

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

Railroad Accident Brief Report

CHI 97 FR 002
DERAILMENT

NATIONAL RAILROAD PASSENGER CORPORATION
UNION PACIFIC RAILROAD COMPANY
GRANITE, WYOMING
JANUARY 13, 1997

At about 3:45 p.m., mountain standard time, on January 13, 1997, Amtrak train No. 25, consisting of 3 locomotive units, 2 baggage cars, and 7 passenger cars, derailed the 2nd and 3rd locomotive units and all 9 cars near milepost (MP) 528.5 on the Union Pacific Railroad (UP) in Granite, Wyoming. The train was traveling at a recorded speed of 59 mph in 70-mph territory when the derailment occurred.

Twenty of the 109 passengers, 3 of the 12 on-board-service personnel, and 1 of the 5 operating crew members sustained minor injuries. The costs associated with the accident were \$1,706,651.

The investigation revealed that the derailment occurred at a broken rail located just west of a spring frog on No.1 main track. A portion of the west end of the rail had a weld about 11 ½ inches long on the running surface (head) of the rail, and the gauge face of the head had also been welded in order to match it with the rail to which it was attached. The welded area broke out under the movement of train No. 25, causing the derailment.

A metallurgical examination of the broken rail and weld indicated that the weld was of "poor quality." The weld material on the gauge face of the rail did not penetrate properly because the rail was not properly preheated before welding. UP officials stated that welds made to rail ends are routine repairs and as such there were no written records regarding when the weld was made or who performed the task. Local UP officers and welders could not recall when the weld was made.

The track in the accident area had been visually inspected by a track inspector several hours before the derailment and no defects were noted. The condition that led to the failure of the weld was an internal condition and would

not have been apparent during a visual inspection. The rail had been inspected by a rail defect detector car on December 16, 1996, and no internal defects had been noted during that inspection.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this accident was a field weld on the end of a rail that broke under the moving train because the rail was not properly preheated prior to welding.

Adopted: August 18, 1998