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TWO-WIRE FIELD TELEPHONE UK/PTC/404
MODIFICATION INSTRUCTIONS AND INDEX

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BY COMMAND OF THE DEFENCE COUNCIL

Ministry of Defence

INDEX AMENDMENT RECORD

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PREFACE

- 1 The Controlling publication authority for this AESP sub category is:

Electronics Branch REME
Leigh Sinton Road
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- 2 All Modification instructions issued are to be recorded in manuscript by the recipient on the Modification instruction index provided. Amendments to individual Modification instructions are to be recorded on the Instruction Amendment Record. All extant instructions and amendments are recorded in the current AESP Index 0100-A-001-001.

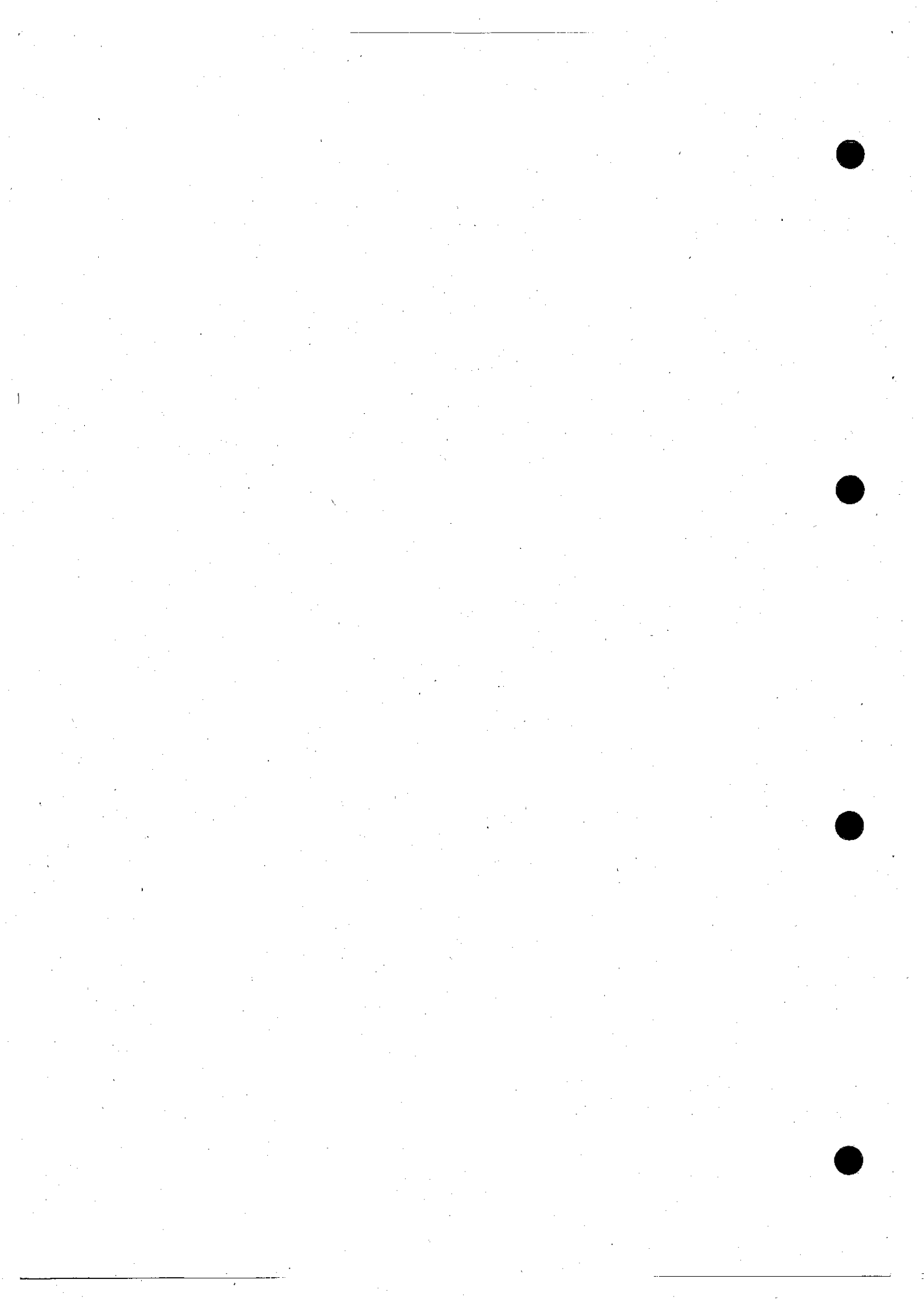
- 3 The publication authority is responsible for the preparation and maintenance of the Modification instruction index and will advise the Distribution Authority on the issue of completed and subsequent blank index pages as necessary.

- 4 Comments on instructions are to be forwarded in accordance with AESP 0100-P-011-013.

CATEGORY 8-1 MODIFICATION INSTRUCTION INDEX

Priority (Pty) is shown as: Immediate: I Routine: R

Instr No.	Pty	Subject	Approval No./ Remarks
1	R	Short line protection	
2		REPLACEMENT OF INSULATORS FOR TERMINAL POSTS	
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TWO-WIRE FIELD TELEPHONE UK/PTC/404MODIFICATION INSTRUCTION No. 1

Sponsor: DGEME

Publications

Authority: Electronics
Branch REMEFile ref: ATMC No. 02495
(Disk ref: EB/A/U/46 - PA 054)

AMENDMENT RECORD

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SUBJECT: Short line protectionINTRODUCTION

1 There have been several reported instances of transistors TR8 and TR12 in the ringing generator (board D) failing due to excessive current flowing. This occurs when the telephone is connected to a highly reactive load, such as a Tele J or UK/PTC/405, on short lines of less than 5 km. To overcome this defect, two current limiting resistors of 680 ohms, 2.5 W are to be fitted in place of diodes D11 and D16 on failure of TR8 and TR12. This instruction details the action required to fit these resistors.

APPLICABILITY

- 2 PEC Board D - Y1/5805-99-652-1388
part of:
Field Telephone - Y1/5805-99-658-2428
part of:
Field Telephone Set UK/PTC/404 - Y1/5805-99-652-1384

REASON FOR MODIFICATION

- 3 Code 3 - to improve reliability.

PRIORITY

4 Routine - On repair only.

ESTIMATED TIME REQUIRED

5 1 man hour.

MODIFICATION IMPLEMENTATION PLAN

6

6.1 This modification may be carried out by units authorised to carry out field or base repairs.

6.2 There are no associated modifications.

6.3 Strike action : The figure 1 is to be struck through on the Modification Record Label on the Panel Electronic Circuit Board D Y1/5805-99-652-1388.

Action required by

7

7.1 Units and establishments holding the equipment

Nil.

7.2 Units authorised to carry out field or base repairs

7.2.1 On repair, or overhaul, demand the stores detailed at Sub-para 8.1 and carry out this modification.

7.2.2 On completion of the modification strike through the figure 1 on the PEC Board D Modification Record Label.

7.2.3 Complete AF G 1084A (EMER Mgmt J 020) when reporting completion of the modification to REME Data Centre.

EQUIPMENT CODE (EMER Mgmt J 022 refers)
ARMY MODIFICATION CODE Y 01422

Stores, tools and equipment

Note...

Refer to Materiel Regulations for the Army Volume 1 Pamphlet 1 Part 1 Section 10.

8

8.1 Stores to be demanded

Stores are to be demanded through normal Ordnance channels quoting this instruction as the authority. The stores are to be demanded as a complete kit and NOT as individual items.

<u>Item No.</u>	<u>COSA Sect</u>	<u>NSN</u>	<u>Designation</u>	<u>Qty per eqpt</u>
		5805-99-661-6808	Modification Kit Electronic Eqt Comprising:	1
1		5805-99-626-9067	Resistor, Fixed, Wire Wound, 680 ohm 3 W	2
2	Z37	5940-99-956-9738	Terminal Post	4
3	Z37	5940-99-624-6744	Terminal Post	1
4	Y3	6145-99-014-9388	Wire, Electrical, 7/0.2 Pink PTFE	120 mm
5	Y3	6145-99-142-1607	Wire, Electrical, 22 SWG T.C.	20 mm

8.2 Special tools and equipment

Nil.

Sequence of operations

9

- 9.1 Remove 2 screws holding PEC Board D.
- 9.2 Remove 4 socket head screws to separate top and bottom case halves.
- 9.3 Carefully separate top and bottom case halves, extracting Board D at the same time.

9.4 Note position of 6 wires on Board D and unsolder from pins. Note strain cord route and untie. Disconnect terminal pins from Battery Terminal Board (Board G):

<u>Pin</u>	<u>Wire colour</u>
31	White/Black
32	White/Green
33	Grey
34	White/Red/Black
35	White/Orange/Black
36	White

9.5 Remove diodes D11 and D16.

9.6 Mark and drill 4 holes C, D, E and F using a No. 50 drill (1.8 mm dia) see Fig 1. Remove solder resist round holes D and E.

9.7 Fit terminal post 5940-99-956-9738 in 4 positions (C, D, E and F) and lock to board using centre punch on track side. Beware of damaging surrounding components.

9.8 Fit terminal post 5940-99-624-6744 in position A from track side.

9.9 Cut to size, fit and solder pink wire between A and F (160 mm long, strip each end by 5 mm).

9.10 Cut to size, fit and solder T.C. wire link between B and C.

9.11 Fit and solder resistors between tops of terminals C-D, and E-F ensuring resistors do not touch the board or adjacent components. See Fig 2.

9.12 Solder pins to board where applicable. (Pins A, D and E).

9.13 Refit wires removed at Sub-para 9.4 by soldering to pins and retie strain cord. Lock knot with varnish. Protect solder joints with varnish. Reconnect terminal pins to Battery Terminal Board G, ensuring correct polarization.

9.14 Strike through the figure 1 on Board D Modification Record Label.

9.15 Refit Board D and secure into its housing with screws removed at Sub-para 9.1 using sealastic under their heads. Join top and bottom halves using screws removed at Sub-para 9.2.

Testng after embodiment

10 Carry out a functional test.

AESP AMENDMENTS

11 Formal amendment to the related AESPs will be made in due course.

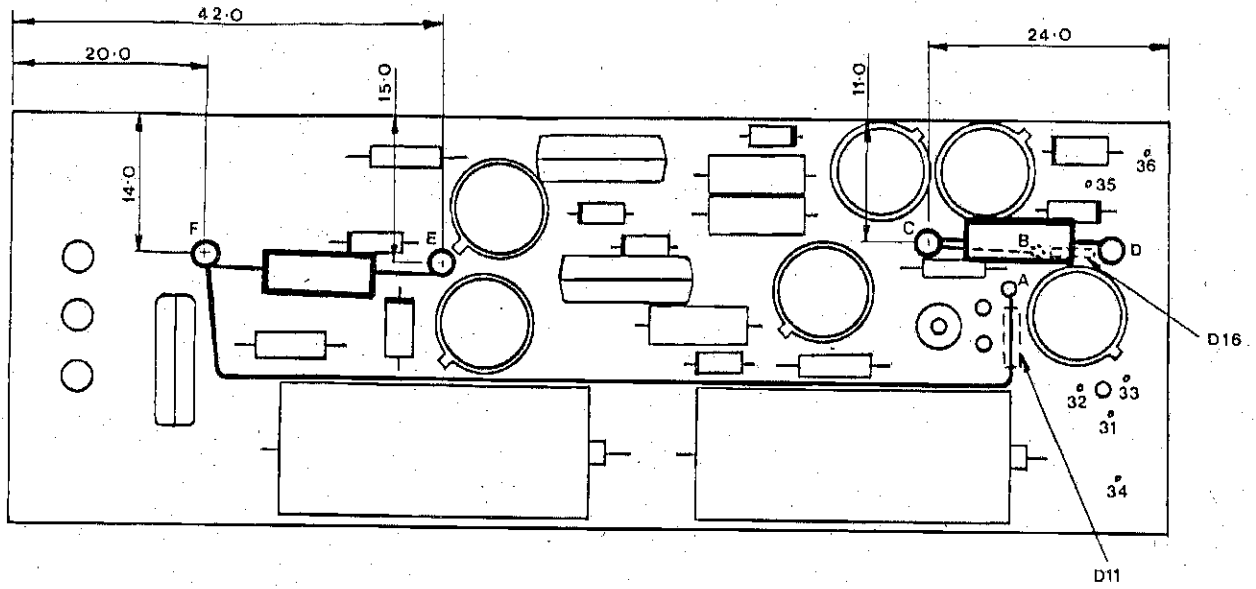


Fig 1



Fig 2

END



TWO-WIRE FIELD TELEPHONE UK/PTC-404MODIFICATION INSTRUCTION No. 2

Sponsor: DGEME

Publications

File ref: EB/63764 D&M
(Disk ref: EB/A/BJ/43)Authority: Electronics
Branch REMEAMENDMENT RECORD

Amdt	Incorporated by	Date
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SUBJECT: Replacement of insulators for terminal postsINTRODUCTION

1 To prevent the upper insulator of the terminal posts breaking during service, replacement insulators of a tougher material are to be fitted on failure of one or both of the insulators. This modification will not effect the equipments interoperability with unmodified equipments.

APPLICABILITY

2 Field Telephone Y1/5805-99-658-2428
part of:
Two-wire Field Telephone Set UK/PTC-404 Y1/5805-99-652-1384

REASON FOR MODIFICATION

3 Code 3 - to improve reliability.

PRIORITY

4 Routine - on repair only (EMER Mgmt N 097 refers).

ESTIMATED TIME REQUIRED

5 Embodiment : 1 man hour.

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MODIFICATION IMPLEMENTATION PLAN

6

- 6.1 This modification may be carried out by units authorised to carry out field or base repairs.
- 6.2 There are no associated modifications.
- 6.3 The equipment may be issued without this modification.
- 6.4 Strike Off Action - Nil.

Action Required by

7

7.1 Units and establishments holding the equipment
Nil.

7.2 Units authorised to carry out field or base repairs

7.2.1 On repair or overhaul, demand the stores detailed at Sub-para 8.1 and carry out this modification.

7.2.2 Complete AF G 1084A (EMER Mgmt J 020 refers) when reporting completion of the modification to REME Data Centre.

EQUIPMENT CODE L000D950
ARMY MODIFICATION CODE NN0000

7.3 All recipients of this AESP

Add particulars of this instruction to the Mod Instr Index.

Stores, Tools and Equipment

Note...

Refer to Materiel Regulations for the Army Volume 1 Pamphlet 1 Part 1 Section 10 before demanding stores.

8

8.1 Stores to be demanded

Stores are to be demanded through normal Ordnance channels quoting this instruction as the authority. The stores are to be demanded as a complete kit and NOT as individual items.

<u>Item</u>	<u>COSA Sect</u>	<u>NSN</u>	<u>Designation</u>	<u>Qty per eqpt</u>
	Y2	5805-99-758-9588	Kit, Modification Comprising:	1
1	Y2	5805-99-652-1146	Fixing Kit Comprising:	2
2		-	Insulator	1
3		-	"0" Ring 4.7 mm I/D	1
4		-	"0" Ring 10.82 mm I/D	1

8.2 Stores to be obtained locally or manufactured

5 H1 8030-99-224-8425

8.3 Stores to be removed and discarded

Nil.

8.4 Stores to be returned

Nil.

8.5 Stores to be modified

Nil.

8.6 Special tools and test equipment

Nil.

Sequence of operations

Note...

Numbers shown in brackets in the following paragraphs refer to the item numbers of the Modification Kit listed in Sub para 8.1.

9

9.1 Remove the batteries from the equipment.

9.2 Remove two countersunk screws from the side of the lower case assembly (holding p.e.c. board D in place).

9.3 Remove four socket head screws and separate upper and lower case assemblies, extracting board D at the same time.

9.4 Disconnect terminal pins from battery terminal board (board G).

9.5 On the upper case assy remove both Switch Knobs having slackened their hexagonal socket grub screws.

- 9.6 Remove both switch retaining nuts.
- 9.7 Record position of Handset cables six coloured wires on board C, exposed in upper half of case, and separate connections.
- 9.8 Hold the wires separated in Sub-para 9.7 into the corner of the upper case clear of the boards, gently press on switch spindles to remove the switch and board assembly from the case.
- 9.9 Remove two slotted nuts holding the screw head terminals and remove the terminals, p.e.c. and the two spacers under the p.e.c.
- 9.10 Examine the terminals, Z37/5940-99-655-4921, to ensure that neither the stud nor the top cap are damaged and that the top cap will screw back sufficiently to fully expose the wire entry hole. Replace if faulty.
- 9.11 Fit small "O" rings (3) to the terminal post studs.
- 9.12 Fit the insulators (2) to the terminals so that the flat on the terminal fits into the "D" hole in the insulator.
- 9.13 Fit large "O" ring (4) into the recess in the insulator. Apply loctite 221 to stud threads and replace terminals in upper case, locating the flats on the insulators in the similarly shaped holes in the upper case.
- 9.14 Whilst holding the terminals in place on the outside of the upper case, refit the spacers, p.e.c and slotted nuts removed in Sub-para 9.9. Align the wire entry holes in the external part of the terminals square to the side of the case before tightening the nuts on the inside.
- 9.15 Before replacing the switch and board assembly, hold the handset wires into the corner of the upper case, and push the internal wires to the side to avoid trapping them.
- 9.16 Apply loctite 221 to the threads on the mounting bushes of both switches being careful not to allow loctite onto the switch spindle. Feed switch spindles through the holes in the upper case and replace and tighten the switch retaining nuts removed in Sub-para 9.6.
- 9.17 Replace knobs removed in Sub-para 9.5.
- 9.18 Replace handset connections removed in Sub-para 9.7.
- 9.19 Refit board D and secure into its housing with the screws removed in Sub-para 9.2.
- 9.20 Reconnect terminal pints to battery terminals on board G (ensure correct polarity).
- 9.21 Check that the rubber gasket is serviceable. Apply loctite 221 to threads in upper case, fit gasket and secure top and bottom case halves using the four socket head screws removed in Sub-para 9.3.

Testing after embodiment

10 Carry out the functional test, as described in Cat 512.

PUBLICATIONS AMENDMENTS

11 Formal amendment to the related AESPs will be made in due course.

ATMC No. 02783

END

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