

06/01/2005

South West Trains

Depot Maintenance Manual Revision Letter

DM400SW Issue 2 Revision E

Date: 8 November 2004

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The following is a list of changes with a brief description of each change updating DM400SW to Issue 2 Revision E. The changes are identified by a black line in the left-hand margin adjacent to the relevant piece(s) of text.

<u>Pages Changed</u>	<u>Details of Changes</u>
Revision Record.	Updated.
Revision Status pages.	Updated.
Index of Jobs - Sections 2 to 9. (Star Charts)	Section 2 Deleted.
Section 2	Deleted in its entirety, Incorporates FTB K001 dated 03/08/2004, (Removal of Section 2 from DM400).
Job 303	Incorporates FTB S012 dated 27/9/00 (AWS Testing).
Job 343	Updated to remove requirement to carry out TPWS aerial disconnection test and incorporation of FTB S029 dated 30/09/2003 (Revised Attenuator Settings for Mk6 Bogies)
Job 913	Revised incorporating FTB U044 dated 23/08/02 (Traction Earth Return Slip Ring)
MP2-104, MP2-105	Deleted, no catering equipment fitted.
MP3-003	Updated to Incorporate FTB S012 dated 27/9/00 (AWS Testing).

All of the above amendments are additions or enhancements to the current maintenance regime classified as Green or Yellow in accordance with VMOP EM/X*0001 and do not affect the conformance to mandatory requirements. These amendments do not therefore require approval by a Conformance Certification Body.

This Publication Letter is to be stored at the back of the manual for future reference when superseded at the next revision .

The following extant FTBs have been included with the issue of this amendment for information:-

FTB A006 - Inter-Vehicle Isolation Cock Check dated 10/04/2003

FTB O002 - Procedure for Bodyside Slam Door Incident Examination dated 17/07/1995

FTB P005 - Enhanced Maintenance of Intermediate Power Jumper Connections on Class 421 and 423 Units dated 25/01/1999

FTB S015 - TPWS Brake Application Timer Check dated 15/11/2002

FTB S018 - Guidance on Speedometer Test Requirements dated 13/11/2002

FTB U037 - Amendment to MT288 on SWT Class 400 Wheelset Tolerances dated 15/07/1999

FTB U039 - Damaged Vehicle Procedure date 13/12/1999

FTB U049 - SWT Class 412 Ultrasonic Axle Test Periodicity date 30/05/2003

AUTHORISATION

Prepared by:

Authorised by:

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Index of Jobs - Sections 2 to 9.	Replace all pages with Issue 2 Revision C.	Section 2 - new Jobs 211, 216, 218 and 223 added; Jobs 206 and 222 titles changed. Section 3 - Job 302 added to X exam; Job 311 title changed; new Job 370 added. Section 4 - Job 403 now nos. 1 to 9 exams, was nos. 2 and 6 exams; Job 407 (complete machine) now nos. 1 to 9 exams, was motor end on nos. 1 to 9 exams and generator end on nos. 2 and 6 exams. Section 5 (1963 stock) - Job 526 removed from no. 4 exam as a result of functional check of master controller being included in Job 505. Section 5 (1957 stock) - Job 526 removed from nos. 4 and 8 exams as a result of functional check of master controller being included in Job 505. Section 6 - new Jobs 696 and 662 added.
Winterisation Index and Frequencies.	Replace with Issue 2 Revision C.	New jobs 365, 412 and 559 added. Job 622 removed, carried out at nos. 1 to 9 exams using Winter Solution all year round. Previously specified requirements for frequencies replaced by date limits where applicable.
Index of Jobs - Section 10 Maintenance Procedures.	Replace with Issue 2 Revision C.	New Maintenance Procedures MP2-104, MP2-105, MP3-029, MP6-021 and MP6-074 added.
Section 2 Job Descriptions.	Replace with Issue 2 Revision C.	New Jobs 211, 216, 218 and 223 added. Jobs 206 and 222 - titles changed.
Job 201	Replace with Issue 2 Revision C.	Safety wording at start of job altered.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 202.	Replace with Issue 2 Revision C.	Safety wording at start of job altered. Section 3 - reference to isolating traction supply removed, traction supply already isolated for job. Reference to DP181 removed, never used. Use of Sulphamic Acid replaced by Ferno DS3 Descaling Fluid (which contains Sulphamic Acid).
Job 206.	Replace with Issue 2 Revision C.	Title changed and job rewritten for new water heater replacing Stills Boiler.
Job 207.	Replace with Issue 2 Revision C.	Job updated.
Job 211.	Insert Issue 2 Revision C.	Job reinstated and rewritten.
Job 214:	Replace with Issue 2 Revision C.	Job rewritten to reflect new equipment fitted.
Job 216:	Insert Issue 2 Revision C.	Job reinstated and rewritten.
Job 218.	Insert Issue 2 Revision C.	New job.
Job 222.	Replace with Issue 2 Revision C.	Title changed and job rewritten for new water heater replacing Stills Boiler.
Job 223.	Insert Issue 2 Revision C.	New job.
Section 3 Job Descriptions.	Replace with Issue 2 Revision C.	Job 311 - title changed. New Jobs 365 and 370 added.
Job 301.	Replace with Issue 2 Revision C.	Section (1c) - reference to cracked blocks added. Section 1(d) added, additional check.
Job 304.	Replace with Issue 2 Revision C.	Reference to materials and special tools added to relevant parts of text where indicated.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 311.	Replace with Issue 2 Revision C.	Title was Automatic Drain Valve. Job rewritten to reflect the manual drain cock now fitted.
Job 312.	Replace with Issue 2 Revision C.	Draining of EP brake unit Norgren filters added to job.
Job 314.	Replace with Issue 2 Revision C.	Sections 6, 27 and 28 - minor changes to text. Note after section 6 added. Note after section 9 removed - not applicable to stock types covered by job.
Job 317.	Replace with Issue 2 Revision C.	Safety wording at start of job altered. BR Cat. No. 027/027001 changed to 027/027000.
Job 323.	Replace with Issue 2 Revision C.	Additional attention to L1 brake units and rewording of the relevant parts of text; requirement to carry out a brake test added.
Job 327.	Replace with Issue 2 Revision C.	Section 2 added - additional check. Subsequent sections renumbered. Sections 3 and 4 - reference to materials added. Section 8 added - additional check.
Job 365.	Insert Issue 2 Revision C.	New job.
Job 370.	Insert Issue 2 Revision C.	New job.
Section 4 Job Descriptions.	Replace with Issue 2 Revision C.	New Job 412 added.
Job 406.	Replace with Issue 2 Revision C.	Reference to Crater Grease supplied in 0.5kg sachets added.
Job 410.	Replace with Issue 2 Revision C.	Safety wording at start of job altered.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 412.	Insert Issue 2 Revision C.	New job.
Job 443.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Job 445.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Job 446.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Job 448.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limit.
Job 449.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Job 450.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Section 5 Job Descriptions.	Replace with Issue 2 Revision C.	New Job 559 added.
Job 503.	Replace with Issue 2 Revision C.	Section 4 - reference to VF7 cells removed, not applicable to stock types covered by job. Reference to materials added to sections 1 and 6.
Job 505.	Replace with Issue 2 Revision C.	Safety wording at start of job altered. Sections 11 to 16 added, functional check of master controller. Section 17 added, wiring check.
Job 506.	Replace with Issue 2 Revision C.	BR Cat. No. 027/027001 changed to 027/027000. Reference to materials added to sections 4 and 5. Section 6 added, wiring check. Subsequent section renumbered.
Job 510.	Replace with Issue 2 Revision C.	Reference to materials added to section 2. Section 4 added, wiring check. Subsequent sections renumbered.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 522.	Replace with Issue 2 Revision C.	Section 7 added, wiring check.
Job 523.	Replace with Issue 2 Revision C.	Section 4 - reference to materials added. Section 14 - renewal of locking washers added. Section 33 reworded in line with wiring check in other jobs.
Job 525.	Replace with Issue 2 Revision C.	Reference to materials added to section 2. Section 5 added, wiring check. Subsequent section renumbered.
Job 528.	Replace with Issue 2 Revision C.	PA System part of job rewritten to reflect the use of the Test Box.
Job 534.	Replace with Issue 2 Revision C.	Sections 4 and 6 - check of operating rollers added. Sections 8 and 9 removed. Section 9 rewritten as new Job 559 for Winterisation.
Job 539.	Replace with Issue 2 Revision C.	MS4 Silicone Grease replaced by Silicone Electrical Compound DC4. Section 4 - reference to materials added.
Job 541.	Replace with Issue 2 Revision C.	MS4 Silicone Grease replaced by Silicone Electrical Compound DC4. Section 2 - reference to materials added.
Job 559.	Insert Issue 2 Revision C.	New job, more detailed rewrite of the former section 9 from Job 534.
Section 6 Job Descriptions.	Replace with Issue 2 Revision C.	New Jobs 662, 674 and 696 added.
Job 601.	Replace with Issue 2 Revision C.	Section 13 - wording altered to include a routine check of the intermediate coupler and reference to Maintenance Procedure MP6-021.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 602.	Replace with Issue 2 Revision C.	Section 2 added, more detailed examination of items in driver's cab. Subsequent sections renumbered.
Job 612.	Replace with Issue 2 Revision C.	Note referring to MP6-009 added at start of job. Items repeated in job 613 removed. Coupler height gauging removed and transferred to job 613. Remaining sections renumbered. Section 2 - reference to using gauge replaced by use of steel rule. Reference to special tools added where appropriate. Section 9 added - check of intermediate coupler knuckle thickness.
Job 613.	Replace with Issue 2 Revision C.	'Gauge Height' added to title. Note referring to MP6-009 added at start of job. Section 2 - reference to materials added. Note referring to MP6-039 added after section 7. Section 8 added - coupler height gauging transferred from job 612. Subsequent sections renumbered.
Job 622.	Replace with Issue 2 Revision C.	Section 2 - reference to materials added.
Job 624.	Replace with Issue 2 Revision C.	Section 2 rewritten.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 625.	Replace with Issue 2 Revision C.	Reference Documents and note referring to Job 662 added at start of job. BR Cat. No. 027/001350 changed to 027/001354. Section 4 - minor changes to text in first paragraph; reference to restricted droplight opening removed, not applicable; and note referring to Job 662 added. Section 7 - loose studs and nuts now renewed instead of just being tightened and reference to CR/TP0583 Appendix A added regarding welding of damaged holes. Sections 29 and 86 - rewritten to include reference to new Maintenance Procedure MP6-074.
Job 628.	Replace with Issue 2 Revision C.	BR Cat. Nos. for lubricants changed. Reference to materials added to Sections 1, 2 and 4.
Job 632.	Replace with Issue 2 Revision C.	Reference to reporting body damage to the Supervisor added.
Job 636.	Replace with Issue 2 Revision C.	Materials and Torque Figures include references to both imperial and metric nuts. Section 4 rewritten to refer to renewing any nuts found loose.
Job 648.	Replace with Issue 2 Revision C.	Section 3 - recording of mileage reading now carried out as and when required rather than at every exam.
Job 662.	Insert Issue 2 Revision C.	New job.
Job 674.	Insert Issue 2 Revision C.	New job.
Job 696.	Insert Issue 2 Revision C.	New job.
Job 704.	Replace with Issue 2 Revision C.	Section 2 - five years was four years. Section 4 - reference to materials added.

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<u>Location</u>	<u>Action</u>	<u>Reason For Change</u>
Job 806.	Replace with Issue 2 Revision C.	Previously specified frequency replaced by date limits.
Job 815.	Replace with Issue 2 Revision C.	Safety wording at start of job altered. Section 4 - minor alteration to text.
Job 920.	Replace with Issue 2 Revision C.	✓ Section 2 - reference to additional power fuses fitted to 1957 motor coaches added. Section 6 added, check of equipment links on 1963 stock motor coaches.
Section 10 Job Descriptions.	Replace with Issue 2 Revision C.	New Maintenance Procedures MP2-104, MP2-105, MP3-029, MP6-021 and MP6-074 added.
MP2-104.	Insert Issue 2 Revision C.	New Maintenance Procedure.
MP2-105.	Insert Issue 2 Revision C.	New Maintenance Procedure.
MP3-012.	Replace with Issue 2 Revision C.	Section 18 added, requirement to carry out a brake test after adjustments.
MP3-029.	Insert Issue 2 Revision C.	New Maintenance Procedure.
MP6-021.	Insert Issue 2 Revision C.	New Maintenance Procedure.
MP6-074.	Insert Issue 2 Revision C.	New Maintenance Procedure.
MP7-003.	Replace with Issue 2 Revision C.	Section 3 - contents of cupboard added. Cable ties added to contents. Original note (b) removed, not applicable. New note (b) added.

2. After incorporating the above changes, the Revision Record at the front of the manual shall be initialled by the person undertaking the amendments.
3. When this revision has been actioned, this Revision Letter shall be stored at the back of the manual for future reference.



DEPOT MAINTENANCE MANUAL

CLASS 411, 412, 421 AND 423
ELECTRIC MULTIPLE UNITS

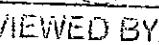
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Prelude

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**DEPOT MAINTENANCE MANUAL**

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DM 400 SW

DEPOT MAINTENANCE MANUAL
for
CLASSES 411, 412, 421 AND 423
ELECTRIC MULTIPLE UNITS

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SOUTH WEST TRAINS	DEPOT MAINTENANCE MANUAL CLASS 411,412, 421 AND 423 ELECTRIC MULTIPLE UNITS	DM 400 SW Issue: 2 Revision: E Date: Nov 2004
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REVISION RECORD

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