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FOR PRESS INFORMATION

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BRITAIN'S FIRST DIESEL PULLMAN TRAINS L. B'ham 2.8

DE-LUXE TRAVEL AT 90 M.P.H.

1.0

PERSONAL SERVICE AT ALL SEATS 450

AIR-CONDITIONED AND INSULATED SALOONS 658

Two of British Railways' new de-luxe diesel-electric Pullman trains are on view at Marylebone Station, London, today, Thursday, June 23. These 90 m.p.h. de-luxe diesel expresses - there are five of them altogether - are of an entirely new type designed to bring a fresh conception of main-line railway passenger travel to Britain, with superior standards of comfort, and a personal service of meals and refreshments for all passengers.

Two of the trains are of six cars for first class passengers only, and three are of eight cars with first and second class accommodation. The six-car trains will run between Manchester, London (St. Pancras) and Leicester, and the eight-car trains between Bristol and London (Paddington), and Wolverhampton, Birmingham and London (Paddington).

The Manchester - London - Leicester services will be introduced on Monday, July 4, and the other services will start shortly afterwards.

Each six-car train consists of two motor cars (the leading vehicles at either end), housing the two main diesel engines and electric generators, driving compartments, and saloons for 12 passengers; two kitchen cars which include non-smoking saloons for 18 passengers; and two parlour cars each seating 36 passengers.

The total accommodation of the six-car train will be 132 first class passengers. The eight-car trains have additional seating in the motor cars and in two more parlour cars for second class passengers, giving a total capacity of 108 first class and 120 second class seats. All seats on the de-luxe Pullman trains will be reserved.

The trains are painted Nanking blue, relieved by a broad white band extending the length and width of the windowed section along the sides of each car. The rounded nose of each of the motor cars bears the Pullman Car Company's crest, which is also carried on the white painted band, midway between the last pair of windows at the end of each vehicle. Beneath each of these crests and just below window level on the blue bodyside is the word "Pullman", lettered in white. The roofs are painted light grey, the underside aluminium and the bogies black.

SMOOTH, SILENT TRAVEL

Travel in the de-luxe Pullman trains will be smooth, comfortable, and almost silent, even at high speeds. They are the first trains in Britain to be fully air-conditioned with controlled temperature and humidity, and particular care has been given in their design to the reduction of noise. The passenger accommodation is in enclosed saloons, the vehicles are heavily insulated against sound and heat, and the windows are double glazed, and have fully adjustable venetian blinds between the glasses. Even the floors of the vehicles are fully suspended and insulated.

In each car the seating is arranged in facing pairs on one side of the passenger gangway and in facing individual seats on the other, with double or single fixed tables respectively set between them.

The comfortable armchair-type seats in the first class saloons are deeply padded with foam rubber, and are mounted individually on runners with a locking device, so that they may be set nearer or farther from the tables. A further refinement in the first class cars is that each seat can be adjusted from reclining to upright positions. The seats in the second class saloons of the eight-car trains are similar but are fixed.

STRIKING DECOR

The interior decor varies from vehicle to vehicle, and has been carefully chosen to give pleasing and colourful combinations, mainly of decorative rosewood and ebony veneers, grey plastic hide, plastic facings, and contrasting seat upholstery in red or blue striped fabric, trimmed with black and grey plastic hide. The partitions forming the ends of each passenger saloon are strikingly decorated with wood veneers and abstract plastic inlays. The access door in each partition has glazed panels, incorporating glass with a vertical striped pattern which has the property of a mirror but allows unimpeded vision at close quarters. The bodyside walls of the vehicles are surfaced with plastic hide from floor level up to and including part of the continuous hand luggage rack running the length of each passenger saloon. Above the racks, walls and ceiling surfaces are lined with plastic facings in pearl grey, with a fine black-line pattern superimposed which continues up to the edge of the continuous central lighting panel in the ceiling. The floors are carpeted in kingfisher blue or cardinal red, laid on plastic underlays. The exposed parts of the hand-luggage racks, the table edges, and window surrounds, are all of anodised aluminium, satin finished in aluminium for the first class cars, and in pale gold for the second class. The heater grilles, mounted low on the bodyside alongside the seats, are of satin-finished stainless steel.

FLUORESCENT LIGHTING

Warm white fluorescent lighting concealed by opal diffuser panels, is the principal form of illumination throughout the passenger accommodation, supplemented by individual table lamps. In each saloon the main fluorescent lighting is by twin tubes placed end to end along the centre of the ceiling, covered by diffusion panels which, when illuminated, give an impression of a continuous panel of light running the length of the saloon. The inward flow of air from the air-conditioning plant in each vehicle is dispersed through ducts and outlets which are above and are concealed by the central lighting panel. Additional illumination is provided by tungsten lamps fitted in the luggage racks above each table. The individual table lamps have glass shades, and are mounted on swan-necked pillars fixed to the bodyside just below window level, leaving the French grey plastic covered table tops free from encumberance of lamp standards or trailing wires. Small battery-operated emergency lights are also installed.

NEW TYPE GANGWAYS

The entrance vestibules at the ends of the cars are wide and spacious, and the walls are faced in pearl grey plastic, with plastic hide trimming around the entrances to the air-tight and draught-proof passenger access gangways between vehicles. These are of an entirely new design and are far wider than usual. They are mounted upon pivots at the ends of each vehicle and, when joined together, form semi-floating units between pairs of cars, providing a level platform free from the oscillation associated with ordinary gangways. Rubber seals cover the outsides of the gangways and prevent draughts and loss of efficiency in the air-conditioning of the train. Immediately adjacent to the vestibules and to one side of the entrance to the passenger saloons are the toilets, and, on the other, there are enclosed compartments for heavy luggage.

HYGIENIC TOILETS AND KITCHENS

The toilets are equipped to include such features as towel dispensers, and hygienic spray washing facilities which give an automatically timed flow of water. The temperature of the washing water can be selected to suit individual needs and is automatically maintained until the timed flow ceases. The toilet floors are paved in coloured mosaic with easy-to-clean hygienic skirtings, the ceilings are painted matt white, and the walls are faced with plastic surfaces in flame, clover pink and grey. All the metal fittings are finished in satin chromium plate, with exception of the skirting beadings of satin finished anodised aluminium and the similarly finished stainless steel heater and ventilation grilles.

In the kitchen cars the kitchen and separate pantry accommodation has been designed with particular attention to hygiene and proper storage of food and drink. The walls are lined with an easy-to-clean plastic finish in pearl grey, the ceilings are matt white, and the floors are of red composition material set in aluminium grilles with a 2-inch square mesh. Four extractor fans are fitted in the roof of each kitchen space, two of them immediately above the fume chamber over the gas cooking range with its large grill. All the kitchen utensils and working surfaces and both the sterilising and all-purpose sinks are of stainless steel. Other features include a constant boiling water supply and both deep-freeze and normal domestic refrigeration.

GENERAL EQUIPMENT

A public address system is installed throughout the train, and the guard and driver are linked by Loudaphone.

The train is fitted with an air-operated braking system, with automatic slack adjustment on each bogie, and provision has been made for Automatic Warning System equipment to be installed. Designed throughout for maximum passenger comfort, the train has Metro-Schlieren type bogies incorporating helical springs and hydraulic dampers. In each of the four driving bogies the two separate electric traction motors are fully suspended, and the transmission from each motor to its respective axle is by a quill drive. The driving bogies are situated at the trailing end of each motor car, and at the leading end of the adjacent vehicle, that is the kitchen cars in the six-car trains and the additional parlour cars in the eight-car units. A new type of permanent coupling is employed between the cars which absorbs both buffing and drawing loads, and was designed for the de-luxe trains to provide a smooth pick-up on starting and stable-riding at high speed. Normal coupling hooks are fitted in concealed recesses in the nose of each of the leading motor cars of the train for emergency use.

The train is powered by two 1,000 h.p. M.A.N. 12-cylinder vee-type diesel engines supplied by the North British Locomotive Company Limited, each direct-coupled to a G.E.C. composite main and auxiliary generator. The main generator supplies D.C. electric power for traction purposes and the auxiliary provides current for exciting the main generator, and for main-engine starter-battery charging, control circuits, air compressors, oil priming pumps, and driving cab heaters.

Alternating electric current for lighting, air-conditioning, refrigeration and auxiliary power, including 24-volt battery charging, is provided by two Rolls-Royce 8-cylinder horizontal diesel engines, each direct coupled to a Stone Tonum alternator, mounted underfloor beneath each of the kitchen cars of the six-car train. In the

eight-car trains they are beneath each of the second-class Parlour cars, next to the motor cars. One power unit is sufficient for normal lighting and summer cooling or winter heating, but both units are required for extreme conditions. Normally one unit will act as a standby. The lighting, refrigeration, and air-conditioning equipment can be operated from an external 3-phase A.C. electric supply when the train is stationary, and static power supply points are being provided at terminal stations on the routes to be served by the trains.

All these diesel-electric de-luxe trains have been designed and built by Metropolitan-Cammell Carriage & Wagon Company Limited, to the requirements of the British Transport Commission, under the general direction of the Chief Mechanical Engineer, in collaboration with the Chief Electrical Engineer and Chief Traffic Officer, respectively, of British Railways Central Staff, B.T.C., and The Pullman Car Company. The Chief Mechanical & Electrical Engineer, London Midland Region, was responsible for inspection during construction and for test running. Special importance has been given to the amenity and aesthetic design of these trains, including both external and internal appearance, decor, and passenger comfort, by Metropolitan-Cammell, in consultation with Mr. Jack Howe, F.R.I.B.A., F.S.I.A., who has been the Design Consultant for the project throughout, and was appointed with the approval of the British Transport Commission's Design Panel and The Pullman Car Company.

BRIEF TECHNICAL DETAILS

Length of train (over buffers)	six car	409 ft. 1 in.
	eight-car	545 ft. 1 in.
Length of vehicles (over body)	motor car	66 ft. 5½ in.
	other cars	65 ft. 6 ins.
Height from rail level to roof level		12 ft. 4½ ins.
Width (at waist)		9 ft. 0 ins.
Distance between bogie centres		46 ft. 6 ins.
Distance between axle centres (motor and leading bogies)		9 ft. 6 ins.
" " " " (trailer bogies)		8 ft. 6 ins.
Wheel diameter (all wheels)		3 ft. 6 ins.
Maximum service speed		90 m.p.h.
Weight of train in working order	(6-car)	299 tons
" " " " "	(8-car)	364 tons

Diesel-Electric Traction Equipment

Main engines	:	(2) N.B.L./MAN diesel 12-cylinder vee-engine 180 m.m. bore x 210 stroke. Type L12V18/21S
Electric Generators	:	(2) G.E.C. composite main and auxiliary generators, continuous ratings :-
		Main:- 1700 amp. 383 volts 1500 rpm. 650 kW
		1250 amp. 523 volts 1500 rpm. 650 kW.
		Auxiliary:- 91 amp. 110 volts 650/1500 rpm. 10 kV.
Traction Motors	:	(8) G.E.C. four-pole, self-ventilating rating 425 amp. 383 volts. 199 hp., at 1360 rpm. continuous rating. Gear ratio 19/67

A.C. Electric Power Supplies

(For air conditioning, lighting, refrigeration, and auxiliary power supply).

Engines	:	(2) Rolls-Royce 190 hp. at 1500 rpm. horizontal diesel engine. Type C8NFLH. Bore 130.175 mm Stroke 152.4mm.
Alternator	:	(2) Stone Tonum Alternator, Type ARK64L/XR228 133 KVA, 400 volts, 3-phase, 50 cycles.

Tank Capacities

Fuel: Main Engines (each) : 500 gallons (2 x 250 gallon tanks)
Auxiliary Engines (each): 100 gallons.

Lubricating Oil:

Main Engine : 40 gallons.

(A list of the principal sub-contractors is given on the attached sheet).

DIESEL ELECTRIC PULLMAN TRAINS

LIST OF PRINCIPAL SUB-CONTRACTORS

Traction Equipment	General Electric Company Ltd.
NBL/MAN Engines	North British Locomotive Co. Ltd.
Air-Conditioning & Lighting	J. Stone & Company Ltd.
Auxiliary engines	Rolls Royce Limited.
Electro-Pneumatic Brakes	Westinghouse Brake & Signal Co. Ltd.
Kitchen Stoves	Radiation Limited.
Sink Units	James Stott & Co. (Engineers) Ltd.
Kitchen Floors, laid by	Durastic Limited.
Toilet Commodes and Basins	Twyfords Limited.
Bodyside Door Castings	Dean & Sons (Yorkshire) Ltd.
Kitchen Door Droplights	Etablissements Georges Klein et Cie.
Guards Door Droplights & Driver's Windows	Beckett, Laycock & Watkinson Ltd.
Carpets (First Class)	S. & J. Stockwell & Co. (Carpets) Ltd.
Carpets (Second Class)	Tomlinsons Limited.
Seat Castings	G.D. Peters & Company Ltd.
Seat Cover Materials	Edinburgh Weavers Ltd.
P.V.C. Coverings (First Class	Hunt & Winterbotham Ltd.
P.V.C. Coverings (Second Class)	I.C.I. Limited.
Interior Window Units	Henry Pope & Sons Limited.
Venetian Blinds	Crittall Manufacturing Co. Ltd.
Plastic Panels - Saloon ceilings	Bakelite Limited.
Plastic Panels - Toilets	Holoplast Limited and Formica Limited.
Interior Timber Partitions	Edmonton Panel Co. Ltd.
Body Shell Insulation	J.W. Roberts Limited.
Interior Insulation	W. Gilmour Smith & Co. Ltd.
Ascot Heaters	Ascot Gas & Water Heaters Ltd.
Lavatory Mosaic Flooring	Carter & Company Ltd.
Public Address System & Loudaphones	Clifford & Snell Limited.
Dunlopillo Seat Cushions	Dunlop Rubber Company Ltd.
Springs	English Steel Springs Corporation Ltd.
Axle Boxes	Skefko Ball Bearing Co. Ltd.
Buffer Springs	G. Spencer Moulton & Co. Ltd.
Paint	Docker Brothers Limited.
Fire Protection Equipment	Craviner Manufacturing Co. Ltd.
Heater-Demisters, Drivers Compt.	S. Smith & Sons Ltd.
Warning Horns	C.V. Desiderio Ltd.
Windscreen Wipers	Trico-Folberth Ltd.
Buffers. Hydro-Pneumatic	G. Turton Platts Ltd.
Pipe Fittings	British Ermeto Corporation
Drivers & Guards Seats	A.W. Chapman Ltd.
Metallic Fittings, Locks etc.	J. Beresford & Son.
" " " "	Jones & Foster Ltd.
" " " "	J. Kaye & Sons.
" " " "	Taylor & Osbourne Ltd.