Beamish Museum

Urgent Safety Advice Notice (USAN)

This USAN is issued to other operators when it is considered by the appropriate 'Responsible Person' at Beamish Museum that an incident or observation at Beamish Museum may have wider safety implications for other operators.

This notice is therefore issued as part of the Beamish Museum Safety Management System (Tramcar Maintenance & Inspection Policy) in order to meet the requirement of ROGS to co-operate with other operators with identical/similar equipment.

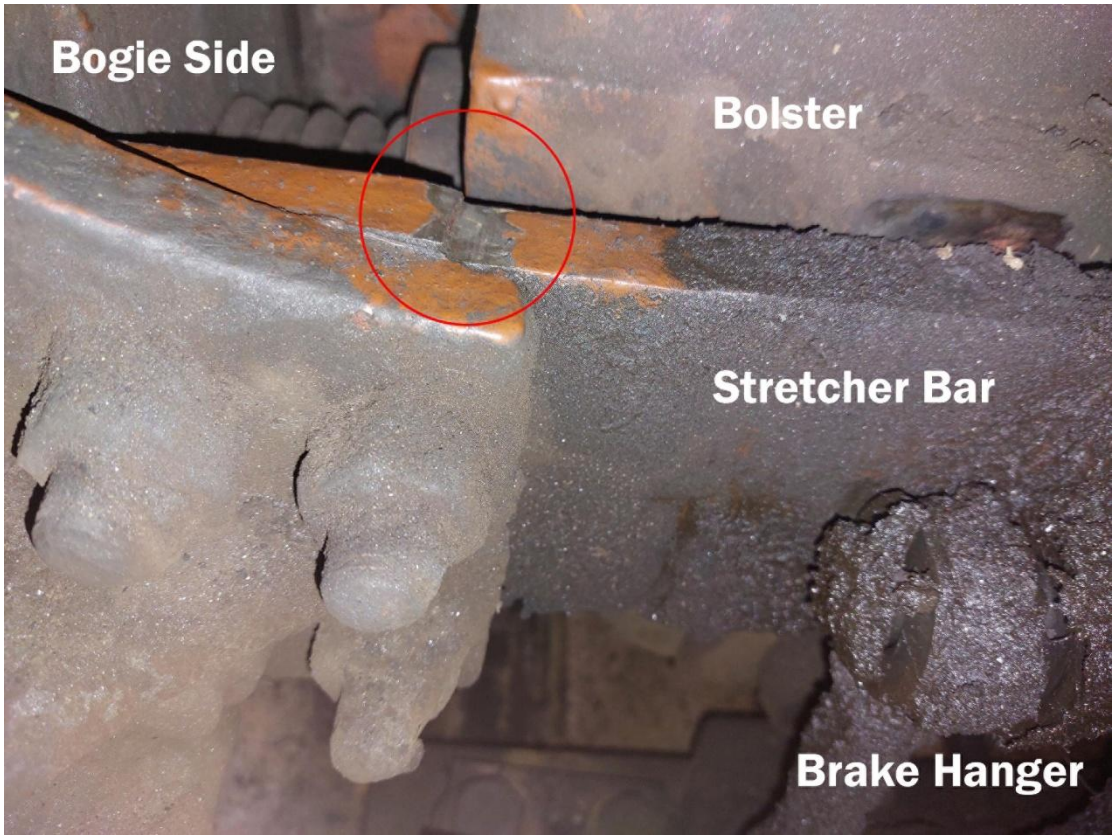
Title:	Blackpool McGuire trucks – Bogie Frame Stretcher Cracking
Raised by:	Paul Jarman (Director of Development – Transport, Industry & Design)
Defect date:	16/03/26
Vehicle type:	Tramcar operating on Blackpool McGuire trucks
Vehicle number:	31
Vehicle class:	Blackpool 'Marton Box'
Vehicle owner:	Blackpool Corporation (long-term loan to Beamish Museum)
Use being made of vehicle:	Tramcar in passenger carrying use
Systems giving rise to defect:	Bogie structure – cross members
Other affected vehicles:	Any tramcar operating on Blackpool McGuire trucks
Defect description:	Blackpool tramcar 31 was undergoing routine examination, which revealed suspected cracks in the anchor point of one of the plate frame stretchers where this meets the cast bogie side frame on one bogie. Experience with the same component on the other bogie suggested that this crack would run between the bolt holes, nearest to the centreline of the bogie. Upon dismantling and extraction of the stretcher, this was confirmed – see photographs on Page 3 of this USAN and attached drawing.
Geographical location:	Beamish Museum, DH9 0RG
Action taken:	The tram was withdrawn to enable the removal of the frame stretcher for replacement – this being determined as the most expedient method of

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correcting the problem whilst minimising the potential to reoccur. A previous fault on the other bogie produced an identical failure in the stretcher material, and both stretchers were replaced accordingly.
Both the fault stretcher outlined in this USAN, and its mate on the same bogie, are being replaced with new material. The bolts are also being replaced.
An assembly drawing is attached to this USAN email for reference. Of note are the in-equal hole spacings that originate from the truck's manufacture

Justification for advice: To alert other operators of similar trucks of this occurrence and to ensure their repair specifications and inspection processors are suitably robust to ensure they can identify any similar situation arising on their rolling stock.

Below: A labelled view of the stretcher and bogie side brackets in situ, with the suspected crack highlighted by a red circle. The pair of stretchers are secured to the bogie side frames by brackets, each having four bolts to secure it. The holes are not regular in spacing and were, presumably, set out and drilled on the assembly line when manufactured. It was also observed that there could be excessive percussive action of the bolster against the stretcher, allowed by considerable clearance on the wear plates (see drawing).



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Below: After removal the stretcher revealed that it was indeed cracked, with the end section beyond the innermost pair of bolts being completely separated from the outer end.



Below: A close-up of the end piece of the stretcher (stood on its end) which had remained secured to the bogie side frame.

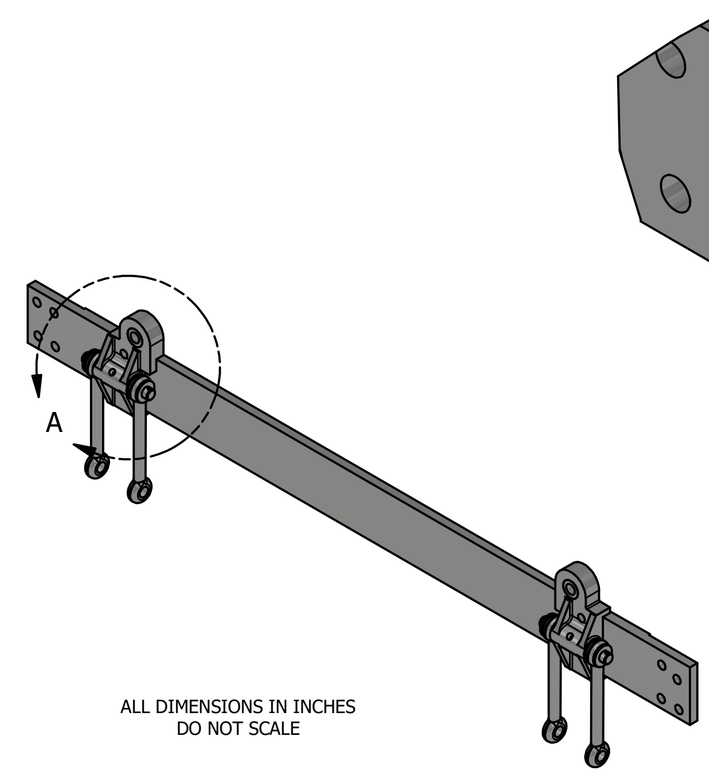


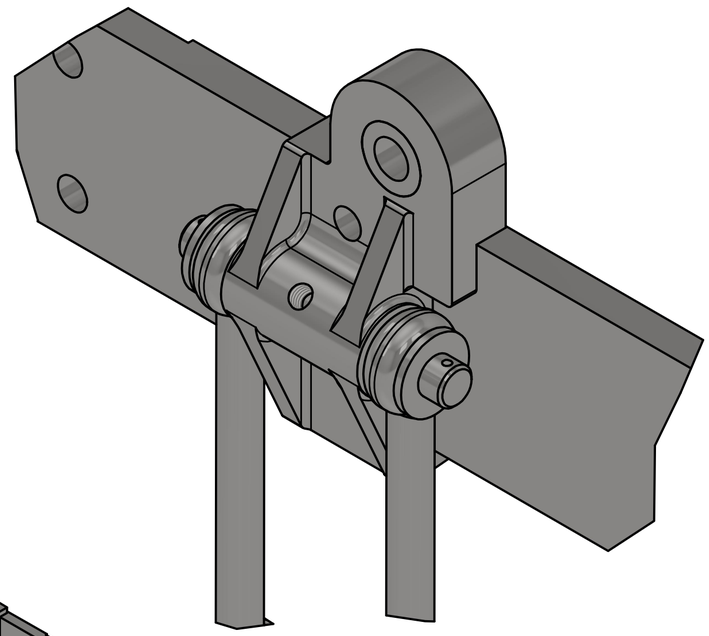
Associated Documents Tram 31 Stretcher Bar 1 End Trailing Assy 2.pdf

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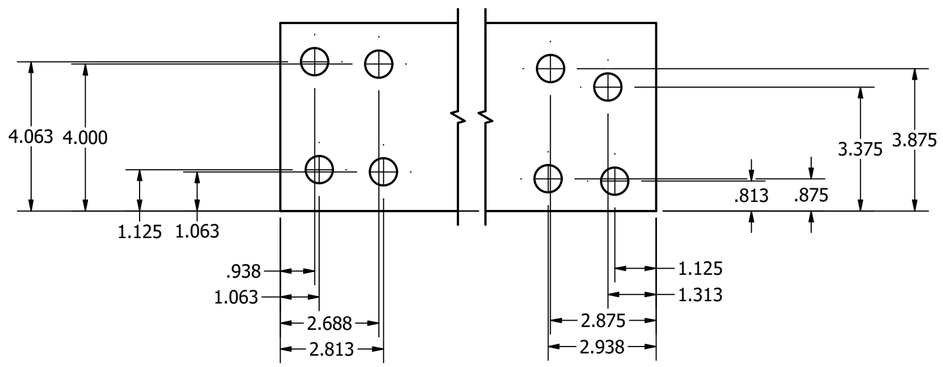
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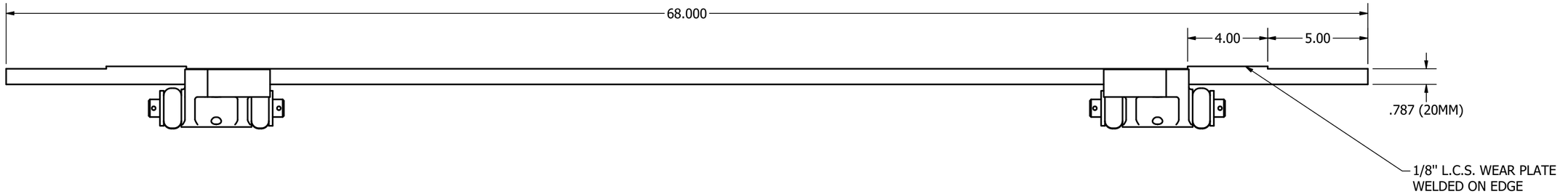


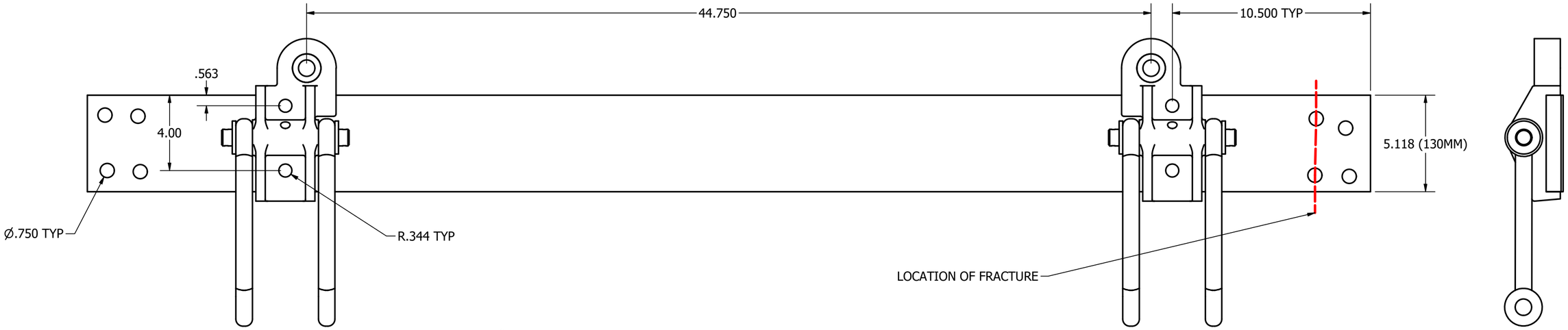
DETAIL A
SCALE 1 : 2

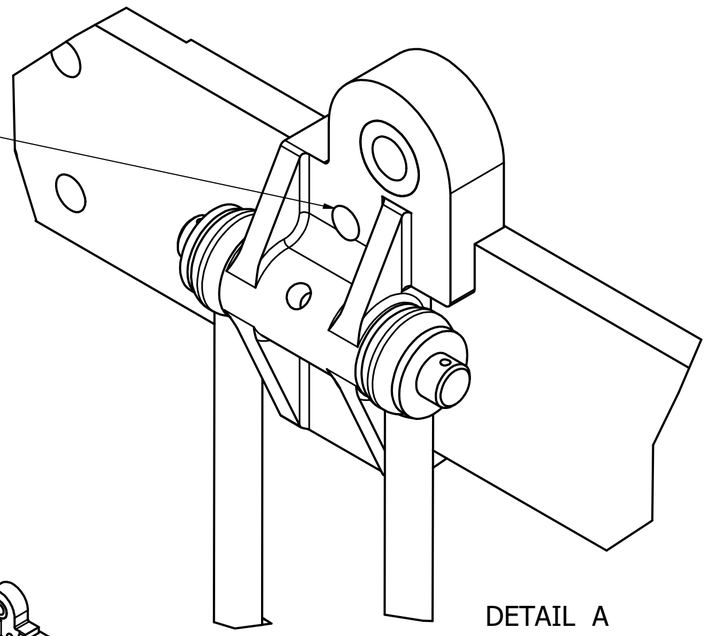


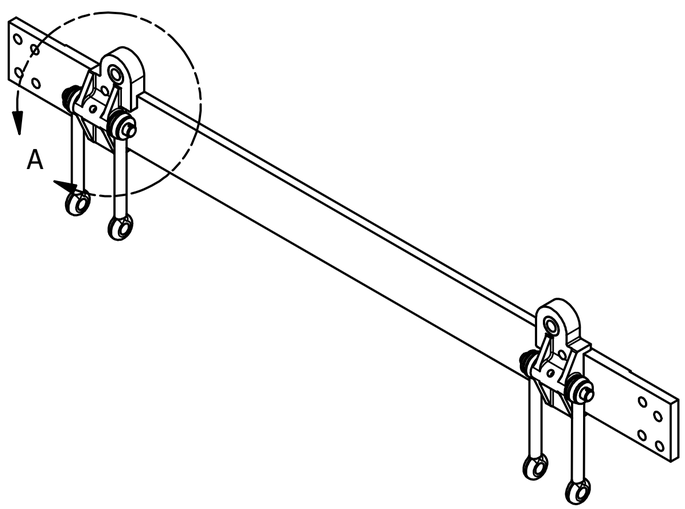
ALL DIMENSIONS IN INCHES
DO NOT SCALE

DRAWN chrisarmstrong	16/09/2025	130MM X 20MM S235-S275 FLAT BAR
CHECKED		TITLE: TRAM 31 STRETCHER BAR ASSY (1 END TRAILING)
QA		
MFG		
APPROVED		
SIZE A2		DWG NO Tram 31 Stretcher Bar 1 End Trailin
SCALE 1 / 4		REV
		SHEET 1 OF 1

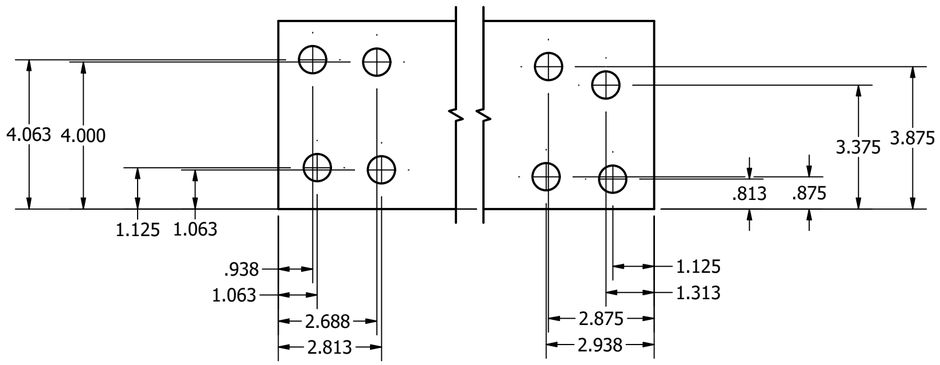








DETAIL A
SCALE 1 : 2



ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED
DO NOT SCALE

DRAWN chrisarmstrong	16/09/2025	130MM X 20MM S235-S275 FLAT BAR
CHECKED		TITLE: TRAM 31 STRETCHER BAR ASSY (1 END TRAILING)
QA		
MFG		
APPROVED		
		SIZE A2 / DWG NO Tram 31 Stretcher Bar 1 End Trailin / REV
		SCALE 1 / 4 / SHEET 1 OF 1