

GREAT NORTHERN RAILWAY.

Ministry of Transport,
Public Safety and General Purposes Department,
28, Abingdon Street,
Westminster, S. W. 1.
9th March, 1920.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of the 21st February, the result of my Inquiry into the circumstances of a collision which occurred at about 2.40 p.m. on the 9th February, at Soothill Wood Colliery, on the Leeds-Batley Branch of the Great Northern Railway, between a Lancashire & Yorkshire Railway passenger train and a Great Northern Railway goods train.

Fifteen wagons and the brake-van of the latter train were standing, during shunting operations, on the up main line, outside the home signal, when they were run into by the passenger train following on the same road.

As a result of the collision, four of the passengers (one of whom was a G.N.R. servant), and the guard of the L. & Y. train complained of shock or injury.

One of the coaches of the passenger train, the brake-van and three wagons of the goods train were damaged, one of the wagons being derailed. The standing van and wagons were driven forward about 30 yards by the impact.

The passenger train consisted of three long-buffered bogie coaches, drawn by tank engine No. 1541, 2-4-2 type, weight in working order 59 tons. The engine and train were fitted throughout with the vacuum automatic brake, operating blocks on the coupled engine wheels and on all wheels of the coaching stock.

The goods train consisted originally of 1 loaded goods and 24 empty wagons, with a 20-ton brake-van.

The weather at the time of the accident was overcast, but dry.

Description.

Soothill Wood Colliery is the block post next in the up direction to, and about a mile and a quarter south-west of, Woodkirk Station. The double line of rail between the two posts is on a steep gradient, falling at an inclination of 1 in 50 towards Soothill; a tunnel, 660 yards long, intervenes, followed, on the Soothill side, by a short length of cutting, which changes to embankment about 220 yards north-east of Soothill signal-box.

The alignment of the railway from Woodkirk Station to Soothill signal-box is as follows:—

113 yards .. .. .	..	..	..	..	..	Tangent.
638	..	..	..	..	..	30 chain curve to North.
198	..	..	..	..	..	Tangent
495	..	..	..	..	..	30 chain curve to South.
176	..	..	..	..	..	Tangent
341	..	..	..	..	..	50 chain curve to South.

Woodkirk Station signal-box is situated alongside the down siding, next to the down line, north of the railway, and there are here a number of up siding roads which join the up line by a trailing connection about 150 yards south-west of Woodkirk box; ahead of this connection is the up advanced starting signal.

Soothill Yard box is also north of the railway, alongside the down line, and the approximate distances of the various signals, connections, etc., concerned, from this box, are as follows:—

Woodkirk up home signal .. .. .	..	..	..	..	2,114 yards N.E.
.. .. starting signal .. .. .	..	..	..	..	1,961
.. .. Signal-box .. .. .	..	..	..	..	1,861
.. .. up advanced starting signal .. .. .	..	..	..	..	1,615
Soothill up outer distant signal .. .. .	..	..	..	..	1,343
North end of tunnel .. .. .	..	..	..	..	1,217
South .. .. .	..	..	..	..	557
Soothill up inner distant signal .. .. .	..	..	..	..	370
Scene of collision .. .. .	..	..	..	..	201
Soothill up home signal .. .. .	..	..	..	..	68

Conclusion.

The severe storm on the 29th of January had resulted in extensive damage to block telegraph and telephone wires over a large area in this district, and traffic was still, on this branch, being operated under Block Telegraph Regulation 25.

The Great Northern goods train had spent some three hours at Woodkirk sidings before proceeding to Soothill. Signalman Lilley on duty at Woodkirk, states that before this train left, he informed the driver that the block had failed and then shewed him a green flag. The train was at the time on No. 5 up siding road, with the engine a few yards beyond the signal-box. This message was duly received by the driver and also by the guard, Pope, who was at the time near the engine, walking towards the brake-van. Lilley's booked time for the departure of this train (via the trailing siding connection south-west of the signal-box) is 2.13 p.m. It must however be remembered that this and other times given for various movements, etc., can only be regarded as approximate, as none of the clocks in the signal-boxes concerned had been checked with one another since the breakdown of communication on January 29th.

The next movement on the up line from Woodkirk was the Lancashire and Yorkshire passenger train, which is due to stop at the station, and to leave at 2.32 p.m. Lilley checked this train at his home signal, which he pulled off when the driver whistled. His starting and advance starting signals he kept at danger. Lilley's booked time for the arrival of this train is 2.34 p.m., i.e., 21 minutes after the goods train had left. Green, the driver of the passenger train states that when he was ready to leave Woodkirk station he whistled, and that the starting signal was then pulled off. As he approached the signal-box, a red flag was shewn. When he had come nearly to a stand, a green flag was substituted, and he was informed by the signalman that the block was out of order between Woodkirk and Soothill. The advance starting signal was at danger when this warning was given, but was pulled off shortly afterwards. Green states that he shut off steam, which he had applied in order to start from the station, before he reached the advance starting signal, and that his train was running without steam from that point onwards. About 126 yards from the tunnel mouth is Soothill up outer distant, which Green observed to be at danger. He estimated his speed on passing this to have been between 10 and 15 miles an hour. About half way through the tunnel Green states that he applied his brakes, reducing his vacuum from 20 to 5 inches. Soon afterwards he at first partially, and then completely released his brake and was running free, at a speed estimated by him at 15 miles an hour, when he emerged from the tunnel and sighted the Soothill inner distant signal, also at danger. He states that he then sounded his whistle and made a half brake application, thereafter again completely releasing his brake. He first sighted the obstruction when he was 20 or 30 yards beyond the inner distant signal, i.e., when the tail of the standing train was about 145 yards away. Green at once, according to his evidence, made a full brake application, with the result that his wheels picked up. He released sand, but failed to free his wheels, and then reversed his engine and applied steam. Immediately afterwards the collision occurred, at a speed, estimated by Green, of 8 miles an hour.

Green did not dispute the danger position of the Soothill distant signals nor the receipt of an adequate warning at Woodkirk; indeed he stated in his evidence that he "left Woodkirk prepared to stop short of any obstruction on the line." That he failed to do so must therefore—the brake equipment of the train being admittedly in good order—be attributed to an insufficient degree of caution in traversing the section. The extent to which Green is to blame depends very largely upon the actual speed at which he travelled, and, in the absence of block signals between the two posts concerned, there is more difficulty than usual in forming an estimate of this speed. George, the guard of the passenger train states that just as they left Woodkirk station, he looked at his watch and saw that he was one minute after his booked time, which is 2.32. Immediately after the collision, he again looked at his watch and found the time to be 2.38. The distance from the station to the scene of the accident is almost exactly a mile, so that the average speed would, on this computation, be 12 miles an hour. Owing to the check at the signal-box, however, the average speed from the station to the advance starting signal would almost certainly be considerably lower than that beyond the latter point. George, the guard of the train, Commercial Inspector Stevenson, who was travelling in the van, and Booth, signalman on duty at Soothill box, all estimated the speed at which the train emerged from the tunnel to be from 25 to 30 miles an hour. Booth stated that it was less than that of a passenger

train passing his post with clear signals, but added that he could see by the speed at which this train was travelling that it would not be able to pull up short of the obstruction.

In regard to Green's evidence on the various brake applications made by him, George stated that he was unaware of any brake application having been made prior to the collision. Mr. Stevenson thinks that the driver was applying the brake in the tunnel, but is of opinion that the final brake application was only made almost immediately before the collision took place.

In the light of the evidence on these various points, it is impossible to acquit Alfred Eyre Green, the driver of the passenger train, of failure to exercise the proper degree of caution necessitated by the circumstances. It is obvious that the conditions of gradient, curvature, and tunnel on this section are such that the very greatest caution is essential in working under Block Telegraph Regulation No. 25, and it is I think proved that the speed of Green's train, when he sighted the obstruction, was excessive. He attributed the skidding of the wheels to the greasy state of the rail caused by steam and vapours from the colliery works. As, however, he added that the rail at this point is generally greasy, he should have expected this condition and regulated the speed of his train accordingly.

He must therefore take the full responsibility for the accident.

George Lilley, the signalman at Woodkirk did not fully comply with the Regulation in question, in that he did not bring the train actually to a stand, nor did he warn the guard of the conditions.

It may be inferred from Green's evidence that he was not misled by these omissions and I do not therefore hold Lilley jointly responsible for the accident. The reason given by him for not taking the full action prescribed by the Regulation was that the block had been out of order for so long that he thought that it was unnecessary to do more than he did. Signalmen should however understand that they have no discretion in regard to obedience to a Regulation of this kind, and should appreciate the importance of taking every possible precaution in such circumstances, particularly on a section of this kind where conditions are so adverse. In this case, Lilley had no certain knowledge of the identity of the Lancashire and Yorkshire driver and could not therefore be sure that he had previously worked a train under the Regulation in question.

The case is similar to that recently reported upon near Mottram on the Great Central Railway, and is one of several which have occurred as a direct result of the storm at the end of January last. It is of great importance that the duration of traffic operation under Block Telegraph Regulation 25 should be reduced to a minimum, and I agree with the opinion, expressed in the report referred to, that the temporary installation of telephone block working by means of insulated cable run out from reels would be of the greatest value pending restoration of normal conditions. It will be observed that in this case about 12 days had elapsed since the storm which caused the damage.

I have, etc.,

G. L. HALL,

Major R.E.

The Director General,
Public Safety and General Purposes Dept.,
Ministry of Transport.