

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION

FALSE PROCEED SIGNAL REPORT

REPORT FOR (month/year)

December 1995

DATE

January 2, 1996

REPORTING CARRIER (railroad & region or division)

Norfolk Southern Corporation

Division - Kentucky

*no field investigation*

REPORTING OFFICER (signature/title)

Chief Engineer - West  
Communications & Signal Dept.

All railroads subject to Regulations of the Federal Railroad Administration shall submit a false proceed signal report, original only, to the Federal Railroad Administration within five days after a false proceed occurs. If no false proceed occurs during any calendar month, a report showing "No Failures" must be filed within ten days after the end of the month.

Copies of this form will be furnished upon request to the Department of Transportation, Federal Railroad Administration, Office of Safety, Washington, D.C. 20590

MAIL TO

Federal Railroad Admin.  
Suite 440, North Tower  
1720 Peachtree Rd., NW  
Atlanta, GA. 30309

A failure should not be counted more than one time in items 1, 2, 3, and 4; the failure should be classified under the basic system or appliance of which it forms an essential part. E.g.: assume grounds cause a block signal to indicate a false proceed causing corresponding indications of a cab signal system on each train approaching this point, such failures should be included in item 1, Block Systems.

A false proceed failure is a failure of a system, device or appliance to indicate or function as intended which results in less restriction than intended.

The following abbreviations may be used in the report.

- A - Automatic
- AB - Automatic block
- ACS - Automatic cab signal
- APB - Absolute permissive block
- ATC - Automatic train control
- ATS - Automatic train stop
- CL - Color light
- CPL - Color position light
- E - Electric
- EM - Electromechanical
- EP - Electropneumatic
- FP - False proceed
- MB - Manual block
- M - Mechanical
- P - Pneumatic
- PL - Position light
- SA - Semiautomatic
- TC - Traffic control

TYPE OF SYSTEM	DATE	LOCOMOTIVE NUMBER	DEVICE THAT FAILED	LOCATION (city and state)
<b>1 BLOCK SYSTEMS</b> <input type="checkbox"/> AB <input type="checkbox"/> APB <input checked="" type="checkbox"/> TC	12/24/95	unknown	Ins. Joint	Stearns, KY
<b>2 INTERLOCKING</b> <input type="checkbox"/> REMOTE <input type="checkbox"/> MANUAL			DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION RECEIVED  JAN 15 1996  ATLANTA GEORGIA	
<b>3 AUTOMATIC SYSTEMS</b> <input type="checkbox"/> ATS <input type="checkbox"/> ATC <input type="checkbox"/> ACS				
<b>4 OTHER (specify)</b>				

NATURE AND CAUSE OF FAILURE/CORRECTIVE ACTION TAKEN

At approximately 9:45 AM, Train No. 108, Engineer \_\_\_\_\_, Conductor \_\_\_\_\_, was moving northbound on track #2 at Stearns, KY when they observed an approach diverging signal for their movement. Knowing they were to meet opposing southbound traffic at the end of double track (the next signal), they expected to get an approach indication at Stearns. Engineer \_\_\_\_\_ reported the incident to the dispatcher and proceeded on to the end of double track at Whitley where he had a stop indication as expected.

The signal maintainer was arriving at Stearns to investigate a previously reported loss of train indication in the block where the false proceed signal was encountered. He was waiting on the traffic to clear before starting his investigation when Train 108 observed the false proceed. After Train 108 passed, the maintainer opened the signal case and observed the coded track relays chattering, indicating the presence of AC on the rails. The amount of AC on the rails diminished during the day, and so the relays never picked to the point of causing a repeat of the false approach diverging signal. However, one of the insulated joints at the signal read as having a four ohm short. The intermediate signal at Stearns is designed to receive only a minus code for an approach and a plus code for an approach diverging. The track was taken out of service pending resolution of the problem.

The next morning, there was more induced AC read on the rails than on the previous day, but the insulated joint that had been shorted the day before now read over 65 ohms. However, by manually shorting out the joint, the relays chattered to the point that the "BD" relay falsely picked when only an "H" code was received resulting in a false approach diverging signal. Discussion with the local power company revealed that their load on a power line that crossed the track in the block was much higher in the morning than at other times of the day.

To correct the problem, the intermittently shorting insulated joint was replaced, and reactors were installed in series with all coded track relays in the block. Tests were then run to verify that the problem could not be duplicated by shorting an insulated joint at the Stearns signal location. The signal system on track #2 was then returned to service.