Crosby[®] - Real Life Solutions

Innovative McKissick[®] Split-Nut Retention System Makes Inspection Easier.

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^patent 7,000,905

Crane Block Hook Inspection in 4 Easy Steps

STEP 1— Remove protective vinyl cover

STEP 2 Remove retaining ring

STEP 3 – Slide keeper ring off split nuts

STEP 4 Easily remove split nut halves to inspect shank hook

* U.S. Patent 7,000,905 and 7,293,763

Shank hooks on crane blocks must be inspected in accordance with applicable ASME B30, CSA Z150 and other crane standards. These standards mandate the crane hook to be inspected for surface indications, damage and corrosion which could compromise the integrity of the crane block. Because of the type of environment in which these hooks are required to perform, the removal of corroded nuts from the threads can become a problem during inspections. The innovative patented* Split-Nut Retention System featured on McKissick[®] crane blocks makes inspection easier. With 4 easy steps, the hook can be disassembled, inspected and put back into service in a fraction of the time of a Fatigue Rated conventional threaded nut.

The Split-Nut is standard for McKissick[®] 380 Series and Easy Reeve[®] standard crane blocks up to 80 tons.

- Allows for easy inspection as required by ASME B30, CSA Z150 and other crane standards
- Eliminates conventional threaded nut and problems associated with the nut removal for inspection.
- Allows repeated installation and removal without risk of damage to hook/nut interface.
- Zinc plated finish for corrosion resistance
- Replacement hook and trunnion assemblies available for selected McKissick[®] 380 or Easy Reeve[®] blocks with threaded hooks.

The new patented* Split-Nut can be purchased in a variety of configurations that can be used to retrofit the following McKissick® blocks in the field or in the shop.

- Over 80 tons and larger crane blocks, upon request
- Bridge crane blocks
- 80 Series tubing blocks

In addition, the Split-Nut can be used to replace existing hooks on existing crane blocks currently in the field (most manufacturers makes and models) and on special designed lifting equipment.





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Call for hook thread checks

A Canadian construction safety organisation has issued a warning about the risks of worn threads on hook shanks.

A tower crane on a construction site was lifting a 4t load when the hook assembly failed, dropping the load near two workers.

The failure was caused by worn threads on the top of the hook, and was not visible once the load block was assembled, according to Worksafe, the workers' compensation board of British Columbia.

It advises that in absence of manufacturers' specifications, the hook should be inspected annually. It advises that inpectors check especially the first three threads from the bottom, and the thread relief area, for cracks using magnetic particle or dye penetrant tests. It recommends that the hook be removed from service if a crack is found in the bottom three threads or thread relief area.

It also advises that when reassembling the hook, technicians should check that the length of threads engaged between the hook and the nut is at least equal to the hook thread diameter, and that the nut retaining pin, set screw or key that prevents the nut from backing off the hook is secure.



What the standards say...

CSA Z150-98-CAN/CSA

4.3.5.2

Teardown, inspection and relubrication of the swivel, hook, and block assembly shall be performed at least every five years, and the hooknut shall be disassembled and inspected for corrosion and wear.

5.5.4.3 Inspection Targets

...complete inspection of the Crane shall be performed at intervals defined in clause 5.5.4.1. Deficiencies shall be examined to determine whether they can affect the safe operation of the Crane. Deficiencies can include:

(f) visible damage to hooks, retaining nuts, and safety latches;

ASME B30.10-2009

10-1.10.4 Periodic Inspections

(a) A complete inspection of the hook shall be performed by a designated person.

Note: Some disassembly may be required.

The hook shall be examined for conditions such as those listed in para. 10-1.10.5 and a determination made as to whether they constitute a hazard.

10-1.10.5 Removal Criteria

- (*j*) damaged, missing, or malfunctioning hook attachment and securing means
- (k) thread wear, damage, or corrosion