The All Time Guide to EMU Classifications

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Above: The first franchise holder of the Great Eastern suburban lines from Liverpool Street was First Group, who commenced a repainting programme in 1997. The first unit to sport the new livery was inner-suburban Class 315 No. 315809, seen here at Shenfield on 15 April 1997. CJM

With the introduction of early computer-based train reporting in the 1960s, all multiple unit trains were given three digit numeric classifications. EMUs using ac as their prime power source were allocated numbers in the 3xx series, while dc powered sets were allocated numbers in the 4xx and 5xx series. For the first time, MLI have brought together a full tabulated list of three digit EMU classifications. Subsequent to the original listings, many sub-classes have been formed for specific sets or duties.
Class 420 - Original design fitted with electric parking brake, modified from 1970 design.

Class 419 - Single MLVs. 68001-68010. Built 1959-61.

Class 418 - Modified from 1951 equipped HAP, modified from 1957 equipped HAP. 5901-5942. Introduced 1974 as SAP.

Class 416 - SR design units, BR design units, refurbished SR design units, refurbished BR design units. 5651-5795 (later amended) Built from 1953.


Revised classification - BR design HAP units coupled in pairs as 4-CAP, 413/2 - 1951 equipment, 413/3 - 1957 equipment.

Class 415 - SR/BR 4-EAP 5001-5366 (later modified) Built from 1951, 415/1 - SR design units, 415/2 - BR design units, 415/4 - Facelifted 415/1s 415/5 - Sets formed with compartment vehicles in 1980s, 415/6 - Refurbished 415/2s, 415/7 - BR design units with express gear ratio.

Class 414 - BR design units fitted with electric parking brake, modified from 1970 design.
Class 421  Original 1972 classification - 421/1 - 1957 equipped 4-CEP, 421/2 - 1957 equipped 4-BEP  
Revised classification BR design 4-CIG 7301-7438. Built 1964-70  
421/1 - Original phase 1 sets fitted with electric parking brake, 421/2 - Production sets with manual parking brake  
421/3 - Refurbished phase 1 electric park brake sets, 421/4 - Refurbished phase 2 manual park brake sets  
421/5 - Refurbished sets with 'Greyhound' speed equipment, 421/7 - three-car 5-COP units for Brighton-Portsmouth 'Coastway' use  
421/8 - Refurbished sets with 'Greyhound' speed equipment, former 422s with 411 TS vice TRBS

Class 422  Original 1972 classification - 422/1 - MLV, 422/2 - TLV, Revised classification 4-BIG units from 1988  
422/0 - 8 DIG units for London-Brighton service (formed of one class 421 and one class 422/0, 422/2 - 4 BIG refurbished phase 2  
422/3 - 4 BIG facelifted phase 1 or 2 (Mk6 Power bogies)

Class 423  Original 1972 classification BR design EPB units  
Revised classification BR design 4-VEP 7701-7894. Built 1967-73, 423/0 - Original units, 423/1 - Refurbished sets  
423/2 - Modified 423/1s with all standard seating (open) for South London Metro, 423/4 - Original classification for refurbished sets, changed to 423/1

Class 424  Original 1972 classification - 1957 equipped 2-HAP units  
Revised classification - Used for trial rebuilding of 'Networker Classic' from frames of 1963 stock

Class 427  Modified 4-VEP stock with extra luggage space 4-VEG for use on Victoria-Gatwick service

Class 430  SR 4-REP units 3001-3015. Built 1966-72 - classification until 1980

Class 431  Original 1972 classification 431/1 production 4-CIG units, 431/2 production 4-BIG units

Class 432  Original 1972 classification 4 VEP and 8 VAB units, Revised classification BR 4-REP units 3001-3015, reclassified from class 430 in 1983

Class 438  Amended classification of 4-TC sets (42)8001-(42)8034

Class 441  Original 1972 classification REP units

Class 442  Original 1972 classification TC stock 442/1 - 3-TC, 442/2 - 4-TC  
Revised classification 'Wessex Electric 5-WES units, Built 1988-1989, 2401-2422 (now on Southern/Gatwick Express

Class 444  Siemens Desiro five-car 23m vehicle main line sets for SWT, Built 2002-05, 444001-444045

Class 445  BR 4-PEP prototype suburban unit 4001-4002. Built 1971

Class 446  BR 2-PEP prototype suburban unit 2001. Built 1972

Class 447  Classification allocated to 'Battersea Bullet' EMUs - cancelled

Class 450  Siemens 'Desiro' outer-suburban 20m vehicle sets. Built 2003-05 450001-450127  
450/2 Allocated to 32 five-car 20m vehicle 'Desiro' EMUs for SWT - cancelled  
450/5 Allocated to High Capacity sets 450543-450570

Class 451  Original 1972 classification for 3-TIS units

Class 452  Original 1972 classification for 4-VEC units

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Below: The modern order of the day on the Great Eastern lines from London Liverpool Street, with BREL-built Class 315, 317, 321 and Siemens Class 360 stock dominating the service. Painted in the latest National Express East Anglia livery, the first of the Class 321/3 build No. 321301 pulls away from Stratford with a semi-fast service from Clacton on 28 April 2010. The East Anglia franchise is up for renewal in 2011 and it is likely that yet another new livery will be applied to these units. CJM
Class 453  Original 1972 classification for Waterloo & City stock
Class 455  BR/SR replacement suburban stock. Built 1982-85
Class 456  BR/SR replacement suburban stock two-car units. Built 1990-91, 456001-456024
Class 457  Used for modified Class 455 and 210 stock when used for dc 'Networker' traction development work
Class 458  Alstom 'Juniper' sets for SWT - (458)001-(458)030 Built 1998-2000
Class 460  Alstom 'Juniper' 8-car sets for Gatwick Express 460001-460008
Class 461  Original 1972 classification for 2-PEP
Class 462  Original 1972 classification for 4-PEP
Class 465  BREL/Met-Cam 'Networker' units, replacement stock for Kent Link, Built 1991-94
Class 466  Met Cam 'Networker' two-car sets for Kent Link, Built 1993-94, 466001-466043
Class 471  Allocated to Kent Coast main Line 'Networker' units (800 vehicles as main line version of Class 465) - cancelled
Class 480  Eight-car 8-VAB unit. 8001, modified from VEP stock plus loco hauled buffet
Class 482  Temp allocation given to reformed 8-MIG units (CIG with Buffet) Nos. 2601, 2602
Class 483  Replacement Waterloo & City line stock, built as part of LUL Central line order. Built 1993, Class number later withdrawn - Stock sold to LUL TOPS numbers 482501-482510
Class 485  Isle of Wight 4-VEC units. Introduced 1967, 041-046
Class 486  Isle of Wight 3-TIS units. Introduced 1967, 031-035
Class 487  Waterloo & City 1940 stock. Motors 51-62, Trailers 71-86
Class 488  Gatwick Express modified loco-hauled passenger stock 1983-84, 488/2 - two-car sets 8201 fleet, 488/3 - three car sets 8301 fleet
Class 489  Gatwick Express driving vans, rebuilt from Class 414 DMB stock in 1983-84, 68500-09, set Nos. 9101-9110
Class 491  BR 4-TC sets 401-443. Rebuilt 1966/72
Class 492  BR 3-TC units 301-303, rebuilt 1966 from loco-hauled stock, 492/8 - used by temp formation of 5 TCB sets for Bournemouth line 280x
Class 499  Rebuilt loco-hauled BGCs as trailer vehicles for MLV. Classified TLV. Nos. 68201-206. Most returned to loco-hauled stock
Class 505  Three-car LM sets for Manchester-Hadfield line. Built 1954 Car Nos. M59401-08, M59501-08, M59601-08
Class 507  BR/BREL Merseyrail three-car units. Built 1978-80. 507001-507033
Class 508  BR/BREL Four-car suburban units built 1979-80 for SR, 508001-508043. Transferred to Merseyrail as three car sets, some later returned to Connex (Southeastern) and Silverlink (London Overground), 508/0 - As delivered - 508001 - 508043, 508/1 - Merseyrail sets - 508103 - 508143, 508/2 - Southeastern sets 508201 - 508212, 508/3 - Silverlink (London Overground) sets - 508301 - 508303
Class 510  Originally allocated to SR suburban replacement stock - changed to Class 455

Below: Set No. 417 was used for a number of pre-service trial runs in mid 1960. One operated on 2 June 1960 from Ilford to Liverpool Street and then to Hertford East, stopping at Rye House for a photo shoot, where this image was captured. It will be noticed that the buck-eye coupling is in the lowered position. CJM Collection