

BR/SR REBUILT BULLEID MERCHANT NAVY PACIFIC.

Fig. 1.

Cut out the running plate (1), cab front (2), cab floor (3), cab rear (4), front buffer beam (5) and front frames (6). Note that all the fold lines go on the inside.

Carefully file of the tabs from all the parts. Gently curve the cab sides to match the profiles of the cab front and rear. Fold the valences down and roughly form the valence front curves. The running plate angles locate onto the slots in the back of the valences. Hold the valences in place and then solder the seams.

Fit the cab front onto the three small tabs at the back of the running plate. The cab front should overlap the cab sides and should be soldered in place so that it holds the sides in position. Fit the cab floor into its slots in the cab sides with the tabs facing backwards. When the position is correct solder it in place. Now solder the cab rear onto the tabs and to the cab sides. Fold the bottom of the cab in to match the cab rear.

Fig. 2.

Check that the upper cab sides (7 & 8) fit in place OK, (they may need a little work). When a good fit is achieved use low melt solder to attach them to the lower cab sides. The cab front and cab rear will give you a guide to the positioning. Check the fit of the cab roof (9). Take sure the curvature of the roof matches the cab front as this part has a tendency to flatten in the mould. You will also have to file away a certain amount of whitemetal down the sides of the roof to get a snug fit. Solder the roof in place and use the solder to fill in or build any sections as required.

Fig. 3.

Drill a 2mm hole 12mm from the front running plate angle. This is to take a self tapping screw for fixing the boiler.

Clean any lines or imperfections from the boiler (11) (there are some mould lines under the boiler barrel). Glue the smokebox wrapper (10) around the smokebox. Trim any overlap at the front. Check the fit of the boiler onto the running plate (there may be a slight gap at the back end which may need filling). When satisfied with the fit line the boiler up centrally on the running plate. When you are satisfied with the position tack the boiler in place with superglue. Check again that it is central and add more superglue to hold. Use epoxy resin to glue the firebox to the cab front permanently (from the inside). Drill out a 1.5mm hole in the bottom of the smokebox saddle through the 2mm hole you drilled earlier. Screw the saddle firmly in place with the self tapping screw. Add superglue to the screw to prevent it coming undone.

Drill the washout plug holes out with a 1.5mm drill and the handrail knob holes with a 0.8mm drill.

Fig. 4.

Please note that the ejector pipe (21) has been replaced by 0.9mm brass rod and some copper wire for the additional piping.

Fit the turned brass washout plugs (12) flush with the boiler. Clean up the castings and etchings for parts 13 to 62.

Fit the two washout plugs into the holes on the front corner of the lower firebox sides (13 & 14). Fit the firebox castings underneath the running plate. They locate against the cab front and against the running plate valence. Glue the L/H ashpan door lever (15) into the holes on the L/H firebox side and the R/H operating rod in place on the firebox side.

Glue the smokebox door (19) to the front of the smokebox.

The cabside window frames (27 & 28) are of two types. Part 27 (with two bars) represents the wooden frame as fitted to 35011-20 and part 28 (with one bar) represents the brass frame as fitted to 35001-10 and 35021-30.

The smokebox saddle front (29) fits in between the front frames from under the running plate. The back should line up with the smokebox saddle. (You will need to cut the front of the chassis back to fit. See chassis instructions).

Note that the mechanical lubricators (36 & 37) are different and the set with two different types go on the right hand side.

The manifold wheel (41) fits into the bole but is best left until after painting and lining as it covers the boiler band just in front of the manifold.

Before fitting the injectors (58) you must attach the back injector (60) to it at right angles. The remainder of the parts can be fitted in rough number order.

Fig. 5.

MAINFRAMES (63) - Check all the wire pilot holes to take sure that the 0.7mm brass wire supplied will go through. Bend up the frames and the integral spacers at front and rear with the fold lines on the inside to make up a box section. Fit the small frame spacer (64) into the recesses just behind the cylinder mounting slots. The front spacer (65) is also the bogie mounting plate. Solder an 8BA nut over the hole, as indicated, so that the bogie (74) can be fitted later. The spacer can now be slid into the two recessed slots in the front of the chassis.

CYLINDER BLOCK - Cut out the Cylinder main etching (67) and fold down the front and back plates with the fold lines on the outside. Push the cylinder block onto the mainframes. With the wrapper plates still in the horizontal position the 3/32" tubes (66) can be soldered in position so that the fronts of the tubes are flush with the surface of the front plate and protrude out of the back plate. The wrapper plates must now be gently folded down taking plenty of time to get the curves in the right place. Solder into position the cylinder end covers (69 & 70) and the three washers (71) on each side. The cylinder valve covers (72 & 73) can now be fitted.

BOGIE - Cut out the bogie (74) and fold the sides down. Open out the holes to take the 2mm bearings (75) and solder them in place. Glue the dummy compensating castings (76) in place. Then, when you are ready, the bogie can be fitted using the spring (77), screw (78) and washer as shown.

Fig. 6.

COMPENSATING - Solder the frame bushes into the rear two holes in the chassis and into the compensating beams (79 & 80). The compensating beams should be mounted on the the brass wire and one of the springs (77) used as the compensating spacer. It is very important that no parts of this mechanism are soldered in a fixed position other than the brass wire to the mainframe. Both beams must move independently of each other. The assembly of the beams is otherwise very simple. Fit the wheels so you can test the compensating mechanism and when satisfied that it works O.K. remove the wheels and put them to one side.

Fig. 7.

SLIDEBARS - Cut out the main slidebar etching (81) and fold as in fig. 7. Fold the slidebars down. Solder the three spacers (82) onto the main slidebar and the inner slidebar (83) on top of that. Push the completed slidebars onto the chassis. The top of the slidebar bracket should be level with the top of the frames in the cut out.

MOTION BRACKETS - Cut out the motion brackets (84 & 85) and fold them as shown. The front bracket fits into the slots just behind the slidebars. The rear bracket fits in the recesses in the top of the frames.

FIG. 8.

COUPLING RODS - The driving wheels can now be fitted permanently. Fit Romford crankpins (not supplied). Assemble the coupling rods (86, 87, 88, 89, 90, 91, 92 & 93) as shown in the diagram. Take care in this operation as they must move freely for the compensation to work. The connecting rods (94, 95, 96 and 97) can also be assembled.

FIG. 9.

BRAKE GEAR - The brake gear is rather delicate and requires a certain amount of patience. Careful study of fig. 9. is advised before commencing. As the joints are mostly close together super glue or the equivalent may be considered easier than soldering. Check that the 0.7mm brass wire will go through all the holes. Start by fitting both the L/H and R/H centre front brake hangers (98) onto the ends of the protruding compensating spindle. Once the brake hangers are correctly fixed in position they can be used as a datum point via the inner pull rods (99, 100 & 101) for the correct positioning of the other brake hangers. Finally add the outer pull rods (102, 103 & 104).

FIG. 10.

CROSSHEADS - Fold the crossheads (105) as shown in the drawing. Fix the crossheads to the con rods with the 14BA screws and nuts provided.

Fig. 11.

VALVE GEAR - Cut out all the valve gear parts. Rivet together the various parts and attach them to the motion brackets with the 16BA nuts and screws.

Fig. 12.

REAR PONY TRUCK - Open out the holes in the pony truck (112) and solder the 2mm bearings (75) in place. Fold the sides up (the fold lines must face upwards) and fit a 14mm wheel into the pony truck. You can now fold the pony truck as shown and fit the sideframes (113, 114 or 115 & 116) of your choice. The sides are marked on the back to indicate which locos they are suitable for. Now glue the pony truck weight on top of the truck.

TENDER ALLOCATIONS

Tender allocations for the Rebuilt Merchant Navy did not strictly follow the three building series as it did with the original locos. Towards the end of their lives some amount of chopping and changing of tenders occurred. The allocations are as follows although we do not yet produce the 5000 gallon tender or the BR 5250 gallon tender.

The 6000 gallon tender attached to 35008 was a longer version of the 5250 gallon tender. 35024 had the self weighing tender (S/W) prior to rebuilding and for a couple of years afterwards. 35020 carried an original 6000 gallon tender when rebuilt for two months. This was so that the engine could be attached to a dynamometer car.

35001	5000g (8/59) 5250g (2/63).	35016	5100g (4/57).
35002	5000g (5/58), 5250g (4/60).	35017	5100g (3/57).
35003	5250g (8/59).	35018	6000g (2/56), 5000g (12/61), 5250g (1/62).
35004	5000g (6/58).	35019	5100g (5/59).
35005	5250g (5/59).	35020	HIGH 6000g (5/56), 6000g (7/56).
35006	5000g (10/59).	35021	6000g (6/59).
35007	5000g (5/58), 5100g (9/66).	35022	6000g (6/56).
35008	5000g (5/57), 6000g (2/62), 5250g (10/64).	35023	6000g (2/57).
35009	5000g (3/57).	35024	S/W 6000g (4/59), 6000g (12/61).
35010	5000g (1/57), 5100g (12/64).	35025	6000g (12/56).
35011	5100g (7/59).	35026	5100g (1/57), 6000g (3/65), 5250g (4/65).
35012	5100g (12/57), 5000g (12/64).	35027	6000g (5/57), 5100g (3/65).
35013	5100g (5/56).	35028	6000g (10/59), 5100g (3/65), 6000g (10/65).
35014	5100g (7/56), 6000g (3/65), 5000g (9/65).	35029	5100g (9/59), 5000g (10/65).
35015	5100g (6/58).	35030	6000g (4/58).

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Parts List

1.	Running plate.	67.	Cylinders.
2.	Cab front.	68.	3/32" tube.
3.	Cab floor.	69.	Front cylinder covers.
4.	Cab rear.	70.	Rear cylinder covers.
5.	Front buffer beam.	71.	Cylinder washers.
6.	Front frames.	72.	Front cylinder valve covers.
7.	L/H upper cab side.	73.	Rear cylinder valve covers.
8.	R/H upper cab side.	74.	Bogie.
9.	Cab roof.	75.	2mm bearings.
10.	Smokebox wrapper.	76.	Compensating castings.
11.	Resin boiler.	77.	Springs.
12.	Washout plugs.	78.	8BA screws and nuts.
13.	L/H lower firebox side.	79.	L/H compensating beam.
14.	R/H lower firebox side.	80.	R/H compensating beam.
15.	L/H ashpan door operating lever.	81.	Main slidebars.
16.	R/H ashpan door operating rod.	82.	Slidebar spacers.
17.	Dome.	83.	Inner slidebar.
18.	Chimney.	84.	Front motion bracket.
19.	Smokebox door.	85.	Rear motion bracket.
20.	Manifold pipe.	86.	Coupling rods.
21.	Ejector pipe (0.9mm brass and fine copper wire).	87.	" " "
22.	Front roof cover.	88.	" " "
23.	Cab roof shutter.	89.	" " "
24.	Rear roof cover.	90.	" " "
25.	Sand operating valve.	91.	" " "
26.	Reversing bar.	92.	" " "
27.	Cab window frames (wooden).	93.	" " "
28.	Cab window frames (brass).	94.	Connecting rods.
29.	Smokebox saddle front.	95.	" " "
30.	AWS box.	96.	" " "
31.	Main steam pipes.	97.	" " "
32.	Front sandbox fillers.	98.	Brake hangers and blocks.
33.	Rocker arm cover.	99.	Inner pull rods.
34.	Nameplate mount.	100.	" " " "
35.	Large sandbox filler bases.	101.	" " " "
36.	L/H mechanical lubricators.	102.	Outer pull rods.
37.	R/H mechanical lubricators.	103.	" " " "
38.	Sandbox filler pipes.	104.	" " " "
39.	Small sandbox filler bases.	105.	Crossheads.
40.	Speedo drive cable.	106.	Radius rods.
41.	Manifold wheel.	107.	Expansion links.
42.	Smokebox top inspection cover.	108.	Return crank rods.
43.	Clack valves and pipes.	109.	Return cranks.
44.	Motion bracket.	110.	Combination levers.
45.	Steam generator mounting block.	111.	Union links.
46.	Steam generator.	112.	Rear pony truck.
47.	Cab fallplate.	113.	L/H pony truck side (1 - 10 & 11 - 20).
48.	L/H smoke deflector.	114.	R/H " " " " " " " "
49.	R/H smoke deflector.	115.	L/H pony truck side (21 - 30).
50.	L/H steam pipe (outside).	116.	R/H " " " " " "
51.	R/H steam pipe (outside).	117.	Sprung buffers.
52.	Centre cylinder steam pipe.	118.	Front ladders.
53.	Snifting valve.	119.	Smokebox door handle.
54.	Electric lamps (smoke deflector).	120.	Handrail knobs.
55.	Electric lamps (front running plate).	121.	Vacuum and steam pipes.
56.	Front running plate angle steps.	122.	1/8th chassis bearings.
57.	Electric lamp (smokebox top).	123.	16BA screws and nuts.
58.	Injector and piping.	124.	Steel rivets.
59.	Whistle and valve.	125.	1/16" tube.
60.	Rear injector.	126.	0.45mm Handrail wire.
61.	Ross pop safety valves.	127.	0.7mm Brass wire.
62.	Cab backhead.	128.	Balance weights.
63.	Mainframes.	129.	Lamp brackets.
64.	Centre frame spacer/body fixing.	130.	Cylinder drain cocks.
65.	Front frame spacer/bogie mount.		
66.	Rear frame spacer/body fixing.		

Fig. 1. Running Plate and Cab Construction.

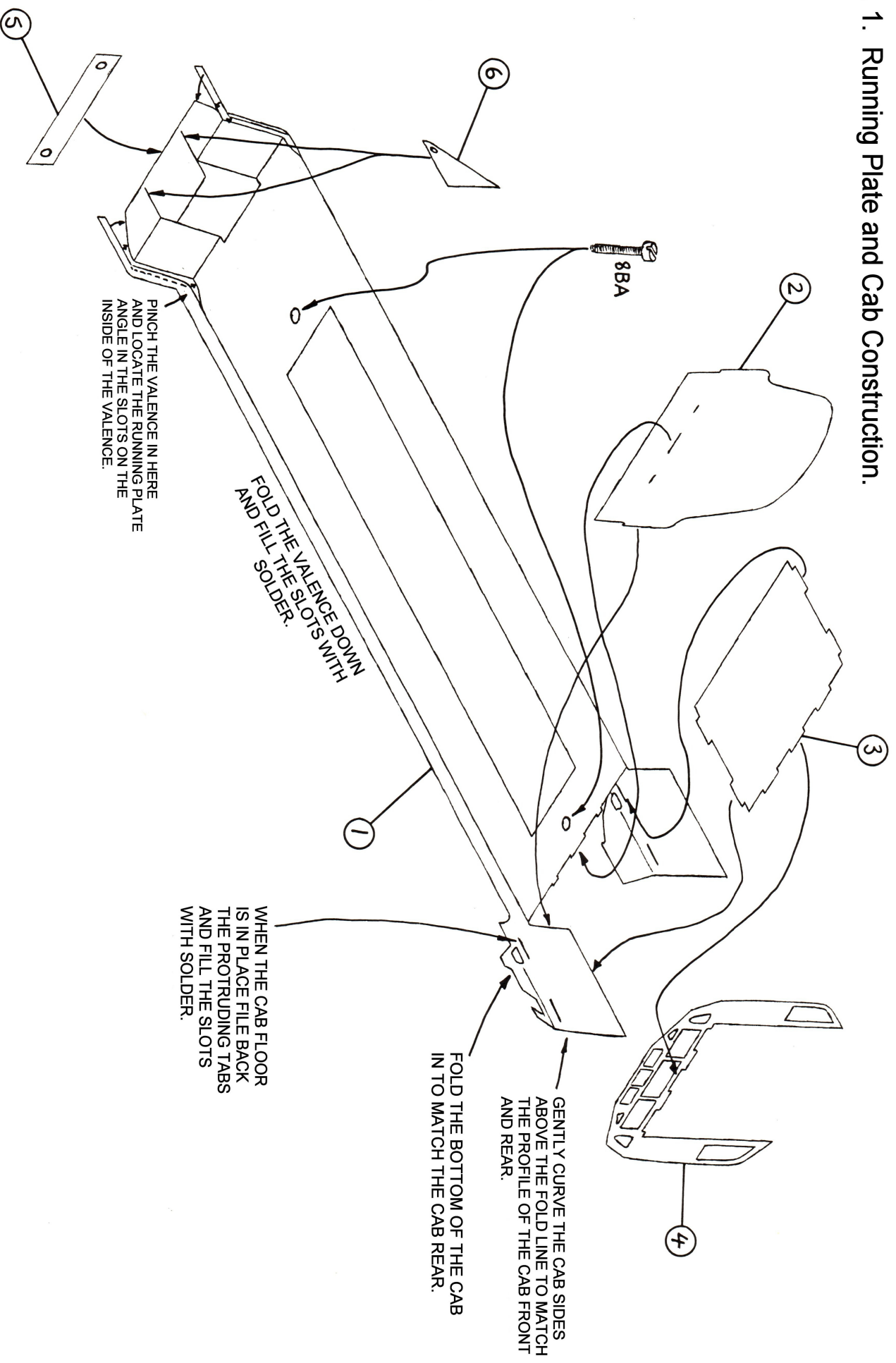


Fig. 2. Upper Cab Construction.

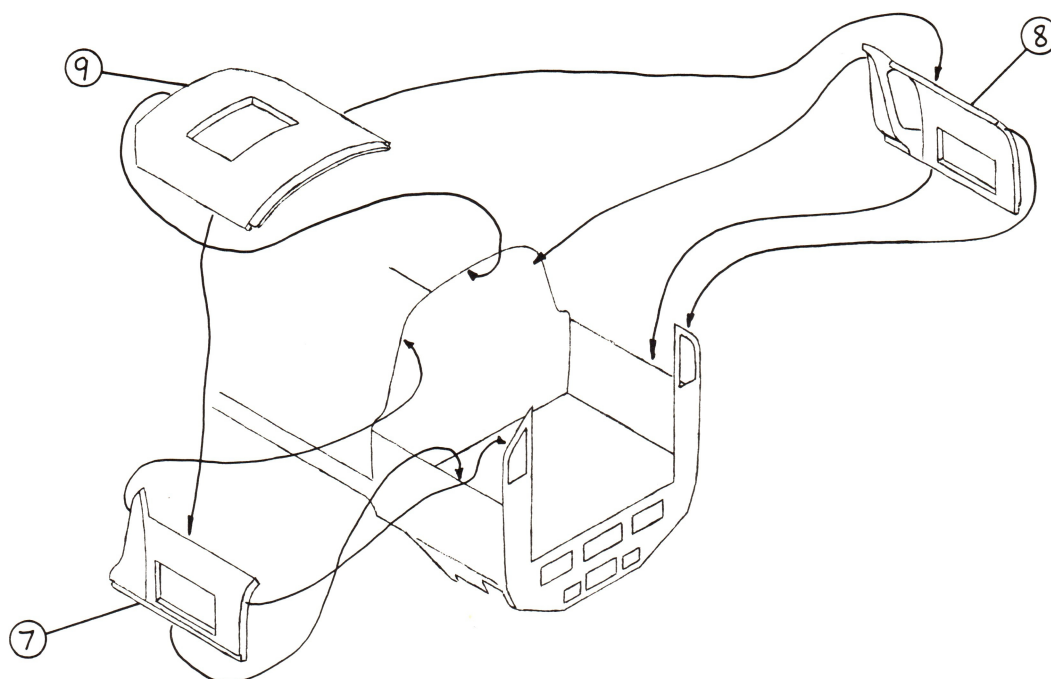


Fig. 3. Fitting The Boiler.

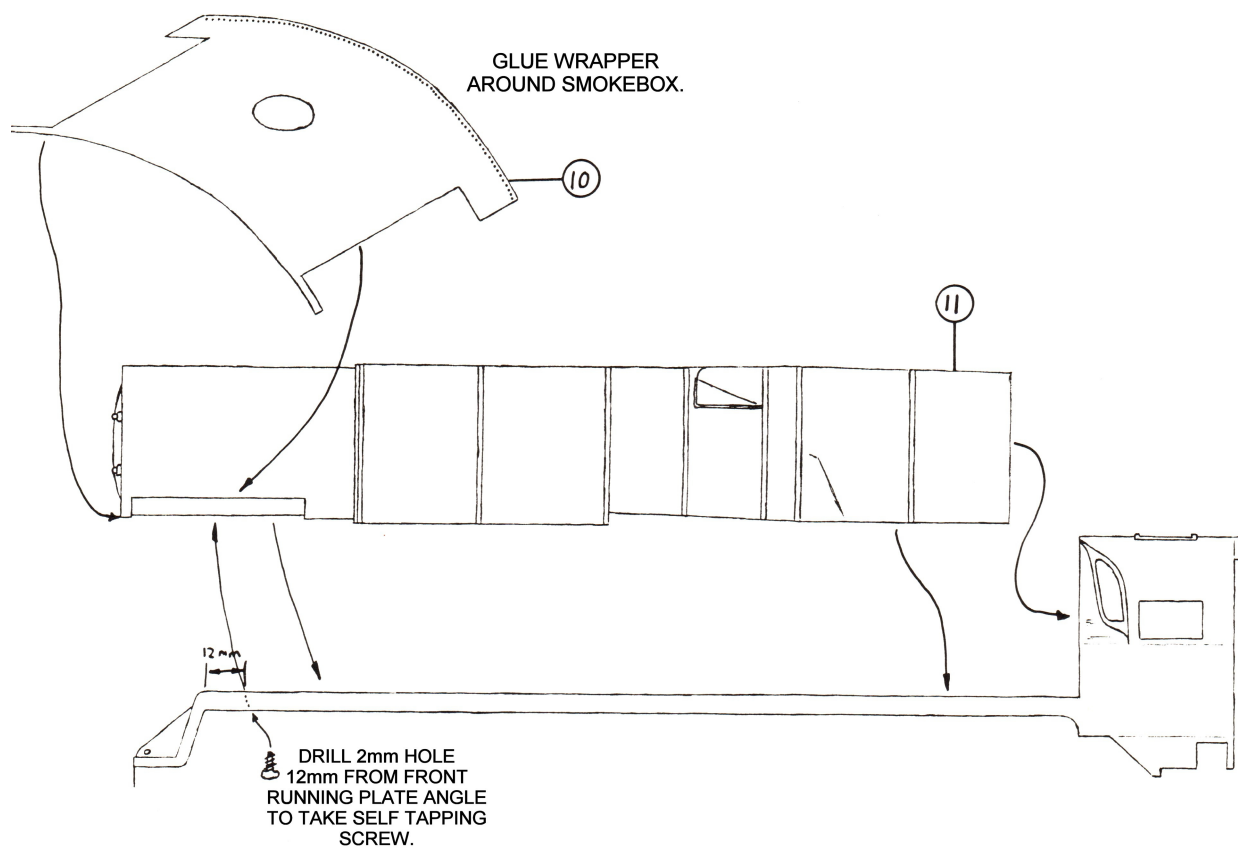


Fig. 4. Body Detailing.

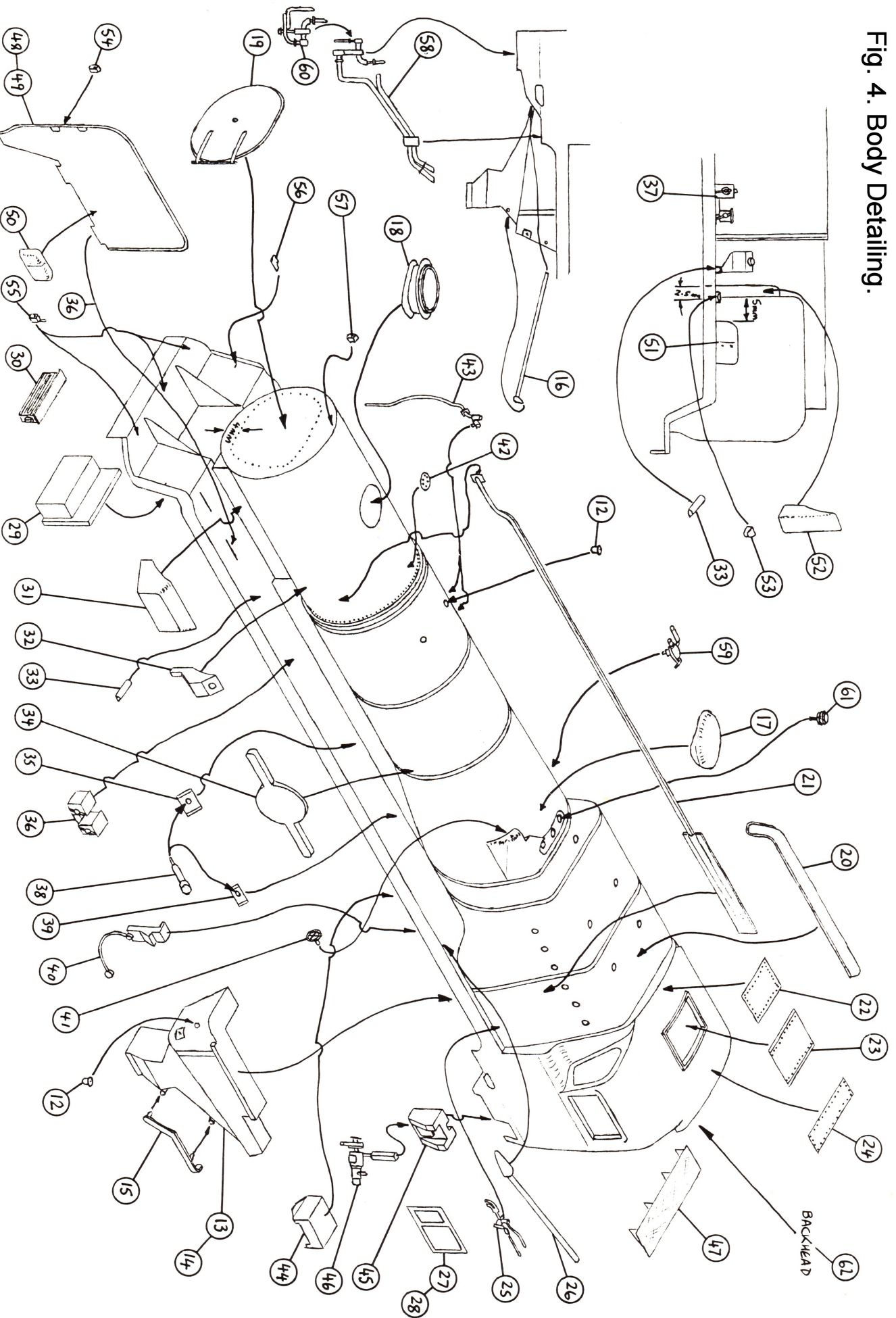


Fig. 5. Cylinders and Bogie Assembly.

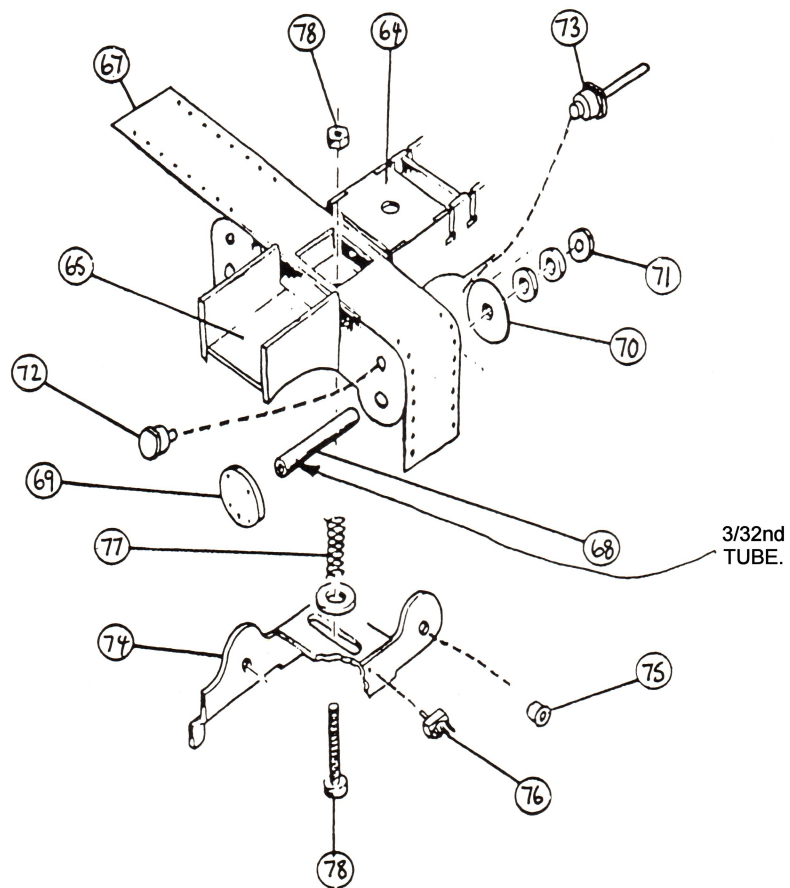


Fig. 6. Chassis Compensation.

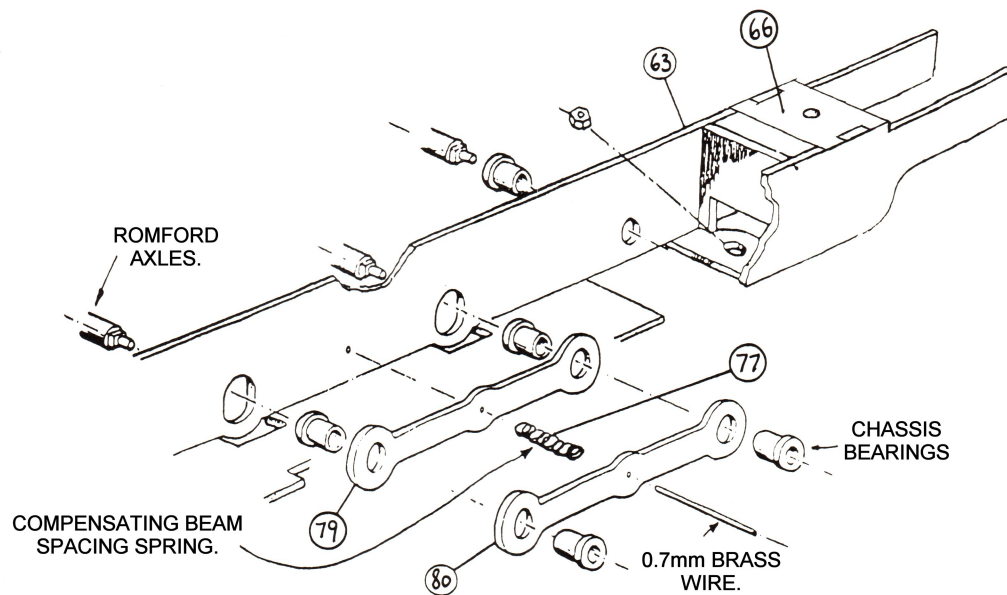


Fig. 7. Sidebar Assembly and Fitting Motion Brackets.

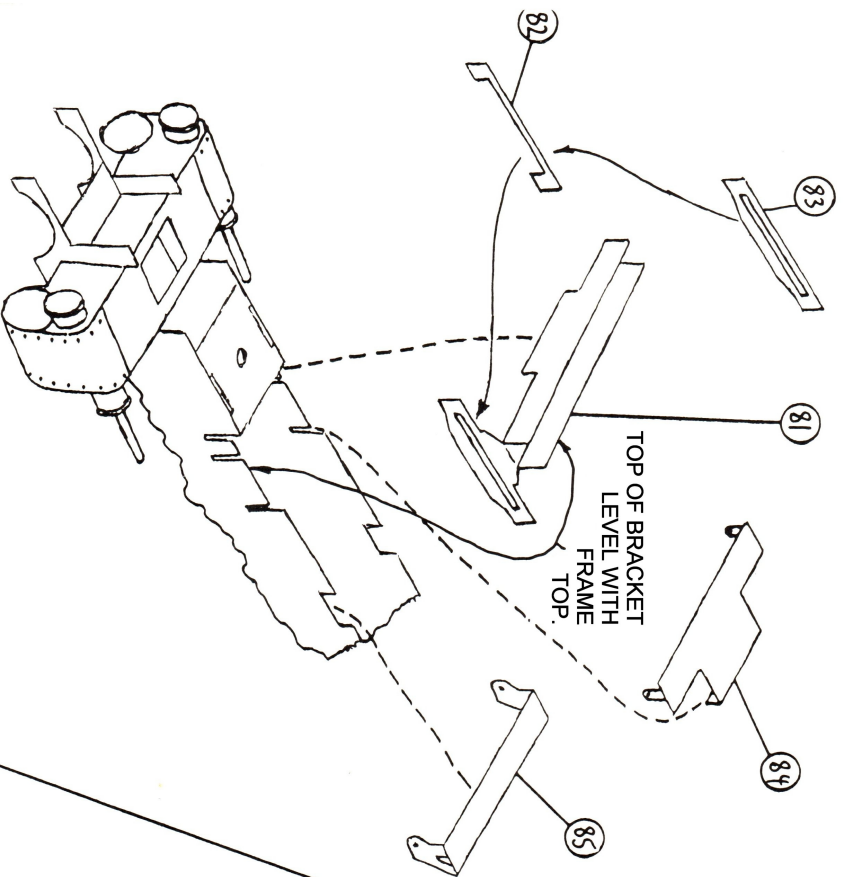


Fig. 8. Coupling and Connecting Rods.

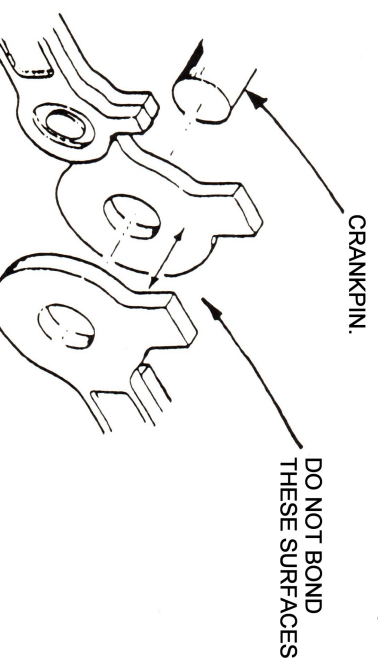
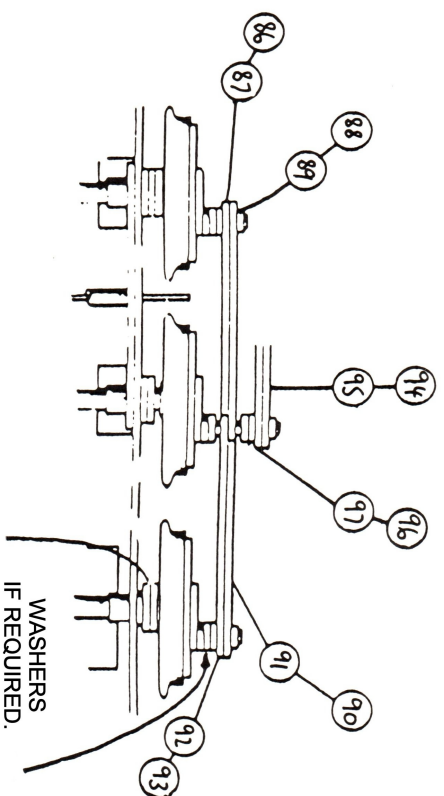


Fig. 9. Brake Gear.

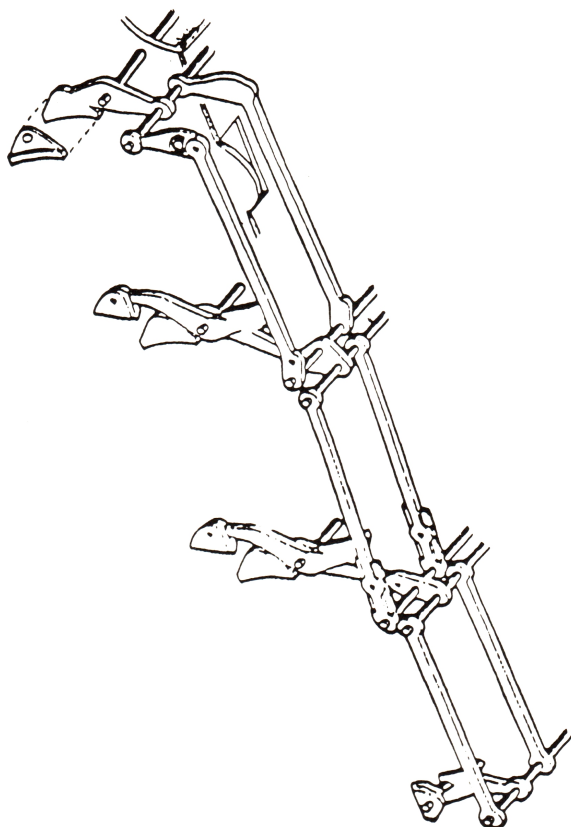


Fig. 11. Valve Gear.

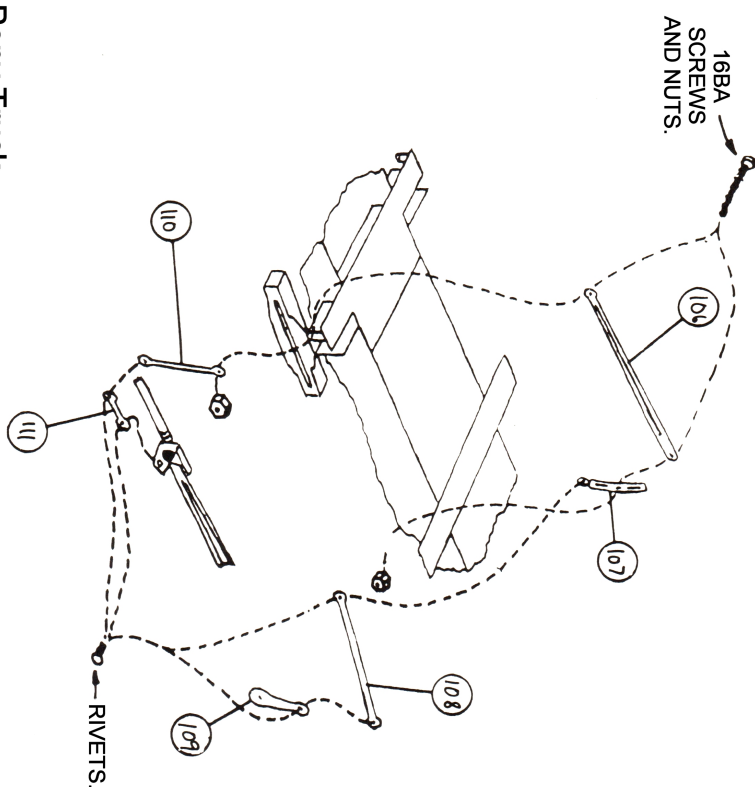


Fig. 10. Crosshead.

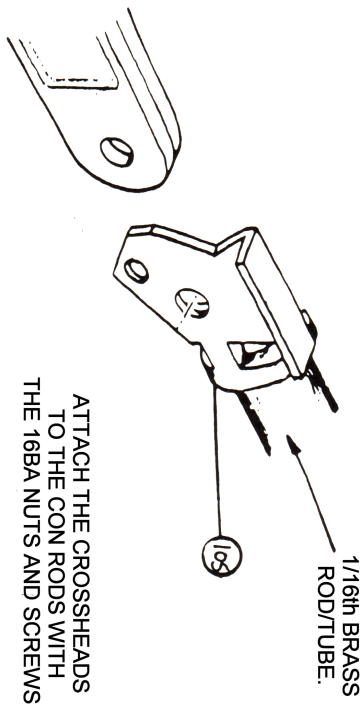


Fig. 12. Pony Truck.

