

WOSS 501/1

British Railways Board

Director of Mechanical and Electrical Engineering

**Hot Water/Detergent
Cleaning**

WORKSHOP OVERHAUL STANDARD SPECIFICATION



REVISION RECORD

This Specification will be updated when necessary by the issue of amended pages accompanied by revision letters. The amended or additional part of re-issued pages will be marked with a vertical black line.

If you consider that an amendment is necessary, complete BR Form 14298 and pass it to the local BRB Resident Engineer or Area Quality Engineer. Submission of a form does not authorise the proposed amendments.

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Should any query arise regarding the contents of this document telephone 0332 42442 Ext. 3516, BR Code is 056 3516, or write to the above address.

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This Specification applies to equipment fitted to the vehicles indicated 'X' below, but it is only to be implemented when authorised by an appropriate maintenance/overhaul document.

LOCOMOTIVES

03	X
08	X
09	X
20	X
25	X
26	X
27	X
31	X
33	X
37	X
43	X
45	X
47	X
50	X
56	X
58	X

73	X
81	X
85	X
86	X
87	X
88	X
89	X
91	X

DMU's

101	X
104	X
107	X
108	X
110	X
111	X
114	X
115	X
116	X
117	X
119	X
121	X
123	X
140	X
141	X
142	X
143	X
144	X
150	X
151	X
155	X
156	X
210	X

EMU's

302	X
303	X
304	X
305	X
307	X
308	X
309	X
310	X
311	X
312	X
313	X
314	X
315	X
317	X
318	X
319	X
504	X
507	X
508	X

411	X
412	X
413	X
414	X
415	X
416	X
419	X
421	X
422	X
423	X
432	X
455	X
485	X
486	X
487	X
488	X
489	X
491	X

DEMU's

201	X
202	X
203	X
204	X
205	
207	

COACHING STOCK

Mk 1	
Mk 2, 2a-c	
Mk 2d-e	
Mk 2f	
Mk 2 DBSO	
Mk 3a	
Mk 3b	
Mk 3 (HST)	
Mk 3 SLE and SLEP	
Non Passenger	

WORKSHOP OVERHAUL STANDARD SPECIFICATION 501/1
HOT WATER / DETERGENT CLEANING

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INTRODUCTION

This specification is for use whenever hot water/detergent cleaning is specified in repair documents.

TOOLS

Air line 80 - 100 psi

Hot water washing unit with facility for chemical mix and to the following specifications.

Pressure 1000 - 950psi
Flow rate 2.5 - 3 gallons per minute
Temperature 80 - 90°C
Lance jet angle 25 - 45°

Circulatory oven, thermostatically controlled.
Vacuum drying chamber

MATERIALS

BR Cat No

Janitol or	7/19756
SIC(25L)	7/20336
SIC(200L)	7/20338
Cleaning gel	7/71086
SDC Fluid	27/18401

SECTION 1 - REPAIR PROCEDURE

1. Electrical Machines

- 1.1 Remove heavy contamination with a non-metallic scraper.
- 1.2 Remove dust and unamalgamated contamination using a compressed air line.
- 1.3 If coils are heavily contaminated, work cleaning gel into their surfaces with a brush.
- 1.4 Mix a solution of 1 part detergent to 10 parts cold water. Coat all surfaces with the solution using a low pressure device, e.g. syringe or stirrup pump. Allow the machine to stand for 20 minutes.
- 1.5 Set the washing unit to a mix of 1 part detergent to 20 parts water, a temperature of $85 \pm 5^{\circ}\text{C}$ and a pressure of 950 - 1000 psi. Wash the machine until clean. (This should take between 25 and 45 minutes for traction motors, main generators and alternators).
- 1.6 Set the washing unit to hot water only and rinse all detergent from the machine. (This should take between 5 and 10 minutes for traction machines). Turn off the washing unit.
- 1.7 Remove surplus water using a compressed air line. On armatures, immediately after cleaning, dry pinion seats, bearing seats and bearing inner rings with a clean cloth and then protect with SDC fluid.
- 1.8 Place the machine in a Circulatory Oven and stove at 160°C for 12 hours or preheat to at least 50°C and dry in a Vacuum Chamber.

2. Electrical Equipment

- 2.1 Remove heavy contamination with a non-metallic scraper.
- 2.2 Place small components in a wire basket.
- 2.3 Remove dust and unamalgamated contamination using a compressed air line.
- 2.4 Set the washing unit as directed in para 1.5 and wash the components until clean.
- 2.5 Set the washing unit to hot water only and rinse all detergent from the equipment.
- 2.6 Remove surplus water using a compressed air line.
- 2.7 Equipment may be left to dry at room temperature for 24 hours. Alternatively stove at $95 - 100^{\circ}\text{C}$ for 1 hour or preheat to at least 50°C and dry in a Vacuum Chamber.