MINISTRY OF TRANSPORT

RAILWAY ACCIDENTS

REPORT ON THE COLLISION
which occurred on
1st August 1951 at
DALGUISE
in the
SCOTTISH REGION
BRITISH RAILWAYS

LONDON : HIS MAJESTY'S STATIONERY OFFICE
1951

FOURPENCE NET

SCOTTISH REGION
BRITISH RAILWAYS

MINISTRY OF TRANSPORT,
Berkeley Square House,
London, W.1.
1st September, 1951.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of 2nd August, 1951, the result of my Inquiry into the collision which occurred at about 4.56 p.m. on the 1st August, 1951, at Dalguise on the single line section of the main line between Perth and Inverness, in the Scottish Region, British Railways.

The 4.10 p.m. Down passenger train from Perth to Blair Atholl left Dalguise without a token and against the starting signal, and collided head-on with an Up Officers' Special train from Inverness to Glasgow which was entering the station under clear signals. The combined speed of the two trains at the time of the impact was about 30 m.p.h. Eight passengers, three railway officers, the driver and guard of the special train and the guard of the passenger train were injured, of whom three passengers and two members of the Railway Executive's staff were detained in hospital.

The Scottish Regional Medical Officer, who was travelling in the special train, examined the injured and rendered first aid. Further medical assistance was summoned and a doctor from Dunkeld arrived at 5.15 p.m., followed by ambulances at 5.35 p.m.

The 4.10 p.m. passenger train comprised four non-corridor coaches, weighing 117 tons, and it was drawn by a Class 3, 4–4–0 type tender engine weighing 108 tons, driven from the left hand side. The vacuum brake operated on the train and the westinghouse brake on the engine and tender, and the combined braking power of the train was 54% of its total weight of 225 tons. The length of the train was 100 yards. The front three coaches were well filled.

The Officers' special train consisted of Saloon No. 972002, weighing 32 tons, hauled by a similar class of engine. The braking power available was 43% of the total weight of the train which was 140 tons.

As a result of the collision both the engines were heavily damaged at the front ends and were partly derailed. The special train pushed the 4.10 p.m. train backwards and the recoil caused the coupling between the tender and the leading coach of the passenger train to break, the coaches stopping with a gap between them and the tender. Except for steel solebars, the saloon had timber underframe members and it was badly smashed at the leading end. The coaches of the 4.10 p.m. train were severely shaken and sustained many minor breakages. In addition, the main underframes and the bogie frames of the leading two coaches were distorted. All had steel underframes and the leading three coaches had shock absorbing buffers.

The damage to the permanent way was slight and normal working was resumed at 10.0 p.m. In the meantime, main line trains were diverted via Aberdeen and 'bus services were introduced for the local passengers.

The weather was fine and the rails were dry.

DESCRIPTION

Dalguise lies between Ballinluig, 3½ miles to the North, and Dunkeld, 5 miles to the South. It is 20 miles north of Perth and 15 miles south of Blair Atholl.

It is a simple single line station with an Up and a Down loop, and goods sidings with a connection in the Down loop near the south end of the platform. Up trains from the North approach the station on a long left-hand 31 chain curve, which finishes at the Up facing points. The approach from the South is straight for about ½-mile. The Down loop is straight except for a slight right-hand curve at the converging point of the loop lines at the north end of the station. The gradients are negligible.

The signalling consists of a distant, home and starting signal in each direction. The home signals are about 17 yards outside the facing points. The Down starting signal is 113 yards beyond the end of the platform and 123 yards in rear of the Up facing points.

The Up facing points and the facing point lock are worked from a 3-lever ground frame on the Down platform, from which the Down starting lever is slotted. All other points and signals are worked from a signalbox situated on the Down loop between the goods siding connection and the Down facing points. Train working between Dalguise and Ballinluig, and Dalguise and Dunkeld is by electric tablet and electric key token instruments respectively. The lever of the Up starter is released hy the withdrawal of a token from the instrument.

The two engines stopped with their front ends in the lead of the Up facing points about 87 yards beyond the Down starter. It was evident, however, from broken pieces of the teak underframe of the saloon found in the track, and from other indications, that the impact had occurred further towards Ballinluig, and that the Special train had pushed the passenger train back about 6 yards. The gap between the tender and leading coach of the passenger train was about 8 yards, and the brake compartment, at the rear end of the third coach, stopped opposite the Down starting signal.

The 4.10 p.m. train left Perth on time, with a horsebox for Dalguise attached between the engine and the coaches. The train had a normal run and, after being checked at the Dalguise home signal, Driver J. McPherson stopped it on the Down loop short of the goods siding connection. Fireman W. Riddell had handed the incoming token to Signalman J. Doig as the engine passed the box, but he was not given an outgoing token for the section to Ballinluig.

The horsebox was detached and placed for unloading by the train engine under the direction of Porter D. Robertson, who recoupled the engine to the train and connected the vacuum hose pipes. McPherson then drew the train into the Down platform and stopped it with the engine opposite the end ramp. He had not noticed the starting signal as he entered the station nor as he drew the train ahead.

Guard A. Robertson got down from the brake compartment and gave the driver the "right away" signal after the station work, which took about one minute, was completed. McPherson then started the train at 4.55 p.m., four minutes late. He forgot about the token and again did not look at the starting signal. According to his statement he was looking back along the train to ensure that a party of about 70 school boys in the first two coaches had closed all the doors, and he did not look forward until he was near the starting signal which he saw was at Danger. He closed the regulator, applied the brakes, first the vacuum and then the westinghouse, and then put the reversing lever into back gear. The combination valve was closed and the brakes were being worked independently. McPherson thought that the speed of the train was about 10 m.p.h. when he applied the brakes, and that it had nearly stopped when the impact occurred.

Fireman Riddell did not mention to the driver that he had not been given an outgoing token as they passed the box, and thought that the latter had noticed it. He assumed that McPherson received the token at the station. He also looked back along the train as it started and then began to fire, and he too did not see the starting signal. He heard the emergency brake application and looked out of the left-hand (driver's) side and saw the oncoming special train. He realised that there must be a collision, saw the fireman of the special train jump out, and he himself jumped just before the impact occurred. He took two or three paces in a forward direction down the bank and when he turned round saw that both engines were stationary after the impact and that he was opposite the cab of his engine.

Guard Robertson was prevented by an overbridge from seeing the starting signal when he gave "right away". As the train pulled out of the platform he was recording the times and it was not until the engine and one or two coaches had passed the starting signal that he looked out and saw it at Danger. He immediately applied the brake. He saw the train pipe needle of the vacuum gauge go to zero and concluded that the driver had made an emergency application at the same moment.

Ganger R. Stewart and two lengthmen were collecting tools after finishing work just outside the Up home signal. Stewart saw that signal was lowered and he also saw the special train approaching on the curve, at a speed he estimated to be slightly less than that of an ordinary passenger train. He then noticed that the 4.10 p.m. train was moving out of the station. He realised that a collision was inevitable and told one lengthman to run towards the 4.10 p.m. train, while he himself ran towards the special train, holding up his hands. The lengthman did not reach the 4.10 p.m. train before the collision, but Passed Fireman D. Thomson, of the special train, said that he saw Stewart almost at the same time as he noticed the Up home signal go to Danger. He made a full brake application and put the reversing lever into back gear, skidding the engine wheels. Thomson said that he had already slowed down on account of the 30 m.p.h. restriction through Dalguise, and because tokens were being exchanged by hand. He thought that the train was travelling at 15–20 m.p.h. at the time of the impact.

Fireman L. Rose heard Thomson make some exclamation and apply the brakes. He looked out of the left-hand side of the cab and saw the approaching passenger train. He too realised there must be a collision and jumped from the other side just before it occurred, and he rolled down the bank. When he picked himself up he was opposite the centre of the saloon.

Mr. J. M. Fyfe, Assistant to the Motive Power Superintendent, Scottish Region, was in the saloon and was looking out of a left-hand window in the direction of travel. As the train was about to pass the home signal he saw an engine fouling the Up loop line and went to apply the brake in the saloon. Before he could do so, however, he felt the emergency brake application made by the driver. Mr. Fyfe estimated that the train was travelling just over 20 m.p.h. before the brake application was made, and at about 10 m.p.h. at the time of the impact.

Signalman Doig had obtained line clear from Dunkeld for the special train, and was leaving the box to hand over the token when he saw the passenger train leaving the station. He therefore ran back into the box and put the Up home signal to Danger.

After the accident, Mr. E. D. Trask, Motive Power Superintendent, Scottish Region, who was also travelling in the saloon, examined both the engines and found the reversing levers in full back gear and the vacuum brake handles in the full application position The regulator of the passenger train engine was shut and that on the engine of the special train was slightly open He did not notice the position of the westinghouse brake handles.

Driver McPherson was questioned closely about his failure. He knew the line well and he stated that it was his usual practice to examine the token and look at the starting signal before starting a train, but that on this occasion he just forgot to do so He thought this was entirely due to the fact that his attention was distracted by the school boys who had caused him some anxiety throughout the journey as they were frequently changing compartments at stations. Guard Robertson had confirmed this. McPherson said that except for Porter Robertson, who rode on the engine as the train was drawn forward, he and Fireman Riddell were alone on the footplate and there had been little, if any, conversation between them.

McPherson had come on duty at 12.5 p.m. on the day of the accident after 16 hours rest ; he was not tired, and he had no special worries. He had suffered from anaemia about a year ago, but he said that he now felt perfectly well. He has been medically examined since the accident and found to be in a good state of health.

Conclusions

Driver McPherson must accept full responsibility for this accident. He could only attribute his action in starting the train without a token and against the starter to the fact that his attention was diverted to other matters concerning the passengers in the train. He gave evidence in a straightforward way and was very distressed at his failure. He is 53 years of age, has been driving for 20 years, and he has a good record

Consideration of the evidence and the result of a practical test made at the station lead me to the conclusion that McPherson and Guard Robertson made the emergency brake application only just before the impact, and that the 4.10 p.m. train was travelling at a little over 10 m.p.h. when the collision took place. It seems that Mr. Fyfe rather under-estimated the speed of the special train when the impact occurred and that it was probably nearly 20 m.p.h. This is understandable for he had moved into the saloon to apply the brake himself when the emergency application was made and he could not see the ground. The combined speed of the two trains was therefore about 30 m.p.h., and this is consistent with the damage to the engines.

The vacuum and westinghouse brakes were being operated independently on both engines. On the passenger train engine this was because the short pipe connecting the westinghouse brake application valve to the combination fitting between that valve and the vacuum ejector had fractured, and had been blanked off with a farthing piece. That was done by another driver on the 28th July, and the defect had not been booked. On the engine of the special train, Driver Stewart could not open the combination valve as it had seized. The practice of working passenger trains fitted with the westinghouse brake on the engine and the vacuum brake on the coaches with the combination valve closed is undesirable, and suitable notice has already been taken of this aspect of the case.

Remarks

According to records, this is only the second occasion in which a passenger train has been involved in a head-on collision with another train on a single line since the serious accident at Abermule in 1921. The other case occurred near Fishguard, in the Western Region, on 11th July 1951. The security of operation on single lines must depend to a large extent on drivers examining tokens before leaving stations and observing signals. These two serious lapses, which occurred within three weeks of each other, are in contrast with the high standard of discipline which is generally maintained in single line working and is proved by the freedom from accidents of this kind over a period of 30 years.

The locking of the starting signals with the token instruments, as done on the Dalguise-Dunkeld section, is a desirable safeguard in single line working, but in this case the lack of such a control between Dalguise and Ballinluig had no bearing on the accident. Trap points at the starting signal would, however, have prevented it, but if these are considered to be necessary at Dalguise, they should, logically, also be provided at a large number of other stations with similar layouts. I do not, however, consider that in present circumstances the expenditure of labour and material on such a scheme is justified. Both could be used to better advantage in other directions.

I have the honour to be,
Sir,
Your obedient Servant,
D. McMULLEN,
Colonel.

The Secretary,
Ministry of Transport.

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