

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3175
THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY
REPORT IN RE ACCIDENT
AT AKRON, KANS., ON
MARCH 28, 1948

SUMMARY

Railroad: Atchison, Topeka and Santa Fe
Date: March 28, 1948
Location: Airon, Kans.
Kind of accident: Side collision
Trains involved: Freight : Freight
Train numbers: Extra 3207 East : Extra 100 West
Engine numbers: 3207 : Diesel-electric
100
Consists: 59 cars, caboose : 75 cars, caboose
Speeds: 2 a. m. h. : 19.5 a. p. h.
Operation: Timetable and train orders
Track: Single; tangent; 0.50 percent
descending grade westward
Weather: Clear
Time: Between 2:50 a. m. and 2:54 a. m.
Casualties: 4 injured
Cause: Failure of inferior train to provide
protection after having failed to
clear main track at time required
by the rules
Recommendation: That the Atchison, Topeka and Santa
Fe Railway Company establish an
adequate block system on line on
which accident occurred

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3175

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

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY

May 27, 1948

Accident at Akron, Kans., on March 28, 1948, caused by
failure of the inferior train to provide pro-
tection after having failed to clear the main
track at time required by the rules.

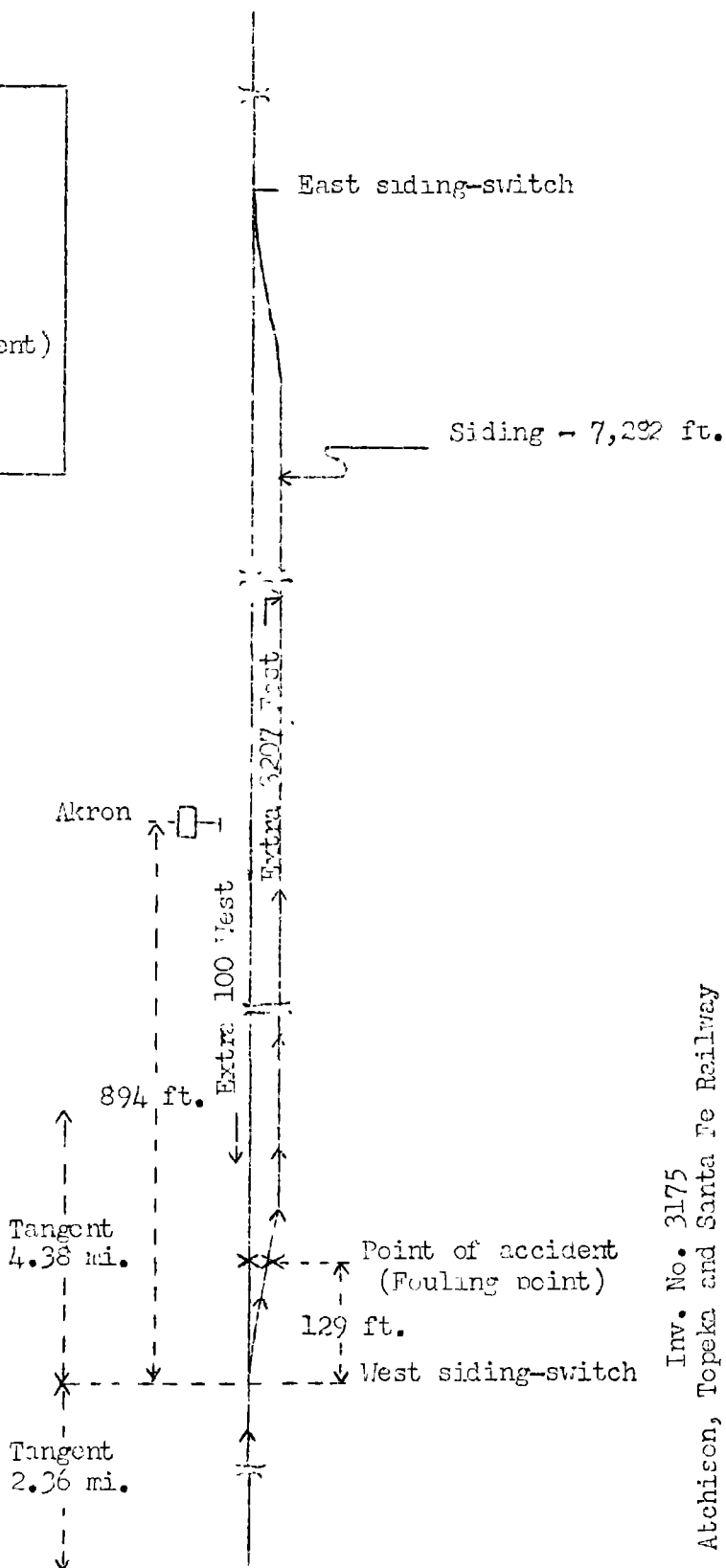
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On March 28, 1948, there was a side collision between
two freight trains on the Atchison, Topeka and Santa Fe
Railway at Akron, Kans., which resulted in the injury of
four employees.

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

○	AG Tower	0.3 mi.
○	Augusta, Kans.	16.9 mi.
○	Rock	6.2 mi.
X	Akron	(Point of accident)
		7.3 mi.
○	W. N. Jct., Winfield, Kans.	



Inv. No. 3175
 Atchison, Topeka and Santa Fe Railway
 Akron, Kans.
 March 28, 1948

Location of Accident and Method of Operation

This accident occurred on that part of the Middle Division extending between AG Tower, Augusta, and W.N. Jct., near Winfield, Kans., 30.7 miles, a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. At Akron, 7.3 miles east of W.N. Jct., a siding 7,282 feet in length parallels the main track on the south. The west switch of this siding is 894 feet west of the station sign. The accident occurred at the fouling point of the main track and the turnout of the west siding-switch, at a point 120 feet east of the switch. The main track is tangent throughout a distance of 4.38 miles immediately east of the west siding-switch and 2.56 miles westward. The grade is 0.50 percent descending westward.

The capacity of the siding at Akron is 153 cars. The switchstand at the west siding-switch is located on the south side of the main track. It is provided with a red circular target 18 inches in diameter and an oil burning switch lamp. The center of the target is 5 feet 11-1/4 inches above the tops of the ties, and the center of the switch lamp is 7 feet 7-3/4 inches above the tops of the ties. When the switch is lined for entry to the siding, the switch target is at right angles to the track and the switch lamp displays a red aspect in the direction of an approaching train.

This carrier's operating rules read in part as follows:

DEFINITIONS.

* * *

Train.--An engine * * * or more than one engine * * * coupled, with or without cars, displaying markers.

5. * * * The time applies at the first siding switch where an opposing train clears; * * *

17. The headlight will be displayed to the front of every train by night. It must be concealed or extinguished when a train turns out to meet another and has stopped clear of main track, * * *

19. The following signals will be displayed to the rear of every train, as markers, to indicate the rear of the train.

* * *

* * * by night while running on single track; * * *

Lights * * * showing yellow to the front and side and red to the rear.

* * *

S-71. A train is superior to another train by right, class or direction.

Right is conferred by train order; * * *

Right is superior to class or direction.

* * *

S-87. An inferior train must keep out of the way of opposing superior trains, and, failing to clear main track by the time required by rule, must be protected as prescribed by Rule 99. * * *

S-89. At meeting points * * * the inferior train must take the siding and clear the superior train at least five minutes and must pull into the siding when practicable.

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes and, when necessary, in addition, displaying lighted fuses.

* * *

The front of the train must be protected in the same way when necessary by the brakeman or fireman.

* * *

104(A). * * *

* * *

Crews of trains which are clear of main track must not give "proceed" signals to approaching trains.

FORMS OF TRAIN ORDERS.

* * *

S-Form C. Giving Right Over an Opposing Train.

Examples:

* * *

- (3) Extra 72 west has right over Extra 91 east A to G but wait at E until nine fifty nine 9 59 a m and at F until ten fifteen 10 15 a m for Extra 91 east.

The first-named train must not pass the points designated as E and F before the time given at such points unless the other train has arrived,
* * *

In this territory the maximum authorized speeds are 55 miles per hour for passenger trains and 45 miles per hour for freight trains.

Description of Accident

At W.N. Jct., the last open office, 7.3 miles west of Akron, the crew of Extra 3207 East, an east-bound freight train, received copies of train order No. 524 reading in part as follows:

* * *

Exa 100 west has right over
Exa 3207 East AG tower to WN Jct
But wait at
Rock until two forty 240 am
Akron Two fifty three 253 am for
Exa 3207 East

* * *

Rock is 6.2 miles east of Akron. Extra 3207 East, consisting of engine 3207, 59 cars and a caboose, passed W.N. Jct. at 2:29 a. m. and stopped on the main track between 2:42 and 2:44 a. m., with the engine immediately west of the west siding-switch at Akron. Soon afterward this train proceeded eastward and stopped about 2:48 a. m., with the engine on the siding

about 4,600 feet west of the clearance point of the east siding-switch, the fifty-second to fifty-fifth cars, inclusive, on the turnout of the west siding-switch, and the rear four cars and the caboose on the main track west of the switch. Between 2 and 5 minutes later this train had just started to move eastward when the fifty-second car was struck by Extra 100 West at the fouling point of the main track and the west siding-switch.

At AG Tower, the last open office, 23.4 miles east of Akron, the crew of Extra 100 West, a west-bound freight train, received copies of train order No. 524. This train, consisting of Diesel-electric engine 100, of the 3-unit type, 75 cars and a caboose, departed from AG Tower at 2:15 a. m., passed Rock about 2:40 a. m., and while moving at a speed of 19.5 miles per hour, as indicated by the tape of the speed recorder, it struck Extra 3207 East.

The fifty-second to fifty-fourth cars, inclusive, of Extra 3207 East, and the Diesel-electric units and the first two cars of Extra 100 West were derailed and damaged.

The conductor and the flagman of Extra 3207 East, and the conductor and the flagman of Extra 100 West were injured.

The weather was clear at the time of the accident, which occurred between 2:50 a. m. and 2:54 a. m.

During the 30-day period preceding the day of the accident, the average daily movement in this vicinity was 13.3 trains.

Discussion

The rules governing operation on this line provide that an inferior train must keep out of the way of opposing superior trains, and inferior trains must clear the time of opposing superior trains not less than 5 minutes. If an inferior train fails to clear the time of an opposing superior train, flag protection must be provided.

The crews of both trains held copies of train order No. 524, which gave Extra 100 West right over Extra 3207 East between AG Tower and V.N. Jet., and required Extra 100 West to wait at Rock, 6.2 miles east of Akron, until 2:40 a. m., and at Akron until 2:53 a. m. for Extra 3207 East. Under the

rules the times specified at Rock and at Akron applied at the west switch of the siding at each of these stations. Under the provisions of the train order, Extra 100 West was required to remain clear of the west switch of the siding at each of these stations until the time specified unless Extra 3207 East was into clear. Also, Extra 3207 East, which was inferior to Extra 100 West by right, was required to be into clear at Akron not later than 2:48 a. m., if it proceeded to that station to meet Extra 100 West, or to provide flag protection. All employees involved understood these requirements.

Extra 3207 East stopped at the west siding-switch at Akron between 2:42 and 2:44 a. m., according to the various times as stated by the members of the crew. Then this train proceeded eastward on the siding to clear for Extra 100 West. The engineer, the fireman, and the front brakeman were on the engine, and the conductor and the flagman were on the caboose. After the train had moved some distance eastward the fireman, who was looking toward the rear to ascertain when the train was into clear, thought he saw one of the lighted marker lamps on the caboose in the vicinity of the west siding-switch, and he so informed the engineer. Soon afterward, when the engineer thought the train had moved eastward a sufficient distance for the rear portion to be clear of the main track, he made a brake-pipe reduction and the train was stopped about 2:48 a. m. Then the engineer extinguished the headlight. After the engine of Extra 100 West had passed engine 3207, the fireman of Extra 3207 East saw proceed signals being given with a lighted white lantern from the caboose of his train, and he so informed the engineer, then Extra 3207 East started to move eastward. The members of the crew on the engine said they were not aware that their train was not into clear until after the accident occurred. Immediately prior to the collision the conductor was in the cupola of the caboose giving proceed signals with a lighted white lantern, and the flagman was on the rear platform of the caboose. These employees said they thought the enginemen and the front brakeman were aware that their train was not into clear and that flag protection was being provided against Extra 100 West by a member of the crew on the engine. The conductor and the flagman took no action to provide protection against Extra 100 West. The conductor said that he last consulted his watch immediately after his train first stopped to enter the siding and observed the time as 2:42 a. m. or 2:43 a. m. He estimated the time of the collision as 2:50 or 2:51 a. m. The other members of this crew did not consult their watches until several minutes after the time of the accident. Each member of the crew had compared time, and there was a variation of only a few seconds in their watches.

As Extra 100 West was approaching Akron the speed was 43 miles per hour, as indicated by the tape of the speed recorder. The headlight was lighted brightly, and the enginemen, and the front brakeman, who was on the engine, were maintaining a lookout ahead. The conductor and the flagman were in the caboose. Each member of the crew had compared time, and there was a variation of only a few seconds in their watches. They had road train order No. 524, and each understood the requirements of the order. When the engine was about 2 miles east of the east siding-switch at Akron the engineer consulted his watch and observed the time as 2:47 a. m. At that time he saw the reflection of the headlight of the opposing train. Soon afterward he made a service brake-pipe reduction and, when his engine was approaching the east siding-switch, the speed was reduced to about 20 miles per hour. At that time the fireman and the front brakeman consulted their watches and observed the time as 2:49 a. m. When engine 100 was about 500 feet east of the engine of the train on the siding, the engineer of Extra 100 West extinguished his headlight. The members of the crew on engine 100 identified the engine of the train on the siding as being the engine of Extra 3207 East and, because the headlight of that train was extinguished, they thought the train was into clear on the siding. When the engine of Extra 100 West passed the engine of Extra 3207 East the speed of Extra 100 West was about 12 miles per hour. Soon afterward the engineer of Extra 100 West saw proceed signals being given with a lighted white lantern in the vicinity of the caboose of Extra 3207 East, and he sounded two short blasts on the engine whistle and released the brakes. The speed of Extra 100 West was about 20 miles per hour when the engine was a few hundred feet east of the west siding-switch, then the engineer placed the headlight switch in position for the headlight to be lighted brightly, and he saw the rear portion of Extra 3207 East occupying the turnout. He immediately moved the brake valve to emergency position, but the collision occurred before Extra 100 West could be stopped. The switch light at the west siding-switch was on the south side of the main track, and therefore the rear portion of Extra 3207 East obstructed the light from the view of employees on the engine of Extra 100 West. The conductor said that he last consulted his watch a few seconds prior to the time the brakes were applied in emergency and observed the time as 2:53 a. m. The engineer said that he consulted his watch immediately after the accident occurred and observed the time as 2:54 a. m. The flagman did not consult his watch until several minutes after the time of the accident. The fireman and the front brakeman did not consult their watches between the time their train was approaching the east siding-switch and the time the accident occurred.

The exact time of the accident was not determined. According to the statements of the employees who consulted their watches, the accident occurred some time between 2:50 a. m. and 2:54 a. m. Under the rules, Extra 3207 East was required to be into clear at Airon not later than 2:43 a. m., and flag protection was required to be furnished against Extra 100 West by a member of the crew of Extra 3207 East if the latter train was not clear of the main track at the required time. However, the rear portion of Extra 3207 East was occupying the main track during a period of at least 2 minutes after the time this train was required to be into clear, and flag protection was not furnished by a member of the crew of that train.

In the territory where this accident occurred, trains are operated by timetable and train orders only. If an adequate block system had been in use, the crew of Extra 100 West would have received information that Extra 3207 East had not cleared the main track, and this accident probably would have been prevented.

Cause

It is found that this accident was caused by failure of the inferior train to provide protection after having failed to clear the main track at time required by the rules.

Recommendation

It is recommended that the Atchison, Topeka and Santa Fe Railway Company establish an adequate block system on the line on which this accident occurred.

Dated at Washington, D. C., this twenty-seventh day of May, 1948.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.