

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
FALSE PROCEED SIGNAL REPORT

REPORT FOR (month/year)
Aug-03

DATE
2-Sep-03

REPORTING CARRIER
Norfolk Southern Corporation

Division: **Pittsburgh Division**

REPORTING OFFICER

**Chief Engineer - Northern Region
Communications & Signal Department**

MAIL TO
**Mr. Michael Woods
Federal Railroad Administration
16th Floor - Suite 16T20
100 Alabama Street, SW
Atlanta, GA 30303-3104**

TYPE OF SYSTEM	DATE	LOCOMOTIVE NUMBER	DEVICE THAT FAILED	LOCATION (city and state)
1 BLOCK SYSTEMS <input type="checkbox"/> AB <input type="checkbox"/> APB <input checked="" type="checkbox"/> TC	8/27/2003	8818	B-1 Biased Relay	Mansfield, OH
2 INTERLOCKING <input type="checkbox"/> REMOTE <input type="checkbox"/> MANUAL				
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

At 6:03 p.m. August 27, 2003 Train 528, Engineer _____ and Conductor _____ traveling from track #2 to track #1 westbound at CP Lucas, reported the home signal was Limited Clear (red over flashing green). 528 reported his next signal, intermediate signal 1727-1W, displayed stop and proceed. Train 528 brought his train to a normal stop. No other trains were involved.

Upon arrival the condition was reproduced and was determined to be caused by a melted contact in the 1727 AHP relay. This contact had battery B-12 on the front and the positive coil of the 1727 AHPP relay on the heel. This condition allowed the 1727 AHR and 1727 AHP relays to be energized and the 1727 AHPP to be de-energized when, under normal conditions, it would have been energized. Had the 1727 AHPP been energized, the 1727 signal would have been displaying an approach aspect vs. stop and proceed. The HD circuits leaving the 1727 signal towards CP Lucas are controlled through the 1727 AHP relay. The aspects to be displayed on 1727 signals are controlled through the 1727 AHPP relay. This scenario allowed the HD circuits to upgrade back towards CP Lucas account the 1727 AHP relay being energized but, account the 1727 AHPP being de-energized held intermediate signal 1727 AHPP at stop and proceed.

The cause of the relay contact melting in the 1727 AHP relay is suspected to have been caused by several severe thunder storms and lightning in the area earlier in the afternoon.

The 1727 AHPPR relay is a GRS Part #298 B-1 biased 194 OHM slow drop. This relay was replaced in kind and the signal system tested and restored to service at 11:16 p.m., August 27, 2003.

