



IronWood Technologies

Railroad Accident Reconstruction

Federal Railroad Administration

False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - State of New Mexico

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
449	1/11/1995	SP	CTC			01CICHX-10	Signal 50RA	Akela, New Mexico	N
Failed Equipment or Device - Semaphore Signal									
On January 11, 1995 at approximately 11:10 PM Engineer operating train no. 01 CICHX-10 traveling east, reported that signal 50RA at West Akela was Green and the next signal 52RA was Red. Signal 50RA should have been Yellow.									
Under the direction of the Signal Maintainer, the signal system was immediately removed from service and thoroughly tested. It was found that the report made was true. Upon further investigation, it was found that a broken eyelet in the negative armature circuit in the eastbound signal 52RA caused that circuit to remain open and signal 52RA to remain Red regardless of the position of the controlling relays.									
The defect was corrected. The signal system was thoroughly tested and found to be working as intended. The system was restored to service on January 12, 1995 at 3:00 AM.									
453	2/8/1995	SP	AB			1CHSXF-06 West	Signal 15329	Vaughn/Leoncito, NM	N
Failed Equipment or Device - Semaphore Signal									
On February 8, 1995 at approximately 1:00 AM Engineer operating train 1CHSXF-06 traveling west, reported that signal 15329 was Green and the next signal 15319 was Red.									
Under the direction of the Signal Supervisor, the signal system was placed at STOP. Signal personnel inspected the signal system and found that the motor brushes and commutator at signal 15319 were covered with carbon thus preventing the proper operation of the semaphore blade.									
After the motor brushes and commutator were cleaned, the signal system was thoroughly tested and found to be working as intended with no exceptions.									
The signal system was restored to service on February 8, 1995 at 3:30 AM.									

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			Cause						
			Narrative						
465	3/10/1995	SP	AB			1CHLBT1-07	Signal 15329	Vaughn/Leoncito, NM	N
			Failed Equipment or Device - Semaphore Signal						
			<p>On March 10, 1995 at approximately 3:00 AM, Engineer operating train 1CHLBT1-07 traveling west, reported that signal 15329 was Green and the next signal 15319 was Red for no apparent reason, with no train in the block.</p> <p>The Signal Maintainer investigated and found that the single arm semaphore signal 15329 was Green but the single arm semaphore signal 15319 was Red due to a defective motor. He made repairs and tested signals, and returned signals to service at 9 AM on March 10, 1995. Signal 15319 was converted to a colorlight signal on March 16, 1995 to prevent any future reoccurrence.</p> <p>(NOTE: Signal 15319 had also experienced a similar failure on February 8, 1995)</p>						
482	5/4/1995	ATSF	CTC			526	Underground Cable	Near Lucy, NM	N
			Vandalism - Instrument Case, Cable, or Junction Box Damaged						
			<p>Approximately 5:11 AM, May 4, 1995, crew on the S-KCLB5-03 reported they were lined westbound into the siding at the east end of Lucy with a Red over Green aspect at control signal (L) and the approach signal 8261 displayed Green instead of Flashing Yellow for their train. Signal personnel were notified and their investigation of the reported incident verified the condition reported. Further investigation determined that a contractor installing an antenna tower for radio control of the CCT control point, had driven a ground rod through the underground cable that runs from the instrument house to the westbound control signal (L) at the east end of Lucy. This condition provided a cross path for the B10 battery conductor and the LAHDP conductor. The LAHDP is the pole change circuit for approach signal 8261. The underground cable was repaired temporarily and signal system tested to prove proper operation. Later the same day (5/4/95) the damaged underground cable was replaced and signal system retested.</p>						
496	7/8/1995	SP	AB			1LBCHT1-06 East	Signal 16172	Hargis, NM	N
			Failed Equipment or Device - Battery Charger						
			<p>On July 8, 1995 at approximately 7:15 AM Engineer operating eastbound SP train 1LBCHT1-06, reported that he passed signal 16172 on a Green aspect and then found signal 16198 Red and signal 16212 Dark.</p> <p>The Signal Supervisor tested the signal system and found that the battery charger (rectifier) at signal 16212 had failed, causing the battery voltage to drop to about 3-4 VDC. This caused signal 16198 to go Red after the train passed signal 16172. The battery charger was replaced and the signal system was thoroughly tested with no other defects found, and signals operating as intended.</p> <p>The signal system was restored to service on July 8, 1995 at 3:00 PM.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
506	8/12/1995	SP	AB			SP 1EPKCT-12	Signal 14174	Three Rivers, NM	N
<p>Cause</p> <p>Narrative</p> <p>Scenario Reenacted, Unable to Duplicate, No Defects Found</p> <p>On August 12, 1995 at approximately 3:50 PM, Engineer operating train no. 1EPKCT 12 traveling east, reported that signal 14174 was Yellow, while the rear of the train ahead no. 1LBCHT1-10 was still in the block.</p> <p>Under the direction of Signal Supervisor J.L. Stevenson, the signal system was thoroughly tested. All tests showed the signal system to be working as intended with no exceptions.</p> <p>The following day, the Division Signal Engineer and the Signal Supervisor made further operational tests and observed the signal at the same time of day for evidence of phantom indication. They found the signal system to be working as intended. They did not, however, that the Electrocode 4 receiver LEDs flashed while being checked for pickup values, so they replaced the Electrocode 4 box and module as a precautionary measure.</p> <p>The signal system was returned to service on August 13, 1995 at 5:55 PM.</p>									
516	9/11/1995	ATSF	AB			811	Unknown	Colmor, NM	N
<p>Scenario Reenacted, Unable to Duplicate, No Defects Found</p> <p>Approximately 6:10PM, September 11, 1995 Amtrak engineer reported signal 7102 at the west switch of Colmor Red and approach signal 7112 was Green for his train. Signal Department was notified and made operation test of the signal system in question, with no exceptions taken. The control relay for signal 7112 was replaced (22HDR) as a precautionary measure. The signal control relay (22HDR) has been sent to our signal repair shop for more extensive tests and inspections.</p>									
530	11/7/1995	SP	AB			SP 1BSMFF-05	Signal 14619	Ancho, NM	N
<p>Maintenance - Wiring Chewed by Rodents</p> <p>On November 7, 1995 at approximately 7:40 AM, Engineer operating train no. 1BSMFF-05 traveling west, reported that signal 14619 at W. Ancho remained Green while the 1WCKCQ-04 traveling east was occupying all 3 track circuits on the main track at W. Ancho, and that the signal had remained Green the whole time that the 1WCKCQ-04 was approaching the West End of Ancho.</p> <p>The Signal Engineer investigated and found that a mouse had eaten through the battery and lamp wires insulation, inside the signal junction box. A battery wire was touching the Green lamp wire which could cause the lamp to display Green even when the block is occupied.</p> <p>[Signal personnel] replaced the bare wires, sealed the box, made full operational tests with shunts, tested relays, and meggered cables. The signal system was then working as intended and was returned to service.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
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533	11/16/1995	SP	CTC			SP 1LBHOT-15	Signal 50RA	Akela, New Mexico	N
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Scenario Reenacted, Unable to Duplicate, No Defects Found

On November 16, 1995 at approximately 2:50 PM, Engineer operating train no. 1LBHOT-15 traveling east, reported that signal 50RA at the West End of Akela was Green when it first came into view, then changed to Yellow when the train was a mile away, and heading towards the signal.

Under the direction of the Division Signal Engineer, the signal system was put to STOP and thoroughly tested. All tests showed the signal system to be working as intended with no exceptions.

The signal system was restored to service on November 17, 1995 at 3:30 AM.

79	12/16/1996	BNSF	CTC			SLBCH3-12 Engine	Underground Cable	La Lande, NM	N
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Human Error - Field Wiring Error, Inadequate Service Testing

Train SLBCH3-12 proceeding eastbound on the main track approaching the east end of La Lande noticed a Green aspect displayed on the main track signal and a Yellow aspect displayed on the leave siding signal. Since the switch was normal the proper aspect for the siding signal should have been Red. Investigation revealed that a signal gang was splicing through underground cable to get ready for a track expansion project and had inadvertently spliced RARN to RBN and RBR to RARN. This put both signal mechanisms in series allowing the voltage for the mainline signal mechanism to also display the Yellow aspect on the siding signal.

Procedures were reviewed with all signal personnel involved. Remedial action is as follows: additional formal training for Signalman and Foreman involved, additional test equipment will be provided to this signal gang, discipline was assessed to Signalman involved requiring retraining before returning to work.

162	8/25/1997	UP	CTC			SP 8574	Battery	Strauss, NM	N
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Failed Equipment or Device - Battery or Circuit Breaker

On August 25, 1997, at 14:00 CDST, on the Lordsburg Subdivision at Strauss, NM, eastbound 1EPLDW.19 had a Flashing Red signal for a move from the siding to the main track before the dispatcher requested the switch reverse.

An investigation revealed a bad set of operating battery causing pumping relays and the siding signal flashing in lieu of steady Red.

The battery was replaced, the signal system was restored to proper operation and all applicable tests were performed.

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			Cause							
			Narrative							
175	11/14/1997	UP	AB			SSW 9690	Semaphore Signal Air Valve	Carrizozo, NM	N	
			Failed Equipment or Device - Semaphore Signal							
			On November 14, 1997 at 03:58 CST, on the Carrizozo Subdivision at Carrizozo, New Mexico, westbound IGTWC-05 observed a Green approach Semaphore signal 1441.5 to a Red signal 1440.3 at the east end of Carrizozo.							
			An investigation revealed a plugged air valve in the Semaphore signal 1441.5 did not let the signal move to a Yellow position.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
181	1/3/1998	BNSF	CTC			H-BARGAL1-03, E	2E Signal	West Baca, New Mexico	N	
			Human Error - Improper Circuit Jumper in Place							
			At 2224 hours on January 3, 1998, train H-BARGAL-1-03 was stopped at the 2E signal at West Baca waiting for train ahead to clear the plant at East Baca. When the train ahead cleared the plant at East Baca, the 2E signal at West Baca displayed a Yellow over Green aspect. This signal should have been Yellow over Red.							
			Signal tests revealed that this could be duplicated. The problem was found to be an AAR washer had fallen down between two terminals on the back of the H-2 mechanism at East Baca. This washer bridged two terminals thereby falsely energizing the 2E signal at West Baca.							
			The washer was removed and signal system restored.							
186	7/30/1998	BNSF	CTC			ZNBYWSP829	Switch CP 7816	Vaughn, New Mexico	N	
			Human Error - Signal Personnel Introduced False Energy into Signal System During Testing							
			Train Z-NBYWSP8-29 was eastbound on the south track between Vaughn and Joffre, New Mexico. The train observed a CLEAR aspect for intermediate signal 7814. After passing the intermediate signal, approximately 1100 feet, the train encountered a reverse switch at a new control point CP7816 that was not in service. The train crossed over from the south track to the north track. The train stopped approximately .6 mile after crossing over to the north track. The dispatcher did have an opposing train lined on the north track approaching this location. The two trains got stopped approximately eight (8) miles apart.							
			Cause: Signal personnel were pretesting the new crossover location preparing for in service testing scheduled for August 4, 1998. Switch clamps were removed from the switches anticipating a track window to test the switch operation. Track and time was denied by the dispatcher until one train ran. While waiting for track and time the signal personnel inadvertently threw the switch reverse while testing modules and looking for a ground on the operating battery.							

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			Cause							
			Narrative							
218	10/21/1998	UP	AB			UP 6046	None	Pastura, NM	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On October 21, 1998 at 23:45 MDT, on the Carrizozo Subdivision at Pastura, NM, eastbound IILADU-20 was lined from the Main track to the siding, and eastbound approach signal at MP 1543.0 and the eastbound home signal for the switch at MP 1545.8 displayed a Green signal.							
			An investigation revealed the switch was not wired correctly which allowed the normal switch position indication to remain energized with the switch reverse.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
223	1/30/2000	BNSF	AB			Amtrak #4-27	Signal 8552	Waldo, New Mexico	N	
			Vandalism - Signal Mechanism Shot - Stuck in Position							
			Amtrak #4-27 reported passing approach signal to Waldo, Signal #8572 with CLEAR indication. Also reported passing 8552 signal at West End Waldo with CLEAR indication. Upon passing curve at MP 855.1, observed train H-DENBAR1-29 pulling into siding and still the OS section at East End Waldo. Amtrak 4-29 placed his train in emergency and was able to stop short of Red signal at East End Waldo. (8542 Signal).							
			Signal forces called to investigate. Upon arrival, Supervisor of Signals found the searchlight signal 8552 had been shot into by person/persons unknown. Signal relay was broken and bullet fragments had jammed H-5 signal relay in the Green position. Relay was replaced and signal system tested and found no further exceptions. Cross and Ground Test was made upon arrival as well and no exceptions found.							
			Special Agents were notified as well as County Sheriff's Office to make report of vandalism.							
325	5/9/2001	UP	CTC			UP7578	None	Orogrande, NM	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On May 9, 2001 at 12:31 MDT, at Orogrande, NM on the Carrizozo Subdivision, eastbound ILCIM-08, on the main track, was lined to the siding, and at MP 921.80, reported the eastbound signal at TC922 at West Orogrande was Red over Yellow (DIVERGING APPROACH), with a switch in the siding lined against him.							
			An investigation revealed the Switch Circuit Controller was wired incorrectly causing the Normal Switch Repeater Relay to energize with the switch reversed.							
			The signal system was restored to proper operation, and all applicable tests were performed.							

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			Cause						
			Narrative						
298	11/5/2001	BNSF	CTC			CMCMJCC324A, B	2LA Signal	Defiance Wye Spur, MP .6, Defiance Sub., Ga	
340	6/2/2002	BNSF	CTC			ZKCKLAC1-01	None	Clovis, NM	N
386	9/29/2003	BNSF	CTC	Remote		ZALTSBD227	Design Error	Belen, NM	N

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428	11/20/2003	UP	CTC			UP 2236	None	Vaughn, NM	N
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Cause
Phantom Signal - Due to Unpainted Signal Hood or Background

On November 20, 2003 at 14:32 MST, in Vaughn, NM on the Carrizozo Subdivision, westbound MHNEP-19, on the main track at MP 741.2, reported the westbound absolute at CP TC741 (West Vaughn) was Green, then turned to Red, with the switch at West Vaughn lined against him.

An investigation revealed the Red signal appeared Green for a short time, from reflection off of the top of the signal hood, while the westbound train was rounding a curve.

The signal was realigned, and all applicable tests were performed.

430	1/24/2004	BNSF				P-LACCHF1-23C	2E Signal	Perea, NM	
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No. of Reports Shown in this Listing: **22**