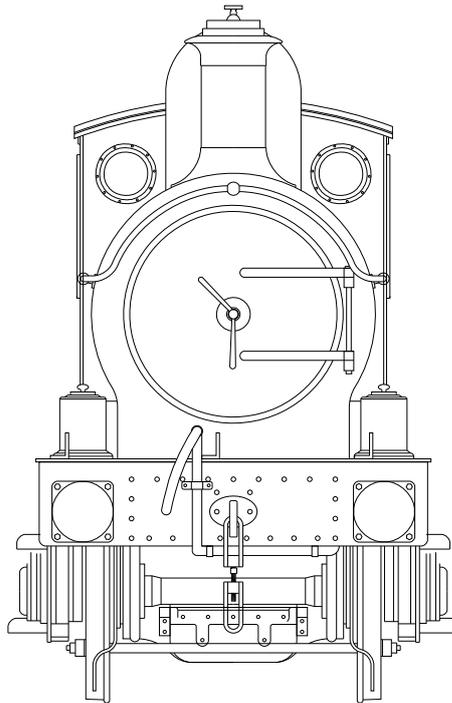


GWR STELLA CLASS LOCOMOTIVE



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.

BRIEF HISTORICAL DETAILS

In the period 1884-87 Dean carried out an interesting standardisation scheme involving four classes of engine, passenger, 2-4-0, tender and tank and goods, 0-6-0, tender and tank. All had identical cylinders and motion, double frames of a neat and attractive design and coupled wheels of the same size with springs hung underneath the axles.

The subjects of this kit are the 2-4-0 passenger engines which were built as follows:

Lot	Numbers	Built	Original condition	Date rebuilt as standard gauge tender engine
65	3201-3205	1884-85	Standard gauge tender engine	
64	3501-3510	1885	Broad gauge tank	1892
64	3511-3520	1885	Standard gauge tank	1894-1895

Hence, from 1895 there were 25 basically similar 2-4-0 tender engines with however significant differences depending on their origin which we have tried to accommodate in the design of the kit. As is usual for Great Western engines the most obvious variation is in boilers. S2 boilers were fitted until the S4 and B4 boilers included in the kit were used from around the turn of the century.

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.

So, from this kit any of the class can be built from circa 1900 to 1933. The following Swindon drawings were used to design the kit:

16937	10/1900	Lot 65 Standard boiler No.3 in lot 65 frames
61305		Diagrams E,O & Y Maximum cross section
11385	1885	Lot 67 Arrangement of boiler mountings (2361 class)
114761	4/1940	General arrangement- Dean goods (2301 class)
11532	8/1940	Arrangement of motion-1700,2301,2700 classes

G.W.Engines - Vol 1 by J.H.Russell on pages 151 - 156 has some useful photographs.

CABS

The cabsides of Lot 65 had a very large cut-out whereas the new cabs of the rebuilt engines had a smaller cut-out which gave more protection to the crew. With the fitting of Belpaire fireboxes the cabs were raised to allow the spectacle windows to be refitted. Cab roofs were latterly of steel replacing the earlier canvas covered wood.

TENDERS

3201-3205 were initially fitted with standard, Dean 2500 gallon tenders. 3510-3520 when rebuilt seem to have been given old iron frame Armstrong tenders. From the early years of the century many were paired with Dean 2000 gallon tender originally fitted to 'Dukes' and indeed some kept such tenders until withdrawal. In later years the majority had the Dean 2500 gallon type and at least one (3515) had a tender of 3000 gallons capacity.

OTHER VARIATIONS/MODIFICATIONS

Steps. Many different arrangements, determined by the origin of the engine.

Smokebox. Latterly many acquired new/overhauled smokeboxes with snaphead rivets and some Churchward type smokebox doors without the ring.

Frame patches. Outside frame strengthening plates were fitted to many in later years.

Firebox side brackets. These were fitted with a cover on some engines in later years.

Lower front wheel splashers. Removed around the time of the Great War.

Coupling rods. Originally plain but some engines subsequently fitted with fluted rods.

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 (2)

Slater's Ref. 7862

Extended axles with outside cranks (X720052G). These cranks do not fit but you need the axles.

Leading wheel - 3' 8" diameter, 10 spoke, 3/16" diameter axle

Slater's Ref. 7843

MOTOR/GEARBOX

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

CRANKPINS

Steel crankpins are available from Finney7.

INSIDE MOTION

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