

Welcome to the C Stock Explorer tour!

[illegible]

Sunday 13 April 2014

London Underground C stock Explorer rail tour – timetable

Please note that timings may be subject to minor alteration at short notice

Moorgate (Plat 4)	arr	09 32
		ENTRAIN
Moorgate (Plat 4)	dep	09 55
Farringdon		09 58
King's Cross		10 02
Baker Street (Plat 2)		10 07
Finchley Road		10 13
Neasden		10 17
Wembley Park (Plat 1)		10 20
Harrow-on-the-Hill (Plat 1)		10 26
Moor Park		10 36
Rickmansworth		10 42
Chorleywood		10 46
Chalfont & Latimer		10 50
Amersham (Plat 1)		10 54
Chalfont & Latimer		11 11
Chorleywood		11 15
Rickmansworth		11 19
	North Curve	
Watford		11 27
Moor Park		11 36
Northwood		11 39
Northwood Hills		11 41
Pinner		11 44
North Harrow		11 46
Harrow-on-the-Hill		11 49
Rayners Lane		11 55
Ruislip		12 01
Hillingdon		12 05
Uxbridge (Plat 3)		12 09
Hillingdon		12 15
Ruislip		12 19
Rayners Lane		12 25
South Harrow		12 28
Alperton		12 35
North Ealing		12 41
Ealing Common		12 43
Acton Town (Plat 4)	arr	12 46
		DETRAIN
Acton Town	arr	12 55

Acton Town (Plat 1)		ENTRAIN
	dep	13 00
Northfields	arr	13 04
DETRAIN		LUNCH
Northfields (Plat 4)	arr	14 02
		ENTRAIN
	dep	14 07
Acton Town (Plat 4)		14 12
Turnham Green		14 16
Hammersmith		14 21
West Kensington		14 24
Earl's Court		14 28
Gloucester Road		14 31
South Kensington		14 33
Embankment		14 43
Mansion House		14 49
Tower Hill		14 53
Aldgate East		14 55
Whitechapel		14 58
West Ham		15 08
Plaistow		15 10
Barking		15 18
Dagenham East		15 27
Upminster	arr	15 37
(Plat 5)	dep	15 50
Dagenham East		16 00
Barking		16 10
Plaistow		16 18
West Ham		16 20
Whitechapel		16 30
Aldgate East		16 33
Liverpool Street		16 39
Moorgate		16 40
Farringdon		16 44
King's Cross		16 47
Baker Street (Plat 6)		16 53
Edgware Road (Plat 4)		16 56
Paddington (Suburban)		16 58
Latimer Road		17 04
Goldhawk Road		17 09
Hammersmith	arr	17 11
		DETRAIN

General C Stock information

The C Stock, consisting of C69 and C77 Stock, runs on London Underground's District line between Edgware Road and Wimbledon. It is maintained at Hammersmith Depot. Following the withdrawal of A stock in 2012, the C stock is the oldest passenger train in service on London Underground and also on any rapid transit system in the United Kingdom.

The C stock has been replaced by S Stock on the Circle Line and Hammersmith & City Line since 11 February 2014. It is also due to be replaced on the District line (Edgware Road to Wimbledon) by June 2014. Most trains will be scrapped, although it is expected that a 2 car set will be preserved. . It has now been confirmed that the farewell tour for this stock is provisionally scheduled for 29 June 2014, although its last day in service may be well before this date.

Construction began in 1968. C69 stock 6-car trains were ordered from Metropolitan-Cammell of Birmingham to replace O/P Stock on the Circle and Hammersmith & City lines for delivery from 1969, but trials of a four-car unit were delayed until summer 1970. C77 stock was ordered later to work the District line Edgware Road services.

A car was added to the C77 order to replace C69 car 5585, damaged in the West Ham IRA bomb attack in March 1976. Unit 5585-6585 became a hybrid C69/C77 unit and was selected for a trial refurbishment in 1989 at BREL (British Rail Engineering Ltd) Derby.

Unit 5606-6606, which had been used for various equipment trials, were scrapped in December 1994. Cars 6505 and 6713 were damaged in the "7/7" 2005 bombings and were scrapped above the solebar. The remains were used in the building of new cars 6606 (the second car with this number) and 6734 as C08 stock. They were paired with 5505 and 5713, renumbered 5606 and 5734 to match their partners. 5548+6548 were rebuilt in part following the bombings.

The stock is made up of three two-car units, a 52 feet 7 inches (16.03 m) driving motor and a 49 feet (15 m) trailer, each with four pairs of doors on each side and seating 32 people. The stock had a public address system and rheostatic brakes on the driving motor. Although there are technical differences, units of different ages can be coupled together and since the 1991–94 refurbishment there are no visual differences. The stock was unpainted until refurbishment, then painted red, white and blue.

When delivered, the cars were divided by partitions adjacent to each set of doors, with two facing pairs of transverse seats on each side of the aisle, giving limited standing room. The partition wall contained a large backlit advertising space above the

aisle opening. When the stock was refurbished in 1990-94 these features were removed.

The stock now operates only on the District line between Edgware Road and Wimbledon.

C69 Stock DMs were numbered 5501-5606 plus trailers 6501-6606; C77 Stock 5585(2), 5701-5733, 6701-6733 and renumbered 5734; C08s Stock 6606(2) and 6734.

The C stock has been replaced (between 2012 and 2014) by S7 Stock. Set 5595+6595 was cannibalised in 2011 as a trial programme, and this will result in a planned withdrawal until 2014. In July 2012, set 5532+6532 and 5575+6575 was damaged beyond repair at Hammersmith depot after a collision (a minor side swipe). It was sent to the Northwood sidings on 15 October 2012, and taken to Eastleigh Works to be scrapped. Withdrawal commenced on 2 January 2013, when the first full 6-car train, 5515+6515, 5519+6519 and 5732+6732, was taken to Northwood sidings and loaded on trucks to be scrapped. A withdrawal is expected to be made every 1-2 weeks until 2014, but due to delays with the introduction of S7 Stock owing to modifications needed to be made to the S8 Stock the withdrawal process was temporarily halted. On 26 April 2013, the process resumed with 5528+5588+5701 being transferred to Acton Works for removal from the system. On 11 February 2014, the Circle Line and Hammersmith & City Line no longer operated with C Stock. As from 23 February C Stock workings were reduced to 4 Wimbledon-Edgware Road trains, with 8 trains left in total

Equipment details

Bodies:	Aluminium underframe, originally unpainted aluminium alloy panelling - exteriors painted on refurbishment in LUL red, white and blue corporate livery.
Bogies:	4-wheel symmetrical plate frame bogies of welded/riveted construction.
Wheel diameter	3ft (915mm).
Couplers:	London Underground Automatic Wedgelock between units, semi-permanent tray between cars within a unit.
Traction system:	English Electric – A.E.I. Traction Ltd. (C69) or G.E.C. Traction (C77), pneumatic double camshaft, resistance controller with series/parallel grouping and 2 stages of weak field. Brush LT117 axle-hung, nose-suspended motors, 17/114 gear ratio, 4 per driving motors car, 1 per driving axle, the two motors on each bogie are connected in permanent series.
Compressors:	Reavell TBC 38Z (some C69 and all C77) or Westinghouse 3HC43 (some C69), reciprocating, one on each trailer car.

Brakes: Rheostatic on Driving Motors, one pneumatically-operated brake block per wheel on all cars. Service braking – electro-pneumatic with rheostatic on motor cars; electro-pneumatic only on trailer cars. Emergency braking – Westinghouse automatic air brake. Parking brake – Automatic spring applied, air released.

Auxiliary power: English Electric - A.E.I. Traction Ltd (C69) or G.E.C. Traction (C77)

Motor- supplies: Alternator-Rectifier (type MG3005), one per Driving Motor car.

Main lighting: Inverter driven, 115V ac Fluorescent tubes, 16 per car.

Built by: Metro-Cammell, Birmingham 1969-1971 (C69) and 1977-1978 (C77)

Entered service: Hammersmith & City and Circle line 1970-1971 (C69) and 1977-1979 (C77)
Commenced operation on the District line from April 1978

Emergency lighting: 2 inverter-fed, 50V dc powered, fluorescent tubes per car.

Refurbished by RFS Industries, Doncaster 1991-1994

Doors: 4 double sliding per car, per side.

Principal characteristics

Track gauge: 4ft 8½ ins/1435mm Current system: 630V dc 3rd and 4th rail, floating earth

Types of vehicle: Driving Motor (DM); Trailer (T)

Formation per unit: Two cars, formed DM – T

Formation per train: Six cars, formed DM – T + T – DM + T – DM or DM – T + DM – T + -DM

Number of train: 35 six-car trains (C69 stock) and 11 six-car trains (C77 stock)

Hammersmith & City line – brief history

Intended as a feeder to the Metropolitan line, with the extension running through fields on the fringes of suburbia to Hammersmith, The Hammersmith and City Railway opened on 13 June 1864. It wasn't until 1988, however, that it gained independence to become the Hammersmith & City line in its own right.

Jointly run by the Great Western Railway (GWR) and Metropolitan Railway (MR), when it opened, the only stations on the two-mile long track were Notting Hill (now Ladbroke Grove) and Shepherd's Bush.

Since the Circle line began running trains on the 'loop' in 2009, the Hammersmith & City line no longer has any unique stations. Every one of its 29 stations is shared with another tube line.

Key dates

- 1863 - The Metropolitan Railway opens between Farringdon and Paddington
- 1864 - Together with Great Western Railways, Metropolitan Railway extends the line to Hammersmith
- 1864 - Services to Addison Road (now Kensington Olympia), via the curve at Latimer Road, begin. Following bomb damage in 1940, this service is suspended and doesn't restart after the war
- 1869 - A new London and South Western line opens between north of Addison Road and Richmond, via Ravenscourt Park. The new Hammersmith station (at Grove Road) means the old terminus is re-sited
- 1884 - The line extends east to Whitechapel
- 1906 - The line is electrified
- 1936 - Trains are extended over the former District Railway line to Barking
- 1988 - The line becomes the Hammersmith & City line in its own right



C Stock train in its final livery