



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

<b>GROUP</b>	<b>F</b>
<b>EXHIBIT</b>	
14	

Agency / Organization

**GATX Corporation**

Title

**Excerpts of Tank Car Qualification File  
for GATX95098, February 17, 2023.**



**GATX Corporation**  
**Rail North America**  
233 S. Wacker Drive  
Chicago, IL 60606-7147

**Peter R. Manyek**  
*Sr. Manager Design Engineering*

Tel: [REDACTED]  
eFax: [REDACTED]

February 17, 2023

**Subject: NTSB Investigation RRD23MR005**  
**02-03-23 East Palestine, Ohio, Derailment**  
**GATX095098 Car Information and Repair History**

The attached GATX maintenance records for GATX095098 (“the car”) indicate:

1. The car is a 1992 Trinity built, 25,740-gallon HP tank car with a gross rail load capacity of 263,000 pounds.
  - a. Stencil Class: DOT 105J300W
  - b. Constructed Class: DOT 105A300W
2. Certificate of Construction: F916110 attached.
3. The car is in a full-service lease with OCCIDENTAL CHEMICAL CORPORATION
4. We understand that the commodity that the car carried at the time of the accident was VINYL CHLORIDE (MONOMER). MSDS attached. We could find no record of what the car carried prior to the accident.
5. See attached Tank Arrangement Drawings D-42540
6. See attached Fittings Arrangement Drawings D-44638
7. See attached Bonnet Arrangement Drawing D-143547
8. See attached Manway Cover Drawing D-243786
9. See attached car Service Equipment parts listing - GATX095098\_IB 11-18-2021\_GAGA Shop Portal Forms.pdf
10. The Jamesbury angle valves were replaced with Midland A720 angle valves on 4-4-2007 with an unplanned program by the customer where our car records did not get updated. See attached R1 - GATX095098\_R1\_04-01-2007\_ANGLE VLV CHNG.pdf .
11. The Safety valve was replaced with a Midland 247.5 safety valve per GATX program IO-8296 on 11-21-1996. See IO-8296-D-2.pdf
12. The car was last qualified at our GATX repair facility in Waycross, GA in 2021. See attached qualification records - GATX095098\_IB 11-18-2021\_GAGA Shop Portal Forms.pdf



**DOT-SP 21134**

**FRA: AIP 201901**  
**DOT: 105J300W**

	PERSON LICENSE	QUALIFIED	DUE
TANK QUALIFICATION	GAGA	2021	2031
THICKNESS TEST	GAGA	2021	2031
SERVICE EQUIPMENT	GAGA	2021	2031
PRO: VALVE   247.5 PSI	GAGA	2021	2031
LINING:			
BB.B.2 INSPECTION	GAGA	2021	2031
STUB SLL INSPECTION	GAGA	2021	2031

50

BLT-04-92

13. See attached R1 records for the car - GATX095098\_R1\_03-01-14.pdf
14. There may, of course, have been other maintenance done to this car for which we have no records.





Comments - OTMA

First Saved: 11/30/2021 08:33:37

# GATX as Received Visual Test

Procedure: FM-0875-0001-000

Fitting	Test Result	Test ID				
Manway Cover Plates - STEEL, 20", S/N UNKNOWN	Pass	4				
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	Fail	4				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border: 1px solid black;">Inspection Point</td> <td style="border: 1px solid black;">Service Equipment Defect Reason</td> </tr> <tr> <td style="border: 1px solid black;">Valve Handle / Handwheel</td> <td style="border: 1px solid black;">Cracked into multiple pieces</td> </tr> </table>	Inspection Point	Service Equipment Defect Reason	Valve Handle / Handwheel	Cracked into multiple pieces		
Inspection Point	Service Equipment Defect Reason					
Valve Handle / Handwheel	Cracked into multiple pieces					
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	Pass	4				
Induction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	Pass	4				
Eduction Excess Flow Valves - MIDLAND MANUFACTURING CORP, A-164, STEEL, WELDED, 3", S/N UNKNOWN	Pass	4				
Eduction Excess Flow Valves - MIDLAND MANUFACTURING CORP, A-164, STEEL, WELDED, 3", S/N UNKNOWN	Pass	4				
Induction Excess Flow Valves - MIDLAND MANUFACTURING CORP, A-174, STEEL, WELDED, 3", S/N UNKNOWN	Pass	4				
Sample Line Excess Flow Valves - MIDLAND MANUFACTURING CORP, A-119, STAINLESS STEEL, SCREWED, 1 1/4", S/N UNKNOWN	Pass	4				
Reclosing PRD (valve) - MIDLAND MANUFACTURING CORP, A-34247, VA, STEEL/STAINLESS STEEL, VITON A, S/N UNKNOWN	Fail	4				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border: 1px solid black;">Inspection Point</td> <td style="border: 1px solid black;">Service Equipment Defect Reason</td> </tr> <tr> <td style="border: 1px solid black;">Spring</td> <td style="border: 1px solid black;">Worn out</td> </tr> </table>	Inspection Point	Service Equipment Defect Reason	Spring	Worn out		
Inspection Point	Service Equipment Defect Reason					
Spring	Worn out					
Magnetic / Electronic Gauging Devices - MIDLAND MANUFACTURING CORP, UNKNOWN, UNKNOWN, STAINLESS STEEL, FLANGED, S/N UNKNOWN	Pass	4				
Sample Valves - MIDLAND MANUFACTURING CORP, A-257, EPR, STAINLESS STEEL, SCREWED, 3/4", S/N UNKNOWN	Fail	4				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border: 1px solid black;">Inspection Point</td> <td style="border: 1px solid black;">Service Equipment Defect Reason</td> </tr> <tr> <td style="border: 1px solid black;">Valve Body</td> <td style="border: 1px solid black;">Missing component(s)</td> </tr> </table>	Inspection Point	Service Equipment Defect Reason	Valve Body	Missing component(s)		
Inspection Point	Service Equipment Defect Reason					
Valve Body	Missing component(s)					
ThermoWells - MIDLAND MANUFACTURING CORP, B-290-CS, EPR, STEEL, S/N UNKNOWN	Pass	4				
Rigid Eduction Pipes - UNKNOWN, UNKNOWN, UNKNOWN, STAINLESS STEEL, 3", S/N UNKNOWN	Pass	4				



# GATX as Received Leak Test

Procedure:

Is Initial LT being done?  Yes  No

## Calibration Information

Date of Leak Test:

Thermometer S/N:  Calibration Due Date:

Gauge	S/N	Range	Calibration Due Date
Primary Gauge:	<input type="text" value="57-791b"/>	<input type="text" value="0"/> <input type="text" value="100"/> psig	<input type="text" value="23 Feb 2022"/>
Secondary Gauge:	<input type="text" value="57-790b"/>	<input type="text" value="0"/> - <input type="text" value="100"/> psig	<input type="text" value="1 Mar 2022"/>

Test Medium:  Compressed Air  Nitrogen  
 Shop Air

Test Pressure:  30 psig  50 psig

Test Solution (°F):  Big Blu 35 - 177  Big Blu Sub Zero - 30 - 200  
 Real Cool Snoop - 65 - 200  Sherlock 33 - 160  
 Sherlock Extra Low - 65 - 16  Sherlock Low - 10 - 160  
 Snoop 27 - 200  Super Blu - 30 - 202  
 Water 32 - 212

Fitting	Surface Temperature	Test Result	Test ID
Manway Cover Plates - STEEL, 20", S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Induction Valve HP Car - NELES-JAMESBURY, AZFRA, 2236-TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Reclosing PRD (valve) - MIDLAND MANUFACTURING CORP, A- 34247, VA, STEEL/STAINLESS STEEL, VITON A, S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Magnetic / Electronic Gauging Devices - MIDLAND MANUFACTURING CORP, UNKNOWN, UNKNOWN, STAINLESS STEEL, FLANGED, S/N UNKNOWN	<input type="text" value="45.0"/>	Pass	2
Sample Valves - MIDLAND MANUFACTURING CORP, A- 257, EPR, STAINLESS STEEL, SCREWED, 3/4", S/N	<input type="text" value="45.0"/>	Pass	2



257, EPR, STAINLESS STEEL, SCREWED, 3/4", S/N UNKNOWN

ThermoWells - MIDLAND MANUFACTURING CORP, B-290- CS, EPR, STEEL, S/N UNKNOWN

45.0

Pass

2

# GATX as Received Bench Test

Procedure:

Education Valve HP Car - NELES- JAMESBURY, AZFRA, 2236- TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN

Test Result Not Tested Test ID: 3

Why not tested?: Validated by other inspection method

Education Valve HP Car - NELES- JAMESBURY, AZFRA, 2236- TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN

Test Result Not Tested Test ID: 3

Why not tested?: Validated by other inspection method

Induction Valve HP Car - NELES- JAMESBURY, AZFRA, 2236- TT, STEEL/STAINLESS STEEL, FLANGED, 2", S/N UNKNOWN

Test Result Not Tested Test ID: 3

Why not tested?: Validated by other inspection method

Reclosing PRD (valve) - MIDLAND MANUFACTURING CORP, A- 34247, VA, STEEL/STAINLESS STEEL, VITON A, S/N UNKNOWN

Test Result Pass Test ID: 3

Date of Bench Test:	<input type="text" value="1 Dec 2021"/>		
Thermometer S/N:	<input type="text" value="57-0044"/>	Calibration Due Date:	<input type="text" value="9 Feb 2022"/>
Test Pressure:	<input type="text" value="247.0"/>		
Pressure Gauge:	Primary Gauge		Secondary Gauge
Type:	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital	<input type="checkbox"/> Analog <input checked="" type="checkbox"/> Digital	
S/N:	<input type="text" value="57-0014"/>	<input type="text" value="57-0018b"/>	
Range:	<input type="text" value="0.0"/> <input type="text" value="1,000.0"/> psig	<input type="text" value="0.0"/> <input type="text" value="1,000.0"/> psig	
Calibration Due Date:	<input type="text" value="17 May 2022"/>	<input type="text" value="27 Jan 2022"/>	
Test Solution (°F):	<input type="checkbox"/> Big_Blu 35 - 177 <input type="checkbox"/> Big_Blu_Sub_Zero - 30 - 200		
	<input type="checkbox"/> Real_Cool_Snoop - 65 - 200 <input type="checkbox"/> Sherlock 33 - 160		
	<input type="checkbox"/> Sherlock_Extra_Low - 65 - 160 <input type="checkbox"/> Sherlock_Low - 10 - 160		
	<input type="checkbox"/> Snoop 27 - 200 <input type="checkbox"/> Super_Blu - 30 - 202		
	<input checked="" type="checkbox"/> Water 32 - 212		
PRD STD:	<input type="text" value="246.0"/>		
PRD VTP:	<input type="text" value="233.0"/>		
Surface Temperature (°F):	<input type="text" value="51.0"/>		
Gas Medium:	<input type="checkbox"/> Compressed Air	<input type="checkbox"/> Nitrogen	
	<input checked="" type="checkbox"/>		



# GATX Final Leak Test

Procedure:

Leak Test #1

Did the Final Leak Test Pass?  Yes  No

## Calibration Information

Date of Leak Test:	<input type="text" value="17 Dec 2021"/>		
Thermometer S/N:	<input type="text" value="57-2062"/>	Calibration Due Date:	<input type="text" value="19 Oct 2022"/>
Gage	S/N	Range	Calibration Due Date
Primary Gage:	<input type="text" value="#5G"/>	<input type="text" value="0"/> - <input type="text" value="100"/> psig	<input type="text" value="21 Apr 2022"/>
Secondary Gage:	<input type="text" value="57-1377H"/>	<input type="text" value="0"/> - <input type="text" value="100"/> psig	<input type="text" value="16 Feb 2022"/>
Test Medium:	<input type="checkbox"/> Compressed Air <input checked="" type="checkbox"/> Nitrogen <input type="checkbox"/> Shop Air		
Test Pressure:	<input type="checkbox"/> 30 psig <input checked="" type="checkbox"/> 50 psig		
Test Solution (°F):	<input checked="" type="checkbox"/> Big Blu 35 - 177 <input type="checkbox"/> Big Blu Sub Zero - 30 - 200 <input type="checkbox"/> Real Cool Snoop - 65 - 200 <input type="checkbox"/> Sherlock 33 - 160 <input type="checkbox"/> Sherlock Extra Low - 65 - 160 <input type="checkbox"/> Sherlock Low - 10 - 160 <input type="checkbox"/> Snoop 27 - 200 <input type="checkbox"/> Super Blu - 30 - 202 <input type="checkbox"/> Water 32 - 212		

## Fittings

Fitting	Surface Temperature	Test Result	Test ID
Manway Cover Plates - Single Location, 20", S/N UNKNOWN	<input type="text" value="60"/>	Pass	3
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA2236-TT, A, 2", S/N AFA469	<input type="text" value="60"/>	Pass	3
Eduction Valve HP Car - NELES-JAMESBURY, AZFRA2236-TT, B, 2", S/N AFA467	<input type="text" value="60"/>	Pass	3
Induction Valve HP Car - NELES-JAMESBURY, AZFRA2236-TT, Single Location, 2", S/N AFA470	<input type="text" value="60"/>	Pass	3
Reclosing PRD (valves) - MIDLAND MANUFACTURING CORP, A- 34247NONE, Single Location, CSI 5350 (VITON GFS), S/N JG42RA	<input type="text" value="60"/>	Pass	3
Magnetic / Electronic Gauging Devices - MIDLAND MANUFACTURING CORP, UNKNOWNNONE, Single	<input type="text" value="60"/>	Pass	3

MANUFACTURING CORP, UNKNOWNNONE, Single Location, S/N UNKNOWN			
Sample Valves - MIDLAND MANUFACTURING CORP, A-257EPR, Single Location, 3/4", S/N UNKNOWN	60	Pass	3
Thermowells - MIDLAND MANUFACTURING CORP, B-290 - CSEPR, Single Location	60	Pass	3
Rigid Education Pipes - UNKNOWN, UNKNOWNNONE, Single Location, 3", S/N UNKNOWN	60	Pass	3

# Certificate Of Test

AAR Manual of Standards and Recommended Practices

Facility: GAGA

Future Commodity STCC: 2813966 VINYL CHLORIDE

Future Commodity CIN: 00030003 VINYL CHLORIDE

EXHIBIT D- 4 CERTIFICATE OF TEST FORM		Compartment Count <input type="text" value="1"/>	
1. Reporting Marks and Car Number	GATX095098		
2. Tank Specification	DOT 105J300- W		
3. Stenciled Specification	DOT 105J300- W		
4. Tank Capacity in Gallons (liters) or pounds (kgs) of water			
5. Tank Test Pressure, psi (kPa)*			
6. Interior Heater System Test Pressure, psi (kPa)*			
7. Pressure Relief Valve (PRV)	No. 1	No. 2	
a. Name and Location of Company Performing Test of PRV			
b. Name and Location of Company Applying PRV	GAGA		
c. Manufacturer			
Model/Type Number			
d. Serial Number			
e. Start- To- Discharge Pressure, psi (kPa)** Low: High			
f. Vapor-Tight Pressure, psi (kPa)** Low: High			
g. Valve Seals Replaced (Y/N) (only those exposed to product)			
h. New Seal Material			
8. Combination Device Nominal Start- To- Discharge Pressure			
a. Rupture Disc Pressure, psi (kPa)			
b. Breaking Pin Lower Diaphragm Tight at psi (kPa)			
9. Rupture Disc Device			
a. Number of Rupture Disc Devices (on Compartment)			
b. Rupture Disc Pressure, psi (kPa)			
10. Excess Flow Valve Seat Tightness Checked (Y/N)	Yes		
11. Test Date (Date Stenciled on Car) (Estimated)	2021		
12. Tank Built/Conversion Date	04/01/1992		
13. Test Due Stencil			
a. Tank (Date Stenciled on Car) (Estimated)			
b. Pressure Relief Valve (Date Stenciled on Car) (Estimated)			
c. Interior Heater System (Date Stenciled on Car) (Estimated)			
14. Name and Location of Company Performing Tank and/or Heater System Test	GAGA		

\* Tested with hydrostatic pressure shown, for the required time period, without leaks or evidence of distress.

\*\* Valve has been set to start-to-discharge and is vapor-tight at pressure shown. For combination devices, the start-to-discharge and vapor-tight pressures of the valve portion is shown.

I HEREBY CERTIFY THAT TESTS PERFORMED TO TANK CAR TANKS, PRESSURE RELIEF VALVES AND/OR HEATER SYSTEMS WERE DONE IN ACCORDANCE WITH THE DEPARTMENT OF TRANSPORTATION REGULATIONS AND THE AAR SPECIFICATIONS FOR TANK CARS AND REPORTED CORRECTLY.

Applicator: Travis McDowell Date: 17 Dec 2021

First Saved: 12/03/2021 09:44:02

ST = Safety valve test SV = Safety valve application TT = Tank hydro test CT = Interior coil test

# Certificate Of Test

AAR Manual of Standards and Recommended Practices  
Specifications for Tank Cars

Facility: GAGA

Future Commodity STCC: 2813966

VINYL CHLORIDE

Future Commodity CIN: 00030003

VINYL CHLORIDE

1. Reporting Marks and Car Number	GATX095098
2. Tank Specification	DOT 105J300- W
3. Stenciled Specification	DOT 105J300- W
4. Tank Capacity in Gallons (liters)	
5. Tank Test Pressure, psi (kPa)*	
6. Interior Heater System Test Pressure, psi (kPa)*	
7. Pressure Relief Valve (PRV)	No. 1
a. Name and Location of Company Performing Test of PRV	GAGA
b. Name and Location of Company Applying PRV	GAGA
c. Manufacturer	MIDLAND MANUFACTURING CORP
Model/Type Number	A- 34247
d. Serial Number	JG42RA
Location	Single Location
e. Start- To- Discharge Pressure, psi (kPa)**	249.00
f. Vapor- Tight Pressure, psi (kPa)**	241.00
g. Valve Seals Replaced (Y/N) (only those exposed to product)	Y
h. New Seal Material	CSI 5350 (VITON GFS)
8. Combination Device	
a. Rupture Disc Pressure, psi (kPa)	N/A
b. Breaking Pin Lower Diaphragm Tight at psi (kPa)	N/A
9. Rupture Disc Device	
a. Number of Rupture Disc Devices	
b. Rupture Disc Pressure, psi (kPa)	
10. Excess Flow Valve Seat Tightness Checked (Y/N)	
11. Test Date (Date Stenciled on Car)	2023
12. Tank Built/Conversion Date	04/01/1992
13. Test Due Stencil	
a. Tank (Date Stenciled on Car)	
b. Pressure Relief Valve (Date Stenciled on Car)	2032
c. Interior Heater System (Date Stenciled on Car)	
14. Name and Location of Company Performing Tank and/or Heater System Test	GAGA

\* Tested with hydrostatic pressure shown, for the required time period, without leaks or evidence of distress.

\*\* Valve has been set to start- to- discharge and is vapor- tight at pressure shown. For combination devices, the start- to- discharge and vapor- tight pressures of the valve portion is shown.

I HEREBY CERTIFY THAT TESTS PERFORMED TO TANK CAR TANKS, PRESSURE RELIEF VALVES AND/OR HEATER SYSTEMS WERE DONE IN ACCORD WITH THE DEPARTMENT OF TRANSPORTATION REGULATIONS AND THE AAR SPECIFICATIONS FOR TANK CARS AND REPORTED CORRECTLY.

Owner/Tester:                     Tony Courson                    

Date:                     4 Jan 2022                    

Fig. D.4 Certificate of Test Form