

THE BAKERLOO LINE'S 1972 MkII TUBE STOCK

50 YEAR ANNIVERSARY

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INTRODUCTION

50 years ago this month, on 19 November 1973, the first trains of 1972 MkII Tube Stock entered passenger service on the Northern Line. The 1972 MkII Tube Stock complemented the 1972 MkI which had entered service on the Northern Line during the previous year. Now at 50 years young, there is no sign of these trains being replaced and will undoubtedly make 55 years into passenger service, and quite possibly 60 if the current political and financial climate doesn't improve, thus beating the length of A Stock in passenger service by many years, most of which made 49-50 years, and a handful 51 years. *Whether it makes the 80-plus years in service like the 1938 Stock did on the Isle of Wight seems rather unlikely, but you never know...!*

EARLY DAYS

Both types of 1972 Tube Stock were almost identical in design to the Victoria Line's 1967 Tube Stock but were built for crew operation rather than Automatic Train Operation (ATO). The 1972 group of rolling stock came about because of the deteriorating condition of the 1938 Tube Stock on the Northern Line – a damaging strike by craftsmen at Acton Works in 1969 had led to the cancellation of many trains because of equipment problems, mostly affecting compressors on the Northern and Bakerloo lines. Politics therefore played a substantial part in ordering 30 seven-car trains for the Northern Line. This became the 1972 MkI Tube Stock and was built by Metro-Cammell. The trains were formed into three- and four-car units, one of each being required for each train (M-T-T-M+UNDM-T-M). The shunting control equipment for the new UNDM cars was obtained from withdrawn 1938/49 stock UNDM cars and for the few remaining years of service, some UNDMs ran without their shunting controls and became effectively a non-driving motor car, although it was still possible to uncouple for maintenance purposes. Appearance-wise, they were almost exact copies of the 1967 stock, but the 1972 stock DMs were equipped with door control panels for the guard at the trailing ends but, because they were crew operated, and had no calling-on light adjacent to the destination blind. The first order comprised 30 seven-car trains (the 1972 MkI Tube Stock), all in unpainted aluminium with little colour relief apart from the car numbers and 'UNDERGROUND' in red, the latter being only on the driving motor car sides in the centre position. The first train entered service on the Northern Line on 26 June 1972 and all 30 trains were in service by June 1973. This enabled the same number of 1938 Tube Stock trains to be withdrawn and scrapped.



The second batch of 1972 Tube Stock (the 1972 MkII) was also the result of politics dominating London's transport scene. This was to cover the gap between the end of the 1972 MkI production and the start of the 1973 build, which was quite short, thus preventing the company to 'fold'. It so happened that new trains were required for the Fleet Line, the first stage of which was then beginning construction. This was not expected to open until the Queen's Silver Jubilee in 1977 and in the end, it didn't open until 1979. Therefore, the trains were able to enter service on the Northern Line first, which improved matters further by replacing more 1938 Tube Stock on what had become tagged "the Misery Line". The trains would subsequently go to the Fleet Line, which was later renamed Jubilee Line.

Above: A brand new train of 1972 MkII Tube Stock in Ruislip Depot, awaiting commissioning. Destination blinds are outstanding to be fitted, along with train set numbers (electronic or plates) and shoebeams. Note that the 'no-smoking' labels are of the plain blue type, soon enhanced with red half discs to make them more visible.

This name change created the added expense of changing or amending already prepared 'Fleet Line' signage, some of which survived for many years but, in the main, were covered over with 'Jubilee Line' stickers – unless itchy fingers in the know got there first!

The 1972 MkII Tube Stock had the honour of being transferred to the Jubilee Line in time for its opening on 1 May 1979 but with subsequent stock transfer plans, flitted between the Bakerloo, Northern and back to the Bakerloo Line again, before settling down there in 1988, where it has remained ever since. Apart from some casualties (derailments and collisions), the MkII fleet remains otherwise complete. The story of Tube Stock allocations over the 20 years between 1982 and 2001 may be found in *Underground News* No.698, February 2020, pages 104-113, so only a summary will be attempted here.

It was a different story, however, for the 1972 MkI Tube Stock. Some of these cars were later converted to run on the Victoria Line, while others were converted to one-person-operation for the Bakerloo Line. However, the Northern Line's 1972 MkI fleet remained at 20 seven-car trains at the time when the 1995 Tube Stock began to enter service, from when withdrawals began. The last train of 1972 MkI Tube Stock was withdrawn from passenger service on the Northern Line on 3 February 1999. Apart from 26 cars later converted to operate with the 1972 MkII on the Bakerloo Line, the remaining 64 cars were scrapped.

1972 MkII

The 1972 MkII order was for 33 trains and in the main fared much better than its predecessor – only five cars were scrapped because of accident damage. However, the fleet was boosted between 1992 and 1997 by the adaptation and conversion of 26 MkI cars, some of which had already been refurbished. (Refurbishment of the 1972 MkI Stock was stopped after the third train because new 1995 Tube Stock for the Northern Line had been decided on).

The order for the 1972 MkII stock was also placed with Metro-Cammell and comprised 33 seven-car trains in exactly the same formation as the MkIs. After trials and testing, the first five trains of 1972 MkII Tube Stock entered service on the Northern Line on 19 November 1973.

Although similar in appearance to the MkI cars, red-painted passenger doors were introduced on the MkII stock and all-red roundels replaced 'Underground' transfers on the motor car sides as well as being introduced on trailer and UNDM cars. Because it was the intention for it to be converted to ATO at a later date for the Fleet Line, some trains were at first provided with a motorised destination blind and electronic train set number equipment. This was soon replaced by the standard train set number plates (in the offside cab window rather than beneath the front cab door window as on 1972 MkI stock) and hand-operated destination blinds. The driving controls also had an 'ATO' position but was made inoperative. All but one train of 1972 MkII Stock had entered service on the Northern Line by 21 May 1976 – one four-car unit had been the subject of air metacone suspension and aluminium bogie experiments on the middle driving motor car, hence entering service much later than others after being converted to standard.

From late-1975, with deliveries of the 1973 Tube Stock to the Piccadilly Line gathering pace, the 1956/59 Tube Stock began transfers from the Piccadilly to the Northern Line. This was a three-fold programme – it allowed the withdrawal of more 1938 Tube Stock and allowed transfer of the 1972 MkII Stock to (initially) the Bakerloo Line and operate there until the Fleet/Jubilee Line opened, which would keep the Stanmore branch separate from the Queen's Park branch of the Bakerloo. Moreover, the arrival of the 1972 MkII Tube Stock on the Bakerloo Line allowed more 1938 Stock from that line to be withdrawn.

The transfer process of the 1972 MkII Tube Stock was a gradual one. The first unit (3257) reached Neasden on 3 May 1976 for gauging and rolling stock staff training and returned to the Northern Line in November.

The first seven-car train from Golders Green to Neasden (units 3262+3562) was on 18 February 1977 for crew training. Other trains followed over the next two years, having been fitted at Golders Green with step plates and grab rails on the driving cab ends, Storno train radio and Bakerloo Line destination blinds. The trains began to enter passenger service on the Bakerloo Line from 4 April 1977. Initially, there were four dedicated paths in the timetable, as not all crews had received training on them. With the Bakerloo Line operating train crew stepping back at Elephant & Castle because of the short turn-round times, it was necessary to keep these trains separated from the 1938 Stock in case of service disruption and thus they reversed in London Road Depot, running empty from and to Waterloo. In this way, it avoided any further service disruption at Elephant & Castle which could occur in having a train crew that was untrained on 1972 Stock that might turn up. Once all crews had been trained, the

nominated workings were withdrawn and the 1972 MkII stock worked all over the Bakerloo Line, including to and from Watford Junction, the first run north of Queen's Park to Watford being on 14 October 1977. The one train that hadn't entered service on the Northern Line which had been retained for test train purposes (units 3243+3534), was transferred to Neasden on 21 November 1978 and entered passenger service on the Bakerloo Line on 28 November. This train, being the newest into service, was used for the Royal opening of the Jubilee Line on 30 April 1979.



Above: The 1972 MkII Tube Stock first saw service on the Northern Line and an example in fairly new condition is seen arriving at Finchley Central (Left). It is fitted with an electronic destination blind and train set number box (at the bottom of the offside cab window), the latter actually being very difficult to read in daylight. Most trains of 1972 MkII Tube Stock had conventional destination blinds and traditional train set number plates in melamine, as seen at High Barnet (Right).



Above: (Left) DM 3351 in Ruislip Depot, after delivery and awaiting commissioning. Much still needs to be done – passenger doors to be fitted along with shoebeams and other associated equipment.

Above: (Right) Also in Ruislip Depot and under commissioning is DM 3344. In all photos, the blue bar no-smoking labels can be seen, which had little effect, and very soon had red circles added above and below the blue bar. The same problem occurred with the early units of 1973 Tube Stock.

Both photos: LURS Collection



Above: (Left) One train of 1972 MkII Tube Stock that didn't enter service until late in 1978 was the LT Design Division's seven-car test train, formed of units 3243+3534 and seen here in the siding just south of Northwood station. Being the last and newest into passenger service, it was the obvious choice to be used for the Royal opening of the Jubilee Line on 30 April 1979.

'A'-END UNITS

'D'-END UNITS

UNIT	ARRIVE RUISLIP	TO G.GRN	E/S N'THN	TO B'LOO	NOTES	UNIT	ARRIVE RUISLIP	TO G.GRN	E/S N'THN	TO B'LOO	NOTES
3231	06.04.73	13.09.73	19.12.73	10.11.78	5	3531	06.04.73	13.09.73	19.12.73	19.04.79	5
3232	11.05.73	17.08.73	19.11.73	12.04.79		3532	11.05.73	17.08.73	19.11.73	09.11.77	
3233	24.05.73	07.09.73	19.11.73	17.06.77		3533	27.06.73	07.09.73	19.11.73	24.06.77	
3234	21.12.73	27.03.74	05.04.74	22.03.79		3534	15.06.73	23.05.78	—	21.11.78	1
3235	12.12.73	08.03.74	18.03.74	19.04.79		3535	05.12.73	08.03.74	18.03.74	12.04.70	
3236	03.12.73	17.01.74	01.02.74	01.04.77		3536	03.12.73	17.01.74	01.02.74	07.10.77	
3237	07.12.73	06.03.74	08.04.74	26.09.77		3537	12.12.73	06.03.74	08.04.74	26.09.77	
3238	03.07.73	23.10.73	19.11.73	17.08.78		3538	13.07.73	23.10.73	19.11.73	19.08.77	
3239	13.07.73	28.09.73	19.11.73	29.03.79		3539	13.07.73	28.09.73	19.11.73	05.08.77	
3240	20.07.73	30.10.73	19.11.73	19.05.78		3540	20.07.73	30.10.73	19.11.73	24.04.79	
3241	15.08.73	19.11.73	25.11.73	01.06.78		3541	15.08.73	19.11.73	25.11.73	05.04.79	
3242	23.08.73	21.11.73	02.12.73	27.03.79		3542	23.08.73	21.11.73	02.12.73	23.03.79	
3243	30.08.73	23.05.78	—	21.11.78	1	3543	30.08.73	10.12.73	28.01.74	10.11.78	
3244	07.09.73	17.12.73	21.12.73	04.03.77		3544	07.09.73	17.12.73	21.12.73	04.03.77	
3245	18.09.73	11.01.74	17.01.74	27.05.77		3545	18.09.73	11.01.74	17.01.74	10.04.79	
3246	02.10.73	24.01.74	04.02.74	03.04.79		3546	02.10.73	24.01.74	04.02.74	25.05.77	
3247	09.10.73	14.02.74	01.03.74	28.07.78		3547	09.10.73	14.02.74	20.03.74	06.07.77	
3248	17.10.73	02.04.74	17.04.74	07.10.77		3548	17.10.73	27.03.74	05.04.74	19.05.78	
3249	25.10.73	19.04.74	03.05.74	06.05.77		3549	25.10.73	19.04.74	03.05.74	19.07.77	
3250	01.11.73	26.04.74	15.05.74	05.04.79		3550	01.11.73	26.04.74	15.05.74	22.04.77	
3251	09.11.73	19.09.74	16.10.74	07.09.77	2	3551	09.11.73	19.09.74	16.10.74	22.03.79	2
3252	02.04.74	25.07.74	16.08.74	18.03.77	6	3552	02.04.74	25.07.74	16.08.74	18.03.77	
3253	25.04.74	13.08.74	31.08.74	19.07.77	6	3553	25.04.74	13.08.74	31.08.74	01.04.77	
3254	05.12.73	10.05.74	24.05.74	24.04.79	6	3554	07.12.73	10.05.74	24.05.74	01.06.78	
3255	20.12.73	23.05.74	15.06.74	06.07.77	6	3555	20.12.73	23.05.74	15.06.74	28.07.78	
3256	21.12.73	05.06.74	01.07.74	05.08.77	6	3556	25.01.74	05.06.74	01.07.74	15.03.79	
3257	25.01.74	14.06.74	03.07.74	03.05.76	6, 7	3557	25.01.74	14.06.74	03.07.74	06.05.77	
3258	12.02.74	03.07.74	14.07.74	22.04.77	6	3558	12.02.74	03.07.74	14.07.74	17.08.78	
3259	01.03.74	16.07.74	31.07.74	24.06.77	6	3559	01.03.74	16.07.74	31.07.74	17.06.77	
3260	15.03.74	11.09.74	02.10.74	15.03.79	6	3560	15.03.74	11.09.74	02.10.74	03.04.79	
3261	23.04.74	28.08.74	18.09.74	09.11.77	6	3561	23.04.74	28.08.74	18.09.74	27.03.79	
3262	26.04.74	08.11.74	22.11.74	18.02.77	6	3562	26.04.74	06.02.75	11.03.75	18.02.77	4
3263	28.06.74	10.11.75	21.05.76	10.04.79	3, 6	3563	28.06.74	08.11.75	22.11.74	07.09.77	

NOTES:

1. Used by Design Division for testing. Entered service Bakerloo Line on 28.11.78. Royal Train for opening of Jubilee Line.
2. Returned to Metro-Cammell 15.03.74. Re-delivered to Ruislip 11.04.74.
3. Aluminium bogies and air metacone suspension fitted to DM 3363.
4. To Acton Works 29.10.74 for DM 3562 to be exhibited in Lord Mayor's Show. Acton Works to Golders Green on date shown.
5. To Acton Works 15.06.73.
6. Unit fitted with de-icing equipment.
7. Returned to Golders Green November 1976 for Northern Line service.

With the Jubilee Line opening to the public on 1 May 1979, on 30 April 1979, it was imperative that the mixed 1938 and 1972 Stocks on the Bakerloo Line that day finished up on their respective lines for the Jubilee Line's opening the following day – all the 1938 Stock on the Bakerloo Line (at Stonebridge Park, Queen's Park, London Road and Elephant & Castle) and all the 1972 Stock on the Jubilee Line (at Neasden and Stanmore. All 33 trains of 1972 MkII Tube Stock were thus in position from opening day and was sufficient for the initial service between Stanmore and Charing Cross for the immediate future.



Left: DM 3562 was exhibited in the Lord Mayor's Show parade in 1974. It is believed that it had difficulty negotiating some of the City of London's narrow streets.

Photo: Fred Ivey

Below: (Left) The 1972 MkII Tube Stock interiors were the same as the MkI and 1967 Stocks – longitudinal seating except for centre bays in motor cars and finished in unexciting grey.

Below: Before transfer from the Northern Line to the Jubilee Line, the trains were fitted with grab rails and step plates on the cab fronts as seen at Finchley Central.



Above: (Left) Transfers of 1972 MkII Tube Stock from Golders Green joined the Piccadilly Line at King's Cross and ran to Arnos Grove to reverse (Above), before heading off to Neasden.

Above: Stanmore with the 1972 MkII Tube Stock new into service and with the 3xx train set numbers which separated them from the normal Bakerloo Line 1xx numbers.

Left: Before the 1972 MkII Tube Stock could operate north of Queen's Park, a test trip was operated, which included visiting Croxley Green Depot.



Opposite/Overleaf: One of the four Bakerloo Line workings to and from Watford Junction (northbound evening, southbound morning), seen on the northbound at Hatch End with one of the step plates up and the other down. Because there were only four trains in each peak, the negative current rail always appeared to be rusty looking.



Above: There were two trains for the Royal opening of the Jubilee Line on 30 April 1979, the Royal special and a following spare, seen here on the southbound approaching Kilburn, which comprised the newest units into service (3243+3534), plus a following spare (train 306). Unfortunately for the photographer, the special headboard for the Royal train was not put in place until the Royal party boarded at Green Park.

Left: The first stage of the Jubilee Line took over the Bakerloo Line's Stanmore branch and ran in new tunnels from Baker Street to Charing Cross.

Below: When the 1972 MkII Tube Stock first ran on the Bakerloo Line, the destination blinds contained all the destinations for both branches but by the time the Jubilee Line opened, new blinds were fitted with just Jubilee Line destinations. Examples of the first (Left) and second (Right) styles are seen at West Hampstead and Willesden Green respectively.



LAST DAYS ON THE BAKERLOO LINE

As we have already said, the first 1972 MkII Tube Stock train in passenger service to Watford Junction was on 14 October 1977 – hitherto, even though all crews had by then been trained, the trains were barred from working north of Queen's Park until authorisation had been given by British Rail. After the first train made it to and from Watford without issues, no distinction was made on which type of stock operated on which services on the Bakerloo – the 1938 or 1972 MkII Tube Stocks.

Fast forward now to late-April 1979 with the imminent opening of the Jubilee Line. Two trains of 1972 MkII Tube Stock reached Watford Junction (and then Croxley Green Depot) on the evening of 29 April 1979, formed of units 3239+3557 and 3257+3558, the latter being the very last arrival. On the morning of 30 April 1979, the two 1972 MkII trains started from Croxley Green Depot at 07.07 (3257+3558) and 07.46 (3239+3557 – the last southbound of that stock), both of which then ran throughout the day until stabling at Stanmore after the evening peak. Also, 1972 MkII trains also began service on the Bakerloo Line that morning, from Elephant & Castle (1 train), London Road Depot (4 trains) and Queen's Park Depot (3 trains). The 1972 Stock Bakerloo workings are summarised thus:

Train	Start Morning	Stable Morning	Start Afternoon	Stable Evening	Stable Night
141	06.10 LR			ST 18.50	
143	06.31 LR				ST 00.33
144	06.49 LR				NN 00.26
146	07.24 LR	QP 10.10	QP 16.30		NN 01.30
152	05.46 EC	QP 09.28	QP 15.53		NN 00.29
155	07.07 CG			ST 18.22	
157	07.46 CG			ST 19.24	
162	05.47 QP	NN 10.26	NN 15.50	ST 19.48	
165	07.05 QP				NN 23.42
166	07.18 QP				NN 00.13

CG Croxley Green Depot
 EC Elephant & Castle
 LR London Road Depot
 NN Neasden Depot
 QP Queen's Park Depot
 ST Stanmore Sidings

There were a further 12 1972 MkII Stock trains in service on 30 April (six each from Neasden and Stanmore), all of them stabling back on what would become the Jubilee Line the following morning. Conversely, there were ten trains of 1938 Tube Stock that started service at Neasden and Stanmore, all of which stabled on what would become the (truncated) Bakerloo Line the following morning. At the close of traffic, all trains were 'where they should be', save for two 1938 Stock trains, one of which remained at Neasden outstanding transfer and one away at Acton Works. This was not without problems as the lack of train crews caused some extended intervals as trains were taken out and returned to service – there were many reformations but only between like stock types.

To complete the story, the last 1972 MkII Stock trains to/from Queen's Park on Monday 30 April were:

Train 143 –3244 + 3552 –

22.27 ex-Elephant & Castle to Queen's Park and 23.06 ex-Queens Park to Elephant & Castle.

Further details of the Bakerloo truncation and Jubilee opening may be found at –

https://www.lurs.org.uk/UN210Sup_JUN_1979.pdf



Left: The train that was designated as the spare for the Royal opening of the Jubilee Line and photographed at Kilburn previously (see page 682), had to be put into West Hampstead siding until the signalman's dispute had been resolved, thereafter resuming its standby role.

STATUS QUO – BUT NOT FOR LONG

The fall in traffic numbers and the 'fares fare' debacle led to service reductions on most Underground lines from December 1982, with ridership at an all-time low. (Only the Covid pandemic saw passenger numbers fall to really 'rock bottom'). Through a series of different stock moves, for the 1972 MkII Tube Stock, this meant that the Jubilee Line was reduced to 29 trains (on a reduced service with 23 trains in peak service) with the four trains displaced transferred back to the Northern Line in 1983. Having four trains of 1972 MkII Tube Stock incompatible with the MkI Stock, modifications were made so that trains could be formed of both types.

It had been the intention to order a new fleet of trains (the 1983 Tube Stock) for the Jubilee Line, but the service requirements at the time reduced the planned order to half which, to cut a long story short, and through another series of stock transfers between the deep tube lines, saw the Jubilee Line fleet comprising 15 trains of 1972 MkII Tube Stock and 15 trains of new 1983 Tube Stock (as it was then).

The 14 displaced trains of 1972 Stock went to the Northern Line, making the MkII total on that line 18 trains. Those 14 trains that were added to the Northern Line in 1984-85 were also modified so they could work with MkI Stock. The first train with a combination of the two types ran on the Northern Line on 12 September 1983 (units 3210 and 3533). One unit was also reformed comprising both types, making one serviceable unit following collision damage. To summarise by the end of 1985, the 1972 MkII Tube Stock was operating on the Jubilee Line (15 trains) and Northern Line (18 trains). The stock allocations at the end of 1985 are shown opposite.

Bakerloo Line	31x1959	
Central Line	3x1960	ATO
	84½x1962	
Jubilee Line	15x1972	MkII
	15x1983	
Northern Line	3x1956	
	44½x1959	
	3½x1962	
	30x1972	MkI
	18x1972	MkII



Left: Mixed train formations, comprising one of each type of unit, began operating on the Northern Line from their transfer back in the early-1980s, with one such train seen departing Edgware (MkII on the left and MkI on the right).

Below: (Left) Because of collision damage, one 1972 Tube Stock unit was reformed (3520-4544-3444) so that it had one MkI and two MkII cars in its formation, as seen in Golders Green Depot. It operated in that form from January 1986 until May 1987. The difference in cosmetic appearance between the two types is evident.



The next two stages involving the 1972 MkII Tube Stock really merged one into the other. With hindsight being a wonderful thing, perhaps the full order for 1983 Tube Stock should have been fulfilled to start with, because passenger numbers gradually picked up within a short time, requiring additional trains. To that end 16½ trains of 1983 Tube Stock were ordered and although completely compatible with the first 15 trains, they were designated as "Batch II" and the existing trains "Batch I". Also, One Person Operation and the phasing out of guards was progressing, with the

subsurface lines being converted between 1984 and 1986. The first deep tube line to be converted to OPO was the Piccadilly from 31 August 1987, with the others following suit over the next two years. These factors combined meant that the Bakerloo Line was to be completely operated with 1972 MkII Tube Stock, and between 1987 and 1989, those 33 trains were converted to OPO at Acton Works and all were on the Bakerloo Line by 17 March 1989. OPO on the Bakerloo Line commenced on 20 November 1989, by which time 28 trains out of the 33 were required for peak service. All of this caused a complex series of stock transfers between lines as described previously elsewhere (q.v.).

Once all the 1972 MkII Stock was on the Bakerloo Line, the trains were 'turned' so that the 'D' ends faced north and the 'A' ends faced south. This enabled most shunting operations in Stonebridge Park Depot to be carried out from a middle (33xx) motor car rather than from an UNDM car with basic controls and limited vision for the Train Operator/Shunter.

A trial refurbishment was done on an eight-car train of 1967 Tube Stock and was 'launched' at Acton Works on 13 September 1989, entering passenger service on the Victoria Line on 9 October. The original plan for the half-life refurbishment was to include all of the 1967 and 1972 stocks on the Victoria, Northern and Bakerloo lines. However, the possibility of new rolling stock for the Northern Line meant

that only three trains of 1972 MkI stock were refurbished for service on the Northern Line. (These have since been absorbed into the Bakerloo Line fleet, apart from two cars written off because of collision damage, of which more below).



Once on the Bakerloo Line, the 1972 MkII Tube Stock received additional car numbers above the driving cab windows, as seen at Kensal Green on this southbound end-of-peak working to Waterloo (and thence London Road Depot). This made identification easier on CCTV, especially during any service disruption.



On 6 June 1992, unit 3257 (which was the first transfer to Neasden in 1976 for rolling stock staff training) is seen at West Ruislip, being prepared for transfer to Rosyth for refurbishment. Accompanied by unit 3538, this formed refurb Train 5 for the Bakerloo Line and returned to Ruislip three months later.

The refurbishment programme began in earnest in 1991 and the first three Bakerloo Line trains for refurbishment were transferred to Rosyth Royal Dockyard by road. From train 4 onwards, they were transferred by rail. The work was done by Tickford Rail. The refurbished first train to enter passenger service did so on the Bakerloo Line on 20 December 1993 (units 3256+3543) and the last train to be completed entered service on 1 May 1995 (units 3258+3553). During the refurbishment process, it was necessary to do further work on the first 18 trains, and these were sent in turn to Old Oak Common from December 1993 to October 1994. With refurbishment and retrofit mods complete, the by now 34-train fleet was adequate to increase the Bakerloo Line peak service from 28 to 31 trains.

One Northern Line train of 1972 MkI stock (units 3203 and 3501) was not only sent for refurbishment but also converted to OPO to enable the Bakerloo Line stock to be increased from 33 to 34 trains – it was converted from MkI to MkII standard and was compatible with the rest of the fleet. (However, refurbished and non-refurbished units were not compatible). Unit 3203 had been out of service since 1985, it then being utilised for overhaul equipment spares, while 3501 was under repair following a collision. To follow in the Bakerloo Line numbering sequence, the two former MkI units became (respectively) 3264 and 3564 and was the third Bakerloo Line train to be refurbished, entering service on 7 March 1994.

The refurbishment included exterior painting for the first time – by then the LU in-house ‘corporate’ red/white/blue livery had been chosen, instead of the blue doors and half blue/white bodywork that had been trialled by consultancy companies on other stocks. The operative driving cab ends were painted red, bodies were white with a blue skirt, and doors were red. Inner car ends and middle driving cab exterior ends were white with a blue skirt and grey communicating doors. The interiors were completely gutted with new décor and lighting, including circular ‘porthole’-shaped lights at the trailing end bulkheads. Fans were also fitted, new flooring, panelling and seating moquette – the transformation was remarkable.

The Bakerloo Line was unfortunate in having two serious collisions in 1994, one at Harrow & Wealdstone siding on 29 March (which saw 3539 and 4539 subsequently scrapped) and one at Piccadilly Circus on 22 April (where cars 3249 and 4249 went for scrap). Effectively one train short, the deficiency was eventually made up by converting refurbished 1972 MkI stock units 3218+3507 from the Northern Line to one-person-operation, becoming respectively 3265+3565 in October 1994.

Service increases called for one more additional train and five cars from a second Northern Line refurbished 1972 MkI train (cars 4324 and 3324 and unit 3524) became 3266+3566 in June 1995. DM

3224 and trailer 4224 had been scrapped and the two remaining cars (3324 and 4324) were 'turned' and converted into 'A'-end cars, becoming 3266 and 4266 respectively. The other two cars of the unit (4365 and 3365) came from spare MkII cars 4349 and 3349. The remaining refurbished but crew-operated 1972 MkI train on the Northern Line succumbed to OPO conversion for the Bakerloo Line, with 3210+3512 becoming 3267+3567 in June 1997.



Above: (Left) The refurbished Bakerloo Line trains did not initially have the car numbers re-applied over the cab windows, as seen on a recently refurbished train in the North Shed at Queen's Park, next to an unrefurbished train, this one being sent for refurbishment in June 1994 as Train 27.

Above: (Right) Unit 3247 leads a southbound refurbished train at Kensal Green, after the car numbers had been applied above the cab windows, continuing to give the front end a symmetrical appearance.

Meanwhile, a further collision/derailment had occurred at Piccadilly Circus on 3 December 1996 with DM 3257 subsequently scrapped. The Bakerloo Line was thus one four-car train short and the only cars then available were the three from the derailment/collision (4257-4357-3357) plus UNDM 3439 from the Harrow collision of 1994. A novel and unique solution was found.

A four-car unit was created by 'turning' all three cars (3357-4357-4257), with DM 3357 becoming a leading 'A'-end DM. Spare UNDM 3439 was also 'turned' and became a 'D'-end UNDM in a four-car unit. Normally on the Bakerloo Line, four-car units are formed M-T-T-M but this unit would be non-standard in a special formation of M-T-T-UNDM. Because the unit was substantially 'different', 3357-4357-4257-3439 became respectively 3299-4299-4399-3399 in April 1999, entering service in its new guise in July 1999.



Above: Engineering mods saw the train whistle relocated above the offside cab window as seen on this southbound train at Stonebridge Park (Left), which meant moving the car number at that position, giving an uneven frontal appearance. Note also the front cab door opening handle at the bottom. To the layman, the unique four-car unit 3299 (Right) on the southbound leaving Willesden Junction, looks no different from the rest, but in a train formation it is the only one with two UNDMs in the middle. To the engineers, all four cars were originally opposite facing until converted to this hybrid unit.

WITHDRAWALS AND SCRAPPING

CARS	WITHDRAWN	DETAIL	SCRAP
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3539 4539	29.03.94	Collision Harrow & Wealdstone	} 24.04.95	} Stonebridge Park to Mayer Parry, Newmarket, by road
3249 4249	22.04.94	Derailment/collision Piccadilly Circus		
3257	03.12.96	Derailment/collision Piccadilly Circus	11.02.97	Cut up Stonebridge Park by LUL (ERU)

REFORMS

FROM	TO	DATE	DETAILS
3250-4250-4350-3350 3256-4256-4356-3356	3256-4250-4350-3350	11.83	3250, 3356 fire damaged 4256, 4356 spare
3256-4250-4350-3350	3250-4250-4350-3350	10.84	
3235-4235-4335-3335	3235-4235-4335-3343	10.84	3243, 4243, 3335 derailment
3243-4243-4343-3343	3256-4256-4356-3356	11.84	
3235-4235-4335-3343	3235-4235-4335-3335	07.85	
	3243-4243-4343-3343	09.85	
3444-4544-3544	3444-4544-3520 †	01.86	3420,3544 collision, 4520 spare
3444-4544-3520 †	3444-4544-3544	05.87	
3324-4324 †	3266-4266 (see additional trains below)	12.94	3324 & 4324 conversion to OPO and renumbered (respectively) 3266 & 4266
4349-3349	4366-3366	12.94	Ex-spare and renumbered to form additional unit
3357-4357-4257-3439	3299-4299-4399-3399	04.99	From spare to permanent unit 'turned' and renumbered (respectively).

† 3520, 3324 and 4324 are 1972 MkI DM car(s).

Once the fleet had reached 36 trains in 1999, it settled down to a mundane existence, save for a number of engineering modifications.

Visible alterations included relocating the train whistle from one of the front grab rails to above the offside front cab window. As car numbers had been applied above both cab windows, the whistle mod gave an even front appearance. Other work included fitting an exterior front 'M' door handle at floor level, to assist Train Operators when entering the train in depot from track level. Life extension work was undertaken on all 36 trains at Acton Works between 2015 and 2019, which included a new style of flooring. The first eight trains had to return to Acton Works in 2019 for further work.



Two interior views of 1972 MkII Tube Stock, post refurbishment, that (Left) is as it was originally. Although it was given new flooring, it was still of the same pattern as the maple wood grooved flooring it replaced. Fast forward some 20-plus years, and a completely new style of flooring has replaced the grooved style (Right). By the doorways, the flooring is of a non-slip grooved type. Armrests gave way to stubby dividers as seen in both photographs. Note also the later style of seating moquette. In both cars, the circular 'porthole' lights remain, but not for much longer as they are being removed and the main car lighting replaced by LEDs. In both, Bakerloo Line brown dominates.

ADDITIONAL TRAINS

The following gives details of the four additional trains which made up the Bakerloo Line fleet to its current total of 36 trains.

RU-AW	01.03.93	01.03.93	01.03.93	01.03.93	01.03.93	01.03.93	01.03.93
AW-MN	18.06.93	18.06.93	18.06.93	18.06.93	18.06.93	18.06.93	18.06.93
MN-AW	19.07.93	19.07.93	19.07.93	19.07.93	19.07.93	19.07.93	19.07.93
AW-MN	19.08.93	19.08.93	19.08.93	19.08.93	19.08.93	19.08.93	19.08.93
RES	11.10.93	11.10.93	11.10.93	11.10.93	11.10.93	11.10.93	11.10.93
GG-AW	02.05.96	02.05.96	02.05.96	02.05.96	02.05.96	02.05.96	02.05.96
Reno	3267	4267	4367	3367	3467	4567	3567
Date	03.06.97	03.06.97	03.06.97	03.06.97	03.06.97	03.06.97	03.06.97
AW-NN	11.06.97	11.06.97	11.06.97	11.06.97	11.06.97	11.06.97	11.06.97
NN-SE	12.06.97	12.06.97	12.06.97	12.06.97	12.06.97	12.06.97	12.06.97
RES B'LOO	10.07.97	10.07.97	10.07.97	10.07.97	21.08.97	21.08.97	21.08.97

The latest work to be undertaken in the Bakerloo Line's fleet is to meet the Rail Vehicle Accessibility Regulations, which includes interior passenger information displays, wheelchair bays in the centre of one trailer car per train, and the fitting of grab handles inside the cars by the doors.



The current fleet of 1972 Tube Stock on the Bakerloo Line comprises 36 seven-car trains, which are formed of the following types of cars:

		1972 MkI	1972 MkII	Total
DM	32xx	4	32	36
T	42xx	4	32	36
T	43xx	3	33	36
DM	33xx	3	32	35
UNDM	33xx	—	1	1
UNDM	34xx	4	32	36
T	45xx	4	32	36
DM	35xx	4	32	36
Total:		26	226	252



Above: Refurbished and non-refurbished trains of 1972 MkII Tube Stock stabled in London Road Depot, looking towards the depot exit to Lambeth North. The cleared space just right of centre is where the workshop in London Road Depot was, having been made redundant when Acton Works opened in 1922, where all overhauls and repairs were done. The unrefurbished middle DM on the left seems to have acquired a proper Underground roundel rather than a 'dumb' solid red one.

Above: (Left) One of the grabrails being fitted to 1972 Stock on the Bakerloo as part of the RVAR work now being undertaken. However, most of the Bakerloo Line tunnel stations still need to be fitted with ramps for level boarding and alighting.

Photo: Colin Smith

Below: (Left) On 29 March 1994, a Bakerloo Line train overran the stopping mark in Harrow & Wealdstone siding and collided with a main line overhead mast, also disrupting services on the West Coast main line. DM 3539 and trailer 4539 were subsequently scrapped but UNDM 3439 eventually became UNDM 3399 in the hybrid unit (q.v.). These two views show the damaged DM, trailer and

overhead mast and, below it, DM 3539 after the cab end had been covered in tarpaulin and made ready for transfer to Stonebridge Park Depot by a battery loco.

Both photos: LURS Collection

Below: (Right) The interior of the unique UNDM 3399, which has been fitted with new LED lighting – the 3 cars you can see beyond is made up of the older style lighting and the subtle difference in hue from the lighting of the old and the new may be seen. On the leading cab end of this train, DM 3299 has been fitted with LED headlights which make for a brighter view ahead in the tunnels.

Photo: Georgie Duane



Above: The 1972 Tube Stock all had automatic wedgelock couplers at the 'A' (32xx) end and mechanical couplers at the 'D' (35xx) end, the latter because they would not have to couple to another unit in service. (Middle DMs also had auto couplers of course and when on the Northern Line, UNDMs could – and did – couple to either 32xx or 33xx DMs). In the 1990s when on the Bakerloo, 32xx DMs would no longer couple to another unit in service, so they were converted to mechanical only, although they still appear to be auto couplers. On the left, DM 3244 leads a southbound train into Kensal Green with an original mechanical coupler and on the right DM 3567 is at the rear of a southbound train at Queen's Park and has acquired what was an auto coupler. Note also that on DM 3244, the front cab 'M' door contains space for former set numbers and must therefore be of 1967 or 1972 Mkl origin.



Left: Some years ago, six middle driving motor cars acquired dark red/maroon cab fronts (the shade is debatable!), so they could be used singly on Network Rail metals north of Queen's Park for stock transfer purposes. It is thought that all six remain but 3344 seen here at Queen's Park differs from the rest in being painted all over instead of red/maroon just below the cab windows. All other middle DMs remain in white with a blue skirt and grey front cab 'M' door.

Right: Another hybrid unit in the 1972 Tube Stock fleet is unit 3266-4266-4366-3366, seen at the rear of a train at Kenton on 24 March 2016. The nearest two cars, 3266 and 4266 were originally Mkl 3324 and 4324 respectively, having been turned from 'D' to 'A' and formed with 4366 and 3366, which were formerly 4349 and 3349 respectively. This was when the footbridge at the north end of the station was being replaced, with a temporary bridge in use.



POSTSCRIPT

While we are recognising that the 1972 MkII Tube Stock is indeed 50 years old into passenger service, we mustn't forget that the Bakerloo Line fleet has been augmented by the conversion of a handful of cars of 1972 Mkl Tube Stock (q.v.) that had been refurbished for the Northern Line, but in the end were superfluous because of the impending 1995 Tube Stock. With that in mind, all of those converted from 1972 Mkl Tube Stock are even older than the MkII and all of the converted ones had entered service prior to the MkIIs.

So the oldest unit in passenger service is in fact 3267-4267-4367-3367, which started life as 3210-4210-4310-3310 on the Northern Line and entered service on 14 August 1972, making it well over 51 years in service.

Below: In their past life as crew-operated trains, before refurbishment and before OPO conversion, we see 3512-4512-3412 (now 3567-4567-3467) at High Barnet in platform 1 (Left) and at Golders Green in the northbound platform (Right) is 3501-4501-3401 (now 3564-4564-3464). Throughout their time on the Northern Line, even the short spell in refurbished form, they never had exterior grab rails on the cab fronts, nor step plates. This was despite that some of the tube tunnel platforms were a little shorter than a seven-car train and thus the drivers had to change over by exiting through the car, which could be inconvenient in rush hours, such as at Camden Town and Kennington, where some crew reliefs took place. Even where platforms were of sufficient length, changes of motormen still had to take place via the car saloon.

