



Report #	Date	Reporting Carrier	Block System	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
476	4/10/1995	SEPA	CTC				Open wire - pole line	100' N of Sig. 501, MP 1.0 Warminster Line	N
<p>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>Nature of Failure: Engineer reported passing signal 501 displaying APPROACH MEDIUM and approaching next signal, signal 41A, displaying STOP.</p> <p>Cause of Failure: Inspection of pole line conditions revealed open line wire conductor 501AD was crossed with open line wire conductor 41AHA thus energizing 501ADR relay. Fault condition was apparently caused by a severe windstorm that passed through the area.</p> <p>Corrective Action Taken: Re-aligned open wire conductors on pole line.</p>									
518	9/28/1995	SEPA	AB				Open Wire Pole Line	MP 17.5 to MP 18.6, Neshaminy Line	N
<p>Maintenance - Pole Line (storm, excessive vegetation, rotting poles, excessive slack in wires, etc.)</p> <p>Nature of Failure: Engineer reported passing NB automatic signal #71 displaying CLEAR and approaching next NB automatic signal #73 displaying STOP AND PROCEED.</p> <p>Cause of Failure: Inspection of pole line conditions revealed open line conductors 73H, 75CX110 and 72A were crossed due to vegetation growth. In addition, investigation revealed single conductors at a line drop to a terminal box were bare in a bridle ring above the terminal box, grounding circuits 73H, 76H and 75CX110 and shorting an isolation transformer located at #72 automatic signal feeding 76H circuit and 75CX110.</p> <p>Corrective Action Taken: NB automatic signals 71 & 73 and SB automatic signals 76 & 72 were placed in their most restrictive condition. All brush and vegetation were removed, line wires were realigned and affected conductors in line drop were replaced. Isolation transformer feeding energy to 76H circuit was also replaced. System was tested and returned to service.</p>									

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537	11/20/1995	SEPA		Remote			Unknown	Sig. 20L, Newtown Jct. Int., MP 6.2	N
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Scenario Reenacted, Unable to Duplicate, No Defects Found

Nature of Failure: Engineer reported passing signal 20L displaying MEDIUM CLEAR and approached next signal, signal 4W at CP Nice, displaying STOP.

Cause of Failure: Could not repeat the condition, therefore could not verify that the condition existed. It should be noted the signal 20L does not display a MEDIUM CLEAR for the route taken.

Corrective Action Taken: Performed all necessary tests and inspections to determine if the condition existed. It was determined that the system was working as intended and that the reported condition did not exist. Therefore no corrective action was required.

NOTE: From the conclusions drawn it is the position of SEPTA that a False Clear condition did not exist and the condition is only alleged.

567	8/10/1996	SEPA	CTC	Remote			Home Signal L12D	CP Kalb, Borough of Norristown, Montgomer	N
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Human Error - Signal Circuit Design Error, Inadequate Service-Testing

Nature of Failure: Engineer reported passing home signal L12D at CP Kalb (approach signal to home signal 2S at CP Ford) displaying APPROACH MEDIUM instead of MEDIUM APPROACH with home signal 2S at CP Ford displaying RESTRICTED.

Cause of Failure: Cause was traced to a circuit design condition. Circuit for signal L12D (searchlight-type) should not have been poled when a RESTRICTED signal was displayed for signal 2S at CP Ford.

Corrective Action Taken: Set signal L12D at CP Kalb to RESTRICTED. Corrected circuit design. Conducted necessary tests and inspections. Returned system to normal operation.

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573	11/1/1996	SEPA		Remote			20LBDPR Circuit	Signal 20L, Newtown Jct. Int., MP 6.2 Main Li	N
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Human Error - Signal Circuit Design Error, Inadequate Service-Testing

Nature of Failure: Conrail engineer of southbound freight train SCCS-1 reported southbound home signal 20L displayed MEDIUM CLEAR and approached next signal, signal 4W-2 at CP Nice displaying STOP.

Cause of Failure: Design problem. Signal 20L should have displayed a MEDIUM APPROACH indication for a route through the interlocking to the Conrail low grade route for this move. The least restrictive indication to be displayed at signal 20L for this route is APPROACH MEDIUM.

The MEDIUM CLEAR indication that was displayed at signal 20L was the result of the 20L BDPR circuit being energized through an alternate energy source that had existed from a former circuit configuration. The circuit energy should have been fed only through #17 switch reverse indication a crossover route, to southbound on the Main Line.

A simultaneous southbound parallel move from home signal 16L for a SEPTA train caused the 20L BDPR relay to energize from the alternate energy source.

Correction: Revised circuit by removing the alternate energy source.

580	1/29/1997	SEPA	AB				Signal #302	ABS #302, MP 11.1, Main Line, Montgomery	N
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Failed Equipment or Device - Aerial or Underground Cable, Shorted or Grounded (not due to vandalism or digging)

Nature of Failure: Engineer of southbound train 0121 reported passing signal #302 displaying CLEAR with next signal, #R2 at CP-Jenkin displaying STOP.

Cause of Failure: Could not duplicate condition, however, during investigation and testing it was found that circuit NR2DRP contained a conductor with less than 100,000 ohms resistance to ground although the circuit was working as intended.

A grounded conductor in this circuit could cause the condition.

Corrective Action Taken: Relocated NR2DRP circuit to a conductor with acceptable resistance to ground reading. No other condition was found that would have contributed to the incident. Performed all necessary tests and inspections to determine if the condition existed.

642	7/24/2000	SEPA	AB				Cable	Jenkintown, PA	N
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Failed Equipment or Device - Aerial or Underground Cable, Shorted or Grounded (not due to vandalism or digging)

See attached [nothing attached].

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704	11/19/2002	SEPA	AB				Track Relay	Automatic Signal 330, Pennbrook, PA	N
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Vandalism - Instrument Case, Cable, or Junction Box Damaged

Vandalized relay case caused weather conditions to fail relay. See attached report from Foreman.

[following is the entire text of the attached report]

This morning at 6:30 AM signal maintainer [redacted] received a trouble report from the C&S desk that automatic signal 330 was reported dark. This signal is on SEPTA's main line just south of Pennbrook Station.

[redacted] proved the signal lamp to be good and noticed that the AR relay was up with a train in the approach block. As a precaution the maintainer set automatic 330 to STOP AND PROCEED.

The cut section case in automatic 330's block was vandalized. A solid shunt was applied across the rails at the relay end of 330AT circuit and the track relay did not respond. The track relay remained in the energized position after being physically removed from the relay rack.

The state of the relay remained unchanged because it had been exposed to the elements and was covered with ice as a result of the vandalized signal case.

Repairs were made to secure the case and the track relay and its repeater were replaced and tested.

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714	7/13/2003	SEPA		Automatic			Cab Decoder Circuit (see below)	Juniper Interlocking, Philadelphia, PA	N
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Failed Equipment or Device - Relay

On June 29th at 08:50hrs, the C&S Trouble Desk received a report of cabs dropping to RESTRICTING after accepting interlocking signal 4N at Juniper. Signal Maintainers were dispatched to investigate the alleged report of the cabs dropping out, but they could not duplicate the reported failure.

Then on July 4th at 07:43hrs, the C&S Desk took a report of Juniper Interlocking signal 4N displaying CLEAR, then having the cabs drop to RESTRICTING with the next interlocking signal at Market East displaying RESTRICTING. Once again, Signal Maintainers were dispatched to the scene to investigate an alleged report that the signal was dropping in the train's face, and once again could not duplicate the failure.

Finally, on July 13, 2003 at approximately 18:00hrs, the C&S Desk received a report that a train operating north on no. 2 track from Suburban Station, reported Juniper Interlocking signal 4N displaying CLEAR with 180 cab in the 4T interlocking track circuit and a train ahead sitting in Market East station. The train also reported that when the train exited Juniper Interlocking and entered track circuit 2ET the cabs dropped to RESTRICTING.

Upon learning of the incident, the C&S Desk immediately removed signal 4N from service via form C&S 39 "Signal Facility Out of Service," 4N signal was set to STOP SIGNAL and Signal Maintainers were dispatched to investigate. Concurrently, Signal Foreman J. Caro was dispatched to the scene.

During the investigation, signal 4N was set to display RESTRICTING and the cab was removed from track circuits 4T and 2ET.

Using operational simulations, it was not possible to recreate the alleged false proceed. Nonetheless, from the Juniper circuit drawings it appeared possible for a failure fitting the reported description to occur if the 2EDR relay were to fail to drop away. Consequently, the 2EDR relay, Decoding Unit and Decoding Transformer were replaced. In addition, the 2EDR, 2EHR, 4AHR as well as other suspected circuits were point checked and broken down. Grounds were also checked. Finally, during testing, the 2EDR was falsely energized and signal 4N displayed CLEAR with 180 code in the interlocking and no code in track circuit 2ET.

On July 15, 2003 at 17:25hrs Juniper Interlocking signal 4N was returned to service.

No. of Reports Shown in this Listing: **9**