INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2691

THE ILLINOIS CENTRAL SYSTEM
AND
THE UNION RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT MEMPHIS, TENN., ON

APRIL 4, 1943

SUMMARY

Railroads:	Illinois Central	: Union
Date:	April 4, 1943	
Location:	Memphis, Tenn.	
Kind of accident:	Side collision	
Trains involved:	Passenger	: M. P. freight
Train numbers:	53	: Extra 1204 East
Engine numbers:	1037	: 1204
Consist:	4 cars	: Auxiliary water car, 54 cars, caboose
Estimated speed:	9 m. p. h.	: 12 m. p. h.
Operation:	Timetable and train orders	: Yard rules
Track:	Double; tangent; level	: Single; tangent; 0.20 percent descending grade eastward
Weather:	Clear	
Time:	About 4:06 p. m.	
Casualties:	1 killed; 63 injured	
Cause:	Accident caused by failure properly to control speed of Missouri Pacific train in compliance with crossing-signal indication	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2691

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

THE ILLINOIS CENTRAL SYSTEM
AND
THE UNION RAILWAY COMPANY

May 15, 1943.

Accident at Memphis, Tenn., on April 4, 1943, caused by failure properly to control speed of Missouri Pacific train in compliance with a crossing-signal indication.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On April 4, 1943, there was a side collision between a passenger train of the Illinois Central System and a freight train of the Missouri Pacific Railroad being operated on the line of the Union Railway at Memphis, Tenn., which resulted in the death of 1 passenger and the injury of 60 passengers, 1 train-service employee off duty and 2 train-service employees on duty.

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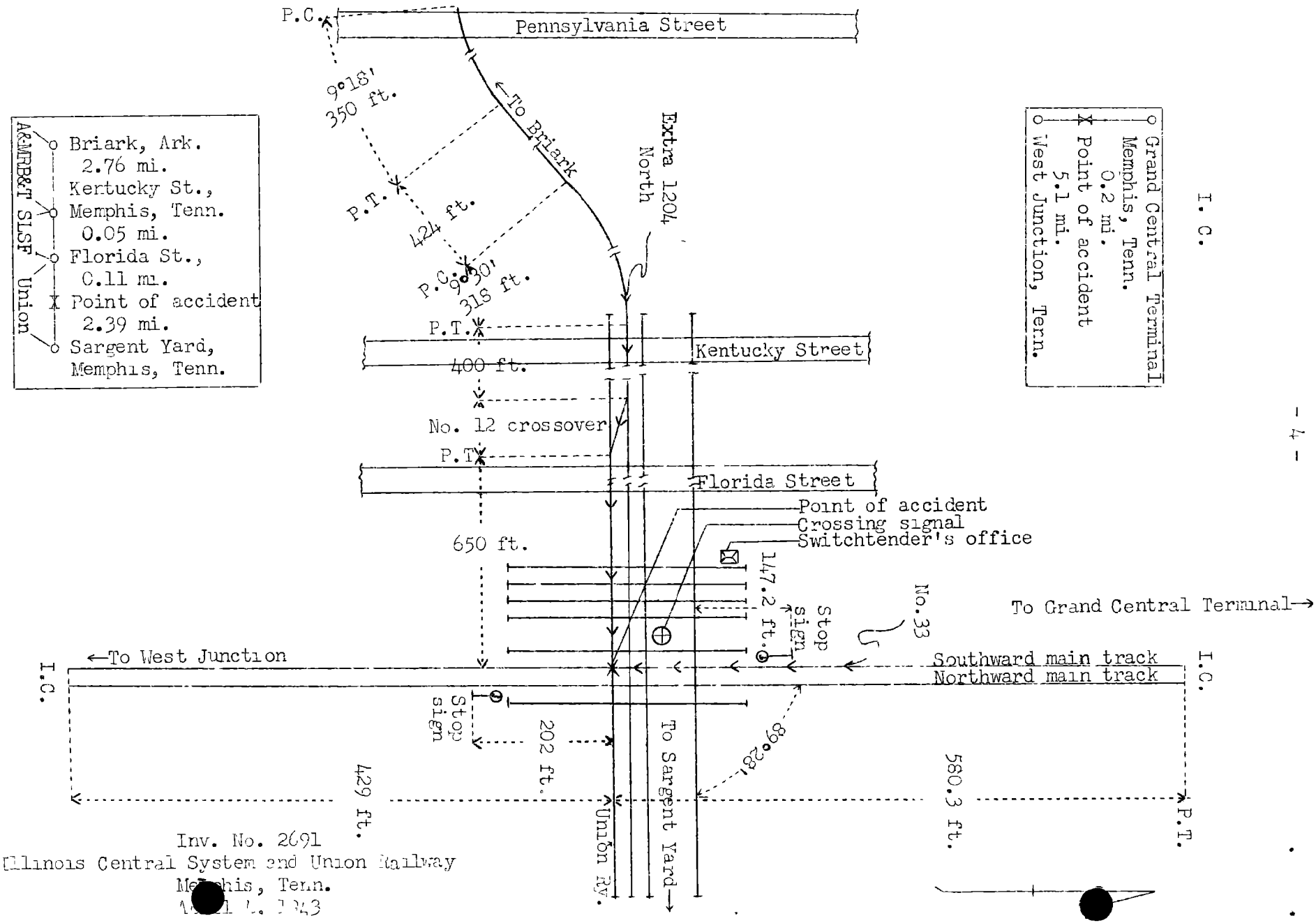
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2691
Illinois Central System and Union Railway
Memphis, Tenn.
[illegible] 1943

Location of Accident and Method of Operation

This accident occurred at an intersection of a line of the Illinois Central System and the Union Railway, hereinafter referred to, respectively, as the I. C. and the Union Ry. The crossing is located on that part of the Memphis Terminal District of the I. C. extending between Memphis and West Junction, Tenn., 5.3 miles, and on that part of the Union Ry. extending between Florida Street and Sargent Yard, Memphis, 2.5 miles. Freight trains of the Missouri Pacific Railroad, hereinafter referred to as the M. P. en route from Briark, Ark., to Sargent Yard, are operated over the Arkansas & Memphis Railway Bridge and Terminal Company from Briark to Kentucky Street, Memphis, 2.76 miles, over the St. Louis-San Francisco Railway from Kentucky Street to Florida Street, 272 feet, and over the Union Ry. from Florida Street to Sargent Yard. In the vicinity of the crossing the I. C. is a double-track line and the Union Ry. is a single-track line. On the I. C., trains are operated by timetable and train orders. There is no block system in use. On the Union Ry. trains of the M. P. are operated by M. P. yard rules. Time-table and compass directions on the I. C. are north and south. Compass directions on the Union Ry. are east and west. At the crossing, eight tracks of the I. C. are intersected at an angle of 89°28' by four tracks of other railroads, of which one is the Union Ry. As the crossing is approached from the north on the I. C. the tracks are tangent 580.3 feet to the crossing and 429 feet beyond. The grade for south-bound trains varies between 0.93 percent descending and level 900 feet to the crossing. As the crossing is approached from the west via the route traversed by M. P. freight trains there are, in succession, a 9°18' curve to the left 350 feet in length, a tangent 424 feet, a 9°30' curve to the right 318 feet, a tangent 400 feet, a No. 12 crossover, and a tangent 650 feet to the crossing. The grade for east-bound trains varies between 1.04 and 0.20 percent descending throughout a distance of 4,000 feet to the crossing where it is 0.20 percent descending.

On the I. C., stop signs are located, respectively, 147.2 feet north and 202 feet south of the crossing. Movements over the crossing on either line are governed by a color-light signal, mounted on a pole 20 feet 11 inches high, located in the northwest angle of the crossing. The signal consists of three units arranged vertically to display aspects through 8-inch lenses to the east, west, north and south. The signal is in the charge of a switchtender and is controlled from a building located in the northwest angle of the crossing. The top and center lenses display red and the bottom lenses display green. The signal is so arranged that when a movement over the crossing on the I. C. is intended the top lenses display red aspects in all directions, the center lenses display red aspects to the east and west and the bottom lenses display green aspects to the north and south.

Operating rules of the I. C. and the M. P. read in part as follows:

10. Color Signals.

Color	Indication
(a) Red.	Stop
* * *	
(c) Green.	Proceed, * * *.
* * *	

I. C. special instructions read in part as follows:

98. Trains and engines must stop at * * *, railroad crossings * * * as follows:

* * *

Broadway.....Mo. Pac. * * *

Color light signal operated by switch tender Broadway Crossing, intersection of Missouri Pacific, * * *

* * *

M. P. special instructions read in part as follows:

20. HELPER AND PUSHER SERVICE:

20-A. Helper Service:

* * *

After helper move has been completed, train must be brought to stop and brakes applied before helper engine is cut off. After helper engine is uncoupled, double-heading cock on "train-engine" will be opened and test made to know that brakes are operating by brake valve of the "train-engine."

* * *

22. OPERATION OVER FOREIGN LINES:

* * *

III.

Between Union Railway Junction, near Florida Street, and Sargent Yard, The Uniform Code of Operating Rules will govern. The entire line is within yard limits. * * *

* * *

The Illinois Central crossing at Texas Street is governed by a Manually Controlled Signal on a pole on the north side of the Union Railway tracks, and in the center of the Illinois Central tracks, and trains will stop and then proceed over this crossing on green signal indication.

* * *

Air brake rules read in part as follows:

17. FREIGHT SERVICE.

(a) Caboose Air Gauge-Cabooses are equipped with air gauges and trainmen are required to use this device as an additional precaution against danger from low air pressure in brake pipe or a closed angle cock. * * *

Description of Accident

No. 33, a south-bound first-class I. C. passenger train, consisted of engine 1037, one mail-express car and three coaches, in the order named. All cars were of steel construction. This train departed from Grand Central Station, Memphis, at 4 p. m., according to the dispatcher's record of movement of trains, on time, entered the southward main track, stopped at the crossing stop sign located 147.2 feet north of the crossing, then proceeded, passed the crossing signal, which displayed proceed, and while moving over the crossing at a speed of about 9 miles per hour the rear car was struck by M. P. Extra 1204 East.

Extra 1204 East, an east-bound M. P. freight train, consisted of engines 9319 and 1204, coupled, 1 auxiliary water car, 53 loaded cars, 1 empty car and a caboose. This train departed from Briark, Ark., 2.92 miles west of the crossing, at 3:17 p. m., according to the dispatcher's record of movement of trains, and stopped at a point about 2,000 feet west of the crossing about 3:30 p. m., according to the statements of the crew, where engine 9319 was detached. About 35 minutes later Extra 1204 proceeded and while moving at a speed of about 12 miles per hour it struck the rear car of No. 33.

The rear car of No. 33 stopped, considerably damaged, on its left side at an angle of 45 degrees to the southward main track. The coupler attachments between the tender and the first car were damaged. Engine 1204 stopped, slightly damaged, with its front end 768 feet east of the point of accident. The front truck of the tender and the rear truck of the eighteenth car were derailed.

It was clear at the time of the accident, which occurred about 4:06 p. m.

The train-service employees injured were the conductor and the flagman of No. 33 and an engineer who was deadheading on No. 33.

Data

After the accident, another engine was attached to the equipment handled in Extra 1204 and all brakes applied and released properly. Brake-cylinder piston travel varied between 7 and 10-3/4 inches.

In tests made after the accident the automatic brake valve, the distributing valve and the vent valve of engine of engine 1204 conformed to the requirements. The air-pressure regulating devices functioned properly. There was no condition found that would prevent the proper application and release of the train brakes. All driving-wheel tires of engine 1204 had slid-flat spots about 7 inches in length.

Discussion

The rules governing operation over this crossing provide that an approaching train must stop short of the crossing, then it will be governed by signal indication. The M. P. rules for the testing of train air-brake equipment provide that, when the first engine of a two-engine movement is detached and the other engine is assigned to haul the train alone, the double-heading cock of the latter engine must be opened and a test made to ascertain that the brakes are operating.

The crossing signal displayed proceed for I. C. No. 33, a south-bound passenger train, and displayed stop for M. P. Extra 1204, an east-bound freight train. After No. 33 had stopped at the crossing sign, about 150 feet north of the crossing, it proceeded and while moving over the crossing at a speed of about 9 miles per hour the rear car was struck by Extra 1204.

The engineer of No. 33 said his engine had just passed over the crossing when he saw Extra 1204 approaching on the Union Ry. about 500 feet west of the crossing. He observed that the driving wheels of engine 1204 were sliding, and that the speed appeared to be too fast for the engine to stop before reaching the crossing. He immediately increased the speed of

his train in an unsuccessful attempt to clear the crossing before Extra 1204 reached it. The switchtender in charge of the crossing signal said that about 10 minutes before No. 33 stopped at the stop sign north of the crossing he set the signal to display proceed for movements on the I. C. and stop for movements on the Union Ry. As Extra 1204 was approaching the crossing, the switchtender observed that the driving wheels of the engine were sliding. The first 18 cars of that train passed his location after the engine struck the rear car of No. 33, and the brakes of these cars were not applied. A yardmaster of the I. C. who arrived at the scene soon after the accident occurred said he examined the first 37 cars of Extra 1204 and found that the brakes of these cars were not applied. The angle cocks on the engine tender and the 37 cars were in position to permit the flow of air through the brake pipes.

The engineer of Extra 1204 said engine 9319 was coupled to his engine at Briark to assist the train over the Mississippi River bridge. Before the train departed from Briark the engineer of engine 1204 placed his double-heading cut-out cock in closed position. Between Briark and the point where engine 9319 was detached, the brakes were in the charge of the engineer of engine 9319, and the brakes functioned properly. The engineer of engine 1204 said that after engine 9319 was detached he placed the double-heading cock in open position, then attempted to release the brakes, but he was unable to do so. Because the helper engine had maintained brake-pipe pressure of 90 pounds and the feed valve of engine 1204 was adjusted for 70 pounds, he used considerable time in attempting to reduce the excessive pressure. Then members of the train crew operated the release valves of the cars and released the brakes. Soon afterward Extra 1204 proceeded eastward a short distance and stopped to enter the tracks of the Union Ry. The engineer said he used the independent brake valve and applied the brakes on the engine only to stop the train at that point. The train proceeded and when the engine reached a point about 900 feet west of the crossing in question the fireman informed the engineer that the crossing signal was displaying stop. The engineer closed the throttle, moved the independent brake valve to application position and opened the sanders, but the speed of the train was not reduced. Then he moved the automatic brake valve to emergency position, but an emergency application of the brakes was not obtained. The speed of Extra 1204 was about 12 miles per hour when the collision occurred. No member of the train crew observed the caboose air-gauge and no test of the train air-brake system was made to ascertain the condition of the brakes after engine 9319 was detached from the train. The members of the crew of Extra 1204 said they understood that the rules require such a test be made, but, in order to avoid delay, they permitted

their train to proceed without making a test. After the accident no examination of the equipment was made by the crew of Extra 1204. Several hours after the accident occurred, a test of the air-brake equipment of this train was made by officers of the Union Ry. and no defect was found.

The investigation disclosed that, after the auxiliary reservoirs were depleted by the operation of the release valves, air pressure failed to be restored to the train-brake system. This indicates that the double-heading cock on engine 1204 had not been opened. If a test of the train air-brake system of Extra 1204 had been made, as required by the rules, after engine 9319 was detached from the train, the crew would have known the condition of the brakes and they could have taken action to obtain proper functioning of the brakes before the train was permitted to be moved, and this accident would have been averted.

Cause

It is found that this accident was caused by failure properly to control the speed of the Missouri Pacific train in compliance with a crossing-signal indication.

Dated at Washington, D. C., this fifteenth day of May, 1943.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL)

Secretary.