

## Mechanical Group Chairman's Factual Report

## Oxnard, California

## HWY 15MH006

#### A. CRASH INFORMATION

Туре:	Train & Utility Truck Crash on Railroad Right-of-way (not at a Grade Crossing)	
Date and Time:	February 24, 2015 at 5:44 a.m. PST	
Location:	Oxnard, Ventura County, California	
Vehicle #1:	2005 Ford F450 Pick-up towing a 2000 Tandem Axle Utility Trailer	
Vehicle #2:	Metrolink Commuter Train #102	
Fatalities:	1	
Injuries:	33	
Uninjured:	22	
NTSB #:	HWY15MH006	

#### **B.** MECHANICAL GROUP (RAIL)

•	Joey Rhine	NTSB Mechanical Group Chairman
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- Roman Chavez Federal Railroad Administration
- Carlos Perez
  Metrolink
- Jang-Wook Lee Hyundai Rotem

### C. CRASH SUMMARY

For a summary of the crash, refer to the Crash Summary Report in the docket for this investigation.

### D. CONSIST

Metrolink train 102 was operating cab car forward at the time of the accident and consisted of four passenger cars and a locomotive. The lead cab car was a Hyundai Rotem bilevel passenger cab car (SCAX 645), second was a Bombardier bi-level passenger coach car (SCAX 206), third and fourth were Hyundai Rotem bi-level passenger coach cars (SCAX 211, SCAX 263) respectively, and at the rear was an EMD F59PH locomotive (SCAX 870).

#### E. EQUIPMENT POST ACCIDENT INSPECTIONS

A mechanical inspection was performed on all of the equipment involved on February 25, 2015 after being moved to Moorpark, CA, the findings are as follows:

• SCAX 645 was equipped with headlights, auxiliary lights and audible warning devices required by Federal regulations. The SCAX 645 sustained heavy damage to the front and right sides of the car along with damage to the electrical and air brake systems as a result of impacting the vehicle and then derailing onto its side. A functionality test was unable to be performed. An inspection of the wheels, brakes, trucks, exterior, and interior to include any emergency systems revealed no defective conditions which may have existed prior to the accident.

• SCAX 206 sustained heavy damage to the "BL" and "BR" corners of the car as a result of derailing onto its side. An inspection of the wheels, brakes, trucks, exterior, and interior to include any emergency systems revealed no defective conditions which may have existed prior to the accident. Reports were made of the emergency lighting not remaining lit after the loss of normal power 480 VAC from the HEP. It was determined that the battery back-up cabling was damaged during the accident and resulted in a loss of emergency lighting. The main car batteries located at the "BL" location were heavily damaged. These batteries provide the standby power required to keep the emergency lights on. An electrical short or open circuit occurred as a result of the accident.

• SCAX 211 sustained moderate damage to the left side of the car as a result of derailing onto its side. An inspection of the wheels, brakes, trucks, exterior, and interior to include any emergency systems revealed no defective conditions which may have existed prior to the accident.

• SCAX 263 sustained light damage to the wheels and safety appliances of the car as a result of derailing. An inspection of the wheels, brakes, trucks, exterior, and interior to include any emergency systems revealed no defective conditions which may have existed prior to the accident.

• SCAX 870 sustained light damage to the rear truck wheels as a result of derailing. An inspection of the wheels, brakes, trucks, and cab revealed no defective conditions which may have existed prior to the accident.

# F. GROUP EXAMINATION OF THE FRONT PILOT ASSEMBLY FROM CAR SCAX 645 (10/28/2015)

#### Moorpark, California



Figure 1 Investigators examining the pilot assembly.

See below the location of the equipment and pilot assembly post incident.



Figure 2 View of the pilot assembly from the crossing.

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Figure 3 View of pilot assembly from the rear locomotive.

On October 28, 2015, the investigative group met at Metrolinks Moorpark storage yard to examine the pilot assembly of Cab Car SCAX 645. All portions of the pilot assembly and its attachments were examined for signs of wheel contact that may have incurred during the incident. No such strike marks were observed. The assembly's brackets and welds showed signs of impact and weld failure due to the collision with the highway vehicle.

See attached photographs of pilot assembly:



Figure 4 Cab car left side pilot assembly attachment.

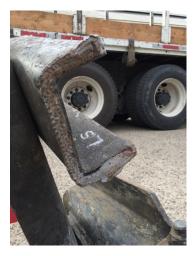


Figure 5 Pilot assembly left side attachment.



Figure 6 Cab car right side pilot assembly attachment.



Figure 7 Pilot assembly right side attachment.



Figure 8 Rear view of pilot assembly.



Figure 9 Front view of pilot assembly.



Figure 10 Right view of pilot assembly.

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Figure 11 Left view of pilot assembly.



Figure 12 Bottom view of pilot assembly.



Figure 13 Top view of pilot assembly.

END OF REPORT