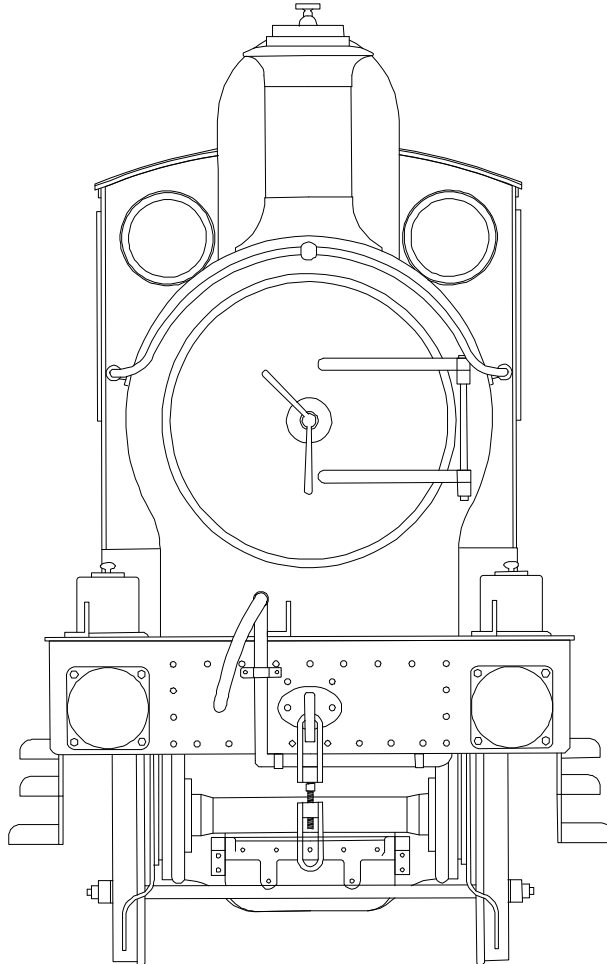


GWR DEAN GOODS LOCOMOTIVE



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.

BRIEF HISTORICAL DETAILS.

The 260 engines of the 2301 class, designed by William Dean, were built over a period of 16 years, in 12 lots, as follows:

Lot	Numbers	Built	Original Boiler	Footplate	Coupling rods
61	2301-2320	1883	S0	Narrow	Oval
62	2321-2340	1884	S2	Narrow	Plain
63	2341-2360	1885	S2	Narrow	Plain
82	2381-2400	1890	S2	Narrow	Plain
87	2401-2430	1891-92	S2	Narrow	Plain
92	2431-2450	1893	S2	Narrow	Plain
99	2451-2470	1895-96	S4	Wide	Plain
100	2471-2490	1896	S4	Wide	Plain
104	2491-2510*	1896	S4	Wide	Fluted
107	2511-2530	1897	S4	Wide	Fluted
108	2531-2550	1897	S4	Wide	Fluted
111	2551-2580	1897-89	S4	Wide	Fluted

* Between 1907-1910 all the engines in this lot were rebuilt by Churchward as 2-6-2 tank engines becoming the 3901 class.

With such a large number of locomotives, built over a long period and lasting in service for over sixty years, there are considerable variations between individual engines many of which we have attempted to cover by including alternative components in the kit.

As is usual for Great Western engines the most obvious variation is in the boilers. The first twenty were built with domeless S0 boilers with flush smokeboxes. The next 110 had S2 boilers fitted. The remainder were constructed with the S4 boiler included in the kit. From around the turn of the century rebuilding began with the B4 Belpaire boilers until by 1927 all were so fitted. For a detailed history of this class, including details of boiler changes, Part Four of 'The Locomotives of the Great Western Railway' published by the RCTS is essential reading. From this kit any of the class can be built from circa 1900 to withdrawal.

The following Swindon drawings were used to design the kit:

8573	Frame plan Lots 82,87,92,99,100,107,108 & 111
11476 4/1940	General arrangement - 2301 class
11532 8/1940	Arrangement of motion - 1700, 2301, 2700 classes

G.W.Engines - Vol 1 by J.H.Russell on pages 79 - 87 has some useful photographs

VARIATIONS POSSIBLE WITH THE KIT.

Footplate. Two different width footplates were fitted as detailed above.

Coupling rods. Plain or fluted coupling rods were fitted as detailed above. Photographic evidence suggests that many of those built with fluted rods subsequently acquired plain rods.

Cab. The cabsides of the first sixty engines had a large sweeping cutout whereas the later engines had a standard two arc opening. With the fitting of Belpaire fireboxes the cabs were raised to allow the spectacle windows to be refitted and there were two distinct cab roof profiles. Cab roofs were latterly of steel replacing the earlier canvas covered wood.

Smokebox. The early smokeboxes had a plain front with ringed door. Later snap head rivets were used and from c1920 the smokeboxes had a pressed front with Churchward type door without the ring.

Firebox. Two different B4 firebox wrappers are provided with alternative positions of the washout plugs.

Steps. The front step and upper rear step were different on the first sixty engines.

Reversing rod. The first sixty had a straight rod whereas the remainder were fitted with a curved rod.

Chimney. Early built up parallel type. From 1919 the tapered cast iron type began to be fitted.

Top feed. From about 1913 onwards some forty of the class carried B4 boilers with top feed.

Balance weights. Changed from large type with visible rivets to a smaller plain design.

ATC. A large number of the class were fitted with ATC equipment most between June 1930 and August 1931.

Lamp brackets. Most have the front lamp brackets attached to the buffer beam but a few have the outer brackets fixed to the sandboxes.

TENDERS

Many of the earlier engines appear to have come out with second-hand iron frame or double frame Armstrong tenders which were to be found on the class up to about 1912. Later engines were paired with standard Dean 2500 gallon tenders. In later years a significant number acquired larger Dean tenders of 3000 gallons capacity. At least one (2398) was paired with a diminutive Dean 2000 gallon tender.

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 26.0 mm. 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. If the leading axle is 5/32" diameter then reduce the bearing diameter accordingly by fitting a sleeve from short lengths of the 3/16" tubing provided.

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. Not provided are the hornblocks and bearings which are available as an extra item which includes instructions for aligning the hornblocks 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 <http://www.euram-online.co.uk/tips/splitaxle/splitaxle.htm>.

COMPONENTS NOT SUPPLIED

WHEELS

Driving wheel - 5' 2", 16 spoke, 3/16" diameter axle (3)

Slater's Ref.7862GW

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 a SDMP 40L/15 gearbox (available from Finney7) or an ABC- VML2 gearbox (available from ABC Gears, 134 Manor. Road, New Milton, Hants BH25 5ED).

Tel. 01425 611151. E-mail abcgears@yahoo.co.uk

CRANKPINS

Steel crankpins are available from Finney7.

INSIDE MOTION

A separate kit is available from Finney7 to construct the working inside motion.