Drill Pipe Screen lodging in Top Drive results in Near Hit

WHAT HAPPENED:
There have been several incidents in which the drill pipe screen has become lodged in the Top Drive following a pressure release of the Mud Pump Pressure Relief System (Pop Off). In some cases the screen dislodged from the Top Drive while traveling overhead, resulting in a significant near hit.

WHAT WERE CONTRIBUTING FACTORS:
An increase in downhole pressure forced the Pop Off system to release. The Pop Off releasing caused mud to travel back up the drill string lodging the drill pipe screen into the Top Drive.

The screen was observed to be missing in the drill pipe while the ring around the screen remained seated in the box end of the tool joint. It was assumed the drill pipe screen had traveled down hole and was not identified as a potential overhead hazard/dropped object. Employees failed to recognize the potential for the drill pipe screen to be lodged in the Top Drive becoming an Overhead Hazard.

This condition can also occur from the negative internal pressure (vacuum) created by activities such as bleeding off the 2” valve on the standpipe manifold.

LESSONS LEARNED:

1. The Rig Manager shall ensure each employee understands the expectation involving a Pop Off release and missing drill pipe screens during drilling operations.
2. The Rig Manager will partner with the Operator Representative during instances involving Pop Offs and missing drill pipe screens to locate and verify any Overhead Hazard has been mitigated before resuming drilling operations.
3. Immediately following a Pop Off release, the Driller shall communicate with their crew to discuss the potential hazard and ensure crews locate the drill pipe screen at the next connection.
4. When a missing drill pipe screen is identified during drilling operations, crews shall stop the job and notify the Driller and Rig Manager of the potential hazard.
5. While attempting to locate the missing drill pipe screen following a Pop Off release, crews shall always assume that the drill pipe screen may have been forced into the Top Drive until verified otherwise.