

General information about the prototype Gresley Class P2s.

Sir Nigel Gresley's P2s were conceived to haul heavy trains over the Edinburgh to Aberdeen route. The original scheme envisaged a 2-8-2 wheel arrangement with an A3 boiler but the latter was changed to a design with a longer firebox and double chimney. They were the most powerful express passenger locomotives to run in Great Britain and their mechanical innovations were matched by their stylish appearance, Gresley using the class as a test bed for various developments. The doyen of the class, No. 2001 *Cock o' the North*, was equipped with Lenz rotary valve gear, an ACFI feed water heater instead of injectors, a 50 sq. ft. (4.65m.) grate and streamlined steam passages to three cylinders which exhausted via a double Kylchap chimney. Gresley was greatly influenced by the work of the French engineer Andre Chapelon who had pioneered the use of these features and was determined to incorporate them in the P2s. A tapered boiler was hidden in a parallel, elliptical cladding running from a V-fronted cab to a muscular, streamlined smoke-box, sitting on a high running board which exposed the 6'2" (1.8m.) drivers entirely. The 220psi (15.17bar) boiler fed three 21" x 26" (0.53 x 0.66m.) cylinders and the locomotive developed a nominal tractive effort of 43,460lb (19,504kg). As a final touch *Cock o' the North* was the first L.N.E.R. loco to carry a chime whistle.

During the testing the results showed a maximum of 2,100 horsepower (1,565,969Nms) at the drawbar making it the most powerful express locomotive in Britain. The engine gained much local and national interest with many of the famous railway authors of the time traveling to see and ride on the locomotive. Gresley was advocate of a locomotive testing station in the UK and as soon as the locomotive was complete Gresley entered a dialogue with Chapelon about the possibility of testing No. 2001 on the stationary test plant that had recently opened at Vitry in France. In late 1934 the locomotive was shipped to France and underwent a series of tests at the plant, as well trials on the French main lines.

The second member of the class, No. 2002 *Earl Marischal*, was fitted with Walschaerts valve gear and was equipped with additional smoke deflectors to compensate for the softer exhaust which resulted from its use. The final four members of this small class, No. 2003 *Lord President*, No. 2004 *Mons Meg*, No. 2005 *Thane of Fife* and No. 2006 *Wolf of Badenoch*, all appeared with an A4 front end coupled with the elliptical boiler cladding of the first two. Only No. 2001 was equipped with the feed water heater and this was removed when No. 2001 was later rebuilt with the A4 nose and fitted with Walschaerts valve gear. No. 2002 was similarly treated at the same time.

Following Gresley's death the new LNER CME, Edward Thompson, tried to standardise the locomotive fleet and the P2 class were earmarked for rebuilding as Pacifics. The rebuilds were controversial and sparked much debate. No. 2001 was returned to Haymarket shed in September 1944. In August 1946 the locomotive was renumbered No. 501 and again in May 1948 the locomotive was renumbered No. 60501 under the new British Railways numbering system. Eventually the rebuilt locomotive was withdrawn at Doncaster shed on 22nd January 1960 and cut up the following month. No. 60502 *Earl Marischal* achieved the highest mileage of any of the class and was the only engine to exceed one million miles. It was the final member of the class to be cut up, going under the cutters torch on 3rd July 1961.

However, this is not the end of the story. The A1 Steam Locomotive Trust, builder of No. 60163 *Tornado*, is constructing a further P2, No. 2007 *Prince of Wales*, based on the design of No. 2001 but featuring revised and improved Franklin-Lentz valve gear, injectors instead of the ACFI equipment, a 250psi (17.24bar) boiler and a host of other innovations to allow it to run on the modern UK rail network. The Trust is based in Darlington in the railway Heritage Quarter.

SPECIFICATIONS

Scale	1/32 Gauge one (45 mm)
Weight	約 7kg/4.5kg(Engine)+1.8kg(Tende)
Length	714.8mm(engine434.9mm+tender230mm)
Width	85.8mm
Hights	124.5mm
Wheel agmt	2 - 8 - 2 Mikado(1D1)
Main driver	57.4mm stainless wheels
Pilot track	30mm/35mm stainless
Tender track	36mm stainless
Axle pump	Bore / Stroke 5 x 5 mm
Cylinder	3 Cylinders with drain valve Φ 12 X20mm X3
Vlave gear	Walschaerts valve gear
Boiler	c type with 1 X Φ 15 & 2 X Φ 12 smoke tubes
Water capacity	280cc(ml)
Fittings	2 x safety valves, water gauge, pressure gauge, throttle and blower valves, by-pass valve, blow-down valve, Whistle valve
Lubricator	Rocore displacment type
Tender	Water 300ml ·wih habnd pumo (BORE 11 mm × STROKE 12 mm)
METH ALCOHOL	240ml
Miinmum radius	2.0m (dia4 m)

