



DEPOT MAINTENANCE MANUAL

CLASS 411, 412, 421 AND 423
ELECTRIC MULTIPLE UNITS

DM 400 SW

Issue: 2

Revision: A

Date: November 97

Section 7

Fire Protection & Emergency Equipment

SWT SOUTH WEST TRAINS	DEPOT MAINTENANCE MANUAL CLASS 411, 412, 421 AND 423 ELECTRIC MULTIPLE UNITS	DM 400 SW Issue: 2 Revision: A Date: November 97
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JOB DESCRIPTIONS

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Section 7 - Fire Protection and Emergency Equipment

Job No. Job Description

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EMERGENCY EQUIPMENT - CHECK

Safety:- Auxiliary supply connected.

Check that the following items of equipment are available and correctly stored, and are safe for further use.

1. All Driving Trailer Vehicles and Class 411/412 Driving Motor Vehicles

- 1 shoe fuse spanner
- 1 hookswitch pole
- 2 shoe paddles
- 2 short circuiting bars
- 1 water or AFFF (gas cartridge) fire extinguisher (in corridor stock only).
- 1 1.75 litre AFFF fire extinguisher. Check that the seal is intact. If broken change extinguisher and check in accordance with Job No. 716.
- 1 track circuit shorting bond (in cab). Change track circuit bonds in accordance with MP7-012 if cable strapping is missing or broken, or is a non authorised type.

Check that the seal on the flag and detonator case is intact. If the seal is broken check contents in accordance with MP7-013.

2. Class 421/423 Motor Vehicles and Class 411/412 Trailer Brake Vehicles

- 1 ladder
- 1 emergency screw coupling
- 1 long crowbar (if short crowbar not included in the emergency tool cupboard).
- 1 water or AFFF (gas cartridge) fire extinguisher (in brake)
- 1 water or AFFF (gas cartridge) fire extinguisher (in coach)
- 1 1.75 litre AFFF fire extinguisher (in brake). Check that the seal is intact. If broken change extinguisher and check in accordance with Job No. 716.
- 2 track circuit shorting bonds. Change track circuit bonds in accordance with MP7-012 if cable strapping is missing or broken, or is a non authorised type.

Check that the seal on the emergency tool cupboard is intact. If the seal is broken check contents in accordance with MP7-003.

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3. Non-Driving Trailer Vehicles

- 1 water or AFFF (gas cartridge) fire extinguisher (except class 423) plus 1 additional water or AFFF (gas cartridge) fire extinguisher in class 422 buffet.
- 1 CO₂ gas fire extinguisher (buffet cars only)
- 1 first aid cabinet (buffet cars only). Check that the paper seal across the cabinet body and its lid is intact. If it is not, open the cabinet and check the contents in accordance with MP7-003. Check also that the location notice is legible and undamaged.

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FIRE EXTINGUISHERS, WATER (GAS CARTRIDGE) & AFFF SPRAY TYPES - EXAMINE

Safety:- If the red safety clip or the plunger guard is missing, take care not to squeeze the operating lever, or to strike operating knob accidentally.

1. Remove the extinguisher from its holder/ bracket, checking that it can be easily removed. rectified any defects.
2. Examine extinguisher for damage or defects. Change extinguisher for one examined in accordance with Maintenance Procedure MP7-001 (Water Types) or MP7-006 (AFFF Type), if:-
 - 2.1 The polypropylene 'Pull-tite' seal is broken, and either:-
 - (a) the red safety clip is missing or the 'Used' indicator is visible.
 - or (b) the plunger guard is broken or missing.
 - 2.2 The extinguisher feels light when handled.
 - 2.3 The headcap, discharge hose or nozzle is damaged or is suspected as being blocked or restricted.
 - 2.4 The body is damaged or the operating instructions are illegible.
 - 2.5 The date on the extinguisher record label (BR 475/54) indicates that an Annual Inspection will be due before the next scheduled vehicle examination.
3. If the date on the extinguisher record label (BR 475/54), or painted on the extinguisher body, indicates that a Discharge Test and Inspection (5 Yearly Water/Gas Types, 4 Yearly AFFF Type) will be due before the next scheduled examination of the vehicles, carry out Maintenance Procedure MP7-002 (Water Types) or MP7-007 (AFFF Type).
4. Ensure that the mounting bracket/holder is secure and undamaged.

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5. Wipe the exterior of extinguisher clean and re-fit in bracket/holder with the discharge hose correctly positioned.
6. Carry out items 1-5 on extinguishers fitted in the saloons/vestibules/brake vans (if applicable) on the other vehicles.

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MATERIALS			
ITEM	DESCRIPTION	QTY/UNIT	BR CAT NO
1	'Pull-Tite' Seal		047/058992 or 047/058993 or 047/058996

1. Remove seal from case and remove detonator canister from case.
2. Examine each detonator and renew if five years old or more, as shown by the date stamp, or if there are signs of rust or any damage to the casing or clips.
3. Check that there are not less than 10 detonators in the canister, re-fit lid and place in case. Check that there is 1 red flag and 1 stick in the case.
4. Close and re-seal the case with a polypropylene 'Pull-tite' seal (see Materials item 1).
5. Carry out items 1 to 4 in the other cab.

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FIRE EXTINGUISHERS, CARBON DIOXIDE TYPE - EXAMINE

Safety:- Under NO circumstances should an attempt be made to remove the operating head from the body.

Note:- This type of extinguisher is fitted in buffet vehicles of multiple unit trains. Several different types are in use but the basic examination requirement is common to all.

1. Remove extinguisher from its holder/bracket, checking that it can be easily removed.

Note:- Take care NOT to squeeze the trigger or operating lever accidentally, if the safety pin is missing.

2. Examine extinguisher for damage and defects. Change, and return to Stockists, if any of the following conditions exist:-

2.1 Operating instructions are illegible.

2.2 Body or operating head is damaged, corroded, or is in any other way defective.

3. Carry out Maintenance Procedure MP7-008 if:-

3.1 The safety pin polypropylene 'Pull-tite' sealing arrangement is broken or the safety pin is missing.

3.2 The discharge hose or horn is damaged, blocked, loose or missing.

3.3 Extinguisher feels light when handled and discharge is suspected.

3.4 Last inspection date on record label (BR 475/54) indicates that an Annual Inspection will be due before the next scheduled examination of the vehicles.

4. Check that the mounting bracket/holder is secure and undamaged.

5. Wipe extinguisher clean and re-fit into its bracket/holder.

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EMERGENCY SCREW COUPLING - LUBRICATE

MATERIALS			
ITEM	DESCRIPTION	QTY/UNIT	BR CAT NO
1	Oil		027/023022
2	Red Paint, BR 81 Item 521		028/044210

1. Remove coupling from mounting, clean and check for freedom of operation. Lubricate the thread as necessary.
2. Repaint coupling red if necessary.
3. Refit coupling to its mounting.

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EMERGENCY EQUIPMENT - EXAMINE

Safety:- Auxiliary supply connected.

Examine all emergency equipment as follows:-

1. Remove shoe fuse spanner, shoe paddles, short circuiting bar and hookswitch pole from mountings.
2. Examine for damage or defects paying particular attention to handles and timber parts. Renew as required.
3. Examine all mounting clips and fixings. Repair as required.
4. Refit all equipment.
5. Examine ladder in situ for signs of cracking, splintering or broken rungs. Renew as required.
6. Examine track circuit shorting bonds in situ, and change in accordance with MP7-012 if cable strapping is missing or broken, or is a non authorised type.
7. Check that the seal on the emergency tool cupboard is intact. If seal is broken check contents in accordance with MP7-003.
8. Check that the seal on the flag and detonator case is intact. If the seal is broken check contents in accordance with MP7-013.

Note:- For location and quantities of emergency equipment see Job No. 701.

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**FIRE EXTINGUISHERS AFFF (1.75 LITRE) STORED
PRESSURE TYPE - EXAMINE**

Warning:- Under **NO** circumstances should an attempt be made to remove the operating head. Take care **NOT** to accidentally squeeze the operating lever if the safety pin is missing.

1. Release security strap and remove extinguisher from its wall bracket.
2. Examine the extinguisher for damage and defects and return to stores, for repair and recharging if:-
 - 2.1 The polypropylene 'Pull-tite' seal is broken and the safety pin is removed, missing or broken.
 - 2.2 The extinguisher feels light when handled. (Partial discharge and/or gauge fault suspected).
 - 2.3 The pressure indicator is in the red sector of gauge.
 - 2.4 The operating head is damaged.
 - 2.5 The spray nozzle is damaged, blocked or not firmly (hand tight) fitted.
 - 2.6 The body is damaged or shows signs of external corrosion.
 - 2.7 The operating instructions are illegible.
3. Check the date on the extinguisher record label (BR 475/54) or where painted on the extinguisher body.
 - 3.1 If it indicates that an Annual Inspection will be due before the next scheduled vehicle examination, carry out Maintenance Procedure MP7-010.
 - 3.2 If it indicates that a 4 Yearly Discharge Test and Inspection will be due before the next scheduled vehicle examination, carry out Maintenance Procedure MP7-011.
4. Check that the mounting bracket and security strap is undamaged, and firmly attached to the wall.

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5. Check that the service record label (BR 475/54) is in good condition, legible and correctly filled in.
6. Wipe extinguisher clean.
7. Re-fit extinguisher into its wall bracket and ensure security strap catch operates correctly.