



## IronWood Technologies

Railroad Accident Reconstruction

## Federal Railroad Administration

### False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - State of Iowa

Report #	Date	Reporting Carrier	Block System	Interlocking Systems	Auto.	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
Cause									
Narrative									
458	2/17/1995	CP	CTC			8654	RTR	Signal 139.2	N
<b>Maintenance - Improper Adjustment, Track Circuit</b>									
On February 17, 1995 at approximately 1630 CNW south bound train no. 8654 was located at south end of siding Farmington and reported signal 28R at the Farmington holding signals had cleared from Red to Yellow to Green for about 15 seconds and returned to Red while CNW southbound train 8018 was in 2nd block ahead.									
Upon investigation, it was determined when CNW train 8018 had passed signal 139-2, the directional stick relay had picked to allow a clearing code to generate to the rear causing signal 28R to display an APPROACH aspect and immediately after passing signal 139-2, the train lost shunt allowing a clearing code to be generated back to signal 28R causing signal 28R to display a CLEAR aspect for about 15 seconds. Possible cause found to be RT track circuit was not adjusted properly causing track circuit to pick up momentarily under the train.									
Corrective Action: All track circuits between Rosemount and Comus will be inspected for adjustment and assure shunting with .06 ohm shunt.									
475	4/6/1995	CNW	ATC	BOMVY		Sig. 210 - Insulated Joints		Ogden, IA	N
<b>Failed Equipment or Device - Insulated Joint(s)</b>									
On 4/6/95 "BOMVY" working at Ogden, IA entered the eastbound main (Trk 2) and observed the eastbound approach signal to the Boone bridge (#210) to be Red with his cab signal showing CLEAR. Investigation revealed both insulated joints at Sig. 210 had failed due to failed metal flow over the top. Normal reverse polarity design on the feed wires caused the signal to go to Red as intended however the 100 cycle train control fed past the insulated joints from the block ahead. Remedied by replacing one insulated joint and slotting the other.									
63	5/20/1996	BNSF	AB			177J68	Signal S238.2	Mt. Pleasant, IA MP 238.2	N
<b>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</b>									
Train 177J68 following train 492 had a Red signal S238.2. Signal S238.2 then went to Yellow for a few seconds and then to Green. Investigation found the "D" control wire crossed on the pole line with "D" wire for the north track due to tree limbs blown into pole line by storm. Tree limbs were removed and circuits tested for proper operation.									

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577	11/30/1996	CC		ATS			FP-CL	East Absolute C.L. Signal, Mills Siding MP 323	N
<p>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>False proceed signal; absolute signal east end Mills Siding.</p> <p>On 11/30/96 at 1:40:00 eastbound train UUPWF04 holding main line west of the siding switch Mills observed Green aspect on eastbound absolute signal with westbound train WFLD29 in the block between Macy and Mills siding. The Green aspect was observed two different times at 15 sec. each time then returning to Red aspect.</p> <p>Signal department upon arrival recreated the false proceed indication. Further tests produced cause of false proceed as follows: Wood pin holding common line wire on pin 6 of pole line at MP 323.6 was broke and touching pin 9 550 volt supply line. This caused 3232 H relay to burn up fusing contacts causing 3238H to be energized.</p>									
152	1/23/1997	UP	CTC		UP 3697	None		Mason City, Iowa	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On January 23, 1997, at approximately 1:50 CDT on the Mason City Subdivision KSIT/22 was northbound at M.P. 199.69 and had the distant signal Green with a route to the siding at U199. The distant signal should have displayed a Yellow signal.</p> <p>An investigation revealed the Electrocode program at U199 needs to be changed to code a Yellow to the distant signal with the route lined for the siding.</p> <p>The green bulb has been removed from the distant signal until the new software is installed. All applicable tests were performed.</p>									
164	8/28/1997	UP	CTC		CNW 6887	None		Dunlap, IA	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On August 28, 1997, at 11:45 CDST, on the Boone Subdivision at Dunlap, Iowa, westbound APRNP reported the westbound approach signal 299.9 to Dunlap displayed a Yellow over Green indication, and the westbound signal at Dunlap (A304) displayed a Red over Green indication with the switch lined for the siding.</p> <p>An investigation revealed that the 299BG and N299BG wires were swapped in the signal head at signal 299.9.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

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587	10/5/1997	IMRL	CTC			IMRL 218	None	Deer Creek, Iowa	N
<p style="color: red;">Scenario Reenacted, Unable to Duplicate, No Defects Found</p> <p>On October 5, 1997, Engineer on train 98K 04 reported that he observed the eastward absolute signal at East Deer Creek as displaying a Yellow aspect. The proped aspect for the eastward absolute signal at East Deer Creek at this time was Red. This signal had not been lined by the dispatcher.</p> <p>Signal Department personnel were immediately called to investigate this incident. Personnel performing operating tests and were unable to duplicate this incident. Personnel viewed the log report and replayed the events as they occurred from the CTC Computer System which indicated the eastward absoulte signal at East Deer Creek was never lined for train 98K 04.</p> <p>The only exception found by Signal Department personnel was the hood was not secured on the lower light unit. This condition is still under investigation to determine if the reflection from the sun could have [ends in mid-sentence]</p>									
592	1/5/1998	CC		ATS		FP-CL		East Absolute C.L. Signal, Lake Oley	N
<p style="color: red;">Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>False proceed signal east absolute C.L. signal Lake Oley.</p> <p>On 1/5/98 at 20:12:00 EB train I12 reported a cab and field signal CLEAR 5 car lengths west of Lake Oley and did not drop Red until the westbound was at Best Wall switch at MP 371.7. The WB CC2000 train reported CLEAR signals from Dumcombe to first Red at 371.7.</p> <p>There were 2 H wires wrapped together at MP 372.1. The insulator was broken possibly due to the ice, which caused the wires to wrap. Trouble cleared at 22:45.</p>									
185	7/27/1998	BNSF	AB		MDENGAL3 - Engin	Pole Line Wire		Ottumwa, Iowa	N
<p style="color: red;">Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>Train MDENGAL3-26 reported signal S277.8 Green and signal S275.6 Red as he was following an eastbound train. Signal Supervisor, Signal Inspector and Signal Maintainer placed shunts to simulate the train position and discovered that the "D" upgrade circuits for the north and south tracks were crossed. Further investigation revealed that a tree limb had fallen into the pole line at MP 277 causing a wrap in the north and south track "D" wires. The line wrap was removed and circuits tested again with no further exceptions taken.</p>									

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617	7/8/1999	IMRL	CTC	IMRL 8925	RHDR Circuit	Deer Creek, IA	N
<b>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</b>							
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.							
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.							
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.							
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.							

624	10/22/1999	CC	APB	FP	Sioux City, Iowa	N
<b>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</b>						
Yard employee reported westward signal at MP 507.4 was CLEAR with a cut of cars observed 20 car lengths west of signal.						
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.						
Corrective Action: The crossarm brace was removed from the pole line wires.						

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637	6/26/2000	IMRL	CTC			IMRL 105	None	Ipsco, Iowa	N
<p style="color: red;">Scenario Reenacted, Unable to Duplicate, No Defects Found</p> <p>On June 26, 2000 at approximately 23:06 hours, crew on train L82726 reported observing eastward absolute signal 1E at Ipsco displaying a CLEAR aspect when lined into the pocket track with cars setout in the pocket track. The proper aspect for signal 1E at Ipsco at this time was Lunar.</p> <p>Signal Department personnel were immediately notified and arrived on the scene to promptly investigate this incident. Personnel duplicated the conditions as reported by lining signals and shunting tracks which resulted in signal 1E displaying a Lunar aspect as intended. Personnel then reviewed the VHLC data log which verified that signal 1E displayed a Lunar aspect for train L82726 which was the proper aspect. Signal Department personnel were unable to duplicate a CLEAR aspect as reported. Subsequent to tests, signal system was returned to service.</p>									
326	6/11/2001	UP	CTC			UP3035	None	Council Bluffs, IA	N
<p style="color: red;">Phantom Signal - Due to Sun Angle</p> <p>On June 11, 2001 at 15:30 CDT, at Council Bluffs, Iowa on the Omaha Subdivision, westbound UP 3035 on Track 2 at CPB 001 reported the Dwarf Signal #20 gave a Red over Lunar aspect.</p> <p>An investigation revealed the lower unit of the dwarf signal had a burned out bulb, and was dark on red. The sun wash into the lenses gave it the appearance of a lunar aspect.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
292	7/25/2001	BNSF	AB			C ATMMAS1-03, E	Poleline	New London, Iowa	N
<p style="color: red;">Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>Train C ATMMAS1-03 stopped at Red Sig S220.6. There was a train in the block ahead, stopped at Sig S218.8. When the train ahead moved out of the block ahead, Sig S220.6 went to Green instead of Yellow. The Signal Supervisor and Maintainer were notified to perform tests and inspections at the location. The tests revealed foreign battery on the SD wire for Sig S220.6 caused by a cross between SD and ND on the poleline. A pole had fallen over and twisted, allowing the line wires to sag to the brush and weeds, causing the crossed battery. There had been rain and the weeds and brush were wet allowing current flow. The pole was repaired, the system tested for proper functioning and returned to service.</p>									

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341	9/23/2002	BNSF	CTC			P-PHXCHII-21A	None	Ft. Madison, IA	N
<b>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</b>									
Train P-PHXCHII-21A was following train Z-ALTWSP2-22B operating eastbound on Main Track 2 and crossing over to Main Track 1. Eastbound absolute signal at West Ft. Madison was lined to make a follow-up move from Main Track 2 to Main Track 1 behind the Z-ALTWSP2-22B. Crew reported that the eastbound absolute signal displayed a DIVERGING CLEAR aspect. The eastbound absolute signal should have displayed an APPROACH DIVERGING due to the Z-ALTWSP2-22B occupying the block east of the automatic signal at MP 235.									
Signal Department employees were dispatched to the locations. Data logs were retrieved and reviewed, operational tests were conducted, and eastbound absolute signal for this route was lined with no exception being taken. Battery grounds and cross battery test were performed. Signal system worked as intended.									
Follow-up testing continued on September 24, 2002. During this testing the report from the train crew was confirmed. The false proceed was caused by an engineering design error. Circuit modifications were made to correct the problem and the signal system tested with no further exceptions.									
419	6/17/2003	UP	CTC			UP 6297	CTU Unit	Fairfax, IA	N
<b>Failed Equipment or Device - HXP Crossing Control Transfer Unit</b>									
On June 10, 2003 at 11:40 CDT, in Fairfax, IA on the Clinton Subdivision, westbound MBYDM 17, on the South Track at MP 89.13, reported a Green train control into a Red absolute signal at CP A090.									
An investigation revealed a HXP Crossing Control Transfer Unit at CP 090 was damaged from a power surge and was back feeding the North Track's CLEAR train control onto the South Track.									
The HXP Crossing Control Transfer Unit was replaced, and all applicable tests were performed.									
426	11/4/2003	UP	ATC			UP 4418	None Found	Fairfax, IA	N
<b>Scenario Reenacted, Unable to Duplicate, No Defects Found</b>									
On November 04, 2003 at 12:55 CST, in Fairfax, IA on the Clinton Subdivision, eastbound ZOAG16 01, on track #1, had a CLEAR cab signal, and could see ahead that the eastbound signal at MP 92.60 was Red. The cab signal changed from CLEAR to RESTRICTING at MP 93.48.									
An investigation of the cab signal system on the UP 4418 and on the track from MP 95.50 to MP 92.60 could not duplicate the report. Recorder tapes from UP 4418 revealed that the cab signal was falsely clear between MP 95.50 and MP 93.48.									

No. of Reports Shown in this Listing: 17