

= LNER Class A3 4472 Flying Scotsman =

LNER Class A3 4472 Flying Scotsman is a Pacific steam locomotive built in 1923 for the London and North Eastern Railway (LNER) at Doncaster Works to a design of Nigel Gresley . It was employed on long @-@ distance express East Coast Main Line trains by the LNER and its successors , British Railways Eastern and North @-@ Eastern Regions , notably on the London to Edinburgh Flying Scotsman train service after which it was named .

The locomotive set two world records for steam traction , becoming the first steam locomotive to be officially authenticated at reaching 100 miles per hour (160 @.@ 9 km / h) on 30 November 1934 , and then setting a record for the longest non @-@ stop run by a steam locomotive when it ran 422 miles (679 km) on 8 August 1989 while in Australia .

Retired from regular service in 1963 after covering 2 @.@ 08 million miles , Flying Scotsman gained considerable fame in preservation under the ownership of , successively , Alan Pegler , William McAlpine , Tony Marchington , and finally the National Railway Museum (NRM) . As well as hauling enthusiast specials in the United Kingdom , the locomotive toured extensively in the United States and Canada from 1969 until 1973 and Australia in 1988 / 89 . Flying Scotsman has been described as the world 's most famous steam locomotive .

= = History = =

The locomotive was completed in 1923 , construction having been started under the auspices of the Great Northern Railway (GNR) . It was built as an A1 , initially carrying the GNR number 1472 , because the LNER had not yet decided on a system @-@ wide numbering scheme .

Flying Scotsman was something of a flagship locomotive for the LNER . It represented the company at the British Empire Exhibition at Wembley in 1924 and 1925 . Before this event , in February 1924 it acquired its name and the new number of 4472 . From then on it was commonly used for promotional purposes .

With suitably modified valve gear , this locomotive was one of five Gresley Pacifics selected to haul the prestigious non @-@ stop Flying Scotsman train service from London to Edinburgh , hauling the inaugural train on 1 May 1928 . For this the locomotives ran with a new version of the large eight @-@ wheel tender which held nine long tons of coal . This and the usual facility for water replenishment from the water trough system enabled them to travel the 392 miles (631 km) from London to Edinburgh in eight hours non @-@ stop .

The tender included a corridor connection and tunnel through the water tank giving access to the locomotive cab from the train so that the driver and fireman could be changed without stopping the train . The following year the locomotive appeared in the film The Flying Scotsman .

While the Great Western Railway locomotive City of Truro had previously been unofficially timed at running in excess of 100 mph (160 @.@ 9 km / h) , 4472 became the first steam locomotive to be officially authenticated at this speed on 30 November 1934 , driven by Bill Sparshatt and running a light test train . It earned a place in the land speed record for railed vehicles ; the publicity @-@ conscious LNER made much of the fact .

The locomotive ran with its corridor tender between April 1928 and October 1936 , after which it reverted to the original type ; in July 1938 it was paired with a streamlined non @-@ corridor tender , and ran with this type until withdrawal . On 22 August 1928 an improved version of this Pacific type , classified A3 , appeared ; older A1 locomotives were later rebuilt to conform . On 25 April 1945 , A1 @-@ class locomotives not yet rebuilt were reclassified A10 to make way for newer Thompson and Peppercorn Pacifics . Flying Scotsman emerged from Doncaster Works on 4 January 1947 as an A3 , having received a boiler with the long " banjo " dome of the type it carries today . By this time it had been renumbered twice : under Edward Thompson 's comprehensive renumbering scheme for the LNER , it became No. 502 in January 1946 ; in May the same year , under an amendment to that plan , it become No. 103 . Following nationalisation of the railways on 1 January 1948 , almost all of the LNER locomotive numbers were increased by 60000 ; No. 103 became 60103 in December 1948 .

Between 5 June 1950 and 4 July 1954 , and between 26 December 1954 and 1 September 1957 , under British Railways ownership , it was allocated to Leicester Central shed on the Great Central Railway , running Nottingham Victoria to London Marylebone services via Leicester Central .

All A3 Pacifics were subsequently fitted with a double Kylchap chimney to improve performance and economy . This caused soft exhaust and smoke drift that tended to obscure the driver 's forward vision ; the remedy was found in the German @-@ type smoke deflectors fitted from 1960 , which somewhat changed the locomotives ' appearance .

= = Preservation = =

In 1962 , British Railways announced that it would scrap Flying Scotsman . Number 60103 ended service with its last scheduled run on 14 January 1963 . Proposed to be saved by a group called " Save Our Scotsman " , they were unable to raise the required £ 3 @,@ 000 , the scrap value of the locomotive .

= = = Alan Pegler = = =

Alan Pegler , who first saw the locomotive at the British Empire Exhibition in 1924 , in 1961 received £ 70 @,@ 000 for his share holding when Northern Rubber was sold to Pegler 's Valves , a company started by his grandfather . When Flying Scotsman was due to be scrapped Pegler stepped in and bought it outright , with the political support of Prime Minister Harold Wilson . He spent large amounts of money over the next few years having the locomotive restored at Doncaster Works as closely as possible to its LNER condition : the smoke deflectors were removed ; the double chimney was replaced by a single chimney ; and the tender was replaced by one of the corridor type with which the locomotive had run between 1928 and 1936 . It was also repainted in LNER livery . Pegler then persuaded the British Railways Board to let him run enthusiasts ' specials ; it was at the time the only steam locomotive running on mainline British Railways . It worked a number of rail tours , including a non @-@ stop London to Edinburgh run in 1968 , the year steam traction officially ended on BR . In the meantime , watering facilities for steam locomotives were disappearing , so in September 1966 Pegler purchased a second corridor tender which was adapted as an auxiliary water tank ; retaining its through gangway , this was coupled behind the normal tender .

Pegler had a contract permitting him to run his locomotive on BR until 1972 . Following overhaul in the winter of 1968 ? 69 Harold Wilson 's government agreed to support Pegler running the locomotive in the United States and Canada to support British exports . To comply with local railway regulations it was fitted with : a cowcatcher , bell , buckeye couplings , American @-@ style whistle , air brakes , and high @-@ intensity headlamp . Starting in Boston , Massachusetts , the tour ran into immediate problems , with some states increasing costs by requiring diesel @-@ headed @-@ haulage through them , seeing the locomotive as a fire hazard . However , the train ran from Boston to New York , Washington and Dallas in 1969 ; from Texas to Wisconsin and finishing in Montreal in 1970 ; and from Toronto to San Francisco in 1971 ? a total of 15 @,@ 400 miles (24 @,@ 800 km) .

Government financial support for the tour was withdrawn by Prime Minister Edward Heath 's Conservative government in 1970 , but Pegler decided to return for the 1970 season . By the end of that season 's tour , the money had run out and Pegler was £ 132 @,@ 000 in debt , with the locomotive in storage at the US Army Sharpe Depot to keep it away from unpaid creditors . Pegler worked his passage home from San Francisco to England on a P & O cruise ship in 1971 , giving lectures about trains and travel ; he was declared bankrupt in the High Court in 1972 .

= = = William McAlpine = = =

Fears then arose for the engine 's future , the speculation being that it might remain in the US or even be broken up . After Alan Bloom made a personal phone call to him in January 1973 , William

McAlpine stepped in and bought the locomotive for £ 25 @, @ 000 direct from the finance company in San Francisco docks . After its return to the UK via the Panama Canal in February 1973 , McAlpine paid for the locomotive 's restoration at Derby Works . Trial runs took place on the Paignton and Dartmouth Steam Railway in summer 1973 , after which it was transferred to Steamtown (Carnforth) , from where it steamed on various tours . In December 1977 ' Flying Scotsman ' entered the Vickers Engineering Works , Barrow @-@ in @-@ Furness , for heavy repairs , including an unused replacement boiler .

In October 1988 Flying Scotsman arrived in Australia to take part in the country 's bicentenary celebrations as a central attraction in the Aus Steam ' 88 festival . The event organisers had been interested in having LNER A4 No 4468 Mallard visit , however due to the 50th anniversary of 4468 's world record high speed run it was unavailable and 4472 was recommended as its replacement . During the course of the next year Flying Scotsman travelled more than 45 @, @ 000 kilometres (28 @, @ 000 mi) over Australian rails , concluding with a return transcontinental run from Sydney to Perth via Alice Springs in which it became the first steam locomotive to travel on the recently built standard gauge Central Australia Railway . Other highlights included Flying Scotsman double @-@ heading with New South Wales Government Railways Pacific locomotive 3801 , a triple @-@ parallel run alongside broad gauge Victorian Railways R class locomotives , and parallel runs alongside South Australian Railways locomotives 520 and 621 . Its visit to Perth saw a reunion with GWR 4073 Class Pendennis Castle , which had been exhibited alongside Flying Scotsman at the 1924 British Empire Exhibition . On 8 August 1989 Flying Scotsman set another record en route to Alice Springs from Melbourne , travelling 679 kilometres (422 mi) from Parkes to Broken Hill non @-@ stop , the longest such run by a steam locomotive ever recorded . The same journey also saw Flying Scotsman set its own haulage record when it took a 735 @-@ ton train over the 490 @-@ mile (790 km) leg between Tarcoola and Alice Springs .

Flying Scotsman returned to Britain in 1990 and continued working on the main line until its mainline certificate expired in 1993 . 4472 then toured preserved railways . To raise funds for its upcoming overhaul it was returned to BR condition with the refitting of the German style smoke deflectors and double chimney , and repainting in BR Brunswick green . By 1995 it was in pieces at Southall Railway Centre in West London , owned by a consortium that included McAlpine as well as music guru and railway enthusiast Pete Waterman .

= = = Tony Marchington = = =

Facing an uncertain future owing to the cost of restoration and refurbishment necessary to meet the stringent engineering standards required for main line operation , salvation came in 1996 when Dr Tony Marchington , already well known in the vintage movement , bought the locomotive , and had it restored over three years to running condition at a cost of £ 1 million , a restoration which , at the time , was recognised as the most extensive in the locomotive 's history . Marchington 's time with the Flying Scotsman was documented in a documentary , the Channel 4 programme A Steamy Affair : The Story of Flying Scotsman .

With Flying Scotsman 's regular use both on the VSOE Pullman and with other events on the main line , in 2002 , Marchington proposed a business plan , which included the construction of a " Flying Scotsman Village " in Edinburgh , to create revenue from associated branding . After floating on OFEX as Flying Scotsman plc in the same year , in 2003 Edinburgh City Council turned down the village plans , and in September 2003 Marchington was declared bankrupt . At the company 's AGM in October 2003 , CEO Peter Butler announced losses of £ 474 @, @ 619 , and with a £ 1 @. @ 5 million overdraft at Barclays Bank and stated that the company only had enough cash to trade until April 2004 . The company 's shares were suspended from OFEX on 3 November 2003 after it had failed to declare interim results .

= = = National Railway Museum = = =

With the locomotive effectively placed up for sale , after a national campaign it was bought in April

2004 by the National Railway Museum in York , and it is now part of the museum 's National Collection . After 12 months of interim running repairs , it ran for a while to raise funds for its 10 @-@ year restoration .

== Overhaul 2006 ? 2016 ==

In January 2006 , Flying Scotsman entered the National Railway Museum 's workshops for a major overhaul to return it to Gresley 's original specification and to renew its boiler certificate ; originally planned to be completed by mid @-@ 2010 if sufficient funds were raised , but late discovery of additional problems meant it would not be completed on time . In October 2012 , the museum published a report examining the reasons for the delay and additional cost . The locomotive was moved in October 2013 to Bury for work to return it to running condition no earlier than summer 2015 . On 29 April 2015 , Flying Scotsman 's boiler left the National Railway Museum to be reunited with the rest of the locomotive at Riley & Son in Bury .

The bay in which the locomotive was being refurbished was on view to visitors to the NRM but the engine was rapidly dismantled to such an extent that the running plate was the only component recognisable to the casual observer . Early in 2009 it emerged that the overhaul would see the loco reunited with the last remaining genuine A3 boiler (acquired at the same time as the locomotive as a spare) . The A4 boiler that the loco had used since the early 1980s was sold to Jeremy Hosking for potential use on his locomotive , LNER Class A4 4464 Bittern .

== Return to service ==

The overhaul was completed in January 2016 and testing began on the East Lancashire Railway on 8 January 2016 . Flying Scotsman was originally going to haul its inaugural mainline train called the Winter Cumbrian Mountain Express from Manchester Victoria to Carlisle on 23 January , but it was not ready due to faulty brakes . The first mainline run , pulling the Winter Cumbrian Mountain Express from Carnforth to Carlisle , took place on 6 February . An inaugural journey from London King 's Cross to York in traditional green livery ran on 25 February . Flying Scotsman will be making special tours throughout the UK in 2016 .

== Debate over restoration ==

In 2011 , the National Railway Museum announced that Flying Scotsman will be painted in LNER war time black livery when it undergoes steam tests and commissioning runs , with the letters " N E " on the sides of its tender , number " 103 " on one side of the cab and " 502 " on the other ? the numbers it was given under the LNER 's renumbering system . The locomotive remained in black for the NRM 's Flying Scotsman Preview event on 28 ? 30 May 2011 . During the museum 's Railfest event on 2 ? 10 June 2012 , Flying Scotsman was kept in front of Mallard in a siding in its black livery . A report on the restoration was published , in redacted form , on 7 March 2013 . On 23 January 2015 , the NRM announced that the smoke deflectors and double chimney will be retained , including a return to its BR green livery , to keep it as historically accurate as possible as No. 60103 .

== In popular culture ==

Because of the LNER 's emphasis on using the locomotive for publicity purposes , and then its eventful preservation history , including two international forays , it is one of the UK 's most recognised locomotives . One of its first film appearances was in the 1929 film *The Flying Scotsman* , which featured an entire sequence set aboard the locomotive .

In 1985 , Flying Scotsman appeared in a witty British Rail TV advert .

Flying Scotsman was featured in *The Railway Series* books by the Rev. W. Awdry . The locomotive visited the fictional Island of Sodor in the book *Enterprising Engines* to visit its only remaining

brother : Gordon . At this time it had two tenders , and this was a key feature of the plot of one of the stories , " Tenders for Henry " . When the story was filmed for the television series Thomas & Friends , renamed as " Tender Engines " only Flying Scotsman 's two tenders and his cab roof were seen outside a shed . He originally was intended to have a larger role in this episode , but because of budgetary constraints , the modelling crew could not afford to build the entire engine . The engine makes a full appearance in Thomas & Friends : The Great Race , where he is voiced by Rufus Jones in all English @-@ speaking regions .

Flying Scotsman appeared in the 2000 film 102 Dalmatians preparing to haul the Orient Express .

The locomotive was the first choice for the Top Gear Race to the North , but due to an overhaul was unable to attend , so the position went to LNER Peppercorn Class A1 60163 Tornado instead .

A model of the Flying Scotsman appeared in Episode 6 and " The Great Train Race " episodes of James May 's Toy Stories . It was James May 's personal childhood model and was chosen by him to complete a world record for the longest model railway . The train was meant to travel 7 miles from Barnstaple to Bideford , in North Devon and it failed early in the trip in Episode 6 but managed to complete it in " The Great Train Race " which took place on 16 April 2011 .

One of the specially produced £ 5 coins for the 2012 Summer Olympics featured an engraving of the Flying Scotsman on the back .

Flying Scotsman is included as a locomotive in the PC simulation game Microsoft Train Simulator .