CONTRACTOR SAFETY ALERT

REAR TRALIER DRAW BAR FAILURE
Number: 118
Date: 4/12/2023

Background

On 11 October, Safety Alert 109 was issued advising that a rear trailer had disconnected from the drawbar. An industry expert was engaged to determine the failure mechanism of the bolt in the drawbar eye and recommend means to prevent a future recurrence.

Key points

- The industry expert determined that the failure was initiated through low bolt tension when the Drawbar Eye (DBE) was installed and lack of subsequent maintenance to check tension and movement. This resulted in movement and subsequent wear and failure of the DBE assembly.
- The DBE failure event was due to the loss of the castellated nut, this allowed the DBE to be removed from the through hole block that is welded to the drawbar.
- NHVR has published VSG4: Inspection of drawbar eyes. This can be found at: https://www.nhvr.gov.au.
- This guide has been produced by NHVR with the purpose of identifying common issues that lead to drawbar eye failures. VSG4 contains good practices that if followed it would take extreme or uncontrollable circumstances to result in a failure of a drawbar eye. The key points include, following the manufactures installation specifications and performing routine checks with special attention to movement, wear and cracks.

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Selecting a drawbar eye that has a large enough D-rating and that the owner/workshop is equipped to properly maintain is potentially an important choice.

Pros and cons for the different DBE's have been listed below in table 2:

Drawbar Eye type.	Pros	Cons
Bolt through	Easy to replace with right tools.	Block is difficult to replace once worn.
		Requires large torque wrench to tension properly
Bolt on	Easy to replace.	Lowest D-rating (200kN)
	Bolts tensions with "standard" 1/2" tension wrench.	
Weld in	High D-Rating (314kN)	Most difficult to replace
	No moving parts that can wear	
Type 480 Clamp on	Highest D-rating (320kN)	Expensive