NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division Washington, D.C. 20594

January 24, 2018

Locomotive Event Recorders Errata 1

Specialist's Factual Report By Cassandra Johnson

1. EVENT SUMMARY

Location: Panhandle, Texas
Date: June 28, 2016
Operator: BNSF Railway

Eastbound Train S-LACLPC1-26K

Locomotive ID/Location: 3967/ 3rd locomotive DPU ID/Location: 8234/ Rear of train DPU ID/Location: 3970/ End of train

Westbound Train Q-CHISBD6-27L

Locomotive ID/Location: 7553/ 2nd locomotive Locomotive ID/Location: 7907/ 3rd locomotive Locomotive ID/Location: 8191/ 4th locomotive Locomotive ID/Location: 5212/ 5th locomotive

NTSB Number: DCA16FR008

Summary: Refer to the Accident Summary report, within this docket.

2. ERRATA SUMMARY

This errata report provides updated speed and miles traveled information for BNSF 3967. BNSF 3967's wheel size was incorrectly provided as 41.0 inches when it should have been 43.125 inches. Since Wabtec Railways Electronics Event Recorder Data Analysis software uses wheel size to calculate speed and distance, BNSF 3967's speed and miles traveled parameters were updated using the wheel size of 43.125 inches. The updated speed and miles traveled parameters for BNSF 3967 are provided in electronic comma separated value (*.csv) format as attachment 1 to this errata report.

3. ERRATA CHANGES

This section provides the items that have been updated. Table 1 from section 3.3 has been updated with BNSF 3967's correct wheel size.

Table 1. Wheel Sizes as provided by on-scene investigators

ID	Wheel Size
BNSF 3967	43.125 inches
BNSF 8234	41.9 inches

ID	Wheel Size
BNSF 3970	42.6 inches
BNSF 7553	40.125 inches
BNSF 7907	39.375 inches
BNSF 8191	40.5 inches
BNSF 5212	37.75 inches

Figure 15 from section 3.5.1 has been modified with BNSF 3967's updated speed data.

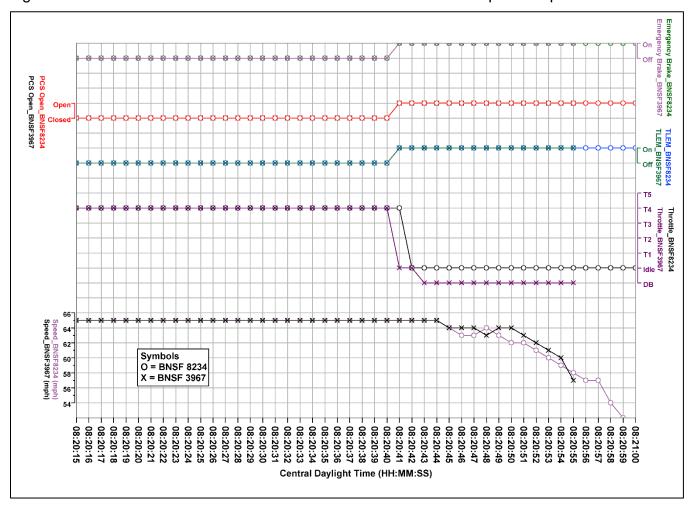


Figure 1. Time correlation between BNSF 8234 and BNSF 3967

The third paragraph from section 3.6 has been modified with BNSF 3967's updated speed data. Replace the third paragraph with the following paragraph:

In brief, the locomotive event recorder data from BNSF 3967 indicated at 8:20:41 CDT while at a speed of 65 miles per hour (mph), the PCS transitioned from "Closed" to "Open", the Emergency Brake transitioned from "Off" to "On", the throttle position changed from throttle position 4 (T4) to Idle, and the electronic air brake – brake pipe pressure (EAB BP) reduced from 89 pounds per square inch (psi) to 33 psi. One second later at 8:20:42 CDT, the EAB BP reduced to 0 psi and remained at 0 psi for the rest of the data. At 8:20:43 CDT, the throttle position changed to dynamic brake (DB) and remained at DB for the rest of the data. Two seconds later at 8:20:45 CDT, the speed reduced to 64 mph. Then 10 seconds later at 8:20:55 CDT, the data ended while at a speed of 57 mph.

Lastly, figures 17 and 18 from section 3.6 have both been modified with the updated speed and miles traveled data.

EAB Brake Setup BNSF3967 EAB Brake Setup BNSF3967 TCO Emergency Brake_BNSF3967 Emergency Brake_BNSF3967 Off Open PCS Open_BNSF3967 PCS Open BNSF3967 Closed Sanding Mode BNSF3967 Sanding Mode_BNSF3967 Off Dir Call_BNSF3967 Dir Call BNSF3967 Trac Effort_BNSF3967 (klbs) For EAB Brake Handle_BNSF3967 EAB Brake Handle BNSF3967 Suppress TLEM_BNSF3967 Trac Effort_BNSF3967 Reset*
Ready NPReady NPReady Notoring*
Dyn Brake*
DB Setup*
Crank* Oper Mode BNSF3967 EAB BC EAB BP_BNSF3967 EAB BC_BNSF3967 Traveled_BNSF3967 (miles) 08:20:41 CDT Miles Traveled_BNSF3967 PCS Open "Open", Emergency Brake "On", 65 mph 20 10 Throttle_BNSF3967 Throttle_BNSF3967 63 mph 80 60 40 20 0 Speed_BNSF3967 (mph) DB Speed_BNSF3967 08:20:55 CDT (last data point) 57 mph 08:25:00 07:45:00 07:50:00 07:55:00 08:00:00 08:10:00 08:15:00 07:35:00 07:40:00 08:05:00 08:20:00 Central Daylight Time (HH:MM:SS) **National Transportation Safety Board** BNSF 3967: 50 Minutes (07:35:00 to 08:25:00)

Figure 17: BNSF 3967's locomotive event recorder parameters (50 minutes)

EAB Brake Setup_BNSF3967 EAB Brake Setup BNSF3967 TCO Emergency Brake BNSF3967 Emergency Brake_BNSF3967 Off Open PCS Open_BNSF3967 PCS Open BNSF3967 Closed Sanding Mode BNSF3967 Sanding Mode BNSF3967 Center Dir Call_BNSF3967 EAB BC_BNSF3967 (psi)

EAB BP_BNSF3967 (psi)

Trac Effort_BNSF3967 (klbs) EAB Brake Handle BNSF3967 EAB Brake Handle BNSF3967 Suppress TLEM_BNSF3967 Off Oper Meady Motoring Dyn Brake DB Setup Crank Trac Effort_BNSF3967 Oper Mode BNSF3967 EAB BP_BNSF3967 Miles EAB BC_BNSF3967 Traveled_BNSF3967 (miles) 08:20:41 CDT PCS Open "Open", Emergency Brake "On", 65 mph Miles Traveled_BNSF3967 5 Throttle_BNSF3967 Throttle_BNSF3967 63 mph 70 60 50 40 Speed_BNSF3967 (mph) Speed_BNSF3967 08:20:55 CDT (last data point) 57 mph 08:21:00 08:12:00 08:13:00 08:14:00 08:15:00 08:16:00 08:17:00 08:18:00 08:19:00 08:11:00 08:20:00 Central Daylight Time (HH:MM:SS) **National Transportation Safety Board** BNSF 3967: 10 Minutes (08:11:00 to 08:21:00)

Figure 18: BNSF 3967's locomotive event recorder parameters (10 minutes)