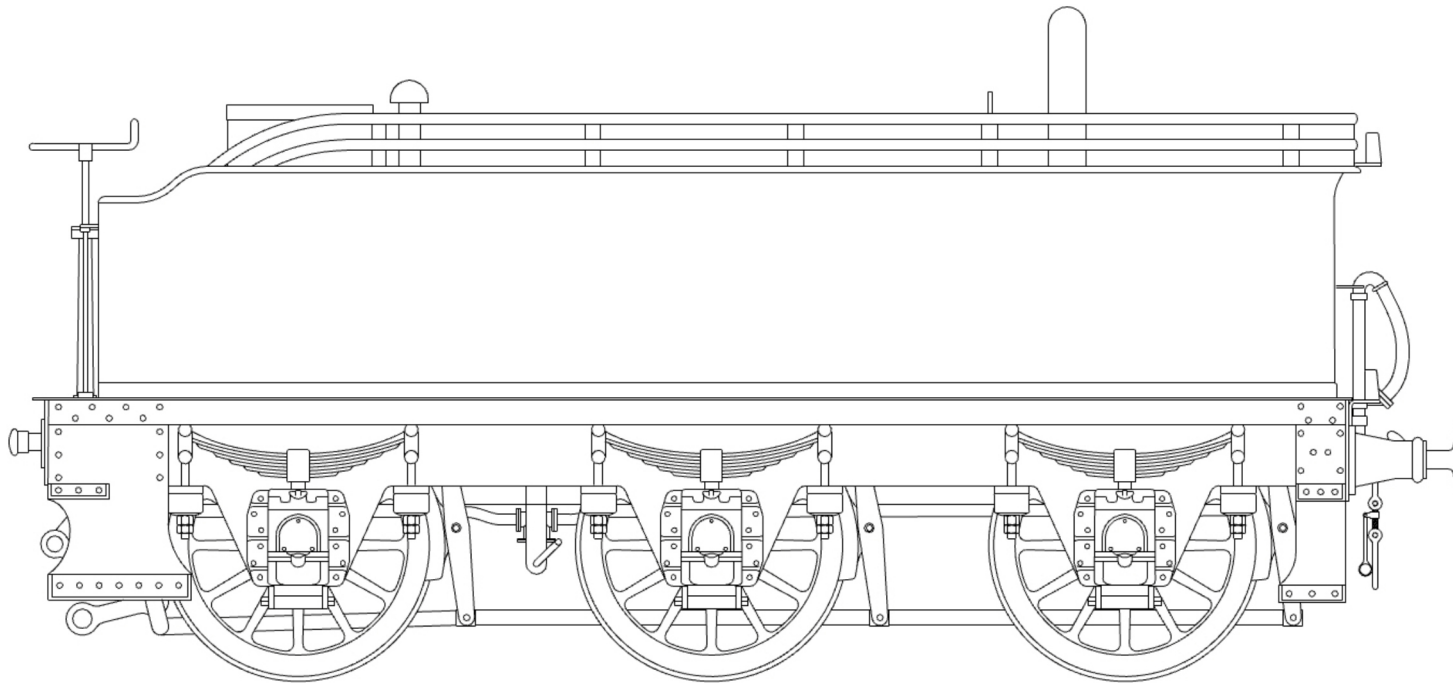


GWR 2500G TENDER



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

Between 1884 and 1903 the GWR built 301 tenders with a water capacity of 2500 gallons, all to basically the same design. They had a coal capacity of 4½ tons, a wheelbase of 13 feet, and weighed 34t. 5c. full and 16t. 2c. empty. They were built under 18 different lots as follows:

Lot	Numbers	Dates	Lot	Numbers	Dates
A6	853-872	12/84-6/85	A35	103/11-4	
A7	873-893	11/85-6/86		117-9/20/2	10/98-5/99
A9	894-903	3/87-5/87	A37	1315-1324	5/99-11/99
A22	1078-1097	10/95-4/96	A38	1325-1344	11/99-7/00
A23	1098-1117	5/96-8/96	A39	1345	11/99
A26	1138-1157	8/96-3/97	A41	1366-1385	10/00-12/00
A29	1179-1198	3/97-7/97	A42	1386-1395	4/01-2/02
A30	1199-1218	7/97-10/97	A43	1396-1415	2/02-5/03
A33	1259-1288	10/97-5/98	A44	1416-1435	2/02-5/03
			A58	1572-1581	9/03-12/03

These tenders were used with many classes including 2-4-0s, 2301 class, Krugers, Aberdares, 3521 class, Dukes and Bulldogs. The first withdrawals took place in 1927 and the only survivor is No. 1273 which is preserved with Dean Goods No. 2516 at Swindon Museum.

The kit is based on the following Swindon drawings:

G.A. 4527 (10/84) Lots A6, A7, A9 - These early Lots cannot be built from the kit because of their different spring hangers and frames.

G.A. 14598 (8/98) Lots A35, A37, A38.

Drawing of Tank 12794 (3/96) Lots A22, A23, A26, A30, A35, A37.

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 19 years over which the tenders were in production and many more changes as they were rebuilt.

The earliest tenders had coal rails and no water scoop (Vol. 1, page 152, fig. 440). The water filler was a cylindrical casing and the sandboxes were mounted on the footplate in front of the tank. They also had identical toolboxes on each side and some were fitted with an overflow pipe and fountain for use with engines equipped with cross-head driven feed pumps.

A later tender is shown in Vol. 1, page 162, fig. 469 fitted with a water scoop and a combined water filler/scoop fountain. The front of the scoop was subsequently fitted with a plate presumably to prevent 'foreign bodies' entering. These early tenders have a 'drop' in the flare on the tank sides at the front, front steps with a curve on the leading edge and hornguide ties of the rod type. (See Fig. 7)

From Lot A38 the flare on the tank sides was carried through to the front (Vol. 1, page 159, fig. 460) the coal rails extended forward and the footplate widened at the front. These tenders were built for the new 4-4-0s and consequently had a raised footplate at the front. Shortly afterwards steps with a straight leading edge and strip type hornguide ties were introduced.

Subsequently all were rebuilt with coal plates, a different pattern toolbox on the left hand side and fire iron trays were fitted with water level gauges (Vol. 1, page 160, fig. 463). Most appear to have had the sandboxes removed and replaced with a single sandbox on the left-hand side at the front of the coal space. Some were also fitted with separate pickup domes and water filler (Vol. 2, page 130, fig. 130). Because of the relatively small coal space this involved cutting an opening in the rear coal plate for the dome to fit through.

All of these variations are accommodated in the kit and before starting construction identify, as far as possible, from photographs, all the features your model will have. There are three different detail configurations described but you might have to interpret between the configurations to be able to model your particular tender.

COMPONENTS NOT PROVIDED

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

CONSTRUCTING THE CHASSIS

Start by embossing the rivets on the side frames then fold the side frames (F1 & F2) at 90° along the half etched lines. Check that the bearings fit in the appropriate slots carefully opening the slots with a file if necessary and solder the rear bearings in place. Construct the appropriate hornguide ties either rod hornguide ties (Fig 7) or plate hornguide ties (Fig 9) and 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 as shown in Fig 1 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 and solder the beam on it, centrally. Fit the beam inside the well tank using the piece of 1/8" brass wire as the pivot.

No.	Description	Sheet
F1	Left frame	2
F2	Right frame	2
F3	Well tank	2
F4	Front plate	2
F5	Compensation beams (2)	1
F6	Water scoop front plate	2
F7	Wheel side play washer	1 & 2

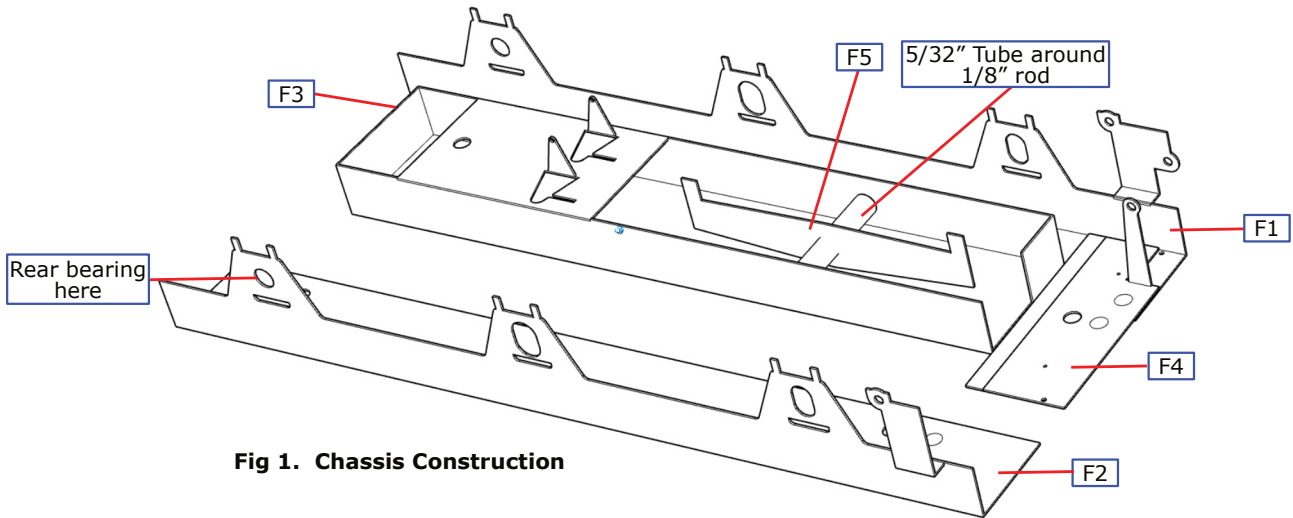


Fig 1. Chassis Construction

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 (F7).

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

Water Scoop. Attach the water scoop front plate (F6) to the front of the water scoop casting (WM6), first bending it through approximately 10° along the half etched line. Now attach the water scoop to the well tank and add the stays from 0.8mm wire passing them through the holes in the front plate and the slots in the well tank bottom before attaching them to the scoop at the rear. Add the scoop cross shaft from 1.2mm wire and fit the scoop rear cross shaft to scoop lever (F12) at the same time.

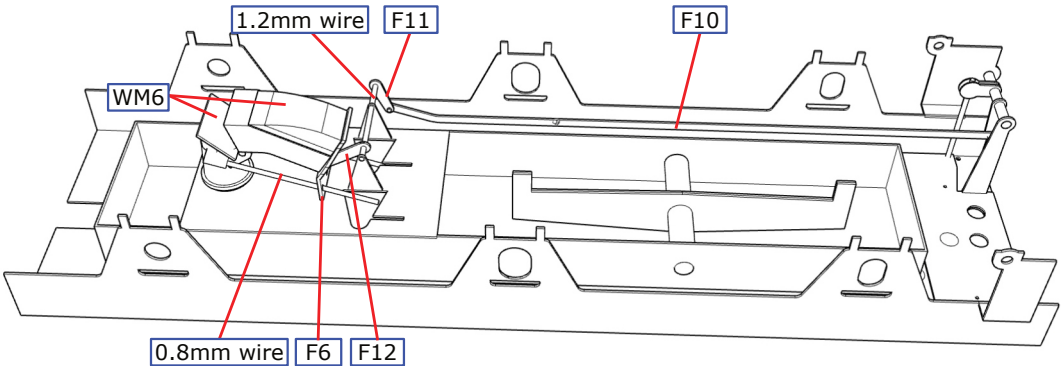


Fig 2. Scoop Mechanism

Scoop Operating Mechanism. Refer to Fig 3. The front cross shaft is a 14mm piece of 1.6mm nickel silver wire. Assemble the scoop standard to cross shaft levers (F8) and the front cross shaft actuating rod lever (F9) 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 3. The rear cross shaft is a piece of 1.2mm wire; thread the wire through the supports and the rear cross shaft to scoop lever (F12) as shown and solder the shaft in place. Make 0.8mm pin joints between the scoop actuating rod (F10) and the scoop pin jointing rod lever on the front shaft and the scoop rear cross shaft lever (F11). When everything fits as shown, solder all in place.

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

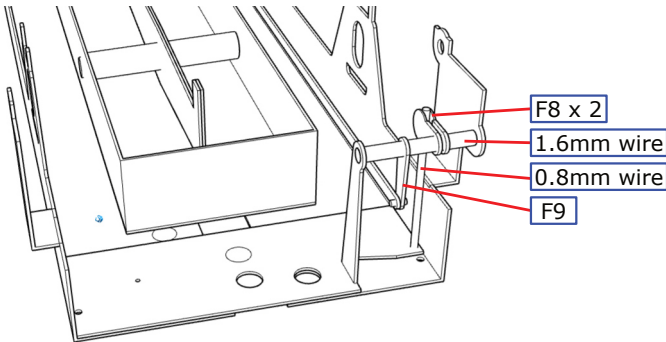


Fig 3. Scoop Actuators

No.	Description	Sheet
F8	Scoop standard to front cross shaft lever (2)	1
F9	Front cross shaft to actuating rod lever	1
F12	Rear cross shaft to scoop lever	1
F13	Brake pull rod lever laminations (4)	1
F14	Brake cylinder to cross shaft lever (2)	1
F15	Brake standard to cross shaft lever (2)	1
F16	Brake shoes (12)	1
F17	Brake hangers (12)	1
F18	Brake pull rods (2)	1
F19	Vacuum pipe drip trap (3 pieces)	2
F20	Vacuum pipe rear bracket	2
F21	6BA Washer	2

BRAKES & PIPES

Brake Operating Mechanism. Refer to Fig 2. The brake 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 (F13), the brake cylinder to cross shaft lever laminations (F14) and the brake standard to cross shaft lever laminations (F15) 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 (F13) to the cross shaft yet.

Solder the brake shoes (F16) together, back to back, (or use the castings WM9) and solder them between the brake hangers (F17) 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 (F18) and attach them to the brake pull rod levers using pieces of 0.8mm wire as pins.

No.	Description	Sheet
F8	Scoop standard to front cross shaft lever (2)	1
F9	Front cross shaft to actuating rod lever	1
F12	Rear cross shaft to scoop lever	1
F13	Brake pull rod lever laminations (4)	1
F14	Brake cylinder to cross shaft lever lamin's (2)	1
F15	Brake standard to cross shaft lever lamin's (2)	1
F16	Brake shoes (12)	1
F17	Brake hangers (12)	1
F18	Brake pull rods (2)	1
F19	Vacuum pipe drip trap (3 pieces)	2
F20	Vacuum pipe rear bracket	2
F21	6BA Washer	2

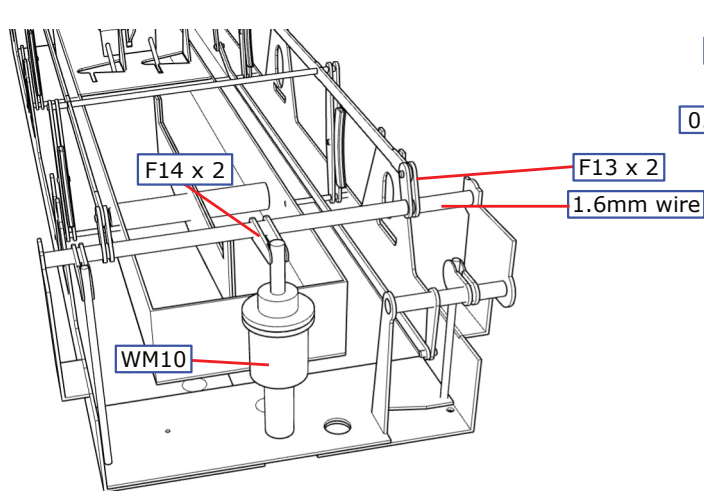


Fig 4. Scoop & Brake Actuators

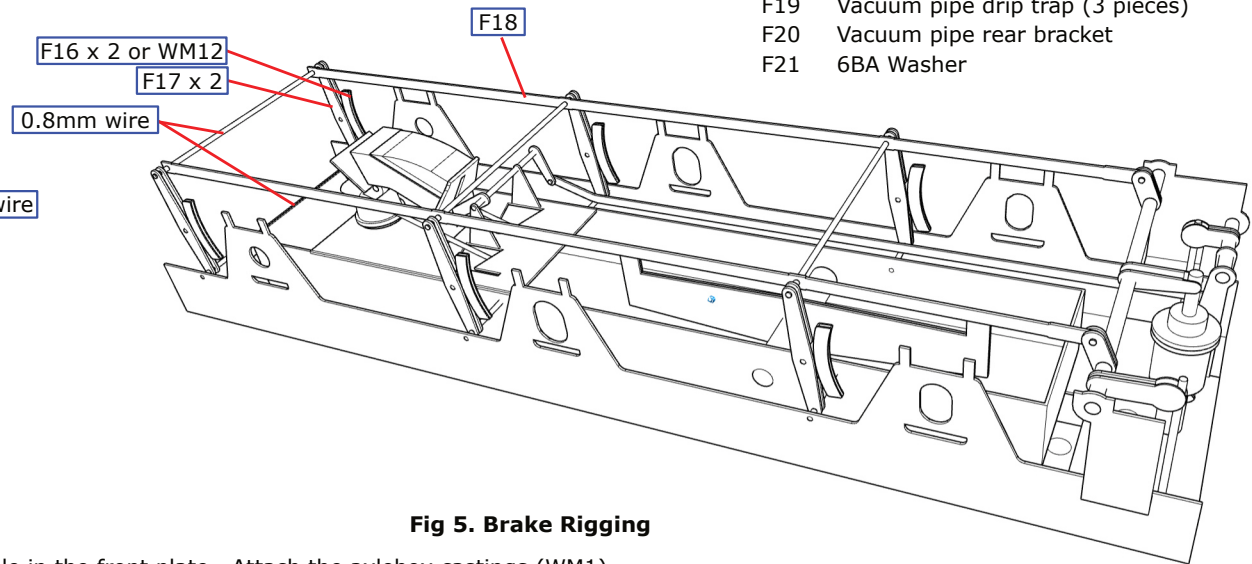


Fig 5. Brake Rigging

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 (F19) 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 (F20) 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.

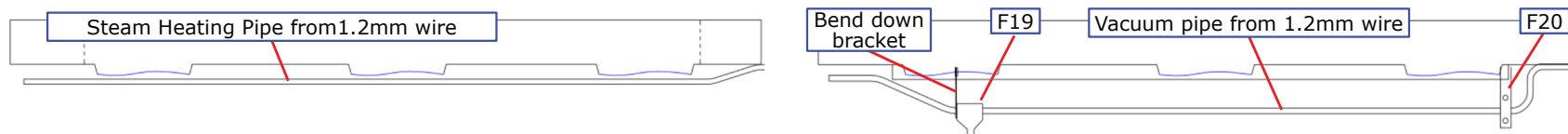


Fig 6. Steam Heat & Vacuum Pipes

CONSTRUCTING THE BODY 1

Emboss the rivets on the footplate (U1) around the brake standard and water pick-up standard bases. If required, remove the footplate extension along the blue line shown below in Fig 5. Now fold the coal space rear through 90° and then fold the small tabs on each side through 90°. Solder a 6BA nut above the body fixing holes at the front and rear of the footplate.

If the tender is to have coal rails, remove the coal plate brackets from the tank former (U2). 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; the joint is shown as a green line in Fig 5.

Solder the tank top overlay (U3) 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.

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

If required, modify the tank sides and back overlay (U4) as shown in Fig 7 using the modification overlays (U6 & U7). Emboss the rivets for the rear step brackets. Carefully form the flare by bending around a rod of suitable diameter (5mm), checking with the jig (U8). Form the rear corners in the wrapper; the holes for the handrails are on the centre of the bend. Then solder the wrapper 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.

No.	Description	Sheet
U1	Footplate	3
U2	Tank former	1
U3	Tank top overlay	2
U4	Tank side & back overlay	2
U5	Coal hole overlay	1
U6	Right side modification overlay	2
U7	Left side modification overlay	2
U8	Jig for side flare	2

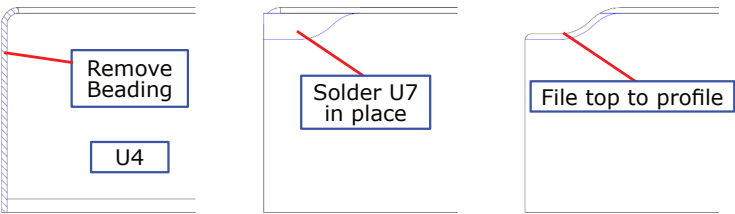


Fig 7. Pre Lot A38 Tender Modification

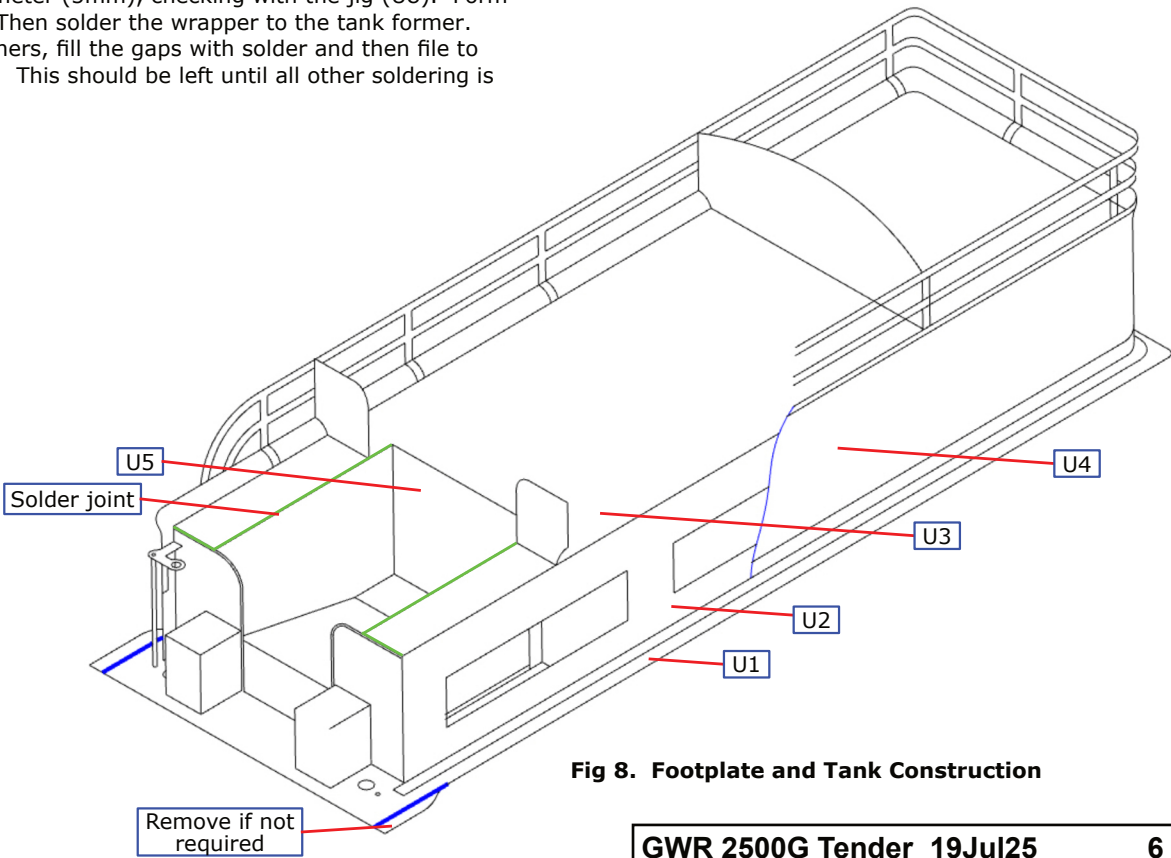


Fig 8. Footplate and Tank Construction

CONSTRUCTING THE BODY 2

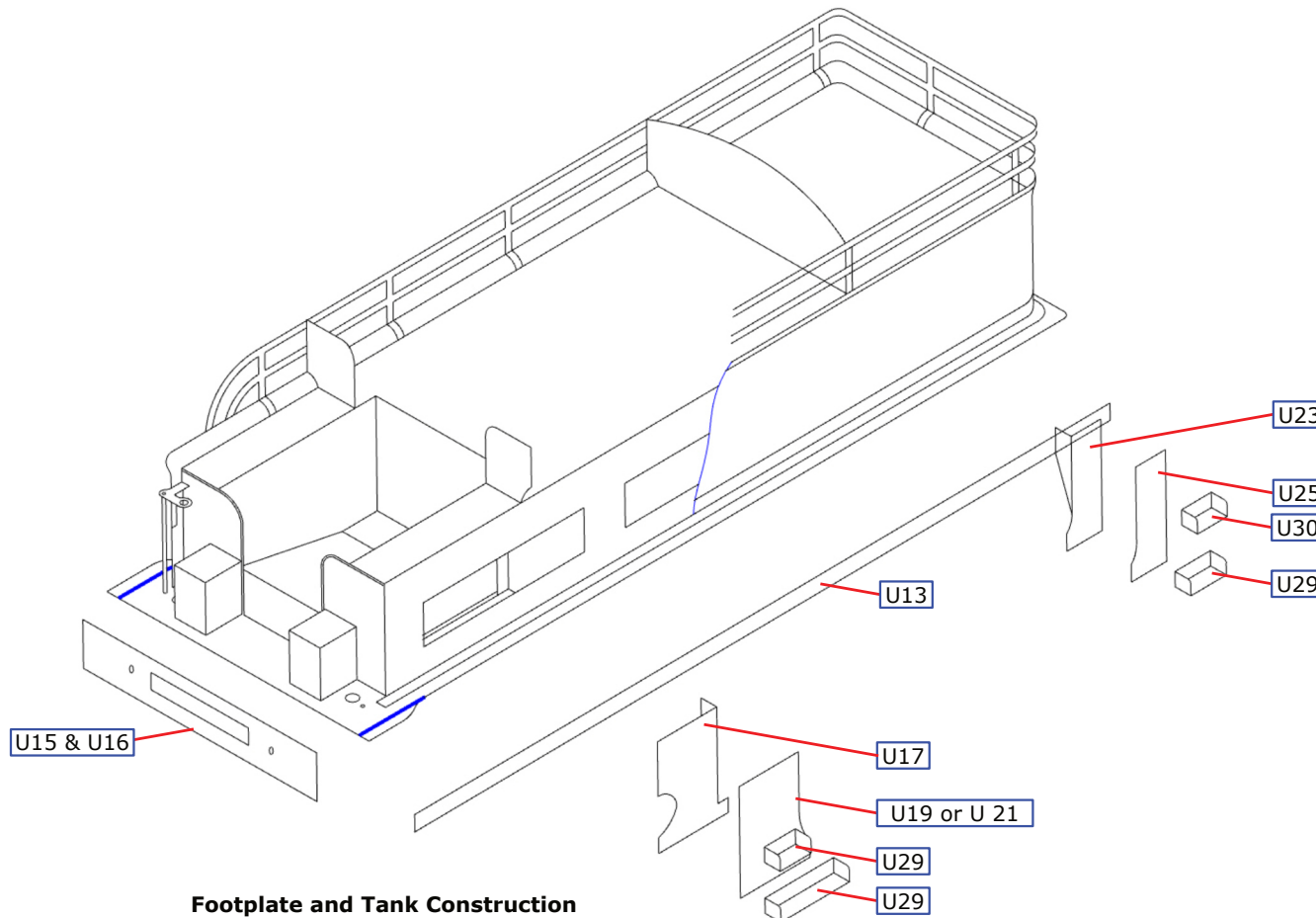
If coal plates are to be fitted shape the coal plate brackets and solder them to the flare. Now fit the coal plates (U9).

Emboss the two rivets on the coupling hook base on the rear buffer beam overlay (U10) and then solder it to the rear buffer beam (U11). Solder the rear bufferbeam in place allowing the footplate to overhang very slightly.

Solder the valences (U13 & U14) in place against the edge of the tank former tabs. Note the valences are handed. Emboss the rivets on the front bufferbeam overlay (U15) and then solder it to the front buffer beam (U16) before soldering the complete front bufferbeam in place.

Steps. Bend to 90° the sides of the front step backs (U17 & U18). Solder the appropriate front step overlays, curved front (U19 & U20) or straight front (U21 & U22) to the step backs and then attach them behind the valence. Bend to 90° the sides of the rear step backs (U23 & U24). Solder the rear step overlays, left and right (U25 & U26) 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 (U27, U28, U29 & U30) as shown below and solder in position.

No.	Description	Sheet
U9	Coal plates (2)	1 & 2
U10	Rear buffer beam overlay	3
U11	Rear buffer beam	3
U12	Coupling hook lamination (2)	1
U13	Left footplate valence	2
U14	Right footplate valence	2
U15	Front buffer beam overlay	3
U16	Front buffer beam	3
U17	Left front step back	1
U18	Right front step back	1
U19	Left front step overlay, curved front	3
U20	Right front step overlay, curved front	3
U21	Left front step overlay, straight front	3
U22	Right front step overlay, straight front	3
U23	Left rear step back	3
U24	Right rear step back	3
U25	Left rear step overlay	3
U26	Right rear step overlay	3
U27	Front step lower tread (2)	2
U28	Front step upper tread (2)	2
U29	Rear rear lower step tread (2)	2
U30	Rear rear step upper tread (2)	2



Footplate and Tank Construction

ORIGINAL CONDITION DETAILS 1

Coal rails, no water scoop, cylindrical water filler, original sandboxes on footplate, no water level gauge, vents in forward position, identical toolboxes, overflow pipe, curved front step, rod hornguide ties.

Solder the quadrant plates (U32 & U33) against the front of the tank. Attach the rear steps (U31)

Original Sandboxes. Fold up the original sandboxes (U34) and solder together with the sandbox lid (U35). Attach them to the footplate against the quadrant plates.

Division & Coal Plates. Laminate the original division plate (U36) together. The alternate positions of the division plate and the front coal plates are marked on the tank top overlay by small 'nicks' in the sides. Using these marks fit the division plate. Fit the original front coal plates (U37). Attach the coal rails (U39).

Toolboxes. Fit the symmetric toolbox (WM3) as shown below. Fold and fit the toolbox to tank top brackets (U38) to the front face of the toolbox. The toolbox padlocks (U45) can be fitted now or glued on after painting to keep the brass finish.

Standards and Handrails. Drill out the top of the short brake and water scoop standards (BR6) to accept the brake standard top (BR7). Fix the assembled standards in place. Fold the handrail brackets (U40), note they are handed, along the half etched line and strengthen the fold with a fillet of solder. Modify the brackets as in Fig 3. if required. Fix the brackets over the standards and attach inside the sides. Fit the front handrails using 0.8mm wire.

No.	Description	Sheet
U31	Tank rear step (2)	2
U32	Front left quadrant plate	3
U33	Front right quadrant plate	3
U34	Original sand box (2)	1
U35	Original sand box lid (2)	2
U36	Original division plate (2)	3
U37	Original coal plate (2)	2
U38	Toolbox to tank top bracket (2)	2
U39	Coal rail	2
U40	Front handrail bracket to side (2)	1

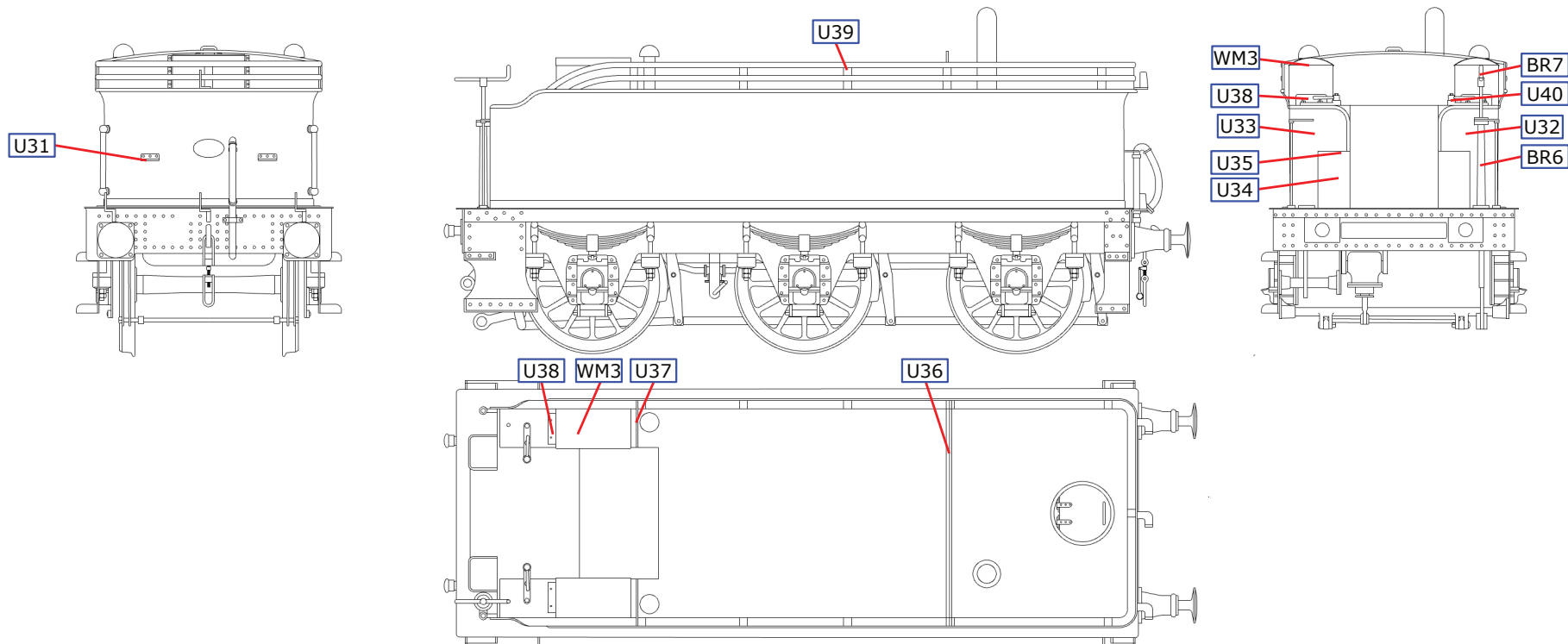


Fig 10. 2500G Tender in Original Condition

ORIGINAL CONDITION DETAILS 2

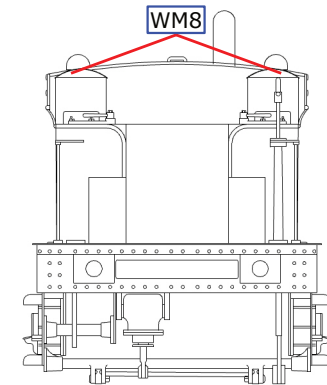
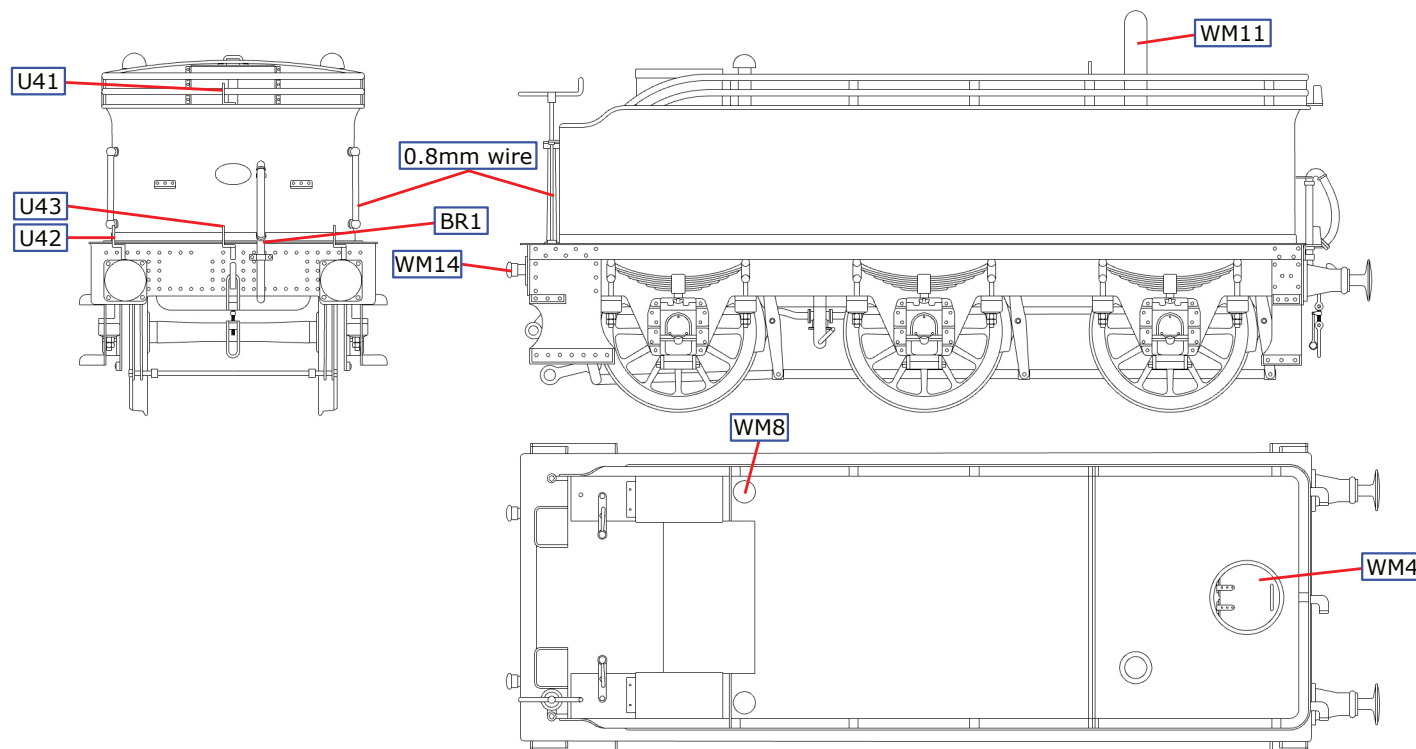
Water Filler. Fit the water filler casting (WM4). Make the handle from 0.6mm wire. Fit the Overflow pipe fountain (WM11). If required, fit the tank vents (WM8).

Lamp Brackets. Emboss the rivets on lamp brackets (U41, U42 & U43) before folding to shape. The lower brackets are attached to the bufferbeam.

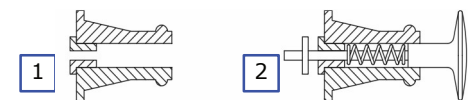
Final Details. Fit the water feed valve levers (BR2) to the tank top as shown below. Align the vacuum pipe (BR1) with the notch in the rear of the footplate. Solder in place. The steam heating pipe (BR3) fits in the bracket under the buffer beam. The steam heating pipe tap handle (U44) fits on the lower 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 (WM14).

No.	Description	Sheet
U41	Upper lamp bracket	1
U42	Lower outer lamp bracket (2)	1
U43	Lower centre lamp bracket	1
U44	Steam heating pipe tap handle	1
U45	Toolbox padlock	1



Buffer Construction



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

Fig 10. 2500G Tender in Original Condition

INTERMEDIATE CONDITION DETAILS 1

Coal rails, sandboxes in original position, both tool boxes original type, no water level gauge, vents in forward position, combined water filler & scoop fountain. rod hornguide ties.

Solder the quadrant plates (U32 & U33) against the front of the tank. Attach the rear steps (U31)

Original Sandboxes. Fold up the original sandboxes (U34) and solder together with the sandbox lid (U35). Attach them to the footplate against the quadrant plates.

Division & Coal Plates. Laminate the original division plate (U36) together. The alternate positions of the division plate and the front coal plates are marked on the tank top overlay by small 'nicks' in the sides. Using these marks fit the division plate. Fit the original front coal plates (U37). Attach the coal rails (U39).

Toolboxes. Fit the symmetric toolbox (WM3 as shown below. Fold and fit the toolbox to tank top brackets (U38) to the front face of the toolbox. The toolbox padlocks (U45) can be fitted now or glued on after painting to keep the brass finish.

Coal Rails. Attach the coal rails (U39) if appropriate. The coal rails extensions (U46 & U47) are used for the later tenders without the drop in the sides at the front. Modify the coal rails by removing the rails in front of the end stanchion and replace with the extensions

No.	Description	Sheet
U31	Tank rear step (2)	2
U32	Front left quadrant plate	3
U33	Front right quadrant plate	3
U34	Original sand box (2)	1
U35	Original sand box lid (2)	2
U36	Original division plate (2)	3
U37	Original coal plate (2)	2
U38	Toolbox to tank top bracket (2)	2
U39	Coal rail	2

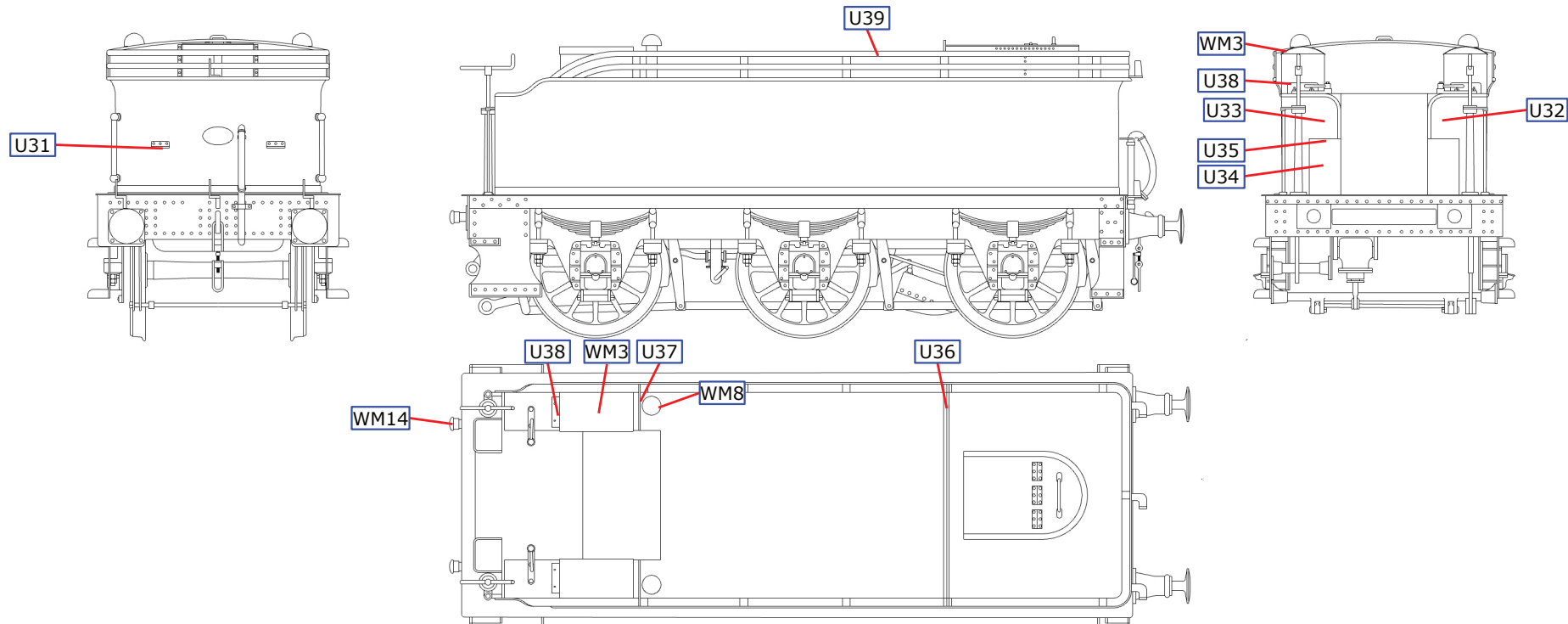


Fig 11. 2500G Tender in Intermediate Condition

INTERMEDIATE CONDITION DETAILS 2

Standards and Handrails. Drill out the top of the short brake and water scoop standards (BR6) to accept the brake standard top (BR7). Fix the assembled standards in place. Modify the handrail brackets (U40) as in Fig 12, note they are handed. Fold along the half etched line and strengthen the fold with a fillet of solder. Fix the brackets over the standards and attach inside the sides. Fit the front handrails using 0.8mm wire. If the coal rail extensions have been fitted the handrail is fixed to the extension on the small half etched recess.

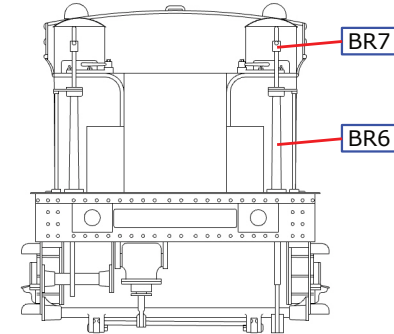
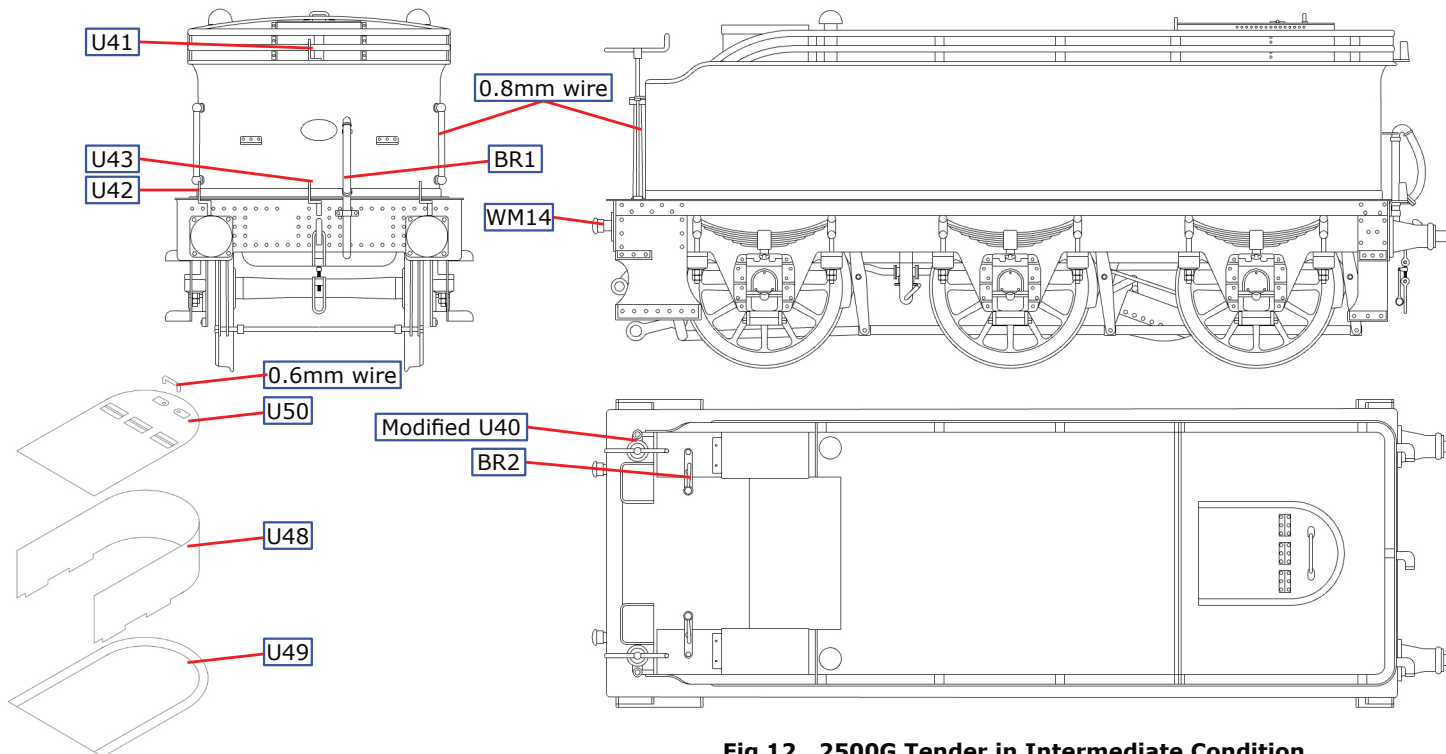
Combined Water Filler and Scoop Fountain. Emboss the rivets on the combined water filler and scoop fountain sides (U48) and form to shape. Solder to the base (U49). Emboss the rivets on the top (U50). Make the handle from 0.6mm wire. Attach the top to the sides and then solder in place on the tank top. If required, fit the tank vents (WM8).

Lamp Brackets. Emboss the rivets on lamp brackets (U41, U42 & U43) before folding to shape. The lower brackets attach to the buffer beam.

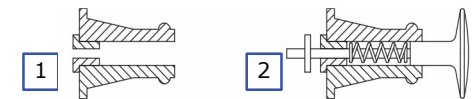
Final Details. Fit the water feed valve levers (BR2) to the tank top as shown below. Align the vacuum pipe (BR1) with the notch in the rear of the footplate. Solder in place. The steam heating pipe (BR3) fits in the bracket under the buffer beam. The steam heating pipe tap handle (U44) fits on the lower 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 (WM14).

No.	Description	Sheet
U40	Front handrail bracket to side (2)	1
U41	Upper lamp bracket	1
U42	Lower outer lamp bracket (2)	1
U43	Lower centre lamp bracket	1
U44	Steam heating pipe tap handle	1
U45	Toolbox padlock	1
U46	Left coal rail extension	2
U47	Right coal rail extension	2
U48	Combined water filler/scoop fountain sides	1
U49	Combined water filler/scoop fountain base	2
U50	Combined water filler/scoop fountain top	1



Buffer Construction



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

Fig 12. 2500G Tender in Intermediate Condition

REBUILT CONDITION DETAILS 1

Coal plates, wide footplate, wide front handrails, sandboxes repositioned, original toolbox on right, quadrant toolbox on left, water level gauge, separate scoop dome and water filler, fire iron tray and bracket, vents moved back behind coal plates.

Solder the quadrant plates (U32 & U33) against the front of the tank. Attach the rear steps (U31)

Rebuilt Sandboxes. For the later sandboxes, first emboss all the rivets in the sandbox side and top (U51 & U52). 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 (U53), fold to shape and solder to the casing top (U54). Fit the casing to the right side of the coal hole behind the quadrant plate.

Raised Footplate. The raised footplate (U55) 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 footplate supports (U56 & U57) as appropriate.

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 (U38) to the front face of the toolbox. The toolbox padlocks (U45) can be fitted now or glued on after painting to keep the brass finish.

No.	Description	Sheet
U31	Tank rear step (2)	2
U32	Front left quadrant plate	3
U33	Front right quadrant plate	3
U38	Toolbox to tank top bracket (2)	2
U51	Rebuilt left hand sand box	1
U52	Rebuilt left hand sand box top	2
U53	Rebuilt right hand casing	1
U54	Rebuilt right hand casing top	2
U55	Raised footplate	2
U56	Raised footplate rear support	2
U57	Raised footplate support sides & front	3

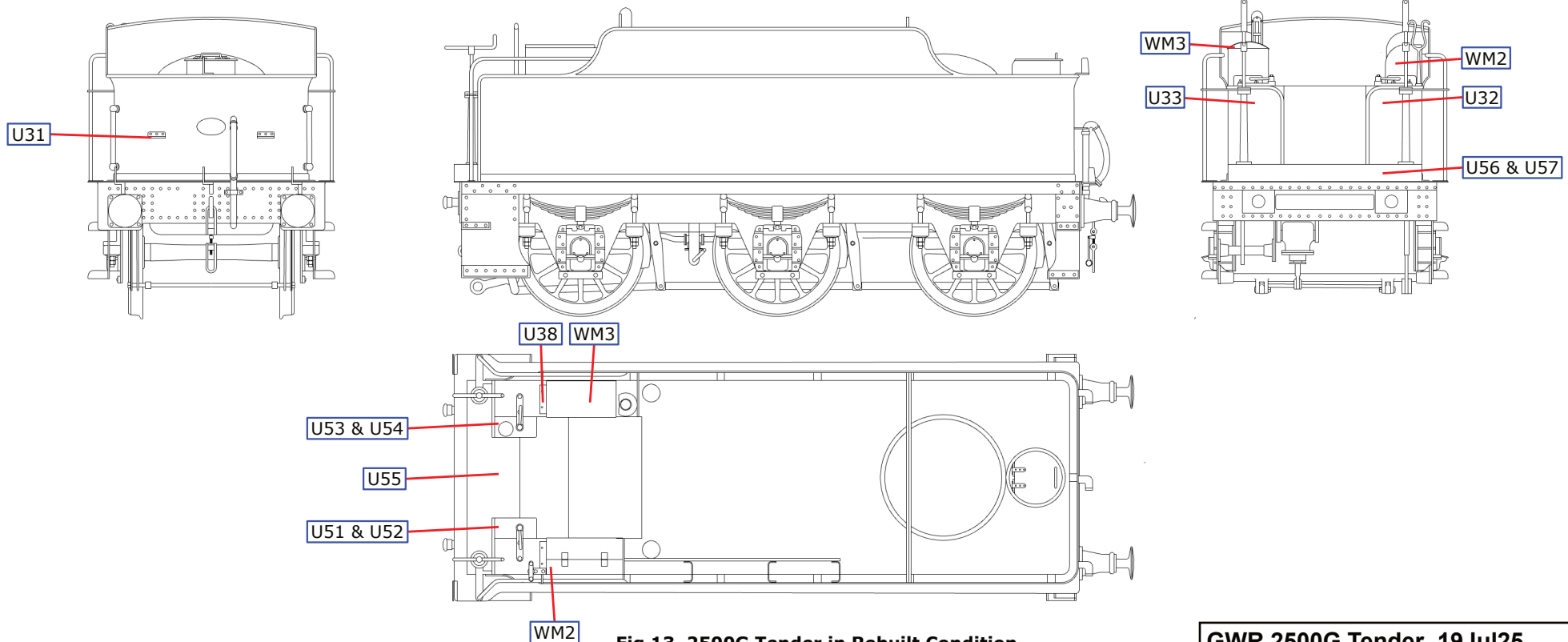


Fig 13 2500G Tender in Rebuilt Condition

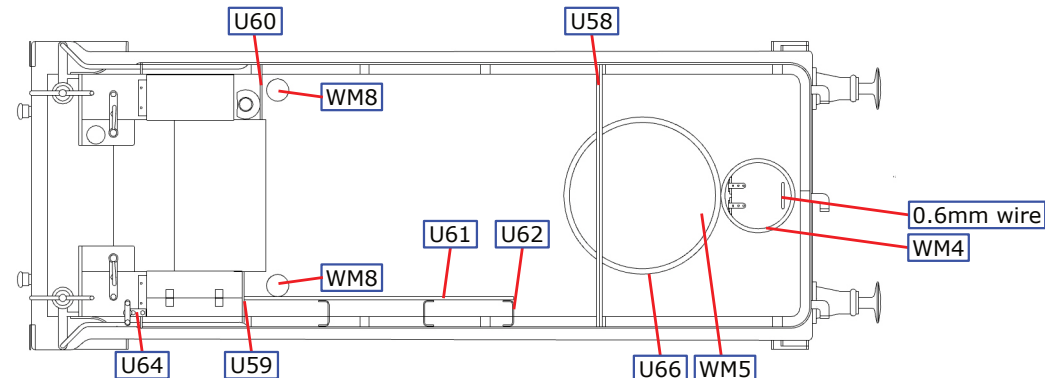
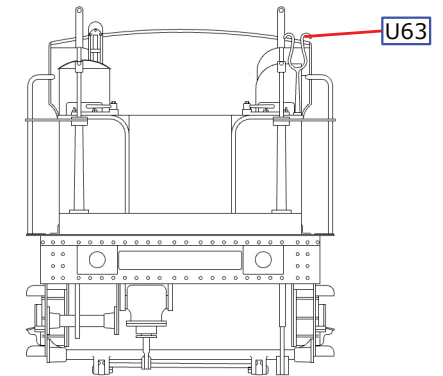
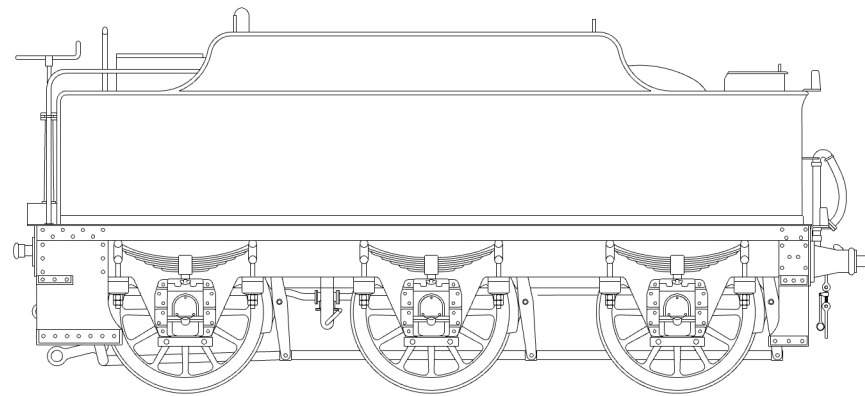
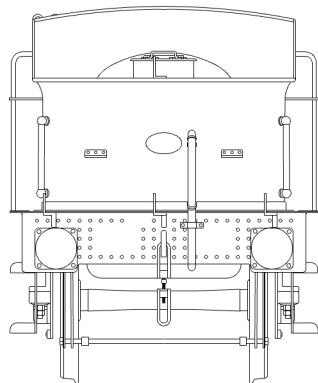
REBUILT CONDITION DETAILS 2

Division & Coal Plates. Laminate the rebuilt division plate (U58) together. Shape an opening in the division plate so that it fits over the dome. The alternate positions of the division plate and the front coal plates are marked on the tank top overlay by small 'nicks' in the sides. Using these marks fit the division plate. Fit the rebuilt front coal plates left and right (U59 & U60).

Fire Iron Tray & Bracket. Emboss the rivets on the fire iron bracket base (U64) and solder in place as shown below. Drill the hole in the base through the tank and then solder the fire iron bracket (U63) in place from inside. Form the fire iron tray (U61) into a shallow 'U' section and fold the rear plate to 90°. Solder the spacers (U62) into the half etched slots and attach the complete tray as below.

Water Pick-up Dome. The water dome base (U66) 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). Make the handle from 0.6mm wire. Fit the tank vents (WM8).

No.	Description	Sheet
U58	Rebuilt division plate (2)	1
U59	Rebuilt left coal plate	2
U60	Rebuilt right coal plate	2
U61	Fire iron tray	2
U62	Fire iron tray spacers (2)	2
U63	Fire iron bracket	1
U64	Fire iron bracket base	1
U65	Front handrail bracket to the top of the side (2) 1	



REBUILT CONDITION DETAILS 3

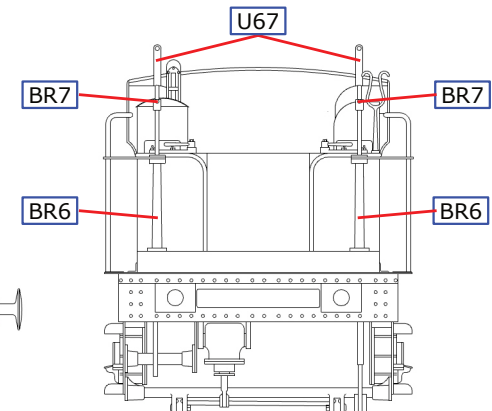
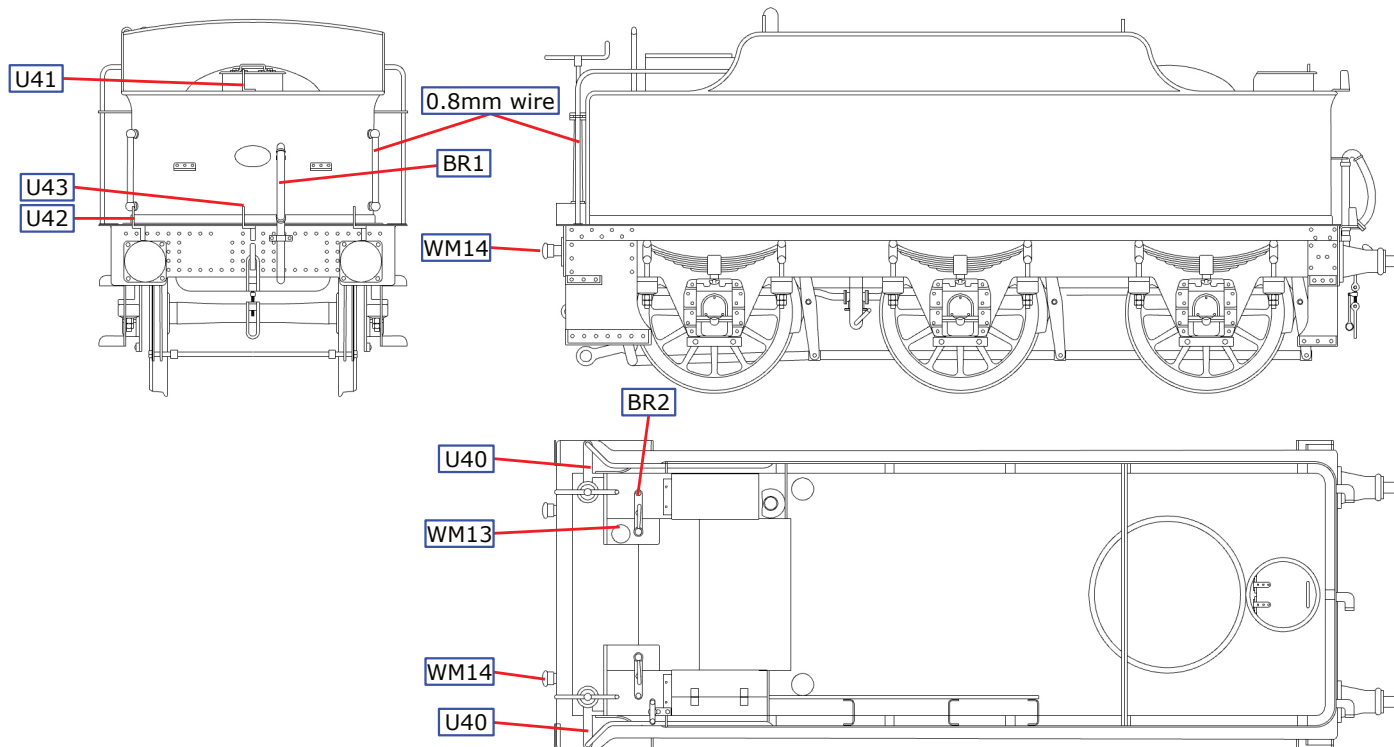
Standards and Handrails. Drill out the top of the long brake and water scoop standards (BR5) to accept the brake standard top (BR7). Fix the assembled standards in place. On the handrail brackets (U40), drill the 0.8 mm holes for the handrail wire at the half etched dimple; note the brackets are handed. Fold along the half etched line and strengthen the fold with a fillet of solder. Fix the brackets over the standard and attach inside the sides. Fit the front handrails using 0.8 mm wire. On the rebuilt tenders the wide mounted handrails use the brackets (U65) and attach them behind the coal plates. Fit the rear handrails from 0.8 mm wire with two handrail knobs as shown

Lamp Brackets. Emboss the rivets on lamp brackets (U41, U42 & U43) before folding to shape. The lower brackets are attached to the buffer beam.

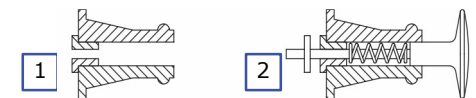
Final Details. Fit the sand box lid (WM13) to the top of the sandbox. Fit the water feed valve levers (BR2) to the tank top as shown below. Align the vacuum pipe (BR1) with the notch in the rear of the footplate. Solder in place. The steam heating pipe (BR3) fits in the bracket under the buffer beam. The steam heating pipe tap handle (U44) 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. The weather sheet supports (U67) are fixed inside the coal plates, at the front, on the rebuilt tenders

Buffers. Build the buffers as shown below and then fit to the buffer beam. Fit the front buffers (WM14).

No.	Description	Sheet
U41	Upper lamp bracket	1
U42	Lower outer lamp bracket (2)	1
U43	Lower centre lamp bracket	1
U44	Steam heating pipe tap handle	1
U45	Toolbox padlock	1
U63	Fire iron bracket	1
U64	Fire iron bracket base	1
U65	Front handrail bracket to the top of the side (2)	1

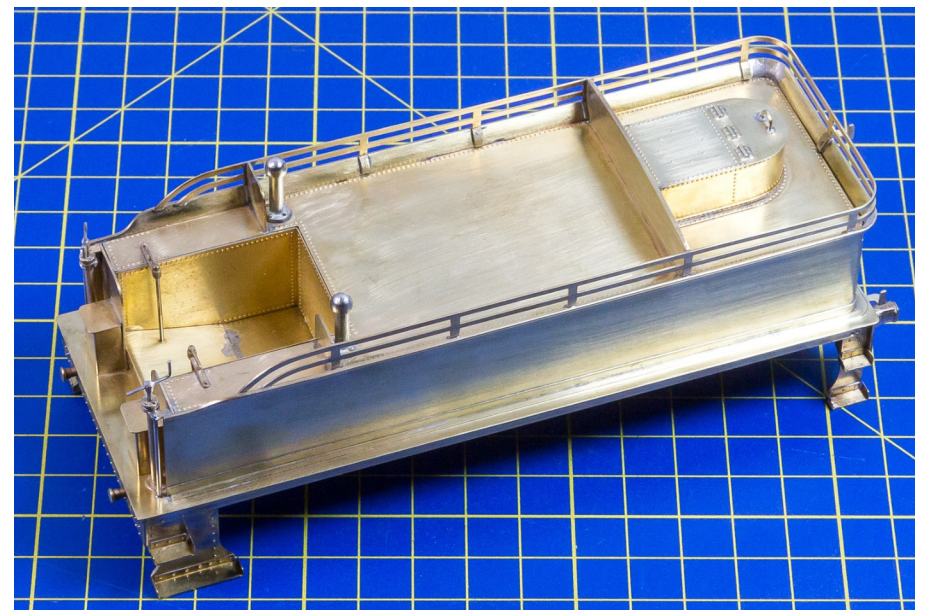
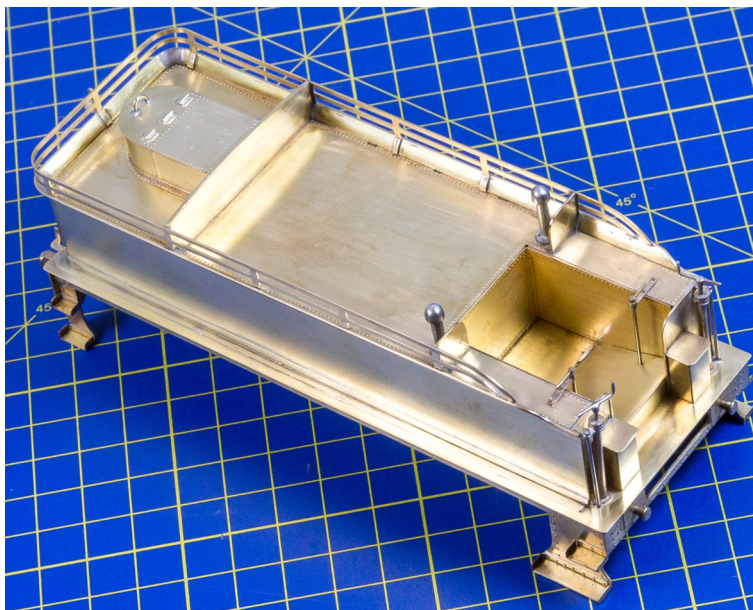
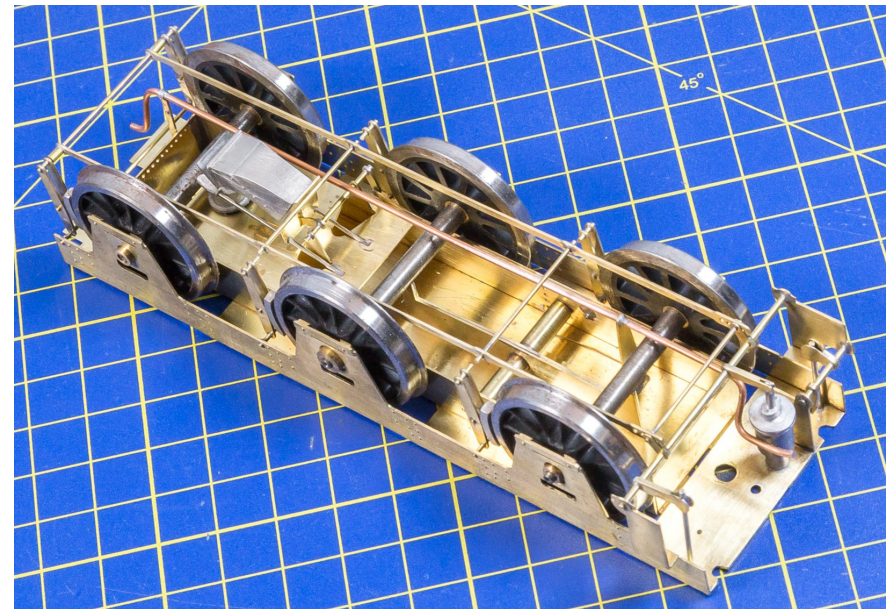
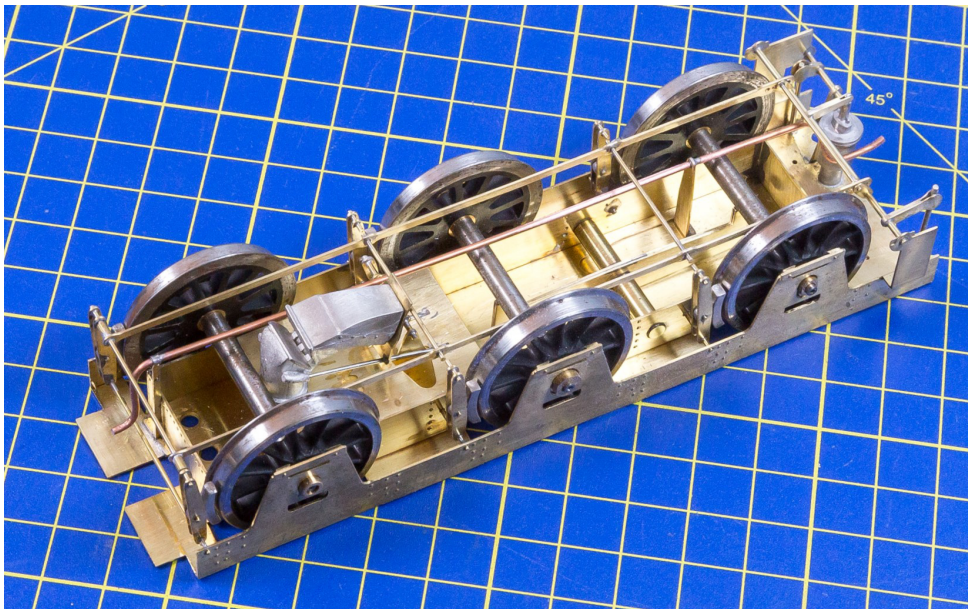


Buffer Construction



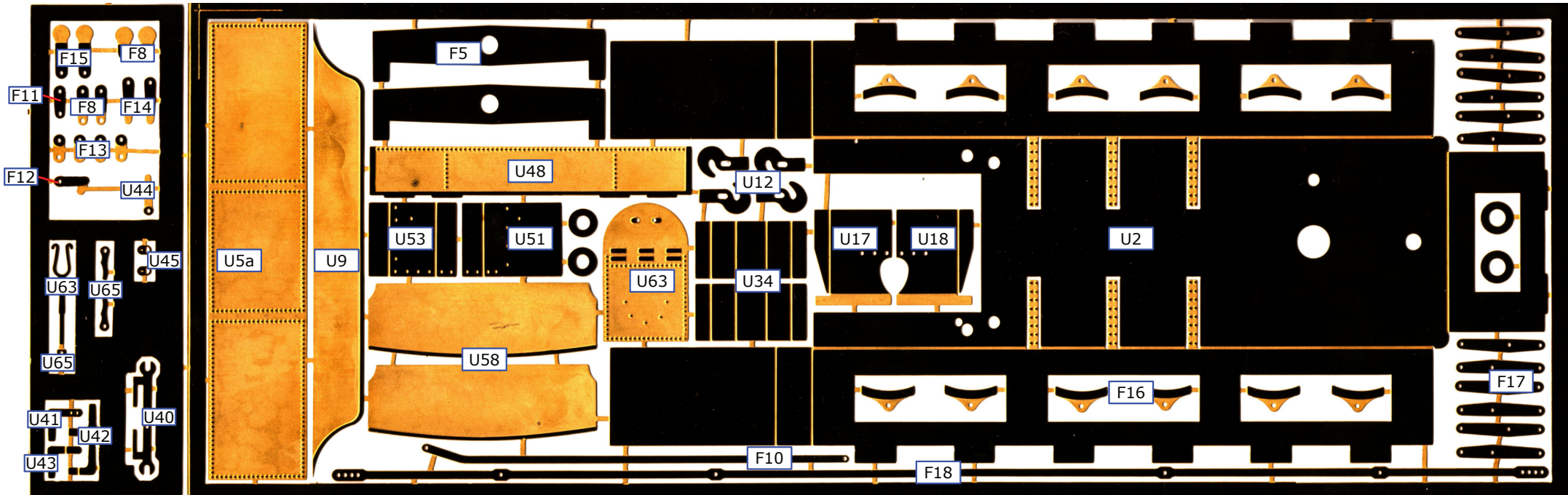
1. Drill casting (WM12) 2mm and glue bush in place.
2. Assemble with spring and retain with washer.

Finney7



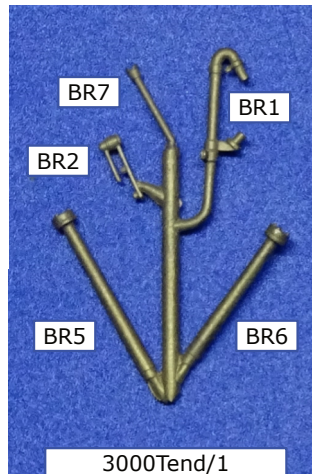
Finney7

ETCH SHEET 1

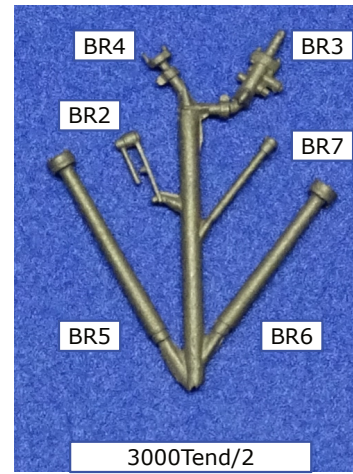


BRASS CASTINGS

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



3000Tend/1

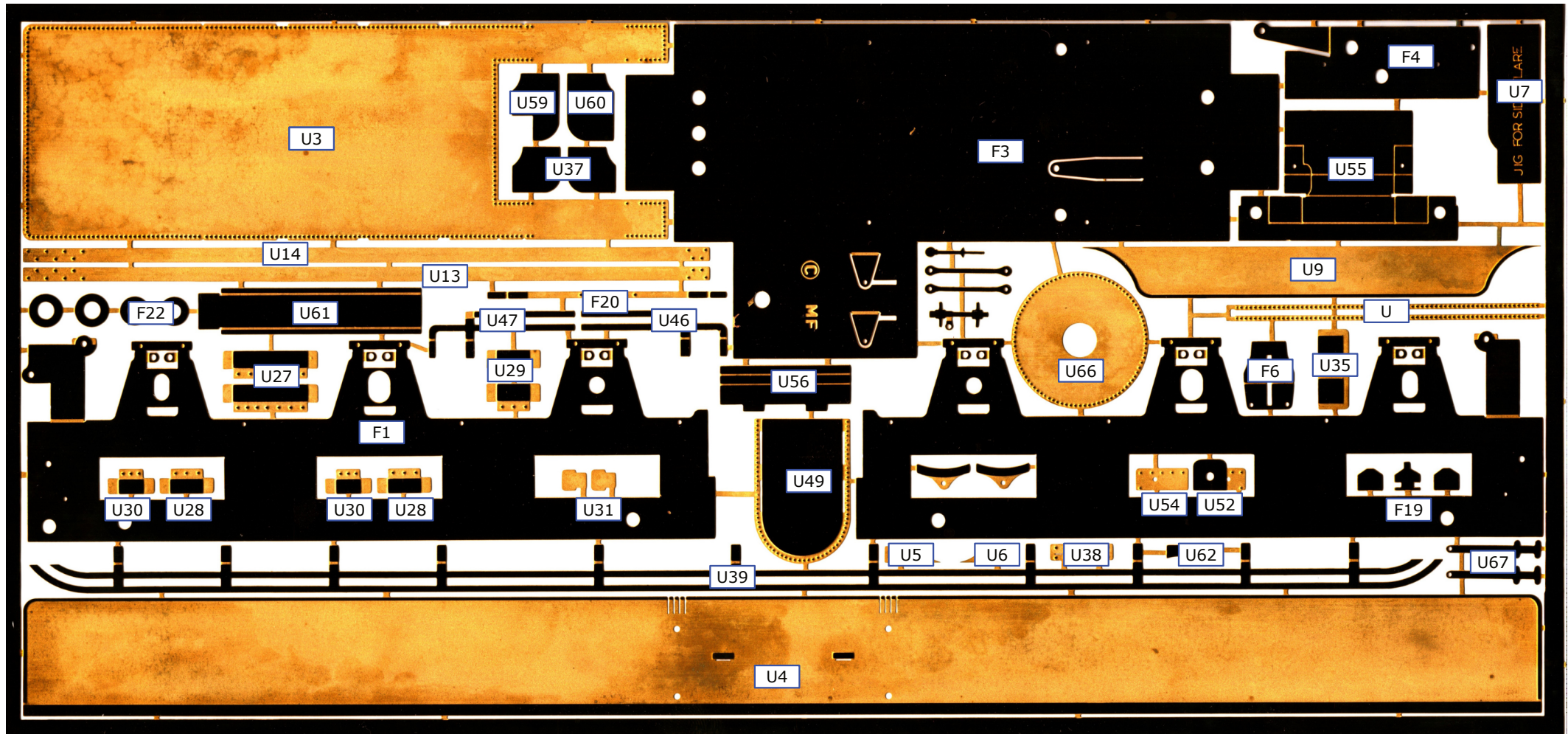


3000Tend/2

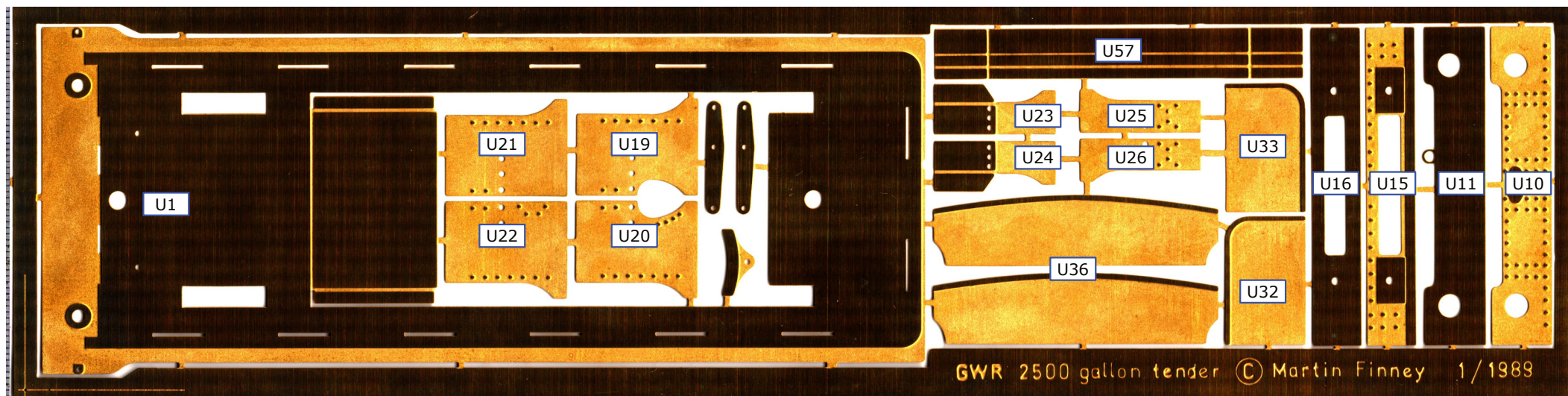
OTHER COMPONENTS

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.

ETCH SHEET 2

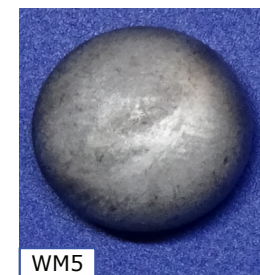
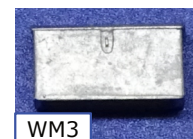
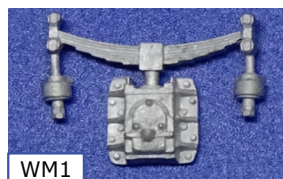


ETCH SHEET 3



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 1 Sandbox lid
- WM14 2 Front buffer
- WM15 12 3000G Spring Hangers



2500G TENDER PACKING LIST

ETCHES

1 Frames 25007 PT 78763

SPRUES

1 MF7/3000Tend/1

1 MF7/3000Tend/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 123000G 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