



AP 113D-0721-2

December 1991

# CONTROL PANEL TYPE 12 LUCAS AEROSPACE TYPE F2801

## GENERAL ORDERS AND MODIFICATIONS

BY COMMAND OF THE DEFENCE COUNCIL

A handwritten signature in black ink, appearing to read 'Mr. G. Jones'.

Ministry of Defence  
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ROYAL NAVY by DGA (N)  
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Publications authority: SMS90 (RAF)

Service users should send their comments through  
the channel prescribed for the purpose in:  
Naval Aircraft Maintenance Manual (RN)  
AP 100B-01 Order 0504 (RAF)

**AMENDMENT RECORD**

General Orders and Modifications

Insert the leaflet and modification numbers. Sign and date the entry.  
 Make the necessary entries on the relevant modification list(s).

Amdt No.	Leaflet Section Letter and No.	Modification No.	Amended by	Date
1	LEAFLET No 1	XLD 22570 (LU 2257)		Dec 91
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## PREFACE

1 Material issued for inclusion in this Topic 2 should be filed in the following order:

1.1 **Preface** (this page).

1.2 **General orders.** These leaflets are identified by the letters 'GO' and should be filed in numerical order.

1.3 **Equipment modification list.** This list shows all MOD-approved modifications affecting the subject of this Topic 2, including those for which leaflets will not be issued. The list will be re-issued periodically. As modification leaflets are inserted, suitable entries should be recorded in the applicable columns of this list.

1.4 **Modification leaflets.** Leaflets bear numbers allotted in sequence as the leaflets are sent to press and should be filed in numerical order.

2 When a complete leaflet or individual leaf is re-issued in amended form the alterations are indicated by triangles thus \_\_\_\_\_ to show where text has been changed.

MOD Mod. No.	Contractor Mod. No.	Mod. plate strike No.	Modification Title	Class	Leaflet No.
XLD 22570	LG2257		Introduction of new rectifiers	C/3	1

F2801 CONTROL PANEL

Mod No LG2257 Rev 1 (Class C/3) on replacement

File Ref D/SMS 90/10/22/174

ADP No XLD 22570

Introduction of rectifiers 80229156 and 80229160 in lieu of rectifiers N45583 or T5D50 (5UC/5196431) and N45583-1 or T5D51 (5UC/5196432) respectively.

1. INTRODUCTION

New rectifiers 80229156 and 80229160 have been introduced to replace existing rectifiers N45583 and N45583-1 respectively. The replacement rectifiers are electrically interchangeable but require the introduction of insulation 80229159 and change to metric fixing nuts 91412134. Rework of Mounting Plate Assembly N45465 is also necessary to enable the fitment of countersunk screw NK3817L prior to assembling the new rectifiers which also require new rectifier supports 8022923.

This modification is applicable to CANBERRA, JET PROVOST and WESSEX (all MKs).

This modification has been introduced due to the non-availability of rectifiers N45583 and N45583-1.

- (1) This modification does not supersede, partially supersede or satisfy the work called for by any other modification, Service Modification or Special Instruction (technical).

2. EMBODIMENT

The modification is to be embodied as directed by Command Headquarters.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 2 man hours.

4. DRAWINGS REQUIRED

Drawing No LG2257 Rev 1 Sheets 1 to 2 is incorporated in this modification.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials.

- (a) The Modification Kit which consists of the following items will be assembled by No 16 Maintenance Unit under Reference No 5UC/13333.

(i) Items supplied by the Contractor:

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>
	80229156	Rectifier	1
	80229160	Rectifier	1
	80229159	Insulation	1
	91412134	Nut	4
	NK3817L	Screw	1
	80229223	Rectifier Support	2
	NK18206M	Rivet	4

(ii) Service Supply Items:

None

All the above items will be issued on Issue Order to RAF Units at home and those overseas units on direct re-supply; no demands are to be submitted. Other RAF Units abroad and all other users are to demand separately their requirements of kits as listed in sub-para (a) above in accordance with current regulations.

- (b) The following materials are to be provided under Unit arrangements.

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>
33C/1835		Brush Alocrom 1200	A/R

(2) Special Tools and Test Equipment.

No special tools or test equipment is required for the embodiment of this modification.

6. MODIFICATION OF SPARES

The following list shows the spares affected by this modification and the parts required to modify them:

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>
	N45465	Mounting Plate Assy	1
Parts Required:			
	80229156	Rectifier	1
	80229160	Rectifier	1
	91412134	Nut	4
	NK3817L	Screw	1
	80229159	Insulation	1
	80229223	Rectifier Support	2
	NK18206M	Rivet	4

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Reference, Part and Assembly Numbers as follows:

<u>OLD</u>			<u>NEW</u>	
<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Ref No</u>	<u>Part No</u>
	N45465	Mounting Plate Assy		80229161
5UC/5196431	N45583	Rectifier		80229156
5UC/5196432	N45583-1	Rectifier		80229160
	NK10009L	Nut		91412134
	NK519L	Screw		NK3817L
	N45464	MTG Plate, Bracket & Supports Assy		80229162
	N45455	Rectifier Support		80229223

8. SEQUENCE OF OPERATIONS

All relevant Safety and Maintenance Procedures must be complied with whilst embodying this modification.

## WARNINGS

- 1 BEFORE ANY ELECTRICAL CIRCUIT IS DISTURBED OR DISCONNECTED, ALL ELECTRICAL POWER SUPPLIES IN, TO OR FROM THE AIRCRAFT ARE TO BE DISCONNECTED. POWER SUPPLIES ARE TO BE RECONNECTED ONLY WHEN THE PERSON RESPONSIBLE FOR EMBODYING OR INSPECTING THE MODIFICATION IS SATISFIED THAT ALL ACTION HAS BEEN TAKEN TO MAKE THE AIRCRAFT SAFE FOR RECONNECTION.
- 2 THIS MODIFICATION IS TO BE EMBODIED AS DIRECTED WITHOUT ANY DEVIATION AND THE PRESCRIBED ROUTEING OF ELECTRICAL CABLES IS TO BE STRICTLY FOLLOWED.
- 3 HEALTH HAZARDS

THIS MODIFICATION INTRODUCES THE FOLLOWING MATERIALS WHICH ARE CONSIDERED TO BE A HEALTH RISK. PRECAUTIONS ARE LISTED IN THE REFERENCES BELOW:

<u>Ref No</u>	<u>Description</u>	<u>Reference Data</u>
33C/1835	Brush Alocrom 1200	JSP(F) 395 AP100B-10 Data Sheet S.0215

If rectifier N45583 and/or N45583-1 are found to be unserviceable, fit new rectifiers 80229156 and 80229160 with reference to AP113D-0721-16 as follows:

This is the sequence of operations:

- (1) Remove mounting plate assembly N45465.
- (2) Remove terminal block N64112, rectifier N45583, rectifier N45583-1 and their associated fixing components. Discard rectifiers and nuts NK10009L.
- (3) Remove and discard 2 rectifier supports N45455 and 4 rivets NK18206M.
- (4) Remove and discard screw NL519L from the position marked reference drawing no LG2257 Rev 1 Fig 1.
- (5) Countersink the hole to 0.218"/0.228" diameter x 90° in the position shown in Fig 1.
- (6) Protect the machined surface using Alocrom 1200 (33C/1835).

## SAFETY NOTES

- A. If 'Alocrom 1200' solution should come into contact with the skin, flush the affected area with liberal quantities of water.



SAFETY NOTES contd

- B. Should 'Alocrom 1200' solution come into contact with the eyes, wash thoroughly with water and seek medical advice.

The provisions of AP100B-10 Data Sheet S.0215 apply.

- (7) Assemble 2 new rectifier supports 80229223 and secure using 4 rivets NK18206M.
- (8) Assemble screw NK3817L in the position marked reference Fig 1.
- (9) Assemble new Rectifier 80229156, Rectifier 80229160, 4 off Nuts 91412134, the retained fixing components and new Insulation 80229159 in the position as shown in Fig 2.
- (10) Re-assemble the control panel as stated in AP113D-0721-16.

9. SPECIAL TESTS AFTER EMBODIMENT

No special testing is required after the embodiment of this modification but any other appropriate and associated testing is to be done.

10. RECORDING ACTION

When this modification has been embodied and inspected in accordance with current authorised procedures, the relevant entries are to be made in the appropriate aircraft records.

11. DISPOSAL OF REDUNDANT PARTS

The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of:

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>
	N45583	Rectifier	1
	N45583-1	Rectifier	1
	NK10009L	Nut	4
	NK519L	Screw	1
	N45455	Rectifier Support	2
	NK18206M	Rivet	4

12. EFFECT ON MASS AND MOMENT

This modification has no effect on mass or moment.

13. EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

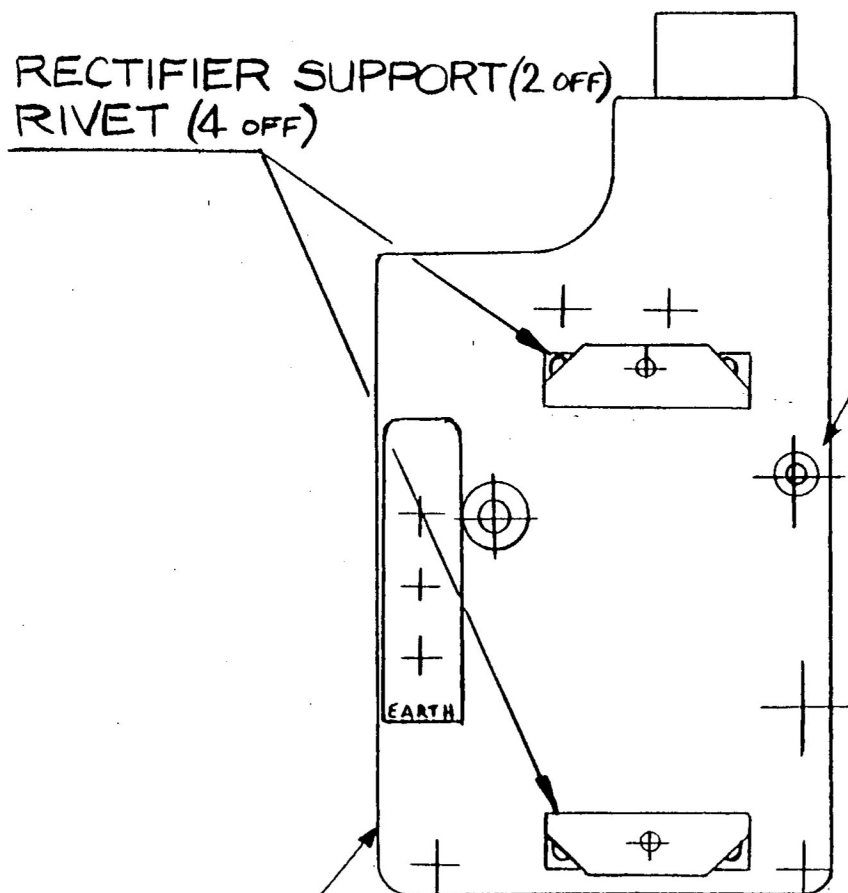
This modification does not affect the operation or handling of the aircraft (including installed equipment).

14. EFFECT ON MAINTENANCE AND ON GROUND SUPPORT EQUIPMENT

All relevant publications will be amended to take account of the changes introduced by this modification.

# FIGURE 1

REMOVE AND DISCARD SCREW NL519L  
COUNTERSINK EXISTING HOLE TO  
0.218"/0.228" DIA. x 90° FROM THIS SIDE.



RECTIFIER SUPPORT (2 OFF)  
RIVET (4 OFF)

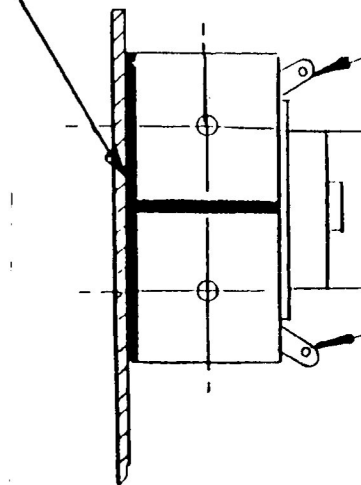
NL5465 ASSY  
(REF.)

# FIGURE 2

INSULATION  
80229159

RECTIFIER  
80229156

RECTIFIER  
80229160



VIEW SHOWING INSULATION