



IronWood Technologies

Railroad Accident Reconstruction

Federal Railroad Administration

False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - Union Pacific Railroad

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
37	1/20/1995	UP	CTC			NLNP-18	None	Darr, Nebraska	N
Cause									
Narrative									
<p>Loss of Shunt - Possible Rust or Foreign Material on Rail</p> <p>On January 20, 1995, at 15:53 (CDT) westbound NLNP-18 on the Council Bluffs Subdivision was stopped on Track 1 at Control Point B233 with westbound LND-15 occupying Track 1 west of the control point. NLNP-18 reported signal 1W went from Red to Green about four times in 5-second durations.</p> <p>An investigation could not duplicate the occurrence, and it was determined that loss of shunt by LND-15, a single 4-axle locomotive, had caused the signal display.</p> <p>All applicable tests were performed.</p>									
38	3/14/1995	UP	APB			UP3148	Switch Circuit Controller	Amelia, Texas	N
Maintenance - Switch Circuit Controller									
<p>On March 14, 1995, at 15:00 (CDT), eastbound UP3148 on the Beaumont Subdivision observed eastbound Signal H450 Green with west end of Amelia Yard lined against them.</p> <p>An investigation revealed the switch circuit controller connecting rod had fallen off due to worn threads in the socket assembly.</p> <p>The socket assembly was replaced on the switch rod, and a switch inspection was done. The signal system was restored to proper operation.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
39	4/13/1995	UP	CTC	Manual		UP 3316	None	Binney Junction, California	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			<p>On April 13, 1995, at 9:30 (CDT), eastbound UP3316 on the Canyon Subdivision observed eastbound signal at CP F180 was Green with the next intermediate signal 183.0 Red and the track occupied between Signal 183.0 and Signal 185.6.</p> <p>An investigation revealed that circuit revisions had been made at Signal 183.0 without making required corresponding revisions at CP F180. Circuit revisions were made at CP F180 restoring the system to proper operation.</p> <p>All applicable tests were performed.</p>						
40	4/27/1995	UP	CTC		ACS	CNW 6933		Keith, Nebraska	N
			Failed Equipment or Device - Relay						
			<p>On April 27, 1995, at 03:50 (CDT) westbound ELNP on Track No. 1 on the Council Bluffs Subdivision reported that the westbound signal at CP B276 was Yellow into an occupied block.</p> <p>An investigation revealed that a loose piece of solder bridged a contact and falsely energized the 1COTESER relay allowing a Yellow signal with a train ahead in the block.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>						
41	6/16/1995	UP	AB			UP6317	Switch Circuit Controller	Stanton, Texas	N
			Maintenance - Switch Circuit Controller						
			<p>On June 16, 1995, at 10:55 (CDT) westbound FWEP16 on the Baird Subdivision reported a Green westbound signal at the east end of Stanton with the switch reverse at the west end of Stanton.</p> <p>An investigation revealed the switch circuit controller at the west end of Stanton had bad roller and tension springs that, under vibration, would lose the "shunt circuit" with the switch in a reverse position.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
42	7/21/1995	UP	CTC	Manual		UP5040	None	Fort Worth, Texas	N
			Vandalism - Instrument Case, Cable, or Junction Box Damaged						
			On July 21, 1995, at 10:46 (CDT) on the Dallas Subdivision at Tower 55, the northbound home signal at Control Point T756 displayed a Yellow signal, and the westbound home signal on Track No. 2 at Control Point T944 displayed a Yellow signal with westbound LDCV-20 occupying the interlocker on No. 2 track.						
			An investigation revealed the GP relay for the westbound Home Signal at Control Point T944 was tipped over from the case being struck by contractor equipment.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
43	7/26/1995	UP	CTC	Manual		SP FHOCHQ	None	Lennox, IL	N
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing						
			On July 26, 1995, at 19:16 (CDT) on the Pana Subdivision at Lennox Interlocker, eastbound SP FHOCHQ reported a Red over Green over Red home signal with a trailing point switch lined against them.						
			An investigation revealed the signal circuits were not designed to check trailing point switches in the control network.						
			Circuit plans have been revised and the switch position relay contacts are being installed in the proper control circuits.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
44	8/9/1995	UP	AB			PRBME	None	Des Plaines, IL	N
			Failed Equipment or Device - Relay						
			On August 9, 1995, at 12:00 (CDT) on the New Line Subdivision at M.P. 8.8, PRBME reported eastbound signal 22 displaying a Yellow indication with 22's block occupied.						
			An investigation revealed the 22H relay had a burnt contact jumpered around in the signal lighting circuit.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
45	8/10/1995	UP	AB			UP2400	Track Relay	Adair, OK	N	
			Failed Equipment or Device - Relay							
			On August 10, 1995, at 11:30 (CDT) on the Cherokee Subdivision while the MOWDWD-10 was switching at the south end of Adair, Oklahoma, the southbound leaving signal at M.P. 454.5 displayed a Green indication with the main line track circuit south of the OS circuit occupied.							
			An investigation revealed the signal being held in a Green position by the track relay for the occupied track circuit having contacts fused in the normally-energized position caused by a lightning strike. The track relay was replaced.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
47	8/12/1995	UP	CTC			UP 3598	Relay, Insulated Joint	Pickens, LA	N	
			Failed Equipment or Device - Relay							
			On August 12, 1995, at 13:50 (CDT) on the Monroe Subdivision, northbound GSWWEG-11 observed a Green indication from northbound approach signal 435 while northbound signal 433 at the control point indicated a Red over Lunar.							
			An investigation revealed a shorted insulated joint and track relay out of tolerance at Approach Signal 435.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
46	8/16/1995	UP	CTC			UP9191	None	Auburn, WA	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On August 16, 1995, at 2:48 (CDT) on the Seattle Subdivision at Control Point S162, northbound APSEZ-13 reported northbound signal displayed a Flashing Red over Red with the switch north of the signal out of correspondence.							
			An investigation revealed a problem in the circuit design. Circuits were revised; the signal system was restored to proper operation, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
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48	9/13/1995	UP	CTC			UP3589	None	Mesquite, TX	N
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Cause
Narrative

On September 13, 1995, at 09:22 (CDT) on the Dallas Subdivision, westbound LIFW-12 observed westbound Signal T207 CLEAR (Green) with westbound signal T208 APPROACH MEDIUM (Yellow/Yellow), and westbound signal T209 at STOP (Red).

An investigation revealed the Yellow/Yellow signal at westbound signal T208 was caused by a wrap in the line wires shorting the 25RBH and 25RHD circuit which had the same common.

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

49	9/25/1995	UP	CTC			UP3970	Signal Head	Kansas City, KS	N
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Phantom Signal - Due to Sun Angle

On September 25, 1995, at 07:50 (CDT) on the Kansas City Terminal Subdivision, westbound KSSI-25 on Track No. 3 at Control Point K006 reported the westbound signal Red over Yellow for his movement from Track No. 3 to Track No. 2 and the switch was lined against him.

An investigation revealed the sun reflections in the lower signal head diffused the Red signal and made it appear to give a Yellow indication.

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

50	11/9/1995	UP	CTC			UP2324	None	Marysville, KS	N
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Maintenance - Improper Adjustment, Track Circuit

On November 8, 1995, at 11:15 (CST) on the Marysville Subdivision, westbound LNE75-08 flagged by Red signal at Z150. The westbound train ahead of LNE75-08 was stopped by the Signal No. 153.7 with 2 1/2 cars of the train east of the insulated joints. As LNE75-08 approached Signal No. 153.7, his cab signal upgraded from Red to Yellow.

An investigation revealed the current of the ACS east of the insulated joint at signal No. 153.7 was 3 amps which allowed the current to pass under the stopped 2 1/2 cars upgrading the ACS in LNE75-08.

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

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
51	11/18/1995	UP	AB	Manual	ATS	EX140	None	Barrington, IL	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On November 18, 1995, at 09:15 (CST) on the Harvard Subdivision, southbound train EX140 had a Red over Green signal for movement from No. 3 track to No. 2 Track at CP T031, Barrington, with a northbound train lined into No. 2 track at CP N019, Seeger.							
			An investigation revealed a circuit design error in the traffic locking circuit at CP T031.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
53	12/8/1995	UP	CTC			SP8353	None	Menard Junction, IL	N	
			Human Error - Improper Equipment Installed							
			On December 8, 1995, at 10:00 (CST) on the Chester Subdivision, northbound FHOCH-06 had a Green signal at CP D061 with intermediate northbound signal 58.3 displaying Red and the track north of Signal 58.3 occupied.							
			An investigation revealed a neutral relay was installed in lieu of a biased relay in the "D" circuit at CP D061.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
101	1/24/1996	UP	CTC			None	None	Goodwin, TX	N	
			Phantom Signal - Due to Sun Angle							
			On January 24, 1996, at approximately 1500 CST at the north end of Goodwin, Texas, on the Austin Subdivision, FRA Signal and Train Control Inspector observed the red aspect of the bottom head of the northward absolute signal fade from Red to Yellow.							
			An investigation revealed that the lower head needed to be refocused; the lower head was refocused.							

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			Cause						
			Narrative						
102	4/9/1996	UP	AB			LTN71/09	H-Relay	Near Mitchell, Wisconsin	N
			Vandalism - Instrument Case, Cable, or Junction Box Damaged						
			On April 9, 1996, at approximately 22:00 (CDT) on the Milwaukee Subdivision Westbound LTN71/09 was stopped with 15 cars passed westbound signal 80.13 was observed displaying a Yellow signal.						
			An investigation revealed that vandals had destroyed the signal equipment including several relays in the signal house at signal 80.13. The "H" Relay was broken and stuck in the up position.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
103	4/19/1996	UP	AB			FARWRC-15	Spring Switch	Woolridge, Missouri	Y
			Failed Equipment or Device - Switch Components Damaged by Dragging Equipment						
			On April 19, 1996, at 2008 CDT on the River Subdivision, eastbound FARWRC-15 accepted signal 1570 with a CLEAR aspect at the west end of Woolridge and derailed the lead unit on the spring switch which was not in the full normal position.						
			An investigation revealed that the previous train, westbound LNJ57-19, had come out of the siding with dragging equipment and bent the switch circuit controller lug and connecting rod in such a manner that the switch point was obstructed and held gapped open from normal while the switch circuit controller indicated normal.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
104	7/17/1996	UP	AB			HOCHT-16	None	Glenwood, Illinois	N
			Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)						
			On July 17, 1996, at approximately 1840 CDT, on the Chicago Subdivision, the northbound HOCHT-16 accepted an APPROACH aspect at signal 250, Milepost 24.9, on the northward main track and proceeded north stopping short of the northbound UGCCH-17 stopped ahead in the block.						
			An investigation revealed that a tree had fallen through the pole line at Milepost 22.3 wrapping the northward HD wires with the HD wires for the southbound main track and energizing the northward HD wires falsely.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

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			Cause							
			Narrative							
105	8/6/1996	UP	CTC		ACS	UP6322	None	Cheyenne, Wyoming	N	
			Maintenance - Improper Adjustment, Track Circuit							
			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.							
			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.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
106	8/28/1996	UP	CTC	Automatic	ATC	CNW6905	None	Rochelle, Illinois	N	
			On August 28, 1996, at approximately 0145 CDT on the Geneva Subdivision, westbound ELNP-27 was proceeding west on No. 2 Track at restricted speed east of M.P. 74.0 with a Restricting cab signal aspect. The cab signal aspect was Restricting as the home signal at the BN interlocking at M.P. 75.3 was displaying a Stop aspect. At approximately M.P. 74.0, the cab signal changed to a Clear aspect and remained Clear until changing back to a Restricting aspect at approximately M.P. 74.25.							
			An investigation revealed a high level of 120 Hz energy on the track originating from a track rectifier at the battery end of a DC track circuit which operated in combination with the feed transformer for the 100 Hz ATC.							
			The wiring for the track rectifier, battery, and ATC feed transformer was revised to a standard arrangement which minimizes the 120 Hz energy on the track circuit. The signal system was restored to proper operation, and all applicable tests were performed.							
107	12/20/1996	UP	AB			UP5041/NLSH-20	None	Marshall, Texas	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On December 20, 1996, at 16:00 CDT on the Reisor Subdivision, southbound NLSH-20 reported the southbound signal at the north end of Louisiana, M.P. 350.3 was CLEAR and the Spring Switch at the south end of Louisiana was lined reverse.							
			An investigation revealed the NWP relay for the Spring Switch did not break the HD signal control circuit to cause the southbound signal to display a Red signal.							
			The circuits were revised to break the southbound signal's HD wires with the NWP relay.							
			The signal system was restored to proper operation, and all applicable tests were performed.							

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			Cause						
			Narrative						
151	1/2/1997	UP	CTC	Manual		Job #700	Underground Cable	Avondale, LA	N
			Failed Equipment or Device - Aerial or Underground Cable, Shorted or Grounded (not due to vandalism or digging)						
			On January 2, 1997, at 14:25 CDT on the Alexandria Subdivision the Tower Operator at West Bridge Junction, at Milepole 10.2 reported that as Train Job #700 passed Signal No. 7 leaving the new yard on the SP tracks to Westwego, Signal No. 7 stayed Yellow.						
			An investigation revealed the 7GZ signal mechanism had a ground on it through an underground cable from switch No. 9 which kept the mechanism energized with a train occupying the OS track ahead of Signal No. 7.						
			The underground cable was replaced, and the signal system was restored to proper operation, and all applicable tests were performed.						
152	1/23/1997	UP	CTC			UP 3697	None	Mason City, Iowa	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			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.						
			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.						
			The green bulb has been removed from the distant signal until the new software is installed. All applicable tests were performed.						
153	2/8/1997	UP	AB			UP9191	Relay, 75 Coder	North Platte, Nebraska	N
			Failed Equipment or Device - Relay						
			On February 8, 1997, at 14:40 CDT on the Council Bluffs Subdivision, CJRWB-07 was eastbound on Track No. 2 at M.P. 285.5 and observed the eastbound signal at B285 was cycling from Green to Yellow with the second track ahead of the signal occupied.						
			An investigation revealed a Style 75 Coder Relay that operated the eastbound signal at B285 intermittently failing.						
			The relay was replaced, and the signal system was restored to proper operation, and all applicable tests were performed.						
			NOTE: This report supercedes previous report of this incident dated February 14, 1997.						

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			Cause						
			Narrative						
154	3/21/1997	UP	CTC			UP9453	None	Kansas City, Missouri	N
			Vandalism - Instrument Case, Cable, or Junction Box Damaged						
			On March 21, 1997, at 17:50 CST on the Kansas City Terminal Subdivision, CRMWL-20 was east bound stopped on Track No. 2 across the insulated joints occupying both the east and west track circuits at the intermediate signal location at Mile Post 280.4. The westbound signal at Mile Post 280.4 was observed displaying a Yellow over lunar.						
			An investigation revealed the signal cabin at Mile Post 280.4 had been hit and knocked a foot off center dumping all the relays in the house.						
			The relays were all righted, the signal system was restored to proper operation, and all applicable tests were performed.						
155	4/7/1997	UP	AB			LVW50-06	Switch Foot	Adobe Creek, Colorado	N
			Maintenance - Switch Circuit Controller						
			On April 7, 1997, at 2:22 DST on the Hoisington Subdivision, eastbound LVW50-06 observed the signal at the west end of Adobe Creek was CLEAR with the switch at the east end of Adobe Creek in a reverse position for movement from main to siding.						
			An investigation revealed the switch foot connecting the switch rod to the switch point at the east end of Adobe Creek was broken, so reversing the switch would not operate the switch circuit controller which would have caused a Red signal at the west end of Adobe Creek.						
			The switch was repaired; the signal system was restored to proper operation, and all applicable tests were performed.						
156	6/3/1997	UP	CTC			UP804	Switch Circuit Controller	Geronimo, TX	N
			Maintenance - Switch Circuit Controller						
			On June 3, 1997, at 5:45 CDST, on the Austin Subdivision, northbound LAS49/02 backed into the Geronimo Spur, at MP 219.0 and was in the clear. With the Geronimo Spur switch still reverse, a northbound signal was cleared at CPQ219 for a main line movement over the switch.						
			An investigation revealed that excess rail movement from loose rail seats and spikes had caused the Switch Circuit Controller cams to roll past, and off of their rollers, letting their normal contacts make and causing a false indication of the switch.						
			The loose rail seats and spikes were tightened and the Switch Circuit Controller was adjusted. The signal system was restored to proper operation, and all applicable tests were performed.						

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			Cause						
			Narrative						
157	6/8/1997	UP	CTC			UP3924	Electrocode Unit	Valentine, AR	N
			Failed Equipment or Device - Electrocode Module						
			On June 8, 1997, at 4:30 AM CDST on the Hoxie Subdivision, southbound MCHHO-06 on track 1 observed southbound Signal 3343 at MP 334.5 Green with the next southbound Signal 3367 at MP 336.7 Red.						
			An investigation revealed that, with the block occupied south of southbound Signal 3367, the Electrocode unit at 3367 was transmitting a Code 4 north to southbound Signal 3343 instead of a Code 2.						
			The Electrocode unit at 3367 was replaced. The signal system was restored to proper operation, and all applicable tests were performed.						
158	6/13/1997	UP	AB			UP1172	None	Crockett, CA	N
			Phantom Signal - Due to Sun Angle						
			On June 13, 1997, at 19:30 PDST, on the Cal-P line of the Martinez Subdivision, eastbound 2CROCKETT13 on track No. 2 observed a Yellow over Yellow at signal 284, the approach to CP A30, with the home signal at CP A30 Red.						
			An investigation at the same time of day was made and revealed the bottom head of approach signal 284 was dark, but appeared to be illuminated Yellow from the rays of the sun.						
			Antiphantom screens were installed to Signal 284 which prevented any further reflections being observed from the sun.						
159	6/16/1997	UP		Manual		UP883	None	West Bridge Jct., LA	N
			Phantom Signal - Due to Sun Angle						
			On June 19, 1997, at 15:22 CDST, on the Alexandria Subdivision at West Bridge Jct., LA, southbound MLINO-16 observed a Yellow dwarf signal for movement from the Yard to UP Long Bridge with a power switch not lined for the movement.						
			An investigation revealed the sun was shining in the signal and washed out the Red aspect.						
			The lens was changed and the signal was adjusted so it would display a more plainly lit Red aspect.						

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			Cause							
			Narrative							
160	7/24/1997	UP	CTC			SP 8280	None	Luling, LA	N	
			Human Error - Improper Equipment Installed							
			On July 24, 1997 at 15:30 CDST, on the Alexandria Subdivision at Luling, LA, northbound FINOLB-23 observed northbound signal 23.7 Green with the next northbound signal at CP L027 Red and a train occupying the track north of L027.							
			An investigation revealed the D biased relay at signal 23.7 had been changed out earlier due to lightning damage with a neutral relay.							
			The relay was changed out to the proper relay, the signal system was restored to proper operation and all applicable tests were performed.							
161	8/10/1997	UP	CTC		ATC	UP5071	None	Nelson, IL	N	
			Phantom Signal - Due to Sun Angle							
			On August 10, 1997, at 17:45 CDST, on the Geneva Subdivision at Nelson, IL, eastbound worktrain WNEKCR, at mile post 105, while making a switching move from track 2 through track 3 and track 5 to the yard, ran by a dwarf signal that should have displayed a Red indication but the bulb was burnt out. The train crew claimed the dwarf signal displayed a lunar indication.							
			An investigation revealed with the sun shining in the signal, it gave the appearance of a lunar indication.							
			The dwarf signal is being changed out to a two position colorlight signal on a five foot mast.							
162	8/25/1997	UP	CTC			SP 8574	Battery	Strauss, NM	N	
			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							
164	8/28/1997	UP	CTC			CNW 6887	None	Dunlap, IA	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			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.							
			An investigation revealed that the 299BG and N299BG wires were swapped in the signal head at signal 299.9.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
163	8/29/1997	UP	CTC			SP8574	None	Slover, CA	N	
			Vandalism - Signal Damaged, Caused Unintended Signal Aspect							
			On August 29, 1997, at 12:45 CDST, on the Mojave Subdivision at Slover, CA, eastbound 1MBKWC.K22 observed a Yellow over Yellow approach signal 487.8 with the home signal at West Slover Red.							
			An investigation revealed vandals had removed the back plate of the lower signal at 487.8, allowing sunlight to shine through, which produced a mistaken Yellow aspect.							
			The signal system was restored to proper operation and all applicable tests were performed.							
165	9/2/1997	UP	CTC			UP 9512	None	Harvard, CA	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On September 2, 1997, at 14:00 CDST, on the Los Angeles Subdivision at Harvard, CA, westbound IG2LA/30 observed a Flashing Yellow indication at westbound signal 172.3, and with a Red indication at the next westbound signal 170.5.							
			An investigation revealed that a faulty eyelet on the HDR relay at signal 172.3 shorted the #1 and #2 reverse contacts together which allowed the flasher relay to pick up and operate.							
			The signal was restored to proper operation, and all applicable tests were performed.							

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166	9/4/1997	UP	CTC		ACS	UP 6211		Cheyenne, WY	N
<p>Cause</p> <p>Narrative</p> <p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</p> <p>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.</p> <p>An investigation reviewed a circuit error in the cab circuits at eastbound signal 509.2.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
170	9/8/1997	UP	CTC			UP 3347	Switch Machine	North Platte, NE	N
<p>Maintenance - Switch Circuit Controller</p> <p>On September 8, 1997, at 05:46 CDST, on the Council Bluffs Subdivision at B283 in North Platte, Nebraska, eastbound ZSEME 05, while making a move from Track 1 to Track 3, had a PROCEED signal with the east switch of the east crossover gapped open approximately one inch.</p> <p>An investigation revealed the switch had been run through and the switch machine and rods had been damaged and bent in such a manner to allow the machine to lock up and indicate with the point gapped.</p> <p>The switch machine was replaced, the signal system was restored to proper operation, and all applicable tests were performed.</p>									
168	9/15/1997	UP	AB			Yard Job	None	Commerce City, CO	N
<p>Vandalism - Signal Damaged, Caused Unintended Signal Aspect</p> <p>On September 15, 1997, on the Greely Subdivision at Commerce City, Colorado, the southbound Yard Job reported the northbound signal at milepost 4.0 displayed a Green indication with the track occupied north of the signal.</p> <p>An investigation revealed that vandals had painted the red lens of the northbound signal at milepost 4.0 with blue paint, which caused the signal to appear to display a Green indication.</p> <p>The painted lens was replaced with a red lens, the signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
167	9/18/1997	UP	CTC		ATC	175	None	Chicago, IL	N
<p>Cause</p> <p>Narrative</p> <p>Loss of Shunt - Possible Rust or Foreign Material on Rail</p> <p>On September 18, 1997, at 11:00 CDST, on the Geneva Subdivision at Chicago, IL, the Switch Tender reported the eastbound signal 3.8 on #1 Main Track was Green with the track occupied east of the signal.</p> <p>An investigation revealed a rusty rail condition was preventing the track circuit from shunting while occupied.</p> <p>The track relay was adjusted and a stainless steel bead will be welded to the rail. The signal system was restored to proper operation, and all applicable tests were performed.</p>									
169	9/22/1997	UP	AB			SSW9627	None	Fort Worth, TX	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On September 22, 1997, on the Dallas Subdivision at Fort Worth, TX, westbound ZMEL/21 on track #1 observed a Green signal aspect at westbound signal T246, and Red signal aspect at the next intermediate westbound signal 246.3, with the track occupied west of 246.3.</p> <p>An investigation revealed the polarity was reversed on the "D" relay coils for signal T246.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
172	9/27/1997	UP	AB			None	None	Shreveport, LA	N
<p>Vandalism - Pole Line</p> <p>On September 27, 1997 on the Reisor Subdivision at Shreveport, Louisiana, the northbound signal 315.7 at milepost 315.6 (Hollywood Junction) was observed to display a Green aspect with the track north of the signals occupied.</p> <p>An investigation revealed scrap wire, laying on the pole line north of signal 315.7, shorting and false feeding signal control circuits.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
171	9/29/1997	UP	CTC			SP 8007	Code Relay	Lasca, TX	N
			Failed Equipment or Device - Relay						
			<p>On September 29, 1997 at 04:40 CDST, on the Valentine Subdivision at Lasca, Texas, eastbound 11LAAV/23, on the main track at mile pole 746.1, observed a Green eastbound signal at the west end of Lasca, with a Red eastbound signal at the east end of Lasca.</p> <p>An investigation revealed a bad order 180 code relay at west end of Lasca was responding to 75 code.</p> <p>The signal was restored to proper operation, and all applicable tests were performed.</p>						
173	10/22/1997	UP	AB			UP 3592	Switch Circuit Controller	Boracho, TX	N
			Maintenance - Switch Circuit Controller						
			<p>On October 22, 1997 at 21:00 CDT, on the Baird Subdivision at Boracho, Texas, westbound IDALB 21, on the main track, reported westbound signal 708.1 Green with the spring switch in the next block at MP 710.0 lined reverse.</p> <p>An investigation revealed a bad order switch circuit controller at the spring switch.</p> <p>The switch circuit controller was replaced. The signal system was restored to proper operation, and all applicable tests were performed.</p>						
174	11/5/1997	UP	CTC			UP 9367	Shunt Wires	Falls City, Nebraska	N
			Maintenance - Switch Shunt Wires Broken						
			<p>On November 5, 1997 at 12:10 CDT, on the Falls City Subdivision in Falls City, Nebraska, at Control Point Z384, northbound ZMESE 03 on the main track had CLEAR signals with the siding switch of a crossover movement.</p> <p>An investigation revealed the shunt wires were broken at the siding switch of the crossover at MP 384.4.</p> <p>The shunt wires were replaced. The signal system was restored to proper operation, and all applicable tests were performed.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			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.							
176	12/5/1997	UP	CTC			CNW 8830	None	Sheep Creek, WY	N	
			Loss of Shunt - Possible Rust or Foreign Material on Rail							
			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.							
177	12/5/1997	UP	CTC			CSX T8603	None	AMA Jct., LA	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On December 05, 1997 at 04:23 CST, on the Alexandria Subdivision at CPL021, AMA Jct., LA, southbound MLINOB/04 on track #1 observed a Yellow over Red signal with the track ahead occupied.							
			An investigation revealed the HR relay output and relay common wires swapped between track 1 and track 2 at LO21.							
			The signal system was restored to proper operation, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
178	12/11/1997	UP	CTC			UP 3539	None	Pace, MO	N
			Vandalism - Signal Damaged, Caused Unintended Signal Aspect						
			On December 11, 1997 at 09:25 CST, on the Sedalia Subdivision at Pace, Missouri, eastbound MKCAS-09 observed the eastbound approach signal on track #1 at milepost 59.0 indicating a Yellow over Yellow signal, with the eastbound home signal on track #1 at CP M058 indicating a Red signal.						
			An investigation revealed the eastbound approach signal at milepost 59.0 had a bottom signal head that has one light which is yellow. The access door to the bottom signal head was open and sunlight shining into the back of it gave the appearance of a Yellow signal on the bottom head.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
201	1/10/1998	UP	AB			UP 6060	AK Card in Electrocode Unit	5 Miles South of Ogden Jct., TX	N
			Failed Equipment or Device - Electrocode Module						
			On January 10, 1998, at 06:00 CST, on the Austin Subdivision, south of Ogden Jct., Texas, northbound MLDLI 09, on track 2, observed northbound signal at Mile Post 241.6 Green with the next northbound signal at Mile Post 238.4 Red and the track north of Mile Pole 238.4 occupied.						
			An investigation revealed a defective 4K card in the Electrocode unit at Mile Post 241.6.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
203	3/7/1998	UP	CTC			Amtrak #6	None	Citrus Heights, CA	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On March 7, 1998 at 1000 PST, on the Martinez Subdivision at Citrus Heights, CA, eastbound Amtrak #6, on the main track and was lined from 2 Tk to 1 Tk, observed the approach signal 2E to Citrus Heights at MP 99.4 Green with the Home signal at Citrus Heights Red over Green.						
			An investigation revealed the pole change wires on the FYR at signal 99.4 were reversed causing incorrect polarity to the HPR relay.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
204	3/11/1998	UP	CTC			UP 8197	None	Colton, UT	N	
			Loss of Shunt - Possible Rust or Foreign Material on Rail							
			On March 11, 1998 at 2300 MST, on the Provo Subdivision at Colton, Utah, eastbound CTVSV-04, on the main track, observed the eastbound signal at MP 644.7 display a momentary Green with the track circuit east of the signal at MP 644.7 occupied.							
			An investigation revealed momentary loss of shunt in the occupied track circuit east of signal at MP 644.7 caused the momentary Green signal at eastbound signal at MP 644.7.							
			All applicable tests were performed.							
205	4/23/1998	UP	CTC			UP 469W	None	Centertown, MO	N	
			Phantom Signal - Due to Sun Angle							
			On April 23, 1998 at 10:10 CDT, on the Sedalia Subdivision at Centertown, Missouri, westbound WPFLWB21, while stopped in the siding 200 yards east of control point M142, observed a Yellow indication from the signal to leave the siding, with the switch lined normal.							
			An investigation revealed a phantom indication in the signal to leave the siding was caused by the sunlight washing out the Red signal and making it appear Yellow.							
			Shields were applied preventing the phantom signal, and all applicable tests were performed.							
206	4/30/1998	UP	CTC			SP 6823	None	near Millican, TX	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On April 30, 1998 at 16:30 CDT, on the Ft. Worth Subdivision, north bound RSPOG 29 observed a Yellow over Green indication at the north bound approach signal at MP 56.8 with the next north bound home signal at control point Q058 displaying a Red over Yellow indication with the track lined for the siding.							
			An investigation revealed the north bound signal at MP 56.8 should have displayed a Yellow over Yellow indication with the control point Q058 lined into the siding.							
			The north bound signal at MP 56.8 was changed to display a Yellow over Yellow indication with the control point Q058 lined for the siding. All applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
207	5/27/1998	UP	AB			SP 7798	None	Pence, IL	N	
			Vandalism - Signal Damaged, Caused Phantom Aspect							
			On May 27, 1998 at 17:59 CDT, on the Chicago Subdivision at CP 1050, southbound ZYCFW 27 had a CLEAR signal through the Pence interlocker, while a westward Conrail crew reported a Green over Red home signal at Pence interlocker.							
			An investigation revealed that Conrail's westbound high green signal's back door was open, and the sun shining through gave a Green indication.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
208	6/24/1998	UP	CTC		ACS	6201	None	Rawlins, WY	N	
			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.							
209	7/9/1998	UP	APB			UP 2256	Switch Circuit Controller	Conway, AR	N	
			Maintenance - Switch Circuit Controller							
			On July 09, 1998 at 00:30 CDST, on the Coffeyville Subdivision at the south end of Conway, MP B371.9, northbound Local LVR56-08 stopped and lined the switch for the siding and observed the northbound signal stay Green.							
			An investigation revealed that the switch circuit controller rod had fallen off the controller.							
			The switch rod was replaced, the signal system was restored to proper operation, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
210	7/18/1998	UP	CTC		ACS	UP 9507	75 Code Transmitter	Rawlins, WY	N
<p>Cause</p> <p>Narrative</p> <p>Failed Equipment or Device - Relay</p> <p>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.</p> <p>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).</p> <p>The 75 Code Transmitter Relay was replaced, the signal system was restored to proper operation, and all applicable tests were performed.</p>									
212	8/7/1998	UP	CTC	Manual		UP-0508	None	Kinder, LA	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On August 7, 1998 at 22:45 CDST, on the Beaumont Subdivision at Kinder, LA, westbound MLIBT-07, at Mile Pole 545.3, observed a Yellow westbound signal governing the Interlocker at Kinder with the gate lined against movement on the Beaumont Sub.</p> <p>An investigation revealed a wiring error which caused the gate repeater to be ineffective in the signal circuits.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
211	8/7/1998	UP	CTC			UP00159	None	North Riverside, MO	N
<p>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>On August 7, 1998 at 13:30 CDST, on the De Soto Subdivision at North Riverside, Missouri, southbound LSE57-07, at Mile Pole 26.30, observed a CLEAR southbound signal at CPD026, and a Red southbound signal at CPD027.</p> <p>An investigation revealed that a line wrap in the HD circuits between D026 and D027 allowed the 61H and 61D relays to pick up falsely at D026.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
213	8/27/1998	UP	CTC			UP 8266	None	Midvale, UT	N
<p>Cause</p> <p>Narrative</p> <p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On August 27, 1998 at 15:46 MDST, on the Provo Subdivision at Midvale, Utah, westbound 1 RUT611 27, at Mile Pole 26.30, had a switch lined under him while he was occupying the OS circuit.</p> <p>An investigation revealed that an OS track relay was not wired into the OS track repeater, which allowed the switch to be lined while the train occupied a portion of the OS circuit for that switch.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
214	8/27/1998	UP	CTC			SP 8108	None	Georgetown, LA	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On August 27, 1998 at 14:40 CDST, on the Monroe Subdivision at Georgetown, LA, northbound MDYNL-26 observed the northbound signal at Control Point A560 upgrade from Red to Green with OS track circuit occupied.</p> <p>An investigation revealed the relay track connections on either side of one insulated joint at the north end of the OS were transposed, which allowed the track battery from the north to be in series with both relays and energize the relays with the OS track occupied.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
215	8/28/1998	UP	CTC			SP 8267	None	Delta, CA	N
<p>Vandalism - Instrument Case, Cable, or Junction Box Damaged</p> <p>On August 28, 1998 at 22:30 PDST, on the Valley Subdivision at Delta, CA, westbound MBROA-28, on the main track at Mile Pole 296.25, observed the westbound signal out of the siding display a Yellow signal with the switch lined normal.</p> <p>An investigation revealed vandalism in the control house left the LBHPR relay turned over.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
216	9/10/1998	UP	AB			UP 5555	None	El Paso, TX	N	
			Phantom Signal - Due to Sun Angle							
			On September 10, 1998 at 17:55 MDT, on the Valentine Subdivision at El Paso, TX, eastbound UP 5555 was lined from the House Track to the #2 Main Track at Mile Pole 826.5, and observed the eastbound signal was Green over Red with the #3 crossover lined against them.							
			An investigation revealed the signal appeared to give a Green indication due to the reflection of the sun on the lens.							
			A Phantom Screen was installed on the signal, and all applicable tests were performed.							
217	10/13/1998	UP	AB			Unknown	None	El Paso, TX	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On October 13, 1998, at unknown time, on the Valentine Subdivision at El Paso, TX, an unknown westbound train on track #1 reported the westbound signal at MP 826.9 was Red over Green over Red with the next westbound signal Red over Red.							
			An investigation revealed the wires on the #3 and #4 contacts of the 2RBHDR relay were transposed.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
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.							

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
219	11/28/1998	UP		Automatic		SP 6866	None	West Point, TX	N
<p>Cause</p> <p>Narrative</p> <p>Maintenance - Wiring Chewed by Rodents</p> <p>On November 28, 1998 at 14:08 CST, on the Smithville Subdivision at West Point, TX, southbound RDTA-27 reported the southbound Interlocking Home Signal at mile pole 78.00 displayed a Red over lunar aspect with a westbound train occupying the interlocking.</p> <p>An investigation revealed a rodent had chewed through the wire insulation in the signal mast which resulted in shorting the voltage from the red signal head wiring to the lunar signal head wiring.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
220	12/18/1998	UP	CTC	Manual		UP 9455 W	None	Houston, TX	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On December 18, 1998 at 09:30 CST, at Tower 26 on the Terminal Subdivision in Houston, Texas, at mile post 360.69, westbound IEWLBB 18, on Main Track #2, reported westbound signal #70 was Green and the next westbound signal #59 was Red.</p> <p>An investigation revealed the yellow/green control wires for signal #70 were reversed.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
268	1/8/2000	UP	CTC			UP5869	None	Odem, TX	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On January 8, 2000, at 06:10 CST at Odem, Texas, on the Brownsville Subdivision at MP 156.40, northbound MBVHO/07, on the main track, reported a CLEAR northbound approach signal at J156, into a Red over Lunar northbound home signal at J159.</p> <p>An investigation revealed a wiring error on the Electrocode unit at J156.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
269	1/11/2000	UP	CTC			AMTK-53	None	Bond, CO	N
			Phantom Signal - Due to Sun Angle						
			On January 11, 2000 at 14:13 MST, in Bond, CO on the Glenwood Springs Subdivision at MP 156.00, eastbound Amtrak 53 on the main track lined for the siding, reported the eastbound signal was Red over Yellow into the siding with the switch reversed into track and time.						
			An investigation revealed a phantom signal in the bottom head caused it to appear Yellow.						
			The lens was changed in the bottom head, it was refocused, and the background was painted flat black. The signal system was restored to proper operation, and all applicable tests were performed.						
270	2/28/2000	UP	CTC			UP4808	None	Indio, CA	N
			Phantom Signal - Due to Sun Angle						
			On February 28, 2000 at 10:22 PST, at Indio, CA on the Yuma Subdivision at MP 606.34, eastbound WBEBET-28 on the main track reported the eastbound signal at Myoma West displayed Yellow over Yellow aspect when lined for the siding.						
			An investigation revealed the lens in the top head was dirty, misaligned and the Red signal appeared Yellow.						
			The lens was changed and the signal head was refocused. The signal system was restored to proper operation, and all applicable tests were performed.						
271	5/31/2000	UP	CTC			SP 2710	None	Houston, TX	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On May 31, 2000, at 11:30 CDT, at Houston, TX on the Terminal Subdivision at MP 2.8, eastbound YHS52-31 on #2 main was lined through the 121 x-over, and reported the eastbound signal 19B at the #23 switch displayed a Red over Green.						
			An investigation revealed the HD control wires to eastbound signal 19B were reversed.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
272	6/2/2000	UP	CTC			UP-3568	None	Houston, TX	N
<p>Cause</p> <p>Narrative</p> <p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</p> <p>On June 2, 2000 at 18:00 CDT, at Houston, TX on the Terminal Subdivision at MP 366.30, westbound 1HHOKC 02 was lined from Main Track 2 to Main Track 1, and reported the westbound signal #15 on Track 2 at LF369 was Red over Flashing Yellow and the next westbound intermediate signal at MP 5.9 was at STOP.</p> <p>An investigation revealed a design error. The Reverse Switch Relay was not wired into the "B" signal head of the westbound #15 signal.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
274	6/3/2000	UP	CTC			UP-1647	None	Houston, TX	N
<p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</p> <p>On June 3, 2000 at 14:50 CDT, at Houston, TX on the Terminal Subdivision at MP 366.30, the Dispatcher was able to line a route from CP LF369, on the #1 main to Bellaire Junction, with a hand throw switch on the #1 main, located south of CP LF369 in a reverse position.</p> <p>An investigation revealed a design error. The Switch Correspondence Relay was not wired into the control for the southbound signal at LF369.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
273	6/12/2000	UP	CTC			UP-9709	Relay	Hood River, OR	N
<p>Failed Equipment or Device - Relay</p> <p>On June 12, 2000 at 14:49 CDT, at Hood River, Oregon on the Portland Subdivision at MP 61.40, westbound IG2SE 10 had gone by a Green westbound signal at MP 61.50 and looked back to see the eastbound signal at MP 61.40 displaying a Yellow aspect.</p> <p>An investigation revealed a broken armature pin in the 614 HR relay allowed the armature to twist allowing contact connection that false picked the HPR relay for the eastbound signal at MP 61.40, which caused the eastbound signal at MP 61.40 to display Yellow.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
275	7/9/2000	UP	CTC			AMT 28	None	Madison, IL	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On July 09, 2000 at 11:15 CDT, at Madison, Illinois on the Springfield Subdivision, northbound 1AMT22.08, on track #2, had a Yellow (APPROACH DIVERGING) northbound signal at CP GM278, with the northbound home signal at WR Tower, MP 275.60 displaying a Red over Yellow (RESTRICTING) indication.							
			An investigation revealed differences in signal aspect rules between the TRRA and the UPRR resulted in a signal design error.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
276	8/10/2000	UP	AB			UP6053	None	Mulford, CA	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On August 10, 2000 at 00:50 PDT in Mufford, CA on the Coast Subdivision, southbound IOAMN 09, on the Main Track at MP 15.70, reported the northbound signal 15.70 displayed a Green aspect when they were 100 feet south of signal 15.70 and 1,900 feet of their train was north of the signal.							
			An investigation revealed that a field construction gang had extended some track circuits and had failed to break the control to northbound signal at MP 15.70 with the track contacts.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
277	9/1/2000	UP	CTC			UP3074	None	Dexter Junction, MO	N	
			Loss of Shunt - Possible Rust or Foreign Material on Rail							
			On September 1, 2000 at 5:48 CDT at Dexter Junction on the Jonesboro Subdivision, southbound MINPB 01 on the main track at mile pole 40.3 reported the southbound signal (4L) displaying a Green aspect and as they proceeded they encountered the northbound LSV5O 01, a local with a single 4-axle unit, in the same block.							
			An investigation revealed an oil film was present on the rail between Dexter Junction and Bernie causing a loss of shunt. It is unknown as to the origin of the oil film and it is under investigation.							
			The oil film was removed and the signal system operated as intended.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
278	9/8/2000	UP	CTC			UP3702	None	Picacho, AZ	N
			Failed Equipment or Device - Aerial or Underground Cable, Shorted or Grounded (not due to vandalism or digging)						
			On September 08, 2000 at 01:02 MDT, at Picacho, AZ on the Phoenix Subdivision, eastbound LK172 07, on the Main Track at MP 978.6, reported the eastbound approach signal to Picacho at MP 978.60 displayed a Yellow over Yellow aspect and the eastbound absolute signal at Picacho displayed a Red over Red aspect.						
			An investigation revealed a shorted underground cable to the eastbound approach signal at MP 978.60 caused the lower aspect to display a Yellow.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
279	9/20/2000	UP	CTC			UP6558	None	Atchison, KS	N
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing						
			On September 20, 2000 at 13:15 CDT, at Atchison, KS on the Falls City Subdivision, northbound CWBCD 17 was on the Main Track at MP 329.50, south of Signal Z329. The Dispatcher was able to line northbound signal at Z329 with the A-B crossover north of northbound Signal Z329 reversed.						
			An investigation revealed the normal switch repeater relay for the A-B crossover was not in the signal control for northbound Signal Z329.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
280	10/20/2000	UP	APB			UP4051	None	Evanston, WY	N
			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.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
281	10/25/2000	UP	AB			CSXT 8670	None	Ogden, UT	N	
			Vandalism - Instrument Case, Cable, or Junction Box Damaged							
			On October 25, 2000 at 13:30 MDT in Ogden, Utah on the Lakeside Subdivision, westbound ZAPT 25, on the main track, reported the westbound Signal 769.5 was Yellow with the track circuit west of the signal occupied.							
			An investigation revealed a road grader had struck the instrument case at MP 767.20 and tipped over the track relay for the track circuit west of westbound Signal 769.5.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
282	11/7/2000	UP	CTC			UP6266	None	Taylor, TX	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On November 7, 2000 at 01:49 CST in Taylor, TX on the Austin Subdivision, northbound MLDAS 06, on the main track, reported the northbound signal at CP Q146 was Green with the switch north at MP 144.8 lined reverse.							
			An investigation revealed a design error caused by a contact of the Normal Switch Relay not properly disabling the Electrocode Repeater at MP 145.20.							
			The signal system was restored to proper operation, and all applicable tests were performed.							
283	11/9/2000	UP	CTC			AMTK39	None	Ironton, UT	N	
			Vandalism - Instrument Case, Cable, or Junction Box Damaged							
			On November 9, 2000 at 06:31 MST in Ironton, Utah on the Provo Subdivision, eastbound AMT6-08, on Track #1, reported the eastbound approach signal at MP 699.80 to Ironton displayed a Green aspect with the crossover in Ironton lined and occupied.							
			An investigation revealed the signal case at MP 699.80 had been struck by a vehicle on the service road and the 98H and 98D relays were upside down.							
			The signal system was restored to proper operation, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
284	12/2/2000	UP	CTC			N/A	None	Kansas City, KS	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On December 02, 2000 at 13:15 CST in Kansas City, Kansas on the KCT Subdivision, westbound signal at MP 5.0 was Yellow with a switch west of the signal in the reverse position.						
			An investigation revealed that during field wiring changes a wire had not been removed that held up the GZP relay which allowed the signal to display a Yellow (APPROACH) with signal's H relay down.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
285	12/9/2000	UP	AB			Unknown	None	Houston, TX	N
			Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)						
			On December 09, 2000 at 3:34 CST in Houston, Texas on the Strang Subdivision, northbound YGP7208 reported the northbound intermediate signal at MP 1.8 was Green into a Red northbound signal at MP 104 (tower 88).						
			An investigation revealed two pole line wraps that false energized the 02GCP D line wire and allowed the signal at MP 1.8 to display a Green aspect.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
317	1/3/2001	UP	CTC			UP 9201	None	Anita, CA	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On January 3, 2001 at 11:30 PST, at Anita, CA on the Valley Subdivision at MP 193.95, southbound QUERV 02 on the main track reported the southbound signal at the north end of Anita displaying Flashing Yellow, and the southbound signal at the south end of Anita displayed Red.						
			An investigation revealed the control wires for the H circuit at the south end of Anita were reversed.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
318	1/18/2001	UP	CTC			UP 743	None	Houston, TX	N
<p>Cause</p> <p>Narrative</p> <p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On January 18, 2001 at 8:40 CST, in Houston, TX, on the Terminal Subdivision, westbound YEW50 18, on track NR2, reported the westbound 1-14-RD signal at LF395 was Green with the westbound 1-24-R signal at LR 360 displaying a Red.</p> <p>An investigation revealed that the mechanism polarity wires at the westbound 1-14-RD signal were reversed.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
319	3/28/2001	UP		Manual		Unknown	None	West Bridge Jct., LA	N
<p>Human Error - Improper Circuit Jumper in Place</p> <p>On March 29, 2001 at 17:00 CST, at West Bridge Jct., LA, on the Livonia Subdivision, the westbound signal #7 at MP 10.2 stayed Yellow after a westbound train passed it and occupied the track circuit west of the signal #7.</p> <p>An investigation revealed that pulling levers for signals #6 and #7 in the mechanical interlocker created a bridge that applied battery which held signal #7 Yellow.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
323	4/4/2001	UP	AB			UP4267	None	Optima, OK	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>On April 4, 2001 at 11:00 CDT, at Optima, OK on the Pratt Subdivision, eastbound MWCHN 02, on the main track at MP 460.80, reported a CLEAR eastbound signal at MP 460.80, with a switch reversed east of the signal.</p> <p>An investigation revealed that the switch circuit controller was improperly wired.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
320	4/4/2001	UP	CTC			UP3958 North	None	Gorham, IL	N
			Human Error - Signal Personnel Introduced False Energy into Signal System During Testing						
			On April 4, 2001 at 11:00 DST, at Groham, IL on the Chester Subdivision, northbound QNLPI-03 received a northbound DIVERGING CLEAR signal (Red over Red over Green) at CP D085 at MP 84.8 into a dark signal at CP C338.						
			An investigation revealed that a signal gang, while cutting over new CP D338 had inadvertently applied battery to the 48DPR circuit which caused the DIVERGING CLEAR signal at CP D085.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
324	4/5/2001	UP	CTC			UP4128	None	Ogden, UT	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On April 5, 2001 at 12:20 MDT, at Ogden, UT on the Lakeside Subdivision, westbound AKSBEX 03, on the main track at MP 759.00, reported a Yellow over Red westbound signal at MP 759.0 with the next block occupied.						
			An investigation revealed that the eastbound and westbound signal control wires were connected together at the 7577 track relay.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
321	4/11/2001	UP		Manual		BNSF 9788	None	Wagoner, OK	N
			Failed Equipment or Device - Interior Wiring						
			On April 11, 2001 at 16:30 CDT, at Wagoner, OK on the Cherokee Subdivision, southbound CGDRO 10, on the main track at MP 486.3, reported the southbound approach signal to the Wagoner Interlocker displayed an APPROACH DIVERGING (Yellow over Yellow) into a Red southbound home signal.						
			An investigation revealed that lightning had melted two wires together, which applied voltage to the bottom aspect of the southbound approach signal.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
322	4/13/2001	UP	CTC			Unknown	None	Caldwell, TX	N
<p>Cause</p> <p>Narrative</p> <p>Failed Equipment or Device - PMTC Card</p> <p>On April 13, 2001 at 06:07 CDT, at Caldwell, TX on the Flatonia Subdivision, westbound RHTCW-12, on the main track at MP 30.95, reported the westbound signal at FL031 was Green and the westbound signal at FL032 was Red.</p> <p>An investigation revealed a bad order PMTC receiver card at FL031.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
325	5/9/2001	UP	CTC			UP7578	None	Orogrande, NM	N
<p>Human Error - Field Wiring Error, Inadequate Service Testing</p> <p>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.</p> <p>An investigation revealed the Switch Circuit Controller was wired incorrectly causing the Normal Switch Repeater Relay to energize with the switch reversed.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
326	6/11/2001	UP	CTC			UP3035	None	Council Bluffs, IA	N
<p>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>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
327	7/3/2001	UP	CTC		ACS	UP 6869	None	Nevens, NE	N
<p>Cause</p> <p>Narrative</p> <p>Human Error - Improper Circuit Jumper in Place</p> <p>On July 3, 2001 at 13:16 CDT, at Nevens, Nebraska on the South Morrill Subdivision, eastbound CNRWX 02, on the main track at MP 18.7, reported the eastbound signal WO18 displayed a Yellow aspect with the track east of Signal WO18 occupied.</p> <p>An investigation revealed a loose terminal washer had caused a short in the BELOR relay that caused the AEHR relay to pick and display a Yellow aspect from eastbound signal WO18.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
328	7/13/2001	UP	CTC			UP0705	GRS SA Searchlight Mechanism	Houston, TX	N
<p>Human Error - Improper Circuit Jumper in Place</p> <p>On July 13, 2001 at 03:20 CDT, at Houston, TX on the Houston East Belt Subdivision, northbound YBS80-12, on 2 Tk at MP 5.40, received a Green aspect north of EB061 at northbound signal 52 into a Red aspect at northbound signal 57 at Wallisville Rd.</p> <p>An investigation revealed water in the SA Signal Mechanism at signal 57 causing the YGPR to pick, which sent a Code 4 back to signal 52, causing the Green aspect.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
329	8/15/2001	UP	CTC			BNSF 4486	None	Apache, AZ	N
<p>Human Error - Signal, Improper Lenses Installed</p> <p>On August 15, 2001 at 10:21 MDT, at Apache, AZ on the Lordsburg Subdivision, westbound CDGCO-14, on #1 Tk, reported the westbound approach signal on #1 Track at MP 1063.3 displayed a Yellow over Green aspect into a Red over Lunar westbound home signal at CP S1061, with his route lined from the #1 Tk on the Coal Lead Track.</p> <p>An investigation revealed the lower colorlight lunar aspect at the westbound signal at MP 1063.30 had a green inner lens installed instead of a lunar lens.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</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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330	9/10/2001	UP				UP4341	None	Templeton, CA	N
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Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)

On September 10, 2001 at 15:42 PDT, at Templeton, CA on the Coast Subdivision, southbound QRVDO 10 on the main track reported the southbound signal at MP 216.4 was Green, and the next southbound signal at the North End of Templeton at MP 217.6 was Red.

An investigation revealed a line wrap at MP 217.0 that caused the Green signal at southbound signal at MP 216.4.

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

331	9/12/2001	UP	CTC			UP6822	None	Kress, IL	N
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Vandalism - Cable Damaged by Digging

On September 12, 2001 at 01:48 CDT, at Kress, IL on the Geneva Subdivision, westbound CMHVC 12, on track #3 at MP 32.1, reported their cab signal cleared for their train on track #3, when the westbound signal on track #2 was CLEAR (cab signals on track #3 should display RESTRICTING when westbound train is cleared on track #2).

An investigation revealed that required track wires were still connected to tracks #2 and 3. These wires were shorted together while performing directional boring, and fed cab signal energy intended for track #2 to track #3.

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

332	11/28/2001	UP	AB			BNSF 4742	Electrocode II Unit	Palestine, AR	N
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Failed Equipment or Device - Electrocode Module

On November 28, 2001 at 17:22 CDT, at Palestine, AR on the Brinkley Subdivision, westbound QMECVJ/28, on the main track at MP 51.90, reported that the westbound signal at MP 51.90 was Flashing Yellow, and the next westbound signal at MP 51.00 was Red.

An investigation revealed that the 5K module in the Electrocode II unit at the westbound signal at MP 51.90 was intermittently failing causing the HD relay to pump causing the signal to display a Flashing Yellow.

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

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
333	12/2/2001	UP	CTC			Unknown	None	Redding, CA	N
			Phantom Signal - Due to Object in Foreground or Background						
			On December 2, 2001 at 15:30 PST, at Redding, CA on the Valley Subdivision, an unknown southbound train on the main track at MP 286.90 reported that the intermediate southbound signal at MP 286.90 displayed a Yellow over Yellow aspect with the next southbound signal at North Lakehead displaying a Red aspect.						
			An investigation revealed that the ditch lights, on high beam on a new Comfort Cab, were refracting off the lower ("B") head of the southbound signal at MP 286.90 causing a washed out Yellow aspect.						
			The screen has been installed on the signal and the signal system was restored to proper operation, and all applicable tests were performed.						
365	7/19/2002	UP	AB			NS 8971	None	Fairbanks, TX	N
			Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)						
			On July 17, 2002 at 08:30 CDT, at Fairbanks, TX on the Eureka Subdivision, northbound MHOFW 19, on the main track at MP 7.60, reported that the northbound signal at MP 6.70 was Green, and the next northbound signal at MP 7.6 was Red.						
			An investigation revealed that a line wrap which caused the signal at MP 6.70 to be Green rather than Yellow.						
			The signal system was restored to proper operation, and all applicable tests were performed.						
366	8/30/2002	UP	CTC			BNSF 4432	None	Norden, CA	N
			Human Error - Field Wiring Error, Inadequate Service Testing						
			On August 30, 2002 at 21:27 PDT, at Norden, CA on the Roseville Subdivision, westbound 1QDVST 27, on track 1 at MP 191.20, reported that the westbound absolute signal was Red over Green, with the crossover switch on track 1 lined normal and the crossover switch on track 2 lined reverse.						
			An investigation revealed wiring errors in the crossover switch on track 1.						
			The signal system was restored to proper operation, and all applicable tests were performed.						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
367	9/3/2002	UP	CTC			CNW 8817	None	Platteville, CO	N
<p>Cause</p> <p>Narrative</p> <p>Loss of Shunt - Possible Rust or Foreign Material on Rail</p> <p>On August 30, 2002 at 21:27 MDT, at Plattville, CO on the Greeley Subdivision, southbound CCSBR1-31, on the siding at MP 33.80, reported that the signal out of the siding at CP W034 went Green and then Red with the main track south occupied.</p> <p>An investigation revealed the train occupying the main track south of CPW034 was a single 4 axle locomotive, and that the CTC log had recorded a momentary loss of shunt.</p> <p>All applicable tests were performed.</p>									
368	10/8/2002	UP	CTC		ATC	METX 159	None	West Chicago, IL	N
<p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</p> <p>On October 08, 2002 at 18:30 CDT, in West Chicago, IL on the Geneva Subdivision, westbound METX 159, on track 3 at MP 28.50, reported that he received a CLEAR ATC cab signal after he had passed a Yellow westbound signal at Y028.</p> <p>An investigation revealed a design error. The Electrocode program of a new cut section located 1200 feet west of MP 28.50 applied ATC energy to the rails east, when receiving Code 4 from the rails west. When passing the Yellow signal the train should have received no ATC energy.</p> <p>The cut section was removed, pending redesign, and all applicable tests were performed.</p>									
369	11/4/2002	UP	CTC			UP 4598	None	Lehi, UT	N
<p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</p> <p>On November 4, 2002 at 16:30 CDT, in Lehi, UT on the Provo Subdivision, westbound MWCOG-01, on the main track at MP 721.30, reported that the westbound absolute signal at West Mesa was Flashing Red into a "Track and Time" permit.</p> <p>An investigation revealed a circuit error that permitted the Red indication to flash without the signal being requested.</p> <p>The circuit error was corrected, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
370	11/6/2002	UP	AB			UP 4357	None	Toyah, TX	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On November 06, 2002 at 11:16 CDT, in Toyah, TX on the Toyah Subdivision, westbound 1ZNSLC-04, on the main track at mile post 665.1, reported that the westbound absolute signal at the east end of Toyah was Green, with the hand throw switch at the west end of Toyah in the reverse position.							
			An investigation revealed a circuit error. The normal switch relay for the east end of Toyah was not breaking the HD control for the westbound signal at the west end of Toyah.							
			The circuit error was corrected, and all applicable tests were performed.							
371	11/9/2002	UP	CTC			AMTK 451	None	Oakland, CA	N	
			Vandalism - Signal Damaged, Caused Phantom Aspect							
			On November 09, 2002 at 09:40 PDT, in Oakland, CA on the Niles Subdivision, southbound AMT714.09, on the main track at mile post 6.40, reported that the southbound signal at N1006 was Red while they were approaching it, and when they were about 30 feet from the signal, it turned Yellow.							
			An investigation revealed the door to the signal head was slightly opened, which allowed sunlight to make the Red signal look Yellow at approximately 30 feet from the signal.							
			The condition was corrected, and all applicable tests were performed.							
372	11/17/2002	UP	CTC			MWCEU.16	None	Hotlum, CA	N	
			Vandalism - Signal Mechanism Shot - Stuck in Position							
			On November 17, 2002 at 16:16 PDT, in Hotlum, CA on the Black Butte Subdivision, northbound MWCEU.16, on the main track at mile post 352.85, reported he passed a Green northbound absolute signal at North Hotlum, and looked back to see the southbound signal was Green.							
			An investigation revealed that the southbound signal mechanism had been damaged by gunfire and jammed in the Green position.							
			The signal mechanism was replaced, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
373	11/29/2002	UP	CTC			UP 6573	None	Wellington, UT	N
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing						
			<p>On November 29, 2002 at 10:02 MST, in Wellington, UT on the Green River Subdivision, eastbound CCSWE-25, on the main track at mile post 613.50, reported that the eastbound signal at West Wellington cycled from Flashing Yellow to Green with a westbound train entering the siding at East Wash.</p> <p>An investigation revealed that the point detector on the power switch at East Wash was failing intermittently as the westbound train passed over the reverse switch, causing the main track HD line circuit feeding west to pump. The existing circuitry at West Wash/East Wellington pole changed the HD circuit feeding west in response to this pumping action, resulting in a Green aspect at West Wellington.</p> <p>The circuits at West Wash/East Wellington were revised to prevent a reoccurrence of this failure. All applicable tests were performed.</p>						
374	12/22/2002	UP	AB			AMT510	None	North King City, CA	N
			Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)						
			<p>On December 22, 2002 at 23:19 CST, in North King City, CA, on the Coast Subdivision, southbound AMT11-20, on the main track at milepost 157.80, reported the southbound signal at MP 157.8 displayed a Green aspect and the next southbound signal at MP 159.20 displayed a Red aspect.</p> <p>An investigation revealed the HD line north, the HD line south, and the Common were wrapped at MP 159.2.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>						
410	1/14/2003	UP	AB			UP 9252	None	Shreveport, LA	N
			Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)						
			<p>On January 14, 2003 at 1342 CST, in Shreveport, LA on the Reisor Subdivision, northbound MSHFW 14, on the main track at mile post 315.80, reported the northbound signal at Hollywood, mile post 315.8 cleared when they had passed the signal, and were still in the block north of the signal.</p> <p>An investigation revealed that at milepost 316.0 a pole fell and caused a short in the signal control wires, which false cleared northbound signal at Hollywood Jct., MP 315.8.</p> <p>The pole line was repaired and all applicable tests were performed.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
411	2/28/2003	UP	CTC			UP 9135	None	Fair Oaks, AR	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On February 28, 2003 at 1333 CST, in Fair Oaks, AR on the Memphis Subdivision, westbound ZMNMQ 28, on the siding at milepost 319.20, received a Green westbound indication with no signal requested.							
			An investigation revealed a design error allowing a battery back feed with the red bulb burnt out.							
			The circuits were revised to prevent a re-occurrence, and all applicable tests were performed.							
412	4/4/2003	UP	CTC			UP 2205	None	Missouri City, CA	N	
			Human Error - Field Wiring Error, Inadequate Service Testing							
			On April 4, 2003 at 08:50 CST, in Missouri City, TX on the Glidden Subdivision, eastbound RBMBD-02, at mile post 20.60, reported the eastbound intermediate signal 20.60 was Green, and the next eastbound absolute signal at SA019 was Red over Yellow.							
			An investigation revealed that the polarity on the control circuit to eastbound signal 20.60 was reversed.							
			The signal system was restored to proper operation and all applicable tests were performed.							
413	4/23/2003	UP	CTC			(WB) UP 9318, (EB	Code Xmit Relay	Kramm, CA	N	
			Failed Equipment or Device - Relay							
			On April 23,2003 at 13:20 PDT, in Kramm,CA on the Canyon Subdivision, two incidents happened. Westbound WDMELB/22 reported westbound signal at 216.10 was Yellow then turned Green until he passed it, and the next absolute signal at CPF215 was Red over Yellow.							
			Eastbound IOASC/22 reported that eastbound absolute signal at CPF213 was Yellow, turned Green, and then back to Yellow while he approached the signal.							
			An investigation revealed a bad 75 code transmitter relay common to both track circuits feeding from CPF215.							
			The code relay was replaced, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?	
			Cause							
			Narrative							
414	4/23/2003	UP	CTC			UPY562	None	Salt Lake City, UT	N	
			Phantom Signal - Due to Sun Angle							
			On April 23, 2003 at 10:25 CDT, in Salt Lake City, UT on the Lynndyl Subdivision, westbound YSC44 22, at mile post 782.40, reported the westbound signal on No. 1 track was Red over Lunar without the signal being requested from the dispatcher.							
			An investigation revealed the sun reflecting off the outer lens of the bottom red aspect gave the appearance of a lunar.							
			The outer lens was replaced, and all applicable tests were performed.							
415	5/3/2003	UP	AB			UP 4580	H2 Mechanism	Wells, NV	N	
			Failed Equipment or Device - Relay							
			On May 10, 2003 at 14:40 CDT, in Wells, NV on the Lakeside Subdivision, eastbound 1ZLTG1 10, on the #2 track at mile post 605.2, reported the eastbound signal at MP 605.2 displayed a Green aspect with the next block east occupied.							
			An investigation revealed the H2 mechanism at the eastbound signal at MP 605.2 was stuck displaying a Green aspect.							
			The H2 mechanism was replaced and all applicable tests were performed.							
416	5/28/2003	UP	CTC			UP 4052	None	Chalk, TX	N	
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing							
			On May 28, 2003 at 14:57 CDT, in Chalk, TX on the Dallas Subdivision, eastbound ASKMQ 27, on #2 track at CP T220 at mile post 219.9, reported the eastbound signal 2E went from Red over Red, to Flashing Red over Red, then back to Red over Red, while a signal was cleared westbound from #2 track to #1 track.							
			An investigation revealed a circuit error, that left a wrap circuit out of the flasher relay circuit, that allowed the top head of the eastbound 2E signal to flash when a westbound signal for movement from #2 track to #2 track was cleared.							
			The circuit was corrected, and all applicable tests were performed.							

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
417	6/2/2003	UP	CTC			UP 2313	None	Rawlins, WY	N
			Human Error - Signal Personnel Introduced False Energy into Signal System During Testing						
			<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>						
418	6/10/2003	UP	CTC			BNSF 706	None	Burbank, WA	N
			Loss of Shunt - Possible Rust or Foreign Material on Rail						
			<p>On June 10, 2003 at 11:57 PDT, in Burbank, WA on the Yakima Subdivision, eastbound F52817, on the main track at MP 6.3, reported the eastbound absolute signal at CP E006 (West Villard) was Red, turned Green, and then back to Red, with the block occupied.</p> <p>An investigation revealed the CAD log indicated a loss of shunt in the occupied block.</p> <p>All applicable tests were performed.</p>						
419	6/17/2003	UP	CTC			UP 6297	CTU Unit	Fairfax, IA	N
			Failed Equipment or Device - HXP Crossing Control Transfer Unit						
			<p>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.</p> <p>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.</p> <p>The HXP Crossing Control Transfer Unit was replaced, and all applicable tests were performed.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
420	7/2/2003	UP	CTC			UP 3382	None	Salt Lake City, UT	N
<p>Cause</p> <p>Narrative</p> <p>Phantom Signal - Due to Sun Angle</p> <p>On July 02, 2003 at 22:15 CDT, in Salt Lake City, UT on the Lynndyl Subdivision, eastbound UGDEO, on the side track at MP 779.10, reported the eastbound signal #12 in the siding was Yellow over Red, and there was no signal requested and the switch was lined normal.</p> <p>An investigation revealed the outer magnifying lens of the top signal head was not properly sealed to the inner lens, and the angle of the sun caused the Red indication to appear Yellow/Orange.</p> <p>The lenses were cleaned, resealed, and all applicable tests were performed.</p>									
421	8/2/2003	UP	CTC			UP 4425	None	Tornillo, TX	N
<p>Maintenance - Wiring Chewed by Rodents</p> <p>On August 02, 2003 at 07:13 CDT, in Tornillo, TX on the Valentine Subdivision, eastbound ILBNS 31, on the side track at MP 792.5, reported the eastbound signal in the siding went Green for several seconds before downgrading to Yellow, with a train ahead of him east of Tornillo.</p> <p>An investigation revealed rodent damage to the circuit wiring causing a battery wire to intermittently false pick the EDR relay giving a Green signal.</p> <p>The damage was repaired and all applicable tests were performed.</p>									
422	8/24/2003	UP	CTC			UP 2466	Circuit Controller	Stanwix, AZ	N
<p>Maintenance - Switch Circuit Controller</p> <p>On August 24, 2003 at 02:45 MDT, in Stanwix, AZ on the Gile Subdivision, eastbound 1 ALAWFX 20, at CP SP819, had a CLEAR signal for a move from single main track to #1 main track, and the movable point frog was not in full reverse position.</p> <p>An investigation revealed the securing screws supporting the reverse switch indication contact assembly of the M23 switch machine had come loose, letting the reverse contacts make with the movable point frog not in full reverse position.</p> <p>The circuit controller assembly was replaced and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
423	9/4/2003	UP	CTC			UP 1674	None	Mitchellville, AR	N
<p>Cause</p> <p>Narrative</p> <p>Loss of Shunt - Possible Rust or Foreign Material on Rail</p> <p>On September 04, 2003 at 16:14 CDT, in Mitchellville, AR on the McGehee Subdivision, southbound MPBBT 04, at MP 393.90, reported southbound signal A394 was Green, with the next block south occupied by (light power) LWB71-04, UP1674 & UP 912.</p> <p>An investigation revealed the CAD Log verified a loss of shunt by the LWB71-04.</p> <p>All applicable tests were performed.</p>									
424	9/24/2003	UP	CTC		ACS	UP 3205	None	Cheyenne, WY	N
<p>Human Error - Signal Circuit Design Error, Inadequate Service-Testing</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>									
425	10/21/2003	UP	CTC			BNSF 8819	2 Relays	Castle Rock, CO	N
<p>Failed Equipment or Device - Relay</p> <p>On October 21, 2003 at 13:20 MDT, in Castle Rock, CO on the Colorado Springs Subdivision, northbound BNSF 8819, on the main track at MP 31.6, reported the northbound signal at MP 31.6 was Flashing Yellow and the next northbound signal at MP 29.4 was Red.</p> <p>An investigation revealed a high resistant contact on the coded 20T track relay along with an internal jumper missing in the 20HR relay allowing northbound signal at MP 31.6 to alternately display Yellow and Dark.</p> <p>The relays were replaced and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
426	11/4/2003	UP			ATC	UP 4418	None Found	Fairfax, IA	N
<p>Cause</p> <p>Narrative</p> <p>Scenario Reenacted, Unable to Duplicate, No Defects Found</p> <p>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.</p> <p>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.</p>									
427	11/15/2003	UP	CTC			UP 3934	Case Wiring	Niland, CA	N
<p>Failed Equipment or Device - Interior Wiring</p> <p>On November 15, 2003 at 22:14 PST, in Niland, CA on the Yuma Subdivision, eastbound MWCFW-13, on the main track at MP 665.63, reported the eastbound absolute signal at CPSP665 (West Niland) was Yellow over Dark for a move into the siding.</p> <p>An investigation revealed that case wiring had deteriorated, which allowed false battery to keep the 84RAHPR relay energized.</p> <p>The wire was replaced, and all applicable tests were performed.</p>									
428	11/20/2003	UP	CTC			UP 2236	None	Vaughn, NM	N
<p>Phantom Signal - Due to Unpainted Signal Hood or Background</p> <p>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.</p> <p>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.</p> <p>The signal was realigned, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
			Cause						
			Narrative						
429	12/9/2003	UP	CTC			UP 9072	Code Following Relay	Ft. Hancock, TX	N
			Failed Equipment or Device - Relay						
			<p>On December 9, 2003 at 15:26 CDT, in Ft. Hancock, TX on the Valentine Subdivision, westbound IMNLB 07, on the main track at MP 780.7, reported the westbound approach signal to SA738, East Iser, was Yellow over Yellow, and the next westbound signal at SA738 was Red.</p> <p>An investigation revealed a defective 120 CDF (code following relay) allowed the WDDR to energize while receiving 75 code.</p> <p>The relay was replaced, and all applicable tests were performed.</p>						
435	1/7/2004	UP	CTC			UP 5012	None	Pedley, CA	N
			Human Error - Signal Circuit Design Error, Inadequate Service-Testing						
			<p>On January 07, 2004, at 06:27 PST in Pedley, CA on the Los Angeles Subdivision, westbound ETULA 06, on track 2 at MP 48.80, reported the 2-west signal at C049 was Yellow over Green, with the next westbound signal C047 CLEAR for movement into the pass track.</p> <p>An investigation revealed a design error that allowed the bottom head at westbound signal C049 to be Green with the switch at C047 lined for the pass track.</p> <p>The design error was corrected, and all applicable tests were performed.</p>						
436	1/8/2004	UP	CTC			UP 2016	None	Grosse Tete, LA	N
			Human Error - Improper Circuit Jumper in Place						
			<p>On January 08, 2004 at 13:05 CST, in Grosse Tete, LA on the Livonia Subdivision, northbound LLL08 08, at MP 101.40 on the main line, was lined for the siding, and reported a Red over Yellow northbound absolute signal at L101 with the siding occupied.</p> <p>An investigation revealed the H circuit was bridged not letting the G relay drop out.</p> <p>The bridge was removed, and all applicable tests were performed.</p>						

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
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202	1/26/2004	UP	AB			UP 2319	None	Columbus, NE	N
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Human Error - Signal Circuit Design Error, Inadequate Service-Testing

On January 26, 1998, at 10:30 CST, on the Council Bluffs Subdivision at Columbus, NE, eastbound LNF10/26, in the siding, observed the eastbound siding leaving signal A848 and the eastbound main signal 846 display Green aspects with track circuit west of eastbound signal 846 occupied.

An investigation revealed the track circuit west of eastbound signal 846 was left out of the control of the eastbound siding leaving signal A848.

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

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