Learning From Incidents?

Inspiring Proposed Improvements?

Aaron Buckelton & Thomas Koester

From fixing to learning

– learning from incidents and inspiring proposed improvements

- This presentation explores how organizations can shift from **isolated fixes** to **generic learning** by analyzing real-world incidents and involving frontline workers.
- Using examples from offshore operations, it highlights systemic factors behind failures and the importance of understanding human and organizational performance principles.
- Attendees will gain insights into designing processes and equipment that set people up for success, thereby reducing repeat events and enhancing safety culture.

How do you learn from incident reporting in other industries?

Offshore drilling rigs

Major accidents

Source: The Guardian, Tim Webb, 28 October 2010

Health, Safety & Environment (HSE)


C21 Shaker House 2
C21 Shaker House 5
C19 DRT
C21 Shaker House 2
C20 Shaker House 1
Google

Nobles Incident Investigation process

Initial Notification and Immediate Actions

Dropped Object - Power Service Loop on Main TDX Dropped to the Drill Floor

Location:	**Date:**
Noble Faye Kozack (NFK)	Sunday, November 9, 2025 at 9:58 AM

What Happened:

- After releasing THRT, elevators had to be swapped between 5-7/8 DP and 6- 5/8 DPR.
- Driller stopped to link tilt levators to avoid contact with umbilical. Floorman stepped out into the Red Zone and observed elevators were not in position for replacement then exited the Red Zone.
- After the Floorman exited the Red Zone, the Driller prepared to slack off Main TDX but observed the Service Loop fall from the Derrick and struck Floorman's shin after contacting the Floor.
- Floorman was evaluated and later released to full duty.

Immediate Actions taken onboard:

- Operations were stopped immediately, and the area was secured.
- IP was escorted to the hospital for evaluation.
- Client and Onshore Management notified.
- Safety Stand Down was held with the crew.

Learning & Continuous Improvement
LCI-018-2025_Failed Lifting Lug on CTU Cover Plates

Applicable Departments:	Deck Crew, Drill Crew, Maintenance Crew, Marine Crew, Subsea Crew
Communication #:	018-2025
Operation:	Rigging and Lifting
Equipment:	Lifting equipment

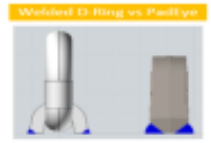
Released Date:	10/29/2025
Classification:	Not Applicable
Event #:	ERS_202596_061955

Facts (What Happened):

During the removal of the CTU cover plates from the moon pool, the plates were transferred through the open hatch and landed onto the cantilever deck in preparation for backloading. While positioning the third cover plate into a vertical orientation, one of the lift eyes failed. No injuries, dropped objects, or equipment damage were reported.

Findings:

* The Lifting Lugs on the CTU Plates were not color coded, i.e. approved for use. The plates were not included in the 3rd party lifting gear inspections and were not updated on the Lifting Equipment Register.
* The Pre-Lift inspection was not thorough and did not establish the lack of certification (color-coding) on the Anchor point.
* Planning and Lift Categorization was incorrect. The lift was categorized as 'General' and its complex nature wasn't accounted for.
* The Weld-on D-Rings that were used in this event, are generally more susceptible to failing, where the flaw in the design leads to the internal corrosion being left undetected.



Follow Up Actions:

Actions taken by rig:

* Conduct a thorough sweep of the rig to identify any additional items or equipment with uncertified lifting points. Clearly isolate and tag out any items not intended for use. For equipment required for operations, ensure it is submitted for certification and remains isolated from use until certification is complete.
* The MSL shall verify that the Lifting Equipment Register has been thoroughly reviewed and updated. This process should be carried out in close coordination with Section Leaders and the contracted inspection company to ensure all inspection-due items are accounted for, including those not previously listed in the register.
* MSL to deliver targeted training and coaching on the Rigging and Lifting Operations Manual to the Marine Crew, emphasizing procedural compliance—starting with proper lift categorization.
* Onshore team to conduct bi-weekly check-ins with Rig Management over the next three months to review lifting operations. Discussions will focus on lift categorization, procedural and policy adherence, and inspection findings.
* Collaborate with engineering to develop a more robust and reliable design for the lifting points on the CTU plates. Once approved and certified, ensure these updates are reflected in the Lifting Equipment Register.

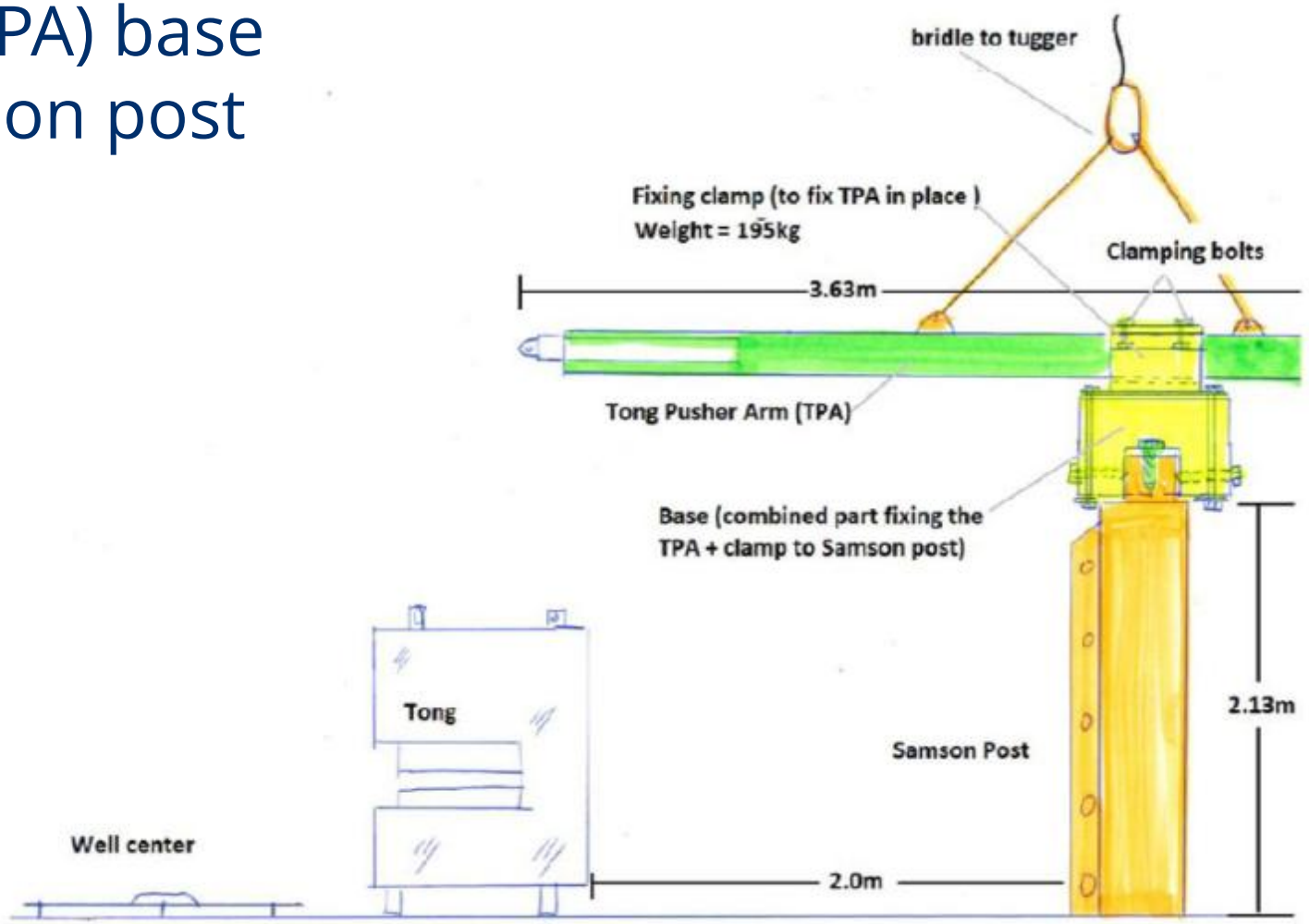
Actions to be taken by other rigs:

Conduct a rig-wide Hazard Hunt on all Lifting Gear equipment to:

* Inspect and verify each lifting point has valid certification. Isolate and tag out any uncertified lifting point until it is either certified or permanently removed from service.
* Conduct a full assessment of all weld-on D-ring lifting points and folding lifting eyes and develop a plan to replace them with pad eyes.

Example 1:
Tong push arm (TPA) base plate dropped from samson post

Case 1: Tong push arm (TPA) base plate dropped from samson post



One Pager no.: Synergi ref.: 2499497

Knowledge Transfer

- [ ] Proposed Improvement
- [x] Accident
- [ ] Near Miss
- [ ] Unsafe act/condition
- [ ] Technical
- [x] HSE
- [ ] General

Location: Maersk Resilient **Time:** 22.30 **Date:** 07.08.2021 **Title:** Tong Push Arm Base plate dropped from Samson post

Facts *(What happened)*

Tong pusher base plate situated on top of samson post came loose and fell to the rig floor when the extension cylinder grip was being adjusted.

Personnel were not in immediate vicinity of the dropped base plate.

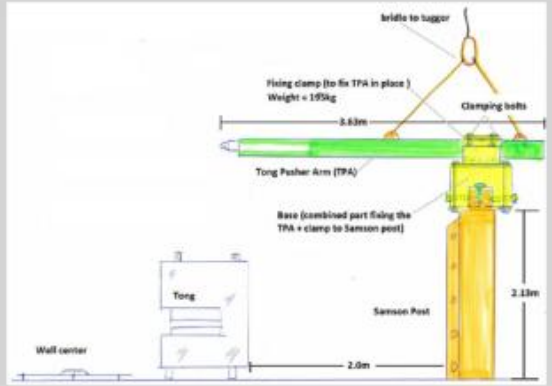
Causes *(Why did it happen)*

Being investigated, but it appears that an incorrect size bolt was installed to secure the base plate to the samson post

Corrective measures/learnings
(What is done for remedial action)

Check securing mechanism for base plate before taking the system into use again.

All rigs to check if similar system is installed and check the securing bolt.



Barriers affected

- [x] Plant /Equipment/Technical
  1. Safe securing of equipment at height
  2. Safe securing of eqpt subject to forces
- [x] Processes/Operational
  1. MoC?
  2. Installation procedures
- [ ] People/Organisational
  1.
  2.

Investigation required

Yes [x] No [ ]

Level 2

SIRIUS:

Work process: Casing running

Content Owner:

Revision Request: [ ]

Raised Revision number:

Specific recommendations (1/2)

- Update the [DOCUMENT NAME] of Third Party Equipment and Personnel Including Interface to Adjacent Platforms with clear indication that it needs to be filled and signed off for all equipment that should be installed and/or connected on the rig including mechanical connections like bolting. (the way checklist is designed somehow suggests that it w only to SECE and equipment requiring power/air/network access).
- Develop CoW Templates for Installation of TPA on the samson post and adjustment of TPA
- Develop a method to ensure that it is a verified M24 bolt and travel “attached” to the base plate for the TPA e.g., using a retainer ring on the M24 bolt when inserted in the bracket.
- Develop a method to ensure that it is torqued to required torque according to [MANUFACTURER’s] International torque specifications with the us torque wrench.
- Update [MANUFACTURER’s] International risk assessment to com the torque value, method, and equipment.

Equipment specific

Equipment specific

Process specific

Specific recommendations (2/2)

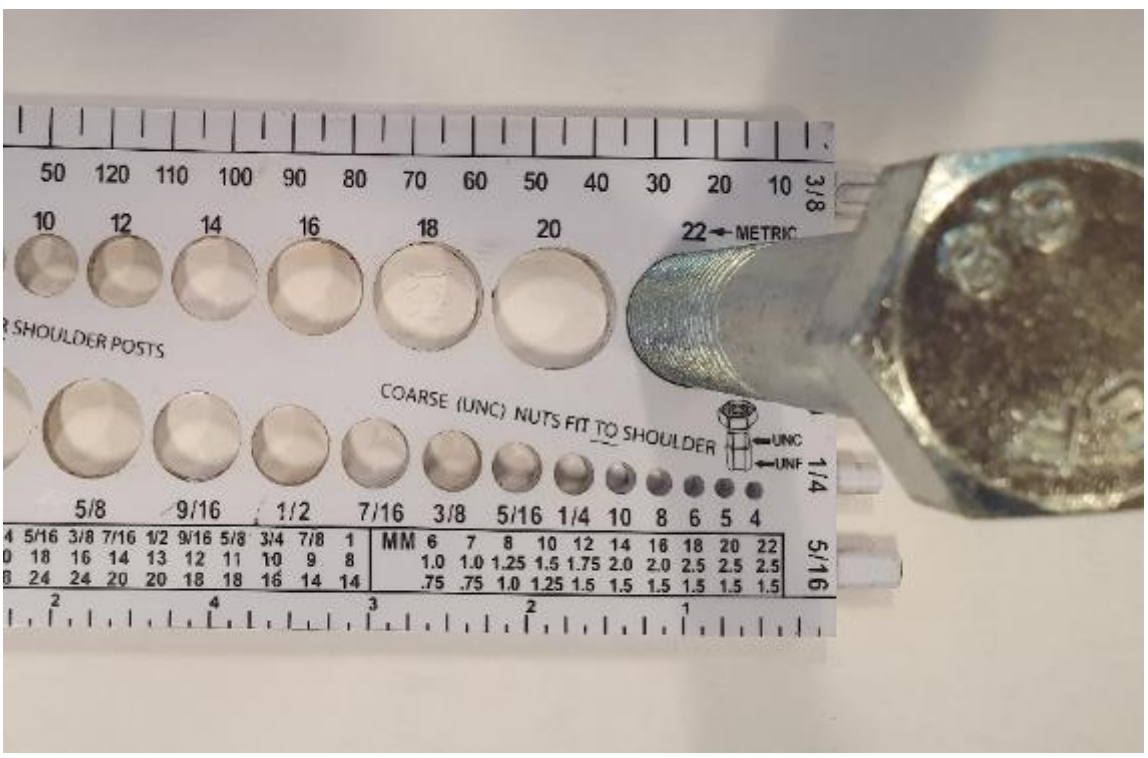
- [MANUFACTURER] are reviewing their incoming goods process to
- [MANUFACTURER] to include measurements of the TPA distance during
  the way it was done during the incident.
- Update Drilling Department casing equipment inspection Process checklist with verification of correct installation of the TPA.
- [MANUFACTURER]: Evaluate if the base plate can be re-designed so it will stay in place if the bolt fails or not installed correctly (the bolt is not visible once installed).
- [MANUF n check the size of the bolt by using a 'bolt size template' as below. This would ensure t eing used.
- For the Torque Master: (a) evaluate the Torque Master as a technolo ap the type of operations for which [COMPANY NAME] would accept the use of th g/Tubing connections.

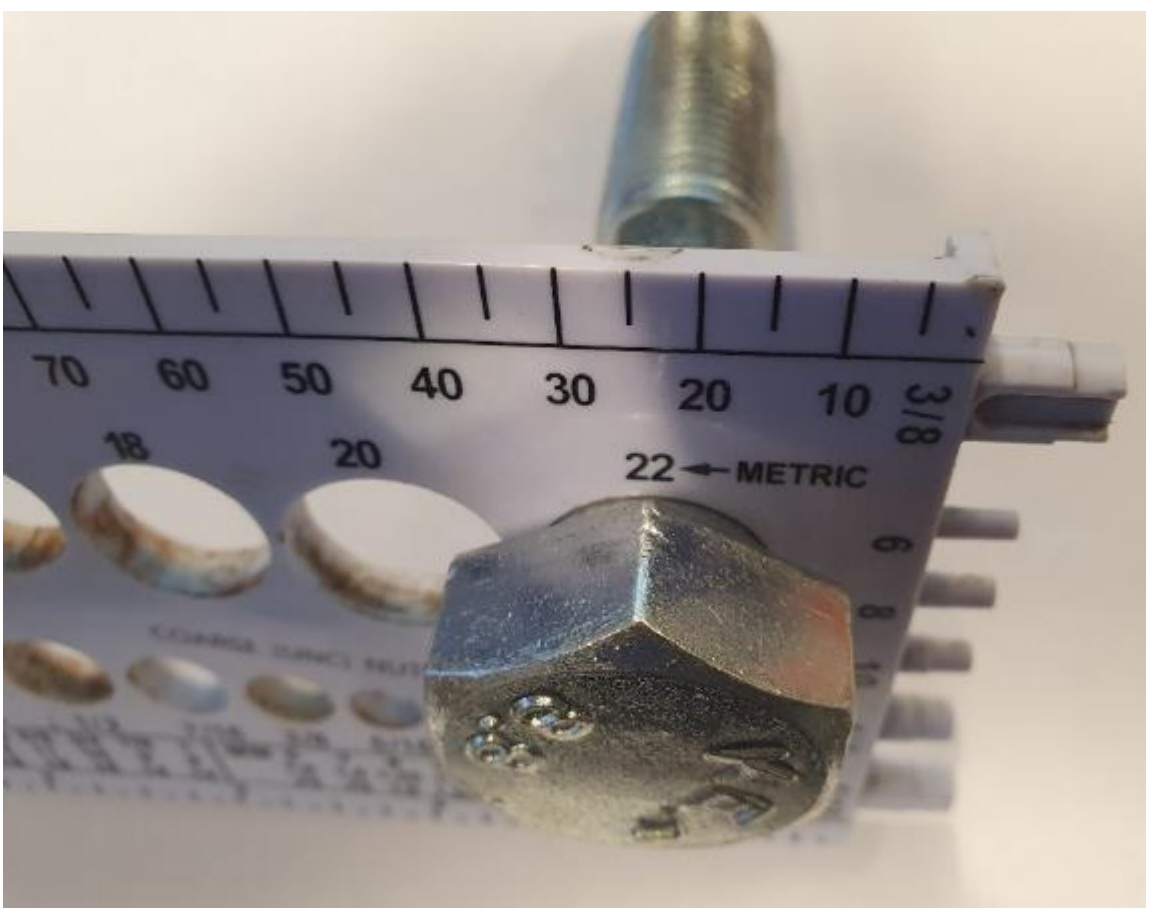
Equipment specific

Equipment specific

Equipment specific

Equipment specific


50 120 110 100 90 80 70 60 50 40 30 20 10
10 12 14 16 18 20
22 METRIC
SHOULDER POSTS
COARSE (UNC) NUTS FIT TO SHOULDER
UNC
UNF
5/8 9/16 1/2 7/16 3/8 5/16 1/4 10 8 6 5 4
MM 6 7 8 10 12 14 16 18 20 22
1.0 1.0 1.25 1.5 1.75 2.0 2.0 2.5 2.5 2.5
.75 .75 1.0 1.25 1.5 1.5 1.5 1.5 1.5 1.5
3/8
1/4
5/16


70 60 50 40 30 20 10
18 20
22 METRIC
3/8

Broad recommendations

- Implement verification of following the process for equipment not using power/utility connections e.g. as a focus in Self Verifications.
- [MANUFACTURER]: Evaluate the complete design of the TPA, e.g., look for solutions to minimize rig-up/rig-down of the equipment.
- Evaluate how to minimize number of actions done offshore and do as much as possible on shore when preparing equipment. This is to support correct installation first time and minimize need for adjustments when equipment is already installed and in position, e.g., at heights where there could be a risk of dropped objects.

Equipment specific

Potentially generic

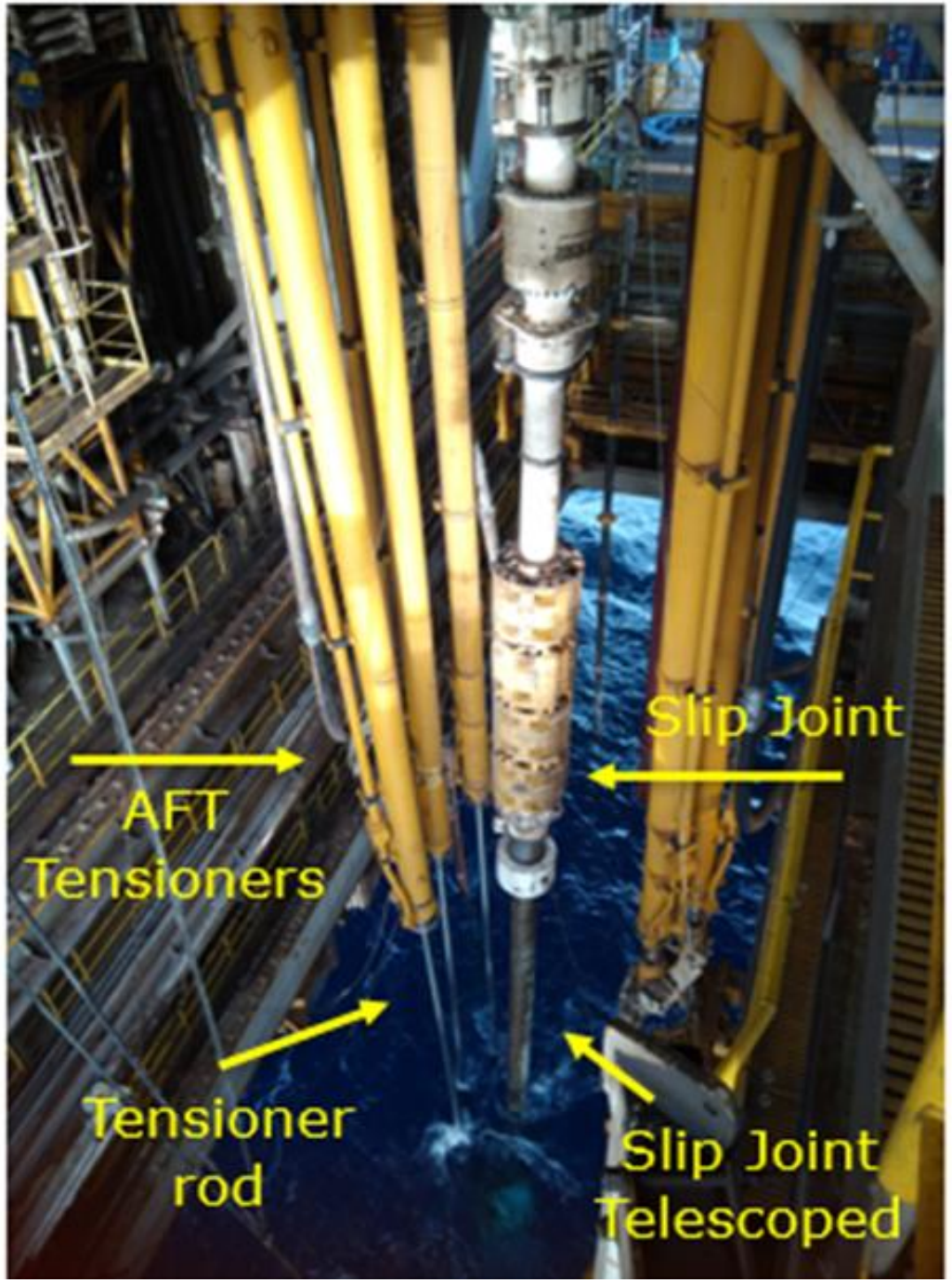
What can we learn from the incident *apart from* what is related to the specific piece of equipment and the specific bolt?

What about sizes of other bolts, pipes, tools, pieces of equipment etc.?

What about other similar processes?

Could something similar have happened in a hospital?

Example 2:
Unintended release of Telescopic Joint


Slip Joint
AFT
Tensioners
Tensioner
rod
Slip Joint
Telescoped

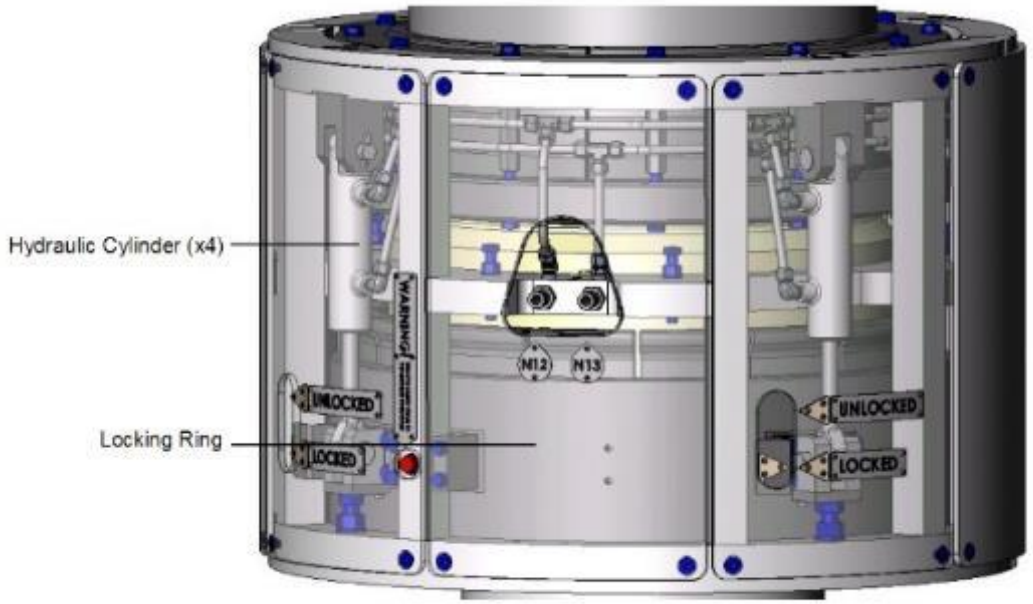


Figure 2.9 - Collet Connector with transparent covers

Excerpt from Operational Manual

Distribution manifold in the moon pool

Connections

The following connections can be found on the Collet Connector.

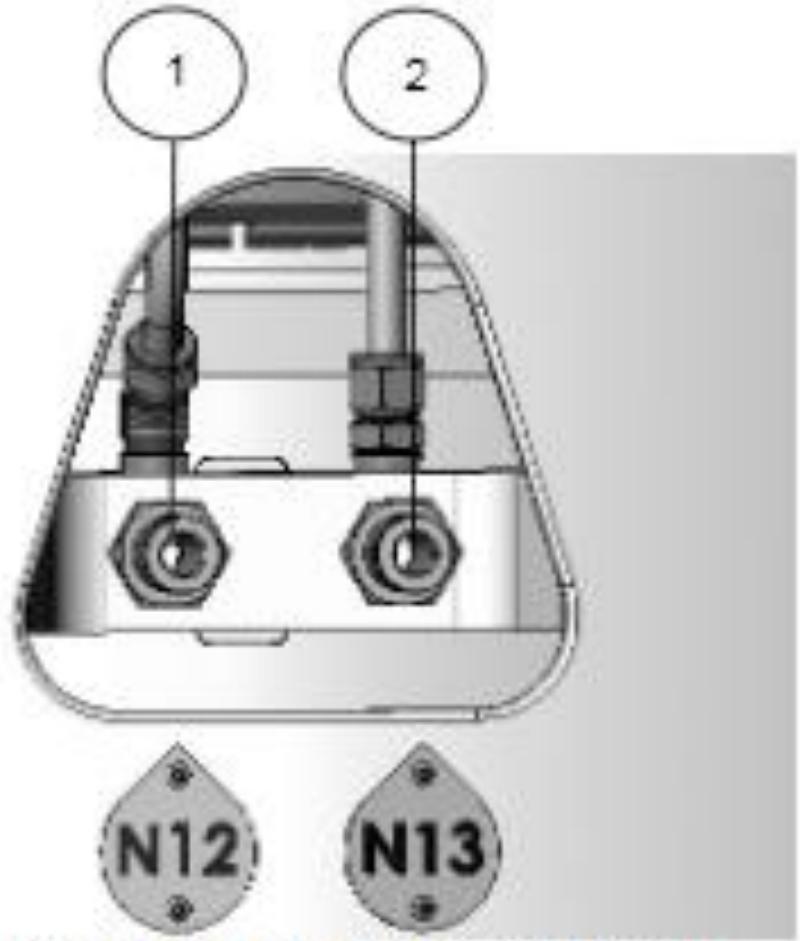


Figure 2.11 - Connections on the Collet Connector

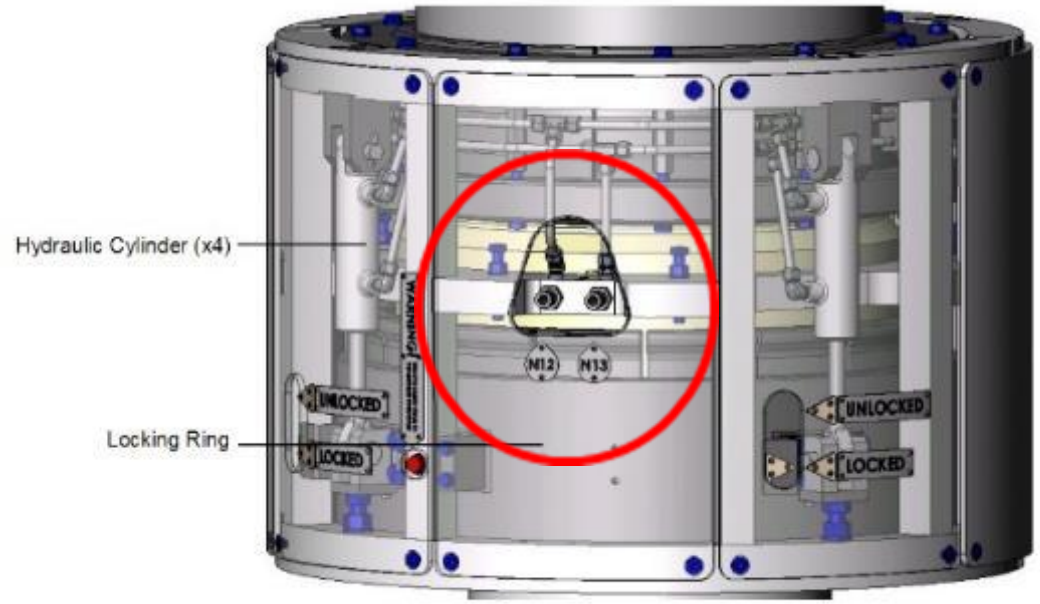


Figure 2.9 - Collet Connector with transparent covers

Excerpt from Operational Manual

Photo from TJ showing the reversed tubing

	TJ #1	TJ #2
Manual (Drawing)	Left N12 = lock Right N13 = unlock	Left N12 = lock Right N13 = unlock
Physical piping	Left= unlock Right = lock	Left = unlock Right = lock
Plate label	Left = N12 Right = N13	N/A
Painted label	N/A	After the incident Left = unlock Right = lock

Left/right in the table refers to the position of the fitting on the collet collector.

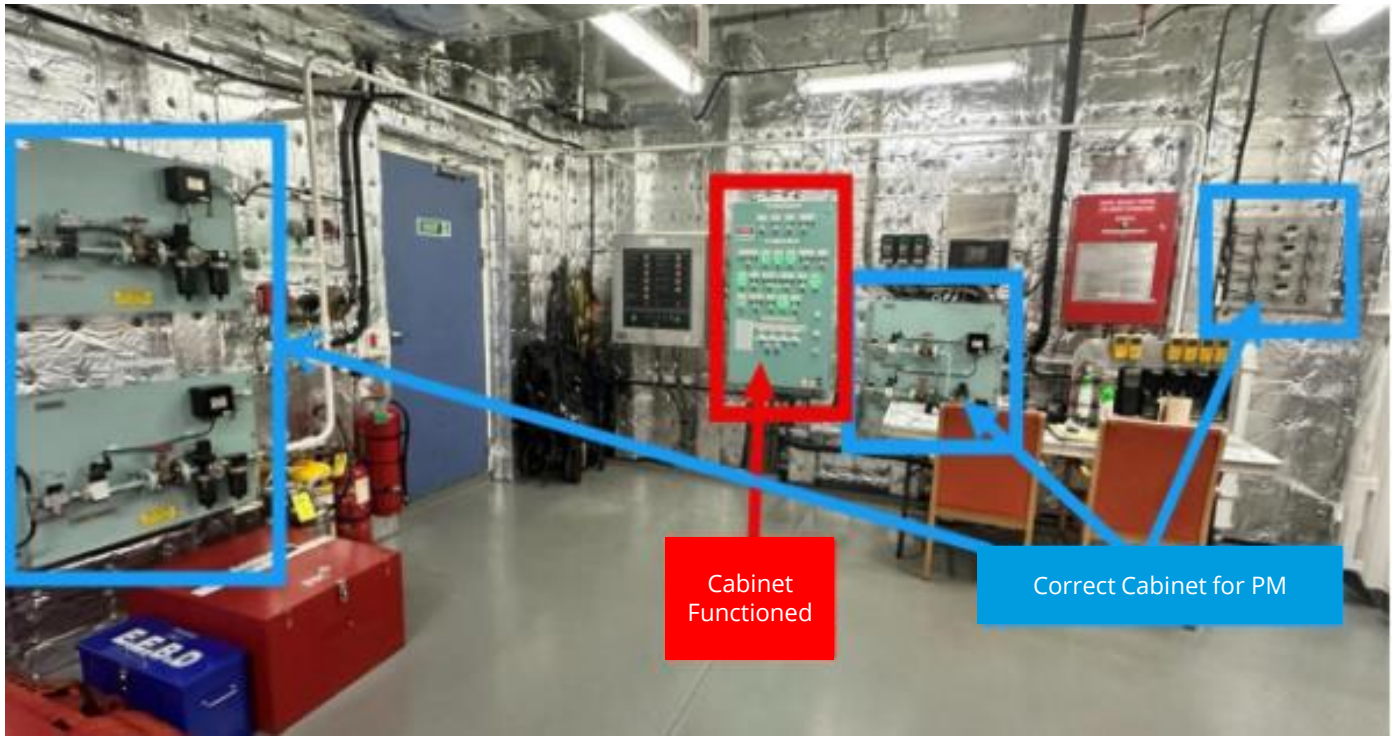
What can we learn from the incident apart from what is related to the specific Telescopic Joint?

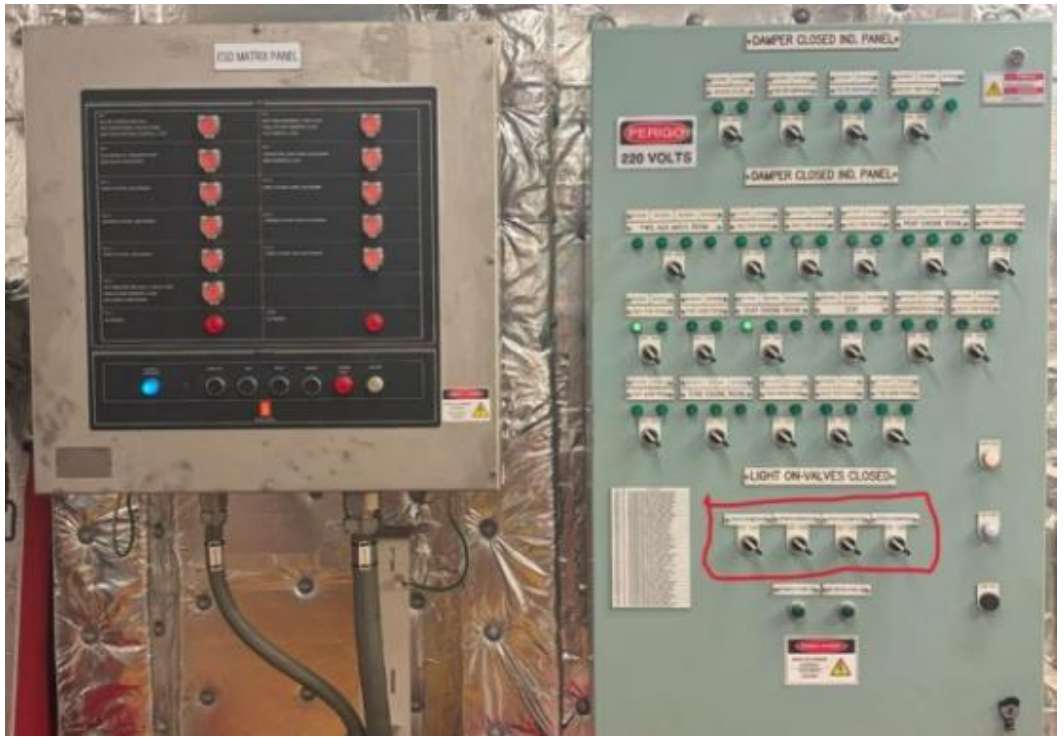
Could something similar have happened in a hospital?

Could something similar happen again but with different equipment on a drilling rig?

Example 3: NSL Blackout & ESD

NSL Blackout & ESD





Corrective Actions

Equipment Identification Needs Improvement
Action: Upgrade labels, signage, and color-coding on panels, switches, and equipment to ensure clear identification.
Hierarchy: Engineering controls / Administrative controls

Instruction Needs Improvement
Action: Develop and distribute detailed, easy-to-understand written procedures and instructions for all maintenance activities.
Hierarchy: Administrative controls

Labels Need Improvement
Action: Conduct a comprehensive labeling audit; replace or add labels and signage on all critical controls and panels.
Hierarchy: Engineering controls

Arrangement / Placement Needs Improvement
Action: Redesign or reorganize equipment layout and placement to minimize operational errors and improve accessibility.
Hierarchy: Engineering controls

No Preparation
Action: Enforce pre-job hazard assessments and planning, including hazard identification checklists and risk assessments before work.
Hierarchy: Administrative controls

Work Package / Permit Needs Improvement
Action: Implement a formal Permit to Work (PTW) system and enforce its use for all maintenance activities, especially on safety-critical equipment.
Hierarchy: Administrative controls

Pre-Job Briefing Needs Improvement
Action: Mandate structured pre-job briefings (e.g., toolbox talks) to discuss hazards, roles, and controls before starting work.
Hierarchy: Administrative controls

Walk-Through Needs Improvement
Action: Establish mandatory pre-task walk-throughs to verify hazards, controls, and equipment status.
Hierarchy: Administrative controls

Team Selection Needs Improvement
Action: Review and update qualification and competency requirements for maintenance teams; assign only qualified personnel.
Hierarchy: Administrative controls

Crew Teamwork Needs Improvement
Action: Conduct team-building exercises and communication skills training; promote a safety-first culture emphasizing teamwork. Reach group will be mobilized to coach crews on gaps identified from initial assessment from Stanley Lafosse Team.
Hierarchy: Administrative controls

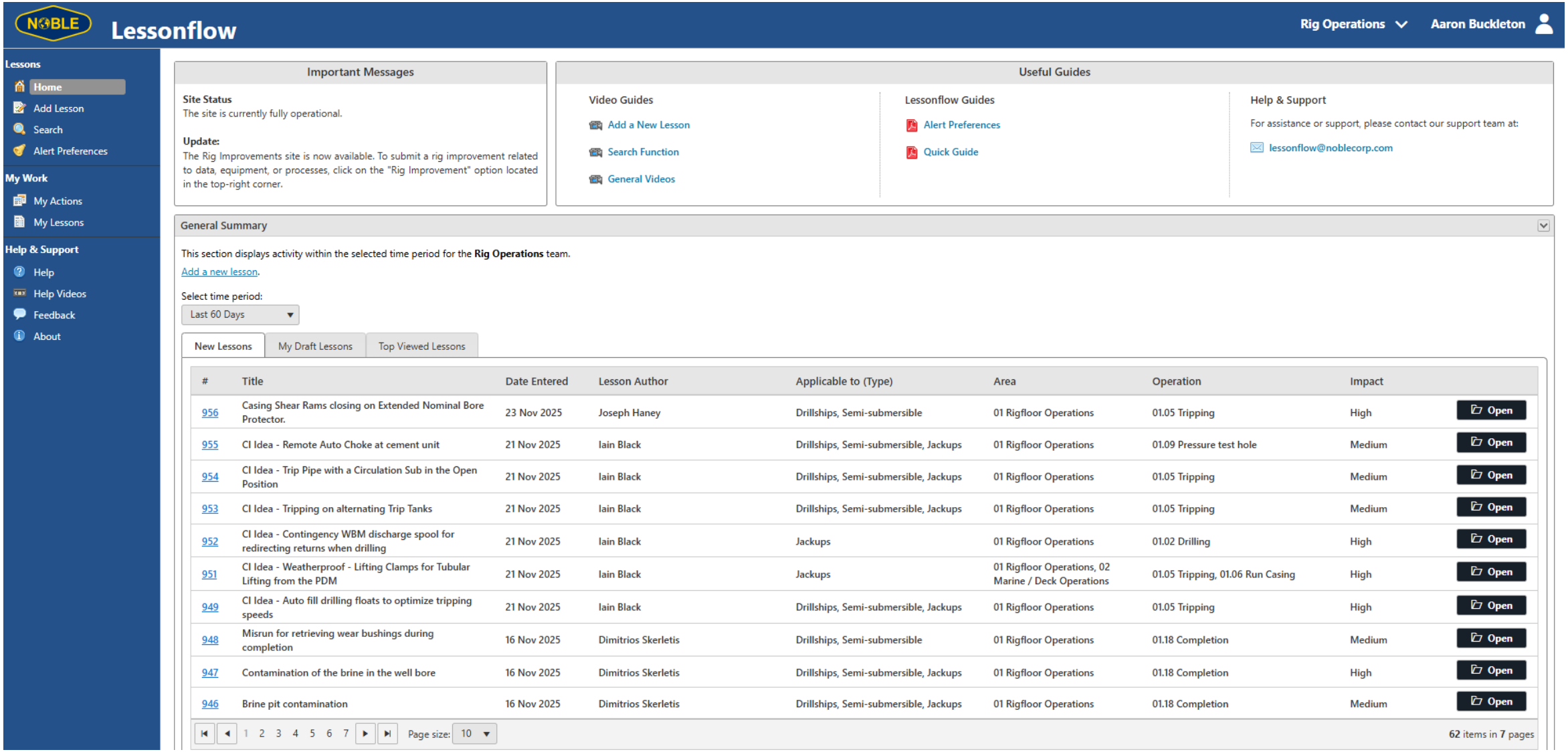
What can we learn from the incident apart from what is related to the specific control panels?

3000ft view of our working conditions

NATIONAL OILWELL

Lesson Flow

Lesson Flow


Lessonflow
Rig Operations
Aaron Buckleton
Lessons
Home
Add Lesson
Search
Alert Preferences
My Work
My Actions
My Lessons
Help & Support
Help
Help Videos
Feedback
About
Important Messages
Site Status
The site is currently fully operational.
Update:
The Rig Improvements site is now available. To submit a rig improvement related to data, equipment, or processes, click on the "Rig Improvement" option located in the top-right corner.
Useful Guides
Video Guides
Add a New Lesson
Search Function
General Videos
Lessonflow Guides
Alert Preferences
Quick Guide
Help & Support
For assistance or support, please contact our support team at:
lessonflow@noblecorp.com
General Summary
This section displays activity within the selected time period for the Rig Operations team.
Add a new lesson.
Select time period:
Last 60 Days
New Lessons
My Draft Lessons
Top Viewed Lessons
Title Date Entered Lesson Author Applicable to (Type) Area Operation Impact
956 Casing Shear Rams closing on Extended Nominal Bore Protector. 23 Nov 2025 Joseph Haney Drillships, Semi-submersible 01 Rigfloor Operations 01.05 Tripping High Open
955 CI Idea - Remote Auto Choke at cement unit 21 Nov 2025 Iain Black Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.09 Pressure test hole Medium Open
954 CI Idea - Trip Pipe with a Circulation Sub in the Open Position 21 Nov 2025 Iain Black Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.05 Tripping Medium Open
953 CI Idea - Tripping on alternating Trip Tanks 21 Nov 2025 Iain Black Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.05 Tripping Medium Open
952 CI Idea - Contingency WBM discharge spool for redirecting returns when drilling 21 Nov 2025 Iain Black Jackups 01 Rigfloor Operations 01.02 Drilling High Open
951 CI Idea - Weatherproof - Lifting Clamps for Tubular Lifting from the PDM 21 Nov 2025 Iain Black Jackups 01 Rigfloor Operations, 02 Marine / Deck Operations 01.05 Tripping, 01.06 Run Casing High Open
949 CI Idea - Auto fill drilling floats to optimize tripping speeds 21 Nov 2025 Iain Black Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.05 Tripping High Open
948 Misrun for retrieving wear bushings during completion 16 Nov 2025 Dimitrios Skerletis Drillships, Semi-submersible 01 Rigfloor Operations 01.18 Completion Medium Open
947 Contamination of the brine in the well bore 16 Nov 2025 Dimitrios Skerletis Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.18 Completion High Open
946 Brine pit contamination 16 Nov 2025 Dimitrios Skerletis Drillships, Semi-submersible, Jackups 01 Rigfloor Operations 01.18 Completion Medium Open
1 2 3 4 5 6 7
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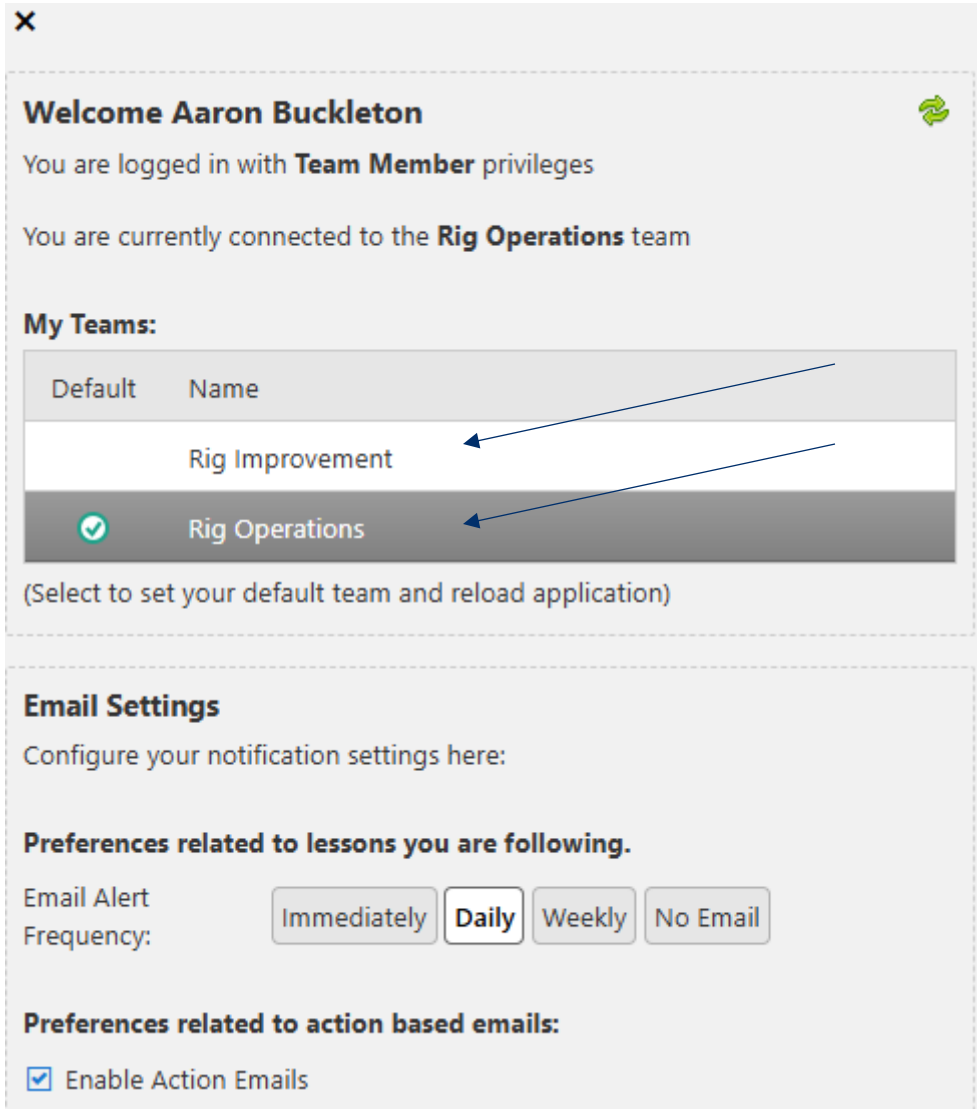
62 items in 7 pages


Welcome Aaron Buckleton
You are logged in with Team Member privileges
You are currently connected to the Rig Operations team
My Teams:
Default
Name
Rig Improvement
Rig Operations
(Select to set your default team and reload application)
Email Settings
Configure your notification settings here:
Preferences related to lessons you are following.
Email Alert Frequency:
Immediately
Daily
Weekly
No Email
Preferences related to action based emails:
Enable Action Emails

Measuring its Success?

The Improvement

Shared learnings for others to implement

Did we have similar proposed improvements submitted to this after the information was shared?

The Improvement

Working at Height Procedure

Document # HSE_7150.0_G

5.1.4

Lanyards *Only lanyards equipped with a shock absorber(s) shall be utilized at Noble locations. Double lanyards shall be used as necessary to maintain 100% tie off. Note: ANSI standards will only allow lanyards to achieve a weight capacity of 310 lb.; CFR 1926.502 allowing capacity to extend up to 420 lb. Manufacturers make a variety of lanyards that are tested up to this increased weight capacity. It is recommended that all rigs carry some of these increased-capacity lanyards in the event one is required.*

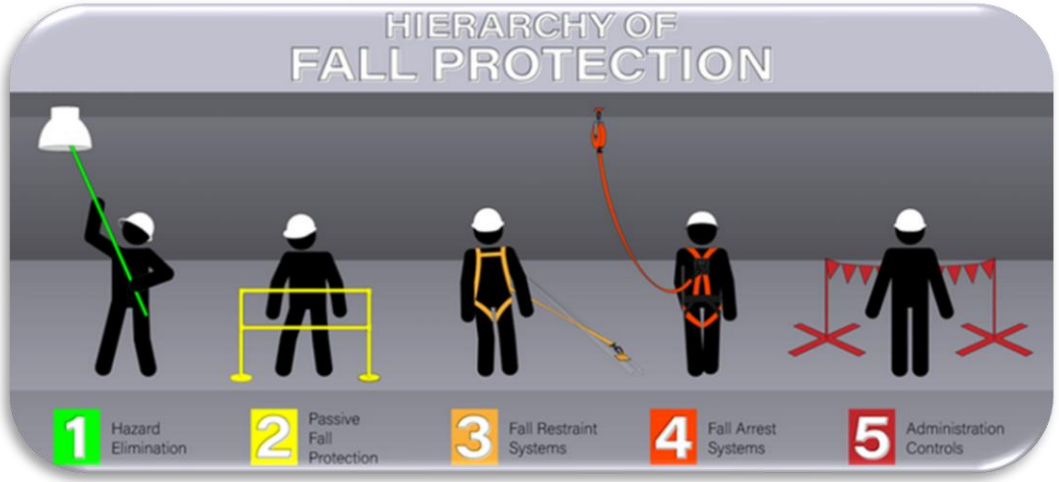
Co-Creator Solution

Current

Only lanyards equipped with a shock absorber(s) shall be utilized at Noble locations.

Changed to

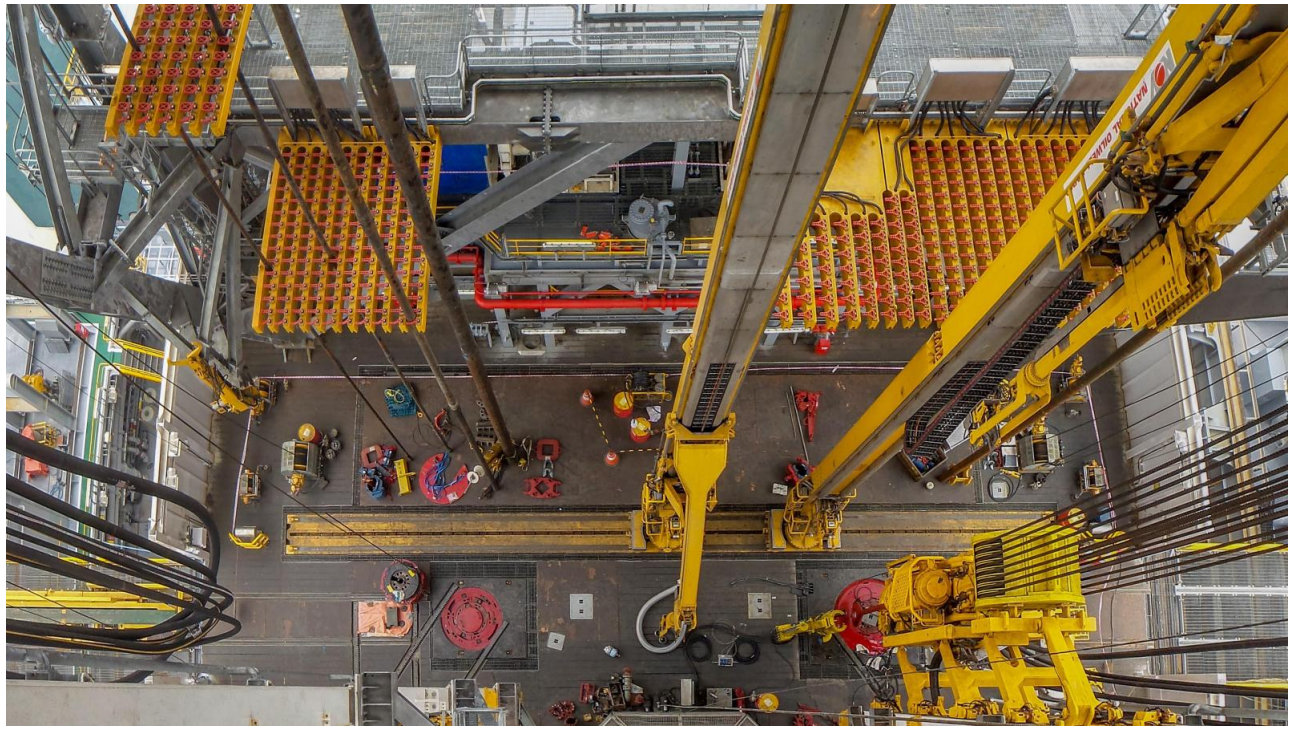
Working at height lanyards that restrict falls may be used at all Noble locations. When there is the possibility of falling, only lanyards equipped with a shock absorber(s) shall be utilized at Noble locations



Restrictive lanyards such as Nanolocks may be considered to be used

Shared learnings for others to implement

Did we have similar proposed improvements submitted to this after the information was shared?



Both of these improvements have been incidents before

People falling off tanks

people being hurt in the red zone…

When we investigate the incident, we found root causes and ‘fixed them’

However similar incidents happened again.

The proposed improvements and lessons learnt programs come from the frontline to improve they're over all working conditions which usually addresses the 3000ft Overview of how to add capacity to their spaces.

Feel free to reach out!

Thomas Koester
Senior Human Factors Specialist
+45 43 25 07 00
humanfactors@forcetechnology.com
forcetechnology.com