



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 03 – 17

## WORKING ON OPERATING EQUIPMENT RESULTS IN HAND INJURY

### WHAT HAPPENED:

A welder was experiencing problems with the governor control on a portable welding machine. The welder lifted the shroud at the radiator end of the welding machine and was wiggling some electrical wiring when he received a 12-volt shock. His natural reaction was to jerk away and when he did, he hit the radiator cooling fan cutting his ring finger on his left hand. It was later determined to have caused a hairline fracture. He returned to work following x-rays and a bandage.

### WHAT CAUSED IT:

The welder exposed the rotating fan when he opened the engine shroud and there was no guard around the fan, fan belt or drive pulley.

**CORRECTIVE ACTIONS:** To address this incident, this company instructed rig personnel:

- A list is to be made on each rig of fan blades, rotating shafts and related fan belts on equipment. This list should be a basis for a fan blade/rotating shaft/fan belt audit. Inspect each fan blade, rotating shaft and belt (also drive chain) for an adequate guard.
- The guards should be sufficient to cover all rotating parts and any expanded metal mesh should have small enough openings where a finger cannot enter (not over 3/8"). Guards should not be removed, except for maintenance, service or adjustment and only when the equipment is properly locked out.
- In work areas where there are fans that are not normally guarded due to their location near the ceiling or other area that is not readily accessible, the control to these fans should be locked or tagged out before any work is started in near proximity to the fans. Be sure to verify the isolation of equipment by testing the normal operating controls and return the off/on switch to the off position before proceeding with the maintenance.
- Examples of equipment with fan blades/rotating shafts/belts are: heater fans, bug fans, engines, centrifugal pumps, oiler pumps, drawworks, mud pumps, mud agitators, shakers, cold starts, welding machines, water pumps, cellar pumps, mobile equipment etc. Make a list of your rig's equipment and perform an audit to ensure adequate guarding around rotating parts.

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**The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.**