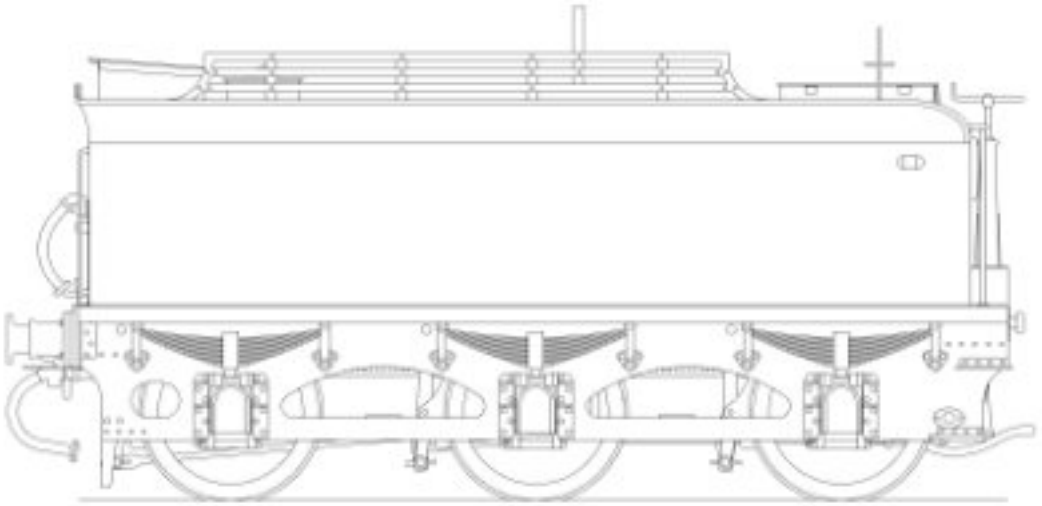
Finney7

LSWR ADAMS 3300G TENDER



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

SOURCES OF INFORMATION AND PHOTOGRAPHS

The Locomotives of the LSWR, Part II - D.L. Bradley - RCTS.

LSWR Locomotives - The Drummond Classes - D.L. Bradley - Wild Swan.

Other valuable sources of information and photographs are:

A Pictorial Record of Southern Locomotives - J.H.Russell - OPC

Locomotives Illustrated No. 111 - The British 0-4-2 - RAS Publishing

Locomotives Illustrated No. 124 - Adams LSWR 4-4-0s - RAS Publishing

Southern Steam Locomotive Survey - The Adams Classes - Bradford Barton

The LSWR at Nine Elms: Vol. 1. - Barry Curl - KRB Publications

VARIATIONS/MODIFICATIONS INCORPORATED INTO THE KIT

Footplate height. The footplate height varied according to the height of the locomotive footplate.

Front handrail stanchions. Similarly the front handrail stanchions matched the height of the locomotive cab stanchions.

Rivets. Over the years some of the flush rivets originally used on the frames were replaced with snap headed rivets.

Rear steps. The steps at the rear were removed from circa 1905.

Lamp brackets. The tenders were built with Adams socket style brackets. Drummond added extra socket brackets to his design. The SR standardised on a design with the socket in the lamp. Many tenders had the Adams and Drummond brackets adapted to accept the standard lamps but some of the later survivors were fitted with new brackets of standard design.

Toolboxes. When built some tenders carried a large wooden toolbox. These appear to have been removed by circa 1900.

Steam heating pipes. These were added from about 1902.

Safety chains. When built the engines were fitted with safety chains. These were gradually removed during Drummond's time.

Couplings. Most of the tenders appear in their early years to be running with a single long coupling link, although some carry two further links. Later the tenders were equipped with screw couplings together with a hook to carry the coupling when it was not required.

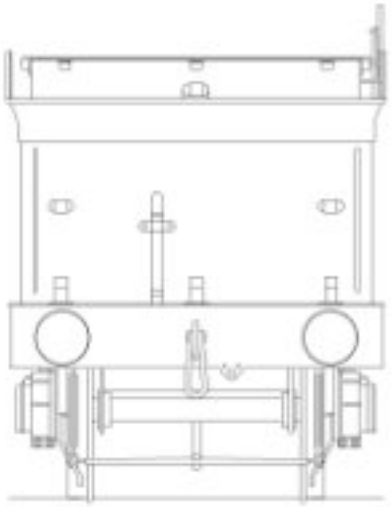
Coal Rails. Three coal rails were fitted from circa 1900.

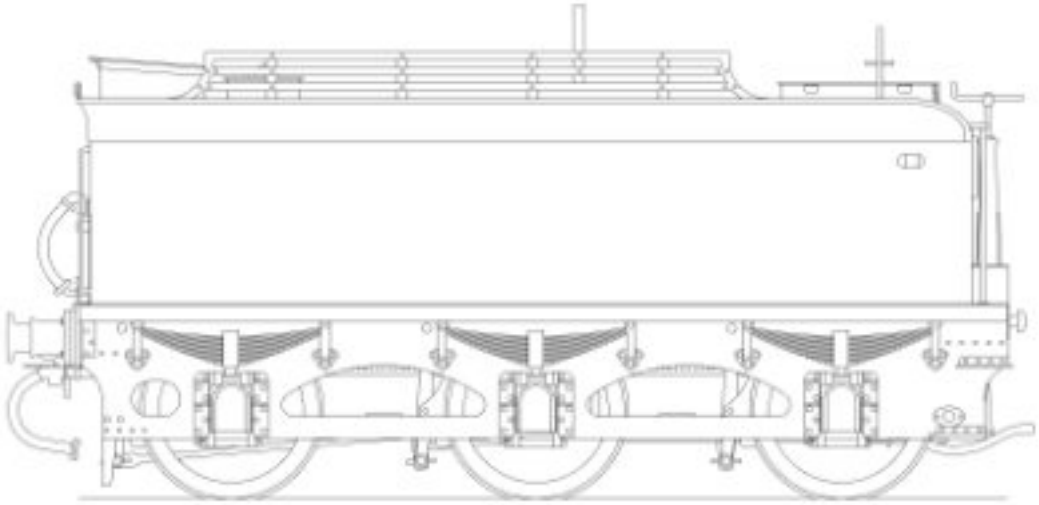
Fire iron brackets. These were added from circa 1900.

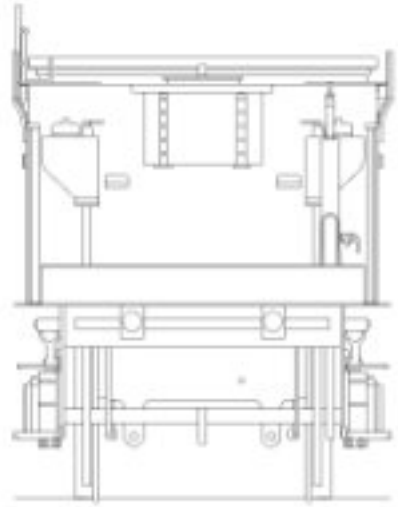
COMPONENTS NOT PROVIDED

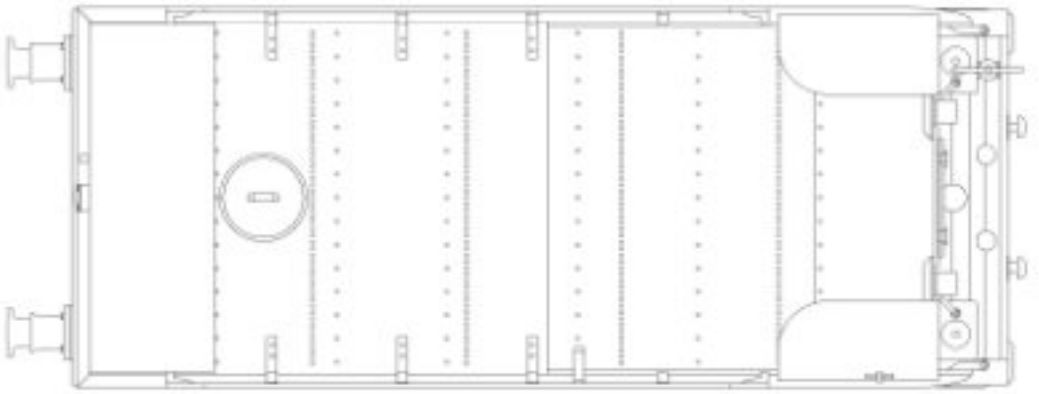
Wheels. 3’9” Diameter, 10 spokes, 5/32” axle (Slaters 7845SWMF).

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.









3300 Gallon tender depicted circa 1910 - coal rails, steam heating pipe, rear steps removed, extra Drummond lamp brackets, large wooden toolbox removed, safety chains removed, fire iron bracket and cruciform, 10” high footplate for X2, T3, T6 & X6 classes.

CHASSIS 1

Part Numbers and Etch Numbers. These are all displayed in the text as part number/etch number as in (B1/1). Parts on this page are on Etch 2 unless detailed.

Emboss the rivets on the lower edge of the frames. Open up the holes in the chassis frames (C1 & C2) as follows:

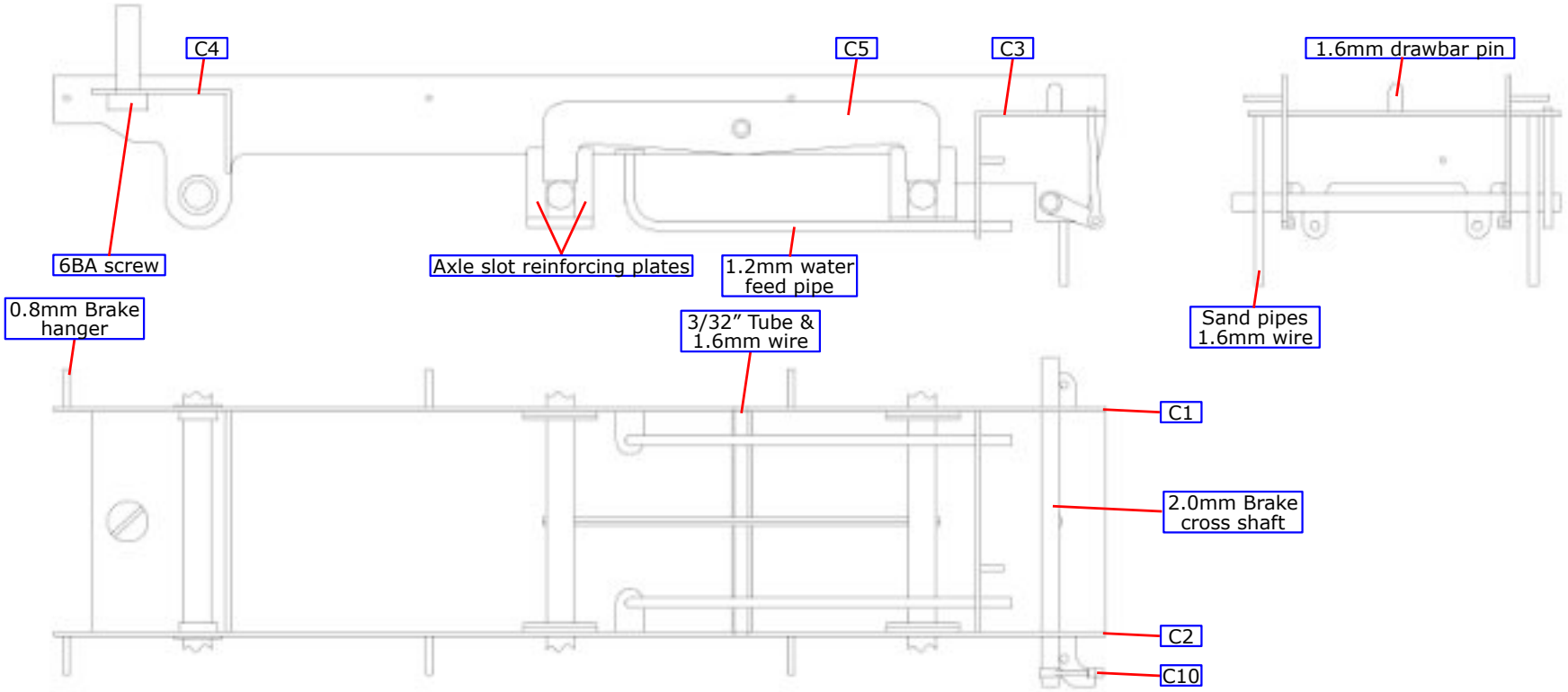
1.6 mm to fit the compensation beam pivots.
0.8 mm to fit the wire for the brake hanger pivots.
1.2 mm for the water feed pipes.
2 mm for the brake cross shaft.

Ease the holes for the 5/32" bearings to fit (4.9 mm) for the rear axle. Fold over the axle slot reinforcing plates, on the chassis frames, through 180° with the half etched line on the outside of the fold. Widen the slots so that the axles are a sliding fit. Fold over the water feed pipe brackets and reinforce the fold with a fillet of solder. Solder the rear bearings in place.

The front and rear stretchers are available in two widths (C3 & C4). Open up the holes in the front stretcher to accept the wire for the loco/tender flexible pipe connections, 1 mm for the sand pipes and 1.6 mm for the drawbar pin. Fold up the stretchers. Solder the stretchers in place in the chassis slots checking that the chassis is straight and square.

Soldering the two laminations of the compensation beam (C5/1) together. Cut a piece of 3/32" brass tubing to fit between the sides of the chassis frames and solder the beam in place centrally. Fit the beam using a piece of 1.6 mm brass wire as the pivot.

Fit the wheel sets and check that the chassis is level and works correctly. Wheel side control is limited by using the washers (C11/1 & 2). Solder the drawbar pin (1.6 mm wire) in place together with the water feed pipes (1.2 mm wire). There are two different length drawbars (C12/1 & 2).



BRAKES

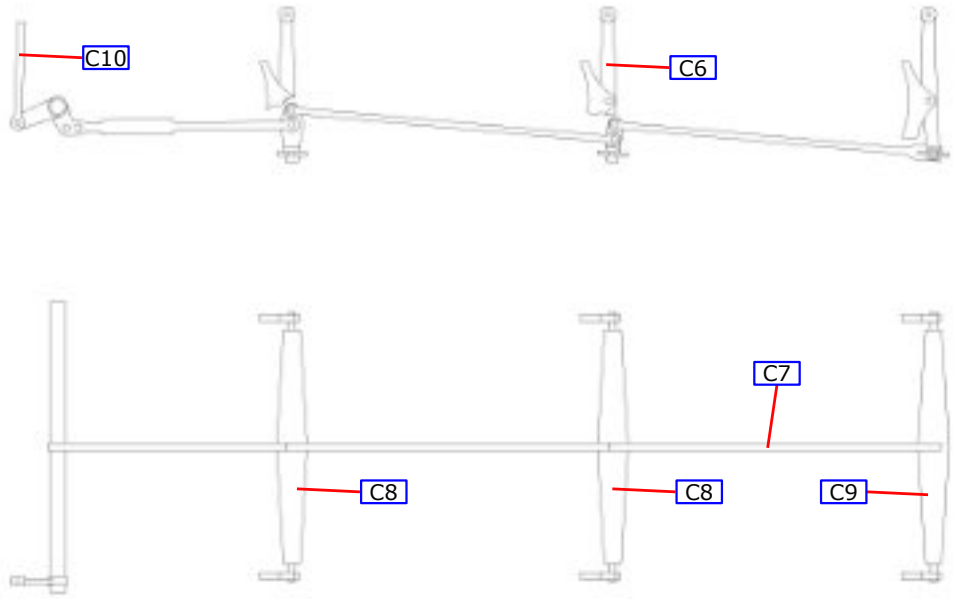
Parts on this page are on Etch 1 unless detailed.

Solder the brake hanger pivots in place from 0.8mm wire. Refit the wheel sets and retain by folding the strap across as shown on page 4.

Emboss the rivet detail and solder together the brake hanger and shoe laminations (C6/2). Open up the holes in the brake hanger and shoe laminations, the upper 0.8mm and the lower 1.2 mm. Attach the hangers to the pivot wires. Check the clearance between the brake shoes and the wheels making any necessary adjustments.

Make up the brake pull rods (C7) and cross shafts, front and middle (C8), rear (C9) as shown in Fig 3.

Solder the two hand brake linkage (C10/2) laminations together and clean up. Drill 2.0 mm and then solder onto the brake cross shaft. Solder the sand pipes (1.0 mm wire) in place.



FRAMES, BUFFER BEAMS & HANGING PLATES ASSEMBLY

Parts on page 6 are on Etch 1 unless detailed.

First emboss all the rivets on the outside frames (F2), guard irons (F3), brake shaft bearings (F4), front upper step (F7/2), rear upper step (F8/2), front lower step (F9/2), rear lower step (F10/2), rear buffer beam (F13/2), rear buffer beam brackets (F14) & the screw coupling hook (F18) as appropriate. Fold down the brackets along the edges of the frame base (F1) and solder the hanging plates (F6) onto the brackets.

The lower edge of the front buffer beam folds back to form a ledge which locates and retains the chassis at the front. Using the half etched lines as a guide reduce its' width so that it fits between the chassis frames. Now make the fold to create the ledge.

Solder the front buffer bases (F12) to the front buffer beam (F11) and add the front buffers (BR9), before soldering in place. If appropriate, drill out the holes in the rear buffer beam to accept the safety chain eyes (F20). Solder the rear buffer beam in place.

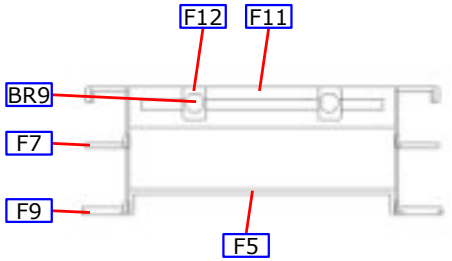
Fold up the required steps (F7, F8, F9 & F10) and solder in place on the frames together with brake shaft bearings (F4). Solder the guard irons (F3) in position on the inside of the frames and bend to shape.

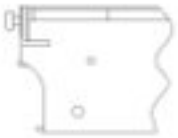
Attach the frames to the base (F1) checking that they are at right angles to the base then fold up the rear buffer beam brackets (F14) and solder in place.

If appropriate, fit the steam pipe (BR8).

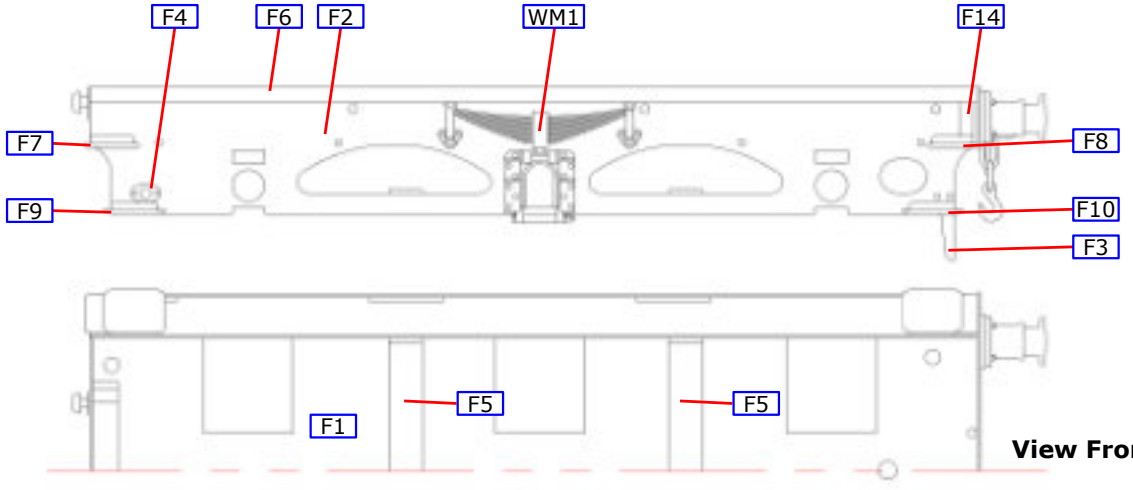
Emboss the locating rivets on the transverse stays (F5) and fold up along the half etched lines. It may be better to finally fit the stays after painting, which will allow the tank, outside frames and chassis assemblies to be painted separately. The stays can be threaded over the brake pull rods before the chassis is finally screwed into place. The dimples at the outer edges of the stays are designed to locate in the rivet holes on the inside of the outer frames.

Fit the axleboxes and spring castings (WM1).

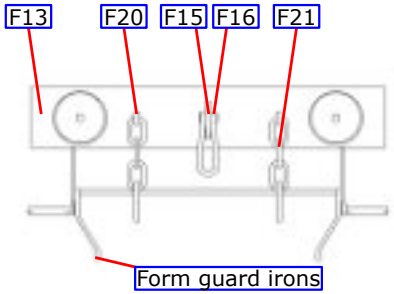




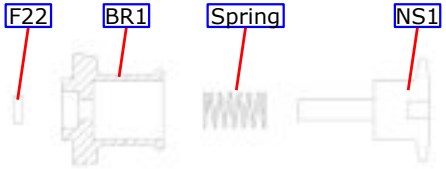
Scrap view between frame to show ledge



View From Below

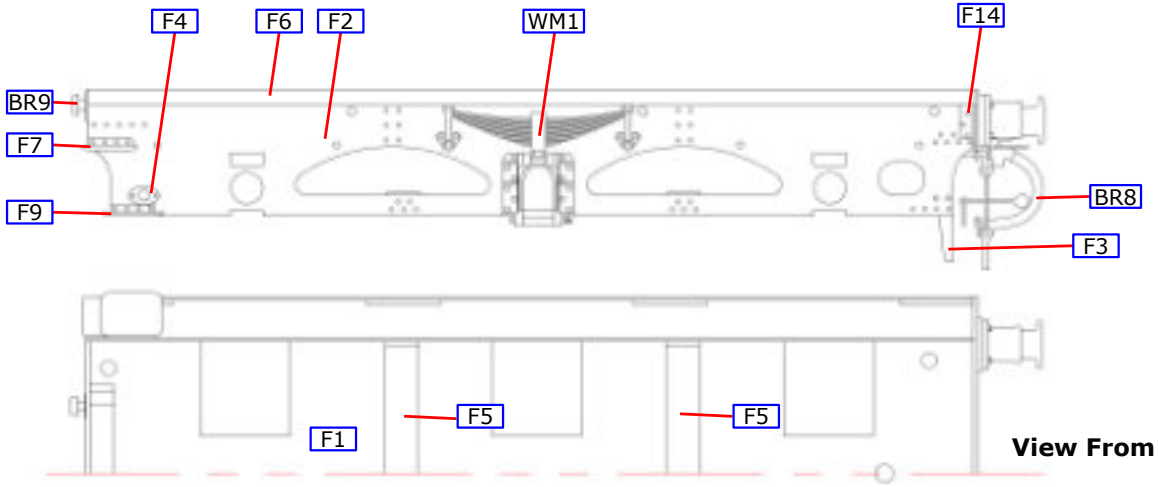


Early Condition - Rear Steps, Safety Chains, Single Link Coupling, No Visible Rivets.

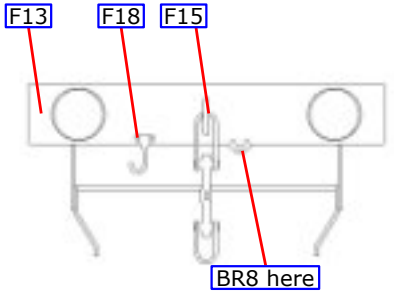


Buffer Assembly

Assemble the buffers as shown in Fig 6 and fix in place on the rear buffer beam.



View From Below



Late Condition - No Rear Steps, Screw Coupling, Snap Head Rivets, Steam Heating Pipe.

CONSTRUCTING THE TANK 1

Drawings for the two types of tank follow on the next two pages. Included are drawings of the variations of lamp irons (page 9).

Solder the four 8BA nuts over the four holes near the corners of the tank platform (T1/1). Check that the hanging plate assembly can now be screwed under the platform. Similarly solder the 6BA nut over the hole at the rear for the chassis fixing screw.

Emboss the rivets in the tank top (T5/2) before folding to shape. Build up the rear toolbox on the tank top using rear toolbox side (T26/2), rear toolbox front (T27/1), rear toolbox back (T28/1) and rear toolbox lid (T29/1).

Form and fit the rear handrails, from 0.6 mm wire, in the holes in the tank back (T4/1). Solder the appropriate Adams lamp brackets to the tank rear and tank sides (T2/2).

For 3' 9" front handrail stanchions fold over the small, upper brackets on the tank side (T2) and reinforce with a small fillet of solder. For 3' 6" stanchions break off the brackets and replace with the handrail stanchion brackets (T3/1) soldered in the small slots on the inside of the tank sides.

Open up the holes in the tank front (T6/1) to accept the sandboxes (WM2) and bucket cock (BR10). Fold up and attach the steps on the front plate (T7/1). Fit the coal door, either closed (T8/2) or open (T9/2).

Now test the fit of the tank plate work - base, sides, back, front plate and top. Locate the tabs along the lower edge of the sides, back and front into the slots into the platform; the back fits between the sides. If all is well, solder the tank together ensuring the base stays flat.

Open up the small holes in the front tool box sides (T10/2) to accept the 0.3 mm wire which retains the toolbox padlocks (T30/1). Fitting the padlocks can be left until painting is complete. Curve the front toolbox sides and solder in place in the slots in the tank top. Add the toolbox lids (T11/1 & 2).

Form the curve in the coping plates (T13/1 and T14/1) over a 3/8" rod or tube, as shown. There is a spare rear coping plate (T14), so we suggest you try forming the rear coping plate first. It is very important to;

(a) Always keep the rod absolutely clean - any debris on the surface will emboss a dent in the coping plate.

(b) Always keep the rod located against the lower edge of the beading. This ensures the curve in the coping plate will be in the correct position.

Cut a piece of stout card 26 mm by 26 mm. Hold the coping plates in position with the card and using jig (T15/2) to establish the correct height, tack solder the coping plates in position. The rear coping plate fits inside the side coping plates. When you are satisfied with the position and fit of the coping plates, complete the soldering and clean up with a glass fibre brush.

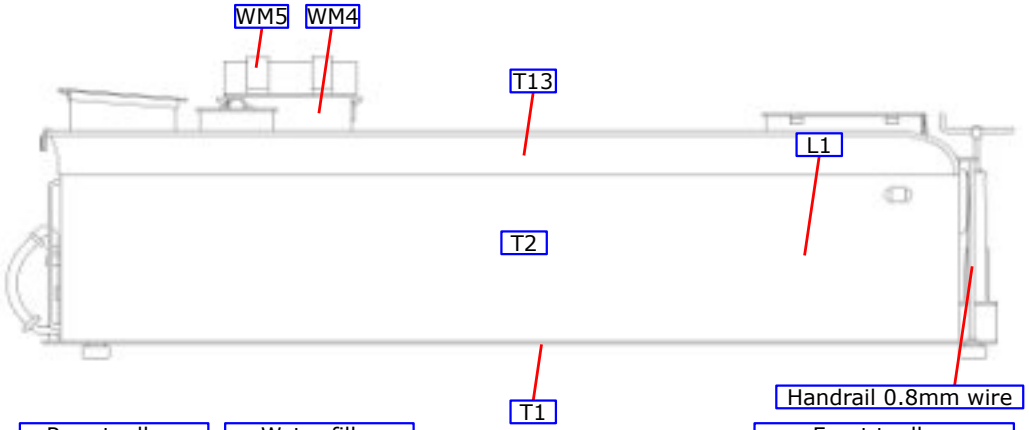
There are two heights of footplate support, 7” high (T17/2) or 10” high (T18/2). Solder the footplate supports in place on the platform. Open up the holes in the footplate (T19/1) to accept the sand pipes (1.0 mm wire) and the brake column (BR2). Solder the footplate in place and add the front handrail stanchions from 0.8mm wire.

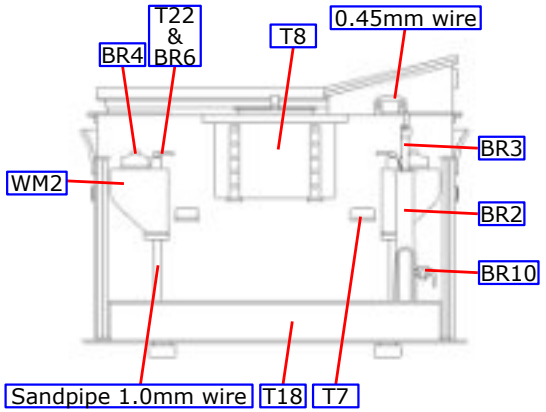
The water filler is constructed from a base (T23/2), a white metal cast body (WM3) and an etched lid (T24/2). Fit the water filler lid handle (T25/1) to the lid before attaching the lid to the body. There is also a wooden tool box built out of a cast base (WM4) and a cast lid (WM5). Fit the lamp irons that are correct for your prototype. These are listed below. On the tank front fit the brake handle (BR3), the sand box lids (BR4), the sanding lever spindles (BR6) and sanding levers (T22/2). If appropriate fit the vacuum pipe (BR7).

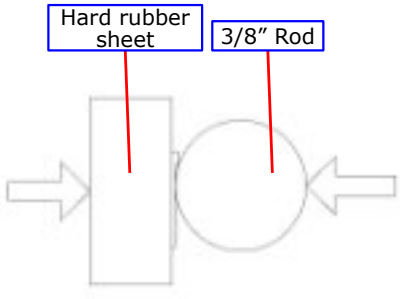
LAMP BRACKETS

L1	Adams lamp bracket, tank side, rear and top	1
L2	Adams tank top mounting bracket	1
L3	Drummond rear platform lamp bracket	1
L4	Drummond tank top lamp bracket mounting	1
L5	SR/LSWR lamp bracket, tank top and rear	1
L6	SR/LSWR lamp bracket, rear platform	1
L7	SR rear platform lamp bracket	1
L8	SR lamp bracket, tank rear	1
L9	SR lamp bracket, tank top	1

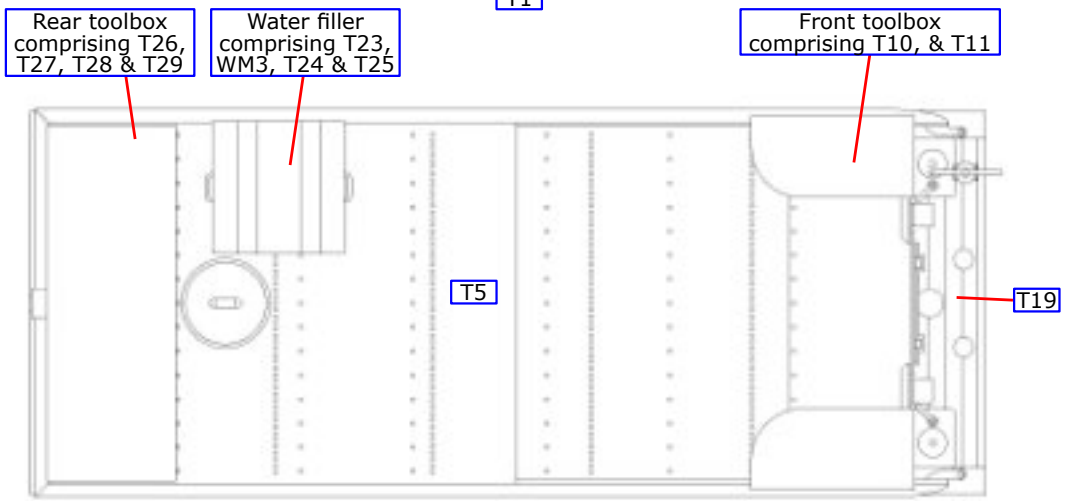
CONSTRUCTING THE TANK 2 - EARLY FORMS

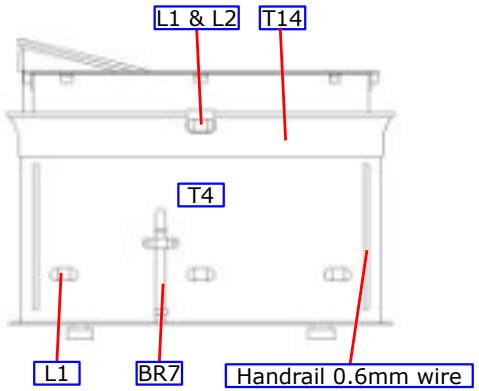




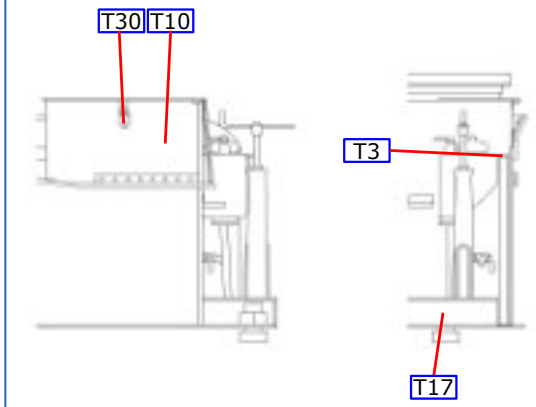


Forming Copping Plates



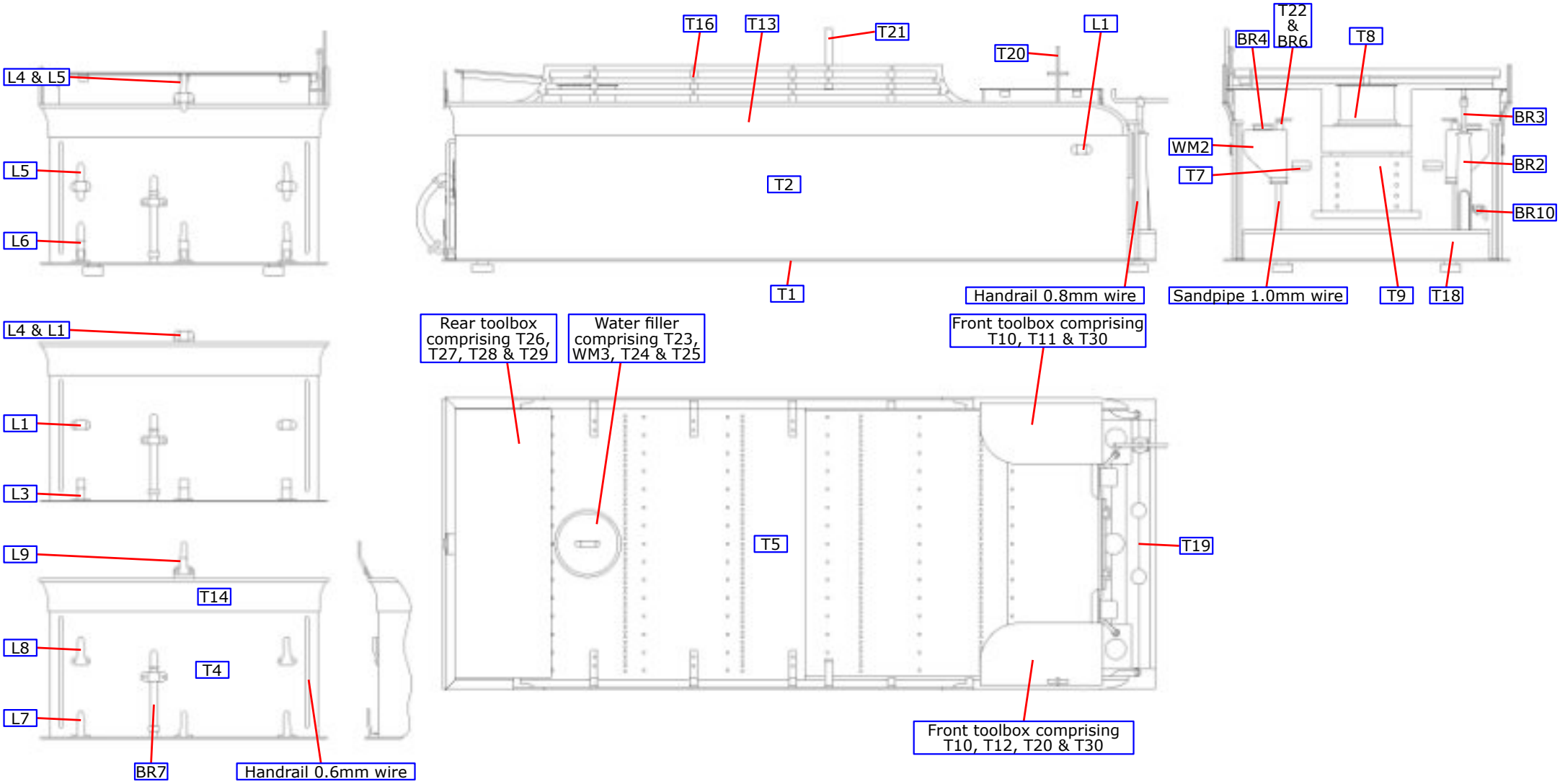


Original Condition. No Coal Rails, Adams Lamp Brackets and 10" Footplate



7" High Footplate, 3'6" Handrails

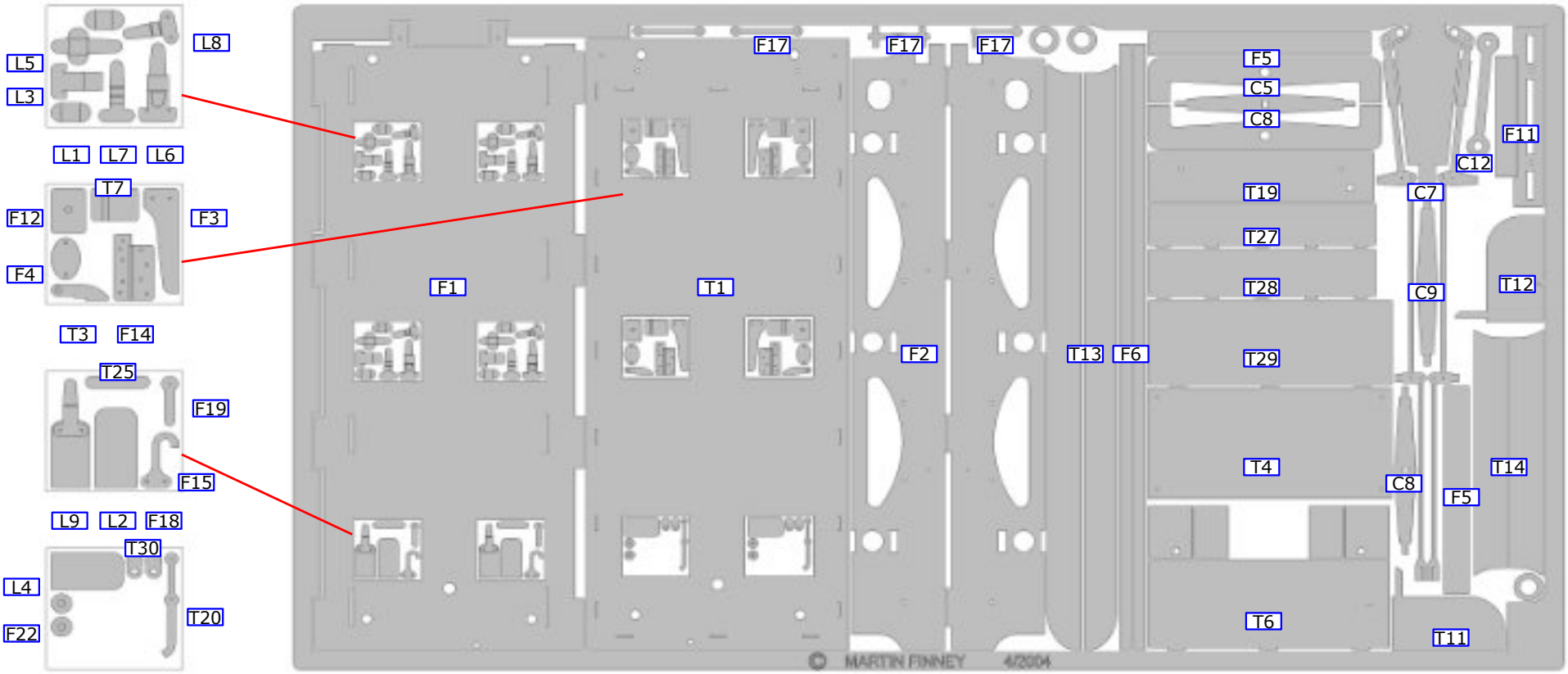
CONSTRUCTING THE TANK 3 - LATER FORMS



Late Condition. Coal Rails, Fire Iron Bracket and Cruciform. 10” Footplate

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ETCH SHEET 1

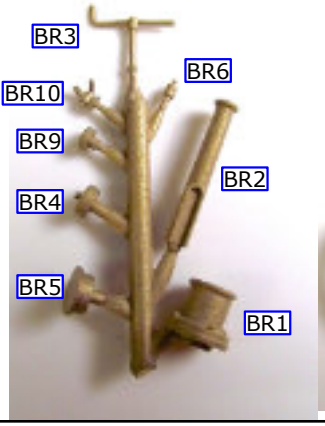


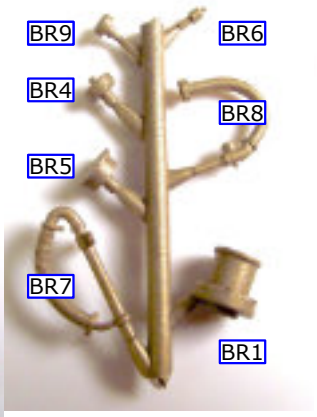
BRASS CASTINGS

BR1 Buffer housing (2)
BR2 Brake column (1)
BR3 Brake handle (1)
BR4 Sandbox lid, original (2)
BR5 Sandbox lid, later (2)
BR6 Sandbox lever spindle (2)
BR7 Vacuum pipe (1)
BR8 Steam heating pipe (1)
BR9 Front buffer (2)
BR10 Bucket cock (1)

NICKEL SILVER CASTINGS

NS1 Buffer head (2)



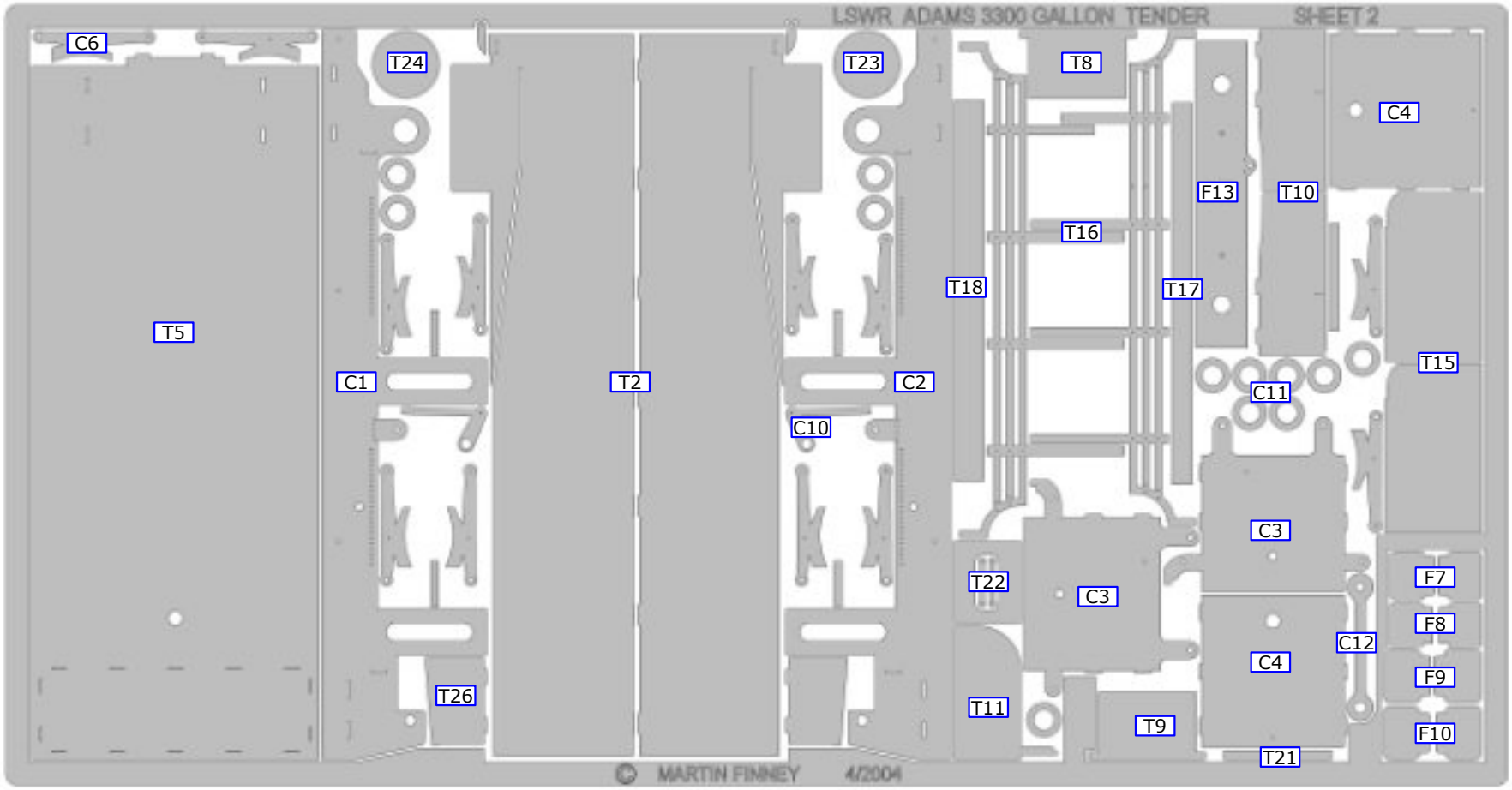


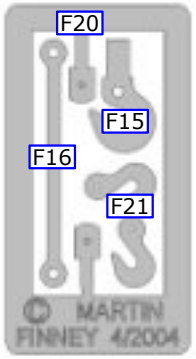


OTHER COMPONENTS

5/32" bearing (2)
6BA screw
6BA nut
8BA x 3/16" screw (4)
8BA nut (4)
3/32" OD brass tube
0.3 mm Brass wire
0.45 mm Brass wire
0.6 mm Brass wire
0.8 mm Brass wire
1.0 mm Brass wire
1.2 mm Brass wire
1.6 mm Brass wire
2.0 mm Brass wire
Buffer spring (2)

ETCH SHEET 2





WHITE METAL CASTINGS

WM1 Axlebox/spring (6)
WM2 Sandbox (2)
WM3 Water filler (1)
WM4 Wooden toolbox (1)
WM5 Wooden toolbox lid (1)



Chassis Parts

C1	Chassis frame, left	2
C2	Chassis frame, right	2
C3	Chassis spacer, front. Two widths	2
C4	Chassis spacer, rear. Two widths	2
C5	Compensation beam lamination (2)	1
C6	Brake shoe and hanger lamination (12)	2
C7	Brake pull rod lamination (2)	1
C8	Brake cross shaft, front & middle (2)	1
C9	Brake cross shaft, rear	1
C10	Hand brake linkage (2)	2
C11	Washer for wheel side control	1 & 2
C12	Draw bar, 2 lengths	1 & 2

Frame Parts

F1	Base	1
F2	Outside Frames	1
F3	Guard Iron (2)	1
F4	Brake shaft bearing (2)	1
F5	Lower transverse stay (2)	1
F6	Hanging plate (2)	1
F7	Upper step, front (2)	2
F8	Upper step, rear (2)	2
F9	Lower step, front (2)	2
F10	Lower step, rear (2)	2
F11	Front buffer beam	1
F12	Front buffer beam base plates (2)	1
F13	Rear buffer beam	2
F14	Rear buffer beam brackets (2)	1
F15	Screw coupling hook	2
F16	Screw coupling single link	2
F17	Screw coupling, four parts	1
F18	Screw coupling hook	1
F19	Steam pipe valve handle	1
F20	Safety chain eye	2
F22	Buffer washer (4)	1

Lamp Brackets

L1	Adams lamp bracket, tank side, rear and top	1
L2	Adams tank top mounting bracket	1
L3	Drummond rear platform lamp bracket	1
L4	Drummond tank top lamp bracket mounting	1
L5	SR/LSWR lamp bracket, tank top and rear	1
L6	SR/LSWR lamp bracket, rear platform	1
L7	SR rear platform lamp bracket	1
L8	SR lamp bracket, tank rear	1
L9	SR lamp bracket, tank top	1

Tank Parts

T1	Tank platform	1
T2	Tank side (2)	2
T3	Handrail stanchion bracket 3’6” high (2)	1
T4	Tank back	1
T5	Tank top	2
T6	Tank front	1
T7	Step on front plate(2)	1
T8	Coal door, closed	2
T9	Coal door, open	2
T10	Front toolbox side (2)	2
T11	Front toolbox lid (2)	1 & 2
T12	Front toolbox lid, cruciform slot	1
T13	Coping plate side (2)	1
T14	Coping plate back (2)	1
T15	Jig for aligning coping plate (2)	2
T16	Coal rail (2)	2
T17	Footplate support 7” high	2
T18	Footplate support 10” high	2
T19	Footplate	1
T20	Fire iron cruciform	1
T21	Fire Iron bracket	2
T22	Sanding lever (2)	2
T23	Water filler base	2
T24	Water filler lid	2
T25	Water filler handle	1
T26	Rear toolbox side (2)	2
T27	Rear toolbox front	1
T28	Rear toolbox back	1
T29	Rear toolbox lid	1
T30	Padlock (2)	1