

## BR CATFISH (ZEV) 19.5t BALLAST HOPPER WAGON

These wagons have a hopper fitted with one central discharge door & are basically a welded version of the earlier 'Mackerel'.

236 Catfish were built from 1955-58 by Metropolitan-Cammell & BR Diagram 1/586 & were numbered:

1955: Lot 2682/3 DB992531 - 650. Lot 2775 DB992651-710

1958: Lot 2929 DB993508 - 566. (152 remaining in service 2/94)

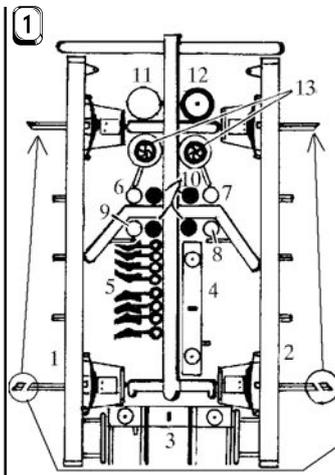
These were all built with oil axleboxes & self-contained buffers as on the model.

A further 471 were built to Lots 3039/3331 in 1960/61 (DB983376 576/627 - 896). These had Oleo buffers & roller bearings. (353 remained service in service 2/94)

Catfish were originally allocated to the LMR, but from the late 60s spread onto the ScR & ER. Some were loaned to the SR on the 1970s. Catfish were worked with most other types of ballast hoppers.

### Description of Chassis Components

1. Solebar
2. Solebar
3. Headstock with handrail
4. Headstock
5. Brake Shoes (8)
- 6-9. Buffer collars
10. Buffer heads (4)
11. Vacuum cylinder top
12. Vacuum cylinder bottom
13. Brake handwheels (2)



The longer end stanchions must be cut to the same size & shape as the shorter end stanchions (there's a line on the back showing where to cut).

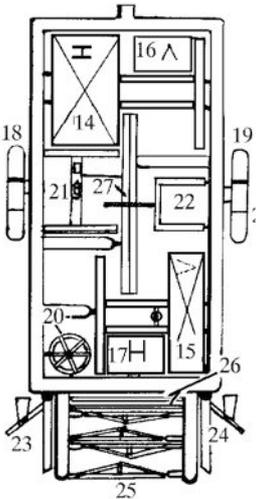
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### Description of 'Detail' parts

14. Large platform. marked H
15. Small platform. marked V
16. Chute. end plate, marked H
17. Chute end plate, marked H
18. Coupling adaptor
19. Coupling adaptor, end V
20. Handwheel
21. Support, end H
22. Angled support struts, end H
- 23/24. Support struts, end V
25. Brake linkage detail (4 pieces)
26. 2 rods, for hand/brake wheels
27. Internal hopper bracing

Remove parts from sprues with a sharp knife, taking care not to leave any moulding pips on the components, or they will interfere with construction.

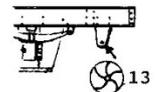
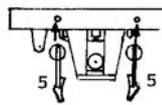
N.B. Fit wheel bearings (not supplied) before beginning assembly.



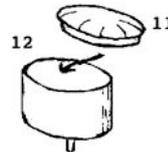
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Fit the brake shoes to the pegs on the solebars

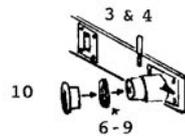
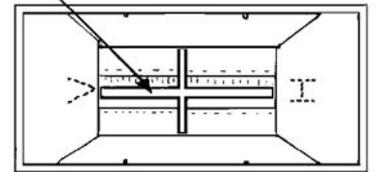
Fit the brake wheels to the small brackets



Put the vacuum cylinder top (11) on the bottom (12)



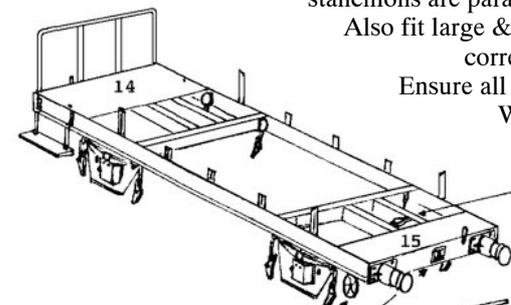
Fit the hopper bracing, with the letters matching those on the hopper



Assemble buffer parts

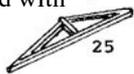
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Assemble chassis, starting with solebars - fix to headstocks. It is important that the support stanchions are parallel & not splayed out. Also fit large & small platforms at the correct ends of the chassis. Ensure all parts set with no gaps. When set insert wheels.



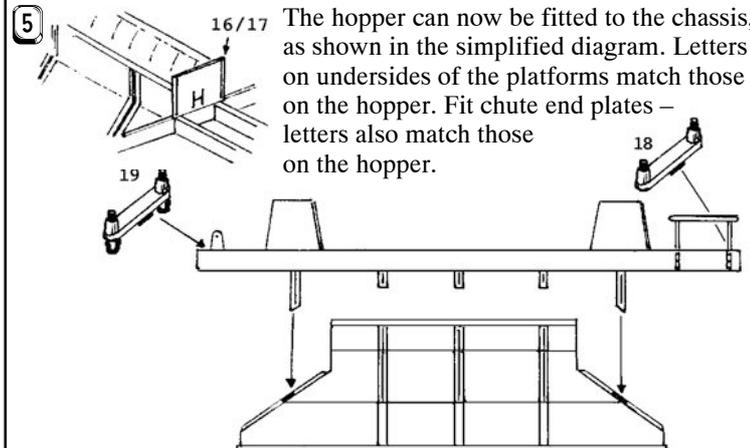
Fit brake rigging between brake shoes. the inner ones can only be used with S4 wheelsets.

Fit shaft between handwheel brackets (Omit if using Hornby couplings)



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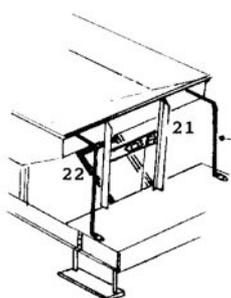
The hopper can now be fitted to the chassis, as shown in the simplified diagram. Letters on undersides of the platforms match those on the hopper. Fit chute end plates - letters also match those on the hopper.



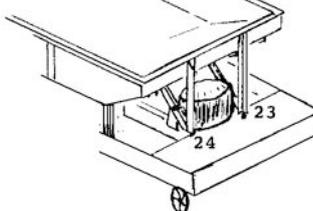
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Fit support struts 23/24 to end "V"

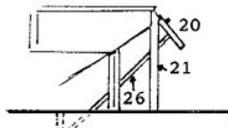
Fit support 21/22 struts to end "H"



Bend handrails from wire, fit as shown. Locate bottom ends into the holes in platform "H"



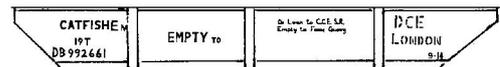
Fit handwheel (20) to shaft (26) & locate on the frame at end "H"



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### LIVERY

Pre-1967 black overall-lettering yellow or white, some were gulf red hopper/black chassis - lettering white.



C. 1967 to 1983 - olive green bodywork & solebars with black running gear, white lettering. TOPS code added 1980



From 1983 - medium grey overall. 12" yellow stripe on upper part of hopper side, white lettering. Generally lamp-irons, handrails, handwheels & footstep supports - white. Electrification flashes on hopper side at 'control' end only

Transfers: Sheet CT4 formerly produced by us, is now available from Modelmasters, ref. no. 4867. and also the CT2 Air-braked wagon sheet, ref. 4866.