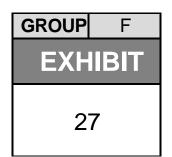


NATIONAL TRANSPORTATION SAFETY BOARD Investigative Hearing

Norfolk Southern Railway general merchandise freight train 32N derailment with subsequent hazardous material release and fires, in East Palestine, Ohio, on February 3, 2023



Agency / Organization

NTSB

Title

Summary of NTSB Pressure Relief Device Testing at Trinity Rail Maintenance Services, Saginaw, Texas, March 15-16, 2023

Docket ID: DCA23HR001

NTSB PRD Testing Summary Trn Saginaw

3/16/2023r1

Pressure Aluminum Aluminum in PRD / stem Pressure PRD Midland Spring ID/ Stem out Stem Stem / O- O-ring Top Guide Protective

SRAW

		built Date	(PRD) Model	Date	Pressure Setting	from pressure plate	Material	DOT/ PHMSA STD Min	PHMSA STD MAX	DOT/ PHMSA Vapor Tight Min Pressure VTP	1	Functioned when tested	PRD functioned STD As received	Debris in PRD Top guide	PRD Top guide -Any effect on function	seized in PRD guide bushing	functioned STD w/ new o-rings	Spring Free height Min 15.01	Coating Specs	of round max .025	condition	ring Retained cap	condition	condition	housing lid Composition	housing lid Heated/ melted/ destroyed
GATX	95098	1992	Midland A-34247-VA	*01-08	247.5	Disassembled	VA Viton A	240.07	254.9	198	Yes	DNT	DNT	No	No	No	DNT	10.793	UR Burned/	DNT	DNT	DNT	Melted	Melted/	B209-6061-	Melted/
	!					/Components										See Note 3			rusted DNT Compressed					Destroyed	T651 Alum	Destroyed
ОСРХ	80179	1990	Midland A-34247-SS-R- VGFS	*10-90 (12-94	247.5	Yes Complete	VGFS Viton GFS	240.07	254.9	198	Yes	Yes See Note 1	STD 49.2 & 149.7	No	No	Yes See Note 2	DNT	13.73 (2 1/2 coils	Non- coated D241634255 ASRH	0.007	Crack indication- PT	Dirty soot	Missing	Heated /tight	B209-6061- T651 Alum	Melted/ Destroyed
				Mid records)														at top compress ed)			PI			See Note 4		
ОСРХ	80235	1990	Midland A-37247-XS- ASXY-CVGFS	*01-09	247.5	Yes Complete	CVGFS Viton GFS	240.07	254.9	198	Yes	Yes	STD 122psi	Yes	No	No	No leak 150 psi	15.43	Xyland coated A34255ASXY	DNT	Dirty- No PT	Ok	Melted/ Degraded	Heated	B209-6061- T651 Alum	Melted/ Destroyed
ОСРХ	80370	2006	Midland A-34247-VA	*11-15	247.5	Yes Complete	VA Viton A	240.07	254.9	198	Yes	No	DNF Tested to 275 psi	No	No	Yes See Note 2	DNT	15.472	Non-coated DR33153425 55ASRAW	0.003	Corrosion/ Crack- indication- PT		Heated/ Degraded	Seized @ guide w/ stem	A36 Steel	Heated
TILX	402025	2016	Midland A-37247-XS- ASAL-VB	*08-16	247.5	Yes Complete	VB Viton B	240.07	254.9	198	Yes	Yes	STD 33.4 psi	No	No	No	DNT	15.44	ASAL =Aluminum coated D24163255A	0.003	Pitting	Ok	Melted	Good	A36 Steel	Heated

The data recorded in this summary is taken from each EXB-015 form completed at the NTSB testing March 15 and 16, 2023

Note 1 - Gas discharged when tested. Possibility valve leaked from burned out O-ring since the valve stem was seized in the top guide bushing.

Note 2 - Required the cage to be torch cut and hammered apart from the stem.

Number Tank Car Pressure Relief Device PRD Mfr

Note 3 - Undetermined - Top guide burned away.

Note 4 - Valve stem was also seized even though gas leaked from the valve during the test.

DNF= Did Not Function
DNT= Did Not Test
PRD= Pressure Relief Device/ Safety Valve
PT = Penetrant Test (dye Penetrant test)
STD= Start To Discharge
UR= Un-Readable
VTP= Vapor Tight Pressure

AAR / AAR/DOT/ AAR/