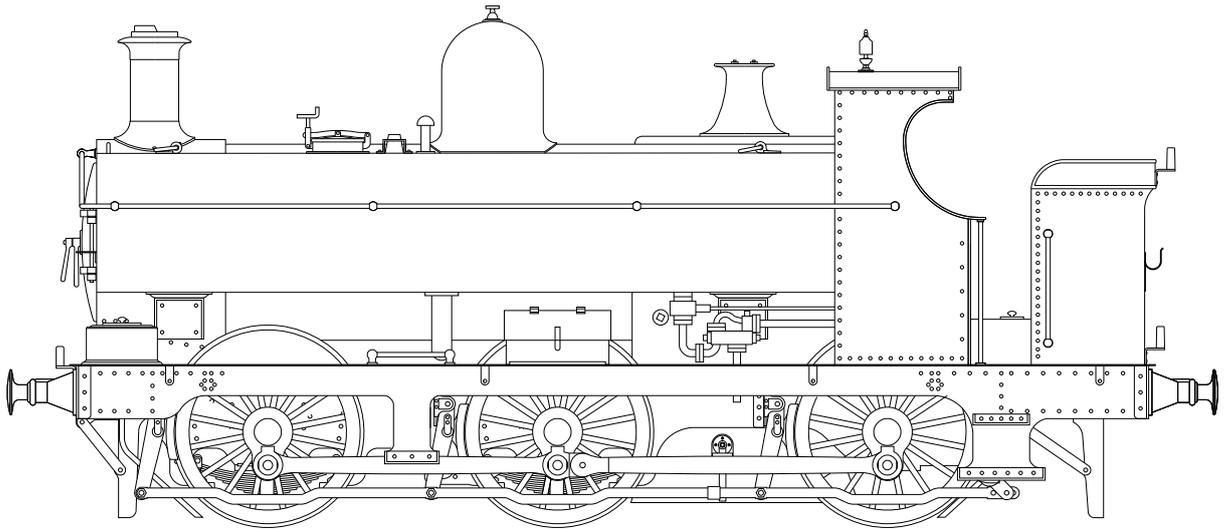


GWR 1854 & 2721 CLASS LOCOMOTIVE



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

These two classes of Swindon built O-6-O tank engines were originally built with saddle tanks as follows:

Lot	Original number	Built	Lot	Original number	Built
79	1854-1873	1890	98	1791-1800	1894
83	1874-1894	1890-91	98	1894-1900	1895
85	1701-1720	1891	112	2721-2740	1897-88
88	1721-1740	1892	115	2741-2760	1899
89	1751-1770	1892-93	122	2761-2780	1900
89	905-907	1892-93	129	2781-2800*	1901

* No. 2800 was renumbered 2700 in December, 1912

Apart from some significant mechanical differences between the two classes, which do not effect the appearance of the engines, the principal differences were:

1854	Plain coupling rods and underhung springs
2721	Fluted coupling rods and volute springs

Starting in 1909 these saddle tanks were amongst the first to be fitted with pannier tanks and all (except 1879) were so fitted by 1933. They were very long lived the majority being withdrawn after WW2 and all by 1950.

For a detailed history of this class, including details of boiler changes and the fitting of pannier tanks, Part Five of 'The Locomotives of the Great Western Railway' published by the RCTS is essential reading. From this kit any of either of the classes can be built as pannier from circa 1909 to 1950.

The following Swindon drawings were used to design the kit.

No. 10476	Frame plan 1854 class
No. 8611	Arrangement of motion, 1854 class
Diagrams A45, A46, B55 & B56.	

Much information was unavailable and has had to be deduced from drawings of other similar classes and from photographs.

G.W.Engines - Vol 1 by J.H.Russell on pages 99 - 101 and Vol 2 on page 178 has some useful photographs. Note the two of the pictures in Vol 2. (fig 456 & 457) are either 1854 or 2721 class not 1813 class as captioned.

VARIATIONS POSSIBLE WITH THE KIT

Pannier tanks. Flush riveted up to c1917. From c1917 to 1924 snap head riveted. After 1924 welded seams.

Smokebox/tank front. Early plain front with ringed door. Later snap head rivets. From c1920, the smokebox had a pressed front with Churchward type door without the ring.

Bunkers. Early short with railed top later sheeted in. From c1924 an enlarged type were fitted.

Cabs. As built were open with a canvas covered wooden roof which was later replaced with steel. A significant number were rebuilt from c1924 onward with new enclosed cabs some whilst carrying the old style bunker.

Steam heating. Although essentially shunting and light freight engines many were fitted with steam heating.

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

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 - 4' 7", 16 spoke, 10" pin between, 3/16" diameter axle (3) Slater's Ref. 7855GWR

MOTOR/GEARBOX

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

CRANKPINS

Heavy duty crankpins are available from Finney7.

INSIDE MOTION

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