



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

GROUP	F
EXHIBIT	
22	

Agency / Organization

Midland Manufacturing

Title

**Pressure Relief Device Model A-37000 Series
Description.**

Model A-37000

Pressure Relief Valve

October 25, 2016

(Rev. 1)



TECHNICAL SPECIFICATIONS

- Start-to-Discharge Pressure: REFER TO TABLE; +/-3% or 3 psig, whichever is larger
- Vapor-Tight Pressure: REFER TO TABLE
- Certified Capacity at Flow Rating, Pressure: REFER TO TABLE
- Flow Rating Pressure: REFER TO TABLE
- Effective Orifice Area: 7.85 in²
- Discharge Coefficient (Kd): REFER TO TABLE
- Max. Operating Temp.: 150°F
- Min. Operating Temp.: -30°F
- Mounting Studs: Four (x4) 7/8"-9 UNC
- Mounting Stud Torque: 150 +/-10 ft-lb
- Top Guide Mounting Stud Torque: 93 ft-lb for B7 alloy steel; 43 ft-lb for 18-8
- Stem/Retainer Locknut Torque: 100-120 ft-lb
- Mounting Flange: 7-5/16 in² x 1-1/4" thick; Four (x4) ø15/16" holes on ø8 B.C.
- Valve Weight: 70 lb
- Stem Adjusting Nut/Locknut Torque: 150 +/-10 ft-lb
- Mounting Configuration: O.D.: 6.745 +/-0.003, I.D.: 6.005 +/-0.003

NOTES

- Alternate O-ring materials available
- Standard Plating is Zinc or Cadmium
- For aluminum-coated Spring, specify -ASAL. For zinc-coated Spring, specify -ASZN.
- For Stainless-Steel Retainer and Stainless Body Seat, add Suffix -XS to Valve Part No.
- Net Flow Area: 7.85 in²
- AAR APPROVAL# PRD072003

NO.	PART NAME	MATERIAL	PART NUMBER	QTY
1	TOP GUIDE	STEEL W/SS INSERT	34-1-XS	1
2	STEM	STAINLESS STEEL	31-2-SS	1
3	RETAINER	STEEL, PLATED (1) (4)	37-3-CS	1
4	BODY	STEEL (4)	34-410-CS	1
5	SPRING	ALLOY STEEL (3) (4)	SEE TABLE	1
6	FOLLOWER	STEEL, PLATED	34-6-CS	1
7	—	—	—	—
8	LOCK NUT	STEEL, PLATED (1)	23-8-CS	1
9	WASHER	NEOPRENE	23-9-NE	1
10	SEAT O-RING	BUNA-N (2)	27-11-BN	1
11	STEM O-RING	BUNA-N (2)	31-11-BN	1
12	ADJUSTMENT NUT	STEEL, PLATED (1)	23-12-CS	1
13	LOCK NUT	STEEL, PLATED (1)	23-13-CS	1
14	—	—	—	—
15	HEX NUT	STEEL, PLATED (1)	10-15-CS	4
16	WIRE SEAL	SS/LEAD (2)	22-72-PB	2
17	NAMEPLATE	STAINLESS STEEL	SEE TABLE	1

NOTES

- (1) Standard plating is zinc or cadmium.
- (2) Alternate materials available.
- (3) For aluminum-coated spring, specify -ASAL.
For zinc-coated spring, specify -ASZN.
- (4) For stainless steel retainer and stainless body, add suffix -XS to valve part number.

PRESSURE SETTING (PSIG)	FLOW RATE (SCFM-AIR)	NAMEPLATE PART NO.	VALVE PART NO.	SPRING PART NO. (3) (4)
225	34,713	37-25-SS	A-37225	34-255-AS
247.5	37,254	37-26-SS	A-37247	34-255-AS
255	38,528	37-27-SS	A-37255	34-255-AS
280.5	39,612	37-28-SS	A-37280	34-280-AS
300	44,614	37-29-SS	A-37300	34-280-AS
330	49,912	37-30-SS	A-37330	34-280-AS

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