

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2977
THE NEW YORK CENTRAL RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT ASHTABULA, OHIO, ON
MARCH 3, 1946

SUMMARY

Railroad: New York Central
Date: March 3, 1946
Location: Ashtabula, Ohio
Kind of accident: Derailment and collision
Trains involved: Freight : Freight
Train numbers: Extra 2985 West : Extra 2978 West
Engine numbers: 2985 : 2978
Consist: 70 cars, caboose : 75 cars, caboose
Estimated speed: 50 m. p. h. : 40 m. p. h.
Operation: Signal indications and automatic train-stop system
Tracks: Four; tangent at point of collision; 0.09 percent ascending grade westward
Weather: Clear
Time: 6:14 p. m.
Casualties: 1 killed; 2 injured
Cause: Broken axle on freight car, and derailed cars obstructing adjacent main track immediately in front of approaching freight train

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO 2977

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

THE NEW YORK CENTRAL RAILROAD COMPANY

April 8, 1946.

Accident at Ashtabula, Ohio, on March 3, 1946, caused by
a broken axle on a freight car, and by derailed cars
obstructing an adjacent main track immediately in
front of an approaching freight train.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On March 3, 1946, there was a derailment of a freight train, and a collision between derailed cars of this train and a following freight train on an adjacent track, on the New York Central Railroad at Ashtabula, Ohio, which resulted in the death of one employee, and the injury of two employees. This accident was investigated in conjunction with a representative of the Public Utilities Commission of Ohio.

¹Under 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.

Location of Accident and Method of Operation

This accident occurred on that part of the Erie Division extending between Bay View, N. Y., and Signal Station BR, near East Cleveland, Ohio, 163.4 miles, a four-track line in the vicinity of the point of accident, over which trains moving with the current of traffic are operated by signal indications and an automatic train-stop system. The main tracks from south to north are designated as No. 4, eastward freight, No. 2, eastward passenger, No. 1, westward passenger, and No. 3, westward freight. At Ashtabula, 119.94 miles west of Bay View, a double-track line of the New York Central Railroad and a double-track line of the Pennsylvania Railroad intersect tracks Nos. 4, 2, 1 and 3 at practically right angles at a point immediately west of the tower at Signal Station OD, located in the southeast angle of the intersection and 1,155 feet west of the station. The freight train which was derailed was being operated on track No. 1, and the following freight train was on track No. 3. The derailment occurred at the intersection of track No. 1 and the N.Y.C. southward main track, and the collision occurred 1,694 feet westward. From the east there are, in succession, a tangent 2,008 feet in length, a compound curve to the right, the maximum curvature of which is $0^{\circ}50'$, extending 1,107 feet to the point of derailment and 447 feet westward, then there is a tangent extending 1,247 feet to the point of collision and a considerable distance westward. The grade is 0.09 percent ascending westward.

In this vicinity the distance between the center-lines of tracks No. 1 and No. 3 is 13 feet. The track structure consists of 127-pound rail, 39 feet in length, laid on an average of 24 ties per rail length. It is fully tieplated, spiked with 4 spikes per tieplate, provided with 6-hole angle bars, and is ballasted with crushed stone and slag to a depth of 12 inches. The frog at the intersection involved is of the solid-cast manganese type.

Operating rules read in part as follows:

102a. When a train is disabled or stopped suddenly by an emergency application of the brakes, or by other causes, adjacent tracks as well as tracks of other railroads that are liable to be obstructed must at once be protected until it is ascertained they are safe and clear for the movement of trains.

701. * * *

When trains are passing, trainmen at rear of train must observe the general condition of trains on other tracks.

* * *

The forward trainmen of freight trains, and enginemen and firemen when practicable, must be on the lookout for signals from the rear after meeting or passing trains, * * * and frequently at other points.

When trains are passing, signalmen and operators must observe the general condition of trains. * * *

If any indication of conditions endangering a train is observed, "Stop" signal must be given. If there are no apparent defects, employees * * * must give "Proceed" signal.

* * *

The maximum authorized speed for the freight train moving on track No. 1 was 50 miles per hour and for the freight train on track No. 3, 40 miles per hour.

Description of Accident

Extra 2985 West, a west-bound freight train, consisting of engine 2985, 70 cars and a caboose, passed Signal Station OD at 6:12 p. m. and was moving at an estimated speed of 50 miles per hour when the front truck of the thirty-second car was derailed at the frog of the intersection of track No. 1 and the N.Y.C. southward main track of the double-track line. The derailed car continued in line with the track 625 feet to the turnout of the east switch of a facing-point crossover, which connects tracks No. 1 and No. 2, where the general derailment occurred. The thirty-second to thirty-fifth cars, inclusive, the thirty-seventh car, and the forty-third to forty-fifth cars, inclusive, stopped in various positions, and obstructed the main tracks. The engine and the first thirty-one cars were not derailed. This equipment, remaining coupled, stopped with the rear of the thirty-first car 685 feet west of the thirty-second car. Immediately after the general derailment occurred, the wreckage was struck by Extra 2978 West.

Extra 2978 West, a west-bound freight train, consisting of engine 2978, 75 cars and a caboose, passed Signal Station OD at 6:14 p. m. and was moving at an estimated speed of 40 miles per hour when it collided with the derailed equipment which obstructed track No. 3. The engine and first fifteen cars of Extra 2978 were derailed. The engine stopped against a loaded nopper-type coal car, which was standing on an auxiliary track located to the north of track No. 3. The cab was demolished, and the engine was otherwise badly damaged. Three cars of Extra 2985, seven cars of Extra 2978 and one car on the auxiliary track were destroyed. The remainder of the derailed cars were more or less damaged.

The weather was clear and it was daylight at the time of the accident, which occurred at 6:14 p. m.

The engineer of Extra 2978 West was killed, and the fireman and the front brakeman were injured.

The thirty-second car of Extra 2985 West was NADX 12920, a bunker-type refrigerator car, built in July, 1922, and owned by the North American Car Corporation, Chicago, Ill. It was 37 feet 4 inches long over end sills, 10 feet 6 inches wide and 14 feet 2 inches high. Its light weight, capacity and load limit were, respectively, 55,900 pounds, 47,000 pounds and 47,100 pounds. At the time of the accident the car was empty. The trucks were of the 4-wheel type, having 4-1/4-inch by 8-inch journals, 33-inch cast-iron wheels on the front truck and 33-inch wrought-steel wheels on the rear truck. The journal boxes were last packed on August 9, 1945.

Discussion

Extra 2985 was moving on track No. 1 at a speed of about 50 miles per hour, in territory where the maximum authorized speed for this train was 50 miles per hour, when the thirty-second to thirty-fifth cars, inclusive, the thirty-seventh car and the forty-third to forty-fifth cars, inclusive, were derailed at a point 0.23 mile west of the station at Ashtabula. The first the members of the crew of this train were aware of anything being wrong was when the brakes became applied in emergency as a result of the derailment. The conductor immediately gave stop signals with a red flag and the flagman displayed a lighted red fusee from the rear platform of their caboose in an attempt to stop the following train.

Extra 2978 West was moving on track No. 3 at a speed of about 40 miles per hour, in territory where the maximum authorized speed for this train was 40 miles per hour, when it collided with the derailed equipment of Extra 2985 West. As this train was approaching the point where the collision occurred the enginemen and the front brakeman were maintaining a lookout ahead. The first they were aware of anything being wrong was when the fireman and the front brakeman saw stop signals being given with a red flag and a lighted red fusee from the rear platform of the caboose of the preceding train about 400 feet distant, and they called a warning to the engineer. The engineer immediately moved the brake valve to emergency position, but the collision occurred before the train could be stopped.

Examination after the accident disclosed that the front axle of the front truck of the thirty-second car of Extra 2985 was broken. This car was empty, and was en route from Rochester, N. Y., to Blue Island, Ill. It was assembled in the train of Extra 2985 at Gardenville, N. Y., 129.23 miles east of Ashtabula, and was inspected by members of the mechanical force about 11:30 a. m., on the day of the accident. At Wesleyville, N. Y., 44.68 miles east of Ashtabula, members of the mechanical force at that point inspected this car, about 4:05 p. m., and no defective condition was observed. The members of the crew of

Extra 2985 said that throughout the trip they made frequent observations of the equipment, and no defective condition was observed prior to the derailment. They received proceed signals from track forces and operators at several points en route. Extra 2985 passed Extra 2978 at a point a short distance east of Ashtabula, and the crew of Extra 2978 saw no indication of defective equipment. A signal maintainer at Signal Station OD said that when the thirty-second car of Extra 2985 entered upon the frog of the crossing he saw a wheel of this car break loose and stop on track No. 4. The signal maintainer immediately informed the operator of the occurrence and these employees gave stop signals, but these signals were not observed by the members of the crew of either train in time to avert the accident.

The investigation disclosed that the failure of the axle involved consisted of a square break 24-3/16 inches inward from the south end, at a point about 6 inches inward from the inside face of the hub of the left No. 1 wheel. About 15 percent of the break was an old progressive fracture, which was 3 inches in length circumferentially and extended below the surface about 3/4-inch at its deepest point. The remainder of the fracture was new. The axle involved was provided with 4-1/4-inch by 8-inch journals, and 33-inch cast iron wheels. The diameter of the axle was 5-11/16 inches at the south wheel seat, 4-5/8 inches at the point of fracture, 4-9/16 inches at its center, and 5-3/4 inches at the north wheel seat. The diameter at the center was 1/8-inch below the minimum dimension specified by the rules of the Mechanical Division of the Association of American Railroads. There was no mark on the axle to indicate the date or place of manufacture, or to indicate that the axle had been reforged.

Cause

It is found that this accident was caused by a broken axle on a freight car, and by derailed cars obstructing an adjacent main track immediately in front of an approaching freight train.

Dated at Washington, D. C., this eighth day of April, 1946.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.