



MINISTRY OF TRANSPORT

RAILWAY ACCIDENTS

REPORT ON THE COLLISION

which occurred on

26th October 1959

at

ARDSLEY STATION

in the

**NORTH EASTERN REGION
BRITISH RAILWAYS**

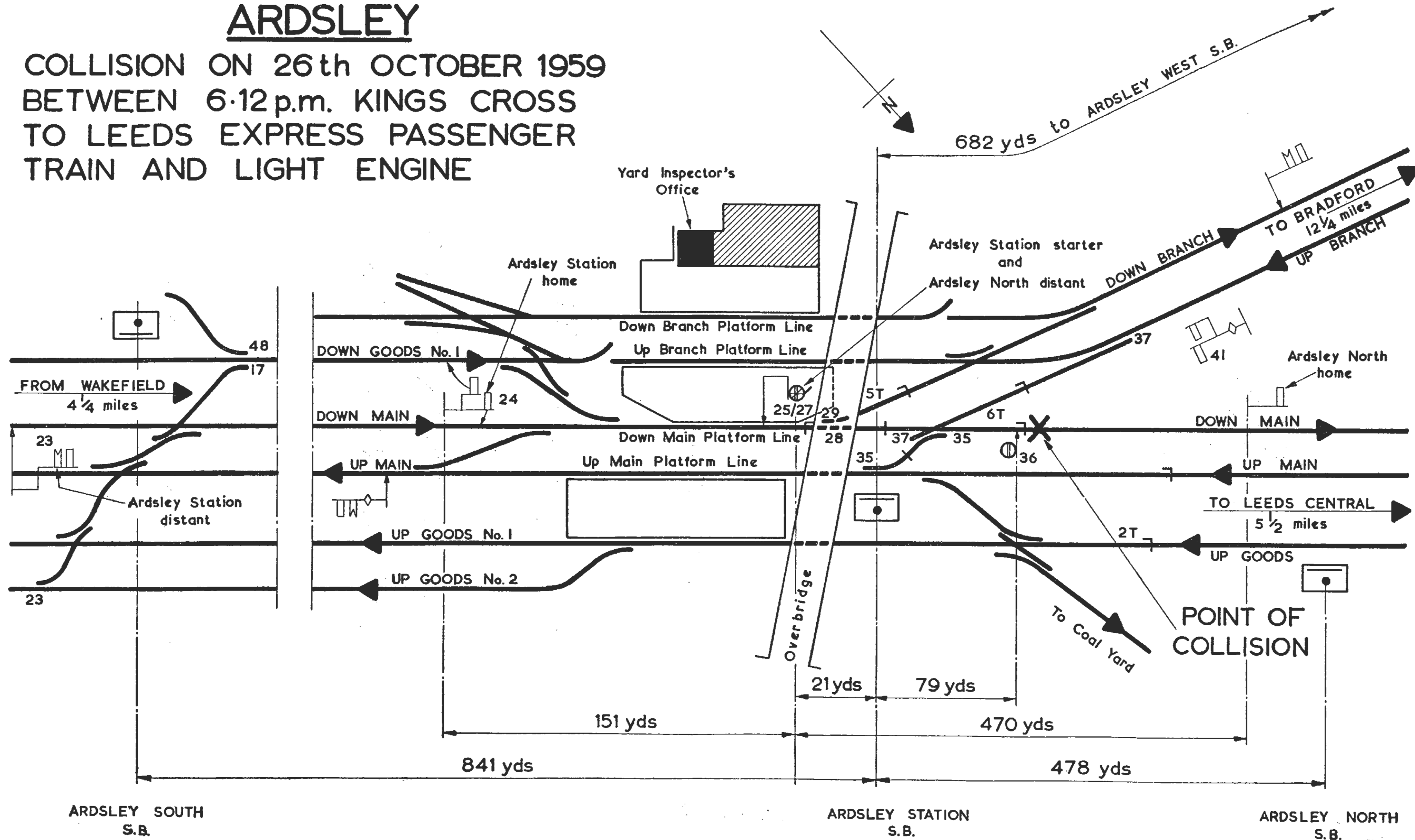
LONDON: HER MAJESTY'S STATIONERY OFFICE

1960

ONE SHILLING NET

ARDSLEY

COLLISION ON 26th OCTOBER 1959
BETWEEN 6.12 p.m. KINGS CROSS
TO LEEDS EXPRESS PASSENGER
TRAIN AND LIGHT ENGINE



Not to Scale

9th February 1960

SIR,

I have the honour to report for the information of the Minister of Transport, in accordance with the Order dated 29th October 1959, the result of my Inquiry into the collision which occurred at 10.8 p.m. on 26th October 1959, between an express passenger train and a light engine at Ardsley Station on the main line between Doncaster and Leeds Central in the North Eastern Region, British Railways.

The Ardsley Station signalman had sent the Down light engine into the forward section to Ardsley North where it was to stand a short distance beyond the signal box and ahead of a shunting signal for a reverse movement to the Up line; he had not, however, block signalled the engine forward. The shunting signal could not be cleared immediately on account of some other train movements and the signalman then accepted the Down express, obtained Line Clear for it from Ardsley North and cleared the home and starting signals, having forgotten that the light engine was still standing on the Down main line. The driver of that engine had not sent the fireman to the box to remind the signalman of the position of the engine, as required by the Rules. Fortunately, the Ardsley Station distant signal had not been cleared for the express which was travelling at only about 35 m.p.h. when the collision occurred. The effect of the impact was also lessened by the fact that the brakes of the light engine were not fully applied.

As a result of the collision the light engine was propelled forwards about 85 yards and was partially derailed. The engine and the leading two coaches of the express train were also derailed, but they remained upright and in line. Sixteen passengers and 6 members of the railway staff were injured. They were conveyed to hospital in Wakefield where 2 passengers were detained.

A Yard Inspector at Ardsley Station witnessed the collision and immediately telephoned to the Wakefield District Control and informed the Civil Police. The first ambulances arrived on the scene at 10.20 p.m., only 12 minutes after the collision, and they were followed closely by the police and the fire services. Railway staff from the shunting yards and local civilians also rendered valuable assistance. All the casualties were removed by 11.5 p.m. The remaining 80 passengers in the express train were conveyed by road transport to their destination after some delay on account of the difficulty of obtaining drivers for the vehicles.

Both the main lines were blocked. Breakdown vans and steam cranes arrived without delay and the engines and coaches were re-railed and the track repaired by 5.40 p.m. on 27th October, when normal working was resumed at restricted speed. In the meantime, some trains were passed over the Up goods line on which absolute block working had been introduced, and most of the diesel services were diverted via Leeds City. Other trains were delayed and some were cancelled.

At the time of the accident the weather was stormy and showery, but visibility was good. Later, the weather deteriorated and torrential rain, accompanied by a gale force wind, fell for several hours.

DESCRIPTION

The site

As shown on the sketch opposite, Ardsley Station is situated on the main line between Wakefield and Leeds Central, at the junction with the branch line to Bradford. In the Down direction the main lines rise almost continuously from Wakefield and the gradient approaching Ardsley Station is 1 in 117; through the station the lines are on a slight left-handed curve. The adjacent signal boxes are Ardsley South, 841 yards towards Wakefield, Ardsley North, 478 yards towards Leeds and Ardsley West, 682 yards towards Bradford.

The branch line junction is on the Leeds side of the station. The signal box is opposite the junction and there is a road overbridge between it and the platforms.

The speed of trains on the main line through Ardsley Station is restricted to 60 m.p.h.; to and from the branch line the speed limit is 15 m.p.h.

The signalling

Ardsley Station signal box is equipped with a frame of 80 levers, 16 of which are spare, and the signalman faces the Up and Down main lines when working it. The 3-position block instruments and the other instruments and equipment are located on a shelf above the frame.

The signals are semaphores except for the Down starter to the branch and main lines, No. 25 (branch)/27 (main), which is a colour light and is provided with a direction indicator. In the Down direction there is an advanced starter on the branch line, but not on the main line because Ardsley North home signal is only 470 yards ahead. Signal No. 27 also acts as Ardsley North box's distant and its green aspect is controlled from that box. Shunting signal No. 36,

at which the light engine stood, is 100 yards beyond the colour light and 79 yards from the centre of the signal box. The distance between the Down main home signal, No. 24, and No. 25/27 is 151 yards, and the overlap beyond the home signal for Regulation 4 acceptance extends for some 270 yards beyond signal No. 25/27.

Two track circuits are provided on the Down main line (No. 5T and 6T) and they extend from the junction points No. 29 only up to shunting signal No. 36. There are no "block controls" on the Down line.

The junction facing points, No. 29, are set normally for the main line and points No. 37, on the Up branch line, for the Up branch platform line. The usual junction interlocking is provided which ensures that points No. 29 must be reversed for the branch line before points No. 37 can be reversed.

Ardsley Station box is in the "special" grade; it is a busy box and the signalmen handle approximately 300 trains and light engines every weekday.

The light engine

The engine was Class V2 with 2-6-2 wheel arrangement and a 6 wheel tender, and it weighed 145 tons in working order. It was equipped with the vacuum brake. It had run tender leading to Ardsley Station.

The train

The train was the 6.12 p.m. express passenger from King's Cross to Leeds Central. It comprised 7 bogie vestibule coaches weighing 249 tons and was hauled by a Class A3 Pacific locomotive with an 8 wheel tender. The engine was driven from the left hand side. It weighed 153 tons and the total weight of the train was therefore 402 tons. All the coaches were of the British Railways "all steel" type and they included four open type coaches built between 1955 and 1957; all the coaches were fitted with Buckeye type couplings. The leading coach, which had a brake compartment at the front end, was screw coupled to the engine.

The damage

As a result of the collision the light engine, the pony wheels of which were derailed, was heavily damaged at the front end where the main frames were bent almost double.

The bogie centre casting of the train engine was broken and the bogie was thrown to the side of the track. The front end of the engine was severely damaged, the buffer beam being torn off and the main frames bent.

As mentioned earlier, the engine and the leading two coaches of the train were derailed, but they remained in line. Structural damage to the coaches was confined more or less to the leading coach in which the body vestibule end panels were smashed and the bogies were buckled and broken. However, in the open type coaches the seats and the tables had been wrenched from the floor and had been damaged; this was responsible for the majority of the casualties and will be referred to later.

RULES AND REGULATIONS

The Block Regulations of the former London and North Eastern Railway are still in force in the North Eastern Region (except on those lines which were part of the former London, Midland and Scottish Railway) and they contain no Regulation to cover shunting movements into the forward block section. Regulation 3 is the only one which has any bearing on that matter and it merely describes the mode of signalling; it says that a signalman may, having obtained "Line Clear" from the box ahead for a train, lower the signal and allow the train to enter the forward section.

The following extracts from the British Railways Rule Book are relevant:—

Rule 55 (a) When a train has been brought to a stand owing to a stop signal being at Danger, the Driver must sound the engine whistle, and, if still detained, the Fireman must go to the signal box and remind the Signalman of the position of the train In clear weather a train must not stand more than two minutes at a stop signal before the man goes to the signal box.

(b) When a train or vehicle has passed a stop signal for the purpose of being crossed to another line, or to be let into a siding, the Guard, Shunter, or Fireman must (except where printed instructions are given to the contrary), when the train or vehicle comes to a stand, and is detained, proceed immediately to the signal box and remind the Signalman of the position of the train or vehicle, and remain in the box until the Signalman can give permission for it to proceed or to be shunted clear of the running lines.

Rule 38 (b) Home signals where starting signals are not provided, starting signals where advanced starting signals are not provided, and advanced starting signals, control the entrance of trains into the section ahead, and must not be passed at Danger except as follows:—

(ii) Where the position of siding connections or crossover roads renders it necessary for the signal controlling the entrance to the section ahead to be passed for shunting

purposes and a shunt-ahead signal is not provided, a Driver may, for this purpose, pass the signal at Danger upon being directed to do so by the Signaller, either verbally or by a green hand signal held steadily,

EVIDENCE

Engine crews

The engine of the express train was in good order and the train was running on time. The Ardsley Station distant signal was at Caution and Driver G. Wallace closed the regulator, but he opened it again soon afterwards when the home and the colour light starter were seen at clear. The crew were unaware that the train had collided with an engine until afterwards and Wallace, in fact, thought that his engine had become derailed on the junction crossing. He said that he was keeping a good look-out ahead but he turned on the blower and glanced at the water gauge when passing through Ardsley Station. He did not see the tail lamp on the light engine and did not think that he could have done so before passing the colour light starter signal because of the latter's brightness. The fireman was busy on other duties.

Driver H. W. Haigh, of Ardsley North Motive Power Depot, was in charge of the light engine which was destined for the coal yard on the Up side of the line between Ardsley Station and Ardsley North. He said that the engine left the depot at 9.57 p.m. with a white light on the tender (which was leading) and a red tail light on the front of the engine, and it passed on to the main line at Spring Lane box, the next box beyond the South box, about 2 minutes later. The South box signals were off, as was the Station box home signal, and the colour light starting signal was yellow. He stopped the engine just beyond the shunting signal (No. 36) and said that he gave a short pop on the engine whistle. He stated that he had as usual travelled slowly, at less than 10 m.p.h., and he considered that he had taken 5 to 6 minutes from Spring Lane box to the shunting signal.

Haigh went on to say that about 15-20 seconds after the engine had stopped, an Up train from Bradford passed over the junction, and he commented on the short interval to his fireman. After that train had left the station he again gave a pop on the whistle. He thought that his engine had been standing about 3 minutes and certainly not more than 4 minutes when he saw the headlights of a Down train, and he soon realised that it was the King's Cross-Leeds express. The fireman jumped off the engine and, after making a very small application of the brakes, Haigh did likewise just before the impact.

Haigh was questioned closely about his failure to comply with Rule 55 (b) when the engine was standing at the shunting signal, and his replies indicated that he thought that the line was track circuited and that, consequently, he was not required to do so; also, that neither he nor other drivers had ever carried out the Rule at that signal.

Haigh also stated that it was the usual practice for drivers of engines destined for the coal yard to stop at shunting signal No. 36. Sometimes, however, the signaller would advise the driver when the engine was passing the box to proceed to Ardsley North box where there is another entrance to the yard.

The light engine fireman generally corroborated Haigh's evidence.

Signalmen

The signalman mainly concerned was J. K. Ward, who was on duty at Ardsley Station box from 10.0 p.m. onwards. Evidence was also taken from the following men:—

J. R. Myers ... Booking lad, Ardsley Station box, 10.0 p.m. onwards.
R. G. Carey ... Signaller, Ardsley South box, 10.0 p.m. onwards.
W. G. Edwards ... Signaller, Ardsley North box, 10.0 p.m. onwards.
L. Moody ... Signaller, Ardsley Station box, 2.0 p.m.—10.0 p.m.
D. Nicholson ... Signaller, Ardsley North box, 2.0 p.m.—10.0 p.m.

The following are the relevant extracts from the Train Registers of the boxes concerned for the Down light engine and the Down express train and for the Up train from the Bradford branch:

	South Box						Station Box						North Box		
	Rear Section			Forward Section			Rear Section			Forward Section			Rear Section		
	L.C. given	T.E.S. re- ceived	T.O.S. sent	L.C. ob- tained	T.E.S. sent	T.O.S. re- ceived	L.C. given	T.E.S. re- ceived	T.O.S. sent	L.C. ob- tained	T.E.S. sent	T.O.S. re- ceived	L.C. given	T.E.S. re- ceived	T.O.S. sent
DOWN															
Light engine	9.58	9.58	10. 1	9.58	9.58	10. 4	9.58	9.58	10. 4	—	—	—	—	—	—
9.12 p.m. Express King's Cross to Leeds Central	10. 3	10. 6	10. 8	10. 4	10. 7	—	10. 4	10. 7	—	10. 5	10. 7	—	10. 0	10. 5	—
Obstruction Danger signal sent to South box at 10.8 p.m.															
Leeds express collided with light engine at 10.8 p.m.															
UP															
9.38 p.m. Bradford to Wakefield	10. 0	10. 3	10. 6	10. 0	10. 5	10. 7	9.59	10. 4	10. 6	9.59	10. 6	10. 7	9.59	10. 6	10. 7
Obstruction Danger sent to North box at 10.8 p.m.															

Ward is 38 years of age and has been a signalman for 12 years. He had worked in Ardsley Station box from January to April 1958 and again, after a short time in the Leeds control office, since November 1958. He arrived in the box at 9.55 p.m. on Monday, 26th October, after having been on rest since the previous Saturday night. He agreed the correctness of the extracts from his Train Register Book, as recorded above. Ward had arranged to cross the light engine into the coal yard over the connections opposite his box and he cleared the home signal, No. 24, and starter, No. 27, for it, but he did not block signal it to Ardsley North. As he expected, it stopped on the Down main line just beyond shunting signal No. 36. Before its arrival he had accepted an Up train from Bradford with points No. 37 set for the Up branch platform line, which was in order. After the light engine had stopped he re-set the junction for the Up train to pass to the Up main platform line; he also accepted the Down express with points No. 29 set for the branch line, which was also in order. He then obtained "Line Clear" for the express from Ardsley North and after the passage of the Up train, he again re-set the junction for the main line and cleared the home signal and the colour light starter, but not the distant, for the express, having forgotten that the light engine was still standing on the Down main line. Ward could not explain this forgetfulness, nor could he say why he had not placed a collar on the lever of the starting signal. He did, however, say he was keen on avoiding delay to the passenger trains and he agreed that if he had crossed the light engine to the coal yard after the passage of the Bradford train, as he should have done, the express would have been checked at his signals. He stated that he did not hear the light engine whistle, but added that on account of the weather, the box windows were shut. He said that he had no domestic worries.

Ward stated that it was irregular to clear the starting signal for the light engine to proceed into the forward section towards Ardsley North without block signalling it. He said, however, that it had been a practice which had existed for many years and he had inherited it from his predecessors. He had never discussed the point with the Station Master or the Divisional Signal Inspector. He was aware that the two other regular signalmen working in the station box had, not long before the accident, changed their system of working and had started to place light engines making such movements on the forward block. He was unaware of the reason for this and said that he himself had not considered it necessary to make a change.

Ward said that the crews of engines detained at shunt signal No. 36 occasionally, but by no means invariably, carried out Rule 55.

Booking lad Myers, who is 19 years of age, had worked in that capacity for 3½ years but had been in Ardsley Station box for only 3 days. He, like Signalman Ward, did not hear the engine whistle and he did not appreciate, when Ward asked "Line Clear" for the express, that the light engine was still standing on the main line. He went to the window of the box as the express passed and he then saw the light engine tail light, but it was too late for anything to be done. He said that the tail light was a good one.

Signalman Carey and Signalman Edwards said that they had been on the same shift as Ward for some time and had experienced no difficulty in working with him. Edwards stated that he had not seen the light engine concerned in this collision. He went on to say that he had seen, during day shifts, that engines were allowed to move into the forward section from Ardsley Station box without any block signal. He could not explain why he had recorded having given "Line Clear" for the express at 10.0 p.m., which was obviously incorrect.

Signalman Moody said that, up to 2-3 months before, he had allowed light engines to move into the forward block to Ardsley North without block signalling them and that he had heard that the practice had been in existence for some 30 years or more. He had, however, realised that it was an improper practice and he and the other permanent signalman had ceased to follow it. He was emphatic that the change in their method of working was not the result of any incident. They had not discussed the matter with the Station Master or the Divisional Signal Inspector. He had never known a driver, whose engine was standing at shunting signal No. 36, carry out Rule 55.

Signalman Nicholson confirmed that the practice of block signalling engines going into the forward section from Ardsley Station box had been started by the signalman on his shift at the station box only about 3 months ago, and said that it was the result of discussion between themselves. He also was emphatic that it was not the result of any incident. He stated that on some occasions light engines had arrived at Ardsley North box without having been block signalled.

Other staff

Mr. C. W. Hoole, Yard Inspector, Ardsley, left his office at the Wakefield end of the Down branch platform just as the light engine passed through the station. The time was then 10.1 or 10.2 p.m. He walked along the platform and waited at the Leeds end until the Bradford train had arrived, at about 10.4 p.m. He then went across the lines to the coal yard and stood on the Leeds side of the light engine discussing the night's work with a foreman. He saw the Down express come through the bridge at the station and, almost immediately afterwards, the collision. He thought that the express was travelling more slowly than usual and that its speed was about 35 m.p.h. He could not recollect hearing the light engine whistle.

Mr. A. Edmondson has been the Station Master and Yard Master at Ardsley since May 1958, and he is also responsible for the Spring Lane, South, Station, North and West signal boxes. He

was aware of the practice of engines being sent under a cleared starting signal into the forward section from Ardsley Station box without being block signalled, and had discussed it with the signalmen. He said that he thought that it was covered by Rule 38 (b) (ii) but when questioned he agreed that that rule is applicable only when a starting signal is maintained at danger. He also said that he had heard that the practice had been in existence for many years and thought that it must have been authorised at some time. Although he, himself, had not been a signalman, he did not discuss the matter with the District Inspector and he agreed that he should have done so. Mr. Edmondson also became aware during the first week of October, i.e. about three weeks before the accident occurred, that two of the three signalmen in the Station box had changed their method of working, in that they had started to block signal forward such light engine movements. He did not know why they had done so, but he thought that it was a good idea. He did not, however, suggest to Signalman Ward that he too should fall into line with the other two men, although he agreed that he should have done so.

Mr. Edmondson said that in accordance with Instructions he had carried out periodical checks of the Train Register Books by withdrawing them from the boxes and comparing them. He had found them generally accurate and well kept. He had not noticed any cases when Rule 55 had been or should have been carried out. He thought that, in general, engines did not stand at the shunting signal long enough for the Rule to be applied.

Mr. S. E. White, District Inspector, has been in charge of the Wakefield area for 3½ years. He was emphatic that he was unaware of the practice at Ardsley Station box in regard to light engine movements. He had visited the box regularly and said that when he was there engines were invariably either block signalled forward or hand signalled past the starter under Rule 38 (b). He had in fact visited the box on 11th and 25th October, but he stated that he had not heard of any change in the method of working. During his visits he had checked cursorily the Train Register Book for the previous 24 hours. He had noticed that engine crews had generally not carried out Rule 55 when they should have done so, but he had taken no action.

CONCLUSIONS

The primary cause of this accident was that there was no clear Block Regulation nor any instruction in the Ardsley Station box to cover the frequent movement of engines destined for the coal yard for the short distance into the forward section to Ardsley North. Consequently an undesirable practice of clearing the starting signal without block signalling the engine forward had been adopted; it had evidently been followed for many years and it had been condoned by the local supervisory staff.

The immediate cause of the accident was a simple human failure by Signalman Ward of that box who forgot that the light engine was standing on the main line and cleared the signals for the express train; he had not made use of the lever collars which are specially provided to prevent such forgetful actions. Ward was an excellent witness and gave his evidence in a most straightforward manner. He has a clear record.

A contributory cause was that Driver Haigh of the light engine failed to send the fireman to the signal box, which was only some 90 yards away, to remind the signalman that the light engine was standing on the main line, as required by Rule 55 (b). In contrast to sub-section (a) of that Rule which allows a period of up to 2 minutes to elapse before such action is to be taken, sub-section (b) requires it to be taken without delay when an engine is detained on a main line for the purpose of being crossed to another line, but in this case the engine must have been standing at the shunting signal from 10.3 p.m. to 10.8 p.m., a full 5 minutes. It is quite clear, however, that the drivers of light engines had been in the habit of not complying with this Rule in such circumstances and this habit also had been condoned locally, and it would therefore be unfair to attach much blame to Haigh. He was, however, an unsatisfactory witness. I do not accept his statement that the branch line train from Bradford passed over the junction 15-20 seconds after the light engine had stopped, and I think that it was made with the intention of suggesting that something may have been wrong with the equipment. Tests showed, however, that the interlocking was in order and that the two movements could not have taken place within such a short period. I am doubtful also whether Haigh had sounded the engine whistle, although he said that he had done so twice. Admittedly it was a stormy night, but if the whistle had been sounded I would have expected either the signalman or the booking boy in the nearby box or Mr. Hoole, the Yard Inspector, to have heard it.

On the left-handed curve through the station the sighting distance of the tail light of the light engine from the footplate of the express was about 250 yards, but it would have been difficult to see it initially on account of the brightness of the colour light starting signal which intervened. The tail light was, however, 100 yards beyond the starter and Driver Wallace should have seen it before the impact, but he could not have avoided the collision.

Mr. Edmondson was aware of the long established practice of signalmen clearing the Ardsley Station starting signal for engines going into the forward section without being block signalled and, instead of condoning the practice (for it was clearly not covered by any Regulation and was not permitted under Rule 38 (b) as he suggested), he should have stopped it. He should have noticed when checking the Train Register Books that Rule 55 (b) was not being obeyed.

I think that Mr. White should, during his cursory checks of the books, have discovered the practice of the signalmen in dealing with light engines and realised that it was improper. He was aware that Rule 55 (b) was being generally ignored by the drivers of light engines standing at the shunting signal but he took no action.

REMARKS AND RECOMMENDATIONS

As mentioned earlier the Block Regulations in force do not include any clear Regulation to cover a movement into the forward section such as was made in this case; at places where such movements are frequent the practice in the North Eastern Region has been to detail the action to be taken in the Signal Box Instructions, but this had not been done at Ardsley Station Box. This has now been rectified and I hope that the same action will be taken at other boxes where similar conditions obtain. I am informed that the British Railways Block Regulations, which are to be issued shortly, will contain a Regulation which will cover such movements, but the Regulation will be applied only when it has been specially authorised in the Signal Box Instructions.

It is to prevent accidents being caused by simple acts of forgetfulness of this type on the part of signalmen that track circuits and block controls are provided, and at busy boxes such as Ardsley Station such equipment is particularly necessary. As a result of discussions with the Regional officers, therefore, a comprehensive scheme for the provision of these controls has been prepared and is to be implemented in the near future; it should eliminate the possibility of any further accident of this nature. The Regional officers are also, at my request, examining the situation at other busy boxes to ascertain whether adequate controls are provided, and I recommend that similar action should be taken in other Regions.

Among other controls to be provided at Ardsley Station is a track circuit on the Leeds side of the shunting signal concerned in this case which will control the starting signal and should render the application of Section (b) of Rule 55 by the crews of engines standing at the shunting signal unnecessary. I am informed, however, that that Rule will continue to be applicable at that signal and that the same conditions obtain at a great many shunting signals on the North Eastern Region and on other Regions. The failure to authorise the exemption to a Rule, when it is justified, will, however, lead to disrespect for the Rule and I think that the whole question of the application of Rule 55 (b) requires to be considered fully.

As mentioned earlier, the majority of the casualties in this collision resulted from the seats and tables in the modern open centre gangway type coaches of the express train becoming dislodged. The method of securing these to the floor is not satisfactory and, as a result of a discussion with the Chief Mechanical Engineer of the British Transport Commission, it is to be improved.

I have the honour to be,

Sir,

Your obedient servant,

D. McMULLEN,
Colonel

The Secretary,
Ministry of Transport.