

**Head-on Collision
BNSF Freight Train PLACCLO3-22A with
Southern California Regional Rail Authority Train 809
Placentia, California
April 22, 2002**

DCA 02 MR 004

Mechanical Group Factual Report

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Train Consist

BNSF train PLACCLO3-22A consisted of three locomotive units and 27 loaded multi-platform intermodal freight cars. The train drafted 5,755 tons with one operative pneumatic brake for each 85.9 tons of train weight.. It was 6,498 feet in length with 2.2 horsepower per ton of train weight.

Southern California Regional Rail Authority (Metrolink) train 809 consisted of one locomotive unit and three passenger cars.

Damages

Metrolink cars 634 and 113 derailed and sustained crush damage. Metrolink estimated monetary damage at \$2.6 million.

BNSF locomotive unit 5340 sustained damage to the front. BNSF estimated monetary damage to be \$25,000.

Train History

BNSF PLACCLO3-22A originated in Los Angeles, California on April 23, 2002. It was destined for Clovis, New Mexico. Records indicate the train was mechanically inspected and received a Class 1 initial terminal air brake test prior to departure. No exceptions were noted during the inspection and testing.

The Metrolink equipment involved in this accident originated as train 801 in Riverside, California on April 23, 2002. The equipment was operated around the Los Angeles basin area throughout the day. It routinely changed train identification between certain segments of the trip. At the time of the accident it was identified as train 809. Records indicate the train was mechanically inspected by qualified maintenance personnel as required by 49 Code of Federal Regulations part 238. The equipment received a Class 1 initial terminal air brake test prior to departure. No exceptions were noted during the inspection and testing.

Event Recorders

Event recorder data was recovered from Metrolink locomotive unit 859 and BNSF locomotive unit 5340. The data will be sent to the Safety Board laboratory in Washington, D.C. for review.

Post Accident Mechanical Inspections

On April 23, 2002 the BNSF freight train was given a Class 1 air brake test before it was moved from the accident site by Safety Board, FRA, Amtrak, Metrolink and BNSF personnel. There was zero (0) brake pipe leakage. The brakes on the “F” truck of car DTTX 72188 did not apply during the test. When the end of train device (EOT) was placed in emergency from the head end it was slow to activate. After the system was recharged, a second test was made and the EOT performed as designed. On April 24, 2002 EOT function was tested again at Fullerton Junction. The EOT performed as designed during the test.

Locomotive control positions observed were:

	BNSF 5340	Metrolink 634	Metrolink 859
Air Brake Handle	emergency	emergency	off
Throttle	idle	idle	
Reverser	forward	forward	in, not locked
Engine Run Switch	on	on	on
Generator Field	on	on	off
Fuel Pump	on	on	on
Headlight	dim	dim	

There was significant damage to the air brake systems on Metrolink cars 634 and 113. The Metrolink locomotive and first car were inspected at Fullerton Junction on April 24, 2002. The brakes applied and released. Piston travel was within accepted limits. A condemnable flat spot was discovered on the locomotive unit’s L1 wheel.

The windshield on the Metrolink cab car was broken during the collision. The windshield on BNSF 5340 was observed to be clean and without scratches or blemishes.