

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FALSE PROCEED SIGNAL REPORT

DATE October 20, 1997

MAIL TO

Mr. Tom McFarlin
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Federal Railroad Administration
1100 Main Street, Suite 1130
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REPORTING CARRIER (railroad & region or division)

Burlington Northern Santa Fe Railway

Northern Lines
Powder River Division
Angora Subdivision

REPORTING OFFICER (signature/title)

Assistant Vice President Signal

FEDERAL RAILROAD
ADMINISTRATION

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 of appliances 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 failure should be included in Item 1. Block System

The following abbreviations may be used in the report

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

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.

TYPE OF SYSTEM	DATE	LOCOMOTIVE OR TRAIN NUMBER	DEVICE THAT FAILED	LOCATION (City and State)
1 BLOCK SYSTEMS <input type="checkbox"/> AB <input type="checkbox"/> APB <input checked="" type="checkbox"/> TC	Oct. 16, 1997	BN 9507	none	Bridgeport, Nebraska
2 INTERLOCKING <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> AUTO <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MATIC				
3 AUTOMATIC SYSTEMS <input type="checkbox"/> ATS <input type="checkbox"/> ATC <input type="checkbox"/> ACS				
4 OTHER (specify)				

NATURE AND CAUSE OF FAILURE/CORRECTIVE ACTION TAKEN

Approximately 0805 MDT BN 9507 east, train symbol EMLTBTM236 with 0 loads 116 empties 3147 tons 6380 feet, Engineer Conductor stopped in approach to EA signal at East Bridgeport on Main track observed EA signal display green for approximately 4 seconds then yellow for 2 seconds then went red. Helpers BN 9212 east a two unit 12 axle consist was cleared out of the siding at East Bridgeport and was at intermediate signal 35.8 at the same time BN 9507 observed the EA signal telegraph. BN 9507 east did not take EA signal. Supervisor Signal was notified at 0824 MDT and advised Alliance South dispatcher to put signals to stop. Maintainer notified to stay at depot Bridgeport until Supervisor's arrival. Field data logs and Ft Worth Network office logs show 1WT track picking up and the 1ET track deenergized at the same time at intermediate signal 35.8. 1WT track is an end fed dc track circuit with a biased 2ohm relay. 1ET track is Electrocode II. Reenactment was performed using a two unit 12 axle consist and the problem could not be duplicated. Test were performed at intermediate signal 35.8 using 0.06 ohm shunts which showed Electrocode II 1ET track circuit deenergized approximately 5 seconds after a 0.06ohm shunt was placed on circuit at signal 35.8. It was calculated that the 12 axle consist traveling approximately 30 mph would cause the 1WT to energize before the 1ET deenergized. which would allow the 1E-HR and the 1E-DR at East Bridgeport to energize causing signal to momentarily display green then yellow and back to red when 1ET track deenergized. Office logs confirm EA signal at East Bridgeport displayed aspect cleared for 5 seconds. HXP-3R2 data logs from Hwy 26 show BN 9212 east passed intermediate signal 35.8 at 28mph.

Corrective action taken - installed 8 second loss of shunt time on 1WT track circuit to compensate for the 5 second delayed pickup on the Electrocode II - 1ET track circuit. Operational tests performed on signal system with no other exceptions taken.