

Safety Awareness Topic of the Month

The Prevention of Dropped Objects

This is commonly known as DROPS and the golden rules here are; keep everything as simple as possible, conduct regular inspections and treat every site individually (this is particularly important when improvements are being made, or have been made on sister rigs as retention methods can differ).

There are multiple DROPS prevention methods available to designers and end users of equipment. However, following a few basics simplifies prevention requirements:

- ✓ For permanent structures that require no disassembly, welding is the preferred option. Regular periodic inspection of the welds preferably undertaken without damage to the coating material is best practice. Any repairs necessary should be done at the earliest possible opportunity by competent welders using the OEM guidelines.
- ✓ For bolted structures the simplest and most effective secondary retention is the use of wedge type washers. Even under the most severe conditions these will not allow the bolts to vibrate and loosen when correctly installed as per the OEM recommendations. The advantage with these is they may be reused multiple times as can the bolts and nuts.
- ✓ Pinned items should where possible have a cross bolt or at least a split pin sized to fit.
- ✓ Some OEM equipment e.g. Top Drive utilises safety wire - always reinstall it correctly.
- ✓ As mentioned in a previous safety bulletin, almost all pressure hose failures occur close to the ferrule. Suitably installed rated whip socks prevent both flail injuries and DROPS. It is important here to follow the OEM installation instructions, normally a minor amount of free play in the legs (10 – 15mm) and the alignment of anchor points with the hose. If your company preference is for the use of whip checks these also need to be kept as short as possible and aligned with the anchorages.
- ✓ Temporary items require additional thought prior to installation. Where possible use one of the preceding methods. Clamps are a commonly used item where no other method is possible but care is required to ensure coatings remain undamaged. This is of particular importance in corrosive atmospheres e.g. offshore.
- ✓ When undertaking maintenance where DROPS may occur, each individual worker should take the appropriate arrangements to minimise the risk. Usually this is accomplished by using tethered tools and storage devices e.g. tool belt or satchel, no-go zones, checklists of items in use, checking the area is clear of loose items, and verification of the safety arrangements and any permit requirements.

Over recent years there have been a large number of near hits, some serious injuries and some fatalities as a result of dropped objects.



The wedge type washers, Nord-lock X series are shown here, one of the types available to reduce the likelihood of a DROPS incident.