

Crane Block Warnings and Use Limitations

This document contains warnings and use limitation information applicable to Gunnebo Johnson Corporation Crane Blocks and is furnished with all Gunnebo Johnson Corporation shipments. Crane Block distributors and lift system manufacturers must pass on this information in their warnings and use limitation literature where Gunnebo Johnson Corporation Crane Blocks are involved.

Protect yourself and others

- **NEVER** use a crane block without training.
- **ALWAYS** inform yourself ... Ask your employer for the manufacturer's crane block use limitations.
- **ALWAYS** comply with applicable Country regulations.
- **ALWAYS** know load weight.
- **NEVER** use a crane block without a legible rated load tag.
- **NEVER** overload a crane block.
- **NEVER** ride on a crane block or load.
- **NEVER** use an Improperly rigged crane block.
- **NEVER** use a worn - out or damaged crane block.
- **NEVER** use a crane block in extreme temperatures.
- **NEVER** use a crane block in acidic conditions.

Never use a crane block without training...OSHA regulation requires responsible work practice.

"The employer shall permit only those employees qualified by training or experience to operate equipment or machinery." OSHA 1926.20 (b) (4).

"Employee shall be knowledgeable of all warnings and cautions on the crane block." - OSHA 1910 Subpart N and 1926 Subpart N.

Employee training should include information given in OSHA training literature, ASME B30.10- 2005 Hook Safety Standards, ASME B30.5-2007 Mobile and Locomotive Cranes and Gunnebo Johnson Corporation's DVD of "Recommended Inspection Practices for Johnson Lifting Accessories" and this document.

Always inform yourself...Ask your employer for crane block safe use instruction.

"The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to injury."-OSHA 1926.21 (b) (2).

Always comply with applicable Country regulations...Federal and Local regulations govern worksite activity.

Understand all governing laws and safety standards before use of crane blocks. OSHA 1910.180 and 1926.550 regulates product requirements, operating practices, product identification, inspection requirements, and use limitation obligations.

"If a particular standard is specifically applicable to a condition, practice, means, method, operation, or process, it shall prevail over any different general standard..." OSHA 1910.5 (c) (1).

Contact OSHA at 800-321-6742, www.osha.gov and ASME at 800-843-2763, www.asme.org for reference assistance.

Always know load weight...Avoid crane block failure.

The weight of the load shall be within the rated load of the crane block.

Weight of the load to be lifted must be known for determination of proper reeving and rigging of crane block.

- **Never use a crane block without a legible identification tag...** Crane block tag is required to insure proper block application.

"All hook and ball assemblies and load blocks shall be labeled with their rated capacity and weight."- ASME B30.5-1.7.6.

- **Never overload a crane block...**Understand Working Load Limits. Overload can cause crane block failure or permanent damage.

Maximum crane block Working Load Limit (Rated Load) is valid only when all crane block sheaves are reeved. Partial reeving requires a Maximum Working Load Limit reduction; $WLL_{PR} = WLL_{MAX}$ times the No. of reeved sheaves divided by the maximum No. of sheaves.

- **Never ride on a crane block or load...**Avoid death or injury.

"All employees shall be kept clear of loads about to be lifted and of suspended loads." -OSHA 1926.550 (a) (19).

"No hoisting, lowering, swinging or traveling shall be done while anyone is on the load or hook assembly. " -OSHA 1910.180 (h) (3) (v).

The use of a crane block to hoist employees on a personnel platform is *prohibited*. *Except* when the erecting, use, and dismantling of conventional means of reaching the worksite, such as a personnel hoist, ladder, stairway, aerial lift, elevating work platform or scaffold, would be *more hazardous* or is *not possible* because of structural design or worksite conditions. - OSHA 1926.550 (g) (2).

Follow Crane Operators' Manual for personnel lifting requirements.

- **Never rig a crane block to a crane or a load improperly...** Avoid dropped loads and crane block damage.

Crane block shall **not** be;

- allowed to "two-block",
- unsymmetrically reeved,
- used with reeving off lead greater than 2.5 degrees,
- used with a single part of line unless expressly permitted,
- used as a wrecking ball,
- used to drag a load,
- subjected to high vibration,
- immersed in water.

Hook load rigging shall be centered in the base (bowl/saddle) of the hook to avoid point loading of the hook and rigging disengagement. (See figure 1a, 1b, & 1c.).

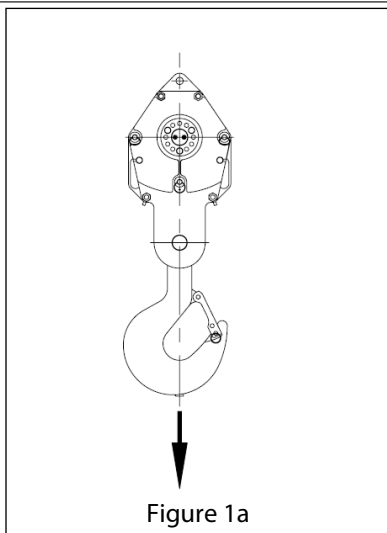


Figure 1a

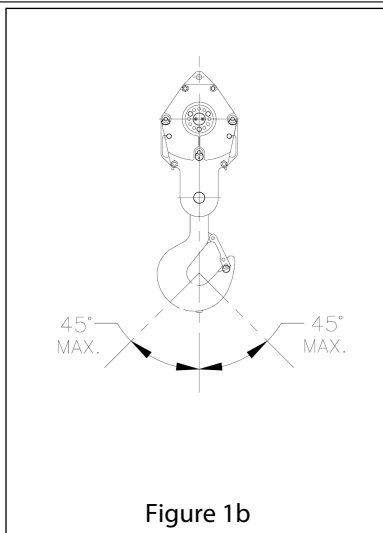


Figure 1b

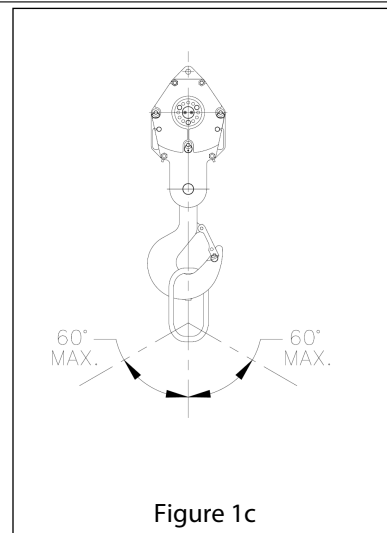


Figure 1c

When using a latch to close the throat opening of the hook, care shall be taken that the rigging load is not carried by the latch. Hook latches aid in the retention of loose slings under slack rigging conditions only and are not intended to be anti-fouling devices during lifting. Such fouling is extremely dangerous and shall be avoided by proper rigging and controlled lifting dynamics.

- **Never use a worn-out or damaged crane block...**Avoid structural or mechanical failure.

Each day before use, the crane block and its fasteners and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during crane block use where service conditions warrant. Damaged or defective crane blocks shall be immediately removed from service. In addition to the daily inspection, a thorough periodic inspection shall be made on a regular basis, to be determined on the basis of (A) frequency of crane block use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of crane blocks used in similar circumstances.

Such inspections shall in no event be at intervals greater than once every 12 months.

The following findings shall be cause for crane block removal from service until repaired or replaced:

- Elongated center pin and hook trunnion holes exceeding 5% of original diameter,
- Bent side plates,
- Severe corrosion pitting,
- Corroded hook threads,
- Bent or twisted hook,
- Welding on hook,
- Damaged or dysfunctional hook latch,
- Cracks in sheaves, side plates, cheek weights, center pins, hook trunnion, dead end connections and hook.
- Material loss due to wear exceeding 10% of original section.
- Sheave wobble,
- Deeply corrugated (not imprinted) sheave grooves,
- Sheave wire rope groove diameter smaller than 2.5%

or greater than 10% of the nominal wire diameter,

- Missing or damaged retaining nuts, snap rings, set screws, cotter pins, tie bolts, hook nut cap screws and lock wire,
- Missing or illegible rating and warning tags.

The following findings shall be cause for crane block removal from service until corrected:

- Loosened tie bolt nuts, center pin round nuts, cheek weight cap screws and hook nut cap screws. Tie bolt nuts to be torqued to 35-40 ft-lbs and restaked, all other fasteners wrench tight.
- Lack of sheave and hook bearing lubrication.
Continuous operation: lubricate bushings every 8 hours and roller bearings every 24 hours.
Intermittent operation: lubricate bushings and bearing every 14 days.
- **Never use a crane block in extreme temperatures...**Sudden failure can occur.

Crane blocks shall not be heated above 180 degrees F. Crane block Working Load Limit is valid between 180 degrees F and service temperature given on the identification tag with normal lifting precautions.

Additional lifting precautions are required below the service temperature given on the identification tag because cold temperature begins to affect the crane block material properties.

Lifting above 75% of the Working Load Limit (WLL), at temperatures between the service temperature given on the identification tag and -40 degrees F, must be done at a slow and steady rate to avoid stress spikes common in normal hoisting dynamics.

75% of the WLL must not be exceeded, when lifting in temperatures below -40 degrees F.

- **Never use a crane block in alkaline or acidic conditions.**

Gunnebo Johnson Corporation Crane Blocks shall not be used in alkaline or acidic conditions. Resulting metal embrittlement and accelerated corrosion can cause sudden failure.