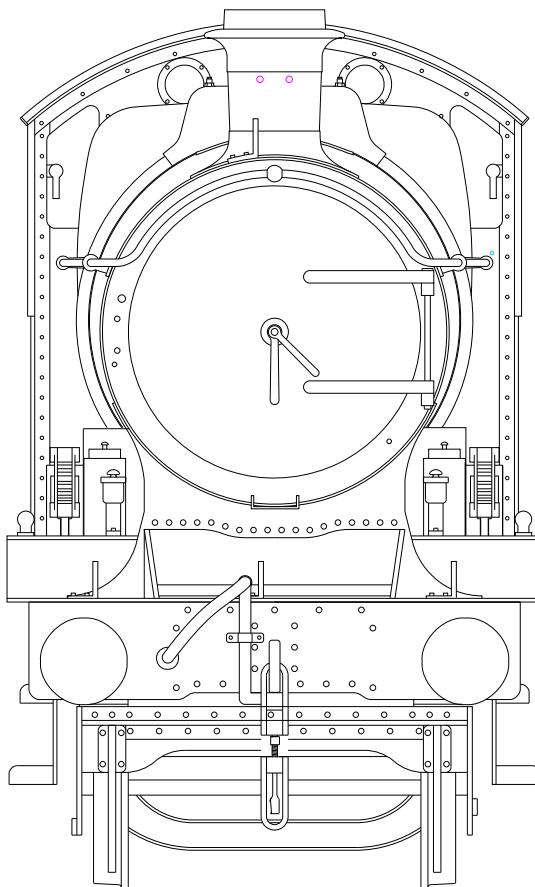


GWR CITY CLASS LOCOMOTIVE



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

The prototype of this most famous of GWR 4-4-0 classes was the 'Atbara' class engine Mauritius rebuilt with the larger Standard No. 4 boiler in September 1902. Ten new engines followed in 1903 and nine more 'Atbaras' were similarly rebuilt in 1907-9.

For a detailed history of these classes, Part Seven of 'The Locomotives of the Great Western Railway' published by the RCTS is essential reading. Also useful are G.W.Engines Vol 2 by J.H.Russell, Standard Gauge G.W. 4-4-Os by O.S.Nock & Locomotives Illustrated 50 GWR double-framed 4-4-Os.

The following Swindon drawings were used to design this kit:

| | | | |
|--------|---------|--------------|---------------------|
| 17849 | 3/1901 | Lots 126,141 | General arrangement |
| 115623 | 10/1940 | | Inside motion |

The locomotives were built under two Lots as follows:

| Lot | Original Numbers | New 1912 Numbers | Built |
|------|------------------|------------------|--------|
| 126* | 3400-3409 | 3700-3709 | 1902-9 |
| 141 | 3433 - 42 | 3710 - 19 | 1903 |

* Nos. 3400-3409 were rebuilt between 1902 and 1909 from Lot 126 Atbara locos which became members of the City class

VARIATIONS POSSIBLE WITH THE KIT

Chimneys. Two different types are provided.

Safety valve casing. Caters for with or without top-feed.

Bogies. Many rebuilt to 'De Glehn' type without swing-hangers and fitted with strengthening patches. Some built with beaded bogie splashes.

Coupling Rods. These locomotives were built with fluted rods but many were subsequently fitted with plain rods.

Frame strengthening. The locomotives acquired frame strengthening plates surprisingly quickly, probably during their first major shopping around 1904-1906. They were first fitted with separate plates for each axle. Later larger, one piece plates were fitted to some of the class.

Smokebox. Originally quite short. Later front and back rings had snap head rivets.

Smokebox saddle. Early flush rivets, later snap head rivets.

Sandboxes. Originally fitted below the footplate on the leading coupled wheels only. Later larger sandboxes were fitted above the footplate on all driving wheels.

Cab roof. Initially a canvas covered wood affair, later changed to steel with two designs of rain strip.

Splashes. Initially built with beading, later the beading was removed and rivets were visible.

Leading coupled wheel splasher. Originally the locomotives were built with a beaded splasher, below the footplate, on the leading coupled axle which was gradually removed up to WW1.

Cab spectacle windows. Plated over during the late 1920s.

Vacuum pipe. Originally tall, later a shorter pattern was introduced.

TENDERS

When built the 'Cities' were fitted with standard Dean 3000 gallon tenders. Subsequently some acquired Churchward 3500 gallon tenders.

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 wheels - 6' 8 1/2" (6' 9"), 18 spoke, 3/16" diameter axle (2) Slater's Ref. 78810/C

Until the Finney7 cranks are available we recommend fitting the MOK outside cranks.

Bogie wheels - 3'7", 10 spoke, general pattern. Specify 2mm outside journals when ordering. Slater's Ref. 7843MF

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.