



Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
1	10/29/1995	BNSF	CTC			BN 9509	Wiring Error	West Antelope, WY	N
<p><b>Cause</b></p> <p><b>Narrative</b></p> <p><b>Human Error - Field Wiring Error, Inadequate Service Testing</b></p> <p>At approximately 13:00 hours on 10/29/1995 eastbound train lead locomotive BN 9509, Conductor and Engineer reported intermediate signal at MP 28.1 displayed Green aspect. Next location West Antelope train went on to diverging route with a Red over Green signal displayed. Signal system was tested and wiring error was found. During circuit changes for a signal cutover on 10/27/1995 a wiring error was made. Normal switch correspondence check was inadvertently left out of the pole change circuit feeding line circuits between West Antelope and intermediate signal at MP 28.1. Wiring error was corrected, signal system tested, and placed back in service at 16:36 hours on 10/29/1995. Attachments include diagram of train movement and portion of signal circuit plan. Investigation scheduled for signal employees involved.</p>									
105	8/6/1996	UP	CTC		ACS	UP6322	None	Cheyenne, Wyoming	N
<p><b>Maintenance - Improper Adjustment, Track Circuit</b></p> <p>On August 6, 1996, at approximately 01:10 CDT on the Laramie Subdivision, Eastbound LAAP7D-04 on Track No. 1, while in the block at approximately M.P. 512.50, received an upgrade of his cab signal from Red to Yellow. Eastbound XOACST-03 was ahead of him on Track No. 1 at M.P. 512.25 still occupying the same block with three axles of the last car.</p> <p>An investigation revealed the high level output from the cab transmitter at M.P. 512.25 enabled the cab signal to push by the three axles and upgrade the cab signal on LAAP7D-04.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

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			<b>Cause</b>							
			<b>Narrative</b>							
<b>166</b>	9/4/1997	UP	CTC		ACS	UP 6211		Cheyenne, WY	N	
			<b>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</b>							
			On September 4, 1997, at 11:20 CDST, on the Sidney Subdivision at Cheyenne, Wyoming, westbound ANPMI-03 observed a Red over Red indication at westbound signal 509.7 while receiving a APPROACH LIMITED cab signal. While approaching signal 509.7, he continued to receive an APPROACH LIMITED cab signal until he passed eastbound signal 509.2 and then the cab signal dropped to APPROACH.							
			An investigation reviewed a circuit error in the cab circuits at eastbound signal 509.2.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
<b>176</b>	12/5/1997	UP	CTC			CNW 8830	None	Sheep Creek, WY	N	
			<b>Loss of Shunt - Possible Rust or Foreign Material on Rail</b>							
			On December 05, 1997 at 12:53 MST, on the North Platte Subdivision at CPW195 in Sheep Creek, WY, westbound CNWNA-01, making a move from track #2 to track #1, observed the signal change from Red over lunar momentarily to Red over Green and then back to a Red indication with the track occupied in front of him.							
			An investigation determined a temporary loss of shunt of the light engine on the main track west of W195 caused the momentary proceed indication.							
			All applicable tests were performed.							

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184	5/4/1998	BNSF	CTC			CNW8820	None	Logan, WY	N
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**Human Error - Field Wiring Error, Inadequate Service Testing**

At approximately 2115MDT Signal Maintainer was notified of a switch out of correspondence and a track indication on main track 2 at crossovers 72.5. On inspection maintainer found 3B moveable point frog and 3A switch had been trailed through and sustained bent throw, lock and point detector rods on both switch layouts. Dispatcher was notified to stop train movements and Signal Supervisor and Signal Manager were notified. Vital Harmon Logic Controller logs were obtained and it was determined that at 21:05:23 MDT the C&NW 8820 coal train CANN0478 with 107 loads and 0 empties 14980 tons, had received a Red over Yellow DIVERGING APPROACH on the 1E signal over crossover main track 1 to main track 2 and had trailed through the 3B moveable point frog and 3A switch in the reverse position. Train crew was unaware they had trailed through the reversed frog and switch. Crossover at 72.5 had been reconfigured same day, with preliminary changes made to have the new crossover from main track 1 to main track 2 used in hand throw only, and the existing crossover from main track 1 to main track 2 was removed from service to allow reconfiguration for addition of third main track and final cutover on May 6. In an effort to expedite traffic during the track changes, Signal Supervisor used existing control and indication circuits from the retired crossover to control and indicate the new main 1 to main 2 crossover using the existing VHLC program. External Indication Locking tests were performed on all switches and moveable point frogs and all showed correct normal and reverse correspondence with the VHLC. Supervisor assumed that since no VHLC software had been changed that it was not necessary to check switch indications against clear signals over affected routes. As a result of moving control and indication circuits from the retired crossover east of 3 crossover to the new crossover west of 3 crossover neither the 1EBHGR or the 2WBHGR checked the 3 crossover switch correspondence. A 1EB signal was requested over main track 1 to main track 2 crossover and the 3 crossover reverse and the eastbound CNW 8820 proceeded on a APPROACH DIVERGING splitting the 3B moveable point frog and the 3A switch.

CORRECTIVE ACTION: 3B moveable point frog and 3A throw, lock, and point detector rods repaired, adjusted and tested switches for indication correspondence and returned to service at 0300 MDT May 5th. Main track 1 to main track 2 crossover removed from service until May 6th, when new VHLC program was installed and signal cutover performed.

Investigation scheduled with Signal Supervisor.

208	6/24/1998	UP	CTC		ACS	6201	None	Rawlins, WY	N
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**Phantom Signal - Due to Sun Angle**

On June 24, 1998 at 18:27 MST, on the Laramie Subdivision at MP 681.2, eastbound AMLKCX 22 reported the eastward signal from the South Runner to the #2 Main was Red over Yellow into a normal switch.

An investigation revealed that the sunlight washed out the lower red aspect and it appeared to be a Yellow aspect.

Phantom screens were installed, the signal system was restored to proper operation, and all applicable tests were performed.

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<b>210</b>	7/18/1998	UP	CTC		ACS	UP 9507	75 Code Transmitter	Rawlins, WY	N
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**Failed Equipment or Device - Relay**

On July 18, 1998 at 07:309 CDST, on the Laramie Subdivision at Rawlins, WY, westbound ZAPLA-16 observed the westbound CP-W680 was Yellow with a Green CAB, and westbound CP-W681 was Red with a Red over Yellow CAB. The ZAPLA-16 was following another train.

An investigation revealed that the eastward 75 Code Transmitter Relay at CP-W681 was coding faster than 75 because of a bad contact, which caused the eastward cab code at CP-W680 to upgrade the code to a Green (180 code rate).

The 75 Code Transmitter Relay was replaced, the signal system was restored to proper operation, and all applicable tests were performed.

<b>188</b>	9/28/1998	BNSF	CTC			BN 9497	None	Logan, WY	N
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**Phantom Signal - Due to Sun Angle**

Approximately 0745 MDT, BN 9497 with 0 loads 116 empties, train symbol EMEANA252, was stopped in approach of absolute westbound Main Track 3 signal 3W displaying Red/Red, at a distance of approximately 12 car lengths for approximately one hour. Conductor on ground giving a roll-by to an eastbound train on Main Track 2 was notified by Engineer at approximately 0845MDT that they had a PROCEED indication for westbound movement at 3W signal. Conductor boarded train and agreed that they had what appeared to be a Red/Yellow signal. Train proceeded westbound to a distance of approximately 7 car lengths from 3W signal, and observed a Red/Red. Crew notified dispatcher, and Signal Supervisor, Maintainer and Inspector were called at 0855 MDT. Crew statements were obtained, and dispatcher held train traffic to allow for signal tests. Signal Supervisor observed 3W signal from BN 9497 at a distance of 7 car lengths and observed a Red/Yellow/Red aspect. VHLC logs from control point Crossovers 72.5 were downloaded. Logs show that 3W absolute control signal had not been requested by the dispatcher and that 3W signal displayed Red/Red while the BN 9497 westbound was in approach to 3W. Office logs at Fort Worth indicate that the 3W signal had not been requested by the Dispatcher. Operational tests performed on signal system with no exceptions taken. 3W signal is a two unit colorlight with green, yellow, red lens in the top unit and green, yellow, red lens in the bottom unit. No exceptions taken with condition of the top or lower unit internal and external lens assemblies. Both units were equipped with snow shields. Lamp voltages were tested with no exceptions. Signal Supervisor reenacted incident in the same position in which the crew observed signal 3W and could distinguish a Yellow aspect in the lower unit caused by sunlight reflection from approximately 0815 until 0835 MDT.

Corrective action: Individual visors were installed on green, yellow, and red light units on top and bottom colorlight units. Signal was observed at approximately 0834 MDT on September 29, 1998 with overcast sky conditions, and with sun in same position on subsequent days and no exceptions were noted. Phankill screens will be installed and evaluated to determine their effect as deterrent against external light sources and reflections.

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<b>280</b>	10/20/2000	UP	APB			UP4051	None	Evanston, WY	N
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**Maintenance - Switch Shunt Wires Broken**

On October 20,2000 at 10:45 MDT, in Evanston, Wyoming on the Evanston Subdivision, eastbound ZLAAP 18 was on Track 2 and reported eastbound signal 917.4 was Green with the switch at MP 916.8 lined against him.

An investigation revealed the shunt fouling wires from the switch circuit controller were not connected to the rail on one side.

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

<b>336</b>	4/30/2002	BNSF	CTC			BNSF 4958	ECII-5K Module	Moorcroft, Wyoming	N
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**Failed Equipment or Device - Electrocode Module**

At approximately 0937 AM MDT eastbound VTACMEM827M-BNSF 1117 reported to dispatcher that intermediate signal 574.6 dropped from APPROACH MEDIUM Flashing Yellow to Red, while following a eastbound. BNSF 1117, after stopping and reporting to dispatcher, proceeded at restrictive speed to intermediate 572.8 which displayed Flashing Yellow, APPROACH MEDIUM and continued eastbound to Moorcroft.

At approximately 1000 AM MDT eastbound XVAWHON927A - BNSF 4958 with 3 units no loads 107 empties 3300 tons, no hardous cars, following the BNSF 1117 reported intermediate signal 574.6 at Flashing Yellow, APPROACH MEDIUM, and as they approached intermediate signal 572.8 which was Yellow, APPROACH, at a distance of approximately 1300 feet it began flashing Yellow at a rate of 25-27 flashes per minute. BNSF 4958 passed intermediate 572.8 at 27 mph and stopped at intermediate 570.8 which was Red, with the BNSF 1117 in advance at approximately 20 car lengths. Crew reported incident to dispatcher at 1005 AM. Dispatcher did not hold the BNSF 1117 nor the BNSF 4958.

Maintainer was called to investigate dropped signal at intermediate 574.6 at 943 AM, Supervisor Signal and Inspector were called at 1010 AM and arrived at approximately 1030 AM. Maintainer arrived at intermediate 574.6 at 1020 AM and Supervisor and Inspector arrived at intermediate 572.8 at 1030 AM.

Signal employees reenacted the train movements of the BNSF 1117 and the BNSF 4958 and determined at intermediate signal 572.8 the Electrocode IIC cabinet was outputting from 3 VDC to 13.4 VDC to the HER relay at a rate of 25-27 fluctuations per minute, while receiving a Code 2 from the intermediate at 570.8. Both the Supervisor and Inspector observed the HER relay releasing and picking, and observed signal 572.8 flashing in correspondence with the HER relay, at a rate of 25-27 flashes per minute. Signal displayed a normal Yellow with 9.0 VDC on the GEM bulb, then a dim Yellow with Approximately 3.9 VDC on the bulb during the release and pickup of the HER relay and did not display Red. 5K Code 2 decoder module was replaced and signal system tested for proper operation.

Suspected bad order 5K module will be sent to manufacturer for inspection and disposition.

Incident occurred on 4 aspect CTC territory with Electrocode IIC coded track circuits, Safetran colorlight signals, and WABCO PN150 relays.

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<b>343</b>	10/30/2002	BNSF	CTC			E-CDJJRM0-05A, B	Insulated Joints	MP 78.0 MT3, MP 77.8 MT3, Bill, WY	N
<p><b>Cause</b></p> <p><b>Failed Equipment or Device - Insulated Joint(s)</b></p> <p>E-IOGCDM0-71A BNSF 8833 with 0-118-2584 tons, westbound MT3 between intermediate 3-75.3 and CP 72.5 with a DIVERGING CLEAR aspect at 72.5 CP. Following train E-CDJJRM0-05A BNSF 8883 with 0-136-3406 tons, westbound MT3 West Bill CP received a Yellow/Red aspect on the 3WA West Bill at 18:31:15 for 27 seconds, dropped to a Red/Red for 9 seconds, changed to Green/Red for 8 seconds, changed to Red/Red for 17 seconds, and then to Flashing Yellow/Red for 4 min. 25 seconds with the BNSF 8883 taking the OS at West Bill at 18:37:46. The first train BNSF 8833 entered the OS at CP 72.5 at 18:36:49. A track indication came in behind the BNSF 8833 at 18:32:03 and picked up at 18:32:16. 3WA West Bill should not have upgraded to Green/Red, it should have displayed Flashing Yellow/Red. Track circuits are Electrocode 4+, with 1 Electrolock at MP 77.8 with VHLC controls at 72.5 and West Bill. During tests and re-enactment, both insulated joints at intermediate 78.1 joints were found to be fully shorted on main track 3, and 1 insulated joint was failing at Electrolock MP 77.8. From this find, the probable cause of the 3WA displaying Green/Red was due to intermixing of codes from the intermediate signal 78.1 combined with codes from the Electrolock at MP 77.8. Insulated joints were replaced October 31st, unable to duplicate the Green/Red with shunts around the new insulated joints. Grounds and megging tests revealed no exceptions. Track wires were cross megged to all 3 tracks at intermediate signal 78.1 and no exceptions were taken.</p>									
<b>417</b>	6/2/2003	UP	CTC			UP 2313	None	Rawlins, WY	N
<p><b>Human Error - Signal Personnel Introduced False Energy into Signal System During Testing</b></p> <p>On June 2, 2003 at 12:15 CDT, in Rawlins, WY on the Laramie Subdivision, westbound IDUSE 31, on #1 track, reported the westbound approach signal to CP W678 at MP 673.3 was Yellow, and the westbound absolute signal at W678 was not called for, and was Red over Yellow, then went to Red over Dark, while the switch was lined normal.</p> <p>An investigation revealed a signal gang, with track and time in the OS, was preparing circuits for a future cut over, and caused the westbound absolute signal at W678 to display other than STOP.</p> <p>All applicable tests were performed.</p>									
<b>424</b>	9/24/2003	UP	CTC		ACS	UP 3205	None	Cheyenne, WY	N
<p><b>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</b></p> <p>On September 24, 2003 at 19:00 MDT, in Cheyenne, WY on the Sidney Subdivision, westbound LCA53 24, on 3 track at CP W508, reported a westbound Red over Lunar signal to proceed into the yard, and his cab signal went from a Yellow to a Flashing Yellow when they entered the OS circuit.</p> <p>An investigation revealed a circuit design error.</p> <p>The circuit was corrected and all applicable tests were performed.</p>									

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			Narrative						

No. of Reports Shown in this Listing: 13