

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
SOUTHERN RAILWAY AT MOY, S C , ON NOVEMBER 20, 1926.

December 29, 1926.

To the Commission:

On November 20, 1926, there was a derailment of a passenger train on the Southern Railway at Moy, S.C., resulting in the death of two employees and the injury of three passengers and three employees.

Location and method of operation

This accident occurred on that part of the Charleston Division, Eastern District, extending between West End and Columbia, S.C., a distance of 106.6 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, no block-signal system being in use. The accident occurred at the east switch of the passing track at Moy, approaching this point from the east there is a compound curve to the left 8,070 feet in length, the accident occurring on this curve at a point 6,373 feet from its eastern end, where the curvature is 2°. The grade at the point of accident is 0.08 per cent descending for westbound trains.

The passing track is 994.8 feet in length and parallels the main track on the south, the turnout is a No. 10, and is a facing-point switch for westbound trains. The switch stand, of the ground throw New Century type, is located on the inside of the curve, while the switch target is located on a mast about 18 feet in height on the outside of the curve; the indications are white when the switch is closed and red when it is open. The switch lock was not fastened to the switch stand with a chain, and main-track switches on this division are not equipped with switch lamps.

The main track is laid with 80-pound rails, 30 feet in length, with an average of 18 or 19 ties to the rail-length, and is ballasted with dirt, the main track is maintained in fair condition. The turnout is laid with 80-pound rails from the switch points to the frog, beyond which point 58-pound rails are used; the general condition of the siding is poor.

The weather was clear at the time of the accident, which occurred at about 10.05 p.m.

Description

Westbound passenger train first No 11 consisted of one baggage car, one mail and express car, and four coaches, hauled by engines 1067 and 942, and was in charge of Conductor Reeves and Enginemen Ansaldo and Stephens. This train left Orangeburg, 23 miles east of Moy and the last open office, at 9.20 p.m., 50 minutes late, and was derailed at the east switch of the passing track at Moy while traveling at a speed estimated to have been between 35 and 40 miles an hour.

Both engines, together with their tenders, the first two cars and the forward truck of the third car were derailed. Engine 1067, the lead engine, was 309 feet west of the switch, headed north and leaning to the right, while engine 942 was on its right side, headed south, with its front end buried in the soft earth; the cars were practically upright. The employees killed were the engineman of engine 942 and the fireman of engine 1067.

Summary of evidence.

Engineman Ansaldo, of the lead engine, said that the engine jerked on encountering the switch and then was derailed, as it started to head in on the passing track, moving at a speed of about 40 miles an hour. Engineman Ansaldo also stated that the headlight was burning brightly but that he did not see the indication of the switch target as this particular target is difficult to observe. Fireman Hart, of the second engine, 942, said that he was standing in the gangway of his engine, he saw steam and smoke from the lead engine and on looking back he saw the tender of his engine derail.

Conductor Reeves, who was riding in the third car of the train, said it was moving at a speed of about 35 miles an hour when it came to a sudden stop, as though from an emergency application of the air brakes, and he realized that something was wrong. The statements of other members of the train crew as to what occurred prior to the accident brought out nothing of importance. Examination of the switch after the accident showed that the switch points were partly open while the target showed partly red and partly white, the more prominent color was red but in order definitely to determine what indication was displayed it was necessary to look at the target very carefully. The switch lever was latched to the east head block tie, while the switch lock was lying on the west head block tie, unlocked. There was no indication of the switch lock having been tampered with.

Section Foreman Sauls stated that he made his usual weekly inspection of the switches on his section on the day of the accident, reaching the east switch of the passing track at Moy at 3.30 p.m. He unlocked the switch and the section laborers cleaned and oiled it; the section foreman then operated it two or three times before he lined and locked it for the main track, which was its position when he departed. Section Foreman Sauls said his motor car was standing east of the switch at the time of the inspection and after departing eastward he looked back and saw that the switch target was displaying a white indication. Section Foreman Sauls was positive that he closed and locked the switch and said that he examined the points before leaving. He was the only member of his force to whom a switch key was assigned and he never allowed the other men to use the key. Section Foreman Sauls further stated that he arrived at the scene of the accident about two hours after its occurrence and his inspection of the switch at that time showed that it was lined for the passing track. The points did not show any indications of having been mounted or struck by wheels, and he was of the opinion that some one opened the switch subsequent to the time it had been cleaned and oiled. The statements of Section Laborers Stuart, Frasier and Green corroborated in substance those of Section Foreman Sauls.

Supervisor Burney stated that he arrived at the scene of the accident about $2\frac{1}{2}$ hours after its occurrence. At this time the switch was lined for the siding and the throw-ball lever was latched to the east head block tie while the switch lock was lying on the west head block tie; there were no marks to indicate that wheels had mounted the switch points. The north switch point was open about 1 inch while the south switch point was wide open, and the switch had the appearance of having been run through by some eastbound train, and after removing the top of the housing on the stand he found that the stem of the throw of the switch had been bent, which allowed the north switch point to open. The switch lever could not be thrown and latched for the main track but could be for the siding, and the indications were that it had been in this position and then had been run through by some eastbound train.

Trains first and second No. 28 passed over the switch eastbound at about 5.53 and 9.03 p.m., respectively, at which time members of the engine crews of these trains noted nothing unusual, while the switch target was displaying a white or clear indication.

The switch was dismantled subsequent to the accident and inspection definitely developed that it had been run through by some train. The switch points were in fair condition, although the north switch point showed some wear, there were no indications of the switch points having been struck or mounted by wheels.

Conclusions

This accident was caused by the damaged condition of a facing-point switch, which apparently had been run through by a train moving in the opposite direction:

Examination of the switch immediately after the occurrence of the accident showed that the points were open, while the open switch lock was lying on one of the head-block ties, and subsequent inspection of the switch mechanism indicated that it had been damaged by reason of the fact that the points had been run through by some eastbound train. It also appeared that the switch target was partly turned, enough so that the red portion of the target showed more clearly than the white portion. The engineman of the leading engine of train first No. 11, however, said it was difficult to observe the indication of this particular target and that on this occasion he did not see it or know that there was anything wrong until the accident occurred.

The switch had received the regular weekly inspection at about 3.30 p.m. on the day of the accident, it was unlocked, cleaned and oiled, and operated several times by the section foreman, who said that he then closed and locked it, leaving it in that position. The engine crews of eastbound trains which passed it at about 5.53 p.m. and 9.03 p.m. said that the target was in the clear position and that nothing unusual was noticed, and at the time of this investigation it had not been determined how the switch came to be open or what train ran through it prior to the derailment of westbound train first No. 11.

The superintendent stated that the use of switch lamps on this line was discontinued about five years ago. In this particular case, on account of the location of the switch, there is no assurance that the use of a lamp would have prevented the occurrence of the accident, but as a matter of ordinary safety, particularly where there is no automatic block-signal system in use, it is believed that all main-track switches should be equipped with switch lamps.

Had an automatic block-signal system been in use on this line this accident probably would not have occurred; an adequate automatic train control device would have prevented it.

The employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.