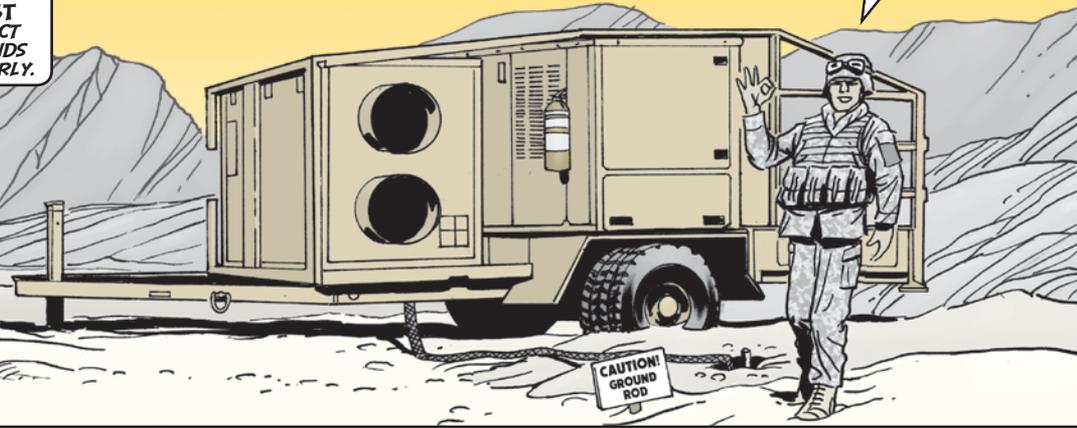
# ON SOLID GROUND

A POORLY GROUNDED GENERATOR CAN DELIVER AN ELECTRIC SHOCK STRONG ENOUGH TO KILL.

MAKE SURE YOU AND YOUR BUDDIES DON'T BECOME THE NEXT VICTIMS.

YOU MUST INSPECT GROUNDS REGULARLY.

THIS GENERATOR IS FULLY GROUNDED AND READY TO GO!



YOU SAY YOU'RE NOT A GENERATOR MAINTAINER? IT DOESN'T MATTER.

INSPECTION OF GROUNDS IS EVERY SOLDIER'S RESPONSIBILITY.

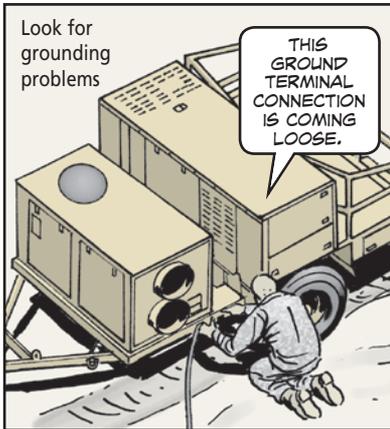
LOOK FOR TYPICAL GROUNING PROBLEMS.

HERE ARE THINGS TO LOOK FOR WHEN DETERMINING WHETHER A GROUND IS GOOD OR NOT...

### Here are two common examples:

- a ground strap loosely attached to a ground rod or to the ground terminal on a trailer or generator's frame
- a ground strap attached to a surface covered with paint, corrosion, grease or dirt instead of clean, bare metal

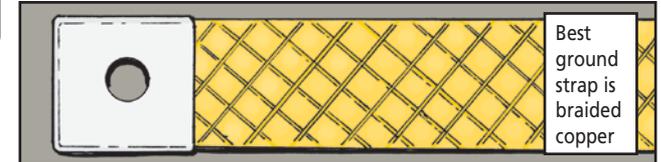
Look for grounding problems



THIS GROUND TERMINAL CONNECTION IS COMING LOOSE.

### Start with the Strap

The ideal ground strap is flat, braided copper, <sup>3</sup>/<sub>4</sub> of an inch to an inch wide, of 6 AWG or better. It is coated and will have a nickel or tin coloring. NSN 6145-00-395-8799 brings this strap by the foot.



The distance the strap must cover from earth ground—a rod or other buried metal—to the generator should be short and straight: No more than 15 feet. Make sure there are no loops, kinks, knots or bends. Make sure the strap follows the path of least resistance: It should run around or under obstacles and not over them.

Make sure the strap is securely connected both to the rod and the generator. It should not be wrapped around the rod as a means of connection. Wrapping the strap is just a temporary measure until you can clamp it to the rod. If the wrap looks as though it is intended to be permanent, report it or fix it.

Often a 6 AWG braided, untinned copper wire comes with a ground rod. This wire is fine to use for grounding.

Just make sure you **don't use an aluminum wire** for the ground wire. Aluminum quickly oxidizes, corrodes and increases resistance to current.



If you spot a problem and are not the person assigned to solve it, **report it**. Those with the know-how will make it right.

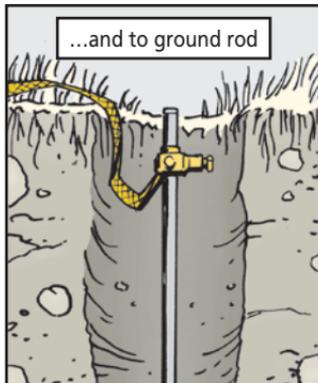
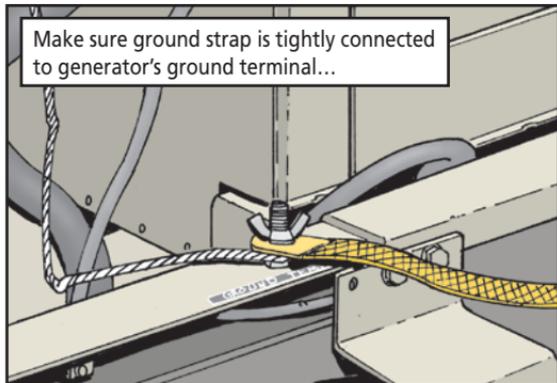
If it's your job to do the PM, be alert to changing conditions. Just because you set up a good ground yesterday doesn't mean it's still there today. Big feet might have disrupted a ground cable or rod. Weather conditions may have altered the situation. Cables, lugs and bolts loosen, move about and break, and a once-good ground might now be faulty.

## Play It Safe

Never set up, adjust or fix a ground when the generator is running. If you do, you risk getting shocked. So play it safe. Make sure the generator is shut down and all power is off before you touch ground straps, rods, terminals, clamps or lugs. Ideally, you should check grounds with other PMCS when the generator is off.

## Continue with the Connections

Your generator frame or the trailer it sits on has a built-in ground terminal. Make sure the threads on the terminal are clean down to bare metal. Test the terminal to see if it's tight. Also, make sure the wing nut is tight and the ground-wire lug is mated metal-to-metal with both the generator frame or trailer and any washers in use.



On the opposite end, the ground rod must have a clamp or a thumbscrew that connects the ground strap. If a clamp is used, make sure the area of the rod or underground pipe that the clamp is mated to is clean, bare metal. If the area has dirt, grease, paint or corrosion, scrape it clean.

Make sure the clamp is tight and that the strap is tight within the clamp. You might find a strap that is attached to the clamp with copper wire. That's another temporary measure. If it looks like it's intended to be permanent, report it or fix it.

## Finish Well

As you wrap up your inspection of the grounding site, make sure the top of the ground rod is below the earth's surface. A rod sticking up from the surface could trip someone. See if the soil around the ground rod has been treated with a mixture of salt and water. The mixture makes the soil more conductive. Make sure every generator has its own ground rod.

For more information, get CECOM Pamphlet TR 98-6, *Earth Grounding and Bonding*. Contact CECOM Directorate for Safety at DSN 648-3812, (443) 395-3812, fax (443) 395-3836 or email: [usarmy.APG.cecom.mbx.amsel-sf@mail.mil](mailto:usarmy.APG.cecom.mbx.amsel-sf@mail.mil)

You can also mail your request to:

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