

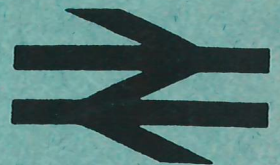
CEPS 175

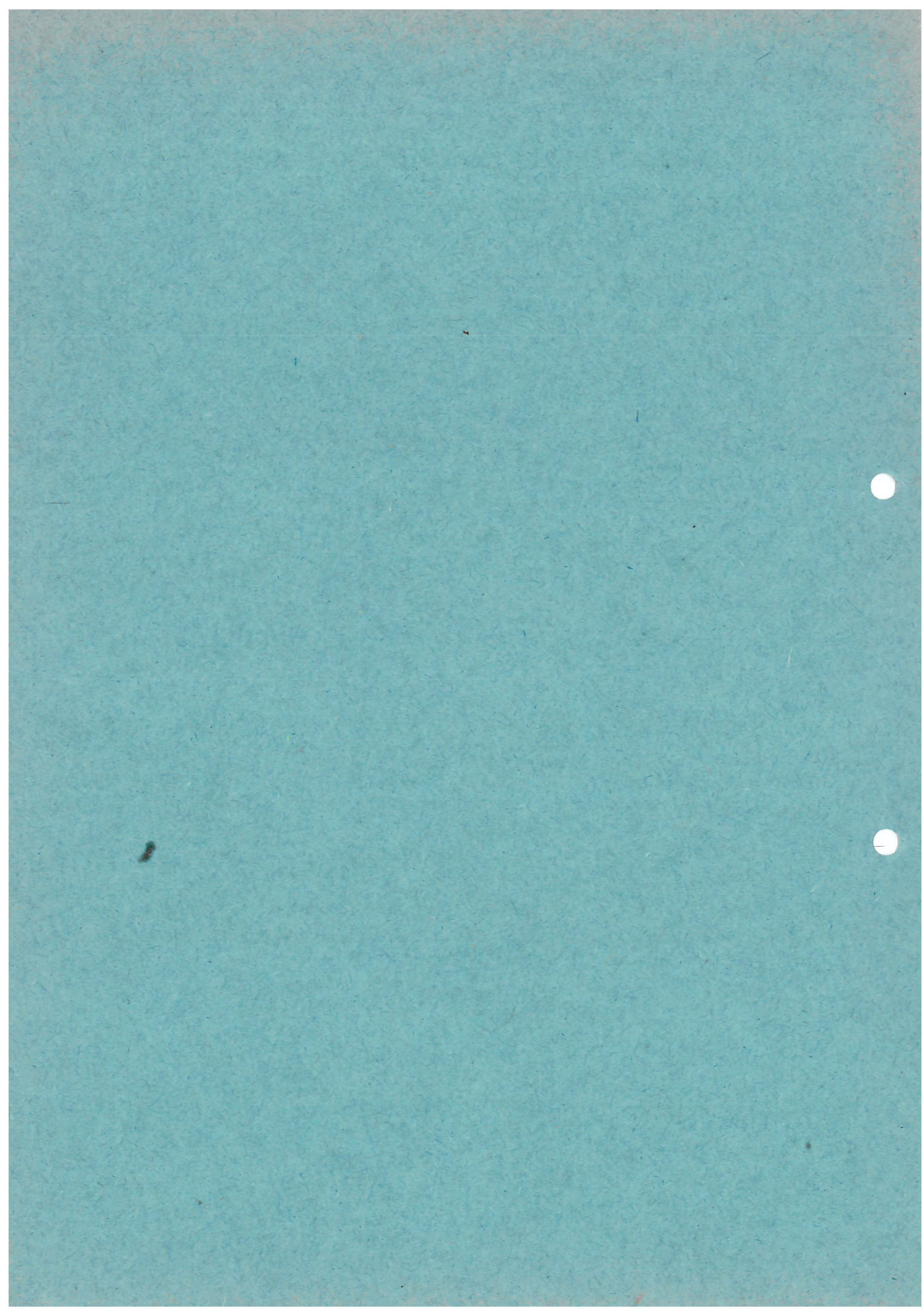
British Railways Board

Mechanical & Electrical Engineer's Department

REWIRING OF UNDERFRAMES

DMU MOTOR COACHES





This specification applies to equipment fitted to the vehicles indicated 'X' below, but it is only to be implemented when authorised by the appropriate Workshop Overhaul Schedule or Workshop Overhaul Standard Manual.

LOCOMOTIVES

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DMU's

101	X
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107	X
108	X
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114	X
115	X
116	X
117	X
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121	X
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EMU's

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DEMU's

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202	
203	
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COACHING STOCK

MK 1	
MK 2, 2a-c	
MK 2d-e	
MK 2f	
MK 3a	
MK 3 (HST)	
MK 3 SLE & SLEP	
Non Passenger	

501	
503	
504	
506	
507	
508	

PROCESS SPECIFICATION 175

REWIRING OF UNDERFRAMES

DMU Motor Coaches

CONTENTS

- Reference documents
- Tools and Materials
- Procedure
 - 1. Rewiring
 - 2. Engineering Instructions
 - 3. Testing
 - 4. Connecting
- Appendix 1: Cables Sizes

REFERENCE DOCUMENTS

Engineering Instructions

- G14 "Testing of Equipment Including Semi-Conductors"
- G260 "Standard Cable Identification Sleeves"
- MD61 "Starter Motor Isolation Sensitised Relay-Replacement by Electronic Control Module"
- MD73 "12 and 18 Way Relay-Operated Switch Panel and Indicator Lamps"
- MD305 "Fitting CAVAC203 Alternator Equipment in place of Obsolete Stones Tonum Generator"

Wiring Diagrams

- SC/DE1850 Control Wiring, Power Car
- SC/DE21975 Control Wiring, Motor Car
- SC/DE11134 Control Wiring, Power Car with 2 Alternators
- SC/DE21974 Control Wiring, Motor Car
- B3-AD-9021425 Wiring, Trailer & Driving Trailer Class 101
- B3-A0-9024073 Wiring, DE Power Car, Class 101
- B3-A0-9024074 Wiring, NDE Power Car, Class 101
- C-S-15270 Wiring, Class 101/1

TOOLS AND MATERIALS

100 V megger

Cables to Specification TDE/71/P/16 (See Appendix 1)

Cable terminals and splices to CEPS 99

Crimping Tools to CEPS 99

Engine Control harness assembly (Class 101) BR Cat 15/176

PROCEDURE

1. Rewiring

1.1 Rewire the underframe control wiring in accordance with the appropriate wiring diagram. See Appendix 1 for modern equivalents to imperial cables sizes.

1.2 Renew the starter, battery or generator/alternator main cables if they are damaged.

1.3 Identify all cables in accordance with EI G/260

2. Engineering Instructions

2.1 Carry out any of the following Engineering Instructions which have not been implemented.

2.1.1 Starter motor electronic control module in accordance with EI MD/61.

2.1.2 Twelve and 18 way relay panel in accordance with EI MD/73.

2.1.3 Class 101: fitting of CAV alternators in accordance with EI MD/305.

3. Testing

3.1 Bond all new cables together and measure the insulation to earth with a 100 V megger. Minimum acceptable reading 20 M ohm.

3.2 Remove bonding wires.

4. Connecting

4.1 Where it is necessary to join cables running from the underframe into the body, splices are to be used in accordance with CEPS 99.

4.2 All cable terminations are to be in accordance with CEPS 99.

APPENDIX 1 Cable Sizes

Imperial Cable Size	TDE/76/P/16 Equivalent
14/.012	37/0.2
3/.036	37/0.25
7/.029 110/.0076	37/0.3
7/.036	37/0.4
7/.044	61/0.4
7/.052	80/0.4
7/.064	126/0.4
163/.018 19/.052	196/0.4
19/.064	276/0.4
61/.044 160/.029 416/.018	360/0.5
235/.029	475/0.5

PROCESS SPECIFICATION

REWIRING OF MAIN AND SUBSIDIARY UNDERFRAME

WIRING ON CLASS 101, 111, 120, 123 & 126 DMU MOTOR COACHES

B.R. PUBLICATION NO. C.E.P.S. 175

REVISION LETTER NO. 1

<u>LOCATION</u>	<u>ACTION</u>	<u>REASON FOR CHANGE</u>
C.E.P.S. 175 dated March 1977.	Replace with new issue dated February 1984.	Specification up-dated.

When this Revision letter has been actioned, it is to be stored at the back of the publication (capacity permitting) for easy future reference.

DATE : FEBRUARY 1984

REF : 220-6-2

TEL : 056-3582

Issued by:-

DM & EE
Railway Technical Centre
Derby

