DEPARTMENT OF TRANSPORT

RAILWAY ACCIDENT

Report on the Collision that occurred on 11th November 1976 at Melton Lane near Ferriby

IN THE

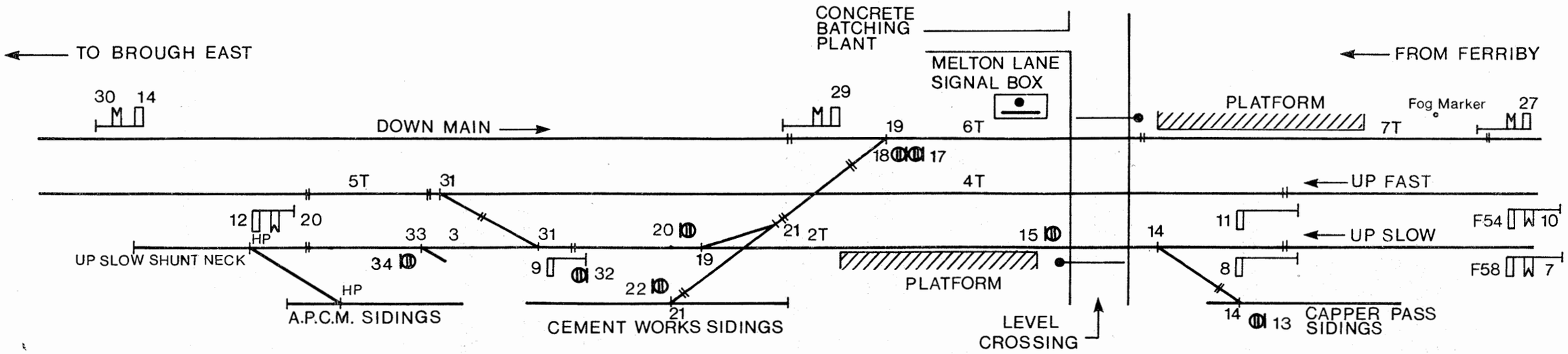
EASTERN REGION

BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE

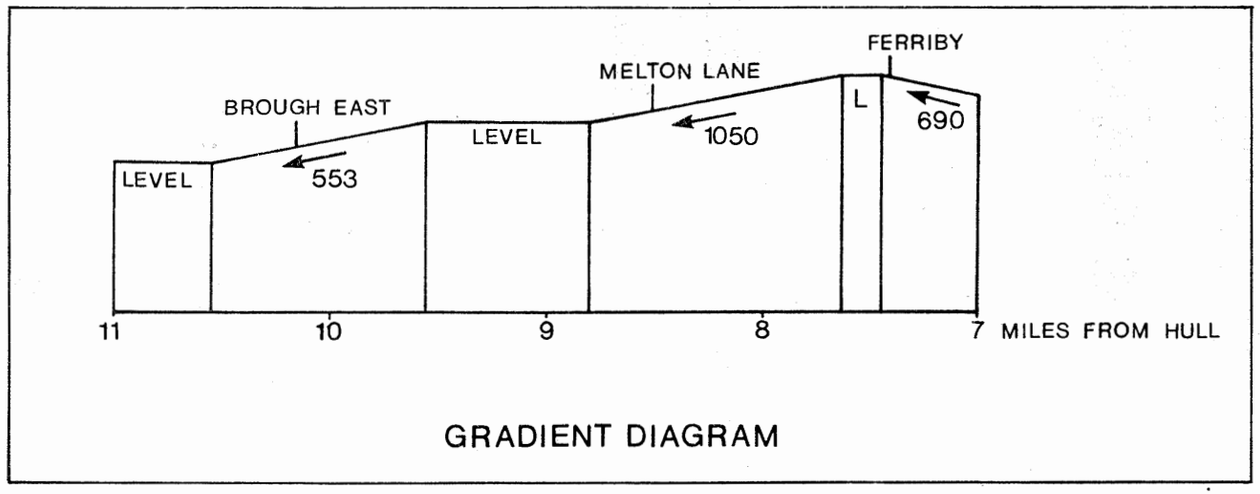
55p net

COLLISION AT MELTON LANE – 11th NOVEMBER 1976

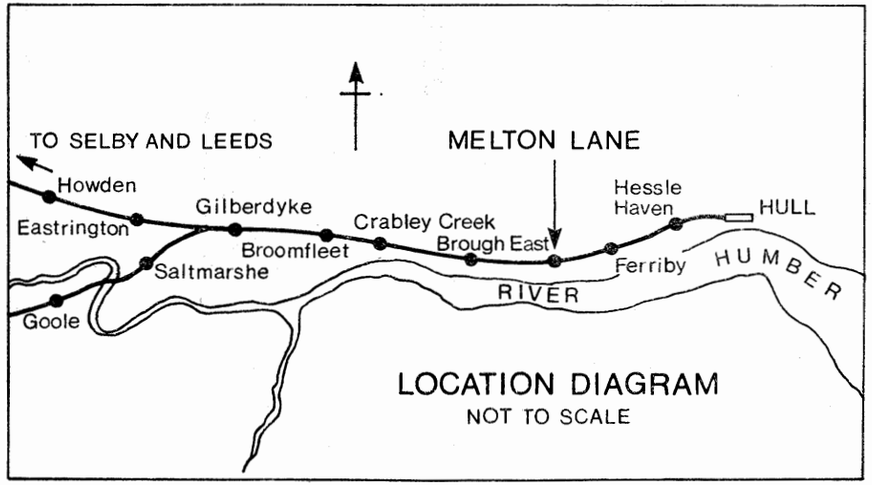


NOTE : TRACK CIRCUITS SHOWN THUS 2T

PLAN SHOWING POINTS AND SIGNALS – NOT TO SCALE



GRADIENT DIAGRAM



LOCATION DIAGRAM
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RAILWAY INSPECTORATE,
DEPARTMENT OF TRANSPORT,
2 MARSHAM STREET,
LONDON SW1.
19th September 1977.

SIR,

I have the honour to report for the information of the Secretary of State, in accordance with the Order dated 23rd November 1976, the result of my Inquiry into the collision between a passenger train and the stationary wagons of a freight train that occurred on 11th November 1976 at Melton Lane, on the line between Selby and Hull in the Eastern Region of British Railways.

At about 10.10 on Thursday, 11th November 1976, the 08.30 Hull to Melton freight train (9T61), running over an hour late, arrived at the Melton Up Slow Home signal. Dense fog covered the area, visibility being about 30 yards. It was normal practice for the locomotive of this train to be detached in order to collect empty wagons from sidings on the Hull side of Melton Lane Halt, and to place these wagons onto the head of the train before drawing the composite train forward into another group of sidings on the Selby side of the Halt. On this occasion, the locomotive duly collected the empty wagons but, because of the fog and the length of the train—9T61 consisted of 29 wagons plus a brake van and there were 32 empty wagons—the guard decided to place the empty wagons in the sidings first before returning for the rest of the train. Whilst this was being done, the Melton Lane signalman assumed, wrongly, that the whole composite train had been taken into the sidings and therefore gave 'Train out of section' for 9T61 and accepted the next train, 2D56, the 10.15 Hull to Goole diesel multiple-unit passenger train. This train approached Melton Lane on the Up Slow line at about 35 mile/h and collided with the brake van and wagons of 9T61 which were still standing in rear of the Up Slow Home signal.

As a result of the collision, the leading car of the passenger train and the rear two vehicles of the freight train were derailed and extensively damaged. The second of the two cars in the passenger train was also damaged but less seriously. There were four passengers in 2D56 in addition to the driver, guard, and a second driver under tuition. All seven received minor injuries: they were given First Aid at the adjacent premises of Messrs. Capper Pass and six were subsequently transferred to Hull Royal Infirmary for further treatment, one passenger being detained overnight.

The collision blocked only the Up Slow line. Immediate action was taken by the signalman and trainmen to protect the obstruction and to call the emergency services, which arrived on site with commendable speed despite the thick fog. The derailed vehicles were rerailed at 18.30 and the Up Slow line was re-opened to traffic at 20.06 after an examination of the track. During the time the line was blocked a special bus service was arranged for passengers to Ferriby Station and Melton Lane Halt.

DESCRIPTION

The Line and Signalling

1. Melton Lane Signal Box is situated just over 8 miles to the west of Hull on the Leeds City to Hull Paragon Line. The adjacent boxes are Brough East on the Leeds side and Ferriby Station on the Hull side. There are three running lines between Ferriby Station and Melton Lane: the Up Slow, Up Fast, and Down Main. The Up direction is towards Leeds. The maximum permissible speeds at the time of the accident were 70 mile/h on the Up Fast and Down Main lines and 60 mile/h on the Up Slow. For most of the distance between Ferriby and Melton the line falls at a gradient of 1 in 1050.

2. At Melton Lane there is a Halt with platforms on the Up Slow and Down Fast lines separated by a public level crossing controlled by Melton Lane Signal Box. The box is situated on the Down, i.e. the north side of the line. On the Up side of the lines there are two groups of private sidings, those of Messrs. Capper Pass Limited to the east of the signal box and those of Associated Portland Cement Manufacturers (APCM) to the west of the box. At the time of the accident there was a 'ready-mix' concrete batching plant close to the signal box on the Down side.

3. Melton Lane Signal Box is a 31 lever mechanical-frame box. The Absolute Block Regulations apply on all lines, signalling of trains being by upper quadrant semaphore signals situated on the left of the line to which they apply. The box has an illuminated diagram showing occupation of track circuits. Details of the track circuits, together with other features of the layout and signalling, are shown on the Diagram at the front of the report: it will be noted that, at the time of the accident, there was no track circuit in rear of Signal No. 8, the Up Slow Home signal.

The Trains

4. The freight train was 9T61, the 08.30 Hull to Melton consisting of diesel locomotive No. 40083, 13 loaded 21-ton Hopper wagons, 16 empty Presflo wagons, and a 20-ton brakevan.

5. The passenger train was 2D56, the 10.15 Hull to Goole consisting of a two-car diesel multiple-unit: power car No. E.51238 (leading) and trailer car No. E.56073.

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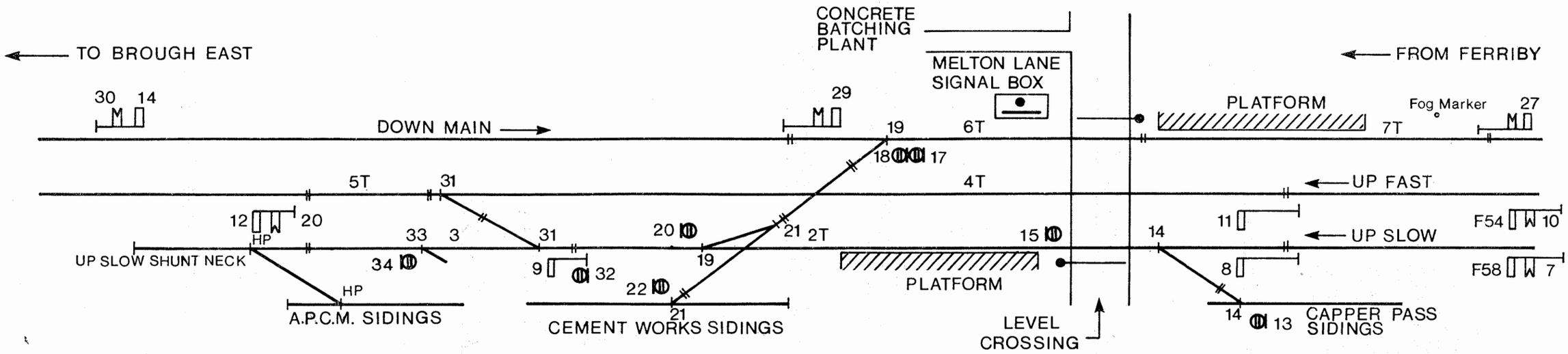

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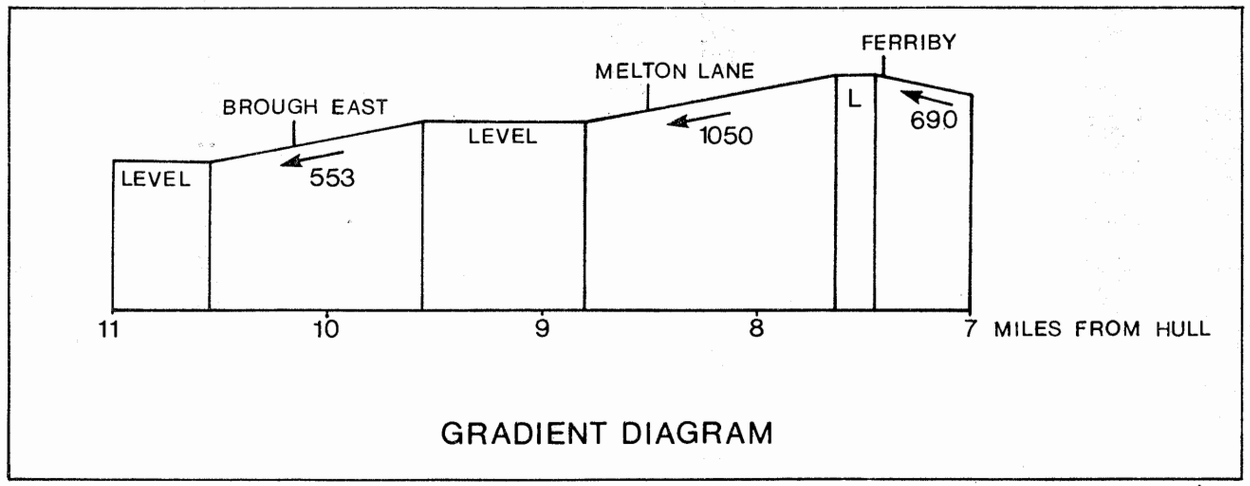

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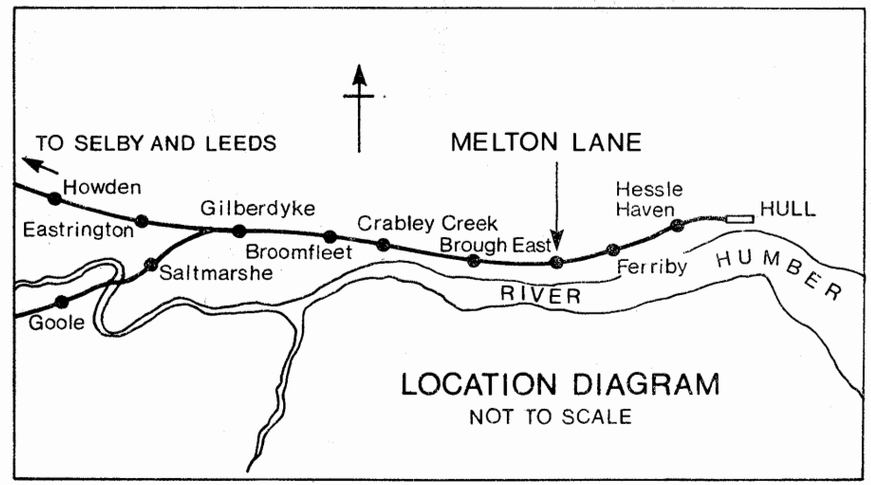

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3. Melton Lane Signal Box is a 31 lever mechanical-frame box. The Absolute Block Regulations apply on all lines, signalling of trains being by upper quadrant semaphore signals situated on the left of the line to which they apply. The box has an illuminated diagram showing occupation of track circuits. Details of the track circuits, together with other features of the layout and signalling, are shown on the Diagram at the front of the report: it will be noted that, at the time of the accident, there was no track circuit in rear of Signal No. 8, the Up Slow Home signal.

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5. The passenger train was 2D56, the 10.15 Hull to Goole consisting of a two-car diesel multiple-unit: power car No. E.51238 (leading) and trailer car No. E.56073.

Rules and Regulations

6. Extracts from the British Railways Rule Book and the Regulations for Train Signalling and Signalmen's General Instructions relevant to the Inquiry are reproduced in the Annexure at the back of the report.

7. The section in the Rule Book dealing with signalling during fog (Section L) is not reproduced since none of its provisions applied at the material time on the line concerned: although fog signalling was in operation generally, no fogsignalmen were on duty at any of the signals concerned. This aspect is discussed later in the report—see paragraphs 49–51.

Evidence

8. The driver of the freight train was *Driver N. McLachlan*, based at Botanic Gardens Depot, Hull. He had had many years experience of the Hull–Leeds line and had often worked the Hull to Melton freight trains. On the day of the accident he left Botanic Depot at 08.20 and travelled light engine to Hull New Yard where the train, 9T61, was waiting. He was accompanied by Guard Patching, with whom he had often worked in the past, and by Relief Driver Marshall who was acting as his secondman. The departure of the train was delayed and it was just after 10.00 when they finally left Hull, with Driver Marshall at the controls. Visibility was poor and the fog, which was patchy, got worse as they travelled west. At Ferriby the train was routed from the Up Main to the Up Slow line, which was normal. The Ferriby Up Slow Starting signal (No. F58) was clear but the Melton Lane Distant (No. 7), mounted on the same post, was at Caution. The train was stopped a few yards short of the Melton Lane Up Slow Home signal (No. 8) which was at Danger. From this position Driver McLachlan could just see the level crossing gates ahead through the fog.

9. After about a minute the gates were swung against the road and Signal No. 8 was cleared. McLachlan uncoupled the locomotive from the train and Marshall drove it forward clear of ground Signal 15 and then, when Signal 15 cleared, into the Capper Pass sidings. There, the Capper Pass shunters indicated that there were 32 empty wagons to pick up, located in two of the sidings. These wagons were collected together and drawn out of the sidings onto the Up Slow line. As the locomotive approached ground Signal 32 the signal cleared and the locomotive drew forward into the head shunt. From experience, McLachlan knew that at this point the rearmost of the 32 wagons would be clear of the sidings, enabling No. 14 points to be restored to Normal.

10. Under the normal procedure, the signalman would then clear ground Signal No. 20 to authorise the propelling of the empty wagons back onto the train, which was still standing at No. 8 signal. However, because of the fog the ground signal was not visible from the locomotive so McLachlan got down and went back to check. The signal was clear, so he rejoined the locomotive and the propelling movement was started. After moving slowly some 15 or 20 wagon lengths there was a loud knocking on the side of the locomotive and Marshall, who was still driving, brought it to a stand. The knocking had been done by Guard Patching who had also called out to them to stop. The guard explained that, because of the length of the train and the fog, he had arranged with the signalman for the locomotive to dispose of the empties into the APCM sidings before going back for the main part of the train. Driver McLachlan was not certain exactly where the locomotive was at this time but he thought it was alongside the platform, with the guard in the space between the Up Slow and the Up Fast lines. The movement was accordingly reversed and the empty wagons placed in the APCM sidings. After uncoupling, the locomotive was moved out of the sidings at the west end and up to ground Signal No. 34, which was at Danger. Guard Patching, who had accompanied the locomotive into the APCM sidings, went to a telephone and spoke to the signalman, who told him that the Hull to Goole passenger train had collided with the main part of the train.

11. I asked Driver McLachlan whether he had ever considered that, under the terms of Section J or K of the Rule Book, a member of the train crew should have gone to the signal box to sign the register and to ensure that the signalman had placed a reminder appliance on the block instrument. He told me that he had never considered it and that it had never been done during the 25 years or so that he had been making the movement.

12. *Relief Driver A. L. Marshall* confirmed the evidence of Driver McLachlan. In particular, he confirmed that Guard Patching, after stopping the propelling movement, had said that he had agreed the change of plan with the signalman.

13. *Guard E. Patching*, also of Botanic Gardens Depot, Hull, had acted as guard on Hull to Melton freight trains on and off since 1948. During all this period the shunting movements at Melton had followed substantially the same pattern and never in his experience had a member of the train crew been to the signal box under the former Rule 55, now Rule K.3. On the day of the accident the departure of the train was delayed and it was 09.25 when they drew out of Hull Sidings. They were further delayed at Hessle Haven until just after 10.00 when they went forward to Melton Lane, arriving there at 10.10. The train stopped at the Up Slow Home signal (No. 8) and, Patching told me, he could at that time see forward about three-quarters of the length of the train. The brakevan was displaying a single lighted red tail lamp and he did not consider that it was necessary to light the side lamps.

14. By the time he had walked to the front of the train the locomotive had gone into the Capper Pass sidings so he went forward to No. 14 points. The locomotive drew the empty wagons out clear of these points and continued slowly forward before stopping. At this moment he had thought that, with visibility poor, the 32 empty wagons added to the 29 they had brought from Hull would make the train too long for him to control properly. He therefore went onto the level crossing, standing between the Up Slow and the Up Fast

lines, and shouted to attract the attention of the signalman. The latter opened the sliding window in the front of the box and looked out and Patching told him that he was going to put "the empties" into the APCM siding. The signalman said "right-ho" and closed the window. Patching was quite sure that it was the signalman who had looked out, and that he had understood what he, Patching, was going to do.

15. At this point the locomotive began to propel the empty wagons back towards the train so Patching moved along the platform and onto the lineside between the end of the platform and the east-end connections to the APCM sidings. There he knocked on the side of the locomotive and it stopped. He climbed into the cab and told the driver and secondman of the change in plan, adding that it had been agreed with the signalman. He remained in the cab whilst the locomotive drew the empty wagons forward into the head shunt and then propelled them into the APCM sidings. After the locomotive had been uncoupled it was driven out into the head shunt and down to ground signal No. 34 where Patching got down and telephoned the signalman who told him that there had been an accident.

16. The passenger train was driven by *Driver S. Smith*, who was based at Botanic Gardens Depot and who also had long experience of the Hull–Leeds line. He booked on duty at 05.25 on 11th November and after working an empty train to Paragon Station he drove the 08.00 passenger DMU train from Hull to Goole. This train was formed of the same unit that later became involved in the collision. Smith worked it back to Hull, where it formed the 10.15 train to Goole. During the journeys to Goole and back the unit had performed satisfactorily, the braking being excellent. At Hull, he remained on the train, where he was joined by *Relief Driver S. Coupland* who had been route learning in the Hull area and who asked if he could join him in the cab for the journey to Goole: Smith readily agreed, being glad of the company in the foggy conditions.

17. The train left Hull on time, with Smith driving. After stopping at Hessle they were routed, as normal, to the Up Slow line at Ferriby where they stopped. On leaving, the Ferriby Up Slow Starting Signal (F.58) and the Melton Lane Up Slow Distant (7) were both clear. Visibility was poor, about 30 to 40 yards, but both drivers said that they had no difficulty in sighting the signals. Approaching Melton Lane they were looking ahead for the Home signal when the outline of a train loomed out of the fog immediately ahead. Smith at once made an emergency application of the brake and left the driving seat and two or three seconds later the collision occurred. Smith thought that the train was probably under power, in third gear, at the moment he sighted the other train, the speed being between 30 and 35 mile/h. He shut off power as he applied the brake, but did not think that speed was significantly reduced before the impact. Neither driver could be sure whether he had seen a tail lamp on the brakevan or not although Smith was fairly sure that he had seen a light of some sort. The windscreen wipers were not in use at the time but the screen was clear.

18. After the collision, Smith found himself at the back of the badly crushed cab with a cut hand. Coupland had been thrown out and was lying on the ground. He was cut about the hands and shoulders. After conferring together, Smith went forward to the signal box where the signalman told him that he had protected the obstruction by replacing all his signals. Coupland made his way to the rear cab, operated the 'engine stop' button, took the track circuit operating clips and detonators and applied the clips to the Up Fast line. He than walked back to Ferriby, putting down detonators and reported to the signalman that the train was properly protected. Both drivers were congratulated at the public Inquiry on the exemplary way in which they had carried out their duties in spite of their injuries.

19. The guard of the passenger train, *Guard F. D. J. Newitt*, based at Doncaster was near the front of the train, walking forward, when he felt a sharp brake application. He looked forward and saw a red light, or lights, directly ahead at a distance he estimated as between 60 and 80 yards. An instant later the collision occurred and he was thrown heavily to the floor. After attending to the passengers, he assisted with providing protection at the rear of the train and was then taken to hospital.

20. *Signalman G. E. Oxendale* was on duty in Ferriby Signal Box. At 09.57 he accepted the Hull to Melton freight train, 9T61, from Hessle Haven and received the 'Train entering section' signal for it almost at once. He offered the train forward to Melton Lane and it was accepted and he booked this also as 09.57. He set the Up Main to Up Slow points and cleared his signals and the train passed at 10.05. He replaced the signals to Danger and sent the appropriate bell signals to Hessle Haven and Melton Lane. At 10.17 he was offered 2D58, the 10.15 Hull to Goole passenger train, and accepted it. His next action was to telephone the signalman at Melton Lane. As far as he could remember he had said: "How is the pilot doing—I've got the Goole on the line from Hessle Haven". The signalman had replied :"Alright". A short while later, at 10.23, Oxendale received the 'Train out of section' signal from Melton Lane for 9T61. He at once offered the passenger train to Melton Lane and it was accepted. He cleared his signals and gave 'Train entering section' to Melton Lane at 10.30. About two minutes later he received the 'Obstruction—Danger' signal from Melton Lane and learnt from the signalman that the passenger train had run into 9T61.

21. I asked Signalman Oxendale why, in view of the paragraphs headed "Use of Telephones" in the Signalman's General Instructions, he had not used the block bells in accordance with Regulation 21 of the 'Regulations for train signalling on double lines by the absolute block system' to remind the Melton Lane signalman that he was required to clear the line and avoid delay to the passenger train. He replied that it had always been his custom to telephone when there was a chance that shunting at Melton Lane might delay following trains.

22. On duty in Melton Lane Signal Box was *Signalman A. C. Kirkby*. He had been a railwayman since 1942 and a signalman since 1948. He had worked at Melton Lane for the past five years and had also worked there on an earlier occasion. On the day of the accident he started work at 06.00 having finished the previous

day at 14.00. At about 08.00 he was joined in the box by a trackman who had been detailed to act as a look-outman for staff of the Electricity Board who were due to carry out work near the line; these men did not arrive, and the trackman remained in the box until after the accident had happened. The fog had been thick since Kirkby came on duty and Regulation 4 (e) was being applied. There were no fogsignalmen on duty.

23. Signalman Kirkby described the normal way in which the Hull to Melton Lane freight train, 9T61, was handled. After being brought to a stand at Signal No. 8 the locomotive would be uncoupled and he would lower the signal to allow the locomotive to proceed over the crossing and in rear of ground signal 15. Having replaced Signal 8 he would reverse No. 14 points, clear Signal 15, and the locomotive would go into the Capper Pass sidings. Having picked up the empty wagons the locomotive would draw them out of the sidings and would move to the rear of Signal 20 or sometimes, with a short train, to the rear of Signal 15 only. Having restored No. 14 points he would clear the ground signal to authorise the locomotive to propel the empty wagons onto the train. Once the empty wagons had been coupled to the front of the train the whole train would be taken into the APCM sidings. Clearance of track circuits 2T and 3T on the signal box diagram indicated that the train was clear of the Up Slow line. In his experience, this was the way in which the movements had always been made.

24. At 09.56 he accepted 9T61 from Ferriby, the conditions of Regulation 4 (e) having been fulfilled, and it arrived at No. 8 signal at 10.10. He could just see the locomotive standing at the signal. He lowered the signal and the locomotive came past the box. After reversing No. 14 points he cleared Signal 15 and the locomotive went into the sidings. After a few minutes he cleared Signal 13 for the movement to come out. It did so, and when the last vehicle had cleared No. 14 points he reversed the points and replaced Signal 13. The movement came to a stand with the last vehicle more or less opposite the signal box, and Kirkby cleared Signal 20. After a few minutes he saw the wagons moving to his left, towards the main part of the train, and then stop. After another minute or two the train began to move to the right so he operated lever 33 to reverse the trap points and cleared Signal 32 to authorise the move into the APCM sidings. The train disappeared into the fog but as it passed he did not specially notice the last wagon and he did not look to see whether it was carrying a tail lamp. Nevertheless, he assumed that the empty wagons had been coupled to the train and that it was the complete train that had gone past his box.

25. In Guard Patching's presence, I told Kirkby what Patching had said about his shouted conversation with him concerning the change of plan, but he had no recollection whatsoever of such a conversation. Nor could he remember having opened the window at any of the material times. There had been a lot of noise from the ready-mix concrete plant, which was working at the time, and he remembered that someone he took to be a lorry driver appeared to be complaining about being held up by the level crossing gates. But he could remember nothing about a change of plan as regards the shunting.

26. Whilst the shunting moves were in progress, Kirkby had been joined in the signal box by two other people, Traffic Assistant Dent and Area Inspector Jefferson, who had come to give him his wages. They had arrived in the box at approximately 10.16 and after giving him his wage packet, which Kirkby had put in his pocket unopened, there had been some conversation about his uniform, which did not fit properly and had, he thought, been intended for another signalman of the same name.

27. At about 10.20 he received the telephone message from Signalman Oxendale telling him that the passenger train was approaching Ferriby. A few minutes afterwards he saw track circuits 2T and 3T clear and, still under the impression that the whole of 9T61 had gone down towards the head shunt, he gave the 'Train out of section' for it to Ferriby. He was at once offered the passenger train and accepted it, booking the time as 10.24. In turn, he offered it to Brough East and, as soon as it was accepted, reversed No. 31 points and cleared signals 8, 9, 12 and 7. At 10.30 he received 'Train entering section' from Ferriby and very soon afterwards he heard a loud bang down the line. He realised at once that the passenger train had run into an obstruction and he sent the 'Obstruction—Danger' signal to Ferriby and Brough East and telephoned the Control Office at Doncaster requesting the emergency services.

28. In reply to my questions, Kirkby said that he had not been distracted from his duties by the three people in his signal box although he agreed that, on the timings given, the train of empties, on which he had failed to look for a tail lamp, must have been passing the box during the time he was discussing his uniform with the two supervisors.

29. The two supervisors were *Area Inspector E. Jefferson* of the Area Manager's Office, Hull, and *Traffic Assistant A. E. Dent*. Mr. Jefferson was responsible for supervising signal boxes between Hull and Brough, and visited them at least once each week. On the day of the accident they were distributing pay to the signalmen and crossing keepers and were combining this with their routine supervisory visits. They arrived at Melton Lane Signal Box at about 10.16 and as they entered the box Mr. Jefferson noticed a train drawing out of the Capper Pass sidings and that the last two or three vehicles in it were air braked wagons of the kind used by Capper Pass. Visibility was such that from the box they could see the level crossing gates but not much beyond. Mr. Jefferson went to examine the train register book and whilst doing this he heard someone shouting from the direction of the level crossing. He looked out and saw that it was Guard Patching, whom he knew well. Signalman Kirkby had heard the shouting and clearly thought that it was a road vehicle driver complaining at the delay so Mr. Dent, who had also seen the guard trying to attract the signalman's attention, told Kirkby that he was wanted by the guard. Kirkby went to the front window nearest to the crossing and Dent heard Guard Patching shout across "I am taking these up to the sidings to get rid of them" or words to that effect. Kirkby acknowledged this by replying "O.K." or "alright". Jefferson also saw Kirkby go to the window, but he did not hear any of the conversation between him and the guard.

30. Mr. Dent handed their pay to Kirkby and the trackman, who had remained seated in a corner throughout, and obtained receipts. Meanwhile Mr. Jefferson completed his examination of the train register and signed it at 10.19. At 10.23 he heard the Ferriby signalman call Kirkby on the telephone and assumed that he would be reminding Kirkby that the 10.15 Goole train was due and that he had to get the line clear. Jefferson accepted that this method of passing messages about train movements, whilst not in accordance with the Signalmen's General Instructions, was normal practice in the boxes concerned. Soon after the telephone call, Kirkby mentioned his uniform and Jefferson discussed it with him for a minute or two, after which the two supervisors prepared to leave the box. Just before doing so Jefferson heard Kirkby give 'Train out of section' for the freight train and accept the passenger train on the Up Slow line. He glanced at the diagram and the levers and saw that all track circuits were showing clear and that No. 31 points were set from the Up Slow to the Up Main line. By this time Mr. Dent was outside the box. Dent did not hear Kirkby give 'Train out of section' for the freight train but he did see the last vehicles of a train of wagons disappearing into the fog in the direction of the APCM sidings; the last vehicle was a mineral wagon of some sort and it was not carrying a tail lamp. He assumed that it was the train of empty wagons that Guard Patching had told Kirkby he would be putting in the sidings.

31. Having left the box the supervisors made their way by road to Welton Crossing where they arrived at about 10.35. Soon after arriving they learned about the accident and returned to Melton Lane where Mr. Dent took charge at the site and Mr. Jefferson relieved Signalman Kirkby, who was shocked and distressed, of his duties in the signal box.

32. Both supervisors were asked about their previous knowledge of the shunting operations at Melton Lane. Jefferson claimed that he was not aware that it was normal practice for part of 9T61 to be left on the Up Slow line whilst the locomotive carried out shunting movements since his visits to the box had never been at a time when 9T61 was at Melton Lane. He was under the impression that the train would draw forward and propel back into the Capper Pass sidings as a whole in order to pick up the empty wagons. Dent, on the other hand, as a former guard, was well aware of the way the train was normally handled.

33. Asked whether, in the conditions then prevailing, they would have expected the guard of the freight train to have visited the signal box under the terms of Sections J or K of the Rule Book, Mr. Jefferson said that he would have expected the guard to apply Section K, although he knew of cases where, in similar circumstances, this was not done. Mr. Dent did not consider that the situation required the guard to go to the box.

34. Finally, Mr. Jefferson was asked whether, when he signed the Train Register Book at 10.19, he had seen a note "sidings" against the entries for the freight train. He agreed that he had signed the book immediately under the entry for 9T61 but could not recall whether the word "sidings" appeared or not. (On the copy of the Train Register produced at the Inquiry the word "sidings" was entered against 9T61 under the columns for 'Advance Section').

35. Evidence on the testing of the signalling equipment after the accident was given by *Mr. H. Murray, the Assistant Signal Engineer (Maintenance) Eastern Region.* Full tests had been carried out on the interlocking and controls and the relevant signal aspects had been examined. No damage had been caused to signalling equipment as a result of the collision and all was found to be in good order and in accordance with the control tables and circuit diagrams.

Discussion

36. The sequence of events leading up to the collision is clear from the evidence. The wagons of freight train 9T61 were left standing on the Up Slow line in rear of the Melton Lane Up Slow Home signal whilst the train locomotive carried out shunting operations. Whilst the locomotive and the wagons it was shunting were in sidings clear of the running lines the Melton Lane signalman gave 'Train out of section' for the freight train, accepted and cleared his signals for the following passenger train, and the passenger train ran into the back of the standing wagons.

37. Signalman Kirkby admitted frankly that he had given 'Train out of section' for the freight train without having seen the train pass with tail lamp attached, in contravention of Regulation 6 of the 'Regulations for train signalling on double lines by the absolute block system'. He claimed that, at the material time, he had not been distracted in his work by the presence in the signal box of three other persons, but the evidence shows that at the critical moment when the shunting movement passed the signal box, without a tail lamp on its rear vehicle, Kirkby was engaged in conversation with one or both of the supervisors and his mind could not have been fully concentrated on his signalling duties.

38. The evidence also makes it clear that Guard Patching, in charge of the freight train, had made some attempt to tell Signalman Kirkby that he was taking the empty wagons only into the APCM sidings. The actual words used and the exact message conveyed when shouted at some distance from the box must remain uncertain but I think it probable that, whilst Patching was convinced that he had passed a clear and unambiguous statement of his intentions to the signalman, Kirkby failed to comprehend the exact nature of the message and what it implied. Kirkby struck me as a particularly honest and frank witness and I cannot believe that he would have acted as he subsequently did if he had properly understood Patching's message.

39. It is unfortunate that neither of the two supervisors, Mr. Jefferson and Mr. Dent, appreciated the risks inherent in the shunting operations that were actually taking place during their visit to the signal box. Although the main purpose of their visit was to deliver pay to the signalman they were also, on their own

evidence, treating the visit as a supervisory one. In this case, and bearing in mind the exceptional weather conditions, I would have expected them to have taken more than a cursory interest in the train movements. Mr. Dent in particular, with his knowledge of how the shunting was normally done, ought to have questioned the signalman on the position of 9T61; had he done so it is possible that Kirkby would have realised that he had not seen the complete train go by. In fact, between them the two supervisors had all the information needed to show that an accident was imminent; Mr. Dent had heard the guard say that he was taking wagons up to the sidings and, whilst leaving the box, he had seen the wagons, without a tail lamp, moving up towards the sidings. Knowing the normal sequence of moves, he could have deduced that the rest of the train, with the brakevan, would still be standing on the Up Slow line. He, however, did not hear Kirkby give 'Train out of section' for the freight train although this was heard by Mr. Jefferson. With the benefit of hindsight it is clear that one chance remark on the part of either of them might have brought these elements of knowledge together and both would then have realised the trap that was being set for the passenger train.

Conclusions

40. I conclude that prime responsibility for the accident must rest with Signalman Kirkby, who gave 'Train out of section' for the freight train without having observed its tail lamp and failed to ensure that it was clear of the running line before accepting the following passenger train.

41. I accept that Guard Patching was acting for the best in deciding to take the empty wagons on their own into the APCM sidings and that he made an effort to tell the signalman about his change of plan. In view of the weather conditions, however, and the significance of what he was doing he should certainly have gone to the signal box in order to make quite certain that the signalman understood what he was planning to do. The question of whether he should initially have gone to the box under either Section J or Section K of the Rule Book is discussed in paragraph 44 below. Although there may have been doubt about the applicability of the Rules in this respect, the requirements of Rule H.7.4. are clear and he was wrong in deciding that there was no need to light the side lamps on his brakevan. Had they been alight they might have given Driver Smith another second or two in which to apply the brakes.

42. I believe that Signalman Kirkby became distracted by the presence of other people in his signal box and, perhaps because of this, failed to comprehend the message passed to him by Guard Patching. Not realising the vital significance of what the guard had tried to tell him he accepted, without giving it much thought, that the whole of the freight train was clear of the running lines once he saw the track circuits clear.

43. I consider that the two supervisors, Mr. Jefferson and Mr. Dent, should have paid more attention to the shunting moves that were being made whilst they were in the signal box and, as supervisors, should have realised that their presence in the box might be distracting the signalman at a time when, with shunting being carried out on the main line in conditions of thick fog, it was essential that his mind be on his work. By their omissions in this respect I consider that they must accept some part of the responsibility for the accident.

Remarks and Recommendations

44. The evidence in this case shows that there was doubt in the minds of many of the railway staff about the applicability of Section J.3.21 and Section K of the Rule Book to the shunting moves carried out at Melton Lane in connection with the freight train 9T61. Some felt that Rule J.3.21 need not be applied since the signalman was well aware that vehicles were normally left on the running line, and that Section K would only apply if the shunting movement was unusually detained. To remove any doubt, a notice was issued to all concerned by the Area Manager, Hull, on 29th November 1976 which required the guard of any train being shunted at Melton Lane, and where vehicles are left in rear of No. 8 signal, to go to the signal box and remind the signalman of the position of the train or portion of the train.

45. In examining the relevant Rules, I noted that Section K.1 states that the signalman must be reminded of the position of a train when it is "brought to a stand owing to a stop signal being at Danger" or when "a shunting movement has come to a stand and is detained". Of these two conditions the second might appear to have been applicable to the situation at Melton Lane in that, with the train locomotive detached, the vehicles of 9T61 could be regarded as a shunting movement and the movement was undoubtedly detained. However, the subsequent clauses of Section K, giving the method by which the principle expressed in K.1 is to be implemented, do not apply to the kind of shunting operation that was carried out at Melton Lane.

46. It could be argued that the position was more appropriately covered by Section J.3.21 of the Rule Book which covers the situation where vehicles have to be left on a running line. This Section calls for the shunter, which by definition includes a guard engaged in shunting operations, to "advise" the signalman but does not specifically call for him to enter the signal box. If this Section, rather than Section K, was applicable then Guard Patching could be said to have complied with the Rule in that he took steps to advise the silgnalman.

47. I discussed these problems of interpretation with the responsible Officers, both in Eastern Region and at the Railways Board. It was agreed that the Board would examine the relevant Rules with a view to removing any grounds for uncertainty in their application.

48. At Melton Lane the grounds for uncertainty would not have existed had there been a track circuit in rear of Signal No. 8. At the time of the accident, of the seven mechanical signal boxes between Hull and Goole those at Ferriby, Broomfleet, Gilberdyke, and Saltmarshe were provided with berth track circuits in

rear of all their Home signals; none of the Home signals was so equipped at Melton Lane or Crabley Creek; and at Brough East the Down Main Home signal had a berth track circuit but the Up Main Home signal had not. This somewhat illogical situation resulted from piecemeal improvement to the signalling that had taken place over many years and it typifies the situation that can arise when mechanical signalling has to be retained on an important line and where investment restraint precludes its comprehensive upgrading. I understand that the Railways Board plan to install modern colour-light signalling on the Hull to Selby line but that this is unlikely to be done within the next eight to ten years. This being the case I recommend that berth track circuits be provided at the Home Signals at Melton Lane, Brough East, and Crabley Creek where none are at present provided.

49. Whilst they had no bearing on the accident, I feel I should comment on the arrangements for fog-signalling. At the time of the accident fog-signalling was in operation and Regulation 4(e) of the 'Regulations for train signalling on double lines by the absolute block system' was being applied where necessary. In the case of Ferriby Signal Box the signalman was entitled to accept trains on the Up line before he had received the 'Train out of section' signal for the previous train from Melton Lane because his signals on the Hull side were colour-light. In the case of Melton Lane, the signalman complied with Regulation 4(e) when he accepted the freight train from Ferriby and he was under the impression that the freight train had cleared the running lines into sidings when he accepted the following passenger train. There is thus no suggestion that a failure to apply Regulation 4(e) contributed to the accident.

50. Although fog-signalling was in force, there were no fog-signalmen posted at any of the Melton Lane distant signals. This I was told was because of the difficulty in providing men for this duty. The problem is apparently a general one throughout British Railways and reflects the change from maintenance of the track by local gangs to mechanised maintenance together with the unwillingness of staff to accept overtime in these circumstances. The effect has been to make it difficult to implement Sections L.1 and L.2 of the Rule Book, and the degree to which semaphore signals are manned during fog or falling snow varies considerably from place to place.

51. The situation in regard to fog-signalling has in fact altered appreciably during the past 20 years or so. The incidence and severity of fog has diminished, it is now generally easier for working under Regulation 4(e) to be adopted, and the extension of multi-aspect signalling and AWS has reduced the number of places where fog-signalling is required. Against this background, I understand that the Railways Board is examining the need for Section L of the Rule Book to be retained in its present form or for it to be modified to accord more with present conditions.

I have the honour to be,

Sir,

Your obedient Servant,

C. F. ROSE,
Major.

The Permanent Secretary,
Department of Transport.

EXTRACTS FROM THE BRITISH RAILWAYS BOARD 'RULES FOR OBSERVANCE BY EMPLOYEES' AND 'REGULATIONS FOR TRAIN SIGNALLING AND SIGNALMEN'S GENERAL INSTRUCTIONS'

RULE BOOK

Section H. Working of Trains

7. Duties of Drivers and Guards in respect of Headcode and Tail and Side Lamps

7.4. **Side lamps**

7.4.1. Guards of freight trains not fitted throughout with the automatic brake must ensure that in addition to the train tail lamp, two side lamps are carried on the rearmost brakevan. After sunset or during fog or falling snow they must show a white light forward, but the indication to the rear must be as follows:

(*a*) On main lines, fast lines and single lines—two red lights,

(*b*) On slow lines, relief lines, goods lines or loops adjoining main or fast lines and running in the same direction—one red light on the side furthest away from the main or fast line and one white light on the side nearest the main or fast line,

(*c*) On goods lines or loops adjoining slow or relief lines and running in the same direction—two red lights,

(*d*) On reception sidings—the side lights must be removed or obscured when the train has passed into the sidings.

7.4.2. Guards must change the side light indications as necessary during the journey.

Note: Reference to an adjoining line in this clause includes a line running in the same direction where another line used in the opposite direction intervenes.

Section J. Shunting

1. Description

The term "Shunting" covers the movement of trains or vehicles other than the normal passage of trains along running lines.

Note (1): Where reference is made to Shunter, this also includes Guards and any other person engaged in shunting operations.

3.21. **Vehicles left on running lines**

If vehicles have to be left on a running line, the Shunter must immediately advise the Signalman. The Shunter must ensure that the vehicles are properly secured in order to prevent any movement and at night or during fog or falling snow, he must place a red light on the rear of the vehicles until they have been moved from the running line. If necessary a red light must also be placed on the front.

Section K. Detention of Trains on Running Lines

1. Principle

When a train is brought to a stand owing to a stop signal being at Danger, or a shunting movement has come to a stand and is detained, the Signalman must be reminded of its position.

3. Duties of Trainmen and Shunters

3.1. **When detained at signal not provided with telephone or call plunger and when performing shunting operations**

3.1.1. When a train is brought to a stand owing to a stop signal being at Danger, the Driver must sound the horn. If the stop signal is not then cleared and none of the signs shown in Diagram No. 1, 2 or 3 is provided at the signal, the Guard or Shunter (or Secondman, where provided) must go to the signal box and remind the Signalman of the presence of the train. In clear weather the train must not stand more than two minutes at a stop signal before the man goes to the signal box but during fog or falling snow he must go at once. He must remain in the signal box until permission is given for the train to proceed or until he has been assured that the appropriate reminder appliance has been used, when he must return to his train or locomotive.

3.1.3. If during shunting operations a train or vehicle comes to a stand when it has:

(*a*) passed a stop signal for the purpose of being crossed to another line or let into a siding,

(*b*) been shunted to another running line or along the same running line,

(*c*) been placed on either a main or branch line at a junction,

(*d*) been shunted from a siding to a running line,

and is then detained beyond the time usually taken to set up the route for its next movement the Guard or Shunter (or Secondman, where provided) must go to the signal box unless the train or vehicle is standing at a signal bearing one of the signs shown in Diagram No. 1, 2 or 3 or is standing at a position light or miniature colour light shunting signal.

3.1.5. **Responsibility for going to the signal box**

The duty of going to the signal box must be performed by the Guard or Shunter, except where the driving cab is double-manned, when the duty must be carried out by the Secondman if he is nearer the signal box.

When, however, a light locomotive is accompanied by a Guard or Shunter, this man must go to the signal box.

3.1.6. The man who goes to the signal box, after reminding the Signalman of the position of his train, vehicle or locomotive, must insert in the Train Register "Train No. . . . detained", the line upon which the train is standing, and then sign his name against the entry with the time it is made. The Signalman will initial the entry.

4. Duties of Signalmen

4.2. **Use of reminder appliances**

Whenever a train or shunting movement is detained and a track circuit or similar equipment is not provided, the Signalman must immediately make use of lever collars or other appliances to serve as a reminder.

4.3. **Trainmen visiting signal box**

4.3.1. The Signalman must see that the Trainman on arriving at the signal box inserts in the Train Register "Train No. . . . detained", the line on which the train is standing, and signs his name against the entry with the time it is made. This must be initialled by the Signalman, who must tell the Trainman when the reminder appliance, if any, has been used.

4.3.2. If the Signalman is unable to make use of reminder appliances, the Trainman will remain in the signal box until the train is allowed to proceed.

REGULATIONS FOR TRAIN SIGNALLING ON DOUBLE LINES BY THE ABSOLUTE BLOCK SYSTEM

4. (e) **During fog or falling snow—**

(i) except where instructions to the contrary are issued or as shown in Regulation 14(b), if a Fogsignalman is not on duty at the distant signal, the **Is line clear** signal must not be acknowledged in accordance with this Regulation unless the line under the control of the Signalman requiring to acknowledge the signal is clear, all the necessary points have been placed in their proper position for the safety of the approaching train, the **Train out of section** signal or **Obstruction Removed** signal has been received from the box in advance, and the block indicator worked from that box, is in the normal position. In addition, where the distance from the box to the outermost home signal of the box in advance is less than ½ mile, the **Is line clear** signal must have been acknowledged by the latter box.

When a train has been accepted in accordance with the first sentence of the preceding paragraph, a **Blocking Back** signal must not be acknowledged to the box in advance until the train concerned has been brought to a stand at the home signal, or the **Cancelling** signal has been received. Similar conditions apply in connection with the last sentence of the following paragraph.

Where the outermost home signal is situated at least ¼ mile in rear of the next home signal, the **Is line clear** signal must not be acknowledged in accordance with this Regulation when the line is clear only to the latter home signal unless Fogsignalmen are on duty at the distant signal and at the outermost home signal; if, however, a Fogsignalman is on duty at the distant signal only, the **Is line clear** signal may be acknowledged in accordance with this Regulation provided the line is clear for at least ¼ mile ahead of the home signal next in advance of the outermost home signal. If the outermost home signal for the box in advance is within that distance a train must not be accepted unless the **Train out of section** signal has been received for the previous train and the block indicator is in the normal position.

(iv) except where instructions are issued to the contrary, Fogsignalmen will not be employed at colour light signals. Such signals may be regarded as if Fogsignalmen were stationed at them.

6. (a) Except where instructions are issued to the contrary, or as shewn in Regulation 5(d), a train must not be considered out of section and the **Train out of section** signal must not be sent and the block indicator placed to the normal position until the train with tail lamp attached has passed the signal box and:

(i) has passed at least ¼ mile beyond the outermost home signal, or

(ii) when the outermost home signal is situated at least ¼ mile in rear of the next home signal, the train has passed the latter signal, or

(iii) where instructions are given authorising a train to be accepted under Regulation 4 with the line clear for a distance other than ¼ mile beyond the outermost home signal, the train has passed beyond such special clearing point, or

(iv) has been shunted clear of the running line concerned, or

(v) at junctions when the train has passed well clear of the junction and the facing points have been set for another line which is clear in accordance with Regulation 4.

(b) When the last vehicle of a train does not pass the signal box before it has been shunted into a siding, or when a train has been brought to a stand within the home signal, and it is necessary to send the **Train out of section** signal before the train passes the box, the Signalman must, before sending such signal, ascertain from the Guard or Shunter in charge of the train that the whole of the train, with tail lamp attached, has arrived, and the Guard or Shunter will be held responsible for giving this information to the Signalman; the Secondman will be similarly responsible in the case of a light locomotive.

21. SHUNT TRAIN FOR FOLLOWING TRAIN TO PASS (1–5–5)

This signal must be used to prevent important trains being delayed by less important trains. When, before the **Train out of section** signal has been received from the box in advance for the previous train, the Signalman receives a signal from the box in rear for a more important train, the **Shunt train for following train to pass** signal must be sent to the box in advance, and the Signalman there, on receiving this signal, must take the necessary measures to clear the line to prevent delay to the second train. He must use his discretion as to the best means of effecting the object in view, and if he is unable from any cause to shunt the train at his box, or if he thinks it inexpedient to do so, he must allow the train to proceed, and send forward the **shunt train for following train to pass** signal to the box in advance.

This signal may also be used when the block indicator is at the **Train on line** position owing to either of the **Blocking Back** signals having been acknowledged.

SIGNALMEN'S GENERAL INSTRUCTIONS

Use of Telephones

In the interests of safe working all communications between Signalmen in regard to train signalling should be made by means of the block bells in accordance with the Regulations, and, as far as possible, Signalmen should refrain from making use of the telephone for this purpose.

Whenever it is absolutely necessary for the telephone to be used respecting the working of trains, Signalmen must in all cases give the full description of the train concerning which enquiries are being made so that there may be no risk of misunderstanding.

In all cases when communicating by telephone Signalmen must give the name of their signal boxes before any message is transmitted.

Where telephone communication is provided by means of the block bell circuit, the attention of the Signalman at the opposite end of the section must be obtained by the use of the 1 pause 1 bell code given on the block bell.

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