WHAT HAPPENED:

Electrical shock to rig personnel from third party rotating head hydraulic unit.

While closing the clamp at the rotating head (i.e. rotating control device) rig employee stated when he grabbed the hydraulic line with one hand and his other hand was on top of the rotating head he experienced an electrical shock from an unknown source. Rig (drilling contractor’s) electricians were called to the location to inspect the area but were not able to identify the source of the electrical shock. The equipment owner’s (third party) electricians then came to the location to inspect their equipment.

CONTRIBUTING FACTORS:

1. Upon inspection the equipment owner’s electricians observed a burnt breaker on their oiler unit.
2. They also found the circuit breaker panel (all 110v circuits) on the oiler unit had water inside.
3. The water had most likely entered from a broken conduit entering the top of the panel.
4. The oiler unit was also found to not be grounded.

LESSONS LEARNED:

1. If the third-party rotating head hydraulic unit is not properly sealed and grounded, there is a potential for failure which can result in a serious injury or fatality.
2. Notify third parties when damaged equipment is identified to get the equipment changed out or the issues corrected.
3. Ensure that repaired equipment is in good working order before returning to service.
4. Thoroughly visually inspect third party equipment to ensure it appears to be in good working order upon arrival at location and periodically thereafter.

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Showing breaker panels inside unit.

Area of damage to the unit allowing moisture inside once the silicone was removed from this area.