

# BONEHAM

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<b>Safety Bulletin No.</b>	SB-1606-01	<b>Subject:</b>	Unsatisfactory Installation of 4 Post Vehicle Hoists	<b>Date:</b>	13/06/2016
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## SAFETY BULLETIN – UNSATISFACTORY INSTALLATION OF 4 POST VEHICLE HOIST

Issued in accordance with MSIR 1995 – 6.2, 6.17, 6.18, 6.25, AS 1418.1, AS 2550.1 & AS 1418.9 & AS 2550.9.

### Background

During a recent inspection of a new four post vehicle hoist (hoist) installation, a number of deficiencies were found. The most serious was with the safety rail nuts and bolts not being installed in accordance with the manufacturer's (OEM's) installation instructions. This was the case on two of the four (4) posts (i.e. posts 3 and 4 at the non-control/ non-drive on end).

On posts 3 and 4 it was immediately noticed there were no locking nuts screwed onto the safety rail bolts. On post 3 the nut and bolt were found to be loose i.e. able to be unscrewed by hand (See Figure 1 & 2). This situation was evidently a result of an attempt to overcome the un-levelness of the floor/ foundations by changing the method of installing the nuts and bolts to set the safety rail height and clearance on posts 3 and 4.

*Note: The OEM of the inspected Hoist supplies as standard two nuts for each safety rail bolt which besides supporting the safety rail are intended to be used to set the height/ clearance and then lock together to prevent unwinding/ loosening. If unwinding/ loosening occurs, then this would cause the height/ clearance to go out of adjustment resulting in improper toggle (locking pawl) function.*

At the time of the inspection, posts 3 and 4 had one of the two nuts installed underneath the top of the post plate as a spacer instead of being screwed onto the protruding safety rail bolt thread above the plate. This resulted in the bolt thread not protruding sufficiently above the top of the plate to install a second nut as a locking nut.

The loose safety rail nuts and bolt on post 3 were deemed to be unsafe. As a result of these findings it was felt necessary to prepare and issue this bulletin to alert responsible persons for the installation, operation and maintenance of 4 post vehicle hoists of this issue and reiterate the need to ensure correct installation of hoists in accordance with the OEM's installation instructions.

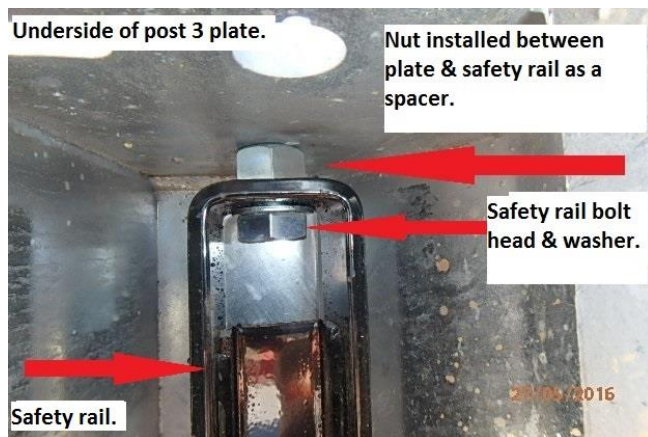


Figure 1 – One of the two nuts installed underneath the plate.

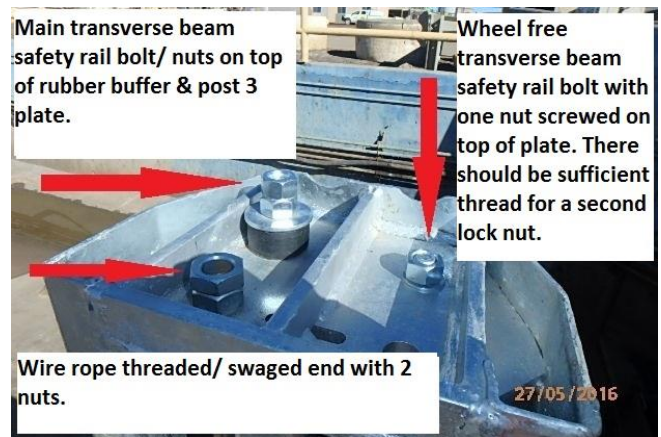


Figure 2 – Top of inspected post 3 with loose nuts and bolt

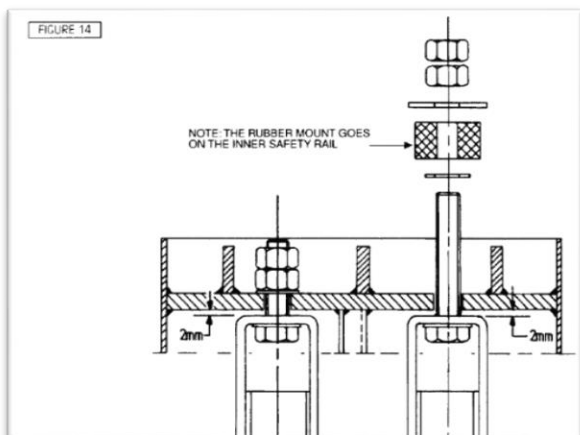


Figure 3 – Snipping from OEM installation instructions specifying set-up of safety rails nuts/ bolts & buffer pad.

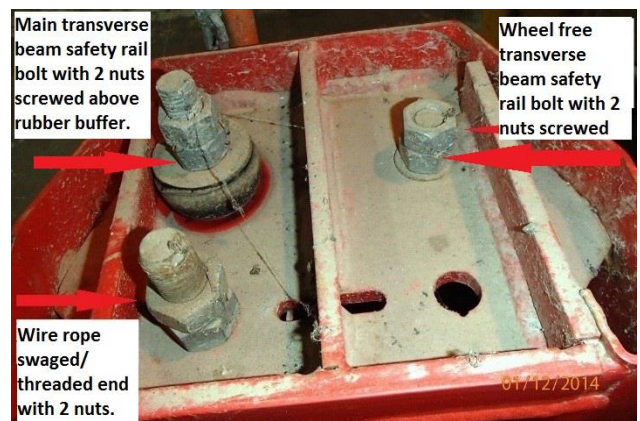


Figure 4 – Photograph depicting correct installation of safety rails nuts/ bolts & buffer pad.

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## Summary of Hazard

The importance of ensuring the correct and secure installation of the safety rail nuts and bolts cannot be overstated. The safety rails, nuts and bolts are critical to the safe operation of the hoist.

These are in-line components which support the vehicle when it is lowered and locked with the engagement of the locking toggles (pawls). It is imperative safety rails, nuts and bolts are installed so as provide the correct height and clearance and secured to ensure they will not loosen/ unwind.

Should loosening/ unwinding of the safety rail nuts and bolts occur then damage will likely occur to the hoist and in a worst case scenario the e.g. the locking pawls not engaging causing the transverse beam to become un-level. In such a case the supported vehicle could become unstable resulting in a dangerous situation.

## Recommendations

It is recommended that the responsible persons having control over the installation, operation and maintenance of 4 post vehicle hoists at the site ensure the following checks are undertaken by a competent person:

- The OEM installation instruction manual.
- The un-levelness of the floor/ foundations and compare with the OEM's permissible tolerances.
- If the un-levelness exceeds the permissible tolerances, consult with your routine maintenance/ service provider to arrange remediation.
- The installation of the safety rails and securing bolts and nuts on each post and compare to OEM instructions.
- If not to OEM's specifications, contact your routine maintenance/ service provider and arrange remediation.
- If planning to install a new hoist or relocate an existing hoist, ensure the floor/ foundations meet the OEM's specifications before commencing installation.

The OEM installation instructions will likely differ between OEM's, but should specify the maximum acceptable limit of un-levelness e.g. over the length of the hoist between posts and over the width between posts. In any case un-levelness should be minimised as much as possible.

Note: Request your maintenance/ service provider to undertake the above checks at the next opportunity and confirm if the installation meets the OEM's specifications or not. If not initiate remediation required.

## Statutory Requirements

Under the requirements of the Mines Safety & Inspection Regulations 1995 (MSIR 1995), regulations (reg.) 6.34 and 6.40, vehicle hoists are registered classified plant requiring registration before use at a mine.

Providing the hoist has satisfactory evidence of current registration with either a State, Commonwealth, or Territory authority responsible for plant safety within Australia, it does not require registration with the Department of Mines and Petroleum (DMP). Do not accept any classified plant at your site unless you are provided with appropriate registration documentation (refer to DMP General Exemption from reg. 6.34(1) dated 17/06/2013).

Vehicle Hoists require statutory inspections by a formally appointed competent person before being placed into service and then at intervals not exceeding 2 years. Statutory inspections are required to be recorded in accordance with reg. 6.25 and 6.40 i.e. a classified plant record book and a plant log book. Do not allow classified plant requiring a statutory inspection to be used unless it has been inspected in accordance reg. 6.40.

Vehicle hoists also require 'periodic inspections' at intervals of 1 year (annually) and 'major inspections' at intervals of not more than 10 years (unless otherwise specified by the OEM) in accordance with AS 2550.1 and AS 2550.9. Routine maintenance inspections/ servicing are typically required at intervals of 3 months. Daily/ pre-operational inspections also apply as do the OEM's recommended maintenance/ servicing. All inspections and maintenance/ servicing must be recorded and available for examination by inspectors.

**IF YOU HAVE ANY QUESTIONS REGARDING THIS BULLETIN, PLEASE DO NOT HESITATE TO CONTACT EITHER BRETT BONEHAM, OR THE OEM OF THE VEHICLE HOIST.**

<b>Inspector:</b>	Brett Boneham	<b>Signature:</b>		<b>Date:</b>	13/06/2016
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