



# IronWood Technologies

Railroad Accident Reconstruction

## Federal Railroad Administration

### False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - 2000

Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
221	1/3/2000	BNSF	CTC			Amtrak 1006	3E Signal, Congress Park Control Point	Brookfield, IL	N
<p>Amtrak 1006 EB main 3 was lined main 3 to 2 at Congress Park (CP) control point through 1 switch reverse. Engineer alleges approach signal was CLEAR and controlled signal was G/R/R. Train took diverge route as intended. Tested all signal mechs (all signals were searchlight), switch correspondence relays, and signal control relays in route. All circuitry free of grounds. Indication locking tested. Signal system found to be working as intended. After the interview with the crew, it is felt the engineer and Road Foreman mistook the EB signal on the opposite end of the plant governing movement over a switch onto main 3 for his high green and missed the R/G/R at the West end of the plant.</p>									
268	1/8/2000	UP	CTC			UP5869	None	Odem, TX	N
<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>									
269	1/11/2000	UP	CTC			AMTK-53	None	Bond, CO	N
<p>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.</p> <p>An investigation revealed a phantom signal in the bottom head caused it to appear Yellow.</p> <p>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.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<a href="#">222</a>	1/25/2000	BNSF	CTC			Local	Signal 76L	Ft. Scott, KS	N
<p>Local train, while switching train at Ft. Scott yard, reported seeing Flashing Red on main one and a Flashing Yellow on main two southbound at absolute signals South Ft. Scott, KS. Upon arrival it was determined that if code 4 was received on both main tracks from the south and either southbound signal was lined, that both the Yellow signal that was requested and Red on the adjacent main track would flash. Investigation revealed that a yellow signal repeater contact break was not in the light energy circuit.</p> <p>Yellow repeater check was added to the light energy circuits, operational tests were performed and all systems working as intended.</p>									
<a href="#">223</a>	1/30/2000	BNSF	AB			Amtrak #4-27	Signal 8552	Waldo, New Mexico	N
<p>Amtrak #4-27 reported passing approach signal to Waldo, Signal #8572 with CLEAR indication. Also reported passing 8552 signal at West End Waldo with CLEAR indication. Upon passing curve at MP 855.1, observed train H-DENBAR1-29 pulling into siding and still the OS section at East End Waldo. Amtrak 4-29 placed his train in emergency and was able to stop short of Red signal at East End Waldo. (8542 Signal).</p> <p>Signal forces called to investigate. Upon arrival, Supervisor of Signals found the searchlight signal 8552 had been shot into by person/persons unknown. Signal relay was broken and bullet fragments had jammed H-5 signal relay in the Green position. Relay was replaced and signal system tested and found no further exceptions. Cross and Ground Test was made upon arrival as well and no exceptions found.</p> <p>Special Agents were notified as well as County Sheriff's Office to make report of vandalism.</p>									
<a href="#">625</a>	1/30/2000	WC				COKEX	Signal 2WA Color Light	Lake Villa West, Lake Villa, Illinois	N
<p>Train COKEX observed a Yellow over Red aspect on signal 2WA for 10 seconds during a meet with train T048 while opposing signal 2EB was CLEAR.</p> <p>Simulations and tests resulted in no defects.</p> <p>A yard light for Snyder Trucking may have caused a phantom signal.</p>									
<a href="#">237</a>	2/4/2000	CSXT		Automatic		Q13501	None	Columbia Ave., Hammond, IN	N
<p>On February 4, 2000, Q33501 reported to the dispatcher that he had received a MEDIUM APPROACH indication at the WAS #1 Track at Columbia Avenue with train engine J701 in the block ahead. The signals were removed from service and Signal personnel were dispatched.</p> <p>Signal personnel simulated the movement and verified the false proceed indication. The westbound signal on #1 track at Columbia Avenue upgraded from STOP to MEDIUM APPROACH when the west end of the eastbound crossover from #1 to #2 track was reversed. Further investigation revealed that a pair of Safetran Dual Wideband Shunts were improperly applied around both insulated joints between the track circuits on #1 track. The improperly applied shunts acted as a DC shunt, allowing battery from the adjacent track circuit to pick the track relay when the shunt &amp; break circuit broke the track circuit battery feed.</p> <p>The wiring error was corrected and the signals were returned to service following operational testing.</p>									

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626	2/9/2000	CN		Remote			Signal Wires	Wellsboro, Ind.	N
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At 05:30 on 2/9/00 a CN train approaching the interlocking at Wellsboro, Indiana, South Bend Subdivision MP 71.1 reported that westward home signal WB2w had a CLEAR aspect when the crew knew that the signal should have been APPROACH. The investigation of the signal system found that the root cause of the false proceed was intermittent foreign voltage on the "H" control wire. The foreign voltage was traced back to a short on the line. The wrapped wire was removed and all circuits tested.

Remedial Action: All control wires will be inspected monthly.

Note 1: Locomotive number unknown, train crew notified FRA.

224	2/11/2000	BNSF		CTC		XSPMWLM110	Signal 144R	Kansas City, KS	N
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XSPMWLM110 was northbound on main track 2 and reported, while a train was still in the block between Rosdale and 30th Street, North Bound Signal at Bravo displayed Yellow then Red then Green then Red then Yellow. This was reported to repeat several times. Bravo is at MP 5.6, Rosdale is at MP 3.9 and 30th Street is at 2.2. There are no intermediate signals in between these control points.

Investigation revealed bailing wire in pole line at MP 3 was shorting Main 1's 22RHD1 circuit to Main 2's 6LR1 circuit. This allowed positive battery to bypass the breaks in the track circuits north of MP 2.85. The dispatcher had requested a signal north bound at Rosdale Main 2, when the rear of the first train passed north of MP 2.85 the signal at Rosdale would clear intermittently, allowing a Green aspect to be intermittently displayed at Bravo.

Bailing wire was removed from pole line. Operation tests were performed and the system operated as designed. Cause is due to vandalism, Special Agents and police notified.

238	2/13/2000	CSXT		CTC		Q57911	Searchlight Mechanism	South Orange Grove, Pascagoula, MI	N
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On February 12, 2000, at 2347 hours the Southward Absolute Signal from the siding at Orange Grove, Signal #6, went into time without a control. At 0012 hours on February 13, the dispatcher reported the signal hung in time and maintenance personnel were dispatched to investigate. At 0040, when southbound Q57911 occupied the siding, the dispatcher had the train crew report the signal aspect. Upon receiving the report that the signal was indicating Red over Yellow while the dispatcher had ordered it to stop, the dispatcher immediately removed the signal from service.

Upon arrival, Signal personnel verified the improper indication. Further investigation revealed that the searchlight signal mechanism had been vandalized. The outer compound lens had been broken, and pieces of the shattered lens were lodged in the signal mechanism causing the mechanism to be stuck in the Yellow position.

The signal mechanism was replaced, and the signal was placed back into service following operational testing.

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
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255	2/16/2000	NS	CTC			5469-5460	Phantom Signal	Cleveland, OH	N
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At approximately 12:30 PM, Train No. 133 observed the 5WA signal at CP 190, Rockport Yard, displaying a SLOW APPROACH aspect. The dispatcher did not have the signal lined and the train was stopped as it took the signal. No other trains were involved.

Signal personnel arrived to investigate and first interviewed the train crew. The crew reported the signal they saw from about 150 feet had looked to be Yellow over Red. 5WA is a US&S dwarf signal consisting of four (4) light units each with an 18 watt bulb. The top unit is red, the second green, the third yellow and the fourth is a red unit. Initial inspection of the signal found it to be in excellent condition with no cracked or discolored lenses, no missing hoods. The signal was properly sealed, locked and aligned. The lighting voltage on the individual units, when lit, measured between 8.4 and 8.6 volts DC. The train was then backed to the point where the crew thought they saw the Yellow over Red. With the top and bottom red units lit, a STOP signal, the top red appeared to be washed out to the point that it could have been misinterpreted as a yellow. A contributing factor was the train crew's relative unfamiliarity with this location.

All appropriate signal tests were performed with no exceptions taken.

As the sun was above and slightly behind the 5WA signal, it was suspected that the sun reflecting back off the second hood could have caused the top unit, displaying red, to wash out somewhat. The signal bulbs were replaced with 20 watt bulbs, and the voltage was increased to 9.2 volts before returning the signal to service.

627	2/26/2000	CN	AB				Signal 366.7	near Baton Rouge, LA	N
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The report of an alleged false proceed signal at Mile 366.7 was left on the Viocemail system of the Signal Supervisor, by a trainmaster, at 02:43 hrs (26.FEB.00). The Acting Signal Supervisor checked the voice mail at 17:20hrs. (26.FEB.00). This voice mail stated that with a train south of signal 366.7, said signal was flashing from Red to Yellow.

The appropriate signals were removed from service.

On site inspection and testing, formally commencing at 00:30hrs (27.FEB.00), could reproduce the condition as reported. A defective Track Code Isolation Unit allowed a capacitor to supply voltage to, and cause the momentary pickup of the 3667 HR, hence displaying the Yellow aspect with the track occupied.

The Isolation Unit was replaced. The signal system was tested and found to be operating properly. The signal system was restored to service at 02:30hrs (27.FEB.00).

As part of an on-going upgrade of the signal system on the Baton Rouge District, the Trackcode in this area is scheduled to be replaced with Electrocode, the week of 06.MAR.00.

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>270</b>	2/28/2000	UP	CTC			UP4808	None	Indio, CA	N
<p>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.</p> <p>An investigation revealed the lens in the top head was dirty, misaligned and the Red signal appeared Yellow.</p> <p>The lens was changed and the signal head was refocused. The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<b>256</b>	3/4/2000	NS	CTC			6681	Dwarf Signal	Norris Jct., AL	N
<p>At approximately 2:50 p.m., Train No. 192A504 was leaving Norris Yard eastbound and called a DIVERGING CLEAR indication (R/G) at Home Signal 27L - Norris Jct., MP 790.7. The operator at Birmingham Division Control Center observed train 192 entering the plant at Norris Junction onto Main 1 and contacted the train crew to stop. The 27L signal was not requested and should have been displaying a STOP. Train 192 ran by signal approximately 1,250 ft.</p> <p>Signal personnel investigated and took no exceptions of the signal system. Signal log reports at the Control Center and the field determined the 27L signal was not requested nor did it indicate lined.</p> <p>Further tests determined that the color light dwarf signal was subject to reflection from sunlight depending on the viewing location and position of the sun.</p> <p>Action was taken to replace the standard hood arrangement with 9 inch hoods that surround each colored lens and install phan screens to further direct sunlight reflection.</p>									
<b>257</b>	3/9/2000	NS	AB			CR2898	Audio Frequency Overlay	Taylor, MI	N
<p>At approximately 3:45 p.m., Train L60L59 was leaving Oakwood Jct. on the Detroit District, Lake Region on an APPROACH indication into single direction ABS territory. They were following train L64. As train L60 approached automatic signal D-10.2, they observed a CLEAR signal. Aware that train L64 was working ahead, they passed this signal prepared to stop.</p> <p>They stopped short of an open hand throw trailing point switch at MP D-11.2 and notified the Ft. Wayne Dispatcher.</p> <p>C&amp;S personnel investigated and determined that the circuit used to indicate the switch point position would not deenergize when power was removed from the transmitter. The switch indication is transmitted from the switch location to the signal location by a 1.2 kHz Audio Frequency Overlay (AFO) circuit. This area has high voltage transmission lines parallel to the track that may be a factor in the failure of the receiver unit to deenergize. The equipment will be sent to our Signal Repair Facility for further analysis.</p> <p>A Phase Selective Overlay (PSO) circuit was installed in the place of the AFO and the signal system was tested and returned to service.</p>									

Report #	Date	Reporting Carrier	Block System	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>258</b>	3/10/2000	NS	CTC			8373, 8792, 8051	Light Out Circuit	Reading, PA	N
<p>At approximately 5:30 AM on 3/10/00, train 11AH510 was proceeding west on Track #1 on the Harrisburg Line in Reading, PA. After having passed Intermediate Signal 591 displaying a CLEAR indication, the train encountered the next signal, Intermediate Signal 601 displaying a RESTRICTING indication.</p> <p>The train was brought to a safe stop, and the problem was reported to the Harrisburg Dispatcher.</p> <p>Investigation of the incident revealed a lamp failure on the Green aspect of Signal 601, and a design deficiency in the light out circuit at Signal 601. The signal design at this location would cause a Red aspect to be displayed when a lamp failure condition existed on the Green or Yellow aspect (as is proper), but failed to change the polarity feeding the approach signal, Signal 591. The result was Signal 591 displaying a CLEAR indication into a RESTRICTING indication at Signal 601 when a lamp failure condition was present on the Green or Yellow aspect at Signal 601.</p> <p>After the incident, changes were made in the circuit design at Signal 601 such when a lamp failure occurs on the Green or Yellow aspects at Signal 601, in addition to causing Signal 601 to display RESTRICTING indication, a polarity change will be fed to Signal 591, causing it to display an APPROACH indication. Upon completion of these changes, the signal system was restored to normal service.</p>									
<b>628</b>	3/27/2000	AMTK	AB			N/A	Hand Throw Switch MP 14.9	Norwood, MA	N
<p>Maintenance inspector discovered that the hand throw switch at MP 14.9 was not checking the signal control circuits for 2E signal at Norwood Central and 131.2 signal. This was found during a routine maintenance inspection. It appears that due to a signal circuit revision at Railroad Ave. sometime in 1995 the signal control circuits were removed from checking the hand throw switch at MP 14.9. Circuits were revised, tested and signal system returned to service. Person responsible for circuit changes made in 1995 no longer is employed by Amtrak.</p>									
<b>629</b>	3/28/2000	CN		Manual			CL	E. Bridge Interlocking	N
<p>Polarity of control wires for H2 mechanism (Signal 31) was reversed allowing said signal to display Green aspect in lieu of Yellow. (09:00, 28-Mar-00). Signal wires were restored and full operational tests were made (18:00, 29-Mar-00). Signal was found to have been wired according to circuit plans. Plan was in error and field corrections made. East Bridge Interlocking, New Orleans, LA.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
239	4/11/2000	CSXT		Remote		H89611	None	E.E. Quinimont, Quinimont, WV	N
<p>At approximately 1515 hours on April 11, 2000, the crew of H89611 reported that they had received a MEDIUM CLEAR signal at MP 377 while proceeding eastbound out of the siding at E.E. Quinimont into a STOP signal at Backus MP 371. The signal should have displayed a MEDIUM APPROACH. Signal personnel were dispatched, verified the false proceed indication, and subsequently removed the signals from service.</p> <p>Further investigation revealed that the R270 DR relay was improperly energized by a wire which ran directly to the BH-6 battery buss, effectively removing the #1 reverse polar contact of the R268 HDR from the circuit. This permitted the R270 DR relay to be energized when the R270 signal was requested without checking the aspect displayed at Backus.</p> <p>The wiring error was corrected and signals were returned to service following operational testing.</p> <p>The cause was found to be improper operational testing following field wiring changes.</p>									
630	4/14/2000	IMRL	APB			IMRL 355	Stick Circuit	Kittredge, IL	N
<p>On April 14, 2000, Engineer on train M264D14 reported the eastbound signal at East Kittredge as displaying an APPROACH aspect with westbound train ICHLB14 occupying the same block east of Kittredge. The proper aspect for the eastbound signal at East Kittredge at this time was Red.</p> <p>Signal Department personnel were notified and immediately investigated this incident. Signal Department duplicated this incident and found stick relays energized at MP 114.8. This condition prevented the opposing east bound signals to tumble back to Kittredge when train ICHLB14 passed Adeline.</p> <p>Signal personnel released the stick circuits and performed the appropriate tests. Subsequent to tests, signal system was returned to operation at 22:52 hours on April 14, 2000.</p>									
240	4/21/2000	CSXT	CTC			Y16221	#27 Track Circuit	Baldwin, Baldwin, FL	N
<p>At approximately 1558 hours on April 21, 2000, northbound single engine Y16221 passed the northbound signal at Baldwin on the main track. The engine had previously indicated occupancy on two separate track circuits at Baldwin, but then indicated clear of the Baldwin circuits upon passing the northbound signal. When the track circuits indicated clear, a previously stored request began automatically lining signals. The switch at Baldwin subsequently reversed and a southbound route lined through Baldwin while Y16221 still occupied the track. The signals were removed from service and Signal personnel were dispatched.</p> <p>Further investigation revealed that the track circuit had been altered by Signal employees attempting to resolve a previous track circuit problem. The employees believed that the existing track wires were faulty, disconnected the existing track wires, and replaced them with temporary wire. In re-wiring the track circuit, the employees failed to recognize the track circuit as a series fouling circuit, and inadvertently eliminated a short portion of the main track from the circuit.</p> <p>The wiring errors were corrected, and signals were returned to service following operational testing.</p> <p>The cause was found to be improper operational testing following field wiring changes.</p>									

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<b>241</b>	4/23/2000	CSXT		Remote		N94820	#4 Signal	VR Tower, Walbridge, OH	N
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At approximately 2315 hours on 4/23/2000 at VR Tower in Walbridge, OH, northbound train N94820 reported receiving a MEDIUM CLEAR (Red over Green) on the #4 Signal when lined for a crossover move from #1 track into the receiving yard through #7 and #5 crossovers reversed. The signal for this move should have been RESTRICTED (Red over Yellow). The following train, Q39723, made this same move and reported receiving a RESTRICTING signal. Upon notification, Train Control personnel were dispatched to investigate.

Further investigation revealed that when a signal was lined northbound on the #2 track at Yard D through the next northbound interlocking (#8 Signal), a Code 7 was sent back to VR Tower holding up the W2DR. This permitted a MEDIUM CLEAR signal to be displayed when the signal was lined on #2 track without checking the position of the #5 crossover.

The wiring error was corrected and signals were returned to service following operational testing.

The cause was found to be a design error.

<b>225</b>	4/24/2000	BNSF	CTC			BNSF 4970, ZWSP	Line Wire and Inverter	Kernan, IL, Signal 811	N
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Train ZWSPNBY9-24B, Engine BNSF 4970, operating westward on main track No. 1 approaching control point at Kernan went by the approach signal at MP 81.64 (Sig 811) displaying APPROACH MEDIUM. The home signal at Kernan was at STOP. The Signal Supervisor and two Maintainers responded and put all signals to STOP. Investigation revealed that a 480V AC wire had come untied from its insulator with the tie wire still attached to it. The high winds blew the 480V AC line wire off the crossarm and it dropped down to the area of the secondary arms below. The tie wire that was still attached to the 480V AC line wire allowed it to touch the "NMR" line wire. When this happened, the 480V AC fed back into the control point, burning up an inverter, causing a ground on the battery that feeds the "NMR" circuit. The ground allowed current to bypass the circuits at Kernan and energize the "NMR" relay at Signal 811, causing it to display APPROACH MEDIUM. The linewire was restored to its insulator, the inverter was replaced and signal system tested for proper operations and returned to service.

<b>631</b>	5/2/2000	IMRL	APB			UP 9730	None	Byron, Illinois	N
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On May 2, 2000, Engineer on westbound train ICHLB 02 reported that while operating on Red signals and after passing eastbound signal 891 he looked toward the rear of his train and observed signal 891 displaying a CLEAR aspect. The Engineer reported that his train was occupying the block for signal 891 when the CLEAR aspect was observed. The proper aspect for signal 891, at this time, was Red.

Signal Department personnel were notified at 10:00 PM and immediately began a complete investigation of this incident. Personnel tested relays, meggered cables, and inspected signal light wires and the pole line. Attempts were also made to recreate this incident by shunting tracks and with actual train movements. Signal would not clear until shunts or train was completely by signal 891. Subsequent to tests, signal system was functioning as intended and returned to service at 04:40 AM on May 3, 2000. Signal Department personnel were unable to duplicate this alleged false proceed report.

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226	5/5/2000	BNSF		Remote		BN7269/MLAUNTW	None	West Fargo, ND	N
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Engine number BNSF 7269 was given permission and a signal from the West Fargo Interlocking up to JY Jct. The dispatcher said they would not get a signal at JY Jct. because there was a switch engine switching at Fargo Yard Office. The dispatcher would talk the train by the signal at JY Jct. When the train got there, they stated that they saw a Red signal. When they were about twenty car lengths from the signal the crew indicated that the signal appeared Yellow. At that point, they called the dispatcher to get permission to take the signal. The dispatcher said he had not called for a signal at JY Jct. and his computer showed JY Jct. at STOP. The dispatcher then talked the train past the signal at JY Jct.

The field HLC log and the Fort Worth office logs had the same information for JY Jct. (i.e. no signal was called and the signals were red). JY Jct. is equipped with searchlight signals and the HLC monitors the red repeater relay, which had not dropped.

The Signal Inspector and Signal Technician tested the relays, the signal mechanism, voltage at the bulb, which was 10.4 volts, and megged the cable to the signal. No exceptions were taken with any of the tests.

The Signal Supervisor rode an engine with the conductor and brakeman on the following day, May 6, at 14:45 hrs. to recreate the incident. It was a cloudy day and the signal displayed aspects as was intended. The supervisor dropped flags at the location where the crew saw the red signal and where the train stopped and the crew said the signal was yellow. The day the incident occurred it was a clear sunny day. In order to recreate the conditions the locations when the signal was seen to be Red and Yellow were marked for future testing.

On May 7, at 14:45 hrs. the Inspector and Maintainer again observed the signal. It was partly cloudy. It appeared to these employees that the signal was Red and may have appeared Yellow at the closer in point to the curve.

The corrective action taken will be to turn the searchlight head slightly to the west and install a phankill lens.

227	5/6/2000	BNSF	CTC			Z-WSPSBD-104	Westbound Signal Main Track Two	Barstow, CA	N
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At 0755 hours Pacific Time train crew reports that they were stopped on Red over Red signal at station Barstow. Train was approximately 500 feet to 1000 feet from the signal. Train crew said they saw signal go to Red over Yellow and they proceeded to take signal. When train was one engine length from signal train crew observed signal was Red over Red but could not stop train from entering OS. Field logs and Digicon logs do not show signal ever being cleared or requested to clear. Could not duplicate event in field. This signal is in direct line of rising sun but at 0845 hours I (Signal Supervisor) arrived on scene and looked at signal on main track two and noticed some sun glare on signals but not excessive. Terminal Superintendent and myself (Signal Supervisor) have arranged to ride train at same of morning on May 7th, 2000.

On morning of May 7th, 2000, we reenacted event and observed that indeed at this time of morning sun was directly reflecting on the red lens. The glare was bad enough to make the signal appear to be Yellow.

Correction: Added hood over red aspect to reduce the potential of sun interference.

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>242</b>	5/11/2000	CSXT	CTC			IHB Run 518	Design	CP Francisco, Blue Island, IL	N
<p>On Thursday, May 11, 2000 at approximately 1022 hours Indiana Harbor Belt (IHB) Train Run 518 received a RESTRICTING signal at CP Francisco MP DC 14.9 (IHB MP 15.4) to proceed west on Track 1. At the same time, eastbound IHB Train NP 11 accepted an opposing approach signal at CP 123 (IHB MP 17.5) to proceed east on Track 1. Each train proceeded into the block until they viewed the opposing train and stopped. The signals were removed from service and Train Control personnel were dispatched.</p> <p>Further investigation revealed that the false proceed was caused when the Call-on feature was initiated by the dispatcher, which permitted a RESTRICTING signal to be displayed at CP Francisco with an opposing signal already lined into the block.</p> <p>Temporary wiring changes were made to disable the Call-on circuit, and signals were returned to service following operational testing.</p> <p>The cause was found to be a design error.</p>									
<b>632</b>	5/15/2000	METX		Manual		Unknown	Signal 2-0	Chicago, IL	N
<p>Signal 40R was reported Green and signal at 2-0 was reported Red. Found wires on RSRIT on print A1-2-1A contact #16 and 13 reversed. Repaired same signal 5/15/00 2:50 PM.</p>									
<b>633</b>	5/23/2000	PATH	AB				Signal 232	Tunnel E, Exchange Place, Jersey City, NJ	N
<p>At some undetermined time in the past, automatic signal 232Z was improperly wired in the field to display a speed control aspect (Rule 208, Figure 1 - Yellow over Yellow), when it was designed to display an APPROACH aspect (Rule 211, Figure 1 - Yellow). Due to track alignment and entering a station platform, this is a slow speed location, and no unsafe conditions or incidents have occurred over the period of years that this has been in place. The wiring has been corrected and the signal displays the proper aspects as designed.</p>									
<b>228</b>	5/30/2000	BNSF	CTC			ZNBYWSP2-28A,	None	Courtney, MO	N
<p>Train ZNBYWSP2-28A, traveling eastward on main track 1 between Congo and Courtney, following a single 4 axle unit, BNSF 2600, train WHMOHMO1-30, observed automatic signal 4414 upgrade to CLEAR from Red and then go back to Red. Engine BNSF 2600 was in the block ahead of the ZNBYWSP2-28A. Signal Supervisor, Signal Inspector, and Signal Maintainer investigated the incident by downloading logs from the Electrocode track circuits and confirmed that engine BNSF 2600 had lost shunting and allowed signal 4414 to upgrade. The track circuits were tested for shunting sensitivity with 0.06 ohm shunts with no exceptions taken. Dispatcher instructions prohibit allowing following moves behind single engines on BNSF. The dispatcher had erred. A copy of Rule 44.5 from the dispatcher's manual is attached.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<a href="#">271</a>	5/31/2000	UP	CTC			SP 2710	None	Houston, TX	N
<p>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.</p> <p>An investigation revealed the HD control wires to eastbound signal 19B were reversed.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<a href="#">259</a>	6/2/2000	NS	CTC			AMT 57, AMT 37	Design Error	Elyria, OH	N
<p>At 4:45 a.m., June 2, 2000, Amtrak #29 was traveling west on track #2 at MP 203 on the Chicago Line when they received a STOP signal at CP-203. After receiving permission to pass the STOP signal, they progressed to intermediate signal 205 2W which was displaying a LIMITED CLEAR (Red/Flashing Green). At this time they notified the dispatcher concerning the improperly displayed signal.</p> <p>Investigation: The signals were lined to replicate the conditions experienced by Amtrak 29, The crossover at CP 207 was lined and it displayed a LIMITED CLEAR aspect. At signal 205 2W a LIMITED CLEAR aspect was also displayed. At this time the NWLPPR relay was also still de-energized. Signal 2W at CP-203 was displaying a STOP aspect. Under these conditions Signal 205 2W should display a STOP AND PROCEED aspect (Red/Red), but was displaying an improper aspect of LIMITED CLEAR (Red/Flashing Green).</p> <p>Review of the in service circuit plans revealed that aspect displayed was consistent with the designed circuit. The circuit design allowed the "B" head to continue to display a Flashing Green with the hand throw switch showing not lined for normal movement. With the cross-over at CP 207 lined from track #2 to track #1 the signal that would be displayed at 205 2W if the NWLPPR relay was energized would be APPROACH LIMITED (Yellow/Flashing Green). When the NWLPPR relay was de-energized the "A" head went to Red but the "B" head remained at Flashing Green.</p> <p>Correction: Signal engineering was contacted and they developed a circuit modification to correct the problem. The circuit was modified and complete signal checks were performed. The signals were placed back in service at approximately 2:00 p.m.</p>									
<a href="#">272</a>	6/2/2000	UP	CTC			UP-3568	None	Houston, TX	N
<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>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>274</b>	6/3/2000	UP	CTC			UP-1647	None	Houston, TX	N
<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>									
<b>260</b>	6/4/2000	NS	CTC			NS 9316	Human Error	Bellwood, NJ	N
<p>At approximately 5:00 p.m., June 4, 2000, train #162H403 was eastbound on the Lehigh Line, in the controlled siding between CP 67 and CP 64, when they observed the eastbound signal at CP 64 on the single track displaying a CLEAR aspect with the #1 switch at CP 64 in reverse position lined against them.</p> <p>Investigation revealed switch junction box had been damaged earlier in the day (at approx. 9:00 a.m.) by what appears to be All Terrain vehicles. Repairs were made by Maintainer and Maintainer Test. They gave the switch back to the dispatcher at 2:06 p.m. The investigation by Fye and Renninger revealed four conductors of the switch cable had been placed in the wrong position which resulted in the switch points laying in the reverse position, yet indicating it was in the normal position. Wiring corrections were made and a complete breakdown of the switch indication circuits were done along with verification of switch correspondence with the dispatcher. Indication locking tests were made and the interlocking was restored to service at 9:55 p.m.</p> <p>The false proceed signal at CP 64 was due to both maintainers' failure to make proper in-service tests after disarrangement of the signal system.</p>									
<b>634</b>	6/6/2000	CN	AB			IC 1026	85 Signal	Cicero (Hawthorne), IL	N
<p>At approximately 1100 hours on June 6, 2000, westbound train CHWL-06 reported that signal 85 displayed a Yellow aspect with the hand-throw switch lined reverse, within the block at Mile 8.8.</p> <p>Signal 85 was removed from service by the Signal Supervisor. Upon arrival at the location, the investigation found that the location had not been vandalized or damaged and that the incident was reproducible.</p> <p>On June 2, 2000 the hand-throw switch at Mile 8.8 had been placed in service. The crossover track circuits 1AXT and 2AXT had been inadvertently omitted from block repeater circuit 85BP, which allowed signal 85 to display an aspect less restrictive than intended when the crossover switch was lined reverse. The omission was not discovered during the in-service testing.</p> <p>Corrections to the 85BP circuit were made to include the 1AXT and 2AXT in the block repeater circuit 85BP. The circuits were then tested to determine that they were operating as intended.</p> <p>Signal 85 was returned to service at 1800 hours.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
635	6/8/2000	AMTK		Manual		None Involved	64L Signal at 200 (DI)	Philadelphia, PA	N
<p>Engineman on SEPTA train no. 562 reported that, while making a move on Track No. 1 at signal 54L, he looked over and observed signal 64L displaying a STOP AND PROCEED aspect. At no time did the operator at Zoo call for signal 64L to be cleared. Upon investigation, it was found that signal 64L was displaying a bottom marker light. Further investigation revealed that the bolt holding the No. 3 front contact of the 64LBHB relay had broken and the carbon contact inside of the relay slid down and allowed a continuous electrical path between the No. 3 front, heel, and back. This allowed EBX energy to be applied to the 64LBN2L circuit, thereby illuminating the 64L marker light. The relay was removed from service, a new relay installed, circuitry tested, and the signal system returned to service. Further testing with the vendor will take place to determine the cause of the bolt failure.</p>									
273	6/12/2000	UP				UP-9709	Relay	Hood River, OR	N
<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>									
636	6/15/2000	PATH					Auto Signal 90	Hoboken Station, Hoboken, NJ	N
<p>A wiring change in the signal control circuit was improperly installed and tested as part of a timing relay replacement. This resulted in the improper display of an APPROACH aspect (Yellow, old Rule 211, Fig. 1, new Rule 213, Fig. 1) with no train on the approach circuit, instead of a STOP AND PROCEED (Red, old Rule 215, Fig. 1, new Rule 219, Fig. 1). Due to this being a stub-end terminal station, this is a slow speed location. No unsafe incidents occurred. The wiring was corrected, retested, and the signal displays the proper aspects as designed.</p>									
261	6/24/2000	NS				8933, 2506, 8713	Human Error	Dorset, OH	N
<p>At approximately 2:22 a.m., June 24, 2000, train #62V was southbound at MP 10.5 on the Youngstown Line when they observed signal 10S displaying APPROACH LIMITED (Yellow over Flashing Green) with signal at CP 13 MEDIUM APPROACH (Red over Flashing Yellow). The train crew knew that MP 10.5 should have been displaying Yellow over solid Green since they were lined to take the turnout at CP 13. The number 15 turnout at CP 13 is limited to 30 MPH, therefore, the signal observed by the train crew at 10S, Yellow over Flashing Green, was improper since it was a 40 MPH speed limit through the turnout at CP 13.</p> <p>Investigation determined that this improper signal was displayed due to our Signal Supervisor replacing the EC-4 box when it was in trouble on 6/1/00, at CP 13. He placed a control wire on the wrong terminal post of an EC-4 box which generated a Code 4 instead of a Code 3. He failed to make proper in-service tests after disarrangement of the signal system.</p> <p>The wiring on the EC-4 box was corrected, in-service tests were done and the signal system placed back in service 6/24/00.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
637	6/26/2000	IMRL	CTC			IMRL 105	None	Ipsco, Iowa	N
<p>On June 26, 2000 at approximately 23:06 hours, crew on train L82726 reported observing eastward absolute signal 1E at Ipsco displaying a CLEAR aspect when lined into the pocket track with cars setout in the pocket track. The proper aspect for signal 1E at Ipsco at this time was Lunar.</p> <p>Signal Department personnel were immediately notified and arrived on the scene to promptly investigate this incident. Personnel duplicated the conditions as reported by lining signals and shunting tracks which resulted in signal 1E displaying a Lunar aspect as intended. Personnel then reviewed the VHLC data log which verified that signal 1E displayed a Lunar aspect for train L82726 which was the proper aspect. Signal Department personnel were unable to duplicate a CLEAR aspect as reported. Subsequent to tests, signal system was returned to service.</p>									
638	7/9/2000	CR		Manual		N/A	Proximity Detector	Bridgeport, NJ	N
<p>On 7/19/00, the bridge operator at Bridgeport moveable bridge at MP 20.79 on the Pennsgrove Secondary notified the signal office that he was able to get a signal with one of the mitre rails not seated. Upon investigation by local C&amp;S forces, we found a proximity switch that failed in the closed position.</p> <p>On 7/19/00, the signal forces removed the defective proximity detector and set the signals.</p> <p>On 7/20/00, the defective proximity detector was replaced after new circuitry was installed to insure that if a proximity detector did fail in the open position, it would be impossible to get a signal.</p> <p>[Note from Editor: This false proceed was charged to "Signal Circuit Design Error" because it is clear from the description above that the circuit was not originally designed on the "closed circuit" principle, as required by 49 CFR Part 236.5]</p>									
275	7/9/2000	UP	CTC			AMT 28	None	Madison, IL	N
<p>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.</p> <p>An investigation revealed differences in signal aspect rules between the TRRA and the UPRR resulted in a signal design error.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
639	7/11/2000	DH	CTC				Switch Circuit Controller	MP 29.5, Ballston Spa, NY	N
<p>Train SCR traveled north thru CPC 24 to switch cars at Curtis Lumber, train 63 was to follow them north. The dispatcher cleared CPC 24 North after SCR. Train 263 called SCR to find out their location. SCR reported that they were switching in Curtis out the switch was open on the main. Train 263 had passed CRC 24 with a CLEAR signal and saw signal 28.7 was CLEAR and stopped their train. Maintainer Acker was notified at 18:45 and the switch circuit controller rod had fallen off at Curtis switch because switch points had moved north. Also found the spring loaded cam in circuit controller in closed position unable to move. Replaced controller and point rod. Had Track Dept. move switch timbers.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>243</b>	7/19/2000	CSXT	AB			Q138-19	EB Signal, #2 Track	Scott Haven, PA	N
<p>At approximately 1830 on 19 July, Q136-19 eastbound on #2 track reported a CLEAR signal with the crossover from #2 to #1 track lined against them. The eastbound signal on #2 track was removed from service.</p> <p>The false clear signal was found to be due to a wiring error. The B-12 wire was found to be connected to the heel contact of a relay in the 51B circuit instead of to the front contact. The wiring error bypassed a relay contact which should have opened the HD circuit when the switch was reversed and set the signal to red. With this contact bypassed, the switch could be reversed without knocking down the opposing signal.</p> <p>The wiring error was corrected, operational checks were performed, and the signals were restored to service at 2310.</p>									
<b>640</b>	7/20/2000	WC	AB			L017-20, WC 6620	Signal 2516	Stevens Point, Wisconsin	N
<p>As NB train L017 passed approach signal 2517, Engineer looked back and observed SB signal 2516 at APPROACH while the 52 car train was still on the circuit.</p> <p>No defects found. Unable to replicate after numerous simulations. Signal returned to service after testing complete.</p>									
<b>262</b>	7/21/2000	NS	CTC			NS 7136	Pole Line	Milton, PA	N
<p>At 9:30 a.m., July 21, 2000, southbound train #H46 received a CLEAR signal, southbound at CP South Fair into a STOP AND PROCEED aspect at automatic signal 247S. Dispatcher notified of incident.</p> <p>Investigation of this incident revealed three separate trouble areas. These three conditions were a grounded code line (L-) wire at MP 246.1, a grounded line drop at Cameron Street, Milton, PA on the negative EHD line wire, and a dead comm line wire that was making contact with both the positive EHD and code line (L+) wires at MP 246.6.</p> <p>The above conditions caused false code line voltage to be applied to the HD resulting in a CLEAR aspect at CP South Fair into a STOP AND PROCEED at signal 247S. The dead comm wires were removed from both code line wires and the signal control wires and the grounded line drop cable has been replaced.</p>									
<b>641</b>	7/24/2000	KCS	CTC			KCS 6602	Pt. Det. Rod	Beaumont, TX	N
<p>At 11:50 hrs on 07/24/00 train #016423 North with engines KCS 6202 and KCS 729 with Engineer and Conductor and a consist of 48 loads, 29 empties, 6633 tons and 4370 feet, was traveling north bound at Mile Post 766, Neches River Bridge, where he reported receiving a Yellow aspect with the derail in the derailling position. The signals were immediately removed from service with the Control Operator until investigation could be made. Upon arrival at the location myself, Signal Engineer [redacted], Signal Supervisor [redacted], and Signal Maintainer [redacted] investigated the report and was able to reproduce the reported failure. The first finding was that the point detector rod was broken where the threads (for connection to the external rod) and the shoulder of the external rod come together. The second finding was that the Lock Rod Arm (clips) were installed reverse therefore not insuring that the lock rod and point detector rods were moving concurrently as described in the General Railway Signal Pamphlet #1293 Rev. February 1987, page 45. The corrective action was to install the lock rod arm (clips) properly and replace the broken point detector rod. We have checked every affected switch machine on the KCS property to insure that this condition doesn't exist anywhere else.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
642	7/24/2000	SEPA	AB  See attached [nothing attached].				Cable	Jenkintown, PA	N
229	7/25/2000	BNSF	CTC  Train SLGBNYC6-22, operating eastbound on Main track 2 reported that he had a CLEAR (Green) signal displayed at Signal 1942 and then had a DIVERGING CLEAR (Red over Green) at Ormonde control point. The Signal Supervisor, Signal Inspector and Signal Maintainer responded to interview the train crew, recreate the lineup and perform tests to verify the conditions of the signal system. When the lineup was made to simulate the conditions as reported by the train crew, the proper aspect (Flashing Yellow) was displayed at signal 1942. After performing cross and grounds, visual and operating characteristics of appropriate relays, megger tests of cables and visual inspections of the pole line and instrument cases, no exceptions were taken. Signal 1942 was observed for alignment and visibility with no exceptions taken. The Signal Supervisor interviewed the train crew prior to beginning testing. They stated that they could see signal 1942 without any problem. It was also noted that the train crew was not completing the Signal Awareness Form as required by BNSF System Special Instructions.			Train SLGBNYC6-2	None	Ormonde, IL (Chillicothe Sub)	N
244	7/28/2000	CSXT	CTC  On July 28, 2000 northbound Q308-26 received an APPROACH aspect at intermediate signal 56N while the electric lock switch XA54 at the New Generation Industry Spur was lined reverse against the 56N signal. Signal 56N should have displayed an aspect no better than STOP AND PROCEED with the switch reversed. Train H719-26 had lined the switch reverse in order to set off a car in the industry track, and the signal went from STOP AND PROCEED to APPROACH when H719-26 cleared the fouling section of switch XA54. When H719-26 re-entered the fouling section, Signal 56N went back to STOP AND PROCEED. The switch was removed from service and Train Control personnel dispatched.  The cause was found to be shorted HD conductors in a spliced aerial 12-conductor/14 line drop, caused by moisture shorting out the wires. The line drop was replaced, switch and signal checks were made with no exceptions, and the signals were returned to service.  The cause was determined to be a material failure of the splice.			Q308-26	Signal 56N	Arlington, OH	N
230	8/2/2000	BNSF	CTC  After a cutover a signal man called Supervisor and then a train crew member of the train reported to Signal Supervisor that at approximately 1500 MDT his westbound train had passed signal 169.7 (the approach to East Culbertson) displaying a Yellow over Yellow. The signal at East Culbertson was Red over Lunar. Signal crew had just installed new intermediate signals between Culbertson and Snowden. The approach signal was configured for a signaled siding that will be cut in later this month. During checkout there was missed communication between parties at approach signal and control point. The control point was modified to not allow a Code 3 to be transmitted. System checked and operating as intended. Decision reached by this group that all future cutovers will have aspect chart at EACH location. Counseling session will be held with this group to discuss aspects and the importance of diligently observing and relaying them during a cutover.			GCCMTAC931	169.7	Culbertson, MT	N

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
245	8/2/2000	CSXT	AB			None	WB Int., Signal #43	Westport Branch, Baltimore, MD	N
<p>On August 2, 2000, FRA officials observed westbound color light intermediate signal #43 displaying an APPROACH aspect (Yellow) with a local freight train in the block ahead. Signal 43 should have displayed a RESTRICTING aspect (Red). The signal was removed from service and Train Control personnel were dispatched.</p> <p>The cause was found to be pole line wires which had been pulled down by a large tree that fell across the line wires. The insulation on the wires was damaged, and the bare HD wires were shorted together.</p> <p>The pole and line wire were repaired, signal and switch checks were made with no exceptions, and the signals were returned to service. The cause was determined to be external damage from the tree to the pole line wire.</p>									
643	8/7/2000	CN	AB			CN2540	Signal 1063	Mishawaka, IN	N
<p>A tree had fallen on the pole line near Fir Rd. at milepost 105.8 on the Southbend Subdivision. The "H" wire and "D" wire crossed causing the signal to be falsely cleared. This was reported by CN 2540 at 0130 on August 7, 2000. The tree was removed, the line wire was repaired, and signal was tested and back in service on August 7, 2000 at 0600.</p>									
246	8/8/2000	CSXT	CTC			P052-07	Signal 6L	Fredericksburg, VA	N
<p>On August 8, 2000 at approximately 0720, northbound L174 while moving on #3 track between Hamilton Interlocking and Fredericksburg Interlocking reported the Northbound Signal (6L) for #2 track at Fredericksburg displaying an APPROACH aspect with Train P308-08 ahead in the block. Signals were removed from service and Train Control personnel dispatched.</p> <p>Investigation revealed a 4.4 mA ground which caused the 6LBPR relay to remain energized with the block occupied ahead. The cause of the ground was found to be deteriorated insulation on house wires which were contacting the metal wire chaseaway. All deteriorated house wires were replaced, signal checks were made with no exceptions, and the signals were returned to service.</p>									
276	8/10/2000	UP	AB			UP6053	None	Mulford, CA	N
<p>On August 10, 2000 at 00:50 PDT in Mulford, 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.</p> <p>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.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
644	8/16/2000	WC		Manual			2LA	Lake Villa, Illinois	N
<p>Northbound #2 main displayed Red and Yellow aspects at the same time. Upon notification took plant out of service.</p> <p>Upon investigation found bridge piling was driven through cable crossing the wires.</p> <p>Replaced cables.</p>									
645	8/17/2000	WC		Manual			103L	Vernon, Wisconsin	N
<p>Northbound signal stayed CLEAR after train movement, received unsolicited signal indication on CTC screen.</p> <p>Upon notification took plant out of service. Plant locked up as intended, caused by vandalism. Signal shot out, broken glass stuck in mechanism.</p> <p>Replaced and tested SA type mechanism.</p>									
247	8/20/2000	CSXT	AB			CP522	CP9 SB Sig., #2 Track	Tonawanda, NY	N
<p>On August 20, 2000, the train crew on southbound CP 522 observed the southbound signal on #2 track at CP9 displaying an APPROACH MEDIUM aspect with a STOP aspect at the next signal at CP8. The signal at CP9 should have displayed an APPROACH aspect. The signal was removed from service and Train Control personnel were dispatched.</p> <p>The cause was found to be open line wires which were twisted together by a tree leaning into the pole line.</p> <p>The tree was cut away, line wire was repaired, signal and switch checks were made with no exceptions, and the signals were returned to service. The cause was determined to be external damage from the tree to the pole line wire.</p>									
248	8/24/2000	CSXT	APB			J769-24	Int Signals 762 & 738	N.E. Rensselaer, Rensselaer, IN	N
<p>On August 24, 2000, the train crew on northbound Train J773-24 was clearing the main into the siding through a reversed switch at MP Q72.9 in order to allow northbound Train J769-24 to pass. While the switch was still reversed, J769-24 received a CLEAR signal at Q76.2 (which should have been APPROACH) and a CLEAR signal at Q73.8 (which should have been STOP). The signals were removed from service and Train Control personnel were dispatched.</p> <p>The cause was found to be an open line wire wrap of the CHD wire (part of the 3-wire HD circuit) and CE1 positive battery wire (part of the approach circuit between the Rensselaer siding switches). The line wrap was removed, signal and switch checks were made with no exceptions, and the signals were returned to service.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
231	8/25/2000	BNSF			ATC	BN2375	Track Ckt	Seattle, WA	N
<p>On 8/25/2000 at about 1100, Light Engines BN2375, BN2723, and BN 2734 were sitting on the round house track at a Red signal at MP4. Work Train W TacPac-25, BN2871, was pulling off the main line at the hand throw switch just west of the plant at MP4. When the work train cleared the main track and was on the fouling track, a switchman normalled the hand throw switch for main line traffic. After a few seconds the signal cleared to Green for the light engines to come out of the yard while the work train still occupied the fouling track. Inspections found that both long fouling jumpers that connected outside rail to outside rail of the turnout were broken off the rail. With the fouling wires broken, the system did not detect the cars shunting the track. Both fouling jumpers were repaired and tested. An investigation is pending.</p>									
646	8/25/2000	MRL		CTC		BNSF 4799	None	Missoula, Montana	N
<p>On August 25, 2000 at approximately 08:27 hours, crew on eastward train STACSPM122 reported signal 1246 as displaying a Yellow over Lunar aspect when the next signal in advance at West Missoula was displaying a STOP aspect with the West Crossover lined reverse which was against the movement for this route. The proper aspect for signal 1246 at this time was Yellow.</p> <p>Signal Department personnel were immediately notified and investigated this incident. During this investigation, personnel performed operating tests, indication locking tests, ground tests, meggering tests of all involved cables, tested all involved relays, tested involved searchlight signal mechanisms, took voltage readings on all involved equipment and tested the involved Electrocode units.</p> <p>Signal Department personnel were unable to duplicate this alleged false proceed incident. All tests and inspections revealed the signal system functioned as intended.</p>									
266	8/26/2000	NS		CTC		BN 9647, BN 9648	Relay	Hammond, IN	N
<p>At approximately 6:40 p.m., Saturday, 8/26/00, the crew of eastbound CSX train #939 with Engineer, Conductor, and Engineer Trainee, was moving on track #2 and went by signal 2E at CP 507 which was displaying a STOP aspect. Crew reported they had a CLEAR aspect at CP 508, the approach to CP 507, and were unable to stop.</p> <p>Upon investigation, C&amp;S personnel did observe the 508-2E signal display a CLEAR indication on track #2 EB with a train in the block immediately ahead.</p> <p>It was determined that the 1EHPR signal control relay was sticking up when no energy was being applied to the coil due to worn and pitted contacts. Relay was replaced and signals restored to service.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking System	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<a href="#">277</a>	9/1/2000	UP	CTC			UP3074	None	Dexter Junction, MO	N
<p>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 LSV50 01, a local with a single 4-axle unit, in the same block.</p> <p>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.</p> <p>The oil film was removed and the signal system operated as intended.</p>									
<a href="#">263</a>	9/3/2000	NS	CTC			NS 6189, MRL 030	Case Wire	Glenvar, VA	N
<p>At 3:48 p.m., 9/3/00, train #185V402 was westbound on Track #1 east of Glenvar, VA when they observed the westbound signal L-102, Track #2, displaying an APPROACH aspect with train #755V403 in the block on Track #2 just west of the L-102 signal. L-102 should have been displaying a STOP aspect with the block occupied by #755V403. L-102 is a color position signal.</p> <p>C&amp;S personnel arrived and were to duplicate the scenario observed by the train crew of #185V402. Investigation found that the "H" relay was being falsely energized and held up by a 14 mil ground on the C-16 battery and a 4 mil ground on the B-16 battery. Several deteriorated case wires were replaced and the location was tested and returned to service at 7:40 a.m., September 4, 2000.</p> <p>This location was last checked for grounds on June 27, 2000 with no exceptions taken.</p>									
<a href="#">264</a>	9/7/2000	NS	CTC			KCS6629	Wire	McConnell, AL	N
<p>At 11:34 a.m. CST, train 339A7 reported that the south home signal (7RA) at McConnell, AL, MP 269.7, Alabama Division was at STOP and then upgraded to APPROACH with southbound train 21KA7 occupying the block ahead. Train 339 notified the dispatcher and train movements were protected. Signal personnel arrived on the scene and also observed the south signal (7RA) at McConnell was at APPROACH with train 339 occupying the block ahead.</p> <p>It was discovered through ground testing that the wire insulation in the south signal had been removed by rodents causing battery to energize the search light signal, resulting in the false signal.</p> <p>Wires were replaced and signal tested and placed back in service.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>278</b>	9/8/2000	UP	CTC			UP3702	None	Picacho, AZ	N
<p>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.</p> <p>An investigation revealed a shorted underground cable to the eastbound approach signal at MP 978.60 caused the lower aspect to display a Yellow.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<b>279</b>	9/20/2000	UP	CTC			UP6558	None	Atchison, KS	N
<p>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.</p> <p>An investigation revealed the normal switch repeater relay for the A-B crossover was not in the signal control for northbound Signal Z329.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<b>232</b>	10/3/2000	BNSF	CTC			BNSF 9819, C-BTM	EC II Unit	Humboldt, NE	N
<p>Signal cable had been damaged by a backhoe at E. Humboldt, NE, MP 135.65. In the process of repairing the cable the train crew reported that they observed the eastbound signal go from an APPROACH aspect to a CLEAR aspect at W. Humboldt, MP 137.3 for 5-10 seconds then drop back to the APPROACH signal. Signal personnel determined that a portable radio being used for the testing of E. Humboldt caused the codes being transmitted to W. Humboldt from the Electrocode II box to upgrade. The radio was a Motorola HT 600, 5 watt.</p> <p>Corrective Action Pending: Harmon/GE Harris Corp. has been notified in regards to the failure.</p>									
<b>265</b>	10/7/2000	NS	CTC			BNSF 9730	Relay	Pinola, IN	N
<p>At approximately 8:30 a.m., October 7, 2000 the train crew of #41M were stopped at the 2W signal at CP 466 when they observed the signal upgrade to APPROACH with a train setting, and visible, in the block ahead.</p> <p>Investigation by C&amp;S personnel confirmed what the train crew saw and it was confirmed that signal 2W improperly displayed an APPROACH aspect with track ahead occupied. From the tests and simulations we identified a failure of the 4661 WHPR relay, a GRS 194 ohm Slow Release Relay, which remained stuck "up" when the battery to its coils was removed. Relay was replaced and signal 2W was returned to service at 10:30 p.m., October 7, 2000.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>249</b>	10/13/2000	CSXT	APB			Q598-13	Semaphore Sig 147.0	Sugar Creek Bridge, Crawfordsville, IN	N
<p>At approximately 1200 on October 13, 2000, northbound Train Q598-13 reported that the signal at MP 147.0 was displaying a Yellow 45 degree signal (APPROACH) with northbound Train Q642-13 ahead in the block.</p> <p>The cause was found to be damage to a temporary cable that had been installed across the bridge decking to facilitate bridge department crane work. The damaged cable was replaced with open line wire and placed back on the pole line. Signal checks were made with no exceptions, and the signals were returned to service.</p>									
<b>250</b>	10/20/2000	CSXT	CTC			U833-17	#14 Dwarf CPL Signal	Mexico Tower, Cumberland, MD	N
<p>At approximately 0113 hours on October 20, 2000, two engines (power for U833-17) were making an eastbound move from the Cumberland Terminal 4 East Lead to the PPG Lead. As the engines passed the #14 westbound signal on the PPG Lead, the crew looked back and observed the #14 signal displaying a RESTRICTED PROCEED (two reds over a "B" marker light) instead of STOP (two red lights) while one engine still occupied the track circuit behind the signal. The signals were removed from service, and Train Control personnel were dispatched.</p> <p>The cause was found to be worn insulation on the cable for the "B" marker light, which had made contact with the energized Red aspect terminal buss. The cable was repaired, signal checks were made with no exceptions, and the signals were returned to service.</p>									
<b>280</b>	10/20/2000	UP	APB			UP4051	None	Evanston, WY	N
<p>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.</p> <p>An investigation revealed the shunt fouling wires from the switch circuit controller were not connected to the rail on one side.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<b>251</b>	10/21/2000	CSXT		Remote		L256-21	2WA Signal	CP-124, Ridgeway, OH	N
<p>At approximately 0500 hours on October 21, 2000, Train L258-21 was westbound on #1 track awaiting the 2WA signal to proceed into Hayes siding through the #4 crossover reversed. When the signal was received, the crew initially observed a RESTRICTING signal (NORAC Rule 29 - Red over Yellow) which changed to a MEDIUM CLEAR (Rule 283 - Red over Green). The signal should have been RESTRICTING. The signals were removed from service, and Train Control personnel were dispatched.</p> <p>The cause was found to be a design error in the circuit, which included an extra wire allowing the 2WA-BDR to be energized when the #3 crossover was reversed regardless of the position of the #4 crossover. The wire was removed, signal checks were made with no exceptions, and the signals were returned to service.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<b>267</b>	10/21/2000	NS	CTC			NS 6776, NS 8613,	Human Error	Cleveland, OH	N
<p>At 1:30 p.m. on 10/21/00, train #24Z on track one observed signal 2E at CP Twin go from RESTRICTING aspect to a CLEAR aspect and back to APPROACH with a train ahead passing the next intermediate signal at MP RD-100.4, 7.7 miles ahead. The CLEAR aspect was only displayed 14 seconds before dropping to APPROACH, the proper aspect.</p> <p>Upon investigation it was discovered that the working current on the 1004T relay was excessive, which resulted in the circuit failing to shunt for light engine 5096 moving in the block ahead of train 24Z.</p>									
<b>233</b>	10/25/2000	BNSF	CTC			BNSF 4594	Rail (Insulated)	Wellington, KS	N
<p>MCILAC7-24A operating westbound on MT 1, CP 238.5 cut their power from the rest of the train and took a signal westward from MT 1 to MT 1. Then they were given a signal into the yard to pick-up 4 cars. After coupling onto the cars they were lined westward from the yard to MT 1. After traveling west of the eastbound absolute signal the dispatcher normalized the switch and then talked them back onto their train sitting east of the westbound absolute signal. The leading wheels of the BNSF 4594 remained in the OS of CP 238.5 while the power and the additional four cars were coupled onto the rest of the train. During this period of setting at this spot for @ 15 minutes the OS relay re-energized. The dispatcher then requested the 1 West signal clear. The 1 West signal cleared displaying an APPROACH MEDIUM. Upon arrival several meter readings were obtained; current on the relay was 165 milliamps, voltage on the relay was 0.73 volts voltage on the rail was 0.95 volts. A 0.06 ohm shunt was placed on the track and the track relay de-energized with 7mA of current on the relay. The shunt was removed and the relay re-energized. The resistance of the wheels was measured at 0.3 of an ohm. Samples of a light film of unknown origin covering the rail were then taken and the train was talked out of the OS. The OS track relay and a meter were observed while this occurred. The relay de-energized as soon as the wheels started to move with the current on the relay going to 3 mA with the third set of trucks and 0 with the next set of wheels. The thin layer of grease coupled with the sand from the locomotive and the moisture from the rain appeared to form an insulating material which prevented the axles from shunting the OS. The subsequent train moves through this location shunted the track without incident. A sample of this substance has been sent to the Topeka Labs for analysis.</p> <p>Note on top of page: "This should not be charged as a false proceed. Rail Conamination (Rule 136.51)"</p>									
<b>281</b>	10/25/2000	UP	AB			CSXT 8670	None	Ogden, UT	N
<p>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.</p> <p>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.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
647	11/2/2000	CN		Remote		Amtrak #51	8W Signal	Thornton, IL	N
<p>8W signal displayed a SLOW CLEAR (R/G) into STOP (R/R) at UP home signal on the UP wye at Thornton Junction.</p> <p>Cause: Wire/design error and insufficient testing at time of installation.</p> <p>Corrective Action: Wire/design change to give a RESTRICTING signal (R/Y) at 8W to the UP wye track.</p>									
648	11/5/2000	CN	AB			CN2415, CN5724	1614	Scotts, MI	N
<p>On Sunday, November 5, 2000 at 1555 hrs, train M398-71-04 reported that ABS 1614 displayed a CLEAR with train E254-61-05 occupying the next block governed by ABS 1628. The ABS 1614 should have displayed an APPROACH. Failure to follow proper testing procedures resulted in this false proceed. A newly installed coded track circuit at ABS 1614 was miswired. The code 2 caused the signal to display CLEAR rather than APPROACH. The coded track circuit at 1614 was rewired and tested properly.</p>									
234	11/7/2000	BNSF	CTC			H MOD SEL 907	CL	West Seligman, AZ	N
<p>On 11-7-00 at 15:42 the HMODESEL907 eastbound on M2 approaching West Seligman (2E signal) reported a Yellow over Green aspect as they approached the signal for about 1 minute, the signal then appeared to go to Yellow over Red. The N.O.C. log showed the signals lined M2 to M2 West Seligman and M2 to M2 East Seligman. We were notified and ran VHLC logs at West Seligman, main and remote houses, and the approach signal 4324. The logs showed at no time did the 2EBG indicate true at West Seligman during this time. Signal 4324 was Flashing Yellow over Red. Grounds test was performed and was negative. I interviewed the crew at 21:30 over the phone and they indicated it may have been sun related (sun was setting into signal at that time). On 11-8-00 I had Signal Inspector in place to watch the signal from 14:00 to 17:00 and I rode an eastbound train from Kingman to Seligman trying to get to West Seligman at about 15:42. I arrived at Seligman about 17:00 and missed the sun but Signal Inspector Mitchell was able to watch the signal and did notice the sun washing the Red out and the Green was visible. Upon looking at the 2EB signal we found that some of the brackets for bolting the background to the signal head were broken and allowing the wind to blow the background away from the signal and sun could enter the lens area from the side. We replace the 2EB signal head and performed the proper tests. We also ran the VHLC log again and performed a grounds test, alignment and voltage check on the 2EA and 2EB signals.</p>									
282	11/7/2000	UP	CTC			UP6266	None	Taylor, TX	N
<p>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.</p> <p>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.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<a href="#">235</a>	11/9/2000	BNSF	AB  Train SCHCTAC2-09 @ 2016 hours on November 9, 2000 was westbound near Galena, Illinois on Track #1, Minnesota Division, Aurora Subdivision, when Engineer and Conductor reported an APPROACH MEDIUM signal at MP 169.7 into a Red signal at MP 171.4, Galena. Upon arrival by signal personnel, the reported signal aspect could not be duplicated after repeated attempts to simulate the events described by the train crew and the SOC Signal Call Desk in Ft. Worth, Texas. All affected signal equipment at 169.7 was tested with no exceptions immediately noted. A replay of the events leading up to the report did not lend any support to the reported signal aspect. After nearly completing all signal testing on the affected signal network, an intermittent failure was observed by signal personnel. An intermittent failure in the S-Code Approach Lighting Module #72718-20 at signal 169.70 allowed a "flickering" from Yellow to Dark. The "flickering" was not at any measurable code rate, but was displaying Yellow to Dark intermittently. The signal displaying this intermittent aspect is a GRS Searchlight signal. As a result of observing this failure, the S-Code cabinet was replaced and a new Approach Lighting Module was installed followed by complete operational tests.			Train SCHCTAC2-0	S-Code Approach Lighting Module	Galena, Illinois	N
<a href="#">283</a>	11/9/2000	UP	CTC  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.			AMTK39	None	Ironton, UT	N
<a href="#">649</a>	11/13/2000	BRC	Remote  Engine reported 2R signal with a Red over Lunar. Engine backed up one engine length in front of signal 2R, signal 2RR had a Red over Dark signal when the engine turned on its headlight on full bottom Dark head seemed to display a near Lunar color, (phantom color). Engineer thought that signal 2R displayed a Red over Lunar. Because of where signal was positioned, south of ship canal bridge which was obstructing view of signal until train was closer to signal. Signal was also located as close to the track as possible to give most range of sight possible. Actions taken: Have relocated to approximately 100 feet north of ship canal bridge and installed twelve feet from center of track allowing maximum visibility.			2R		Lemoyne Interlocking	N
<a href="#">650</a>	11/13/2000	CP	CTC  See reverse side of this page [reverse side of page not photocopied by FRA].			CP8500	OS Track Circuit	Minneapolis, MN	N
<a href="#">651</a>	11/26/2000	MRL	CTC  See attached [nothing attached].			BNSF 1080	None	Drummond, MT	N

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
<a href="#">252</a>	11/27/2000	CSXT	CTC			Q67425	Phantom	SF-269, Pee Dee, SC	N
<p>Train Q674-25 reported a Yellow over a dimly lit offset Green aspect on the Northbound Automatic Signal in approach to the South End of Pee Dee. Crew reported to signal personnel in the area who observed this condition and took immediate action by removing the signal from service then removing the bulb from the offset green lamp. As a follow-up we installed a two aspect signal head with snow hoods in place of the offset green signal. After full operational testing the signal was restored to service. We are reporting this but we do not consider this to be a false proceed.</p>									
<a href="#">652</a>	12/1/2000	WC		Manual		EJE Train	OS Circuit	EJE - Diamond, Leithton, Illinois	N
<p>Dispatcher observed a westbound train cross the Leithton plant without indicating an OS circuit occupied. After investigation it was found that an EJE RR signalman had left a temporary jumper on the OS relay. The temporary jumper was immediately removed.</p> <p>The EJE RR is conducting an investigation of this - how the temporary jumper was left on.</p>									
<a href="#">284</a>	12/2/2000	UP	CTC			N/A	None	Kansas City, KS	N
<p>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.</p> <p>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.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
<a href="#">653</a>	12/4/2000	WC		Manual		BYFDIT	Signal 10LA - Case	Schiller Park, IL - B12 Interlocker	N
<p>Northbound train BYFDIT reported a CLEAR aspect at approach signal 139 into a STOP (Red) absolute signal 10LA at B12.</p> <p>After testing and investigation it was discovered that Code 7 (CLEAR) was being transmitted to the south from 10LA to 139 while the IHB route was lined northbound. This was the result of a defective circuit design. The circuit was repaired to send an APPROACH code (C-2) to the approach 139 when the IHB is lined for a northbound route.</p>									

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
236	12/8/2000	BNSF	CTC			LAUPT1 06	Relay	West Stevenson	N
<p>At approximately 18:30 Pacific Time on 12/8/00, the LAUPT1 -6 was westbound at East Stevenson and viewed a Green over Red signal for westward movement. The dispatcher had West Stevenson lined for Eastward movement into the siding for the MPTLPAS2 08. At that time the MPTLPAS2 08 was having problems at Skamania, approximately 11 miles west of Stevenson. The train crew of LAUPT1 06 knew that they were going to meet an eastward train at Stevenson and stopped before they reached the westbound Red absolute signal at West Stevenson. Signal Supervisor and his testing team found while testing circuits at the West Stevenson that the WAYGP relay (yellow green repeater) remained energized approximately 90 seconds after energy was removed from the coil of the relay. This relay controls the reference chain for the Electrocode 4 unit that transmits Code 7 to the east. At East Stevenson with the power switch lined normal and Code 7 is received from the west, it is decoded and will display a Green over Red signal. The defective WAYGP relay was replaced with field testing complete at approximately 01:00 Pacific Time on 12/9/00. The relay with serial # 532459 is going to be evaluated and tested at our relay repair facility and sent to the manufacturer for further evaluation.</p> <p>NOC trouble ticket 573620.</p>									
285	12/9/2000	UP	AB			Unknown	None	Houston, TX	N
<p>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).</p> <p>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.</p> <p>The signal system was restored to proper operation, and all applicable tests were performed.</p>									
253	12/12/2000	CSXT	CTC			M742-11	#6 Dwarf Signal	N.E. Live Oak, Live Oak, FL	N
<p>At approximately 0040 on December 12, 2000, Train M742-11 backed southward into the siding at the North End of Live Oak MP SP 713.4 on the Tallahassee Subdivision. When the switch into the siding was restored to normal, the crew observed that the dwarf signal governing movement out of the siding displayed a Red over Yellow (MEDIUM APPROACH) signal. The signal was removed from service and Train Control personnel were dispatched.</p> <p>The cause was found to be a jumper which had been installed the previous day to set the lamp voltage on the Yellow aspect after replacing the dwarf signal, which had been damaged by track equipment. This jumper caused the Yellow aspect to be continuously illuminated. The jumper was removed, signal tests were made with no exceptions, and the signals were returned to service.</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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654	12/18/2000	CP	CTC			CP8507	X-Over Switch	South Milwaukee, WI	N
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Nature of Failure:

On Dec. 18, 2000 at approx. 1300 CP8507, with Engineer Skotartzak and Conductor Franklin, proceeding east on #2 main track approaching control point at Lake had a CLEAR signal to proceed east on #2 main track with the east end of the west crossover (#5) lined reverse.

Just previous, a westbound Amtrak train had crossed over from #2 main track to #1 main track at the west crossover (#5) at Lake.

After Amtrak had passed control point at Lake, Dispatcher requested west crossover (#5) to be lined normal and requested an eastbound absolute signal on #2 main track at Lake to be cleared. The switch on the west end of the west crossover (#5) went normal and the switch at the east end of the west crossover (#5) did not move, staying reverse. The west crossover (#5) indicated both ends were lined normal and the eastbound absolute signal cleared.

Signal Maintainer K.D. Huebner noticed the malfunction and stopped train CP 8507 before running through the switch.

Cause and Corrective Action:

Further investigation revealed a jumper wire in the GRS 5F switch machine on the east end of crossover had been applied across terminals 1 and 8 which would allow the crossover to indicate normal or reverse dependent upon position of the crossover switch on the west end of crossover. It is unknown why the east end of the crossover (#5) did not move to normal as requested but frost in contacts or armature is suspected.

Corrective action taken was removal of the jumper from contacts 1 and 8 and crossover tested by removing power from each end simultaneously requesting opposite end of crossover to go normal or reverse and verifying if either end is not in correspondence and it will not indicate. Immediately all crossovers on the CP Railway (Soo Line) utilizing GRS Model 5F switch machines were inspected and found to be correct. CP Railway (Soo Line) is presently drafting a test procedure to be done every 2 years in conjunction with RS&I Rule 236.380 Indication Locking test utilizing the above testing procedure.

254	12/21/2000	CSXT	CTC			K996-20	None	Mango, FL	N
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On December 21, 2000, K996-20 while traveling SB reported the SAS at NE Mango displaying an alleged CLEAR indication. K996-20 reported a STOP indication at the SAS SE Mango coming to a controlled stop beyond the limits of the SE Mango. Signals were immediately removed from service at the NE and SE Mango. Additionally the train dispatcher reported an inability to control the signal at the NE Mango prior to the arrival of K996-20. K996-20 was instructed to handle the switch NE Mango from motor to hand lining the switch reverse and restore the switch to motor position. K996-20 failed to perform this instruction. Subsequent investigation revealed no exceptions. Additional field investigation was performed by CSX and the signal mechanism apparently operated slower than normal. The signal mechanism was replaced and after full operational testing the signal was restored to service. On January 4th FRA performed a field investigation and made an assumption alleging that the signal mechanism was slow on December 21, 2000. We are reporting this but we do not consider this to be a false proceed.

No. of Reports Shown in this Listing: 95