

# Low Voltage (<50V) Work

## Field Reference Tool

### Energy Isolation of Equipment Operating at Less than 50 Volts

1. When possible, isolate equipment operating at less than 50 volts, recognizing that some systems are not designed to be isolated or isolation is not feasible.
2. The decision to not isolate the equipment is made by the Task Supervisor and is based on the amperage capacity of the electrical source, any overcurrent protection (fuse or circuit breaker) between the source and the worker, and increased exposure to electrical burns or to explosion due to electric arcs.
3. The following work activities may be performed by non-Electrical Qualified Persons on non-isolated systems less than 50V.

Removing or attaching cables to terminals on 12V or 24V vehicle while changing batteries	Installing or removing equipment batteries	Attaching clamps or terminals at recharging stations
Working on 24V systems such as SCADA, instrumentation wiring, and testing	Installing or removing fuses on instrumentation systems	Working on solar skids

### PPE Requirements for Working on Equipment Operating Less than 50 Volts



Rubber Insulating Gloves



Z87 Safety Glasses



ASTM F2413-05 Safety Footwear



Fire Resistant Clothing (Minimum HRC 1)

Required when working on batteries



Rubber Gloves



Face Shield



Apron

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