

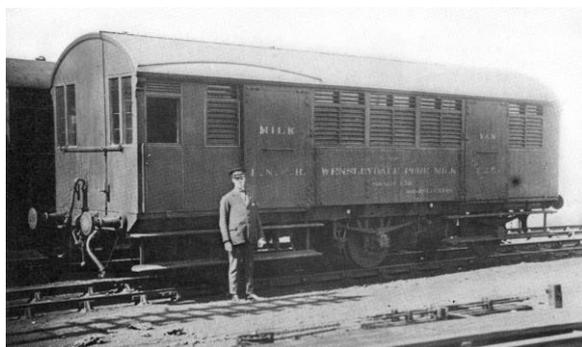
## LNER vans for the GE Section

### *D.86 General Van and D.87 Milk Van*

At the grouping in 1924 the GE Section had by far the largest number of 4w and 6w NPCS vans - because of the agricultural traffic and need to ship quickly. Probably best known from the LNER period were the D.120 32ft 4w passenger brake vans of 1929 which had arisen from a need to replace GER-built 6w vehicles fitted with shelves for this traffic and a novel design of ventilation. Another precursor was this pair which were also 32ft long on four wheels. All were dual braked with through steam heat pipe:

D.86 General Van	6231-6282 (52)	70079-70132	1926-7
D.87 Milk Van	6283-6296 (14)	70133-70144	1927

The designs are believed to have originated at Darlington, which is puzzling - why not at Stratford (which built them)? One possibility is that it may have been influenced by Alex Wilson, an ex-NER man who had taken over as General Manager of the Southern area in mid-1924, after an ex-GER man, Sidney Palmer, had resigned. It has been suggested that Wilson was appointed to shake up the companies to the south and he might have nominated Darlington instead of Stratford to deliver something "new". What is certain is that Darlington's design leaned heavily on an almost twenty year old GER design of 1908 for a milk van built for a co-operative, the Wensleydale Pure Milk Society, which hadn't been happy with the poor ventilation in the GER 6w passenger brake vans. The new design, a one-off, as it turned out, had glazed toplights protected on the outside by louvres to limit incoming sunlight, and grilles underneath, all along the body except for one end where a guard's compartment was added. The NER Diagram number was 168.



*The NER's milk van of 1908 for Wensleydale, precursor to D.86 and D.87, seen in 1926*

The main changes for D.86 were reduction to four wheels, elimination of the guard's compartment, allowing a third sliding door to be added, and addition of ventilation grilles on the ends, just above the buffers, a common device at the time. Dual braking was fitted and a through steam heat pipe. It was, after all, designed for use with passenger trains and overnight runs carrying fruit and vegetables all over the country, including on the LNER, the West Riding, Liverpool, the North East, and Scotland. The LMS area was reached via Peterborough and the GWR via Acton. I suspect that traffic to the SR was lower and was carted across London. Novel features which added complexity were on the sliding doors: most prominent was the GER-style recessed locking handle. The second was the pull handle, usually placed horizontally in the middle of the door, but here it was mounted vertically, also in a recess. Both were probably to maximise the width of a body fitted with external sliding doors inside the loading gauge, which at the time required a maximum width of 9ft.

#### Designs and the Diagram book

Previous research regarding other vans built specifically for the GE Section, namely 4w D.120 and 51'1 1/2" bogie D.129, found them all wrongly called "pigeon vans" by modellers. Diagrams 86 and 87 prove to be another cautionary tale for modellers who think that Carriage Diagrams are like tablets of stone with everything accurate to the last detail and infallible. Let's first remind ourselves what the purpose of a Diagram actually was: it was not a scale drawing, more of a sketch: some areas were oversimplified or exaggerated, and it was not very detailed. The main purpose was a visual shorthand to give an impression to the staff of the various vehicles and their principal dimensions and weight. If you wanted something more detailed, then you had to look up the proper engineering drawings.

Many mistakes have been noted, from the LYR goods brake van which was built with vertical planks, but the diagram (and a subsequent kit based on it) had horizontal planks. In many Diagram books, different vehicles were combined in a single Diagram, sometimes wildly different. A lesser example from the NER was Diagram K1 for both manually braked and automatically braked cattle trucks. When the last batches were built in 1924, the LNER seemed to have followed suit and given a single LNER D.24 for both types. A few years later, two versions of 51'1 1/2" van were built and though the bodies and fittings differed, they too ended up in the same Diagram, D.129.

As regards the LNER Carriages Diagram Book itself, at least three versions have survived. Michael Harris reproduced much in his final book. I also have a copy and it differs from his. So do individual pages that I have also seen. It's because there were different issues and updates over the years with changes in the annotation. When details in a design changed, a new Diagram would only be issued if the changes were important enough, and how much was always a moot point: a Diagram could embrace all sorts of changes that did not merit a fresh drawing for the body let alone a fresh Diagram. The annotations, however, could change quite a lot.

When Stratford was building D.120 changes were made that were not shown on the Diagram and it is clear that the same happened with D.86 and D.87.

#### The bodies

The drawings on Diagrams 86 and 87 look the same, yet service photographs show different bodies. The first version had a complete run of 6 toplights with grilles underneath. The second omitted toplights in the middle so that the grilles were higher, giving a staggered appearance. At some stage, the design was changed.



*D.86*



*D.87*

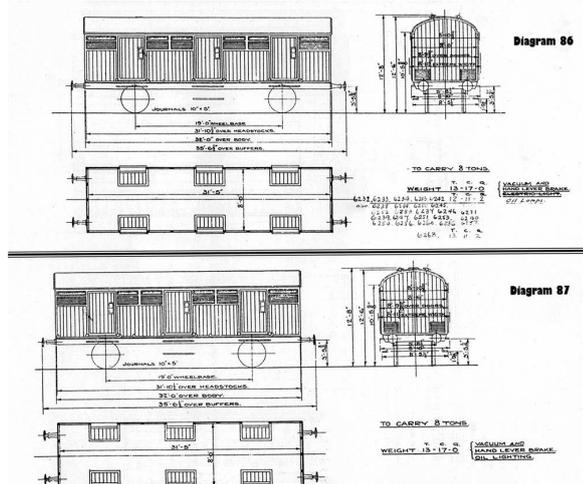
The only two pictures found so far where the numbers can be read show 6250 and E70111 (6243) from the middle of D.86. A useful indicator is a photo taken at Askrigg in 1952 where one of the later bodied vans was being used to carry milk churns. This would tally with D.87 Milk Van and suggests that the design was changed when construction of D.87 started in 1927. There are three possible reasons why.

One is that the LNER's financial position in 1927 was not so good and simplifying the body would have saved on cost. Another possibility is that placing the grilles nearer the roof aided ventilation, an aspect that was to be grasped more forcefully a couple of years later in D.120. But

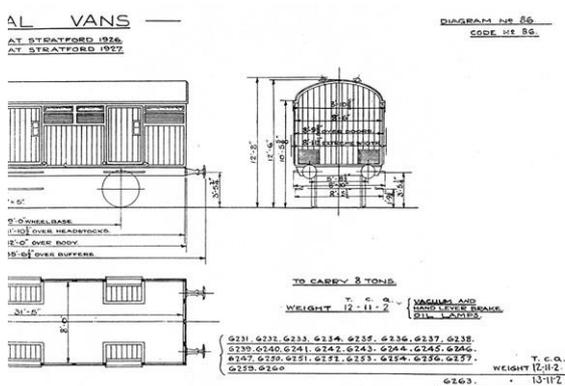
perhaps the main reason was that Darlington had designed the General Service van and the Milk Van to be outwardly identical? After all, the NER had long been comfortable with the nearly identical exteriors of the 6w passenger brake van and two versions, for milk, and for the homing pigeon traffic. Could it be that Stratford disagreed with this concept and wanted the vans to look different, and when construction started, simply altered the body accordingly? The Diagram would have remained the same.

### Lighting

In one of the early issues for D.86 (but clearly not the very first) the annotation "Electric lighting" was crossed out and "Oil lamps" written underneath. A weight of 13-17-0 was quoted with a lower weight added underneath of "12-11-2" with an asterisk, apparently for the oil-lit version.



A later issue of this Diagram, shown above, with D.87 beneath (enlarged in Fig.2 below) is reproduced in Michael Harris's "LNER Standard Gresley Carriages", Mallard Books, 1998, on p.84. The annotations were expanded and underneath the lower weight of 12-11-2, individual running numbers were written - but not in a series as you might expect but randomly from among the first ones built - between 6231-60. There are several gaps and it gives the impression that electric lighting was originally fitted, and then removed, the running numbers being added as the vans were recalled and passed through the works. No further numbers are quoted, and there is no such change for D.87, whose heavier weight could be explained by the fitting of a more durable floor (some companies used concrete) to withstand the wear and tear of heavy steel churns, and ease of washing out spillages.



On my issue of D.86 (shown above, and enlarged below) the annotations are different again and no longer show the original weight, only the lower one of 12-11-2 and, underneath, a list of running numbers in numerical order. Again there are gaps, which tally with the Harris version of the Diagram, but fewer of them. This version had been issued when conversion was almost complete. Standing apart among this is No 6263 which is quoted as having an in-between weight of 13-11-2. The reason is not known. It is, however, clear that electric lighting was fitted to the first thirty built in the sequence 6231-6260, and that from early 1927, construction had oil lighting, and the first 30 were retro-converted to the same.

Diagram 87 was not altered at any stage but the drawing, although apparently identical to D.86, has one small difference: the end

elevation shows oil lamps on the roof. The most likely explanation is that the Milk van, serving most of the time in daylight, was never intended to have electric lighting.

Electric lighting on 6231-6260 was a brief blip and the arrangement would have had twin battery boxes. Practice at the time was to discharge from one battery while charging the other. This will be resolved after analysis of GAs from 1926, from the NRM. Both ends of the body would have been plain until conversion to oil lighting.

Lighting by oil required lamp tops on the roof, each with a bung holder alongside, and grab handles on either side. On one end, steps and hand rails were fitted to gain access.

The whole thing related to the intended use of the vans for the GE Section's heavy traffic in fruit and vegetables, from the growers to the wholesale markets, and from them to retailers around the country. A great deal of loading took place after nightfall - which in winter is between 4pm and 5pm - and after an overnight journey, much of the unloading was also in the dark as the railway did its best to get the produce away to retailers. Fitting electric lighting to a van like this was a ground-breaking decision unique to the GE Section and in fact to all the railways in the UK. Unfortunately, by 1927 financial pressures were telling and the LNER did a U-turn. Lighting stayed in place but a cheaper alternative had to be used. The decision would have come from Head Office and one can imagine the outcry on the ground at having to abandon such a modern and easy to use system and go over to the hassle of preparing antiquated oil lamps and climbing the end steps to fit them through the roof. It's equally likely that staff gradually stopped bothering and used hand-lamps instead: not quite as effective but a lot less bother. This episode was an important step towards the next generation of 32ft 4w vans built from 1929 to D.120.

A question arises as to how long the initial D.86 vans ran with the electric lights? Bearing in mind that from early 1927 the remainder of D.86 and all of D.87 were built with oil lighting - and the first 30 were reverting from electric to oil lighting - when looking at photographs all the pictures of D.86 and D.87 in trains, from the 1920s to the 1960s, show oil lighting on the roof. A train picture from the mid-1950s appears to show a dynamo but the shape doesn't tally and neither does the position, low down and almost in the centre of the carriage; there are no battery boxes and oil lighting is clearly visible on the roof. The Isinglass drawing used a book reproduction of this picture to wrongly argue electric lighting across the board in BR days. The shadowy shape on the photograph is unexplained.

It would appear that conversion of the first 30 was made quickly, especially as the next design, D.120, construction of which started in 1929, had a guard's position and electric lighting as standard: the equipment would have been needed for them. Some may only have carried it very briefly indeed and as a type, it was almost certainly extinct by 1929.

### Braking

The Diagrams are annotated as having vacuum brake but it is certain that these vans were Westinghouse braked as well, a requirement for running with GE Section passenger trains, especially on the rear. Westinghouse brake continued to be used for passenger services in the steam era and many D.120 brake vans were withdrawn with it still in place. Of three portrait views from the 1950s of D.86 and D.87, only one had had the Westinghouse brake removed.

### Some details

An unexplained discrepancy is that the Milk Vans to D.87 were over a ton heavier than D.86 - and the identical weight for D.86 as-designed. It's possible that Darlington specified the same floor as in NER.186, which had been covered with zinc sheeting, a really elegant solution to the problem of wear resistance and spillages (the GER had used oak), but this cannot be confirmed, and it would not have added so much weight. It comes across as a clerical guesstimate.

When built, Stratford provided GER-style rain strips on the roof, straight with a bend in the middle, which all the LNER-period pictures show. Dispersal and servicing at other works could result in a curved rain strip being fitted and photographs from BR days show a 50-50 mix of the two types.

### Developments

A basic tenet of design is to adopt previous best practice, discard bad aspects, and if possible, add some innovation. In the case of LNER D.86, described as a general van but clearly aimed at the fruit and vegetable traffic, the most notable innovation, unique not only to the GE Section but the rest of the UK, came in the electric lighting, even if it was reversed. Nowhere else was a goods vehicle provided with modern lighting. By contrast, D.87 was a simplification of the unique NER design of 1908.

When, a few years later, D.120 was introduced for the same fruit and veg traffic, not only was electric lighting provided but another innovation - enhanced Venturi ventilation, another feature unique to the GE Section. Drop-down shelves, already proven on the GER and somehow omitted in D.86 were fitted, and a guard's position for maximum flexibility. All this was passed onto the GE Section's 51'1 1/2" bogie vans of 1931, and again, only for the GE Section.

It would be fair to say that these relatively sophisticated developments on the GE Section have been underscored.

#### **In service**

In LNER days D.86 operated, sometimes in pairs, alongside D.120 in and out of East Anglia carrying traffic eventually lost to the roads. The map shows the proximity of Liverpool St. to several of London's wholesale markets while the attached extract from the 1923 WTT shows the two long distance workings from Spitalfields. No pictures are available of these overnight hauls although the A4 at Chaloner's Whin with an Up parcels train appears to have been returning empties.

Later much was focussed on Whitemoor and the list of workings in the GE Section's seasonal "Fruit and Vegetable Traffic" in 1946 was still voluminous with fitted express goods trains, specials, attachments, and with passenger trains. For passenger rated traffic, "Passenger vans" (the GE Section's term for such NPCS) were specified or "box wagons" with a wheelbase of at least 10ft. An example was the

10.10pm Norwich Thorpe to Liverpool St. which was a heavy parcels train in the passenger timetable because of five carriages in the middle, surrounded by 13 vans: it was allowed to add up to four vans carrying fruit and veg on the rear, which would have raised the load to 22 vehicles. Two examples of intermediate working were the 1.40pm and 4.8pm from Cambridge to King's Lynn which were allowed to carry vans for Scotland, detached en route at March, for transfer to a long distance working to Doncaster. Traffic from Cambridge to Stratford Market could be put on the rear of the 12.35am Parcels from Ely-Liverpool St. and detached at Stratford.

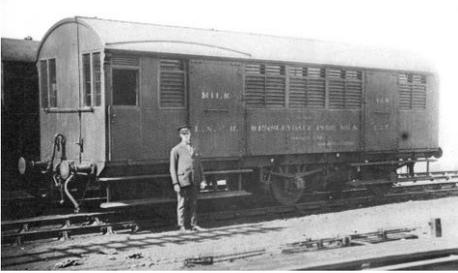
I can offer little at the moment about use of the D.87 Milk Van and in a 1930s picture I have of a GE Section milk train, none can be seen. The truth is that the churns traffic started collapsing soon after these vans were built and the roads took over, serving local dairies. A flat district was easy meat for such capture. Indeed modernisation of the vans may have been a last throw of the dice in an attempt to impress customers. The traffic may all have been lost by the very early 1930s. Some D.87 are known to have been cascaded to the North Eastern Area where poorly ventilated 6w passenger brake vans were still handling the churns traffic and which the picture at Askrigg on the Wensleydale branch illustrates: hilly and more remote districts continued to be served by rail into BR days. Otherwise, D.87 gradually went into general service

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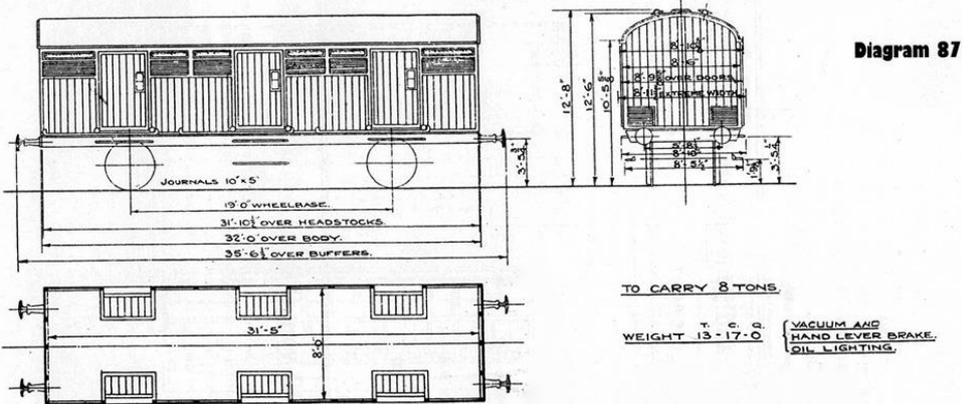
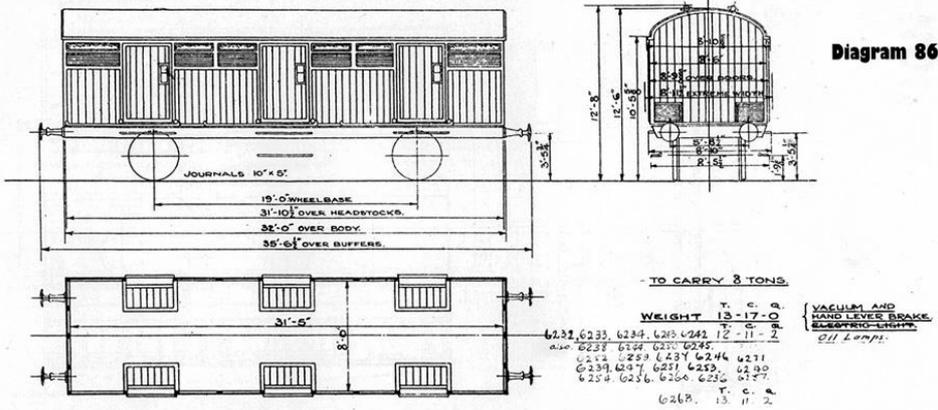
*Larger illustrations follow.*

Illustrations



1. The NER's milk van of 1908 for Wensleydale, precursor to D.86 and D.87 (below), seen in 1926.

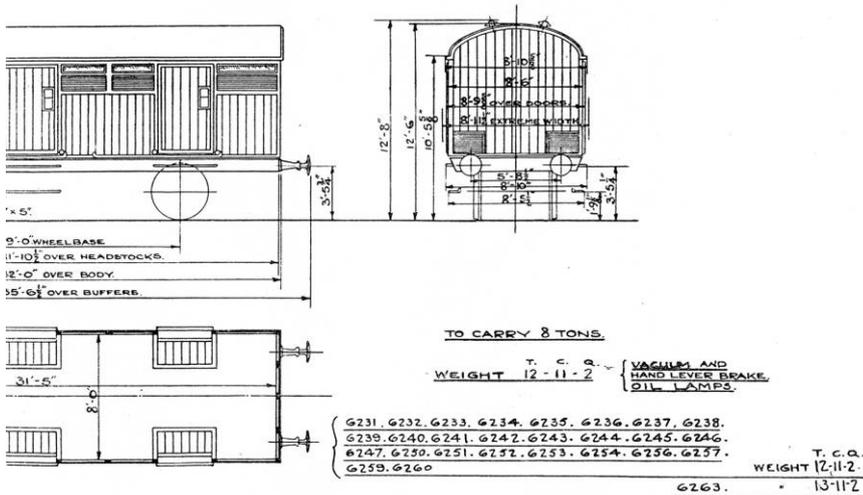
Below: Comparison of different issues of the LNER Diagrams:



2. Diagrams per Michael Harris.

AL VANS  
AT STRATFORD 1926  
AT STRATFORD 1927

DIAGRAM NO 86  
CODE ME 86.



3. My copy of D.86. No 6263 is an oddball, between the final weights of D.86 and D.87.

## D.86



4. 1955 - Behind the goods yard crane at Godley is a D.86 in original condition. Still dual-braked and carrying the oil lamp bung holders. The latter are on the end steps side with the hinge on the oil lamp top on the other side. Date based on solebar marking in chalk or whitewash of 17/7/55. Photo: Author's collection.

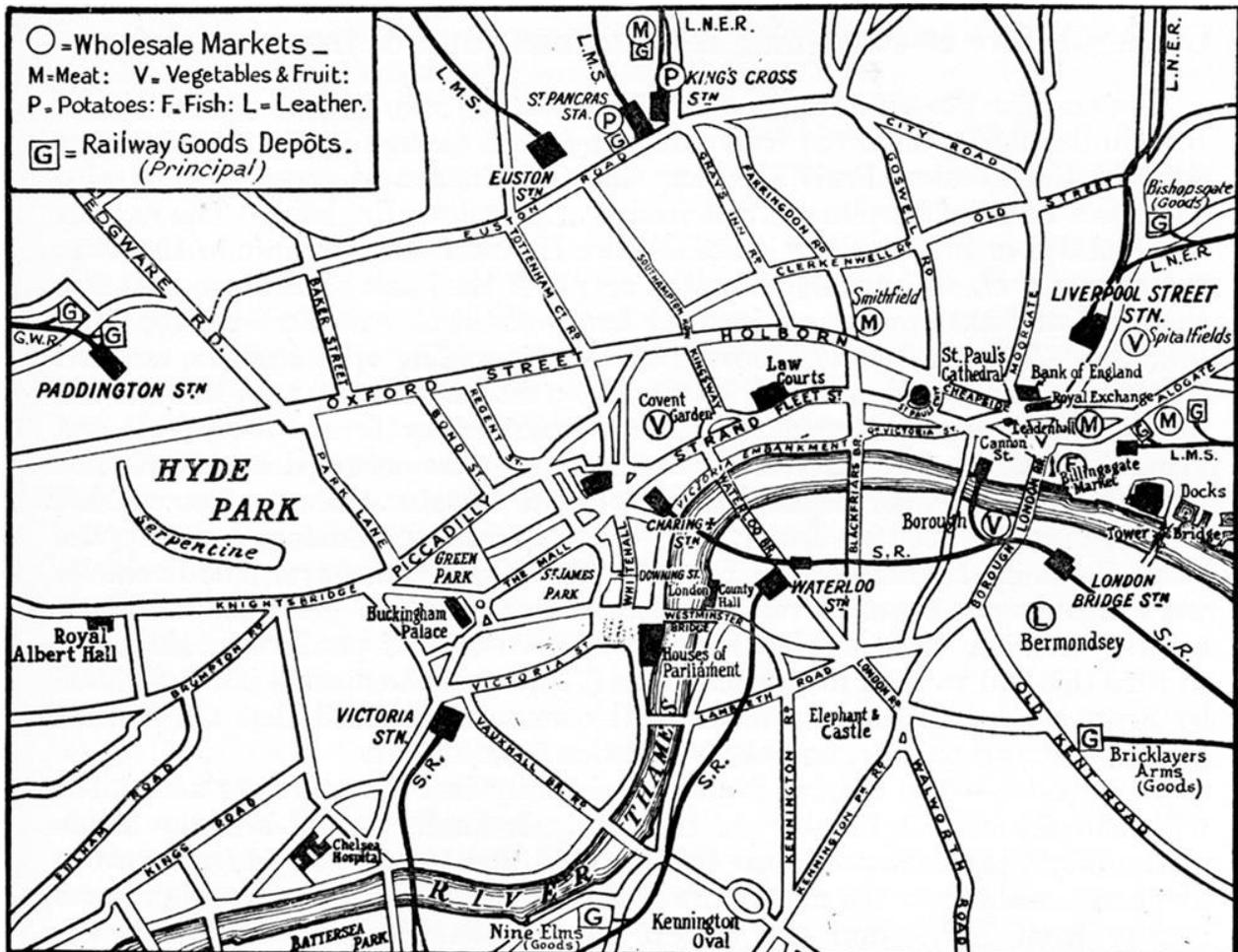


5. 1956 - D.86 No E70111 (ex-6263) ex-works. Bung holders and Westinghouse brake removed. Stratford-style rain strip. Image slightly soft. Photo: Denis Seabrook, now HMRS ADV720.

D.87



6. c1950 - A rare and undated portrait of a D.87 van from c1950. The last two digits are alas unreadable. It is still dual braked with through steam heat pipe, oil lamp tops and barely visible from this angle, bung holders. Still with Stratford style rain strip. Photo: Dan Pinnock collection.



7. London's wholesale markets c1933, showing how close Liverpool St. was to several of them.

## WORKING OF DOWN CAMBRIDGE LINE GOODS TRAINS—*continued.*

WEEK DAYS—*continued.*

Train.	From	To	Remarks.
8 15 p.m. NS	Spitalfields ...	Doncaster ...	<p>To convey traffic in vacuum fitted vehicles for Doncaster, West Riding, North Eastern and Scotch Areas to connect at Doncaster with 2.30 a.m. G.N. section train to York and 2.45 a.m. train to West Riding.</p> <p>Load 17 from Spitalfields, 40 from Tottenham, 40 from Whitemoor.</p> <p>To leave Spitalfields and Tottenham marshalled as follows:—</p> <p>Engine. Hull.</p> <p>All West Riding traffic other than } To be detached off Ossett, Batley and Dewsbury } G.N. section train at Ardsley.</p> <p>Ossett } To be detached off G.N. section train at Batley } Wrenthorpe. Dewsbury } York and beyond (including Scotch.) Brake.</p> <p>Engine will be changed on Main Line at Grassmoor Junction.</p> <p>Whitemoor to wire Doncaster Decoy number of wagons for each section on train, thus:—3 Hull, 20 Ardsley, 2 Wrenthorpe, 5 York. Guard to have information ready on arrival at Whitemoor.</p>
8 30 p.m.	Whitemoor ...	Wensum Jct. Sdgs.	Train to be marshalled at Brandon.
9 3 p.m. NS	Spitalfields ...	Pyewipe ...	<p>To convey traffic in vacuum fitted vehicles for Lincoln and other G.C. section stations, connecting at Pyewipe with 2.30 a.m. G.C. section train to Manchester.</p> <p>Load 17 from Spitalfields, 40 from Tottenham, 40 from Whitemoor.</p> <p>Formation leaving Spitalfields and Tottenham.—</p> <p>Engine. Sheffield and via Sheffield. Manchester. Liverpool and District. Other G.C. section stations and stations via Lincoln. Brake.</p> <p>Engine will be changed on Main Line at Grassmoor Junction.</p> <p>Whitemoor to wire Pyewipe number of wagons for each section on train, thus:—4 Sheffield, 15 Manchester, 7 Liverpool, 1 via Lincoln. Guard to have information ready on arrival at Whitemoor.</p>

8. Part of the 1923 WTT showing the two long-distance workings from Spitalfields, via Doncaster and Lincoln.



9. D16 8797 near Littlebury in the late 1920s when the D.86 General Vans would have been quite new. The Ordinary Passenger train of 6w carriages (possibly T, T, C, CL, B) has two of the vans on the rear, both fitted with oil lighting. This is a slight crop, the whole view shows passing trains. Photo: Author's collection.



10. B12 No 8572 near Littlebury with an Up train, 27th July 1934. Looks like an Ordinary 4-set with vans on the rear, some may be an ECS movement. With a D.86 oil-lit van in the middle. Photo: E.R. Wethersett, author's collection.



11. D16 No 8875 arrives at Ipswich sometime in the 1930s with an Ordinary Passenger train of one bogie and four 6w carriages. The oil-lit D.86 van carries white lettering in the middle of the body and the number 6250 is legible. Behind it is a 52'6" BG and an ex-GER 32ft 6w passenger brake van. Photo: Photomatic.



12. F3 No 8075 with 3 pm Thetford-Bury near Burnham. 27th February 1937. A poor quality image but an oil-lit D.86 with Stratford rain strip is evident. Photo: SLS.



13. B12 No 8512 at Spalding with an express, date unknown. It's not the sharpest picture and I have tried to balance the tones and clear up damage to the negative because, at the head of the train is an LNER "FRUIT" van and a D.86. Both are clearly in service for the traffic they were intended for. Photo: SLS No 2281.



14. D16 No 8783 is passing through Cambridge with the Down Royal Train in 1938. This is a Colour Rail still from a cine film which I have remounted to show the maximum on the right hand side, losing part of the train on the LHS, and corrected the tones. I can't fix the blurring, alas, and you can't rely on an accurate rendition of the colours, but it's evident that the D.86 van, which is fairly clean, is a relatively dark shade of brown. And what appears to be the legend "LNER" has not been applied on the door but on the body to the right. Photo: based on Colour Rail NE71.



15. c1947 with No 26 *Miles Beevor* at Chaloner's Whin and an Up parcels. With two oil-lit D.86 vans and an electrically lit D.120. Photo: Author's collection.



16. 20 Aug 1949, K3 61896 at Shenfield with the Up "Scandinavian". D.86 with oil lighting and Stratford rain strip, carrying fruit and veg or passengers' luggage? Photo: R.C.J. Day.



17. A scene at Brixham station in August 1950 with a 14xx propelling an auto coach and pulling what may be a through oil-lit D.86 van from East Anglia. Photo: Photographer unknown.

## D.87



18. G5 67344 at Askrigg on the Wensleydale Branch, 7th August 1952 with a D.87 Milk Van being used to carry churns. The oil lighting is still in place but the rain strip has been changed to the curved one. Photo: Author's collection.



19. "Tilbury Tank" No 41949 near Bentley in the 1950s with a parcels train including, behind the Thompson 6w van, an oil-lit D.87. Once again, the rain strip has been changed to the curved type: other pictures from this period show both types. Photo: Author's collection.

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