



Operating Practices ■ Recovery Hardware

SHACKLES



WARNING

- Failure to read, understand and follow these instructions may cause death or serious injury.
- Read and understand these instructions before using shackles.
- Screw pin shall be fully engaged.
- If designed for a cotter pin, it shall be used and maintained.
- Applied load should be centered in the bow to prevent side loading.
- Multiple sling legs should not be applied to the pin.
- If side loaded, the rated load shall be reduced according to Table 1 found below.

Angle loads must be applied in the plane of the bow.

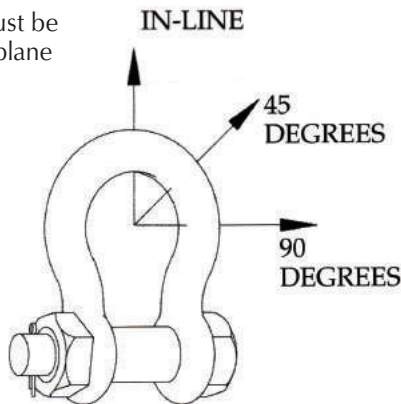


Table 1

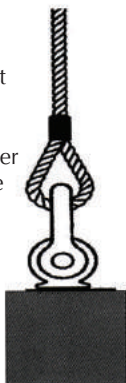
Side Loading Reduction Chart For Screw Pin and Bolt Type Shackles Only +	
Angle of Side Load from Vertical In-Line of Shackle	Adjusted Working Load Limit
0° In-Line*	100% of Rated Working Load Limit
45° from In-Line*	70% of Rated Working Load Limit
90° from In-Line*	50% of Rated Working Load Limit

* In-Line load is applied perpendicular to pin.

+ DO NOT SIDE LOAD ROUND PIN SHACKLE

CONNECTION OF SLINGS TO SHACKLES

Diameter of shackle must be greater than wire rope diameter if no thimble in eye.



Shackle must be large enough to avoid pinching of synthetic slings.



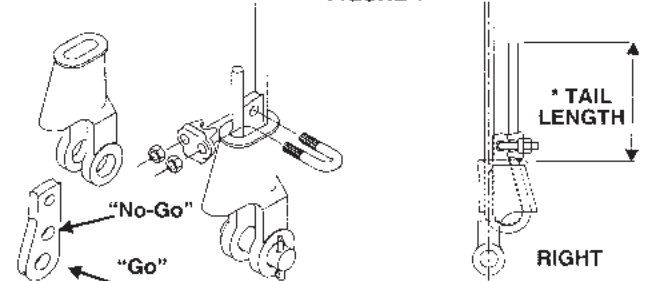
WEDGE SOCKET



WARNING

- Loads may slip or fall if the Wedge Socket is not properly installed.
- A falling load can seriously injure or kill.
- Read and understand these instructions before installing the Wedge Socket.
- Do not side load the Wedge Socket.
- Apply first load to fully seat the Wedge and Wire Rope in the socket. This load should be of equal or greater weight than loads expected in use.

FIGURE 1

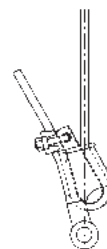


*Tail Length	
Standard 6 to 8 strand wire rope	Rotation Resistant Wire Rope
A minimum of 6 rope diameters, but not less than 6"	A minimum of 20 rope diameters, but not less than 6"

TABLE 1

Rope Size	3/8	1/2	5/8	3/4	7/8	1	1 1/8
Clip Size	3/8	1/2	5/8	3/4	7/8	1	1 1/8
*Torque Ft./lbs.	45	65	95	130	225	225	225

* The tightening torque values shown are based upon the threads being clean, dry, and free of lubrication.



WRONG
Rope
Backward



WRONG
Wedge
Backward



WRONG
Tail Clipped
to live Line

OPERATING PRACTICES

- Apply first load to fully seat the Wedge and Wire rope in the socket. This load should be of equal or greater weight than loads expected in use.
- Efficiency rating of the Wedge Socket termination is based upon the catalog breaking strength of Wire Rope. The efficiency of a properly assembled Wedge Socket is 80%.
- During use, do not strike the dead end section with any other elements of the rigging (called two blocking).



Operating Practices Recovery Hardware

HOIST, WINCH & RECOVERY HOOKS

WARNING

- Loads may disengage from hook if proper procedures are not followed.
- A falling load may cause serious injury or death.
- Threads may corrode and/or strip and drop the load.
- Hook must always support the load. The load must never be supported by the latch.
- Never apply more force than the hook's assigned Working Load Limit (WLL rating.)
- Never shock load a hook.
- Read and understand these instructions before using hook.
- Always visually inspect hook before using.
- Never use a hook whose throat opening has been increased, or whose tip has been bent more than 10 degrees out of plane from the hook body, or is in any other way distorted or bent. **Note: A latch will not work properly on a hook with a bent or worn tip.**
- Remove from service any hook with a crack, nick, or gouge.
- Never repair, alter, rework, or reshape a hook by welding, heating, burning, or bending.
- Never side load, back load, or tip load a hook. (see figure 2)
- Eye hooks, shank hook and swivel hooks are designed to be used with wire rope or chain.
- Do not swivel a swivel hook while it is supporting a load.
- Always make sure the hook supports the load. (see figure 3) The latch must never support the load. (see figure 4)
- See ASME B30.10 "Hooks" for additional information.
- Do not stand between disabled vehicle and recovery vehicle.

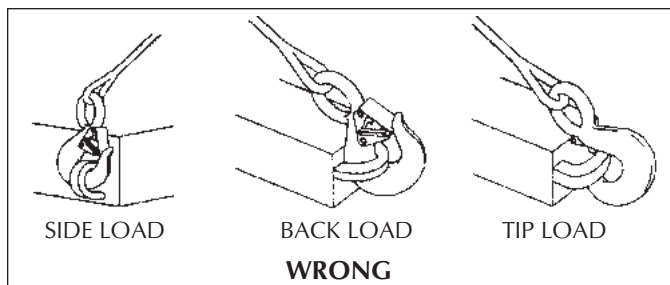


FIGURE 2

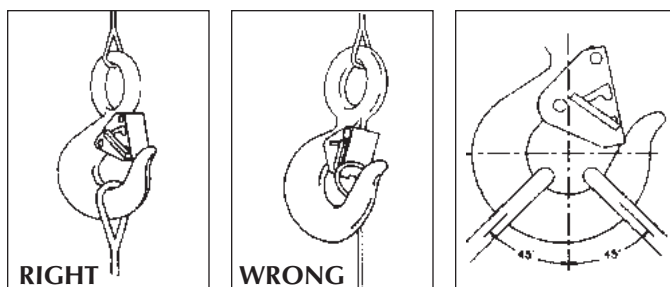


FIGURE 3

FIGURE 4

FIGURE 5

SELF LOCKING HOOKS

WARNING

- A visual periodic inspection for cracks, nicks, wear, gouges and deformation as part of a documented inspection program, should be conducted by trained personnel in compliance with ANSI B30.10.
- Never use a hook whose throat opening has been increased or shows any visible apparent bend or twist from the plane of the unbent hook, or is in any other way distorted or bent. NOTE: A latch will not work properly on a hook with a bent or worn tip.
- Remove from service any hook with a crack, nick, or gouge.
- Never repair, alter, rework, or reshape a hook by welding, heating, burning, or bending.
- Never side load, back load or tip load a hook. Side loading, back loading and tip loading are conditions that damage and reduce the capacity of the hook.
- Always make sure the hook supports the load.
- Do not use hook tip for lifting or pulling.
- Loads may disengage from hook if proper procedures are not followed.
- A falling load may cause serious injury or death.
- Self-Locking latch will unlock when trigger is depressed.
- Never use hook unless hook and latch are fully closed and locked.
- Keep body parts clear of pinch point between hook tip and hook latch when closing.
- Keep hand(s) from between throat of hook and sling or other device.
- Never apply more force than the hook's assigned Working Load Limit (WLL) rating.
- Read and understand these instructions before using hook.
- When placing two (2) sling legs in hook, make sure the angle from vertical to the leg nearest the hook tip is not greater than 45 degrees, and the included angle between the legs does not exceed 90 degrees.
- See ANSI/ASME B30.10 "Hooks" for additional information.

