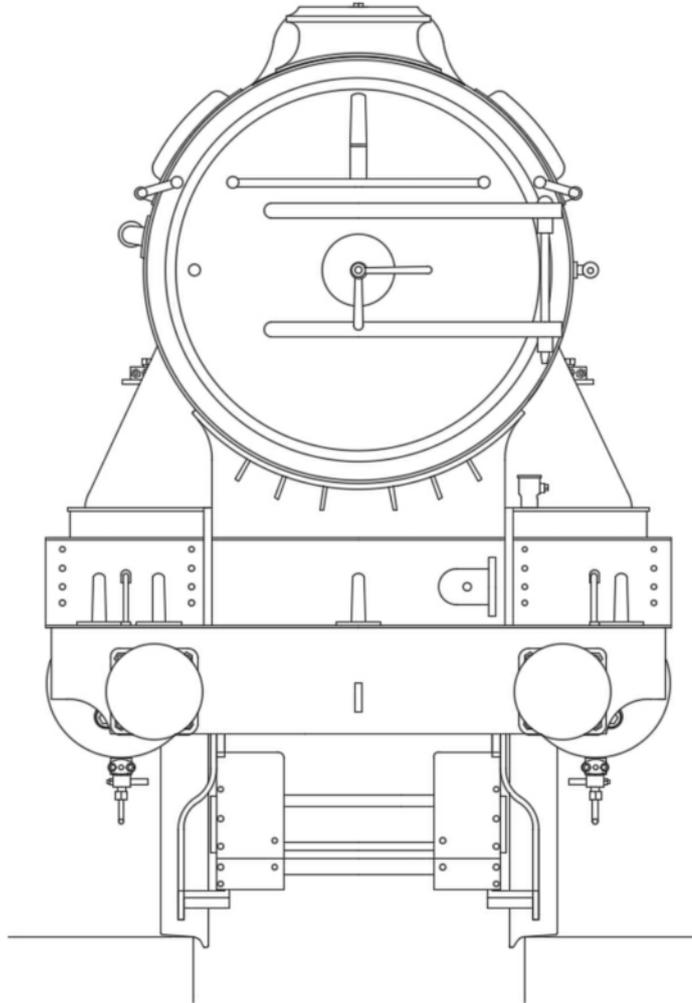


LNER GRESLEY A3 CLASS LOCOMOTIVE



CAUTION.

This product contains etched parts with very sharp edges and castings that may contain lead. Neither the Manufacturer, Distributor or Retailer can accept any liability for illness, injury or consequential damage caused when handling or building this product.

Read any instructions before assembly. Do not eat or drink whilst handling.

Wash hands after use.

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BRIEF HISTORICAL DETAILS

Just before Grouping, Nigel Gresley introduced his prototype 4-6-2 design on the GNR. There were only two engines of this class in service at the end of 1922, but a further ten had been ordered by the GNR and these were completed in 1923, the LNER classification being A1. On Gresley's appointment as CME of the LNER this class was adopted as standard and a further forty (twenty by the North British Locomotive Company) were constructed in 1924-25. In 1927 two of the class were rebuilt with higher pressure boilers to become the first of class A3 and eventually, by 1948, all but the first engine was dealt with in this fashion. These engines were all built with the driving position on the right hand side. Between 1927 and 1931 the original valve gear with short valve travel (STV) was replaced with a new design with increased travel long travel valves (LTV).

During 1928-35, twenty-seven new A3's were built with the driving position on the left hand side. These engines had the long travel valves and were built under 3 Engine Orders as follows:

EO	Numbers	Built	Boiler	Dome	Bogie
314	2743 - 52	1928 - 29	94HP	Round	Swing link
317	2595 - 99	1930	94HP	Round	Swing link
	2795 - 97	1930	94HP	Round	Swing link
331	2500 - 08	1934 - 35	94A	Banjo - Steamlined	Helical spring

During 1952-54 the remaining fifty-one of the original engines were eventually converted to left hand drive.

So from this kit, which is for left hand drive engines, the twenty-seven new A3's can be built in their original condition and the remaining engines can be built after their conversion to left hand drive.

For a detailed history of this long lived class, Part 2A of Locomotives of the LNER published by the RCTS is essential reading. Other valuable sources of information and photographs are:

Locomotives Illustrated 25, Ian Allan

The Gresley Pacifics, O.S.Nock, David & Charles

Yeadon's Register of LNER Locomotives Volume One, Irwell Press

East Coast Pacifics at Work, P.N.Townend, Ian Allan

The Power of the A1's, A2's and A3's, J.S.Whiteley & G.W.Morrison, Oxford Publishing Co.

VARIATIONS/MODIFICATIONS INCORPORATED INTO THE KIT.

Chimney. Original type and double chimney fitted to most of the locomotives from 1958 onwards.

Dome. Original type and later streamlined dome, the Banjo dome is not supplied.

Frames. There were differing frame lightening hole arrangements. All locomotives had the hole ahead of the cylinders. In addition E.O.'s 314 & 317 had four circular holes, 12" in diameter (marked L in Fig. 2). E.O. 331 had only the hole ahead of the cylinders. The locomotives originally built as A1 had the four larger oval holes.

Frame rivets. The original engines were built using countersunk rivets and so give a smooth appearance to the frames. Many photographs show a gradual change to rivets with a visible head as frames were repaired or replaced.

Bogie. The locomotives built with the swing link bogies were soon converted to the helical spring type circa 1933-34.

Front end cover plates. Small cover fitted from 1933 onwards and larger sliding cover from 1945.

Front footsteps. Fitted from 1935 onwards.

Rear spring retaining brackets. Fitted later.

Firebox crown washout plugs/door covers. Originally square ended plugs and from circa 1936 onwards circular covers.

Anti-vacuum valve plate. Two types provided.

Cab seats. Original type replaced with bucket seats from circa 1935 onwards.

Cab sides. Original cut-out increased in height by 11" at the same time as bucket seats fitted.

Lamp irons - footplate. Second lamp iron on RHS removed from 1931.

Lamp iron - smoke box door. Two different types.

Trough type smoke deflectors. Fitted to 55 of the locomotives from 1960 onwards.

Reversing rod. Different shape depending on whether Doncaster or North British built.

Frame guard irons. Removed in the period 1952-54.

CHASSIS OVERVIEW

Note that many of the components for both chassis and body are handed left/right and care must be taken to ensure the correct component is used. Components are not always identified left/right separately but with care and common sense no problems should arise.

Before construction can commence you have to decide which particular chassis you are going to construct. The options are:

Gauge.

For Finescale, where little sideplay is required, the widest spacers can be used but they will need careful filing to make their width 26.0mm. If you require your engine to negotiate sharp curves then the middle width spacers should be used.

The widest frame spacers supplied are suitable for Scaleseven and care will be needed to allow sufficient sideplay, especially in the leading axle to enable the model to negotiate moderate curves.

Suspension.

Rigid. The kit is supplied with top hat bearings to build a rigid chassis. Open out the main axle holes to accept top hat bushes and solder them in place.

Sprung. If you are going to fit sprung horn blocks, you should open out the frame slots by cutting up the half etched lines and follow the manufacturers instructions.

Compensated. The simplest and most reliable suspension system is beam compensation and the necessary compensation beams are provided in the kit. First decide which of the two possible compensation arrangements you prefer (Fig.4). Full compensation gives a much smoother ride to the chassis. Not provided are the horn guides and bearings for the fully sprung units or compensation beam system, they are available as an extra item which included instructions for aligning the horn guides accurately.

Pickups. No pickup material is provided. The options are:

Scrapers. Attached to the middle frame spacer using printed circuit board.

Plunger. Open out holes P and fit according to the manufacturers instructions. It may not be possible to use plunger pickups if you wish to fit the inside motion because they may foul each other.

Split axle/frame. We leave this to you! Some useful information can be found at

COMPONENTS NOT SUPPLIED

WHEELS

Driving wheel - 6' 8" diameter, 20 Spoke, 3/16" axle (3)

Slater's Ref. 7880G

Bogie wheel - 3' 2" diameter, 10 spoke, 5/32" axle (2)

Slater's Ref. 7838GMF

Trailing wheel 3' 8" diameter, 12 spoke, 5/32" axle (1)

Slater's Ref. 7843NEMF

Available from Slaters' (Plastikard) Ltd, Old Road, Darley Dale, MATLOCK, DE4 2ER, England

Tel. (+44) (0)1629 734053 Web Site: slaters@slatersplastikard.com

MOTOR/GEARBOX

A Canon motor with either an ABC- VML2 gearbox or a SDMP 40L/15 gearbox (available from Finney7).

CRANKPINS

Steel crankpins are available from Finney7.