

**Errata Sheet**  
**Accident Summary**

NTSB Accident Number RRD23MR005  
Norfolk Southern Railway General Merchandise Freight Train 32N Derailment  
with Subsequent Hazardous Material Release and Fires  
In East Palestine, Ohio, on February 3, 2023  
NTSB Docket Item Group B Exhibit 8  
Revised Section 2.1, Timeline of NS rail car GPLX 75465 on NS train 32N

Page 5 of the Human Performance System Safety Factual Report states:

"Train crew conducted pre-departure/mechanical inspection of Train 3"

Amended to read:

"TRRA employees conducted pre-departure/mechanical inspection"

Page 6 of the System Safety Report states:

"Added to train: 40 cars which were previously inspected. Also a Class 1 airbrake test and a pre-departure mechanical test were performed at Decatur NS yard."

Amended to read as:

"40 cars were added to the train, on which Norfolk Southern employees performed a Class 1 airbrake test and pre-departure mechanical test."

Page 9 of the System Safety Report included the statement, (NS moved this down to 9:27 p.m.," which was deleted.

The corrected Timeline:

**2.1 Timeline of NS rail car GPLX 75465 on NS train 32N (amended)**

**February 1, 2023**

Madison, IL, TRRA Yard

8:30 p.m.

- Class 1 air brake test (232.205) certified completed by TRRA
- Train crew (Engineer and Conductor) on duty
- TRRA employees completed a 232.205 Class 1 air brake test
- TRRA employees conducted pre-departure/mechanical inspection

10:14 p.m.

- Train 32N departed TRRA Yard
- 3 locomotives on the headend
- Total: 163 rail cars (127 loaded, 36 empty)

- Weight: 16,889 tons
- Length: 10,713 feet
- Rail car GPLX 75465 was at line 26 in consist

## **February 2, 2023**

### Decatur, IL, NS Yard

6:10 a.m.

- Train 32N arrived Decatur, IL NS Yard
- Removed from train: 55 cars
- 40 cars were added to the train, on which Norfolk Southern employees performed a Class 1 airbrake test and pre-departure mechanical test
- Total 150 rail cars
- The third locomotive at head end was moved to the middle of the train, making it a Distributed Power unit

1:10 p.m.

- New train crew (Engineer and Conductor) on duty

4:15 p.m.

- Train 32N departed Decatur, IL NS Yard
- 2 locomotives remain on the headend
- The Distributed Power Unit was at line 112
- Weight: 17,977 tons
- Length: 9,309 feet
- When interviewed, Engineer expressed concern with weight placement: 32% of weight on headend, 20% of weight in the middle, 40% of weight on the rearend.

### Bement, IL (nearby)

About 6:17 p.m.

- Train stops due to Engineer noting the air pressure started to drop
- Dispatcher notified and mechanical personnel replaced the EOT.

### Williamsport, IN

10:48 p.m.

- Train induced emergency brake application
- Broken knuckle at line 93 (car GPLX 75465 was 68 cars away).
- Mechanical personnel replaced the knuckle
- New train crew (relief crew of Engineer and Conductor) on duty (the Decatur crew was limited due to hours of service requirements)

## **February 3, 2023**

Peru, IN

6:15 a.m.

- Train 32N arrived NS Peru, IN yard

6:30 a.m.

- New train crew (Engineer and Conductor) on duty

8:09 a.m.

- Train 32N departed Peru, IN
- No change to the train consist

Toledo, OH, NS Yard

1:00 p.m.

- Train 32N arrived Toledo, OH NS yard

1:15 p.m.

- New train crew (Engineer, Conductor and Conductor Trainee) on duty.
- Conductor has less than one year of experience.
- Engineer "walked through the lead locomotive consist to check everything"
- Engineer performed a train check with the DP, using full-service application

2:15 p.m.

- Train 32N departed Toledo, OH NS Yard
- No change to the train's consist

Cleveland (outside of it)

5:29 p.m. (approximately)

- Engineer stops train 32N and performs additional train check with the DP using a full-service application
- Train 32N departs

Alliance, OH (nearby)

Time unknown

- Train 32N starts catching up to another train, 10Q. Engineer operates in and out of auto mode with Trip Optimizer, due to hilly terrain.

Sebring, OH

7:47 p.m.

- Train 32N entered Sebring hot box detector/dragging equipment detector at MP PC 79.8
- Bearing recorded at 38 degrees above ambient temperature

Salem, OH

8:13 p.m.

- Train 32N entered Salem hot box detector/dragging equipment detector at MP PC 69.01
- Bearing recorded at 103 degrees above ambient temperature
- No defects reported to train crew
- The hot box detector sent an alert to the NS ATC desk, of rail car GPLX 75465's L1 axle having a "K" value of 5.8 and a bearing temperature of 103 degrees above ambient temperature.

#### East Palestine, OH

8:46:44 p.m.

- Train 32N rail car with burning bearing (GPLX 754654, 101st axle) passed a house with a ring doorbell.

8:52:48 p.m.

- Train 32N's lead locomotive passed over the East Palestine hot box detector/dragging equipment detector at MP PC 49.81
- Bearing recorded at 253 degrees above ambient temperature
- Train speed was 43 mph (maximum authorized speed was 50 mph)
- MP 49.2, train struck the crossing at North Pleasant Drive and cars derailed and began piling up

8:53 p.m.

- Radio transmission audible alert from East Palestine hot box detector/dragging equipment detector to train 32N crew of critical alarm was broadcast three times to train crew, "Critical alarm, critical alarm, critical alarm. Norfolk Southern milepost 49.8, track 1 hotbox axle 101 south rail"
- MP 49.5 the derailment started, when the journal came off and hit the ground
- MP PC 49.2, cars derailed and began piling up near crossing at North Pleasant Drive
- Engineer put train into dynamic braking to stop the train.

8:53:45 p.m.

- Conductor turns light on

8:54:25 p.m.

- Locomotive's emergency indication red interior light comes on.
- Conductor Trainee transmits, "Emergency, emergency, emergency" at MP PC 48.63
- Train induced emergency braking is initiated independently near MP PC 49.5

8:55:01 p.m.

- Train 32N came to rest at MP PC 48.41
- (Locomotive traveled 1,368 feet before stopping)

8:56 p.m.

- NS Cleveland East Dispatcher radio transmission to train 32N, asks if the crew was having an issue.
- Train 32N crew responds they have a critical alarm and are in emergency
- Cleveland East dispatcher contacts the crew of train 547, approaching on other track, notifies them that, "32N eastbound next to you on 1 track head end at 48.4 is in emergency, come down restricted, slow it down as quick as you can."
- The 547 train crew confirms Cleveland East dispatcher's instructions.

9:11 p.m.

- Engineer of 32N radios NS Road Foreman's Desk, provides consist and discusses the method of train handling that occurred just prior to and during the derailment. NS Road Foreman's Desk advises Train 32N they were contacted by the Wayside Desk and were told the police reported a derailment.
- Conductor exits locomotive cab and walks toward the derailment to check on the train. Conductor Trainee does not exit locomotive cab, as Conductor has less than one year of experience, as he stated during his interview, "I wasn't able to walk out with him because of your experience"

9:17 p.m.

- Radio transmission; Conductor Trainee advises Conductor of smoke back there, and to cut away from the train
- Conductor responds that he observes fire and heads back to the lead locomotive

9:19 p.m.

- Train 32N radios the Cleveland East dispatcher, requesting to cut the locomotive away from their train.
- Dispatcher approves movement.
- Engineer works with Cleveland East Dispatcher and Conductor to cut the locomotives away from train 32N, as they have hazmat in the rail cars and a fire had started.

9:27 p.m.

- Train 32N radios to Cleveland East dispatcher, they cut away light power and moved about 300 feet East of their train.
- Radio transmission from train 547 to Cleveland East Dispatcher; 32N has derailed onto their track (Main 2) and is on fire.
- Conductor reported reading the hazmat book and discovered they should be one mile away, so they moved further, to one mile.
- Dispatcher contacts ATC desk operator, advises that train 32N had received a critical alarm, and had derailed.

- ATC desk analyst searched for alerts pertaining to train 32N. He found one alert from the Salem HBD (103 degree axle temperature of railcar GPLX 075465 L1 axle. Did not receive any information, alerts or alarms from the East Palestine hot box detector regarding train 32N, even though that HBD had alerted the 32N train crew of a critical bearing alarm. This was because the train had not cleared the detector due to the derailment.
- When interviewed, the ATC analyst was asked if he would have taken any action if he had seen the alert from the Salem hot box detector. He stated according to SOP's he would have just monitored it for future alerts from other HBD's.

9:30 p.m.

- Cleveland East dispatcher instructs train 547 to tie down their train and to tie down the rear of train 32N.