

*Please return to C.I.O.'s office.*

LONDON MIDLAND & SCOTTISH RAILWAY.

MINISTRY OF TRANSPORT,  
7, Whitehall Gardens,  
London, S.W. 1.  
16th June, 1936.

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order of 6th April, 1936, the result of my Inquiry into the circumstances of the accident which occurred at 10.18 p.m. on April 2nd, opposite No. 7 signal box, at the North West end of Rugby Station, on the main line of the London Midland and Scottish Railway.

The 7.45 p.m. fitted freight train, Camden to Edge Hill, running at slow speed along the down Birmingham line, came into sidelong collision with the rear vehicles of the 6.20 p.m. partially fitted freight train, Camden to Birmingham, which was drawing out of the down goods yard on to the down Birmingham line. I regret to state that the guard of the 6.20 p.m. train was fatally injured.

The 7.45 p.m. train consisted of 19 wagons, all of which were fitted with the vacuum brake on all wheels, and a vacuum piped brake van, the total weight being about 275 tons; it was drawn by engine No. 5602, type 4-6-0, with 6-wheeled tender, fitted with steam brake controlled by the vacuum on coupled and tender wheels, and weighing 134 tons in working order. The percentage of brake power of engine and tender was 51 per cent., and the overall length of train and engine was about 170 yards.

The 6.20 p.m. train consisted of 50 wagons and brake van, the leading four wagons being vacuum brake fitted, and was drawn by engine No. 5596 of similar type.

As a result of the collision, the engine of the 7.45 p.m. train was apparently partially derailed for a distance of about 45 yards, after which it re-railed itself; the engine also suffered minor damage on the left-hand side; the three last vehicles of the 6.20 p.m. train were thrown off the track and considerably damaged, but the remainder of this train went forward without the enginemen becoming aware of the accident until stopped at the next signal box ahead.

Considerable local damage was done to the permanent way, in particular the point rods and signal wires adjacent to the track.

The night was dark but clear, and the rail was dry.

*Description.*

The L.M.S. main line through Rugby lies roughly East and West. At the East end the lines from Euston, direct and via Northampton, converge at Clifton Road Junction. At the West End the double track Leamington branch curves to the South West, the double track Birmingham line continues almost due West, and the double track main line to the North curves away to the North West, and opens out into four tracks.

The signal boxes from East to West are Clifton Road Junction, Rugby No. 1 at the East end of the platform, Rugby No. 2 about the middle of the down platform, Rugby No. 4 at the West end of the platform, Rugby No. 5 about 300 yards further West, on the North side of the up lines, and Rugby No. 7 about 700 yards beyond No. 5 box, at the West end of the goods yard and adjacent to the junction of the Leamington Branch.

The three trains concerned passed Rugby Station by three parallel routes, the southernmost being the Down Through Goods road (6.20 p.m. Camden—Birmingham), next to this the Down Main, which beyond No. 4 box is called the Down Birmingham (7.45 p.m. Camden—Edge Hill), and next again the Down Platform Road, which beyond No. 4 box becomes the Down Main. This latter route was followed by No. 915 excursion train, Euston to Tunstall, which was stopped by signal some distance in rear of the collision; this train is only concerned inasmuch as its presence had some bearing on the cause of the collision.

The down sidings in which the 6.20 p.m. train had to work are on the South side of the line between Nos. 5 and 7 boxes, and the normal exit from them towards Birmingham and the North is over a crossover from the Down Through Goods (lever Nos. 32 and 33) opposite No. 7 box on to the Down Birmingham line. The collision occurred at this crossover, the 6.20 p.m. coming out of the goods yard over the crossover on to the Down Birmingham line and so on towards Birmingham, while the 7.45 p.m., having run past signals, was travelling along the Down Birmingham line, the driver expecting to be diverted to the down slow line to the North by means of another crossover (lever Nos. 42 and 43) some 200 yards further on.

Approximately parallel with the crossover, Down Through Goods to Down Birmingham, referred to above as the site of the collision, is another crossover, Down Birmingham to Down Main (lever No. 30), which is the route normally followed by the 7.45 p.m. train.

The signals particularly concerned, apart from the distants of all the boxes, all of which were on, are the down outer homes and the down inner homes of No. 7 box.

The outer homes consist of a gantry carrying two groups of two dolls each; the pair on the right, practically over the Down Main, apply to the Down Main (No. 18), and Down Main to Down Birmingham (No. 7) over a crossover immediately beyond the signal. The former signal (No. 18) was off for the excursion train. This pair of signals are of equal height and slightly higher than the other pair, which are located well away to the left and apply to the Down Birmingham to Down Main (No. 15) over the crossover (No. 30) usually traversed by the 7.45 p.m. train, and the Down Birmingham line (No. 10). Both of these signals were at danger.

The inner homes are on a gantry carrying seven dolls immediately beyond the point of collision; the right-hand and highest arm (No. 21) applying to the Down fast and being off for the excursion train, the next, slightly lower, (No. 19) reading Down fast to Down slow, the third lower still, reading Down Birmingham to Down slow (No. 12). The fourth, of the same height as the second, applies to the Down Birmingham line (No. 11) and was off for the 6.20 p.m. train, and the fifth, of the same height as the third, reads Down Birmingham to Down Leamington branch (No. 5). The three Birmingham line signals are centred over that line, the two main line signals being slightly to the right of the main line.

Distances from Rugby No. 7 box and point of collision :—

|       |  |     |     |     |     |                        |
|-------|--|-----|-----|-----|-----|------------------------|
| Rugby | No. 1 down distant signals                                 | ... | ... | ... | ... | 2350 yds.              |
|       | No. 4 " " "  | ... | ... | ... | ... | 1820 "                 |
|       | No. 1 box, East end of platforms                           | ... | ... | ... | ... | 1640 "                 |
|       | No. 4 " West " "   | ... | ... | ... | ... | 1000 "                 |
|       | No. 6 " down distant signals                               | ... | ... | ... | ... | 1000 "                 |
|       | " " " down homes and No. 7 down distants                   | ... | ... | ... | ... | 820 "                  |
|       | No. 5 box  | ... | ... | ... | ... | 700 yds. East          |
|       | No. 7 box down outer homes 10, 15, 17, 18                  | ... | ... | ... | ... | 192 " "                |
|       | Crossover No. 32/33, down through goods to down Birmingham | ... | ... | ... | }   | Opposite<br>No. 7 box. |
|       | Crossover No. 30, down Birmingham to down main             | ... | ... | ... |     |                        |
|       | Point of Collision   | ... | ... | ... |     |                        |
|       | No. 7 box down inner homes, 11, 12, 19, 21                 | ... | ... | ... | ... | 16 yds. West           |
|       | Junction down main to down slow and down fast              | ... | ... | ... | ... | 170 " "                |
|       | Crossover No. 42/43, down Birmingham to down slow          | ... | ... | ... | ... | 170 " "                |

### Report.

Driver Worthington of the 7.45 p.m. fitted freight train stated that, after coming to a stand in the loop at Kilsby, he proceeded towards Rugby, finding the distant signals at Caution at Hillmorton, Clifton Road Junction, and Rugby Nos. 1, 2, 4, 5, and 7 boxes, but the home signals off at all of these boxes up to and including Rugby No. 5.

He was running about 30 minutes late, and he estimated that he passed outside Rugby Station at about 10 to 15 m.p.h. with his regulator closed and the brake lightly applied. Approaching the outer home signals of No. 7 box, he saw

the right-hand top signal (No. 18) off and mistook it for No. 15 which actually applied to the line occupied by his train; he stated that he continued at slow speed, not intending to open his regulator again until he could see his starting signal, and saw the down Birmingham inner home (No. 11) off. He mistook this for the "down Birmingham to down slow" (No. 12) signal, and remarked to his fireman that they were going slow line. He did not see the tail lamp of the 6.20 p.m. train until it was a few yards away, when he made a full brake application practically simultaneously with the collision. He estimated that his speed at the moment of impact was not much more than 5 m.p.h.

Fireman Nursaw generally confirmed the statements of Driver Worthington; he saw the home signal of No. 4 box "off" and the distant at the same point "on", and after that commenced firing, which he was still doing at the moment of collision, when he estimated the speed was still about 5 m.p.h. He was under the impression that Worthington had slightly opened the regulator when approaching No. 7 box.

Guard Davies of the 7.45 p.m. train confirmed Driver Worthington's statements as to speed and brake application. He saw all the distant signals "on" through Rugby, but on approaching No. 7 box he stated that he could not see the home signals owing to smoke and the presence of vans on the train.

He said that he was standing on his verandah at the time, looking out for signals, and watching to see whether the train was to be diverted on to the slow line, in which case he would have to change his sidelights.

He thought that as the engine got to No. 7 box he felt a slight pull as if the driver had opened his regulator a little and released the brake.

Signalman Lambourne in Rugby No. 7 box stated that, after the 6.20 p.m. train was ready to depart, he offered it forward at 10.14 p.m., it was accepted, and he gave "Train-entering-section" at the same time. He had reversed crossover No. 32/33 and pulled off No. 11 signal, and he estimated that the train was going about 10 m.p.h. by the time the brake van reached his box.

Owing to the late running of the 7.45 p.m., the down fast line was not available, being occupied by a Postal train, and thereafter by No. 915 excursion, and the Irish Mail; Lambourne was instructed by Control, therefore, to send the 7.45 p.m. by the down slow line as far as the next box, and thus it was necessary to hold the train at the outer home signal until the 6.20 p.m. train had cleared the crossover and track ahead.

The local instructions provide that the signalman at No. 7 box is authorised to accept under Regulation 4 a non-passenger train up to his down outer home signals if the line is clear as far as Newbold Road bridge, about 100 yards beyond the signal, and this was the case on this occasion.

Owing to the short intervals between boxes at Rugby, there is a special code of bell signals for trains not booked to stop (5-1-2 bells for a fitted freight train to the down main), and the local instructions provide that this signal must be transmitted from box to box as far as No. 7, and unless the signalman there can obtain "Line Clear" from the box ahead, he may only acknowledge with the ordinary "Line Clear" signal (5 bells), in which case all distant signals through Rugby are maintained in the Caution position.

The 7.45 p.m. train was offered to No. 7 with a 5-1-2 bell signal but was not accepted as the line was not clear to the next box, subsequently being offered with a 5-bell signal and accepted under Regulation 4 as authorised by the local instructions quoted above.

Lambourne left his outer home signal (No. 15) at danger (the interlocking with the crossover ahead would have prevented him from pulling it off in any case), and heard the annunciator ring to show that the 7.45 p.m. train had arrived at the outer home signal, but this rings for 10 seconds only and did not therefore suggest to his mind that the train had failed to stop at the outer home signal. He heard the train approaching and realised the situation too late to be able to do anything; his detonator placers are practically at the inner home signals and therefore just beyond the point of collision.

He estimated that both trains were running at about the same speed, about 10 m.p.h. at his box, so that if the trailing end of the 6.20 p.m. had progressed only a few yards further the collision would have been a following one, probably of negligible effect.

After the collision Lambourne sent the "Obstruction-Danger" signal to No. 5 box, with the result that No. 915 excursion train on the down main line, which was proceeding slowly under distant signals at Caution, was brought to a stand at No. 5 box home signal.

#### *Conclusion.*

Responsibility for this accident lies with Driver Worthington of the 7.45 p.m. train, who frankly admitted that he had made a mistake in reading the signals of Rugby No. 7 box. He had been working this train regularly, probably 20 or 30 times, having been in the link for about 12 months. He stated that he had learnt the road thoroughly both by day and night, and had signed the route card last in January: he had never found any difficulty in identifying the signals passing through Rugby, but had very seldom been brought to a stand at Rugby and had never previously been diverted on to the slow line at this point, his usual route being over crossover No. 30, between the outer and inner home signals of No. 7 box, on to the down fast line.

I do not think he can be blamed for not seeing the tail lights of the 6.20 p.m. train while converging on to his track.

Worthington is 54 years of age, with 39 years' service with the Company, having been driver since 1919. He has a fairly good record.

From the fact that the engine travelled about 108 yards under a full brake application after the initial collision, I think it must be assumed that the speed at the moment of impact was appreciably higher than that estimated by the trainmen, and was probably not less than 15 m.p.h. or so.

It was unfortunate that Guard Davies was unable to detect the danger aspect of the outer home signal owing to smoke and steam, as, at this comparatively slow speed, a brake application even after the engine had passed the signal might still have averted the collision; but I have no reason to doubt his statement that he was on the look-out to the best of his ability.

He is 60 years of age and has 37 years' service with the Company, having been a Goods Guard since 1900. He has a very good record.

#### *Recommendations and remarks.*

I discussed the arrangement of the signals concerned with the Company's officers, but I was unable to offer any criticism of the present arrangement or to suggest any improvement which would avoid risk of such a mistake recurring; moreover, a new colour-light signalling scheme for Rugby is under preparation and is, I understand, likely to be carried out in the near future.

It is problematic whether the special local instruction authorising clear (Regulation 4) acceptance with a limited overrun had any material bearing on this case. If the signalman at No. 7 had given a warning acceptance (Rule 5), the driver would have been given a warning at the preceding box and the accident would probably have been avoided; on the other hand, even if the full  $\frac{1}{4}$ -mile overrun had been available, it seems probable on the evidence that the accident would still have occurred.

In the circumstances, I have no recommendation to make in connection with this accident.

I have the honour to be,

Sir,

Your obedient Servant,

A. C. TRENCH, *Colonel.*

The Secretary,  
Ministry of Transport.