



IronWood Technologies

Railroad Accident Reconstruction

Federal Railroad Administration

False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - 1999

Report #	Date	Reporting Carrier	Block System	Interlockin System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
----------	------	-------------------	--------------	--------------------	---------------	-------------------	--------------------	----------	--------------------------

613	3/8/1999	MNCR		Remote			Track Repeater Relay	CP230 - Cos Cob, CT	N
-----	----------	------	--	--------	--	--	----------------------	---------------------	---

RTC reported @ 0745 train # 1926 going westbound did not indicate a track occupancy on the 2T circuit and the 2W signal was displayed on the model board. Track 2 was taken out of service and the 2W and 2E signals put to STOP. The cause was found to be that the 2TPR relay (Track Repeater Relay) remained in the energized position when track 2 was shunted. Power was removed from the relay and the relay continued to remain in the energized position. After several hours the relay started to operate as intended. The relay was replaced and the circuit was tested and worked as intended.

Report #	Date	Reporting Carrier	Block System Narrative	Interlockin System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
----------	------	-------------------	---------------------------	--------------------	---------------	-------------------	--------------------	----------	--------------------------

614	4/15/1999	KCS	CTC			BN 6307	Wiring	Mulberry, MO	N
-----	-----------	-----	-----	--	--	---------	--------	--------------	---

At 17:20 hrs on 04/15/98 train #076214 North with engine BN6307 with Engineer, Conductor, and a consist of 0 loads, 79 empties, 2471 tons and 4854 feet, was traveling northbound at Mile Post 116, North Mulberry where he received a Green signal. This is the approach to the KCS/BN Interlocker, Mile Post 114.6 at Arcadia, KS. Upon arrival at the interlocker they had a Red signal and shortly after a BN train pulled through the interlocker. Signal Supervisor, Signal Maintainer, and Signal Inspector investigated the report and were able to reproduce the reported failure. Please find attached statement of findings by Signal Supervisor and a train report for the reporting train.

[Statement by Signal Supervisor]

At about 17:30 hrs. on 04/15/99 I was notified by the Signal Desk that a northbound train had reported receiving a CLEAR northbound signal at North Mulberry; which is the northbound approach signal to the KCS/BN interlocking at Arcadia, KS. When the train got to where it could see the color of the interlocking home signal, it was Red. The KCS train also reported that it was only a very short time before a BN train went across in front of them.

The Signal Desk contacted the BN to have their personnel to check the interlocking tapes as the interlocking is their maintenance.

I contacted our Signal Maintainer to go check on our approach signal to verify that it would be no better than Yellow when the home signal was Red. While I was still in route to North Mulberry, [redacted] contacted me by cell phone and informed me that the approach signal would come up CLEAR (Green) with the interlocking home signal at Red. I confirmed that we would not have any other KCS train moves that would be affected by this condition and instructed [redacted] to remain there and wait until I arrived.

When I arrived, I confirmed [redacted] observations and we began to investigate the system. In our test we were able to determine that the 44YGPR relay in the KCS case at the interlocking was being held up by stray battery. The relay repeats the Yellow and Green aspects of the northbound home signal at the interlocking. It also determined the codes to be transmitted to the northbound approach signal. It was determined that there were no grounds on the circuit, but there was stray positive battery. Through further investigation, it was determined that a rodent had chewed into one of two four-conductor unshielded cables used between the junction box at the bottom of the home signal pole and the SA signal head at the top. There were no signs of the rodents in the junction box or the signal head, but they had gotten into the pole itself from the opening at the bottom of the spider-type foundation and chewed through the insulation of the cable that contained the B10 and the 44YGPR wires. They also chewed some of the actual wire strands and frayed them enough that there were strands of one conductor touching the other and introducing the B10 battery onto the YGPR wire all of the time.

We replaced the cables in the pole and made follow up tests. We sealed the foundation bottom and base openings.

615	5/4/1999	CR		Remote		6664	2E Signal	CP Alum, Blairsville, PA	N
-----	----------	----	--	--------	--	------	-----------	--------------------------	---

Engineer on eastbound PICA4 reported receiving APPROACH MEDIUM cab signal aspect with home signal 2E at STOP ahead. Problem was found to be 2 bad insulated joints at home signal 2E, which caused the DC track circuit in the interlocking to drop but did not shut off the MEDIUM APPROACH cab which was the proper cab for the route lined.

Report #	Date	Reporting Carrier	Block System Narrative	Interlockin	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
616	6/9/1999	FEC		Manual		420	1NDR Relay	Pompano, Florida	N
<p>On June 9, 1999 at approximately 8:43 PM FEC train 21609 engine 420 reported signal 1N displayed a Red over Green aspect DIVERGING ROUTE CLEAR at Pompano North Interlocking with train 9809 occupying the block in advance. Signal 1N should have displayed Red over Red STOP under these conditions. Both trains were stacked in Pompano siding and train 21609 was following train 9809 in a northward direction after meeting southbound train 10509. The cab signal on train 21609 went to single Red and remained at this condition immediately after entering the OS track and no incidents occurred as a result of the wayside signal failure. After arrival at the scene FEC personnel were able to simulate the conditions and duplicate the failure.</p> <p>The cause of the failure was determined to be the 1ND relay that was observed mechanically stuck in the energized position by FEC signal personnel. Contacts of the 1ND relay operate the clear control on the searchlight mechanism for the 1N signal that caused the B head of the 1N signal to display a Green aspect. The relay was removed from service and replaced in kind. Operational tests were made and the signals restored back to service.</p> <p>The 1ND relay is a Type B plug in relay serial number H76-96N, Drawing Number 56001-925 manufactured in 1976 by General Railway Signal Co. Rochester NY. The relay will be sent to the manufacturer for inspection by an independent lab to determine the cause of the failure. Test results are forthcoming.</p>									
617	7/8/1999	IMRL		CTC		IMRL 8925	RHDR Circuit	Deer Creek, IA	N
<p>On July 8, 1999 at approximately 13:53 hours, crew on eastward train M 232D 08 reported passing the eastward absolute signal at West Deer Creek displaying a CLEAR aspect when the next signal in advance at East Deer Creek was displaying a STOP aspect. At this time the power operated switch was lined reverse with a signal lined eastward out of the siding at East Deer Creek. The proper aspect for the eastward absolute signal at West Deer Creek at this time was APPROACH.</p> <p>Signal Department personnel were immediately notified and arrived on the scene to promptly investigate this incident. Personnel duplicated the conditions that were reported at the time this incident occurred and determined this condition did occur as reported. With an eastward absolute signal lined out of the siding at East Deer Creek and an eastward signal lined down the main track at West Deer Creek, the eastward absolute signal at West Deer Creek would improperly display a CLEAR aspect.</p> <p>This condition was caused by a circuit design error involving the RHDPR circuit at East Deer Creek which pole changes normal energy on the RHD line circuits. The RHDPR relay was designed to be energized when the RA or RB signal was lined at East Deer Creek. Corrections were made in the RHDPR circuit by checking the front contacts of the RAHR and NWPR relays before the RHDPR relay would be energized. Circuit changes were made and tests were completed at 0200 hours on July 9, 1999.</p> <p>Signal Department personnel have determined that this condition has existed since 1979 when the CTC control points at Deer Creek were installed. Signal Department personnel have also checked all CTC control points on IMRL and have determined this design error does not exist at any other signal locations.</p>									
618	7/22/1999	AMTK		Remote		Train #418, Eng. 49	Charles Int., Signal 2N	Baltimore, MD	N
<p>Engineer on train #418 reported that signal 2N at Charles Interlocking displayed APPROACH SLOW aspect with 4N signal at Paul displaying STOP aspect. Investigation revealed that a circuit design error existed in the 2NHRYPYR circuit. Revision of the circuit was accomplished by breaking the 2NHRYPYR circuit through the front contact of the 66RWCR. Circuitry was changed, tests completed and signal system returned to service.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlockin System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
619	8/25/1999	MNCR		Remote		Train #2736, Head	2S Signal	CP 26 - Phillipse Manor, NY	N
<p>Train #2736 received a NORMAL cab signal for a short period of time when the 2S signal at CP 26 was at STOP, due to a section of third rail laying on tie plates. This bridged an insulated joint at the signal, downgrading it to STOP as the train approached, while permitting cab signal intended for this train after passing the signal, to be received before passing the signal.</p> <p>The section of third rail was removed from the insulated joint location.</p>									
620	9/20/1999	CN		Automatic		N/A	Home Signal	Waltonville, Illinois	N
<p>Phantom signal created by sunlight on Green aspect of CN/IC home signal. Red lamp also burned out. Installation of snow shields and improving site distance for correction.</p>									
621	9/24/1999	AMTK		Remote		Commuter Rail Trai	Loop Interlocking - 14E	Boston, MA	N
<p>Commuter Rail Road Foreman reported to ADE C&S Commuter the 14E signal at Loop Interlocking displayed an APPROACH MEDIUM into a SLOW APPROACH at the 14E at Broad Interlocking. Investigation revealed that a circuit design error from a field change that occurred on March 5, 1999 was the result of improperly displayed aspect on 14E at Loop. Circuitry was changed, tests completed and signal system returned to service. Investigation being conducted to determine responsibility.</p>									
622	10/5/1999	MNCR			ACS	Car # 8326	On-Board Cab Signal	Grand Central Terminal, New York, NY	N
<p>The on-board cab of car # 8326 randomly generated aspects more favorable than intended when operating on uncoded 100 Hz track circuits due to electrical interference by the Motor/Alternator of the car.</p>									
624	10/22/1999	CC	APB				FP	Sioux City, Iowa	N
<p>Yard employee reported westward signal at MP 507.4 was CLEAR with a cut of cars observed 20 car lengths west of signal.</p> <p>Failure was caused by a metal crossarm brace that had fell across the WBH and Com line wires energizing the WBH relay causing the westward signal to display a CLEAR indication.</p> <p>Corrective Action: The crossarm brace was removed from the pole line wires.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlockin System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
----------	------	-------------------	------------------------	--------------------	---------------	-------------------	--------------------	----------	--------------------------

623	10/22/1999	CR		Remote		Unknown	2E Signal	CP Jersey, Delair, NJ	N
<p>On October 22, 1999, Conrail's Director-Operating Rules notified [redacted], Asst. Chief Engineer - C&S that a B. of L.E. Local Chairman informed him that 2E signal at CP Jersey was displaying a SLOW CLEAR when it had previously displayed a SLOW APPROACH going from CP Jersey to CP Hatch. The cause of the problem was the 2RE and 2R2E wires for the 0 and 1 lights were reversed causing the PL4 signal to display a SLOW CLEAR when it should have been displaying a SLOW APPROACH. The signal was rewired and tested and returned to service on October 22, 1999.</p> <p>An investigation will be held to ascertain employee responsibility. Further, instruction on company policy regarding circuit changes and testing will be reviewed with all C&S employees.</p>									

No. of Reports Shown in this Listing: 12