

Group 4
WINDOW INSTALLATION (A.R.I. 18051)

LIST OF CONTENTS

DESCRIPTION AND OPERATION	<i>Para.</i>	CIRCUIT OPERATION	<i>Para.</i>	SERVICING	<i>Para.</i>
<i>Introduction</i>	1	<i>Pre. Mod. 2385</i>	7	<i>General</i>	10
<i>Operation</i>	2	<i>Post Mod. 2385</i>	8	<i>Pre. Mod. 2385</i>	11
				<i>Post Mod. 2385</i>	12

LIST OF ILLUSTRATIONS

	<i>Fig.</i>
Schematic circuit	
<i>Window control</i>	1
Routing charts	
<i>Window control (pre. Mod. 2385)</i>	2
<i>Window control (post Mod. 2385)</i>	3

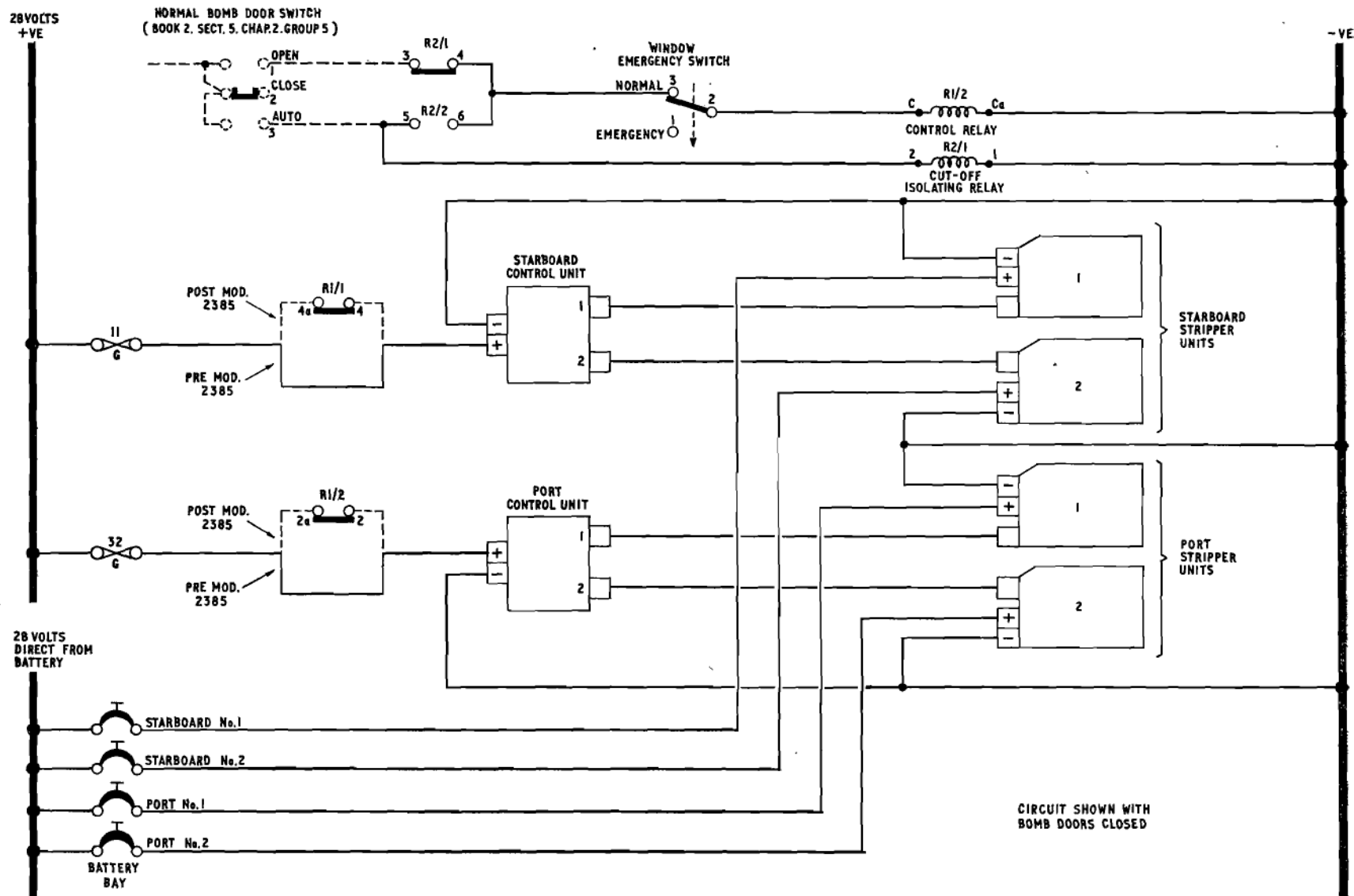


Fig. 1. Window control

RESTRICTED

WARNING

Voltages in excess of 100 volts, either a.c. or d.c., can be dangerous under certain circumstances.

Personnel should therefore ensure that the electrical system is electrically safe before any servicing is attempted. Where it is

essential that tests or adjustments be made with the electrical power switched on, the greatest care must be exercised.

DESCRIPTION AND OPERATION**Introduction**

1. The installation comprises the following main items of equipment:—

Two control units, Type 7122 (10L/291), mounted in the radio crate.

Four stripper units (10AS/460), mounted on the magazines.

Four magazines, Valiant type, mounted at the forward end of the bomb bay.

For details of this equipment refer to A.P.4343X, Vol. 1, Book 1, Sect. 22.

Operation

2. Each control unit regulates the operation of two stripper units, one at a time. The stripper units are fitted into the magazines which are carried on runners in the aircraft.

Pre. Mod. 2385

7. None of the power supplies are switched other than in the units themselves. Two separate d.c. supplies from panel G feed the control units. The control signals are fed from the control units to the control relays and pulsing and rate clutch solenoids in the stripper units. The stripper unit motors and pitch clutch solenoids are fed at 28 volts d.c. from four 15-amp. circuit-breakers in the battery bay. These four circuit breakers are fed in parallel from the 24-volt battery via a heavy duty terminal block above the 24-volt battery control panel.

Post. Mod. 2385

8. The power supplies are as described for

3. The magazines are loaded and tested before being fitted to the aircraft and contain varying quantities of packets of 'window' material taped together, depending on the type of 'window' to be used. The packets are drawn up to the stripper units from the magazine and then ejected into the dispensing chutes when the equipment is set for operation.

4. The control unit, containing the control switches, has two loading indicators which are set before flight to the total number of packets contained in the relative magazines. Each packet leaving the stripper unit passes over a counting micro switch lever which triggers the loading indicator to read one less.

CIRCUIT OPERATION

the pre. mod. 2385 installation. A window control relay, type 10B No. 15, a window cut-off isolating relay, type 9B No. 2A and a switch type 535 (Pye) labelled WINDOW EMERGENCY-NORMAL/EMERGENCY are mounted on the radio crate. When the bomb doors control switch is placed in the OPEN position a supply is fed to the coil of the window control relay via terms 3 and 4 of the window cut-off isolating relay and terms 2 and 3 of the window emergency switch. The window control relay operates and the window control units supplies normally fed through the relay, are cut off. When the bomb doors control switch is placed in the AUTO position, a supply is fed to the coil of the window cut-off isolating relay coil, the relay operates and a supply is fed through terms 5 and 6 to

5. 28-volt d.c. supplies are provided for the control units via fuses or panel G, and for the stripper units via circuit-breakers at the forward end of the bomb bay. Post Mod. 2385, the supplies to the control units are fed via a relay which is energised when the bomb doors control switch is placed in either the AUTO or OPEN position. When the relay is energised the supplies to the control units are interrupted; window dispensation will continue as soon as the bomb doors control switch is placed to the CLOSED position, provided the main ON/OFF switch has not been selected OFF in the meantime.▶

6. For loading the magazine into the aircraft a special loading hoist is to be used. For details of this hoist and of loading procedure, see Book 1, Sect. 2, Chap. 2.

operate the window control relay as previously described.

9. Window dispensation will therefore be interrupted when the bomb doors control switch is selected either AUTO or OPEN; however, in an emergency, the window emergency switch can be placed to the EMERG. position, this will cut off the supply to the coil of the window control relay so that window dispensation can continue despite the position of the bomb doors. The purpose of the window cut-off isolating relay is to prevent 'feed-back' between the open and auto lines of the bomb doors circuit. Figures 1 and 3 of this Group show the wiring post mod. 2385.▶

RESTRICTED

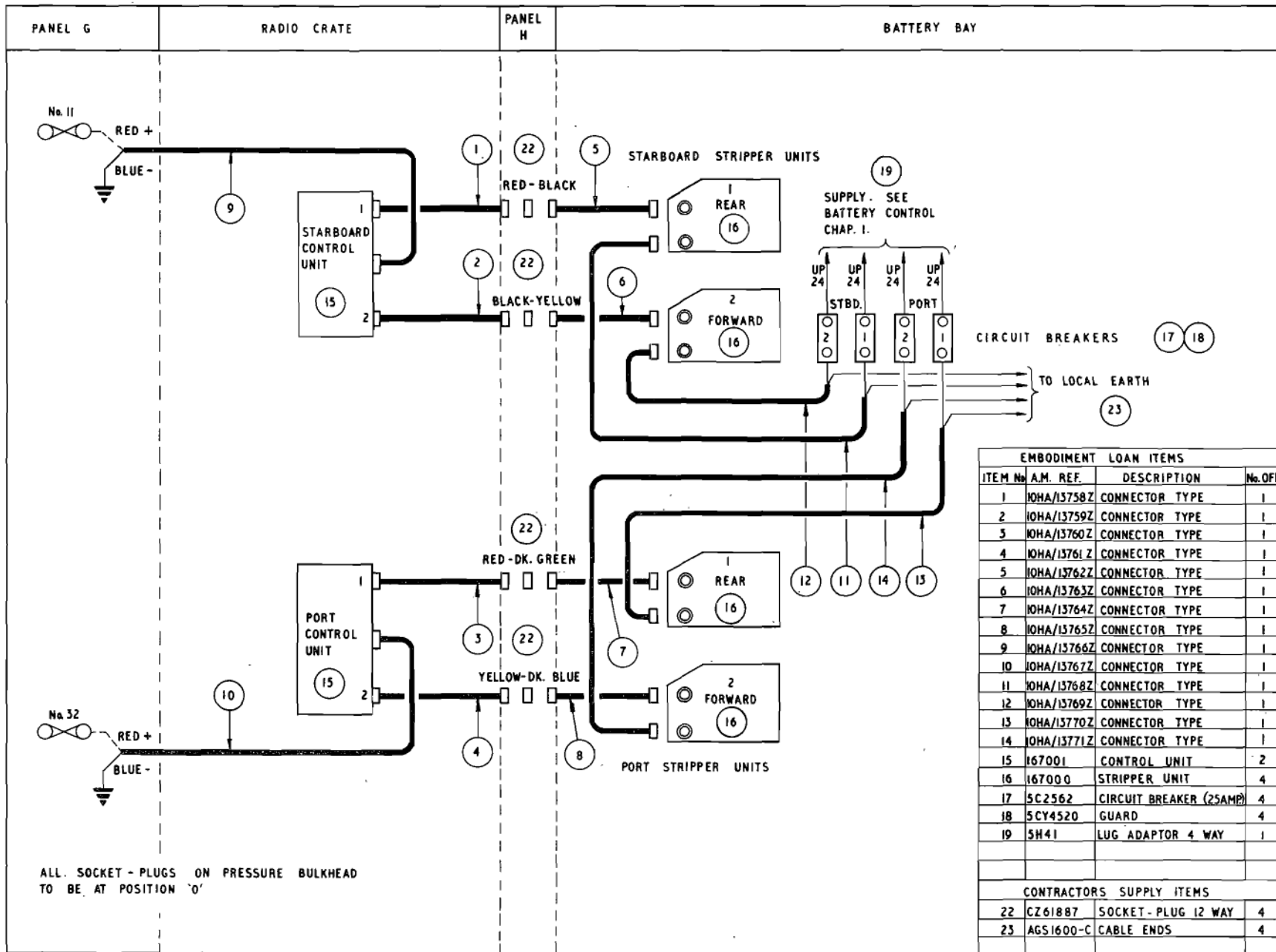
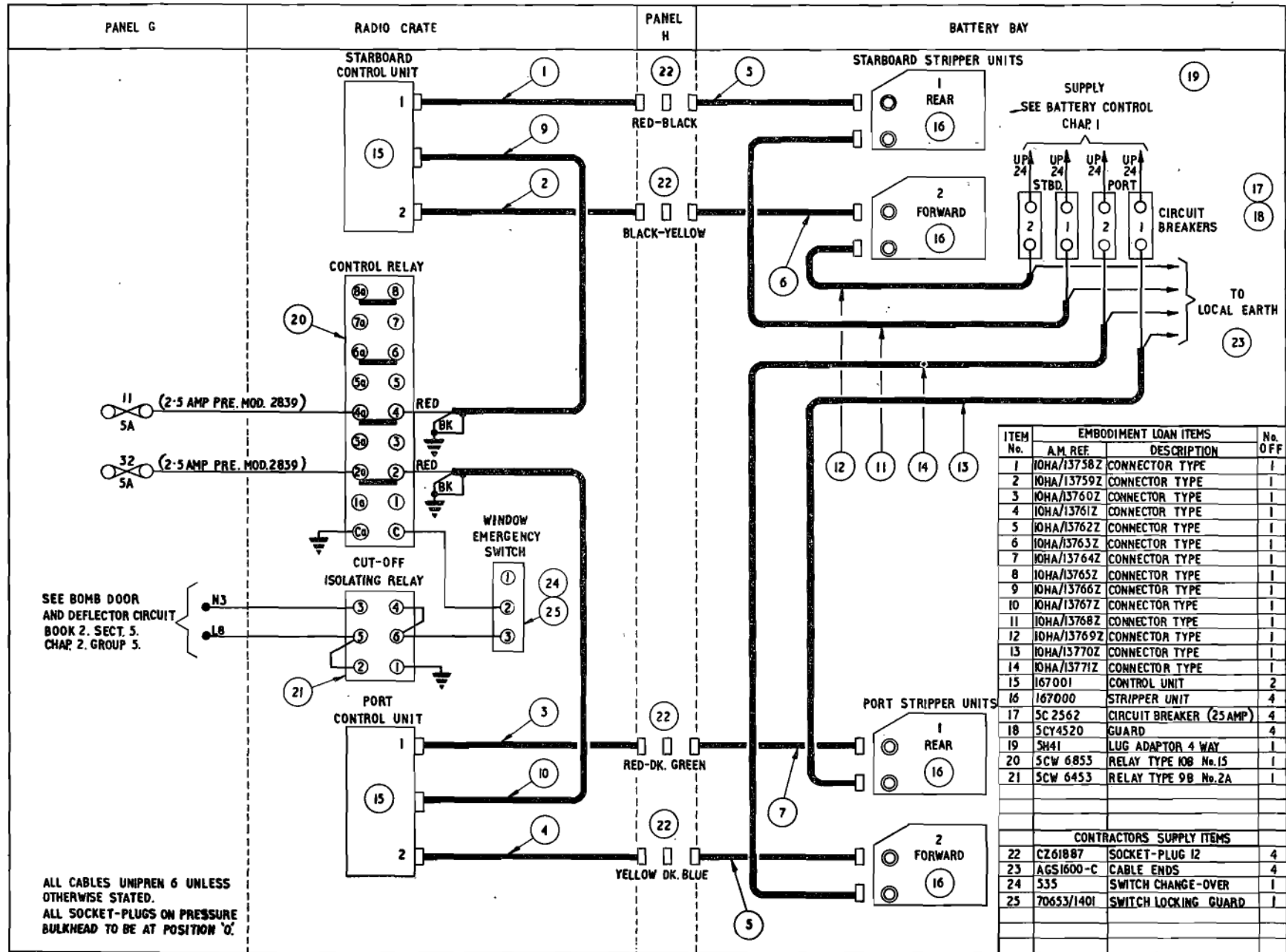


Fig. 2. Window control (pre Mod. 2385)

RESTRICTED



67453 SHT. 91. ISSUE J
75836 SHT. 489. ISSUE F

Fig. 3. Window control (post Mod. 2385)

RESTRICTED

SERVICING

General

10. Check the fittings for mechanical soundness and cables for soundness of insulation. Check the fuses on panel G and the circuit-breakers in the battery bay.

Pre. Mod. 2385

11. Carry out continuity and short circuit tests on all inter-connectors and power supply connectors. Apart from this, little can be done on the installation, equipment

checks should be carried out according to A.P.4343X, Vol. 1, Book 1, Sect. 22.

Post Mod. 2385

12. Carry out tests as described for pre. Mod. 2385, then proceed as follows:—

- (1) Connect both 28-volt and 112-volt external supplies.
- (2) Disconnect the supply connector to the starboard control unit.
- (3) With bomb door closed, check that

a 24-volt test lamp lights when connected across the two pins of the control unit connector.

- (4) Open the bomb doors and check that the test lamp does not light up when connected across the pins of the connector.
- (5) Re-connect the connector to the control unit.
- (6) Repeat for the port control unit and then disconnect external supplies.

RESTRICTED



This file was downloaded
from the RTFM Library.

Link: www.scottbouch.com/rtfm

Please see site for usage terms,
and more aircraft documents.