

Overhaul Ball Warnings and Use Limitations

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

Protect yourself and others

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

- **Never use an overhaul ball 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 overhaul ball." - 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 overhaul ball 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 overhaul ball. 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 overhaul ball failure.

The weight of the load shall be within the rated load of the overhaul ball.

Weight of the load to be lifted must be known for determination of proper rigging of overhaul ball.

- **Never use an overhaul ball without a legible identification tag...** Overhaul ball tag is required to insure proper ball application.

All hook and ball assemblies and load blocks shall be labeled with their rated capacity and weight. - ASME B 30.5-1.7.6.

- **Never overload an overhaul ball...**Understand Working Load Limits. Overload can cause overhaul ball failure or permanent damage.
- **Never ride on an overhaul ball 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 an overhaul ball 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.

Follow crane operator's manual for proper personnel lifting requirements.

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

Overhaul ball shall **not** be;

- Allowed to "two-block",
- used as a wrecking ball,
- used to drag a load,
- subjected to high vibration or
- 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).

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.

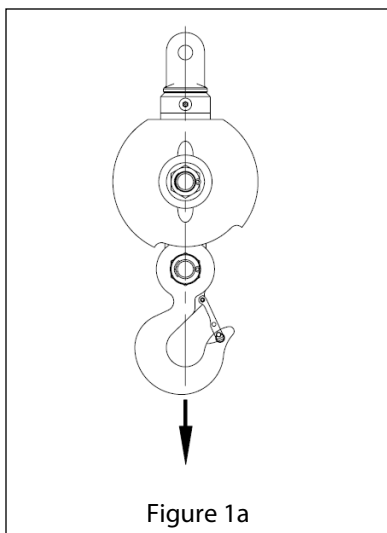


Figure 1a

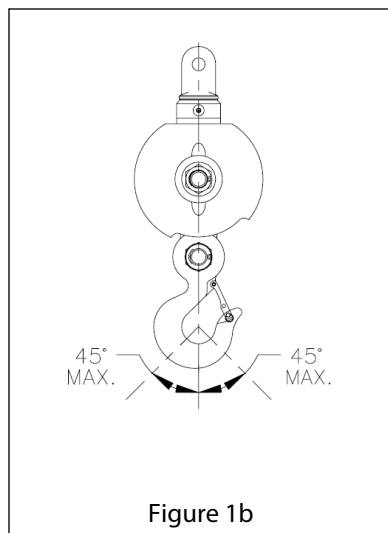


Figure 1b

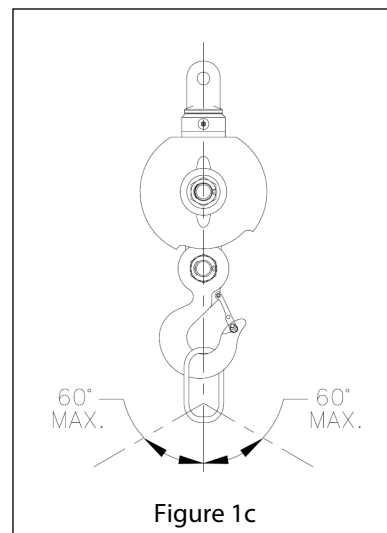


Figure 1c

- **Never use a worn-out or damaged overhaul ball...**Avoid structural or mechanical failure.

Each day before use, the overhaul ball 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 overhaul ball use where service conditions warrant. Damaged or defective overhaul ball 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 overhaul ball use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of overhaul ball used in similar circumstances. Such inspections shall in no event be at intervals greater than once every 12 months.

The following findings shall cause overhaul ball removal from service until replaced or repaired;

- Elongated ball pin holes, hook latch pin holes and swivel eye exceeding 5% of original diameter,
- Swivel end play gap exceeding .08". Excessive end play indicates damaged internal set screw. (See Figure 2)
- Bent connector plates,
- Severe corrosion pitting,
- Bent or twisted hook,
- Welding on hook,
- Damaged or dysfunctional hook latch,
- Cracks in connector plates, ball casting, ball pin, hook latch pin, swivel and hook,
- Material loss due to wear exceeding 10% of original section,
- Loose, missing or damaged retaining nuts, cotter pins or swivel set screws or
- Missing or illegible rating and warning tags.

The following findings shall cause overhaul ball removal from service until corrected;

- Lack of swivel bearing lubrication.
Continuous operation: Lubricate every 24 hours.
Intermittent operation: Lubricate every 14 days.

- **Never use an overhaul ball in extreme temperatures...**Sudden failure can occur.

Overhaul ball shall not be heated above 180 degrees F. Overhaul ball 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 overhaul ball 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 an overhaul ball in alkaline or acidic conditions.**

Overhauls balls shall not be used in alkaline or acidic conditions. Resulting metal embrittlement and accelerated corrosion can cause sudden failure.

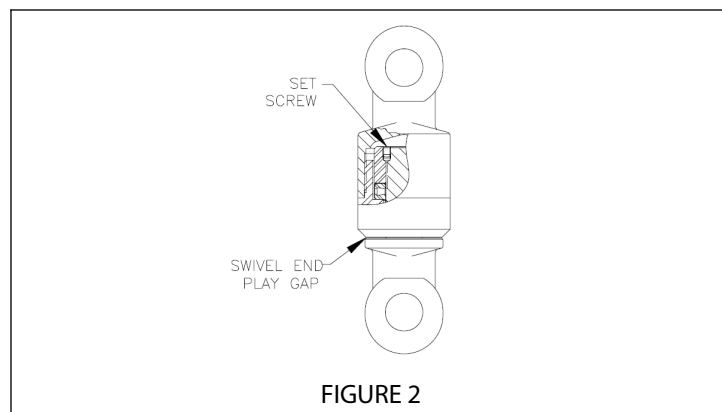


FIGURE 2