



Are Your Shackles Safe for Overhead Lifting?

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There are many different types of shackles to accommodate any potential rigging application. Each type is created for unique use, some specifically for overhead lifting applications. It's important to understand the different types of shackles and which are safe for overhead lifting.

Chain Shackles

Chain shackles are best-suited for straight line, single connection pulls because of their U-shape. **Anchor or bow shackles** have a more generous loop. This allows them to be side loaded or used for multiple connections.

Whether you use chain or anchor shackles, there are three types of pins that are used to secure a shackle, each with their own benefits and limitations.

When determining the best shackle for your lifting application, there are many options to choose from. Shackles are typically available in two styles: chain style and anchor style.

Screw Pin Lifting Shackles

Screw Pin Shackles allow for quick and easy removal of the screw pin, which makes this style ideal for applications where the shackle is removed frequently. While the threaded pin can resist axial forces, it should not be cyclically loaded. Additionally, it is unreliable and vulnerable to backing out in applications where the pin is subjected to a torque or twisting

action. In some applications, it is recommended to “mouse” the screw pin to prevent it from unscrewing. **This type of shackle is suitable for overhead lifting.**

Bolt, Nut & Cotter Lifting Shackles

Of all shackle types, bolt, nut, and cotter shackles provide the most secure pin arrangement, resisting axial and torsional loading. This type of shackle should be used in **semi-permanent applications** where the pin is removed infrequently. **Bolt, nut, and cotter shackles are suitable for overhead lifting.**

Round Pin Lifting Shackles

Round Pin Shackles allow for easy removal by simply removing the cotter that holds the pin in place. These shackles perform well where the pin is subjected to a torque or twisting action. They are not recommended for use where the pin is subject to an axial load. **Round pin shackles are not suitable for overhead lifting.**

For more information on shackles, check out our safety webinar on the Proper Use of Shackles.