



IronWood Technologies

Railroad Accident Reconstruction

Federal Railroad Administration

False Proceed Signal Database

January 1, 1995 through May 3, 2004

All Reports - Cause: Failed Equipment or Device - Track Isolation Unit

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
627	2/26/2000	CN	AB				Signal 366.7	near Baton Rouge, LA	N
<p>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.</p> <p>The appropriate signals were removed from service.</p> <p>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.</p> <p>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).</p> <p>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.</p>									
357	1/17/2002	NS	CTC			NS 5512	Track Isolation Unit	Seneca, NY	N
<p>On January 17, 2002 at 3:15 a.m., Harrisburg Division train 17H, lead unit NS 5512, southbound on the Ebenezer Running Track at Seneca, New York, reported signal 39E at MP 3.9 display an APPROACH aspect for the train's movement. This signal should have displayed a RESTRICTING aspect due to a hand throw switch ahead in the block being in the reverse position.</p> <p>Train 17H's crew was aware of the switch being left in the reverse position by the crew of a previous train movement, and therefore train 17H proceeded at Restricted Speed and stopped short of the hand throw switch lined against their movement.</p> <p>Investigation revealed that the B1-1T track circuit in advance of the 39E signal had a track isolation unit with an open resistor and shorted diode. This condition allowed the track isolation unit to discharge its capacitor through the 39HR relay during the entire duration of its discharge time, which prevented the relay from dropping out while the hand throw switch was in the reverse position.</p> <p>The track isolation unit was replaced and signal restored to normal service at 2:50 p.m.</p>									

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364	12/16/2002	NS	CTC			P40	Signal Circuits	Kannapolis, NC	N
<p>At 7:50 a.m., December 16, 2002, southbound train P40 observed the northbound 339.8 intermediate signal, as his southbound train passed the adjacent southbound proceed signal at the 339.9 intermediate signal location.</p> <p>P40's train had passed the 339.9 southbound signal by approximately 3 - 4 car lengths, as Engineer observed an APPROACH DIVERGING (Y/G) signal at the adjacent northbound 339.8 intermediate signal. At this time, P40 still occupied the track circuit north of the 339.8 northbound signal with approximately 1/2 mile of train. The APPROACH DIVERGING signal was displayed for 3-4 seconds before displaying a RESTRICTING signal (R/R with number plate). The signal remained RESTRICTING until P40 Engineer could no longer observe the 339.8 signal.</p> <p>C&S personnel investigated and were able to duplicate the signal as observed by Engineer. Investigation found shorted blocking diodes in a trackcode isolation unit located at the 339.8 signal location along with excessive current on the track circuit. The current limiting diodes shorted in the isolation unit allowed the track relay to pick up from the kick back circuit generated by the inductor magnetic field collapse. The track relay followed the code being generated for a following move due to the stick circuit being energized. The code following track relay allowed the BD relay to energize and display the northbound APPROACH DIVERGING aspect. Track circuit current levels were adjusted, the isolation unit was changed out and the signal system tested. Returned to service at 3:30 p.m. on 12/16/02.</p>									

No. of Reports Shown in this Listing: 3