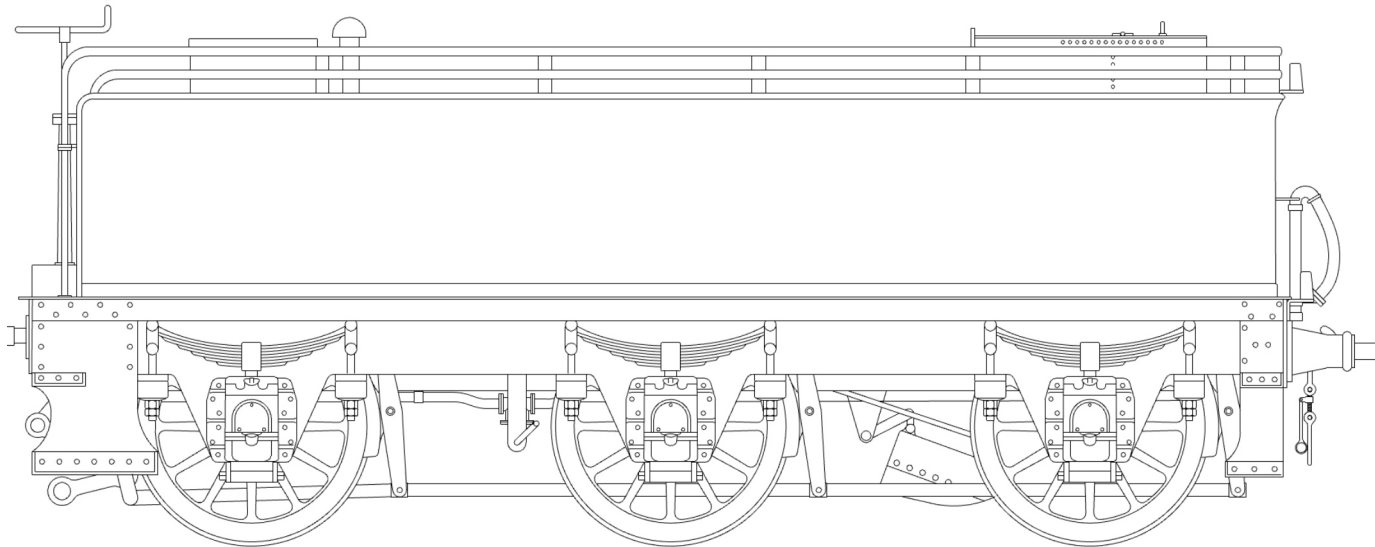


GWR 3000G TENDER



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

In 1884 a single new 3000g tender was built. The most noticeable new feature was the springs which were fitted below the footplate. Between 1889 and 1906 the GWR built 396 more 3000G tenders, all to basically the same design. They had a coal capacity of 5 tons, a wheelbase of 15 feet, and weighed 36T 15cwt full and 17T 9cwt empty.

They were built under 27 lots as follows:

Lot	Number	Dates	Lot	Number	Dates
A5	852	4/84	A45	1436-1455	4/00 - 2/01
A10	904-923	4/89 - 2/90	A47	1462-1467	3/01 - 4/01
A11	924-933	2/90 - 6/90	A48	1468-1487	5/01 - 8/01
A12	934-953	9/90 - 11/91	A49	1488-1507	8/01 - 1/02
A14	954-973	10/91 - 4/92	A50	1508	3/01
A15	974-1003	8/92 - 1/93	A52	1519-1538	2/02 - 9/02
A17	1004-1023	8/92 - 1/93	A54	1540-1559	1/03 - 6/03
A18	1024-1043	1/93 - 6/93	A57	1562-1571	7/03 - 9/03
A19	1044-1047	4/94 - 5/94	A61	1583-1602	3/04 - 10/04
A20	1048-1057	6/94 - 9/94	A62	1603-1611	4/05 - 7/05
A21	1058-1077	9/94 - 4/95	A63	1615-1621	7/05 - 1/06
A31	1219-1238	12/97 - 9/98	A64	1622-1631	11/05 - 2/06
A32	1239-1258	4/97 - 1/99	A71	1685-1694	10/06 - 12/06
A36	1309-1314	4/99-9/99			

These tenders were used with the singles, 2-4-0s, all the classes of double framed 4-4-0s, 2301 class, Aberdares, County 4-4-0s, 28XX and 2251 class. The first withdrawals took place in 1927 and the only survivor is No. 1506 with engine No. 3440 "City of Truro".

Drwg 14262. Produced in March 1898, this drawing looks like a tidying up exercise to Lots A10, A11. A12, A15, A17, A18 & A36 when water scoops were fitted. Original features will be the straight front step, strip horn ties, the steam brake and vacuum pipe. The modifications will be the water scoop & 'Coffin' casing and the tank vents.

Drwg 13550. Produced in March 1897, this looks to be the same tidying up exercise applied to Lots A14, A19, A20, A31, A32. Original features will be the curved front step, rod horn ties, steam brake & vacuum pipe.

Drwg 15821 (11/99)

Drwg 21093 (9/02)

The first two of these drawings are in Great Western Engines (Vol. 1) by J.H.Russell which also contains many useful photographs. There were many modifications made to the basic design during the 22 years over which the tenders were in production and many more subsequent changes as they were rebuilt.

Initial Configuration. The first tenders had narrow footplates, coal rails and no water scoop. The water filler was a cylindrical drum and the sandboxes were mounted on the footplate in front of the tanks. There were identical toolboxes on each side of the coal space. Some were fitted with an overflow pipe and fountain for use with engines equipped with crosshead driven feed pumps. The tank sides had a drop in the flare at the front.

Footplate. Narrow footplates were fitted from the start. Later, believed to be Lot 45, the front of the footplate was widened with a front step added at the front. Lot 45 tenders were built to go with the new 4-4-0s and as a result the footplate was raised. The fitting of a raised footplate triggered the removal of the two sandboxes at the front of the tank and the fitting of a single sandbox in the coal space. The height of the footplate matched the footplate of the locomotive.

Tank Sides. Some of the tenders continued the flare to the front of the tank side sheets. This is generally associated with coal rails with front extensions that form a handrail. These tenders were new build from Lot 45. Other tenders had a drop in the flare at the front. A photograph of the selected tender is essential.

Front Steps. Early lots had a curved hollow in the front edge of the step back.

Hornguide Ties. Lots A10, A11. A12, A15, A17, A18 & A36 were built with rod ties. Lots A14, A19, A20, A31, A32 were built with strip ties and after Lot 45 strip ties were continued.

Coal Rails. From Lot A10 coal rails were fitted. With Lot A54 coal plates replaced the rails. In due course all surviving tenders were rebuilt with coal plates at shopping.

Handrails. There were variations in handrail arrangements to match different locomotives requirements.

Water Fillers. The first 3000G tenders were fitted with circular section water fillers. The fitting of water scoops brought about the fitting of the 'Coffin' casing which combined the filler and the scoop dome. When coal plates were fitted a single large dome and circular section water filler were fitted. The dome intruded into the division plate and as a result the division plate was cut to fit over the dome.

Vacuum Brakes. Vacuum brakes were fitted to the last four lots (A62, A63, A64 and A71). The vacuum brake was fitted to 3000G tenders coupled to 28XX and 29XX locomotives. When these locomotives received 3500G tenders the 3000G tenders cascaded to other classes, such as the Bird series Bulldogs. When the Bulldogs went these tenders were coupled to Collett 2251 locos. The Churchward transverse vacuum tanks could be seen on some 1936 Collett chassis which were fitted to old Dean style 3000G bodies.

Springs. All 3000G tenders were fitted with light springs but heavier springs were fitted when shipped during the late 1920s.

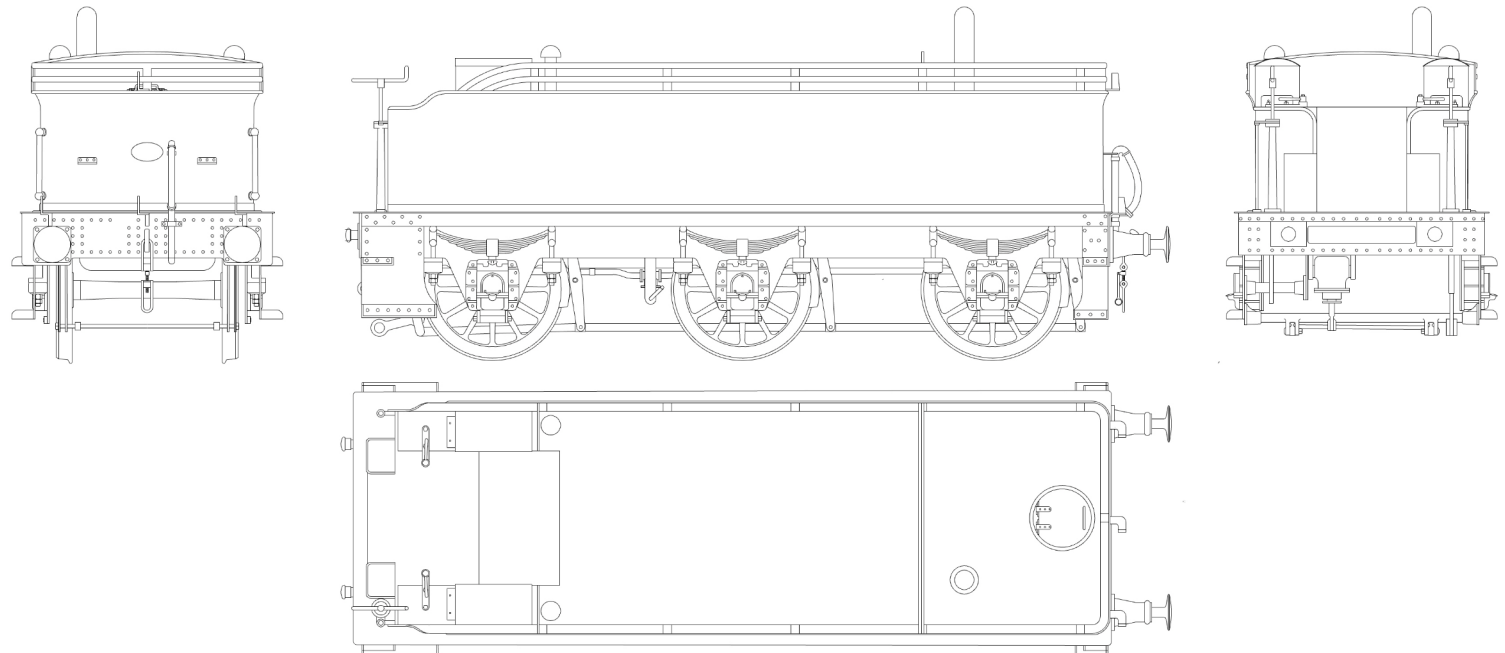
Water Scoops. Water scoops began to be fitted from the mid-1890s. Initially the D shaped 'coffin' casing was fitted on the top of the tank. This contained the dome and a hatch for water filling at the rear. Later a large dome was fitted with a separate drum water filler at the back of the tank.

COMPONENTS NOT PROVIDED

Wheel 4' 1½" diameter, 12 spoke, axle with 2 mm diameter extensions (3) Slater's Ref 7849MF

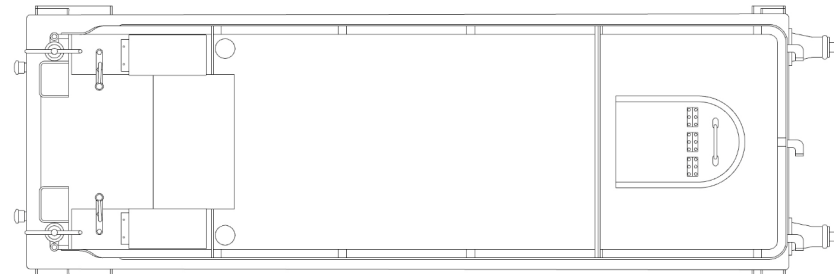
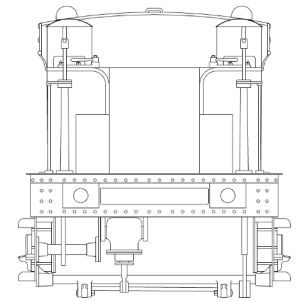
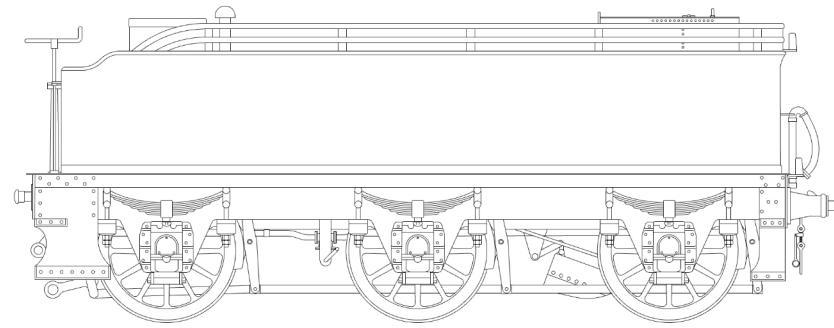
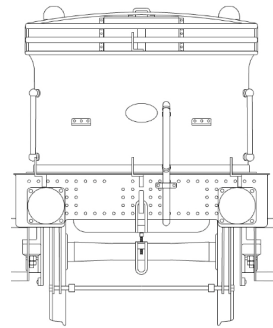
CONFIGURATION 1

- Coal rails
- No water scoop
- Narrow footplate
- Drum water filler
- Original sandboxes on footplate in front of tank,
- Identical toolboxes,
- Overflow fountain,
- Straight front step,
- Rod hornguide ties.



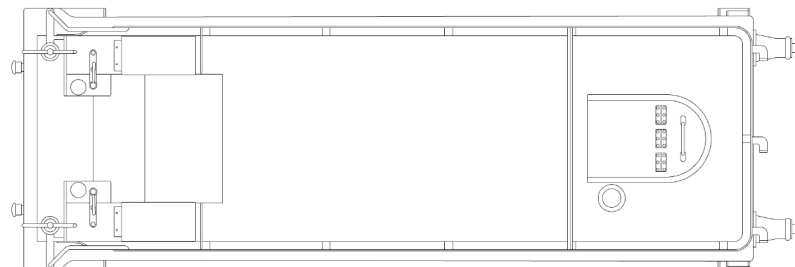
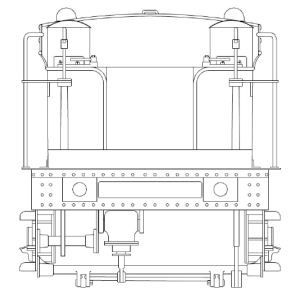
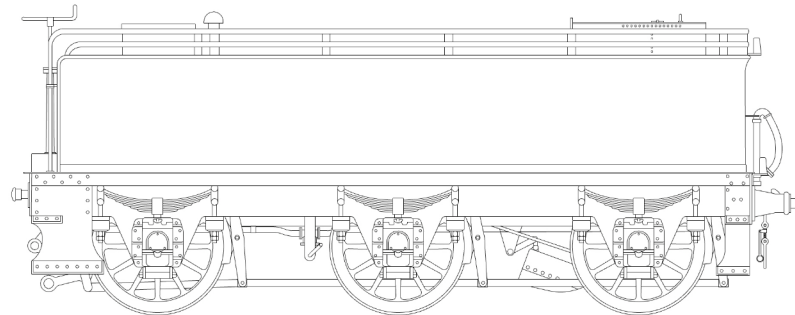
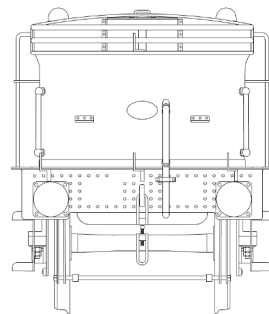
CONFIGURATION 2

- Coal rails
- Narrow footplate
- Water scoop
- Combined water filler/scoop fountain
- Tank vents
- Original sandboxes on footplate in front of tank
- Identical toolboxes
- Curved front step
- Strip hornguide ties



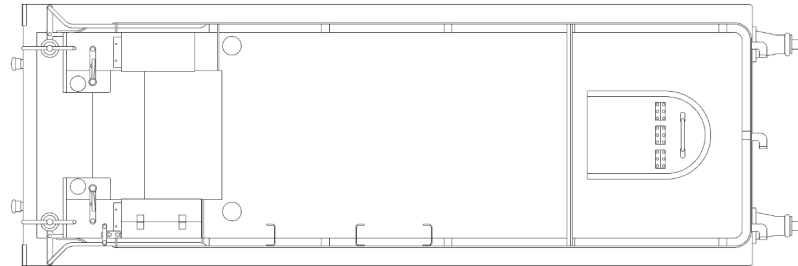
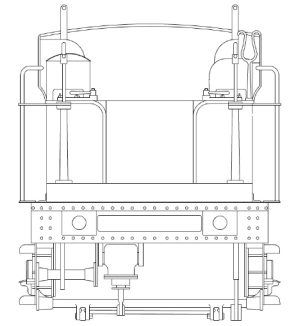
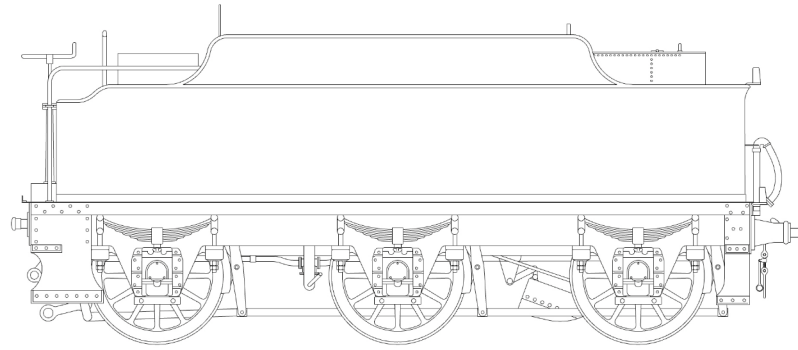
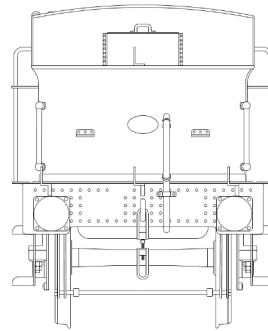
CONFIGURATION 3

- Sides with no drop at front
- Coal rails with front extension
- Widened footplate
- Raised footplate
- Repositioned sandboxes
- Combined water filler & scoop fountain
- Tank vents
- Identical toolboxes
- Curved front step
- Rod hornguide ties



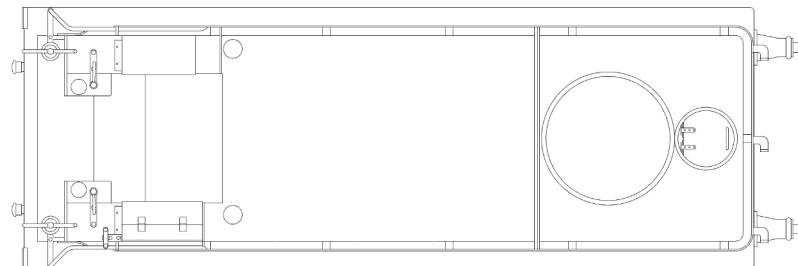
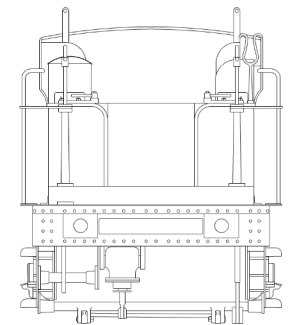
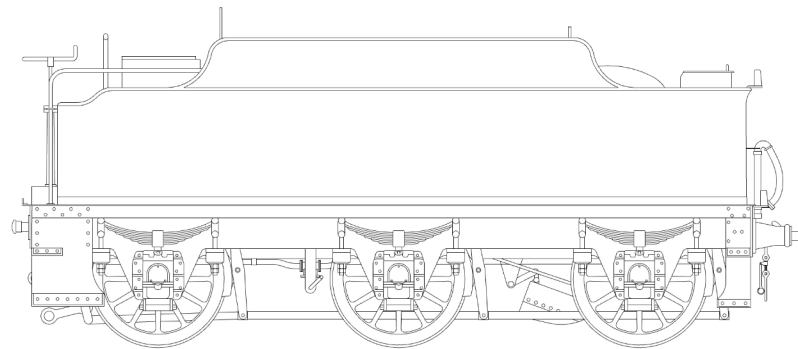
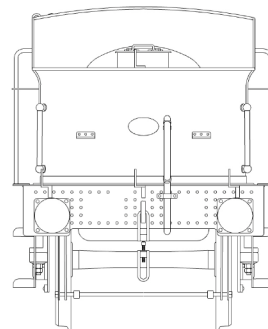
CONFIGURATION 4

- Coal plates
- Wide footplate
- Raised footplate
- Repositioned sandboxes
- Water scoop
- Combined water filler & scoop fountain
- Tank vents
- Identical toolboxes
- Curved front step
- Plate hornguide ties
- Extended handrails
- Fire Iron Tray & Bracket



CONFIGURATION 5

- Coal plates
- Wide footplate
- Raised footplate
- Repositioned sandboxes
- Water Dome
- Tank vents
- Drum water filler
- Different toolboxes
- Straight front step
- Rod hornguide ties
- Extended handrails
- Fire Iron Tray & Bracket



CONSTRUCTING THE CHASSIS

Remove and store the parts not required from the frames. Emboss the rivets on the side frames, left and right (F1 & F2) then fold the side frames at 90° along the half etched lines. Check that the bearings fit in appropriate slots, carefully opening the slots with a file if necessary. Solder the rear bearings in place. Select either the rod type hornguide ties or plate type; construct the appropriate hornguide ties as shown below using 1.2mm rod if required. Fold up the brackets for the front brake cross shaft, strengthening the folds with a fillet of solder.

Emboss the rivets on the well tank (F3), fold up along the half etched lines and solder the seams. Fold down the brackets for the vacuum pipe and the rear scoop cross shaft.

Construct the compensation beam by soldering the two halves (F5) together. Cut the piece of 5/32" brass tubing to fit between the sides of the well tank. Solder the compensation beam centrally on the tube. Fit the beam inside the well tank using the piece of 1/8" brass wire as the pivot.

No.	Description	Sheet
F1	Left frame	1
F2	Right frame	1
F3	Well tank	1
F4	Front plate	3
F5	Compensation beam (2)	1
F22	Side control washer	1

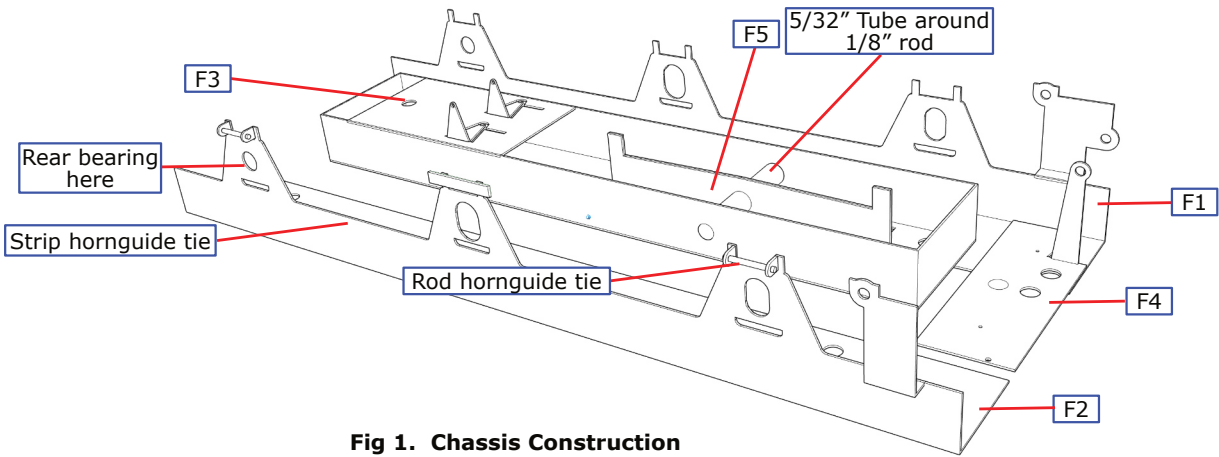


Fig 1. Chassis Construction

Assemble the side frames and well tank bolting them together with 6BA bolts & nuts through the holes at the front and back. Check that the assembly is square and that the top surface of the assembly is flat. Remove one of the front bolts, pivot the frames apart, fit the wheel sets and refit the bolt. Now check that the compensation works properly and that the chassis is level. The height can be adjusted by filing the ends of the compensation beam or by adding a further extra 'foot' and the side play can be limited by using the side play washers (F22).

When you are satisfied with the mechanical performance of the chassis carefully solder the side frames to the well tank, avoiding soldering the bolts, then remove the bolts and complete the soldering. Fold up the scoop cross shaft bracket on the front plate (F4) before soldering the plate in position on the side frames.

WATER SCOOP

If appropriate, bend the water scoop front plate (F17) through approximately 10° along the half etched line and then attach the water scoop front plate to the front of the water scoop casting. Now attach the water scoop to the well tank. Add the stays from 0.8mm wire, passing them through the holes in the front plate and the slots in the well tank bottom and then attach them to the scoop at the rear. Add the scoop rear cross shaft from 1.2mm wire and fit the scoop rear cross shaft to scoop lever (F16). Secure the shaft in place.

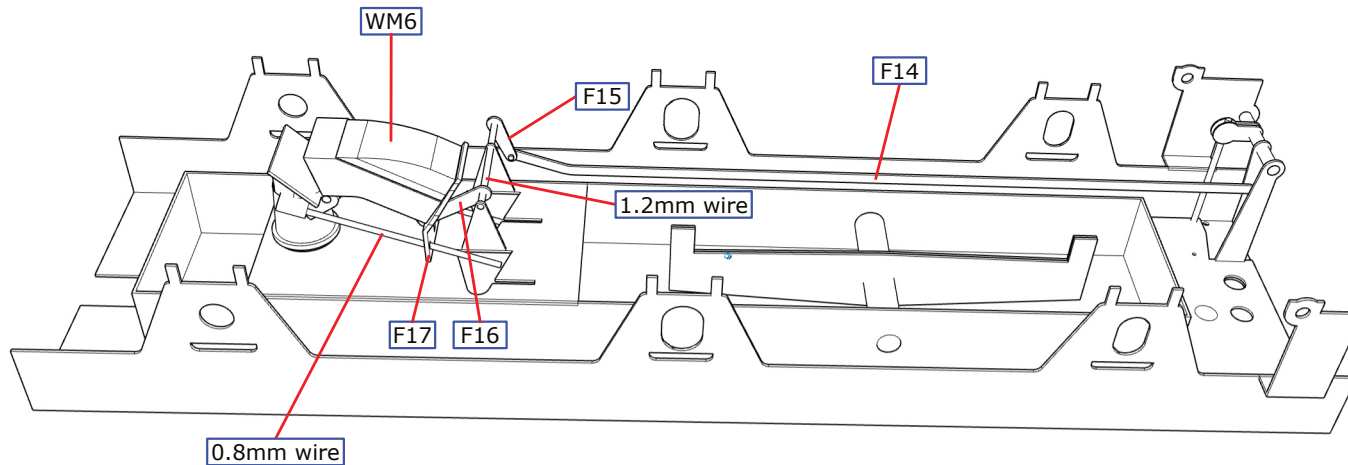


Fig 2. Scoop Mechanism

No.	Description	Sheet
F12	Scoop standard to front cross shaft lever (2)	2
F13	Front cross shaft to actuating rod lever	2
F14	Water scoop actuating rod	2
F15	Actuating rod to rear cross shaft lever	2
F16	Rear cross shaft to scoop lever	2
F17	Water scoop front plate	3
F22	Side control washer	1

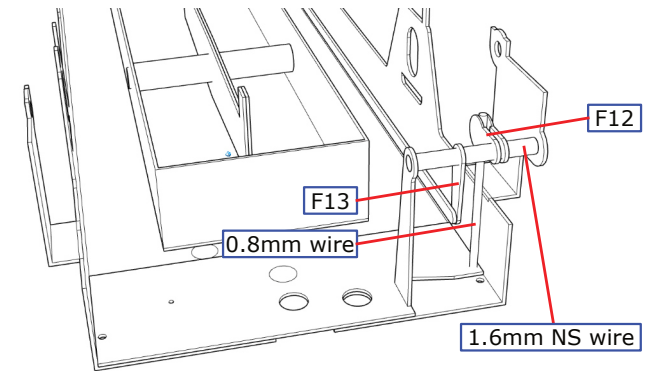


Fig 3. Scoop Actuators

Scoop Operating Mechanism. Refer to Fig 2. The front cross shaft is a 14mm piece of 1.6mm nickel silver wire. Assemble the scoop standard to front cross shaft levers (F12) and the front cross shaft to actuating rod lever (F13) onto the shaft and solder the shaft in place. The bottom of the standard is a piece of 0.8mm wire that should be soldered into the hole in the chassis. Solder the standard to cross shaft levers to the wire and shaft. Solder the actuating rod lever to the cross shaft as shown in Fig 2.

Fix the rear cross shaft to scoop lever (F16) to the bracket on the scoop. Make 0.8mm pin joints between the scoop actuating rod (F14) and the scoop actuating rod lever on the front shaft (F13) and the scoop rear cross shaft lever (F15). When everything fits as shown, solder all in place.

Before proceeding any further with the chassis the basic body shell must be constructed.

BRAKES & PIPES

Brake Operating Mechanism. Refer to Fig 2. The brake cross shaft is made from 1.6mm wire and should be cut to be just longer than the width over the frames. Thread the two sets of brake pull rod lever laminations (F9), the brake cylinder to cross shaft lever laminations (F10) and the brake standard to cross shaft lever laminations (F11) onto the shaft and solder the shaft in place. The bottom of the standard is a piece of 0.8mm wire that should be soldered into the hole in the chassis. Solder the brake standard to cross shaft levers to the wire and to the shaft. Place the steam brake cylinder (WM10) in place. Solder the two brake cylinder to cross shaft levers either side of the piston rod and then solder them to the shaft. Don't solder the pull rod levers (F9) to the cross shaft yet.

Solder the brake shoes (F6) together, back to back, (or use the castings WM9) and solder them between the brake hangers (F7) using 0.8mm wire as pins. Solder the hangers in place suspending them from pieces of 0.8mm wire. Check the clearance between the brake shoes and the wheels making any necessary adjustments. Using 0.8mm wire as cross shafts, fit the pull rods (F8) and attach them to the brake pull rod levers using pieces of 0.8mm wire as pins.

No.	Description	Sheet
F6	Brake hangers (12)	1, 2 & 3
F7	Brake shoes (12)	3
F8	Brake pull rods (2)	1
F9	Brake cross shaft to pull rod (4)	2
F10	Brake cylinder to cross shaft lever (2)	2
F11	Brake standard to cross shaft lever (2)	2
F18	Steam pipe drip trap (3 pieces)	3
F19	Steam pipe drip trap lever	2
F20	Vacuum pipe drip trap (3 pieces)	1
F21	Vacuum pipe rear bracket	1

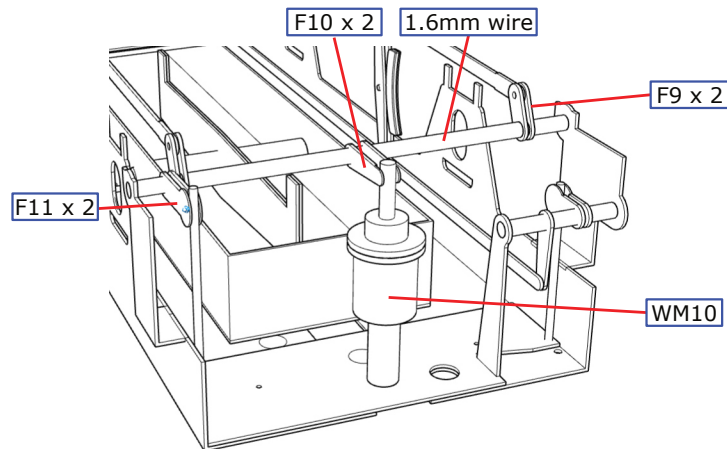


Fig 4. Scoop & Brake Actuators

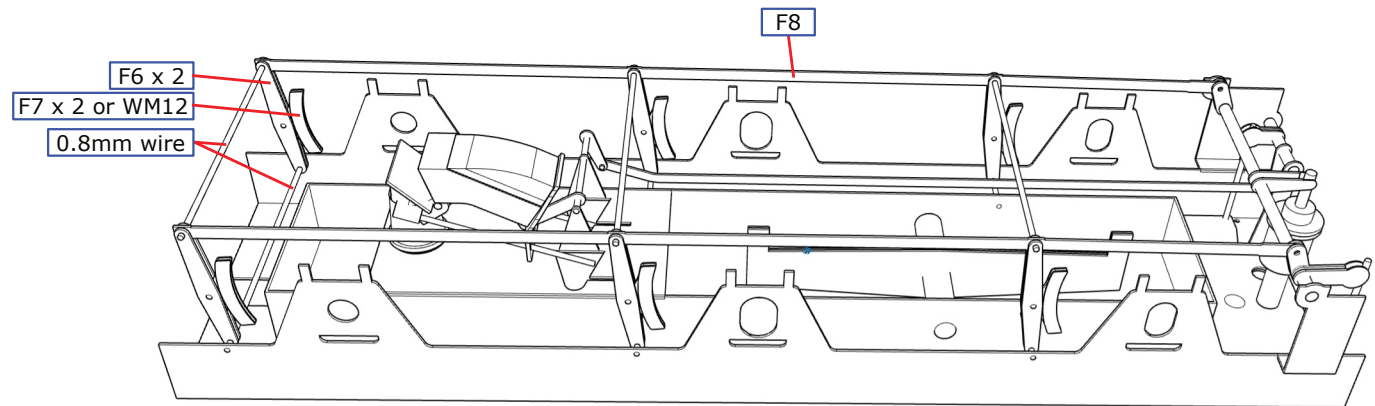


Fig 5. Brake Rigging

Form the sand pipes from 1.2mm wire and attach them through the hole in the front plate. Attach the axlebox castings (WM1).

Solder together the 3 pieces (F18) to make the vacuum pipe drip trap and drill out the small holes on either side to fit 1.2mm wire. Construct the vacuum pipe as shown in Fig 6, soldering the rear bracket (F21) inside the well tank and bending the pipe to align with the vacuum pipe on the rear buffer beam. Similarly make the steam heating pipe, as shown in Fig 6, soldering it to the bottom of the well tank on the opposite side to the vacuum pipe.

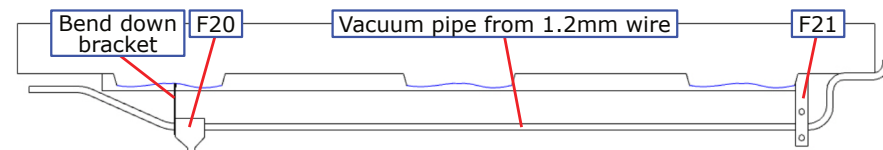
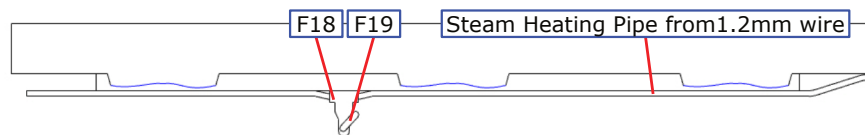


Fig 6. Steam Heat & Vacuum Pipes

CONSTRUCTING THE NARROW FOOTPLATE BODY 1

If required, remove the front side extensions from the narrow footplate (U1) as shown below by the dotted lines. Emboss the rivets on the brake standard and water pickup standard bases. Now fold through 90° the coal space rear and fold through 90° the small tabs on each side. Solder a 6BA nut above the body fixing holes at the front and back of the footplate.

If your tender is to have coal rails, remove the coal plate brackets from the tank former (U3). Fold up the tank former taking care that the coal plate brackets, if not removed, are not bent. Solder the front of the tanks around the outside of the former top.

Solder the tank top overlay (U4) to the tank former and then file it flush with the sides of the former. Determine from the GAs which of the holes for the water filler, water dome, overflow pipe fountain, vents, water level gauge and fire iron bracket are required and then drill out the holes from inside the tank using the holes in the tank former as a guide.

Fit the tank former to the footplate, fitting the tabs through the appropriate slots. Fold over the tabs outwards at 90°. Check that the assembly is square and that the footplate is flat before soldering it together.

No.	Description	Sheet
U1	Narrow footplate	2
U3	Tank former	3
U4	Tank top overlay	3
U5	Coal hole overlay	3
U6	Sides and back overlay	1
U7	Right side modification overlay	3
U8	Left side modification overlay	3

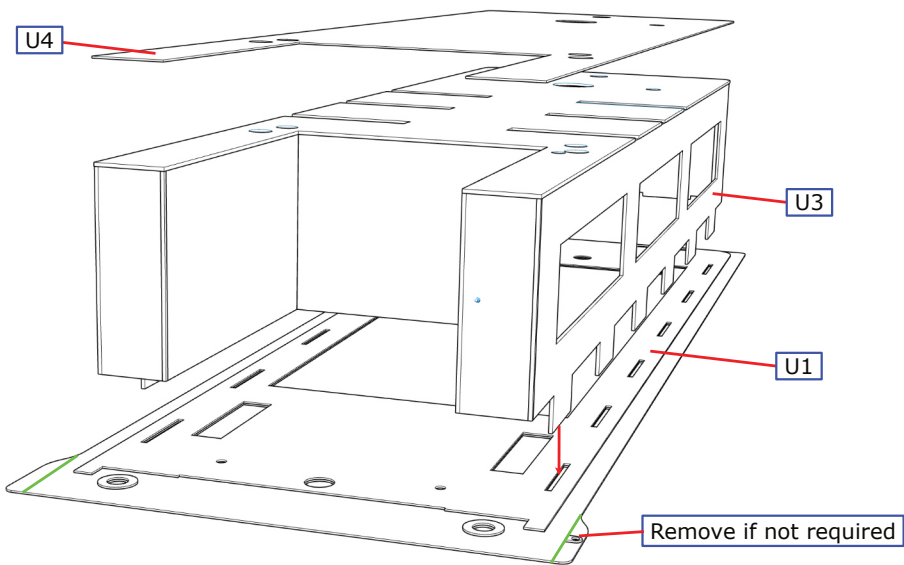


Fig 7. Footplate and Tank Construction

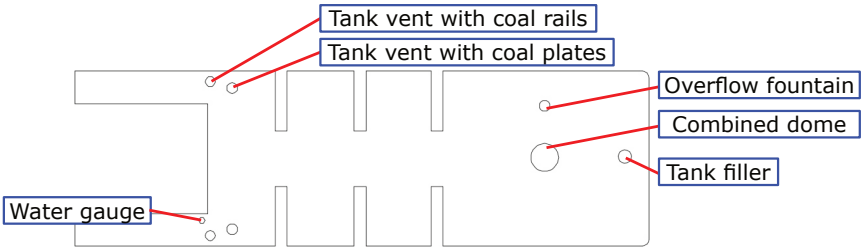


Fig 8. Tank top holes from below

Fold the coal hole overlay (U5) along the slots and solder in place. If you are building a pre Lot 45 tender, modify the sides and back overlay (U6) as shown in Fig 9 using the modification overlays (U7 & U8).

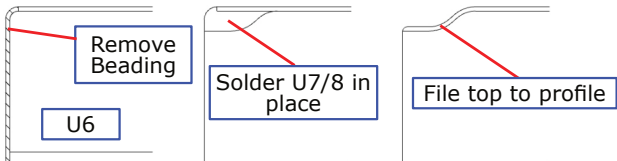


Fig 9. Pre Lot A38 Tender Modification

CONSTRUCTING THE WIDE FOOTPLATE BODY

Fold up the front step treads on the wide footplate (U2). Emboss the rivets on the brake standard and water pickup standard bases. Now fold through 90° the coal space rear and fold through 90° the small tabs on each side. Solder a 6BA nut above the body fixing holes at the front and back of the footplate.

If the tender is to have coal rails, remove the coal plate brackets from the tank former (U3). Fold up the tank former taking care that the coal plate brackets, if not removed, are not bent. Solder the front of the tanks around the outside of the former top.

Solder the tank top overlay (U4) to the tank former and then file it flush with the sides of the former. Determine from the GAs which of the holes for the water filler, water dome, overflow pipe fountain, vents, water level gauge and fire iron bracket are required and then drill out the holes from inside the tank using the holes in the tank former as a guide. Fit the tank former to the footplate, fitting the tabs through the appropriate slots. Fold the tabs outwards to 90°. Check that the assembly is square and that the footplate is flat before soldering it together.

Fold the coal hole overlay (U5) along the slots and solder in place.

No.	Description	Sheet
U2	Wide footplate	2
U3	Tank former	3
U4	Tank top overlay	3
U5	Coal hole overlay	3
U6	Sides and back overlay	1
U7	Right modification overlay for sides	3
U8	Left modification overlay for sides	3

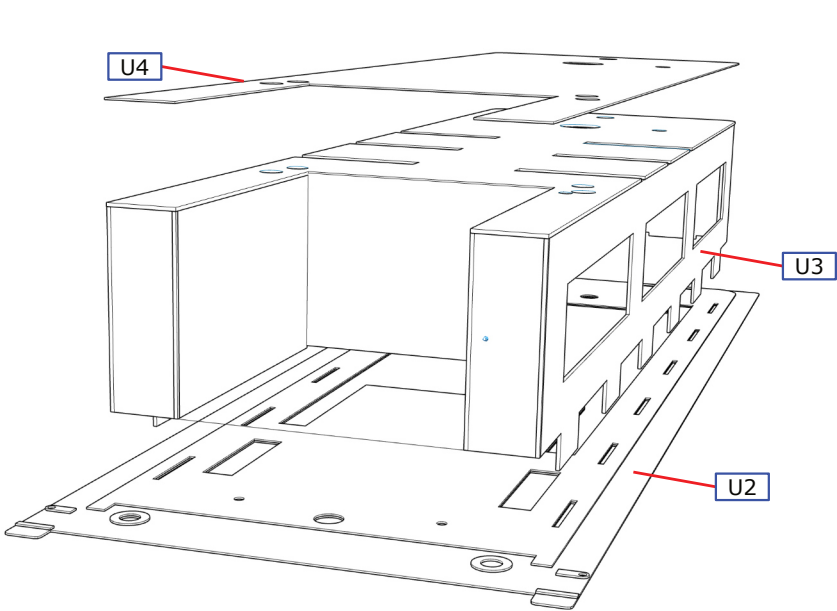


Fig 10. Wide Footplate and Tank Construction

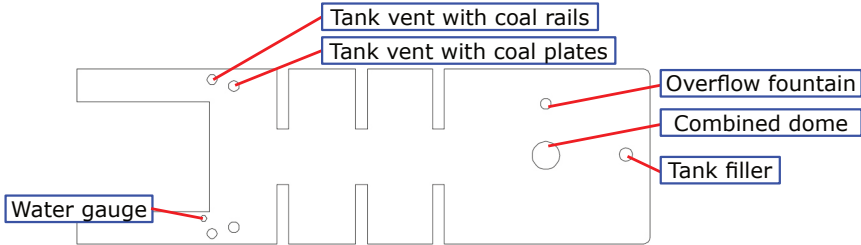


Fig 11. Tank top holes from below

STEPS & SIDE SHEETS

Emboss the two rivets on the coupling hook base on the rear buffer beam overlay (U11) and then solder it to the rear buffer beam (U12). Solder the rear bufferbeam in place allowing the footplate to overhang very slightly.

Solder the valences (U14 & U15) in place against the edge of the tank former tabs. Note the valences are handed. Emboss the rivets on the front bufferbeam overlay (U16) and then solder it to the front buffer beam (U17) before soldering the complete front bufferbeam in place.

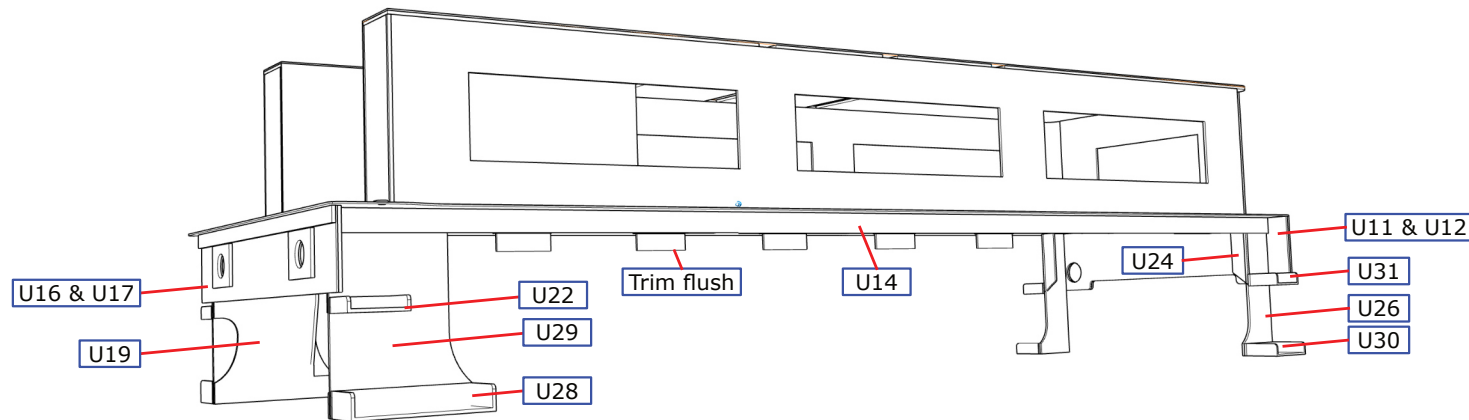


Fig 12. Steps

Steps. Bend to 90° the sides of the front step backs (U18 & U19). Solder the appropriate front step overlays, curved front (U20 & U21) or straight front (U22 & U23) to the step backs and then attach them behind the valence.

Bend to 90° the sides of the rear step backs (U24 & U25). Solder the rear step overlays, left and right (U26 & U27) to the step backs and then attach to the footplate. Check the fit of the body with the chassis and the alignment of the fixing holes. Form the step treads (U28, U29, U30 & U31) as shown below and solder in position.

Emboss the rivets for the rear step brackets on the sides and back overlay (U6). Carefully form the flare in the sides and back by bending around a rod of 5 mm diameter, checking with the jig (U9). Form the rear corners in the sides/back wrapper (the holes for the handrails are on the centre of the bend) and then solder it to the tank former. This requires plenty of heat and flux. Carefully curve to shape the small 'fingers' at the corners, fill the gaps with solder and then file to shape. Low melt solder seems to work best after first tinning the area with ordinary solder. This should be left until all other soldering is complete to avoid the possibility of a meltdown.

If coal plates are to be fitted shape the coal plate brackets and solder them to the flare. Now fit the coal plates (U10).

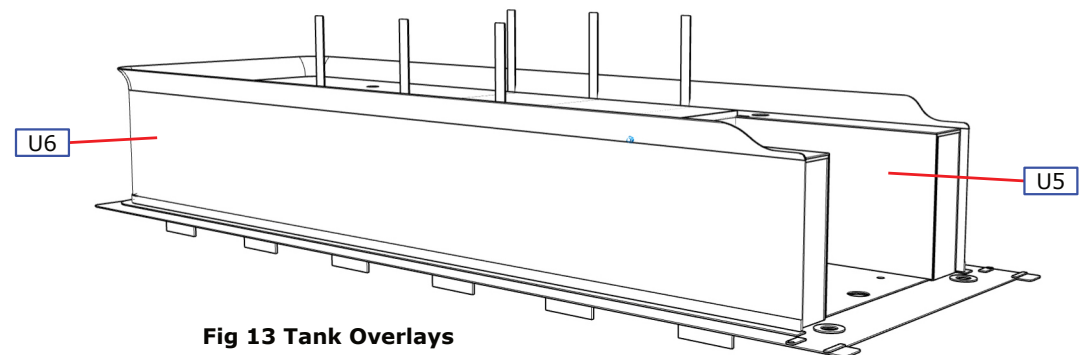


Fig 13 Tank Overlays

No.	Description	Sheet
U9	Jig for side flare	1
U11	Rear buffer beam overlay	3
U12	Rear buffer beam	3
U13	Coupling hook laminations (2)	1
U14	Left valence	3
U15	Right valence	3
U16	Front buffer beam overlay	3
U17	Front buffer beam	3
U18	Left front step back	2
U19	Right front step back	2
U20	Left curved front step overlay	2
U21	Right curved front step overlay	2
U22	Left straight front step overlay	2
U23	Right straight front step overlay	2
U24	Left rear step back	2
U25	Right rear step back	2
U26	Left rear step overlay	2
U27	Right rear step overlay	2
U28	Lower front step tread (2)	2
U29	Upper front step tread (2)	1
U30	Lower rear step tread (2)	2
U31	Upper rear step tread (2)	1

DIVISION PLATES & COAL RAILS.

COAL RAIL TENDER

Fit the quadrant plates (U31 & U32) to the front of the tank and solder in place.

The alternate positions of the rear division plate and front coal plates are marked on the tank top overlay by small 'nicks' in the sides. Laminate the original division plate (U43) and then solder in place.

Attach the coal rails (U52).

The original front coal plates (U45) can now be fixed in place.

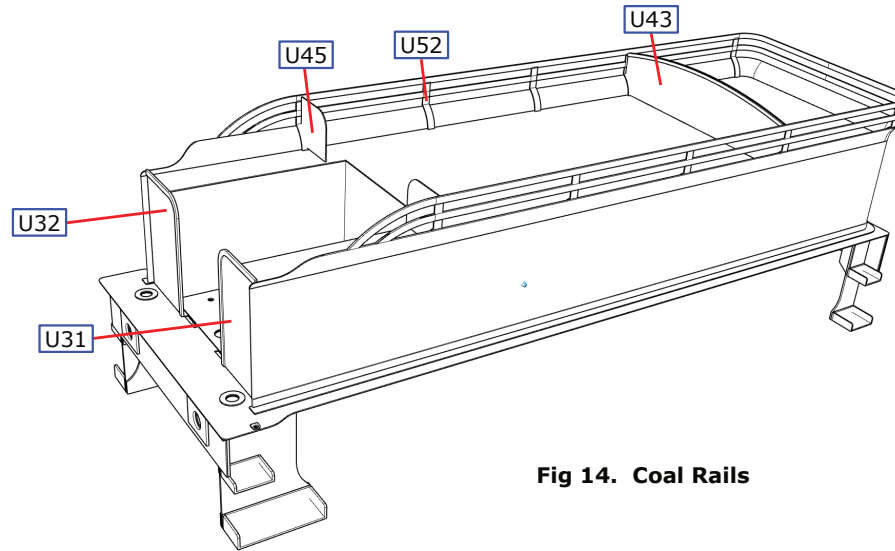


Fig 14. Coal Rails

No.	Description	Sheet
U31	Left front quadrant plate	1
U32	Right front quadrant plate	1
U33	Original sandbox (2)	1
U34	Original sandbox lid (2)	2
U43	Original division plate lamination (2)	3
U45	Original front coal plate (2)	3
U52	Coal rail	1

COAL PLATE TENDER

Fit the quadrant plates (U31 & U32) to the front of the tank and solder in place.

The raised footplate (U40) can be modified to accommodate the various sandbox and footplate height options using the half etched lines on the underside as a guide. Modify the footplate and fit using the supports (U41 & U42).

The alternate positions of the rear division plate and front coal plates are marked on the tank top overlay by small 'nicks' in the sides. Laminate the later division plate (U44) and then solder in place. The weather sheet supports (U60) are fixed to the front of the quadrant coal plates, left and right (U46 & U47). The coal plates can now be fixed in place.

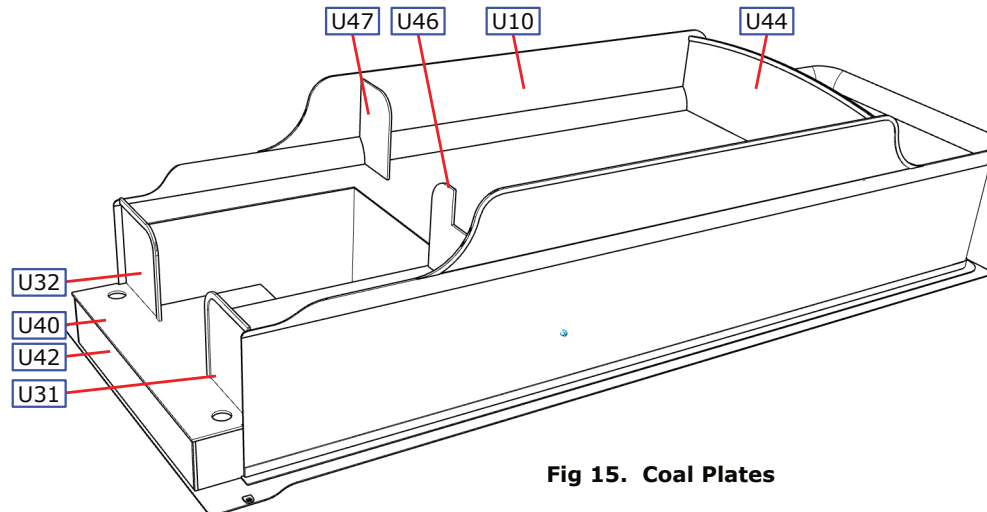


Fig 15. Coal Plates

No.	Description	Sheet
U31	Left front quadrant plate	1
U32	Right front quadrant plate	1
U35	Later sandbox side	3
U36	Later sandbox top	1
U37	Casing side	3
U38	Casing top	1
U40	Raised footplate	2
U41	Raised footplate rear support	1
U42	Raised footplate front and sides support	2
U44	Later division plate lamination (2)	3
U46	Later left quadrant coal plate	3
U47	Later right quadrant coal plate	3

SANDBOXES & TOOLBOXES

Original Sandboxes. Fold up the original sandboxes (U33) and solder together with the sandbox lid (U34). Attach them to the footplate against the quadrant plates. Fit the sandbox lid (BR8) to the left hand sandbox.

Toolboxes. Fit the symmetric toolboxes (WM3) as shown below. Fold and fit the toolbox to tank top brackets (U66) to the front face of the toolbox. The toolbox padlocks (U67) can be fitted now or glued on after painting to keep the brass finish.

Brake and Water Standards. Use the short standards for the early tenders with low footplate. Drill out the top of the brake and water scoop standards (BR6) to accept the top piece (BR7); solder the top piece in place. Attach the handles for the standards from 0.6mm wire. Fix the assembled standards in place.

Front Buffers. Fit the front buffers (BR9) to the front buffer beam.

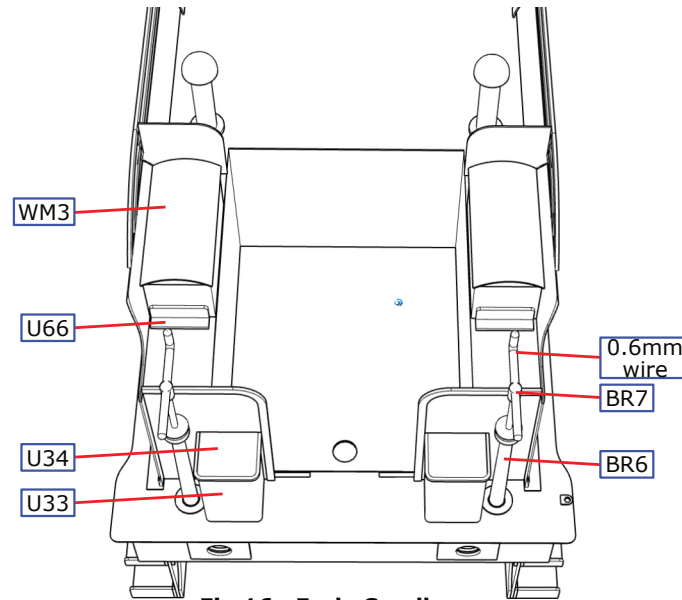


Fig 16. Early Sandboxes

Later Sandbox and Casing. Emboss all the rivets in the sandbox side and top (U35 & U36). Form the sandbox side to match the top, solder together and attach to the footplate on the left side behind the quadrant plate. Emboss the rivets in the casing side (U37), fold to shape and solder to the casing top (U38). Fit the casing to the right side of the coal hole behind the quadrant plate. Fit the sandbox lid (BR8) to the left hand sandbox.

Toolboxes. Fit the symmetric toolbox (WM3) to the right and the quadrant shaped toolbox (WM2) to the left as shown below. Fold and fit the toolbox to tank top brackets (U66) to the front face of the toolbox. The toolbox padlocks (U67) can be fitted now or glued on after painting to keep the brass finish.

Brake and Water Standards. Use the tall standards for the later tenders with the raised footplate. Drill out the top of the brake and water scoop standards (BR6) to accept the top piece (BR7); solder the top piece in place. Attach the handles for the standards from 0.6mm wire. Fix the assembled standards in place.

Front Buffers. Fit the front buffers (BR9) to the front buffer beam.

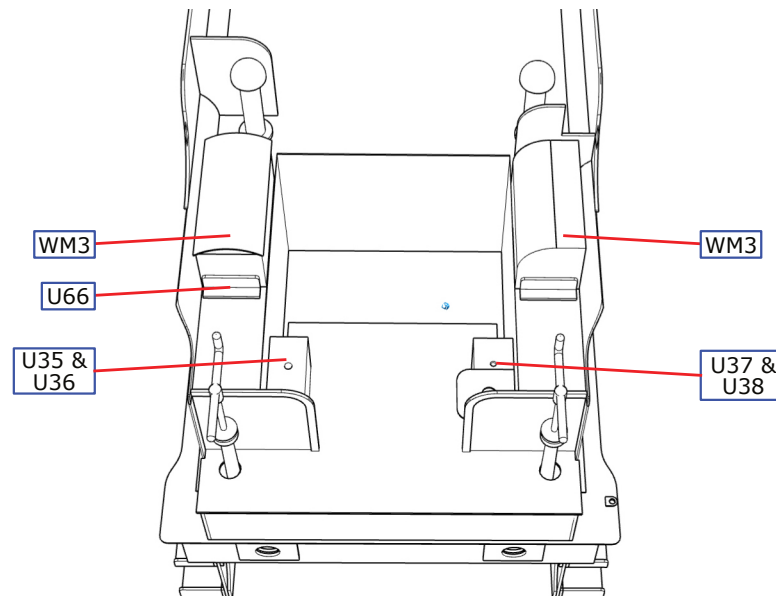


Fig 17. Later Sandboxes

No.	Description	Sheet
U33	Original sandbox (2)	1
U34	Original sandbox lid (2)	2
U35	Later sandbox side	3
U36	Later sandbox top	1
U37	Casing side	3
U38	Casing top	1
U66	Toolbox to tank top bracket (2)	1
U67	Toolbox padlock (2)	2

COFFINS, DOMES, VENTS AND SO FORTH

No Water Scoop Fitted

Fit the overflow fountain (WM11) and the tank filler (WM4) to the tank top behind the division plate. Fit the handle to the water filler made from 0.6mm wire.

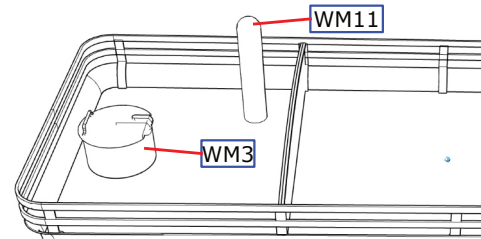


Fig 18. Water Filler & Overflow Fountain

No.	Description	Sheet
U57	Combined water filler and scoop fountain base	2
U58	Combined water filler and scoop fountain sides	3
U59	Combined water filler and scoop top	2
U61	Water dome base	3

Combined Water Filler and Scoop Fountain. Emboss the rivets on the combined water filler and scoop fountain sides (U58) and form to shape. Solder to the base (U57). Emboss the rivets on the top (U59). Make the handle from 0.6mm wire. Attach the top to the sides and then solder in place on the tank top. Fit the tank vents (WM8) behind the coal plates.

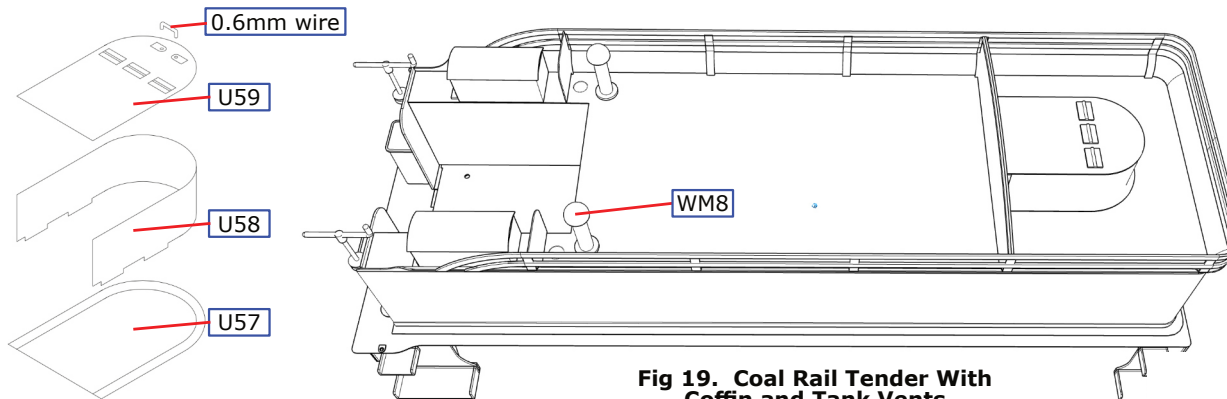


Fig 19. Coal Rail Tender With Coffin and Tank Vents

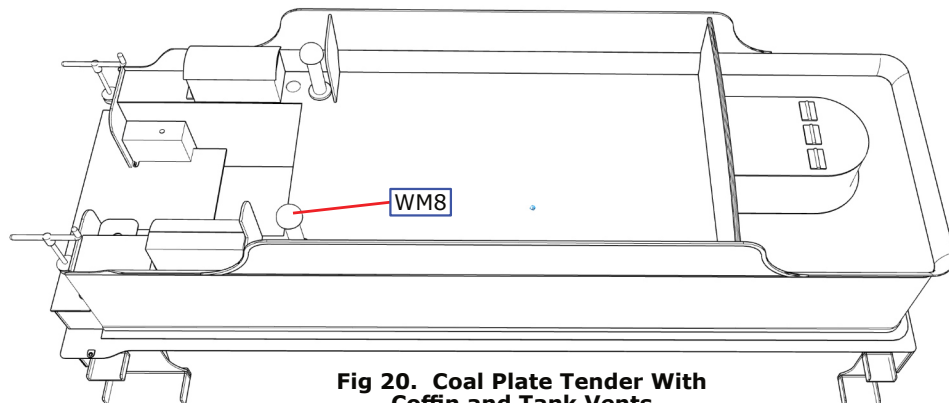


Fig 20. Coal Plate Tender With Coffin and Tank Vents

Water Pick-up Dome. The water dome base (U61) should be soldered to the tank top centred over the pre-drilled hole. Fit the cast dome (WM5) through the hole.

Fit the water filler casting (WM4). Fit the handle to the water filler made from 0.6mm wire.

Fit the tank vents (WM8) as shown below or as in your prototype photo!

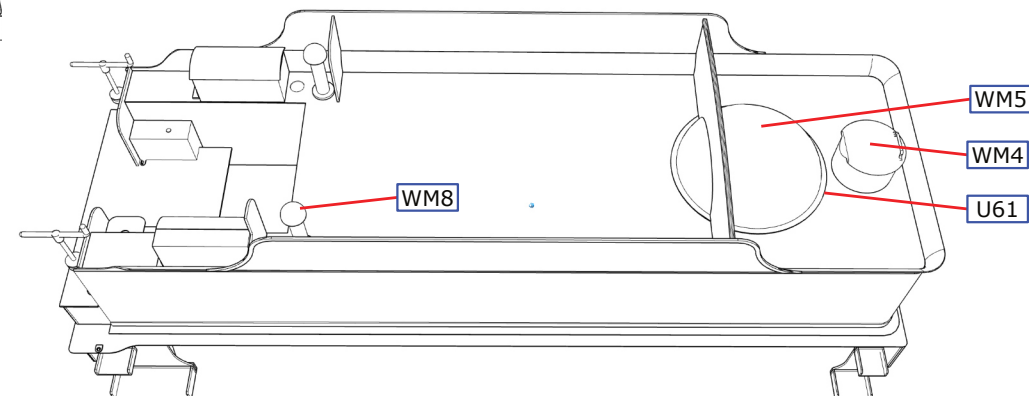


Fig 21. Coal Plate Tender With Dome and Tank Vents

TANK BACK

Handrails. On the handrail brackets (U55) drill the 0.8mm holes for the handrail wire at the half etched dimple; note the brackets are handed. Fold along the half etched line and strengthen the fold with a fillet of solder. Modify the brackets as in Fig 9. Fix the brackets over the standard and attach inside the sides. Fit the front handrails using 0.8mm wire.

Fit the rear handrails from 0.8mm wire with two handrail knobs as shown.

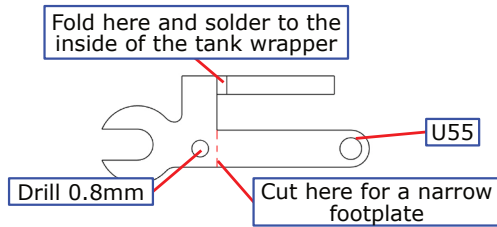


Fig 22. Handrail Bracket Modification

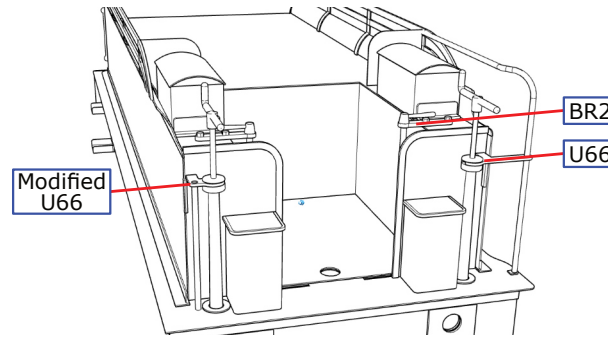


Fig 23. Tender Front

No.	Description	Sheet
U55	Front handrail bracket to front of side (2)	2
U62	Tank rear step (2)	1
U63	Upper lamp bracket	2
U64	Lower outer lamp bracket	2
U65	Lower centre lamp bracket	2
U66	Toolbox to tank top bracket (2)	1
U67	Toolbox padlock (2)	2
U68	Steam heating pipe tap handle	2

Fit the water feed valve lever (BR2) to the tank top as shown above. For coal plate tenders add a wire from 0.8mm rod from the casting into the sandbox/casing.

Lamp Brackets. Emboss the rivets on lamp brackets (U63, U64 & U65) before folding to shape. The lower brackets are attached to the bufferbeam.

We are unsure as to exactly where the weather sheet supports fit. Please let us know if you know!

Fold the sides and back in on the fire iron tray (U48) and solder the spacers (U49). The tray fits on the tank top against the sides and coal plates. Fit the fire iron bracket (U50) and base (U51) on the left tank top in front of the toolbox.

Pipes. Align the vacuum pipe (BR1) with the notch in the rear of the footplate. Solder in place. The steam heating pipe (BR3) fits in the bracket under the buffer beam. The steam heating pipe tap handle (U68) fits on the lower spigot on the casting. Plastic pipe is supplied for both hoses and the steam heating pipe end piece (BR4) goes on the end of the pipe.

Buffers. Build the buffers as shown below and then fit to the buffer beam. Fit the front buffers (BR9).

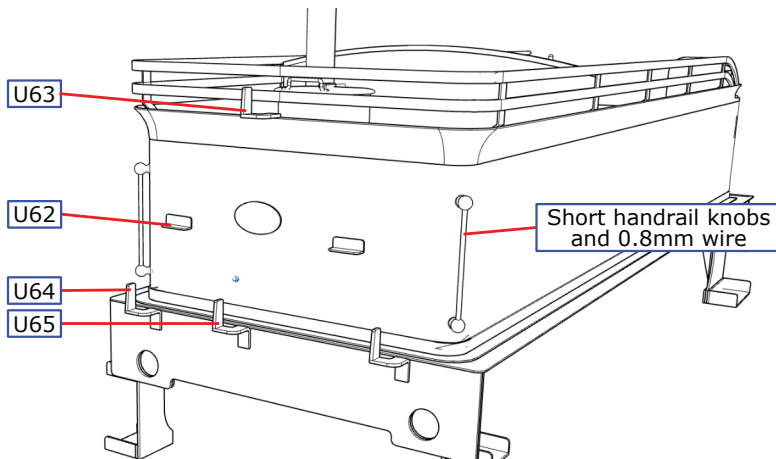


Fig 24. Tender Back

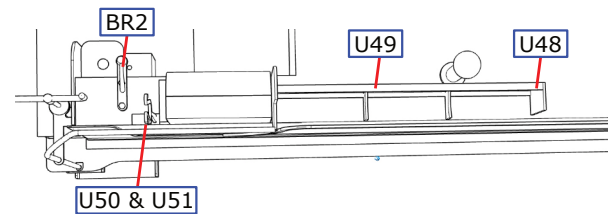


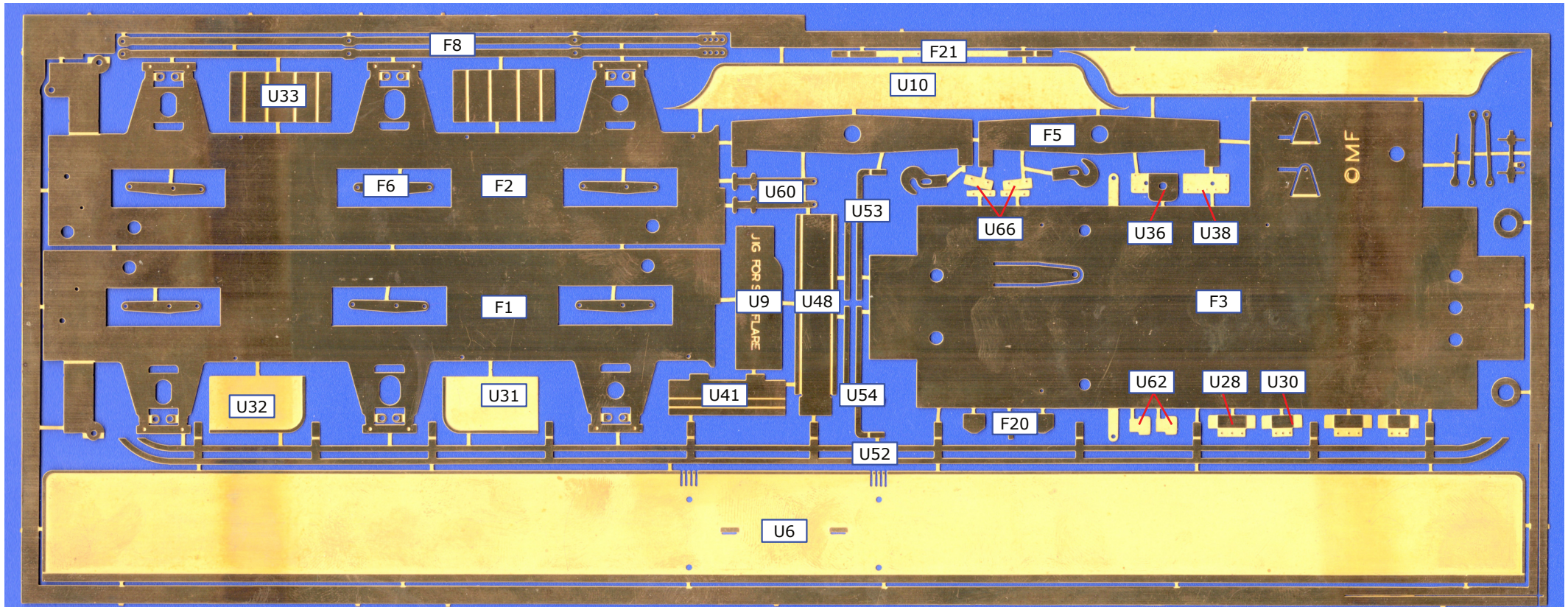
Fig 25. Fire Iron Tunnel



1. Drill casting (WM12) 2mm and glue bush in place.
2. Assemble with spring and retain with washer.

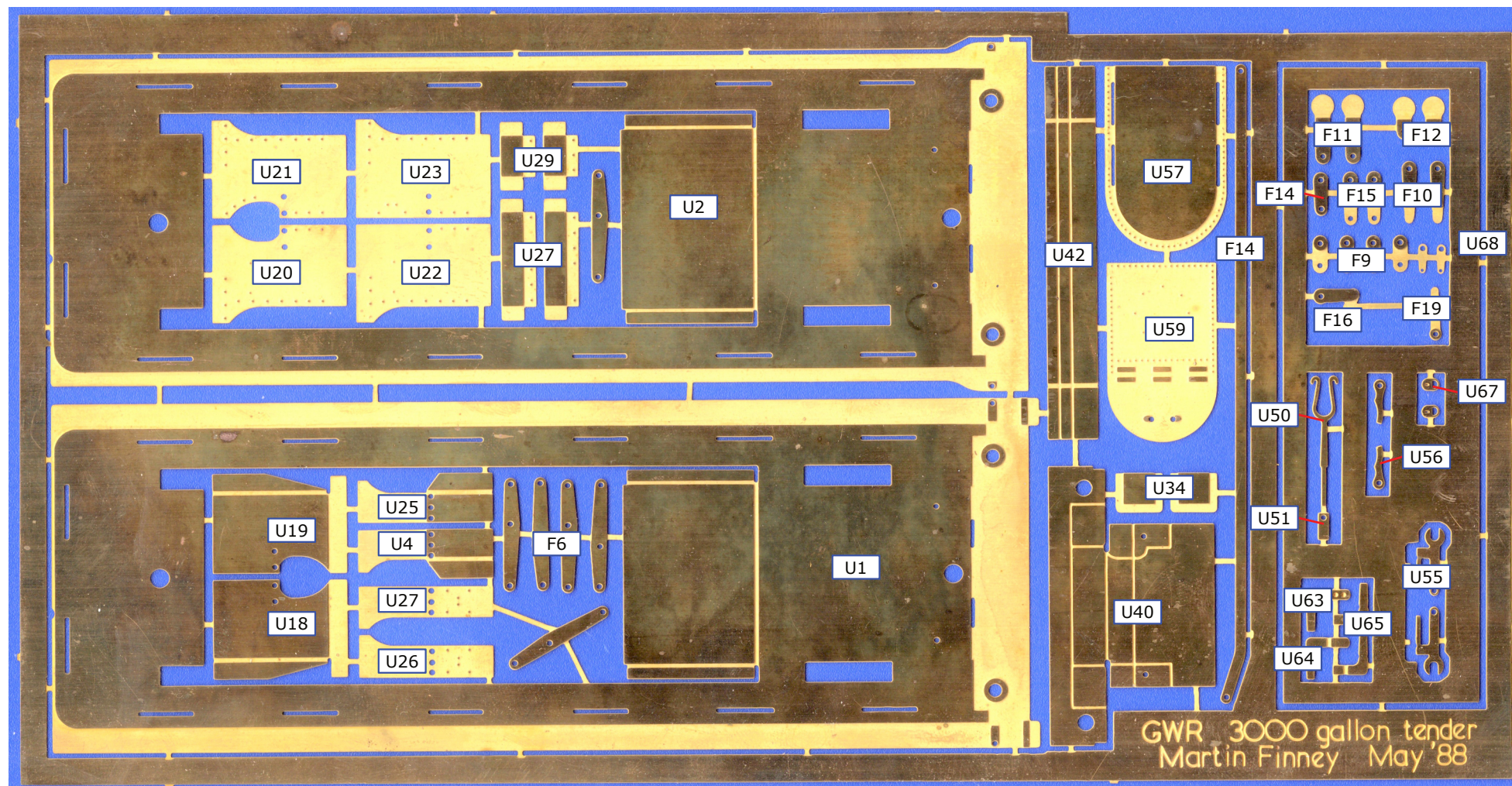
Fig 26. Buffer Construction

ETCH SHEET 1

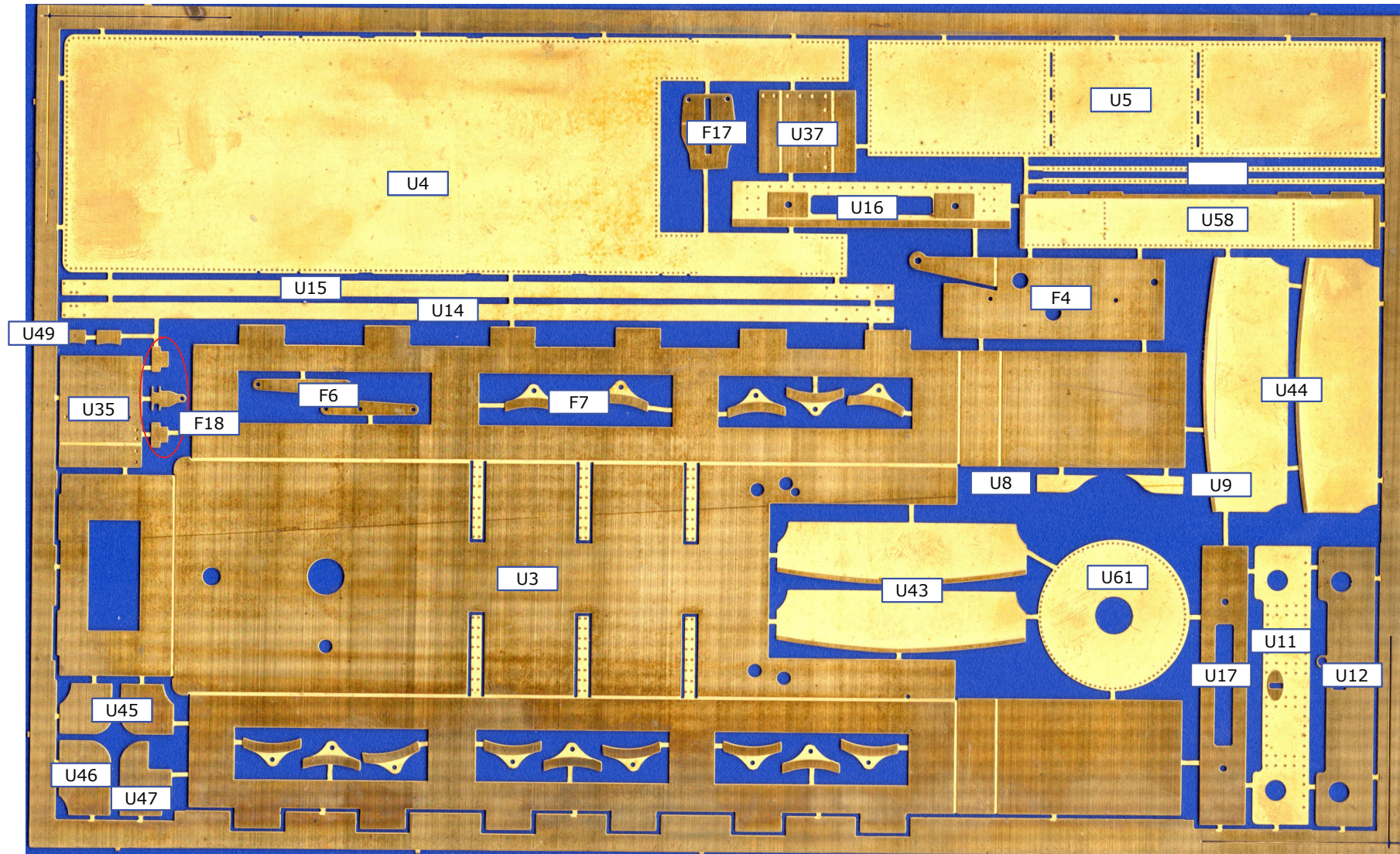


Finney7

ETCH SHEET 2



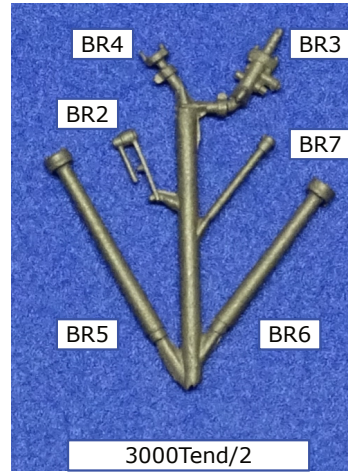
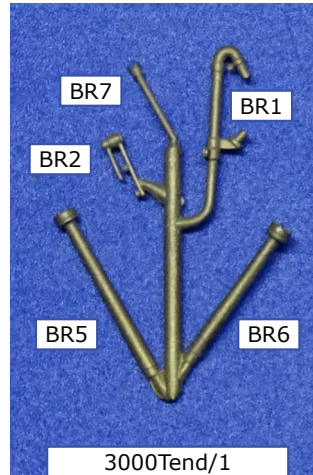
ETCH SHEET 3



CASTINGS

BRASS CASTINGS

BR1	Vacuum pipe	3000Tend/1
BR2	Water feed valve lever (2)	3000Tend/1
BR3	Steam heating pipe	3000Tend/2
BR4	Steam heating pipe end piece	3000Tend/2
BR5	Tall brake and water standard (2)	3000Tend/1&2
BR6	Short brake and water standard (2)	3000Tend/1&2
BR7	Brake and scoop standard, top piece (2)	3000Tend/1&2

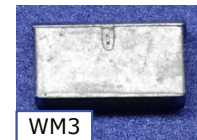


OTHER COMPONENTS

2 mm bore small top hat bearing (4)
 2 mm bore large top hat bearing (2)
 6BA X 5/16" Brass screw (4)
 6BA nut (4)
 Short handrail knob (4)
 Buffer, bush, washer & spring (2)
 Vacuum & steam pipe hose (2)
 1/8" Brass wire for compensation beam pivot
 5/32" OD Brass tube for compensation beam
 0.6mm Brass wire for brake & scoop standard handles
 0.8mm Brass wire for brake hanger pivots, handrails & scoop stays
 1.2mm Brass wire vacuum pipe, steam heating pipe & rear scoop shaft
 1.6mm Brass wire for front brake and scoop shafts
Note. Screws may be supplied over-length and may require cutting to length.

WHITEMETAL CASTINGS

WM1	6	Axlebox & spring
WM2	1	Quadrant shaped toolbox
WM3	2	Symmetric toolbox
WM4	1	Water filler
WM5	1	Water pickup dome
WM6	1	Water pickup scoop, two parts
WM7	1	Water level gauge
WM8	2	Tank vent
WM9	6	Brake shoe
WM10	1	Steam brake cylinder
WM11	1	Overflow pipe fountain
WM12	2	Dean taper buffers
WM13	12	3000G Spring Hangers
WM14	2	Sandbox lid
WM15	2	Front buffer



**DUE TO SUPPLY ISSUES, SOME PARTS
MIGHT BE SUPPLIED AS WHITE METAL**

3000G TENDER PACKING LIST

ETCHES

1 All 30007 PT 78763

SPRUES

1 MF7/3000Tend/1

1 MF7/3000Tend/2

1 F7/GW/Details/2

WHITEMETAL

WM16	Axlebox & spring
WM21	Quadrant shaped toolbox
WM32	Symmetric toolbox
WM41	Water filler
WM51	Water pickup dome
WM61	Water pickup scoop, two parts
WM71	Water level gauge
WM82	Tank vent
WM96	Brake shoe
WM10	1 Steam brake cylinder
WM11	1 Overflow pipe fountain
WM12	2 Dean taper buffers
WM13	1 Sandbox lid
WM14	2 Front buffer
WM15	12 3000G Spring Hangers

OTHER COMPONENTS

4 2 mm bore small top hat bearing
 2 2 mm bore large top hat bearing
 4 6BA X 5/16" Brass screw
 4 6BA nut
 4 Short handrail knob
 2 Buffer, bush, washer & spring
 2 Vacuum & steam pipe hose

WIRE

28mm	1/8" Brass wire
28mm	5/32" OD brass tube
60mm	0.6mm Brass wire
150mm & 300mm	0.8mm Brass wire
300mm	1.2mm Brass wire
70mm	1.6mm Brass wire

INSTRUCTIONS