



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 | H |
| EXHIBIT | |
| 31 | |

Agency / Organization

Norfolk Southern

Title

UMLER Data for TILX 0000402025

+-----+-----+

OPTION: 20 EQUIPMENT UNIT: TILX 0000402025 Tank

| | | | | |
|--------------------|---|--------------|-----------------------|----------|
| BRAKE-SYSTEM | : | Location 1 | | |
| Emer Brkv Cmpnt Id | : | CONFIDENTIAL | Emer Brkv Recon Dt | : 0816 |
| Serv Brkv Cmpnt Id | : | CONFIDENTIAL | Emer Brkv OEM Wty Dt: | |
| Slack Adjuster Id | : | | Emer Brkv Part Nbr | : 775871 |

| | | | | |
|--------------------|---|--------------|-----------------------|---|
| BRAKE-SYSTEM | : | Location 2 | | |
| Emer Brkv Cmpnt Id | : | | Emer Brkv Recon Dt | : |
| Serv Brkv Cmpnt Id | : | | Emer Brkv OEM Wty Dt: | |
| Slack Adjuster Id | : | CONFIDENTIAL | Emer Brkv Part Nbr | : |

| | | | |
|------------|------------|--------------|----------------------|
| | F2=List | | F5=Right Map |
| F7=PrevScn | F8=NextScn | F10=NS Umler | F11=Menu F12=PrevScn |
| | | | 02/23/23 07:34:42 |

+-----+-----+

OPTION: 07 EQUIPMENT UNIT: TILX 0000402025 Tank

Pool Number : 0
 Pool Control :
 User Routing Instructions:
 Umler Transportation Code:
 Transportation Cond Code :
 Mechanical Restriction :
 Mech Restriction Reason :
 Sys Gen Routing Instruct :

| | Pool | Assignments | OIC |
|-----------------------|---------|-------------|-----|
| AAR (Pool ID / Date): | 0000000 | 07/14/2016 | |

| | | | | | |
|------------|------------|-------------|--------------|----------|-------------------|
| F7=PrevScn | F2=List | F4=Pool Hdr | F10=NS Umler | F11=Menu | F12=PrevScn |
| | F8=NextScn | | | | 02/23/23 07:32:54 |

```

-----+
EQUIPMENT UNIT  TILX 0000402025 (T907-TANK                               )
NO OF SAFETY RELIEF DEVICES      1  SAFETY VENT PROTECTION (Y/N)      N
STUB SILL DESIGN                  TRN024
SHIPPING CONT SPECS  105J300W      DESIGN SHIP CONT SPECS 105A300W
TANK HEAD MATERIAL SPECS  128B      AAR TC128, GR.B
TANK SHELL MATERIAL SPECS 128B      AAR TC128, GR.B
BOTTOM OUTLETS/FITTINGS          U0   NOT EQUIPPED
LEVEL OF BOTTOM OUTLETS          U    UNEQUIPPED
TOP FITTING PROTECTION          X    EQUIPPED W/OTH THAN M1002 APPDX E P9.2.1
TYPE OF SAFETY RELIEF DEVICES   V    VALVE

```

F7=Backward F8=Forward

F10=EMIS

F11=UmlrMenu F12=PrevScr

02/23/23 07:28:21

```

-----+
EQUIPMENT UNIT TILX 0000402025 (T907-TANK )
AEI TRANSPONDER ROAD-DATE 71- -00010101 STANDARD TAG, REG WND, TAGGED
NO. COMPARTMENTS 1 NO. OPERATING BRAKES 1
NO. AXLES 04 FOREIGN CUSTOMS
COUPLER A-END SE60EE COUPLER B-END SE60EE
BEARINGS AND BRAKE SHOES N
WHEEL SIZE 4 36 INCHES
DRAFT GEAR 77 STANDARD, E/F DOUBLE SHELF COUPLERS
TRUCK TYPE E 5 FT 10 IN WITH SNUBBERS
JOURNAL SIZE K 6 1/2 X 9 INCHES

```

```

F2=Fitg-Cd
F7=Backward F8=Forward F10=EMIS F11=UmlrMenu F12=PrevScr
ENT=NextScr CLEAR=Exit
02/23/23 07:27:55

```

OPTION: 09 EQUIPMENT UNIT: TILX 0000402025 Tank

| | | |
|----------------------|------------------|-------------|
| Bolster Cmpnt Id | : CONFIDENTIAL | Location A |
| Sideframe Cmpnt Id | : CONFIDENTIAL | Location AL |
| Sideframe Cmpnt Id | : CONFIDENTIAL | Location AR |
| Wheelset Cmpnt Id | : CONFIDENTIAL | Location 3 |
| Wheelset Cmpnt Id | : CONFIDENTIAL | Location 4 |
| Axle Space Distance: | Axle Location 02 | 70 Inches |

F2=List
F7=Prev Page F8=NextScn F10=NS Umler F11=Menu F12=PrevPage
02/23/23 07:34:00

+-----+-----+

OPTION: 09 EQUIPMENT UNIT: TILX 0000402025 Tank

| | | | |
|----------------------|-------------|------------------|-------------|
| Truck System Cmpnts> | LOCATION B | Truck ---> | location B |
| Journal Size | : 6-1/ 2X 9 | Truck Axle Count | : 2 |
| Stability Device Eq: | Yes | Wheel Diameter | : 36 Inches |

| | | |
|----------------------|------------------|-------------|
| Bolster Cmpnt Id | : CONFIDENTIAL | Location B |
| Sideframe Cmpnt Id | : CONFIDENTIAL | Location BL |
| Sideframe Cmpnt Id | : CONFIDENTIAL | Location BR |
| Wheelset Cmpnt Id | : CONFIDENTIAL | Location 1 |
| Wheelset Cmpnt Id | : CONFIDENTIAL | Location 2 |
| Axle Space Distance: | Axle Location 01 | 70 Inches |

| | | | |
|----------------------|-------------|------------------|-------------|
| Truck System Cmpnts> | LOCATION A | Truck ---> | location A |
| Journal Size | : 6-1/ 2X 9 | Truck Axle Count | : 2 |
| Stability Device Eq: | Yes | Wheel Diameter | : 36 Inches |

F2=List

F7=PrevScn F8=Next Page

F10=NS Umler F11=Menu F12=PrevScn

02/23/23 07:33:38

```

-----+
EQUIPMENT UNIT  TILX 0000402025  (T907-TANK
CLEARANCE PLATE C                    WIDTH      HEIGHT      LENGTH
OUTSIDE      (FT IN)                10 08      15 04      055 02
EXTREME      (FT IN)                    10 00
TANK HEAD SHIELD                      F    FULL SHIELD
TANK HEAD THICKNESS ( IN )            0.5625      TANK SHELL THICKNESS( IN ) 0.5625
TRUCK CENTER (FT IN)                                39 07

```

F7=Backward F8=Forward
ENT=NextScr CLEAR=Exit

F10=EMIS

F11=UmlrMenu F12=PrevScr

02/23/23 07:27:31

+-----+

OPTION: 10 EQUIPMENT UNIT: TILX 0000402025 Tank

Draft Gear System : Location B
 Coupler Code : SE60EE - Type E (Rule 1 Coupler Style : Double Shel
 Draft System Type : Standard Draft Gear Inches of Travel :
 DG Grp/Cush Un Pk : Cushion Unit Type :
 Coupler Cmpnt Id : CONFIDENTIAL Cushion Unit CID :

Draft Gear System : Location A
 Coupler Code : SE60EE - Type E (Rule 1 Coupler Style : Double Shel
 Draft System Type : Standard Draft Gear Inches of Travel :
 DG Grp/Cush Un Pk : Cushion Unit Type :
 Coupler Cmpnt Id : CONFIDENTIAL Cushion Unit CID :

F2=List

F7=PrevScn

F8=NextScn

F10=NS Umler F11=Menu

F12=PrevScn

02/23/23 07:34:21

+-----+-----+

OPTION: 03 EQUIPMENT UNIT: TILX 0000402025 Tank

| | | |
|---------------------------|---|--------------|
| Plate Code | : | Plate Code C |
| | | Ft In |
| Outside Length | : | 55 2 |
| Outside Extreme Width | : | 10 8 |
| Outside Extreme Height | : | 15 4 |
| Outside Height Extr Width | : | 10 0 |
| Truck Center Length | : | 39 7 |

| | | | | |
|------------|------------|--------------|----------|-------------------|
| | F2=List | | | |
| F7=PrevScn | F8=NextScn | F10=NS Umler | F11=Menu | F12=PrevScn |
| | | | | 02/23/23 07:31:27 |

+-----+

Option: 01 Equipment Unit: TILX 0000402025 Tank

| | | |
|--------------------------------------|-----------------|---------------------------------|
| Eqp ID: TILX0000402025 | Eqp Type: T907 | EIN: 0010203801 |
| Pri EID: | Eqp Group: TANK | Pseudo Eqp Grp: |
| Status Code : ACTIVE | | Delete Reason: |
| Last Update : 07/15/2021 | | Change Reason: Status Cha |
| Equipment Add: 07/14/2016 | Eqp Add Co: | Change Date: 09/28/2016 |
| Umler Owner : TILX | Lessee: | Maintenance Party: TILX |
| Built Date : | | First Movement Date: 09/28/2016 |
| Rebuilt Flag : | | Rebuilt Date: |
| Conflict Stat : | | Orig Conflict Date: |
| Next Conflict : | | Next Conflict Date: |
| Rate Indicator: Private Mileage Rate | | Notice Indicator: |
| Registration : New | | Restencil: |
| Mark Owner Cat: US Private | | LCS Date: |
| Tank Built Dt : | | Orig Cert of Constr: |
| MOW Svc Type : | | |

Non Compl Wheelsets:

| | | | | |
|-------------------|------------|--------------|----------|-------------|
| F2=List | F4=Inspect | | | |
| F7=PrevScn | F8=NextScn | F10=NS Umler | F11=Menu | F12=PrevScn |
| 02/23/23 07:30:27 | | | | |

+-----+

OPTION: 01 EQUIPMENT UNIT: TILX 0000402025 Tank

Add & Betterment:

Ledger Value:

Ind for +/- A&B:

Original Cost:

Private Zero Rt :

End of Service:

Extended Service: E - Built new from July 1,1974, Qualified for 50 Years Service

Don't Load After:

Air Hose Argmnt : A - S-424 Angle Cock Location

Format Code : B

Ownership Code : 3

CDU Eqp Type : TK01

MKT Eqp Type : TA

Mech Dsgtn Code : T

F2=List

F7=PrevScn

F8=NextScn

F10=NS Umler F11=Menu

F12=PrevScn

02/23/23 07:30:47

+-----+

| | | | |
|----------------------------|-----------------|-----------------------|--------------------------|
| EQUIPMENT UNIT | TILX 0000402025 | (T907-TANK |) |
| PRIOR CAR | | EIN 0010203801 | SWAP INIT TILX |
| OWNER MARK | TILX *PRIVATE* | BUILT | REBUILT |
| LESSEE MARK | | FORMAT B | LAST UPDATE 20210716 |
| CAR TYPE | T907 | RATE HOURLY 00.00 | MILEAGE 0.000 |
| CAR CATEGORY | TK01 | DEFAULT RATE ONLY | OT-37 00.00 |
| WEIGH DATE | SEP/2016 | STAR | NOMINAL CAP(000 LBS) 000 |
| TOTAL WGT ON RAIL(000 LBS) | 263 | CAPACITY | 25170 CG |
| TARE WEIGHT (00 LBS) | 0829 | NO. ARTICULATED UNITS | |
| LOAD LIMIT (00 LBS) | 1801 | 50YR LIFE | E ELIGIBLE |
| MECHANICAL CAR CLASS | | CONFIRMED POOL NUMBER | |
| CAR HIRE RATE | 2 | MILEAGE PAID | |
| MECHANICAL DESIGNATION | T | TANK CAR | |
| NS MARKET CODE | TA | TANK CARS, ALL | |
| TRANS/TRANS CONDITION CODE | | | |

| | | |
|-------------|-------------|-------------------|
| F2=InspInfo | F3=Sts-Code | F6=PoolAsgn |
| F7=Backward | F8=Forward | F10=EMIS |
| ENT=NextScr | CLEAR=Exit | F11=UmlrMenu |
| | | F12=PrevScr |
| | | 02/23/23 07:26:18 |

+-----+

EQUIPMENT UNIT TILX 0000402025 (T907-TANK
 OWNER INITIAL TILX LESSEE BUILT REBUILT
 PRIOR CAR GWR 263 TARE 0829 WEIGH DATE SEP/2016
 AAR CAR TYPE T907 JOURNAL SIZE 6 1/2 X 9 INCHES
 MECHANICAL CAR CLASS OUTSIDE LENGTH (FT IN) 055 02
 ABT INSP DONE TILX 2016/09/28 CAR GRADE LOAD/EMPTY L
 ABT 12-24 DUE 2017/09/28 CDU REJECT CODE
 AEI TRANSPONDER-ROAD-DATE 71- -00010101 STANDARD TAG, REG WND, TAGGED
 CURRENT COMMODITY 4905792 VINYL CHLORIDE, STABILIZED CLASS 2.1 UN1086
 LAST COMMODITY
 COUPLER A-END SE60EE COUPLER B-END SE60EE
 TRANS/TRANS CONDITION CODE
 CURRENT BAD ORDER: DATE LOCATION REASON
 LAST BAD ORDER : DATE LOCATION REASON

*SYSTEM HANDLING\ADVISORY MESSAGES:
 3003 - RULE 107 INCIDENT
 -
 -

F7=Backward F8=Forward F4=Insp Dtl F10=EMIS F11=UmlrMenu F12=PrevScr
 02/23/23 07:29:37

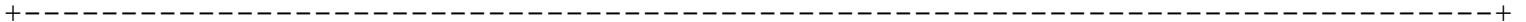
+-----+

Option: 13 Equipment Unit: TILX 0000402025 Tank

ABT 12-24 Mo Due Date: 09/28/2017
ABT 5/8-Year Due Date: 09/28/2024

| Description | Date Done | Rept | Perf | Location |
|----------------------------------|------------|------|------|-----------|
| Air Brake Test | 09/28/2016 | TILX | TILX | 665393000 |
| Emergency Brake Valve Inspection | 09/28/2016 | TILX | TILX | 665393000 |
| Reflectorization Event | 09/28/2016 | TILX | TILX | 665393000 |
| Service Brake Valve Inspection | 09/28/2016 | TILX | TILX | 665393000 |
| Air Brake Prior | 09/21/2016 | TILX | TILX | 665393000 |

F2=List
 F7=PrevScn F8=NextScn F10=NS Umler F11=Menu F12=PrevScn
 F5=Right Map
 02/23/23 07:35:18



OPTION: 12 EQUIPMENT UNIT: TILX 0000402025 Tank

Commercial Lessee CIF:

Commercial Owner CIF :

Umler Effective Date: 08/01/2016

F2=List

F7=PrevScn

F8=NextScn

F10=NS Umler F11=Menu

F12=PrevScn

02/23/23 07:35:01

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

OPTION: 14 EQUIPMENT UNIT: TILX 0000402025 Tank

| | | | |
|----------------------|---|----------------|---|
| Pool ID | : | Operator 1 | : |
| Description | : | Operator 2 | : |
| Pool Type | : | Operator 3 | : |
| Pool Maint. Code | : | Operator 4 | : |
| Loading Location | : | State/Province | : |
| Held-Short Location: | : | State/Province | : |
| Extended Dscrptn | : | Reporter | : |
| | | OIC | : |

| | | | | | |
|------------|------------|--------------|--------------|----------|-------------------|
| F7=PrevScn | F2=List | F4=Car Mgmnt | F10=NS Umler | F11=Menu | F12=PrevScn |
| | F8=NextScn | | | | |
| | | | | | 02/23/23 07:35:43 |

+-----+

OPTION: 05 EQUIPMENT UNIT: TILX 0000402025 Tank

Tank Hd Material : AAR TC-128, Gr. B

Tank Hd Mtrl Norm: Yes

Tank Shell Mtrl: AAR TC128, Gr. B

Tk Shell Mtrl Nrm: Yes

Head Protect Mtrl: Full Height Head Shield

Jacket Mtrl Catg : CARBON STEEL

Slack Adj Grp : Group R

Coils Material :

Coils Ext/Int

Sfty Vnt/Srge Prt: No

Sfty Rlf Count 1

Sfty Relief Dev : Valve

Qual Due

Btm Fitting Prot : Unequipped

Year Year

Top Fitting Prot : Equipped per 49 CFR 179.100-12 Tank Qualified:

CPC1232 Compliant: Thickness Qlfd:

TC-PD-34-Restrict: Service Eqpmnt:

Stub Sill Design : TRN024 Stub Sill Design Pressure Relief:

Stub-Sill-Dsg-Var:

F2=List

F7=PrevScn

F8=NextScn

F10=NS Umler F11=Menu

F12=PrevScn

02/23/23 07:32:15

+-----+

OPTION: 05 EQUIPMENT UNIT: TILX 0000402025 Tank

Tank Head Thickness : 0.5625 in.
Tank Shell Thickness : 0.5625 in.
Head Protect Thicknss: 0.5000 in.
Jacket Thickness : 0.1196 in.
Insulatn/Thrm Prt Typ: Fiberglass & Ceramic Fiber
Insulation Thickness :
ABT 4-Press Rcv Equip:
Brake Cyl Mount Type : Body Mounted
Bottom Outlet : Not Equipped
Bottom Outlet Count :
Btm Outlet Valve Type:
Btm Out Vlv Actuation:
Thermal Prot System : Equipped

F2=List

F7=PrevScn

F8=NextScn

F10=NS Umler F11=Menu

F12=PrevScn

02/23/23 07:32:36

+-----+

OPTION: 05 EQUIPMENT UNIT: TILX 0000402025 Tank

Truck Count: 2

Axle Count: 4

Bearing HBD Shielded:

Empty/Load Device: Yes

Connectd Unit Count:

Rmt Mntrng Dvce Eqpd: No

Operatng Brakes: 1

Compartment Count: 1

PWHT Not Reworked:

PWHT Re-stress Rlvd:

Wheel Bearing Type : Roller

FRA Reflect Wavier : Reflectorization Plan

CC Side Bearing Type: Long Travel Constant Contact

AEI High Temperature:

Intrmdt Conn Sytle :

Brake Shoe Type : High Friction Composite

Equipment Builder : Trinity

Builder Lot Code :

Built Country :

Rebuilt Country :

ECP Brake Builder :

ECP Brake Type : Not Equipped

Tank Major Class : Steel Pressure Insulated

Design Shipping CONT: DOT 105A300W

Stnclsd Shipping Spec: Major Class 80/90 - DOT 105J300W

Tank Lining Material:

F2=List

F7=PrevScn F8=NextScn

F10=NS Umler F11=Menu F12=PrevScn

02/23/23 07:31:51

+-----+

OPTION: 08 EQUIPMENT UNIT: TILX 0000402025 Tank

Restricted Speed when Empty :
 Restricted Speed when Loaded :
 Shove car to rest :
 Shove adjacent Car to Rest :
 Train Position Sensitive :
 End of Train Only :
 Check trailing tonnage :
 Curve Negotiability Exception:
 286K Aprvd COC/FRA Waiver :
 Loaded Net Braking Ratio : 11.0 %
 OP Loaded Net Braking Ratio :
 Empty Braking Ratio : 15.0 %
 OP Empty Braking Ratio :

F2=List
 F7=PrevScn F8=NextScn F10=NS Umler F11=Menu F12=PrevScn
 02/23/23 07:33:18

+-----+-----+

OPTION: 02 EQUIPMENT UNIT: TILX 0000402025 Tank

Gross Rail Load/Weight: 263000 lb
 Tare Weight : 82900 lb
 Load Limit : 180100 lb
 Weighing Status : Actual
 Weighing Date : 09/28/2016
 Gallonage Capacity : 25170 usgl
 Star Code :
 Qual for Inc GRL :

F2=List
 F7=PrevScn F8=NextScn F10=NS Umler F11=Menu F12=PrevScn
 02/23/23 07:31:09