

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3339
THE PENNSYLVANIA RAILROAD COMPANY
IN RE ACCIDENT
NEAR WINDFALL, IND., ON
JULY 10, 1950

SUMMARY

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Date:	July 10, 1950
Railroad:	Pennsylvania
Location:	Windfall, Ind.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	200
Engine numbers:	Diesel-electric units 5778A and 5786A
Consist:	13 cars
Estimated speed:	60 m. p. h.
Operation:	Timetable, train orders and manual-block system
Track:	Single; tangent; level
Weather:	Clear
Time:	2:55 a. m.
Casualties:	6 injured
Cause:	Broken joint bars

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3339

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE PENNSYLVANIA RAILROAD COMPANY

August 31, 1950

Accident near Windfall, Ind., on July 10, 1950, caused
by broken joint bars.

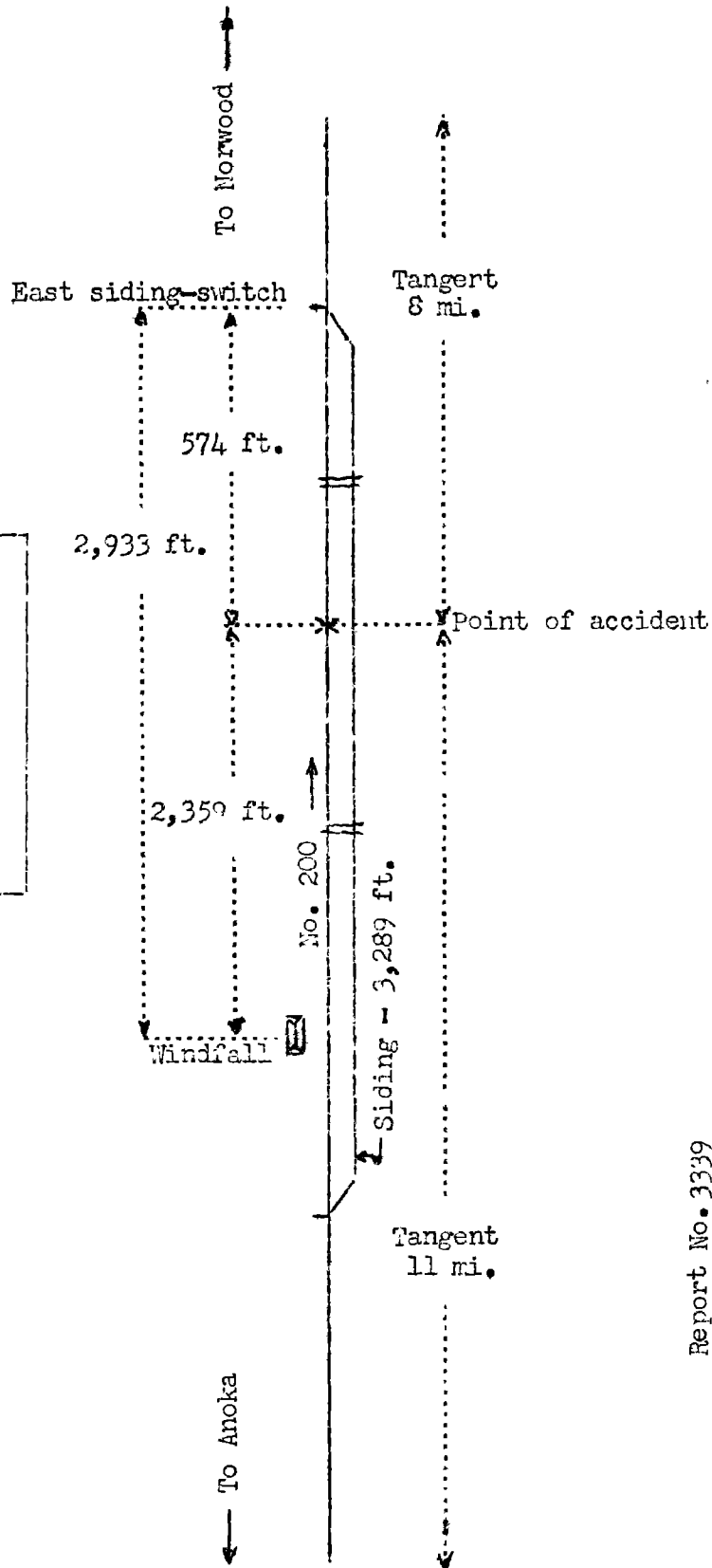
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On July 10, 1950, there was a derailment of a passenger train on the Pennsylvania Railroad near Windfall, Ind., which resulted in the injury of five passengers and one employee.

¹ Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

- o Norwood, Ohio
- | 135.95 mi.
- X Point of accident
- | 0.45 mi.
- o Windfall, Ind.
- | 13.10 mi.
- o Kokomo
- | 17.50 mi.
- o Division Post
- | 0.40 mi.
- o Anoka, Ind.



Report No. 3339
 Pennsylvania Railroad
 Windfall, Ind.
 July 10, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the Cincinnati Division extending between Division Post, 0.4 mile east of Anoka, Ind., and Norwood, Ohio, 167 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders and a manual-block system. At Windfall, 30.6 miles east of Division Post, a siding 3,289 feet in length parallels the main track on the south. The east switch of this siding is 2,933 feet east of the station at Windfall. The accident occurred on the main track 2,359 feet east of the station at Windfall and 574 feet west of the east switch of the siding. The main track is tangent throughout a distance of 11 miles immediately west of the point of accident and approximately 8 miles eastward. The grade is level.

At the point of accident the track structure consists of 100-pound rail, 33 feet in length, rolled in 1923 and laid in the track in 1924 on an average of 18 treated ties to the rail length. It is fully tieplated, spiked with one anchor spike and two holding spikes per tieplate, and is provided with 4 rail anchors per rail length. In 1940 the rail ends were built up by arc welding and 4-hole 23-inch re-formed joint bars were applied. It is ballasted with 10 inches of gravel and broken stone under the ties. In the immediate vicinity of the point of accident several rails varying from 21 to 30 feet in length are used in the track.

The maximum authorized speed for the train involved in this accident was 60 miles per hour.

Description of Accident

No. 200, an east-bound first-class passenger train, consisted of Diesel-electric units 5778A and 5786A, coupled in multiple-unit control, one mail-storage car, two express cars, one coach, four sleeping cars, one coach, and four sleeping cars, in the order named. All cars were of conventional all-steel construction except the seventh and eighth cars, which were of light-weight steel construction. The fourth, seventh, eighth and ninth cars were equipped with tight lock couplers. This train departed from Anoka, 31 miles west of Windfall, at 2:08 a. m., 15 minutes late, departed from Kokomo, the last open office, 13.1 miles west of Windfall, at 2:43 a. m., 23 minutes late, and while moving at an estimated speed of 60 miles per hour, the eighth to the thirteenth cars, inclusive, were derailed.

Separations occurred between the seventh and eighth cars and between the tenth and eleventh cars. The Diesel-electric units and the first seven cars were not derailed and stopped with the front end of the first Diesel-electric unit 2,304 feet east of the point of accident. The eighth, ninth and tenth cars were derailed to the south and stopped with the front end of the eighth car on the roadbed and 670 feet east of the point of derailment. The rear end of the ninth car stopped 40 feet south of the center-line of the track and the rear end of the tenth car stopped 13 feet south of the center-line of the track. These cars leaned at an angle of approximately 65 degrees. The eleventh, twelfth and thirteenth cars stopped on the roadbed and parallel to the track, with the front end of the eleventh car 80 feet west of the rear end of the tenth car. The derailed cars were slightly damaged.

The employee injured was the conductor.

The weather was clear at the time of the accident, which occurred at 2:55 a. m.

Discussion

As No. 200 was approaching the point where the accident occurred, it was moving on tangent track at an estimated speed of 60 miles per hour, in territory where the maximum authorized speed was 60 miles per hour. The headlight was lighted brightly and the enginemen were maintaining a lookout ahead from their respective positions in the control compartment of the first Diesel-electric unit. The brakes of this train had been tested and had functioned properly when used en route. The brakeman was in the fourth car, the conductor was in the ninth car and the flagman was in the rear car. The engine and the cars were riding smoothly, and there was no indication of defective equipment or track, nor of any obstruction having been on the track. Examination after the accident disclosed that throughout a distance of 1,200 feet west of the point of accident the track was well maintained. The greatest variation in cross levels was 1/4 inch at five widely spaced locations and the gage varied between 4 feet 8-1/4 inches and 4 feet 8-9/16 inches.

Examination of the Diesel-electric units and of the undamaged cars of No. 200 after the accident occurred disclosed nothing that could have contributed to the cause of the derailment. A detailed examination of the eighth, ninth and tenth cars disclosed nothing broken or missing that could have caused the accident. Back-to-back measurements of each pair of wheels and measurements of the flanges of all wheels were within the limits prescribed by the carrier.

After the accident occurred two short rails from the south side of the track, 21 feet 1 inch and 21 feet 4 inches in length, were found lying gage-side down, about 24 inches toward the center of the track and 20 inches east of their normal positions. Both joint bars at each end of the westerly rail were broken at the rail joint and at right angles to the base of the rail. All pieces of the joint bars were rigidly bolted to their respective rails. The east portion of the outside joint bar at the west end of this rail was cracked from the spike slot through the head and 5 inches from the east end. It was an old break. In the break at the rail joint there was a concealed defect in the top of the joint bar covering about 10 percent of the cross-sectional area. This break apparently was new and there was no indication of abrasion. At the west end of the east portion of the inside joint bar there was an indentation $3/16$ inch deep and $5/8$ inch long, which apparently was caused by the flange of a wheel. On the west end of the east portion of the outside joint bar there was an indentation $1/2$ inch deep and $1-1/4$ inches long. The west or receiving end of the rail at this joint was battered downward $3/8$ inch, and there was a flange mark on the head $1/4$ inch deep and $2-3/8$ inches from the gage side. This mark extended eastward on the head of the rail a distance of 5 feet 4 inches, then the wheel apparently dropped off the rail on the outside and struck a tieplate 7 feet 10 inches east of the rail joint. The joint bars at the east end of this rail and the ends of both rails at the joint were badly battered. A sliver $1-1/2$ inches long was cut from the west portion of the outside joint bar and a triangular piece of the base $4-3/8$ inches long by $1-1/8$ inches wide was cut off. The north rail was only slightly disturbed. Immediately east of the most easterly pair of broken joint bars the track was destroyed throughout a distance of 500 feet. Apparently, the easterly pair of joint bars were broken prior to the arrival of No. 200, and trains in each direction had passed over the broken joint. The westerly pair of joint bars evidently were broken during the passage of No. 200, because only the west end of the east rail at that joint was battered.

The crew of a west-bound passenger train which passed the point of accident about 1 hour before the accident occurred did not observe any unusual track conditions at this point. The track was last inspected by a track patrolman on July 7, and by the section foreman on July 3. Neither inspection disclosed any defective condition of the track. A rail-defect detector car was operated over this line on May 9, 1950, and no defective condition was indicated.