



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 - Cab Signals

Report #	Date	Reporting Carrier	Block System Narrative	Interlocking	Auto. Systems	Loco or Train No.	Device that Failed	Location	Collision or Derailment?
555	3/19/1996	AMTK		Remote		268	Cab Signals	Cranston, RI	N
<p>Train 177 with Eng 268 traveling west track two was lined to cross from track two to track one at Cranston Int. The 2W home signal was reported to display a MEDIUM CLEAR, and as the train (177) proceeded into the interlocking, the cab signal displayed APPROACH MEDIUM. As train 177 proceeded over the crossover to track one, the enginemen on train 177 reported his cab signal upgraded to CAB SPEED. As a result of this report, Amtrak removed CAB SPEED cab signal from service on all engines operating between New Haven and Boston, and replaced the 100 Hz inverter used to produce 100 Hz for cab signals for westbound moves at Cranston. The inverter was suspected of drifting off frequency. On March 27, 1996, Amtrak re-enacted the two to one move at Cranston Int. using a test Eng 227 with CAB SPEED cab signal aspect cut in. We also re-installed the suspected defective 100 Hz inverter for this test. It was our determination from the test that the 100 Hz inverter had drifted to 89 Hz, and as this inverter is a square wave generator, there was also a significant level of the third harmonic, 267 Hz present in the same wave form. This equipment was tuned to receive 120 code at the 91-100 Hz frequency as well as the 250 Hz frequency and there were sufficient levels of both carriers to support the CAB SPEED aspect at the 120 code rate. The "Fifth Aspect" on-board equipment supporting the CAB SPEED cab aspects remains out of service as of this date and is being re-evaluated. This interim "Five Aspect" on-board equipment does not perform a final "alternating carrier" check as does the full Nine-Aspect cab signal equipment does. We will advise you of our corrective action and our intent to re-establish the interim CAB SPEED cab signal aspect to service.</p>									
572	10/21/1996	AMTK		CTC		Control Car #1519	180 Decoding Unit	Dorchester Branch, Boston, MA	N
<p>On Monday, October 21, 1996 at 1:15 p.m., the engineer of MBTA Commuter Train #042 reported holding a CLEAR cab signal after passing signal 225.8 2E displaying an APPROACH aspect (Yellow over Red) while operating #2 track eastbound on the Dorchester Branch. Train #042 had cab car #1519 on the lead with four coaches and engine #1053 pushing the consist. The Dorchester Branch is reverse traffic signaling with 100 Hz Phase Selective circuits.</p> <p>Amtrak C&S management was notified and dispatched to the scene with signal maintainers and test personnel. Tests revealed during the investigation that the 180 decoding unit located at cut section 226.8 (which is also signal location 226.8 2W for westbounds) was permitting the 75 code feeding westward to that location to create an output sufficient enough to energize the DR relay. This would then allow 180 code to be applied to the rails improperly and feed westward to generate CLEAR cab signals.</p> <p>Correction was made by replacing the 180 decoding unit and all operational tests performed afterwards showed all circuits functioning as intended.</p>									
676	7/11/2001	MNCR		Remote		Locomotive 105	On-Board Cab Signal Tester	CP233 - Stamford, CT	N
<p>Locomotive #105 received MEDIUM Cab Signal intermittently while approaching signal 1E at CP 233 at STOP, due to interference from the On-Board Cab Signal Test Unit of the locomotive.</p>									

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No. of Reports Shown in this Listing: **3**