

MINISTRY OF TRANSPORT

RAILWAY ACCIDENT

REPORT ON THE COLLISION

that occurred on

19th March 1962

at

KING EDWARD BRIDGE JUNCTION near

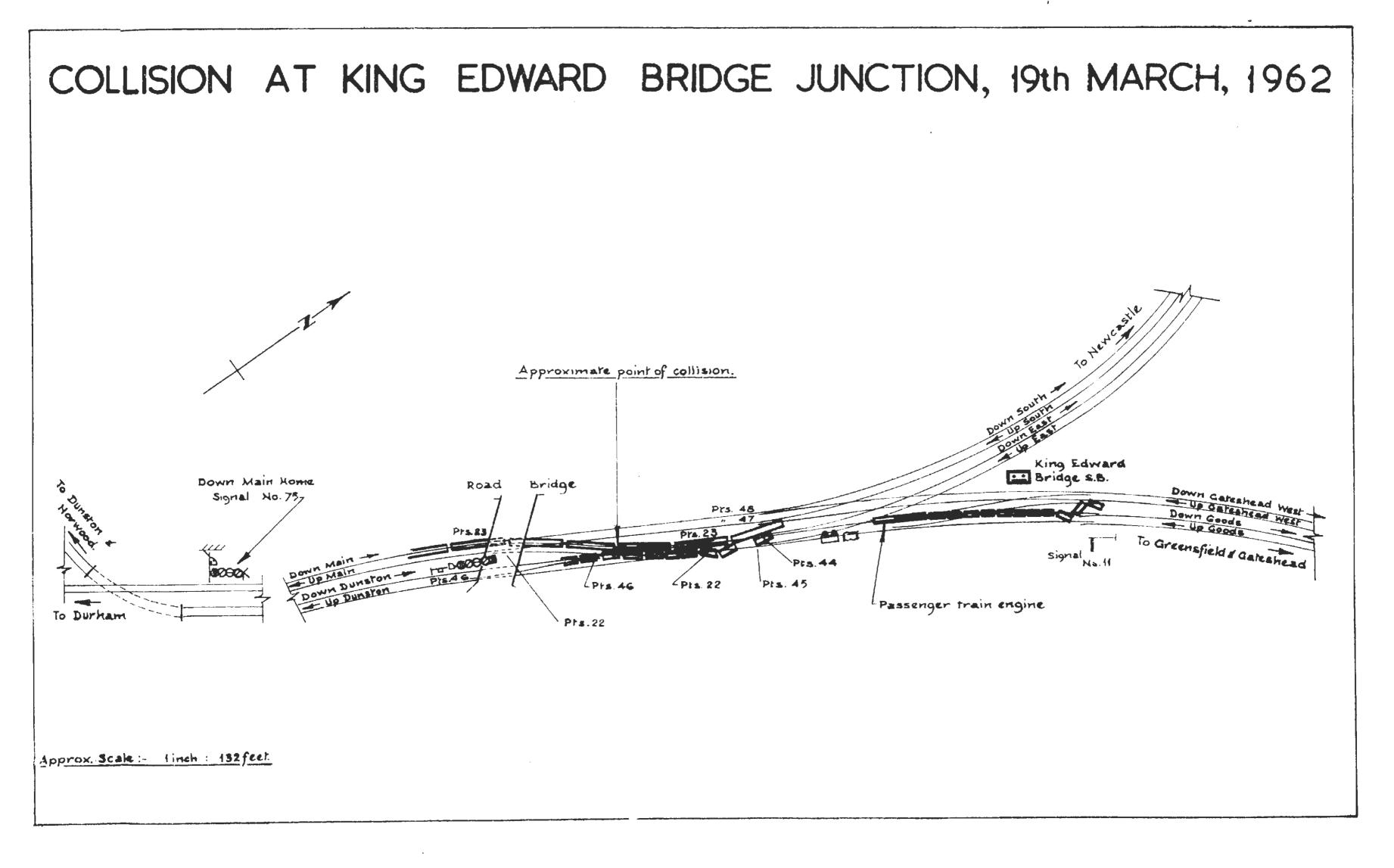
NEWCASTLE

in the

NORTH EASTERN REGION BRITISH RAILWAYS

LONDON: HER MAJESTY'S STATIONERY OFFICE 1962

ONE SHILLING NET



Sir,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order dated 22nd March, 1962, the result of my Inquiry into the collision between a passenger train and a freight train that occurred at about 5.29 p.m. on Monday, 19th March, at King Edward Bridge Junction, near Newcastle in the North Eastern Region, British Railways.

The 12.20 p.m. Down express passenger train from King's Cross to Newcastle was wrongly diverted from the Down Main line towards the Down Goods line during permanent way renewals, and collided at moderate speed with the side of a freight train which was travelling slowly on that line. The points had been turned for the goods line and the signal was at clear for the main line because the electrical interlocking had been wrongly broken down. The passenger train was well filled but only three passengers were slightly injured and the driver and fireman shocked. Rescue and relief arrangements were carried out promptly. All lines were blocked by the accident; the main lines were restored to traffic in the early hours of the following morning and the other lines during the course of that and the subsequent day.

The weather was fine and clear and it was still light at the time of the accident.

DESCRIPTION

The Sile

The sketch map on the facing page illustrates the arrangement of lines in the vicinity of the accident and the position of the relevant signals.

The double track East Coast route to Scotland runs northward in the Down direction from Durham past Low Fell and King Edward Bridge Junction signalboxes to Newcastle. Between these boxes the double track goods branch from Dunston and Norwood passes from the West under the main lines and then rises to run parallel with them. At the junction the 4-track branch to Greensfield and Gateshead diverges to the East from the four tracks to Newcastle which are all passenger lines and are known as the Down South, Up South, Down East, Up East. The signalbox is in the V between the two routes.

The points on the Down Main line that were wrongly set for the passenger train were the facing ones of the pair in the crossover from the Down Main to the Down Dunston line, No. 23. There is a parallel crossover from the Up Dunston to the Up Main line, No. 22, and a trailing crossover between the goods lines, No. 46. The junction points, on the Newcastle side of these crossovers are Nos. 48 facing from the Down Main to the Down Gateshead West, 47 trailing between the Up Gateshead West and the Up Main, 44 facing from the Down Dunston line to the Down East line and 45 trailing between the Up East line and the Up Dunston line. The Dunston lines continue towards Gateshead as Goods lines.

In the area of the accident the line is in cutting between high retaining walls and there is a road bridge spanning the tracks at No. 23 facing points which are 223 yards from the signalbox. The junction points are about halfway between No. 23 facing points and the signalbox.

The Down Main signal on the approach to No. 23 facing points is 287 yards from them. It is a 4-aspect colour light, with a three way junction indicator for the main routes to Newcastle via the South and East lines respectively, and to the Down Goods line towards Gateshead. It also leads to the Down Gateshead West line for which there is no indicator. There is a subsidiary signal here. The Down Dunston line signal which protects the connections is also a 4-aspect colour light and is close to them.

Points and signals in the area are worked electro-pneumatically from a miniature lever frame in King Edward Bridge Junction box, and the area is fully track-circuited. Interlocking between the levers is mechanical but there is, in addition, the usual comprehensive range of electrical controls and locks which, amongst other functions, detect that the points are correctly set and locked before the lever can be fully operated. When a point lever is operated it is held by an electric lock at an intermediate position until the points are detected in the set and locked position, and when the lever is restored it is similarly held in another intermediate position until the points have responded and are locked.

The Down main colour light signal is worked by any one of four levers, one for each of the four routes to which the signal may lead; No. 75 lever works the signal for the route to the Down South line and is mechanically interlocked with, amongst others, No. 23 points lever which must be normal in the frame for No. 75 to be free. The signal lever is also held by the point detection and the lock is only released when both No. 23 facing and trailing points are set normal and locked. The signal itself will only clear provided that the track circuits to the next signal ahead, and for a certain distance beyond, show that the line is unoccupied.

King Edward Bridge Junction signalbox is of standard design with an elevated working floor above a relay room. The signalman has a good view of the whole of the area where the collision occurred. There is, however, as is usual with big installations of this kind, an illuminated diagram on which track circuits are indicated.

Relevant Rules

Rule 78 of the Rule Book refers to the equipment and duties of handsignalmen. Such men are appointed to assist the signalman by placing detonators, securing points, and hand signalling trains, etc. The first paragraph of the rule states--

"He must act under the instructions of the Signalman, and the latter must see that this man is instructed as to his duties and understands what he has to do".

The detailing of duties throughout the subsequent paragraphs of the Rule reaffirms this relationship between handsignalmen and signalmen wherever appropriate.

There are other situations in which handsignalmen are required for the protection of work on the lines, where they act under the orders of persons other than the signalmen. These arise, however, outside signalbox limits, and the handsignalmen's duties in these situations are laid down in other Rules of the Rule Book.

The Trains

The passenger train consisted of eleven coaches weighing 380 tons, drawn by a 2000 h.p., type 4. English Electric, diesel electric locomotive, weighing 133 tons. The brake power was 83% of the total weight and all coaches were fitted with the direct admission valve. The length of the train over buffers was 265 yards. All coaches were close coupled and there was a screw coupling between the leading coach and the locomotive. The unfitted freight train comprised 25 empty mineral wagons, most of them of the 21 tons all-steel type, and a brake van, drawn by a type J.27 steam locomotive with 0-6-0 wheel arrangement and a 6-wheeled tender. The approximate length was 222 yards.

The engine of the passenger train ran into the side of the 12th wagon of the freight train forcing it and the one immediately behind it over the adjacent line and against the cutting wall. The following seven wagons were also pushed off the Down Goods line towards the Up Goods line. The engine became separated from its coaches, the leading one of which was derailed, and followed up the first part of the freight train along the goods line without being derailed, stopping with only a short gap between it and the 11th wagon, about 125 yards ahead of the point of collision. The impact of the passenger engine against the first eleven wagons caused the leading three to become derailed and to be separated from the freight engine.

The right hand leading edge of the passenger train engine was stove in when it came into side contact with the wagons, and there was a considerable degree of superficial damage on that side, but the driving compartment remained more or less intact though some windows were broken. The leading coach was heavily scored and the frame was distorted on the right hand side in the direction of travel, and the next three coaches also suffered some damage.

REPORT

Summary of Events

There were a number of persons responsible in some degree for the circumstances in which this accident happened and it may be as well therefore to outline the salient facts before dealing with the evidence.

On the previous Saturday evening, the goods lines in the vicinity of the junction had been closed to traffic so that they could be re-laid. The work included the renewal of the points at the goods lines end of crossovers No. 22 and No. 23, points Nos. 44 and 45, and the whole of crossover No. 46. The work had been notified in the Railway Weekly Notices in the usual way. The arrangements were that the Down Main line towards Newcastle should remain open all the time but that the Up Main line should be closed for part of the time and the other lines for most of the period of the work, which was to be completed by 6.0 a.m. on Monday.

With the disconnection of the trailing points of No. 23 crossover signal lever No. 75 could not be operated, so it was agreed between the signal and telecommunications (S. and T.) inspector who took possession of the work and the operating representative in general charge, at this time the stationmaster Gateshead, that the electrical controls of No. 23 crossover should be adjusted so that lever No. 75 could be operated, on the understanding that the operating representative would arrange for the facing points to be wedged and clamped. This adjustment was carried out by applying a false feed to the terminals of the detection relay in the signalbox which not only cut out all electrical control between both the facing and trailing points and lever No. 75 but also affected the circuits between the point lever and the points so that if the lever was pulled and the facing points responded (as they would if not clamped) they then remained in the reversed position when the lever was restored in the frame. The false feed also freed the "normal" check lock on the lever so that it could be fully restored. The facing points would then be set for the crossover route but the interlocking and point controls on the Down Main to Down South signal lever would be free. The detection circuits could, in fact, have been bridged in such a way as to retain the detection of the facing points of No. 23 crossover in the normal position on the signal and point levers, whilst the trailing points were disconnected; the signal could not then have been cleared if the points were reversed.

The operating representative understood that the points were to be wedged and clamped and he arranged for this to be done. He did not understand what were the adjustments of the controls nor what effect they would have; nor at this time did the S. & T. inspector think about the effect on the point setting of applying the false feed to the detection relay in the signalbox.

On Sunday morning the stationmaster was relieved by a district inspector and the S. & T. inspector by another S. & T. inspector. The correct nomenclature of the operating department inspector is a signalmen's inspector, but I refer to these men throughout as district inspector to avoid confusion with the signal and telecommunications inspectors. On Sunday night a third operating representative took charge and the first S. & T. inspector relieved the second. The work was still in hand on Monday morning so the second S. & T. inspector relieved the first one again; he was still on duty when the accident happened. The third operating representative, also a district inspector, had decided in the small hours of the Monday morning that the work was nearly completed and that further operating supervision was not necessary. He therefore left the work without arranging for a successor. The stationmaster Gateshead visited the box on Monday morning in the course of his normal duties and saw that work was still going on, but he, also, did not think it necessary to arrange for further supervision by the operating department.

At the beginning of the work there was one handsignalman on duty at the southern end dealing with facing points No. 23, trailing points No. 22 and crossover No. 46, and later on there were two men, the second one working near the box. On Monday afternoon the permanent way work had been completed and the gangs had left; the S. & T. staff then completed their portion of the outdoor work on the site and the S. & T. inspector instructed them to leave. The handsignalman thought that the instruction applied to him also and he unclamped facing points No. 23. One train passed over the points in their normal position but the points then became reversed and the next train, the 12.20 p.m. Down express, was diverted towards the goods line to collide with the freight train. In the meantime the S. & T. inspector had been organising the final testing of controls and interlocking equipment in the signalbox after having put right a faulty track circuit indication which had taken his attention for a little time.

After the accident the false feed, which had been applied by using the normal equipment consisting of pairs of crocodile spring elips linked by short lengths of insulated wire, was quickly discovered, but the reason for the points becoming reversed was not established.

Evidence of Train Crews

The evidence of the crews of the two trains was that they were both proceeding under clear signals, and that the freight train was travelling at about 5 m.p.h. and the passenger train not more than 20-30 m.p.h. when the collision took place. Driver T. W. Buck of the passenger train said that he received a green aspect with a horn indicator for the Main line at No. 75 signal, he then saw the points set for the crossover road as his train approached them closely and he made an immediate application of the brake; it took effect before the collision but speed was not much reduced. Afterwards both crews took appropriate action to protect their trains and to attend to the passengers. Guard S. A. Watts of the passenger train mentioned that he had in his charge three cases of radioactive material for medical purposes which had been loaded centrally in his van in accordance with the special instructions for this type of package. They did not appear to be damaged but he took pains to have them taken over by the police as soon as possible.

Evidence of Operating Representatives

Stationmaster A. Bourn, Gateshead, said that it was a part of his duty to visit King Edward Bridge Junction Signalbox every day. He had been appointed to the extra duty of acting as the operating representative on Saturday night when the permanent way renewal work was started. He said—

"I had to see that the job was started on the Saturday night and the possessions handed over to the engineer so that he could get on with the renewals: see to the placing of two cranes involved: and watch the working on the ground as traffic was passing, to see there was no fouling of the Main line".

Mr. Bourn said that a handsignalman had been appointed and that he spoke to the man to make sure that he understood his duties which were mainly at the London end of the work. They included the clamping of No. 23 facing points in the normal position. He went with the handsignalman to see that this was properly done. When asked whether he gave the instructions to the man and whether the signalman should not have given them as laid down in Rule 78 of the Rule Book he answered "In this respect I was in charge of the operations and I assumed that it was my responsibility in that case".

Mr. Bourn agreed that he had arranged in the signalbox with the S. & T. staff for them to adjust the controls so that signal No. 75 would respond to the lever, on the understanding that he would keep the facing points clamped. This was done to save delays to trains. He thought that this arrangement had been made with Chief Lineman J. Reed, though Reed said that he got his orders from S. & T. Inspector J. D. Bainbridge. Mr. Bourn added that he did not specifically tell the signalman that they could work the signal as he was sure that they knew.

Mr. Bourn was relieved at 7.0 a.m. on Sunday morning and did not visit the signalbox again until 9.0 a.m. on Monday morning in the course of his normal duties. He then learned that the work was still in hand and that the same emergency arrangements at the signalbox were in force. He realised that there was no operating representative on the site but did not think to question this situation assuming that it was in accordance with decisions made by the operating staff responsible for supervision of the emergency arrangements.

District Inspector W. Worthy, from Durham, who relieved Mr. Bourn on Sunday morning, knew that facing points No. 23 were clamped and that signal No. 75 was being worked from the signalbox. He did not concern himself about how this had been achieved but applied himself to the supervision of the various movements necessary in the area which were frequent as a crane was at work and it was necessary to move it on occasions before trains could pass. He said that the handsignalman was working under his instructions at some times and under the signalman's at others.

Mr. Worthy had trouble with one of the cranes during Sunday afternoon and had to arrange for another one which arrived as he was banding over at about 4.0 p.m. to District Inspector E. Ramsden. He told him that the Down Home Signal No. 75 was being worked.

Mr. Ramsden said that when he took over on Sunday afternoon he knew that No. 23 points were clamped, but did not know about the false energisation of the controls for No. 75 signal. He had a discussion with the S. & T. inspector (Mr. Bainbridge) and understood him to say that he could arrange for signals to be worked while points were clamped. Mr. Ramsden objected to this in general though he agreed to No. 75 signal being worked. At about 3.0 a.m. on Monday morning the work had progressed so far that there was no further need for the crane, which was sent away; Mr. Ramsden formed the opinion that the work would be finished by about 6.0 a.m. and decided that there was no longer a need for operating supervision and he left the site. He said "I must explain that we were primarily there for crane working. Had there not been a crane provided for the job I should have considered no supervision was necessary".

Evidence of S. & T. Department Staff

S. & T. Inspector J. D. Bainbridge who took charge of the signalling work when the renewals began on Saturday night, said that he agreed with Mr. Bourn to alter the controls so that No. 75 signal could be worked on the understanding that No. 23 facing points were clamped. It was not necessary to make this adjustment until about Saturday midnight and it was made by Chief Lineman Reed on his instructions given while they were on the site outside the signalbox. Mr. Bainbridge said that he also took the hand signalman personally to facing points No. 23 and saw that the clamps were fixed. He did not think of any possible adverse effect on the facing point controls of the false feed to the detection relay, since the cabling to the point machines had at that time been disconnected. He agreed that applying a false feed was not authorised at this signalbox though he said it was authorised in the Newcastle area by box instruction in special circumstances. (These instructions require that the signals leading over points where the false feed has been applied to the detection relay shall be prevented from clearing.)

When Mr. Bainbridge was relieved by S. & T. Inspector D. F. Sharp on Sunday morning he told him of the position, and when he relieved Mr. Sharp again that evening he was aware that the control of No. 23 points on signal lever No. 75 was still falsely energised "normal". He then gave details of other signalling work relating to the other facing and trailing points which had been carried out in connection with permanent way renewals both during his turn of duty and that of Mr. Sharp. On Sunday night Mr. Bainbridge carried out tests on the controls of No. 44, 45 and 46 points which had been connected up to the signalling installation. When Mr. Sharp relieved him again on Monday morning he was not sure whether he specifically mentioned to him that No. 23 point controls were still falsely energised though he thought he had made it clear.

Mr. Sharp's evidence confirmed generally that of Mr. Bainbridge until the final changeover on Monday morning. He said that his clear impression, when he took charge then was that the false feed had been removed and that all circuits had been tested back to the cabin. On Monday alternoon, after the final adjustments had been made to the new switches, he went to the signalbox at about 4.30 p.m.; he said that he had seen that the clamps had been taken off the facing points though he had not told the handsignalman to remove them. He then went to the relay room in the signalbox and checked on the positions of the relays of No. 22 and No. 23 points which he saw to be in the normal position, but he did not notice the clips for the false feed on the terminals above the detection relay. He asked the signalman if he could test the points but was told to wait a little time for traffic to pass. A fault then developed in a track circuit just before 5.0 p.m. and he left the box with his staff to attend to it. He had just returned to the operating floor when the accident took place.

Mr. Sharp was aware that the type of false feed applied in the signalbox relay room was not authorised at this signalbox, but said that he did not question its use when he relieved Mr. Bainbridge for the first time as he assumed that it had been specifically requested by the operating department representatives.

Chief Installer N. Smith who was working with Mr. Sharp said that he understood from Mr. Bainbridge, when he spoke to him on Monday morning before Mr. Sharp arrived, that all track circuits and all points had been tested back to the cabin and he assumed from this that the false feed had been removed. His work on Monday was outside the signalbox and he did not go in to check on the detection relay.

Evidence of Signalmen and Handsignalmen

Signalmen S. Kane and N. J. Barras were on duty in the signalbox at the time of the accident. They had been together on duty from 10.0 p.m. on Saturday night at the beginning of the work until 6.0 a.m. on Sunday and during the same hours of the following night. They had then resumed duty at 2.0 p.m. on Monday. Kane was in charge at all these times; be gave evidence as follows:—

"Nos. 22, 23, 44, 45 and 46 points were 'signed off' by the S. & T. inspector on Saturday night and were still 'off' when I took duty on Monday. Lever collars were placed on the levers concerned on Saturday night and they were still on when I was on duty on Sunday night, but as far as I can recollect they were not on when I took duty on Monday at 2.0 p.m. and there was certainly no lever collar on No. 23 lever when the 12.20 p.m. from King's Cross passed through No. 23 points about 5.30 p.m. About 4.45 p.m. S. & T. Inspector Sharp came to the cabin and asked if he could have an opportunity to test the points, but at that time we were unable to let him do so because of traffic movements. The handsignalman was in the cabin at this time, but no one told me that the clamps had been removed from the points, and as far as I was aware No. 23 points were still clamped for the main line position as they had been since Saturday night. I had no occasion to move No. 23 points. Prior to the arrival of the 12.20 p.m. from King's Cross, I had the Cardiff to Newcastle train on the Down Main line at 4.45 p.m. and this was the last movement over this section of the line before the King's Cross express came.

A mineral train for South Dock came from the direction of Norwood at 4.33 p.m. but was delayed by other trains ahead, and was eventually accepted at caution by Greensfield. Train Entering Section signal being forwarded at 5.24 p.m. As this train was moving along the Down Goods line towards Greensfield the express approached and instead of proceeding along the main line came through No. 23 points towards the Down Goods line and collided with the train of mineral empties for South Dock.

Obstruction Danger was immediately sent in all directions".

Kane was sure that neither he nor Barras had removed any lever collars during the afternoon shift and he had not operated lever No. 23 at any time, though he had had cause to work No. 22 lever. He knew that some arrangement had been made between Mr. Bourn and Mr. Bainbridge on the Saturday night to adjust the controls so that the signalmen could work the signal lever No. 75 and did not question these arrangements, operating No. 75 signal lever when required.

On the Monday afternoon when he came on duty he did not make contact with the handsignalman who was looking after the points in the area where the relaying was taking place. When I pointed out to him the provisions of Rule 78 he said that so far as he was aware it was not the normal practice for the signalman to get in touch with the handsignalman on occasions such as this one.

Barras generally confirmed Kane's evidence though he added that he was surprised that it was made possible for the signalman to work signal No. 75. On the Monday afternoon he shouted to the handsignalman on occasions to wedge the points in the new work when it was necessary for them to be moved. He said that on the Monday afternoon lever No. 23 was not touched so far as he knew. Neither signalman was aware that the clamp had been removed from the facing points until the accident happened.

At the time of the accident lengthman J. Waitt was the handsignalman at the points where the relaying had taken place. He had been detailed for the work at about 7.30 a.m. that morning when he began his normal work. When he arrived at the signalbox he was told to stand by points No. 44 and 45 to wedge them as required when moved by the signalman. He had to do this about half a dozen times in the course of the day, receiving his instructions by shouts from the signalman. Waitt said that the signal and telecommunications staff were working on the trailing end of No. 23 points and on No. 22 points, and he wedged these also when told by them; the points were being worked from the signalbox. He also said that No. 23 facing points were clamped in the normal position all the time.

At about 4.20 p.m. Waitt heard Mr. Sharp tell his men who had been working on the trailing end of No. 23 points that the work was finished and he said that he heard him say "I will slip upstairs (to the signalbox) and ask him to try the points". Waitt then said to Mr. Sharp "I will lift off all the clamps and wedges" and understood him to agree. He then met the other handsignalman, Lengthman Smiles, who had been on the Gateshead side of the signalbox and told him that the clamps were to be removed, gave him the ones which had been in use in the area of the junction, and asked him to go to the box to let the signalman know that he was removing the other clamps. He did not himself shout to the signalman that he was about to do so and his reason probably was that he has a bad stammer which restricts him from speaking freely. After removing the clamps from the facing points and putting them in a hut nearby he also went to the cabin where there were a number of people, including Smiles; again he did not himself tell the signalman that he had removed the clamp from No. 23 facing points. Waitt was not at all clear about the instruction in Rule 78 of the Rule Book that he should work under the orders of the signalman on work such as this. He had been passed in handsignalman's duties some years previously, and had been re-examined in May 1961.

Lengthman A. Smiles confirmed that Waitt asked him to take clamps to the signalbox and to tell the signalman that all clamps were being removed. Smiles said that he made this announcement when he went to the signalbox though no one took any special notice of it. When questioned about duties as a handsignalman Smiles was clear that he took his orders from the signalman and in fact he had been doing so on that day as he was handsignalling trains past No. 11 signal on the Up Goods line from Gateshead, which was faulty.

CONCLUSIONS

A number of persons must bear responsibility in some degree for this accident. Rules and instructions were ignored and misunderstandings took place, partly through an excess of zeal in a desire to keep traffic moving, but also through a lack of the proper application of authority. The overall authority which the operating representative should exercise in an affair such as this was also wanting.

This accident was made possible because a dangerous situation had been set up in that the electrical interlocking between the facing points and the signal had been nullified enabling the signal to be cleared for the main line route with the points wrongly set for movement towards the goods line.

I believe that the facing points moved to the reverse position at the critical time because someone in the signalbox tried the lever after the elamps had been removed and after the previous train had passed, though no one would admit to it. If there had been a collar on the lever this might not have happened. The false feed to the detection relay had so affected the electric circuits between the point lever and the points that they became reversed when the lever was pulled, and remained in the reverse position when the lever was restored in the frame. The false feed had also rendered the check locks on the lever inoperative so that it could be fully restored. The third and intended effect of the false feed had rendered the electric lock on the signal lever inoperative so that the lever could be pulled to clear the signal. This inherently dangerous condition should never have been set up and S. & T. Inspector Bainbridge was very much at fault in authorising it, though his motive for doing it was to avoid delays to traffic. Nor for that matter should S. & T. Inspector Sharp have condoned it when he took over responsibility on the first occasion, knowing it to be wrong.

I accept that Lengthman Waitt was not instructed by Inspector Sharp to take off the clamps from the facing points and that he misunderstood the Inspector's meaning, but he should have called to the signalman for permission before removing the clamps. He had, however, been taking orders from the S. & T. staff to free the other points during the course of the day and he did not discriminate between the acceptance of instructions from them for working one group of points as against another. It may be that his speech impediment deterred him from calling to the signalman; it did in fact deter him from giving evidence before me at my Inquiry, and he had to be called again on a later date.

Stationmaster Bourn must share some of the responsibility with Mr. Bainbridge for the adjustment of the controls to enable No. 75 signal to be worked. He said that he did not know how it was done and simply accepted Mr. Bainbridge's offer to arrange it, but he should have known enough, as the operating representative, to make sure that the proposed adjustment was covered by signalbox Instructions for such work. His assumption of the signalman's responsibilities in telling the handsignalman what to do was a mistake; he should have insisted on the signalman establishing a link with the handsignalman by giving the orders as soon as the work started and maintaining that link at all times. I appreciate that Mr. Bourn was in some difficulty when he visited the box on Monday morning and found that a district inspector had deemed it unnecessary for an operating representative to be present, but the signalbox was within his charge and it would have been a proper exercise of his responsibility at least to have reported the situation to his superiors.

District Inspector Worthy did not challenge the means by which No. 75 signal had been made after the trailing points had been disconnected. The work was, however, outside his area and he did not know the box well, but he also did not insist on the handsignalman getting his orders from the signalman during the course of his duties.

District Inspector Ramsden might well have enquired how No. 75 signal was being worked, but it was clear from his answers to other questions that he did not appreciate fully his responsibilities as operating representative. His leaving the signalbox while emergency working was still in force was wrong.

The signalman in the box, and particularly Signalman Kane who was in charge at the time, might have asserted themselves more than they did in insisting on the handsignalman working to their orders, but they were not helped in this by the operating representatives. Signalman Kane was at fault in not checking the lever collars when he came on duty on Monday afternoon; he should have made sure that there was one on No. 23 lever.

REMARKS AND RECOMMENDATIONS

The standard method of moving traffic over a clear line when repairs are being carried out in a situation such as this, is to handsignal trains past the fixed signals after the relevant points have been clamped and padlocked. The arrangement made irregularly by the S. & T. inspector on this occasion to enable the signal lever to be worked, presented a departure from that method, but it was not challenged by any of the operating supervisory staff, and the signal was, thereafter, cleared for train passing by working the lever without demur. I therefore asked Mr. Hick, Operating Officer, North Eastern Region, whether such arrangements have been made, through misplaced initiative, on other occasions to reduce delays to traffic, and was assured that he had looked for but had found no evidence of it. He also informed me that the Region had taken steps to ensure that it would not happen again, and that he had brought home to inspectors in the Operating Department the overall responsibility and authority which the operating representative must exercise to ensure the safety of traffic when track and signalling is being renewed.

It is important that the special relationship between the signalman and the handsignalman, while work is in progress in an interlocking area, is maintained constantly, and that the handsignalman takes his orders first and foremost from the signalman. I suggest that the attention of operating supervisory staff in all Regions might be drawn to the need for ensuring that this is done. It is also relevant to bear in mind that a handsignalman, whose duties nccessitate communication by word of mouth with the signalman, should, in addition to being of good hearing, not have an impediment of speech, and that men with this handicap should not be appointed to be handsignalmen.

I have the honour to be,

Sir,

Your obedient Servant.

The Secretary, Ministry of Transport.

W. P. REED,

Colonel.

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