

Manual Chain Hoist Symptoms and Cures

Bulletin: **SB058-MCH**

Date: Sept. 15, 2016

Page: 1 of 1

By: T. Gagnet

Common issue encountered with many brands of Manual Chain Hoist

The hand chain wheel will rotate in the down direction from the weight of the load as it is attempted to be lifted:

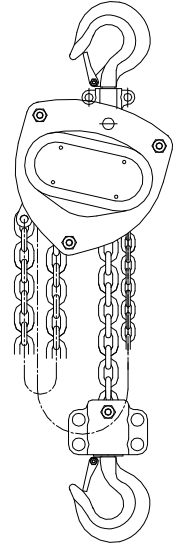
Cause: If an operator continues to lower the hoist when the tail chain is snagged or stopped against the hoist frame, the threaded hand chain wheel will be forced to rotate away from the brake disc until it is stopped by the slotted nut that retains it. The hand chain force applied when stopped against the limit, determines how tight the brake driver is against the slotted nut (Two nuts tightened against each other). This locks the hand wheel prohibiting it from rotating freely to engage the brake.

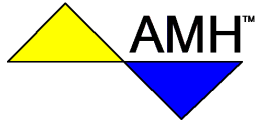
Cure: If a sufficient load is attached, the brake will recover. Or, with no load, by running the chain through the hoist until the hook is against the frame, then applying hand chain pull in the lift direction. Either will cause the hand chain wheel to be rotated away from the slotted nut and return the hoist to normal function.

To Demonstrate: Without load, lower the hoist until the chain stop is against the housing. Continue to apply hand chain force in the down direction. The hoist brake will then be disabled and the hand wheel will rotate in the down direction when a light load lift is attempted. Apply Cure to return to normal function.

Repair technicians be aware: If the hoist is tested it will correct itself as a significant load is lifted. If the hoist is first opened for inspection, no problem will be found. After reassembly it will test normally. Without this understanding it may result in the hoist returning to normal without explanation.

Note: If the slotted nut is found tight against the hand chain wheel then it is likely due to this issue. (When hoists are assembled, the slotted nut is tightened snug then loosened until the cotter pin can be inserted).





Lever Chain Hoist Symptoms and Cures

Bulletin: **SB058-LCH**

Date: Oct. 15, 2013

Page: 1 of 1

By: T. Gagnet

Common issues encountered with many brands of lever chain hoist equipped with automatic brakes including AMH, Badger and Harrington.

Will not ratchet UP but chain can be pulled through by hand without load:

Hoist **without load** will allow the chain to be pulled through by hand with the selector in "N" neutral position, but **will not ratchet up** when the selection lever is in "U" up position and a light pull is applied by hand on the hook side chain.

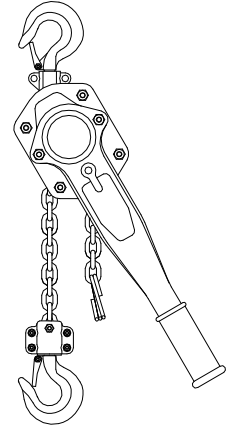
Cause: If an operator continues to crank the lever in the down direction, when the tail chain ring is snagged or is stopped against the hoist frame.

The brake driver (20A), engaged by the lever, will continue to rotate away from the brake disc until it is stopped by the castle nut (70). The force applied determines how much the threaded brake driver is tightened against the threaded castle nut (Two nuts tightened against each other). This prohibits the brake driver from rotating freely to engage the brake normally.

Cure: If a load is attached, the brake will recover as the lever is shifted to the "U" up position and the load is applied or, with no load, by pulling the chain through the hoist until the hook is against the frame, then cranking the lever in the lift direction.

Either will cause the brake driver to be rotated away from the stop nut and return the hoist to normal function.

To Demonstrate: Without load, pull the tail chain through the hoist until the stop is against the housing. Place the selector in D and apply force by cranking the lever causing the chain stop to be tightened against the hoist frame. Apply Cure to return to normal function.



Will ratchet UP but chain cannot be pulled through by hand without load:

Hoist **without load** will not allow the chain to be pulled through the hoist by hand when the selector is in "N" neutral but will ratchet the lever when the selector is in "U" up position and a light pull is applied by hand on the hook side chain.

Cause: A locked brake will occur if a hoist is suddenly relieved of the load, off of the lower hook, by some other means than lowering with the hoist, or if used in some applications like pulling down walls. The brake may also lock if abused by "Two Blocking", a nautical rigging term for pulling the lower hook block tightly against the hoist frame.

The brake driver (20A), engaged by the lever, is tightly screwed against the brake disc by torque generated by the load. The brake remained tight as the load was not released normally by the cranking the lever in the down direction.

Cure: Turn the directional lever to the "D" down position and pull sharply on the lever handle or re-apply a sufficient load then crank the lever down.

Either will cause the brake driver to be loosened from the brake disc and return the hoist to normal function.

To Demonstrate: Without load pull the hook through the hoist until it stops against the hoist frame. Place the selector in U and apply force to lever tightening the bottom hook against the hoist frame (Two blocking). Apply Cure to release the brake and return to normal function.