From: Mueller Erik
To: Manutes John
Subject: RE: Locomotive Coupler Stop Block photos
Date: Monday, April 17, 2023 12:35:51 PM
Attachments: image001.png

John,

While it is not easiest to discern every feature from the photos, the overall the fracture features appear consistent with fracture in overstress from outward bending.

The fracture surface is relatively flat with the exception of an upward facing shear lip toward the right, outer corner, and a depression with sharp corners on the left. The fracture is relatively rough, with a uniform surface luster. The surface oxide is a light maroon or rust color, consistent with post-fracture oxidation from exposure to humidity or water. There were no indications of localized areas of discoloration or geometries that would indicate a pre-existing crack. The features were consistent with bending outwards towards the right in the images.

I hope this helps. Let me know if you have any questions.

-Erik

From: Manutes John [redacted]@ntsb.gov>
Sent: Monday, April 17, 2023 1:07 PM
To: Mueller Erik [redacted]@ntsb.gov>
Subject: Locomotive Coupler Stop Block photos

Hey Erik,

Here are those pictures I was talking about. The preliminary report is here: RRD23LR008.aspx (ntsb.gov) Basically, the locomotive couplers jackknifed under high compressive loads and that force translated down to the wheels laterally in a rail roll-over event. The missing stop block was never found, and the bracket is now destroyed due to repairs made for repositioning the locomotives. My fault. If anything could be derived from these photos regarding "how" the bracket broke, it might be helpful to the investigation. We've considered that the bracket may have broken several hours prior to the derailment, or in the derailment. Our uneducated guess is that the break isn't 'significantly old'.

Let me know if you want me to put this request in Safti. I thought that might be a waste if there isn't enough info in these images to learn anything.

Thank you,
John

John Manutes
Railroad Accident Investigator
Denver, Colorado

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