

APPENDIX.

DAMAGE TO ENGINES AND TENDERS.

Train engine No. 275, "Vulcan," 6 feet 6 inches, rebuilt, passenger class.—Smoke-box door wheel broken; right-hand buffer knocked off; buffer-plank and vacuum-pipe damaged; cylinder cock-rods bent; hopper and shoulder plate damaged; both life-guards carried away; axles bent; stay between leading horn-blocks bent, and framing sprung; left-hand leading axle-box keep broken; left-hand sand-pipe knocked off; left-hand driving axle-box keep broken; damper knocked off and ashpan badly damaged; damper-rod bent; brake-gear carried away, and brake cylinder damaged; trail sand-pipes carried away; drawbar and side chains broken; both feed-pipes on vacuum-pipes damaged; left-hand panel plate and stanchion bent; steadying bracket on foot-plate broken; right side of smoke-box bent up at corner and three rivets broken out; left-hand foot-step and stay knocked off.

Tender No. 972.—Side chains and draw-bar broken; both foot-steps and buffers broken; tool-boxes carried away; both leading axle-boxes and horn-plates broken; feed-pipes broken; right-hand side of tender brake-gear broken off; middle tender axle-box broken; right side water dip gearing badly damaged; tie-rod between right-hand leading and middle wheels carried away; brake-shaft corners broken; left-hand leading and left-hand middle horn-blocks broken; leading and middle springs carried away; leading axle badly bent and the middle and trail axles slightly bent; right-hand life-guard carried away and left life-guard bent; right-hand buffer carried away and shackle broken; rail round top of tender bent, also top of tender bent; vacuum-pipe broken; lamp-board behind tender broken.

Assistant engine No. 2,159, "Shark," 6 foot, rebuilt.—Chimney knocked off; smoke-box hand-rail bent; vacuum hose-pipe damaged; left-hand buffer-plunger and left lamp-bracket carried away; three cylinder cocks knocked off (two left and one right-hand); front and rods knocked off; leading and driving axles bent; life-guards carried away; buffer-plank slightly damaged; hopper and shield-plate knocked off; tap-rod bracket bent; stay between leading horn-plates bent; both sand-pipes carried away; damper slightly bent; dome-shell slightly bent; brake-gear carried away except shaft between brake-hangers; left-hand feed-pipe broken; left-hand trail spring-hanger slightly bent; right-hand leading axle-box keys broken; both side-chains broken; both footsteps carried away; cast-iron corner for tender lap-plate broken; left-hand stanchion and panel-plate damaged; sand-gear and top and side of cab carried away; sight feed-lubricator bent; vacuum air-valve damaged; cab window broken.

Tender No. 1,127.—Both hand-rails bent; hand brake-wheel and screw broken; hole knocked in tank left-hand side; left-hand tool-box carried away; drawbar broken; both leading axle-boxes broken; hornplates carried away; both left-hand middle axle-boxes and springs broken; both trailing axle-boxes broken and left-hand spring carried away; brake gearing and water-dip gearing carried away; feed-pipes and stays broken off and carried away; rail round top of tender bent; both trail buffers, hump-board, life-guards, and drawbar-hook broken off and carried away; leading and middle axle bent.

DAMAGE TO ROLLING-STOCK.

West Coast sleeping saloon No. 265.—Damaged beyond repairs.

West Coast sleeping saloon No. 489.—Damaged beyond repairs.

West Coast composite No. 413.—Damaged beyond repairs.

West Coast third-class brake No. 70.—Damaged beyond repairs.

West Coast brake-van No. 97.—One end smashed; side-panels split; one bogie-truck damaged, step-board and axle-boxes broken; leg-irons and one iron headstock bent; brake gear damaged.

West Coast third-class brake No. 67.—One end compartment stove in, and part of roof torn away; end panels split; axle-boxes, stepboards broken and leg-irons and end brake-pipes bent; body damaged on one side only.

West Coast composite No. 416.—Both ends badly damaged; two end first-class and two lavatory compartments demolished; roof at one end torn away and badly damaged; one iron headstock damaged; buffers, buffer-castings, axle-boxes and stepboards broken; step-irons and axle-guards bent; two bogies badly damaged; brake work damaged and broken.

DAMAGE TO PERMANENT WAY.

Up fast line:—42 rails (various lengths), 178 chairs, 28 sleepers, 34 timbers (various), two V-crossings.

Down fast line:—19 rails (various lengths), 135 chairs, 27 sleepers, 32 timbers (various), two V-crossings.

Deck Street coal yard:—24 rails (various lengths), 138 chairs, 19 sleepers, 16 timbers (various), one V-crossing. (N.B.—Nine of the rails and one V-crossing included above were fit for use in relaying the line.)

Printed copies of the above Report were sent to the Joint Companies on the 8th October.

LANCASHIRE AND YORKSHIRE AND LONDON AND NORTH-WESTERN JOINT RAILWAYS.

Board of Trade (Railway Department),
8, Richmond Terrace, Whitehall, London, S.W.,
August 12th, 1896.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in compliance with the order of the 10th instant, the result of my enquiry into the collision that occurred on the 3rd instant at Preston station, on the Lancashire and Yorkshire and London and North-Western Joint Railways, at 11.1 p.m.

In this case, as the 9.35 p.m. passenger train from Liverpool to Preston was entering the latter station, it came into collision with a light engine, which was standing on No. 3 platform line, at the home-signal, immediately outside the station.

Three passengers are reported to have complained of slight injuries.

The train consisted of 10 vehicles drawn by a four-wheels-coupled tender engine (with leading bogie), and it was fitted with the automatic vacuum-brake.

The pilot engine was also a tender engine, and was standing with the tender in front.

Both engines were more or less damaged (for details, *see* Appendix), but no damage was done to the permanent-way, and neither of the engines and none of the carriages left the rails.

Description.

Nos. 3 and 4 platforms, and the lines leading to them from the south, are known as the East Lancashire portion of Preston station, and although part of the North Union section of the joint railways (London and North-Western and Lancashire and Yorkshire) they are used only for the Lancashire and Yorkshire Company's traffic, No. 3 being the "down" and No. 4 the "up" platform.

The approach to this part of the station from the south is controlled by No. 3 signal-cabin, the home-signal being nearly opposite to the cabin and 60 yards south of the outer end of the platform. Just at the end of the platform there are the points of a cross-over road between the down and the up lines, which enable an empty train to be got out of No. 3 platform to be taken away to the goods yard on the up side of the railway, and there are also points giving access to carriage sidings on the down side.

Goods-yard cabin is the next in rear, and about 300 yards south, of No. 3 cabin, and the block system of working is in operation between these cabins.

The East Lancashire down line approaches the station on a rather sharp curve, first to the left and then to the right.

The night is said to have been dark but clear.

The home-signal is about 50 feet away from the cabin, and there is a loop line and a carriage siding (referred to above) between the cabin and the down main line; vehicles were standing on the loop line at the time the accident occurred.

Evidence.

James Johnson states: I have been about 31 years in the Company's service, 24 years as a driver. On August 3rd I came on duty at 2.20 p.m. to work until 12.15 p.m. On that date I left Liverpool at 9.55 p.m., nearly 20 minutes late, owing to delay there through it being Bank Holiday. We had an extra stop that night at Croston, and we arrived at Preston about 25 minutes late. On approaching Goods-yard cabin, Preston, the home-signal was off for us, but No. 3 cabin home-signal was "on" when I first saw it, which would be just after passing the Goods-yard cabin. I had shut off steam on approaching Whitehouse junction, nearly a mile from Preston station; approaching Preston I had applied the vacuum-brake and reduced the speed to about eight miles an hour. When past Goods-yard cabin I whistled, and No. 3 cabin home-signal was lowered for me immediately. I drive from the left-hand side of the engine and, owing to the curve, my fireman was the first to see the obstruction in front of us. He called out "Whoa," but I do not think there was more than the length of my engine between the light engine and us then. The light engine had a white tail-light at the foot of the chimney, the engine being with the tender in front, *i.e.*, towards the station. I applied the vacuum-brake as hard as I could, but I was unable to stop in time to avoid a collision. I had given my engine steam when the signal was lowered for me. The pilot engine is generally standing on one of the siding lines, ready to take away all the vehicles but one of my train on our arrival. One vehicle has to go forward to Fleetwood. The pilot engine, as a rule, being in the siding, shows a white light. If a red light had been shown on this occasion I feel sure a collision would have been avoided. The night was clear but dark.

James Brown states: I have been 6½ years in the Company's service, and 12 months as a fireman. On the 3rd August I was acting as fireman to driver Johnson and my hours of duty were the same as his. As we passed Goods-yard cabin I was looking out for No. 3 cabin signal, with my head outside the cab—from the driver's side the signal in question cannot be seen until close to it. As soon as the driver whistled for the signal it was lowered for us. When I first saw the white light of the pilot engine I thought the engine was in the carriage siding, on the left of our train, where it usually is. When quite close to the signal I saw the white light of the engine on our line and I called out to the driver. He shut off steam at once and applied the brake. I opened the sand-valves. Neither the driver nor I were hurt in any way and no wheels of the engine or train left the rails. The engine, No. 823, is a four-wheels-coupled tender engine with leading bogie, and we had 10 vehicles behind the engine. The train was fitted with the automatic vacuum and tender hand-brakes. The pilot engine ought to show a red tail-lamp if standing on the down main line, but when in the siding it shows a white lamp at the tail.

Edwin Crookall states: I have 19 years' total service, and have been a signalman for 18 years. I am now a relief signalman in the North Union Company's service, and on the 3rd August I was on duty in No. 3 cabin, Preston station. On that date I came on duty at 10 p.m., to work until 6 a.m. At 10.53 p.m. I accepted the pilot engine from Goods-yard cabin, and it arrived at 10.54. It was stopped at the down home-signal, as the platform was blocked with a special train which had arrived at 10.48. The

empties of the special were taken across from the down line to the up line, at 11 o'clock, and thence to the goods yard, being followed out by the engine which had brought the train in. Just before this Goods-yard cabin had offered me the 9.35 express ex Liverpool, which was then about half-an-hour behind time. I accepted it at 11.1, forgetting that the pilot was standing on the down main line at my home-signal. I had gone to the window of the cabin, to caution the driver of the engine following the empty coach train, but I did not then notice the pilot engine on the down line. There was a large London and North-Western covered carriage-truck on the loop line between the pilot engine and the cabin, which prevented me from seeing that the engine was still on the line. There was not room enough at the platform to enable me to get the pilot into the carriage siding until the empty passenger vehicles had been taken away from the platform. I believe that pilot engines in the station yard, unless in quite exceptional cases, have a red tail-lamp showing after dark.

George Woods states: I have been 15 years in the Company's service, and a driver for the last six months. On August 3rd I came on duty at 11.30 a.m. and "signed off" at 11.50 p.m.; on the previous day (Sunday I was not on duty. My usual duty is with a goods pilot engine, and extends over 12 hours. I arrived at Preston at 2.15, and for the rest

of the afternoon I was employed taking empty carriages out of, and bringing them into, the platform as required. At about five minutes to 11 I was stopped at the station home-signal on the down line, with the tender in front next to the station. I had a white light on both ends, and the same was the case from the time when the lamps were lighted—a little before 9 o'clock. I have not done this duty for the last 12 months. I did not use a red light, because my fireman was a young hand, and I did not like to send him to change the lamps from time to time. I did not notice the passenger train behind me until it was about three carriage-lengths away, and it was into me almost at once. My mate had one finger cut, but I was not hurt at all.

Thomas Parker states: I have been four years and six months in the Company's service. I am a cleaner and extra fireman. On the 3rd August I was employed as fireman to driver Woods, and my hours of duty were the same as his. For the last 12 months I have been acting as fireman two or three times a week. I have been with driver Woods as often as with anyone else. This was the first time I had been on a passenger pilot engine. I have to light the lamps, and before putting them on the engine I asked the driver what to do, and he told me to show a white light at both ends and leave them so. I am 21 years of age.

Conclusion.

This slight collision was due primarily to a careless oversight on the part of signalman Crookall, in No. 3 cabin, who allowed the Liverpool train to enter the section when he had a light engine standing on the line at his home-signal.

It appears from the evidence that the light engine had arrived at Preston at 2.15 p.m., and had been employed during the afternoon and evening as a special pilot engine for shunting purposes. This engine had to remove empty carriages from the station, and similarly to bring empty carriages into the station to form out-going trains, as required from time to time.

At 10.54 p.m., when running back "light" into the station, it came to a stand at the home-signal on the down main line, opposite to No. 3 cabin; at that time there was a train of empty carriages alongside the platform, but the pilot-engine was not required to take them away as another engine was already attached to them for that purpose. Pending the arrival of the next down train the pilot-engine would, under ordinary circumstances, have been placed in the down carriage sidings; access to these sidings was, however, blocked by the train at the platform.

The empty carriages were removed about 11, just previously to which Goods-yard cabin had offered to No. 3 cabin the 9.35 train ex Liverpool, that train being then about half an hour behind time; signalman Crookall accepted the Liverpool train at 11.1, forgetting altogether that he still had the light engine on the main line. Crookall says he went to the window of his cabin as the empty carriages were leaving the station, but that a high London and North-Western Railway covered carriage-truck on the loop line, hid the light engine from his view; this probably would be the case, but his block instrument, which stood at "train on line" should have sufficed to remind him the down line was not clear.

The driver of the Liverpool train found the signals off for him at Goods-yard cabin, but No. 3 cabin home-signal was at danger when he first saw it—which, he says, would be just after passing the Goods-yard cabin, *i.e.*, less than 300 yards away from the signal. He whistled, and No. 3 home-signal was lowered. He had shut off steam nearly a mile from Preston, and had reduced the speed of his train to about 8 or 10 miles an hour by the time that he got near the station; after No. 3 cabin home-signal was lowered he, however, again gave his engine steam. Owing to the curves of the line there is a very limited view ahead, and I do not consider that the enginemen of the Liverpool train can be blamed for having failed to see the light engine until they were too close to it to prevent the collision. The fireman says he saw the white light at the tail of the light engine before they got very close to it, but he then thought that the engine was in the carriage sidings, where it appears to be customary to use a white and not a red light as a tail-light.

The general rules adopted by all the railway companies who are parties to the railway clearing system clearly lay down that a red tail-lamp must be shown by all engines after sunset, *when running alone*; but those rules are rather vague in reference to shunting operations or station-yard working. Driver Woods, who was in charge of the light engine, admits he knew he should have had a red tail-light, and he gives as his reason for not having one that his fireman was young and inexperienced, and he, therefore, did not like to expose him to the danger involved in frequently changing the light (according to the direction in which the train might be running). Fireman Parker appeared to me to be well able to take care of himself, and in any case the excuse cannot be admitted as a valid reason for the light engine being on the down line improperly protected. Driver Woods could, if necessary, have changed the lights himself.

It will be noticed the driver of the Liverpool train says he feels sure he could have pulled up in time to prevent the collision had he received proper warning, by the exhibition of a red light on the light engine, but there is little or no reason to suppose that the question of lights had anything to do with the signalman's blunder.

The light engine, apparently, ran backwards and forwards through the yard for two hours previous to the accident without showing any red light; it is, therefore, clear that more definite regulations on this point are desirable for the future guidance of the Lancashire and Yorkshire Company's servants.

The Assistant Secretary,
Railway Department, Board of Trade.

I have, &c.,
G. W. ADDISON,
Lieut.-Col., R.E.

A P P E N D I X.

DAMAGE TO ENGINES.	framing, both sides, doubled up and fractured; vacuum brake-pipe broken.
Engine No. 823.—Leading buffer-beam and angle-iron broken; frame, right-hand side, bent; foot-	Engine No. 624.—Leading buffer-beam and angle-iron and foot-framing slightly bent.

Printed copies of the above Report were sent to the Joint Companies on the 27th August.

LONDON AND NORTH-WESTERN RAILWAY.

Board of Trade (Railway Department),
8, Richmond Terrace, Whitehall, London, S.W.,
November 23rd, 1896.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in compliance with the Order of the 17th instant, the result of my enquiry into the circumstances attending a collision which occurred at Coventry station, London and North-Western Railway, on the 11th October.

On this occasion, at about 12.30 a.m., the engine of an excursion train from Leicester to Wolverhampton was uncoupled from its train, after arrival at Coventry, and went forward for the purpose of running round the coaches, when it came into collision with the rear brake-carriage of the 10.30 p.m. excursion train from Leicester to Leamington, which was standing on the up (Rugby) line opposite to No. 1 signal-cabin.

Three passengers are reported to have complained of injuries, and the two men on the light engine were slightly hurt.

The Leamington excursion train consisted of 12 vehicles, three of which had some quarter-lights broken, whilst the rear brake-carriage had buffer-rods bent. The trailing wheels of that carriage were lifted a few inches off the rails. The light engine, No. 450, was a six-wheels-coupled engine, fitted with the steam-brake, working blocks on all the wheels of the engine and tender; it was running tender in front, and had buffers broken and the tender damaged.

Description.

There are two up and two down lines, running from west to east, through Coventry station, the up platform line being on the north side of the railway with the up