

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2638
THE SEABOARD AIR LINE RAILWAY COMPANY
REPORT IN RE ACCIDENT
AT DEERFIELD, FLA., ON
OCTOBER 22, 1942

SUMMARY

Railroad: Seaboard Air Line
Date: October 22, 1942
Location: Deerfield, Fla.
Kind of accident: Rear-end collision
Trains involved: Passenger : Freight
Train numbers: 191 : 77
Engine numbers: 246 : 221
Consist: 11 cars : 23 cars, caboose
Speed: 2-3 m. p. h. : 25 m. p. h.
Operation: Timetable and train orders, and
manual-block system for follow-
ing passenger trains only
Track: Single; tangent; level
Weather: Slightly cloudy
Time: About 8:05 a. m.
Casualties: 1 killed; 46 injured
Cause: Accident caused by failure to
provide adequate protection
for preceding train
Recommendation: That the Seaboard Air Line Rail-
way Company establish an adequate
block system on the line involved
in this accident

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2638

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

THE SEABOARD AIR LINE RAILWAY COMPANY

December 8, 1942.

Accident at Deerfield, Fla., on October 22, 1942, caused
by failure to provide adequate protection for pre-
ceding train.

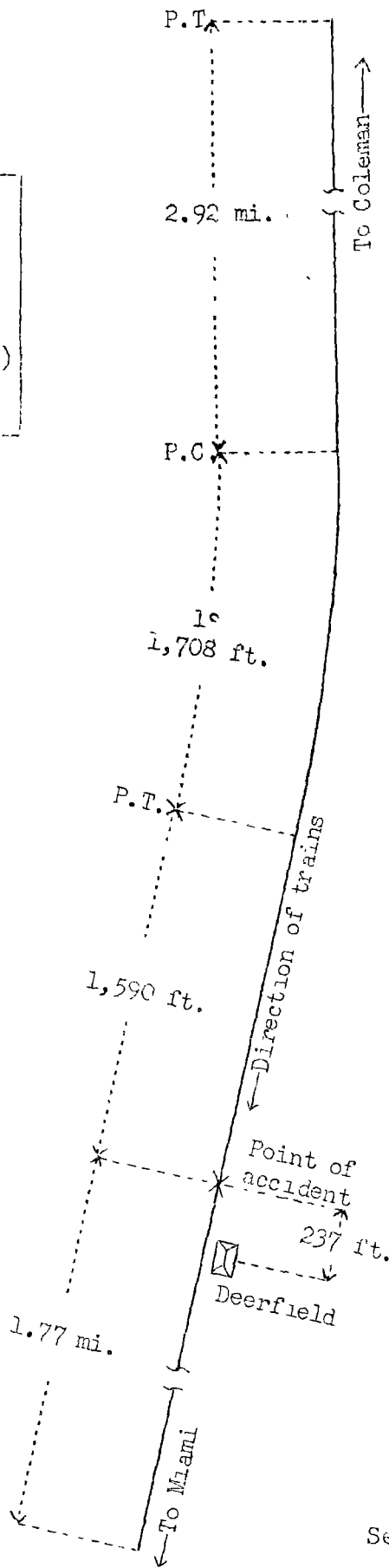
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On October 22, 1942, there was a rear-end collision between a passenger train and a freight train on the Seaboard Air Line Railway at Deerfield, Fla., which resulted in the death of 1 Pullman employee and the injury of 39 passengers, 1 news-company employee, 3 Pullman employees and 3 train-service employees.

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.

o	Coleman, Fla.	69.7 mi.
o	West Lake Wales	134.1 mi.
o	West Palm Beach	208.4 mi.
X	Deerfield (P. of A.)	41.7 mi.
o	Miami, Fla.	



Inv. No. 2638
 Seaboard Air Line Railway
 Deerfield, Fla.
 October 27, 1942

Location of Accident and Method of Operation

This accident occurred on that part of the North Florida Division designated as the Coleman Sub-division and extending between Coleman and Miami, Fla., a distance of 273.9 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders, and a manual-block system for following passenger trains only. The accident occurred on the main track at a point 237 feet north of the station at Deerfield. Approaching from the north there are, in succession, a tangent 2.92 miles in length, a 1° curve to the right 1,708 feet and a tangent 1,590 feet to the point of accident and 1.77 miles beyond. At the point of accident the grade is level.

Operating rules read in part as follows:

35. The following signals will be used by flagmen:

Day Signals--A red flag.
Torpedoes and Fuseses.

* * *

91. Unless some form of block signal is used, trains in the same direction must keep at least ten minutes apart, except in closing up at stations. A train following a train carrying passengers must keep at least ten minutes behind it.

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, (not less than one-half mile), placing one torpedo on the rail, on the engine-man's side; he must then continue to go back to a point not less than three-quarters of a mile (or further on descending grades or where the view is obscured) from the rear of his train, placing two torpedoes on the rail (100 feet apart), when he may return to the point where the first torpedo was placed, where he must remain until the approaching train has been stopped, or he is recalled by the whistle of his engine.

When necessary, lighted fuseses will be displayed.

* * *

316. A first class train, or a train carrying passengers, will not be permitted to enter a Block occupied by another train; nor will any other train be permitted to enter a Block occupied by a first class train or a train carrying passengers, * * *.

Time-table special instructions read in part as follows:

BLOCK RULES.

El7. All first class trains and all trains carrying passengers, moving in the same direction, will be blocked one telegraph station apart. In case of emergency such trains may be permitted to enter a block occupied by another first class train, or a train carrying passengers, on the authority of a train order. * * *

In the vicinity of the point of accident the maximum authorized speed for the freight train involved is 40 miles per hour.

Description of Accident

No. 191, a south-bound first-class passenger train, consisted of engine 246, one mail car, one express car, one Pullman sleeping car, one baggage car, one passenger-baggage car, two coaches and four Pullman sleeping cars, in the order named. All cars were of steel construction except the seventh, which was of lightweight construction. This train departed from Coleman, 232.2 miles north of Deerfield, at 2:31 a. m., according to the dispatcher's record of movement of trains, 1 hour 46 minutes late, departed from West Palm Beach, 23.4 miles north of Deerfield and the last open office, at 7:19 a. m., 1 hour 39 minutes late, and stopped on the main track at Deerfield about 7:54 a. m. About 11 minutes later, when the train had moved forward about 20 feet and while moving at an estimated speed of 2 to 3 miles per hour, the rear end was struck by No. 77 at a point 237 feet north of the station at Deerfield.

No. 77, a south-bound second-class freight train, consisted of engine 221, 23 loaded cars and a caboose. After a terminal air-brake test was made this train departed from West Lake Wales, 162.5 miles north of Deerfield, at 11 p. m., October 21, according to the dispatcher's record of movement of trains, 7 hours 10 minutes late, departed from West Palm Beach at 7:30 a. m., 11 hours 15 minutes late, and while moving at an estimated speed of 25 miles per hour it collided with the rear end of No. 191. The air brakes of No. 77 had functioned properly en route.

There was no condition of the engine that obscured the view or distracted the attention of the enginemen. Because of trees, poles and track curvature, the view of the point of accident from the right side of a south-bound engine is considerably restricted.

The force of the impact pushed No. 191 southward about 40 feet. The eleventh car of No. 191 was derailed and stopped upright and in line with the track. The rear end was telescoped a distance of 15 feet and the car was otherwise badly damaged. The tenth to eighth cars, inclusive, were not derailed, but were considerably damaged. The seventh car stopped west of the track. A section about 20 feet long at the rear end of this car was broken and torn, and the car was practically demolished. The front end of the sixth car was telescoped a distance of about 5 feet and the car was otherwise badly damaged. The remainder of the cars and the engine were slightly damaged. Engine 221, of No. 77, was derailed and stopped upright and in line with the track. The front end was crushed, both cylinders were broken and the engine frame was bent. The tender was derailed and the cistern was badly damaged. The first six cars were derailed, one of which was demolished and three badly damaged. The eighth car was slightly damaged.

It was clear at the time of the accident, which occurred about 9:05 a. m.

The train-service employees injured were the engineer, the fireman and the front brakeman of No. 77.

Data

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 13.13 trains.

Discussion

The rules governing operation on the line involved provide that 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, but not less than one-half mile.

No. 191 departed from West Palm Beach at 7:19 a. m. and stopped at Deerfield at 7:54 a. m. to discharge passengers and a considerable amount of baggage. The rear end was standing 217 feet north of the station. At 8:05 a. m. this train started southward and had moved about 20 feet when the rear end was struck by No. 77.

No. 77 was into clear on the siding at West Palm Beach for No. 191, and departed from that station about 7:30 a. m., or 11 minutes after No. 191 departed. As No. 77 was approaching Deerfield the speed was about 40 miles per hour, the throttle was open, and the members of the crew on the engine were maintaining a lookout ahead. Brake-pipe pressure of 70 pounds was being maintained. The engineer said he sounded the engine-whistle signal for several highway grade crossings north of Deerfield, then, when the engine reached a point about 2,500 feet north of the point where the accident occurred, he made a 10-pound brake-pipe reduction, which reduced the speed to about 35 miles per hour. Soon afterward, the engineer observed the flagman of No. 191 giving stop signals with a lighted fusee at a point about 400 feet to the rear of his train. The engineer placed the brake valve in emergency position, opened the sander valve, closed the throttle, and moved the reverse lever to position for backward motion, but the distance was insufficient for No. 77 to stop short of No. 191. Because of the service brake-pipe reduction, he thought the full benefit of the emergency application was not obtained. The fireman and the front brakeman first observed the flagman giving stop signals about the time the brakes were applied in emergency. The members of the crew of No. 77 estimated that the speed of their train was about 25 miles per hour at the time of the collision. The brakes had been tested and had functioned properly at all points where used en route.

Under the rules, when No. 191 stopped at Deerfield, the flagman was required to proceed to the rear a sufficient distance to provide adequate protection. The conductor said he informed the flagman that an unusual amount of station work would be performed at Deerfield. He did not instruct the flagman to provide flag protection, since the flagman was an experienced employee. When the train stopped, the conductor observed the flagman proceeding toward the rear, and was confident that adequate protection would be provided. The flagman said that when his train was reducing speed to stop at Deerfield he dropped off a lighted 10-minute fusee at a point about 3,200 feet north of the station. After the train stopped, he proceeded to a point about 400 feet to the rear of his train, remained there until he heard No. 77 approaching, then ran toward that train, giving stop signals with a lighted fusee. He had reached a point about 675 feet north of his train when the engine of No. 77 passed him. He said that he understood the requirements of the flagging rule, but depended upon the lighted fusee dropped off the train to provide protection until No. 191 was ready to proceed; however, the fusee which was dropped off must have burned out before No. 77 approached as no member of the crew on the engine of that train observed any lighted fusee except the fusee which the flagman was holding. The engineer of No. 191 said that when No. 77 was rounding the curve north of Deerfield he looked toward the rear end, becoming alarmed that No. 77 would not stop short of his train, he opened the throttle in an endeavor to avert the accident, but his train

moved only about 20 feet before the collision occurred. The operator at Deerfield said that about 8 a. m. the train dispatcher instructed him to inform the crew of No. 191 that No. 77 was following closely and to furnish flag protection immediately if it had not already been provided. At that time the flagman was about 100 feet to the rear of his train. The operator relayed the information to the flagman, who started to walk toward the rear until No. 77 was heard approaching, then started running toward that train and waving a lighted fusee. The flagman had reached a point about 650 feet to the rear of his train when No. 77 passed him. The conductor of No. 77, who was in the caboose cupola, said that he observed the flagman of No. 191 giving stop signals from a point about 450 feet to the rear of No. 191.

In the vicinity of the point of accident there is no restriction to prevent freight trains from proceeding at the maximum authorized speed of 40 miles per hour. The rules require that flag protection be provided a sufficient distance for following trains to stop from their maximum authorized speed. From the time No. 191 stopped at Deerfield until the collision occurred the flagman had not less than 11 minutes in which to provide flag protection. Had he proceeded to the rear at an average gait during the time available to him, he could have provided adequate flag protection and the accident would have been averted.

In the territory involved, trains are operated by timetable and train orders, and a manual-block system for following passenger trains only. Under the rules, a following freight train must keep at least 10 minutes to the rear of a preceding passenger train. In this instance, the last open office to the rear was 28.4 miles north of the point where the accident occurred, and there were no means, other than lighted 10-minute fuses, which could have provided 10-minute spacing between the trains involved. The carrier's book of operating rules contains manual-block rules which permit no train to enter a block occupied by a train carrying passengers, except in case of an emergency. However, in this territory time-table special instructions provide only for the blocking of passenger trains moving in the same direction. If the manual-block rules had been in effect, No. 77 would not have been permitted to enter a block occupied by No. 191.

During an 8-month period immediately preceding the day of the accident, three other accidents, resulting in the death of 5 persons and the injury of 85 persons, occurred on the line of this carrier in territory where trains were operated under the same system as that involved in the accident at Deerfield. The Commission's reports covering the investigations of these accidents stated that if an adequate block-signal

system had been in use, the accidents would not have occurred. In the instant case, if an adequate block-signal system had been in use, this accident would not have occurred.

During this 8-month period the Commission investigated, among others, six accidents occurring on the line of this carrier and including the three accidents mentioned above. These accidents involved failure to comply with provisions of the operating rules. Among other factors, three investigations disclosed failure to provide adequate flag protection, three disclosed failure to operate trains in accordance with signal indications, one disclosed failure to obey a meet order, one disclosed failure to issue train order properly, and three disclosed lax supervision and enforcement of the rules. Failure to obey operating rules is involved in the accident here under investigation. The action of the train dispatcher in warning the crew of No. 191 to provide flag protection indicates that it is not customary to provide adequate flag protection in the territory involved. In previous reports the Commission has commented on inadequate flag protection on the line of this railroad and lax enforcement of operating rules, but it is apparent that any corrective measures taken by the carrier have not been effective. The rules must be rigidly enforced to prevent similar accidents in the future.

Cause

It is found that this accident was caused by failure to provide adequate protection for the preceding train.

Recommendation

It is recommended that the Seaboard Air Line Railway Company establish an adequate block-signal system on the line involved in this accident.

Dated at Washington, D. C., this eighth day of December, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.