GROUP A.1

SYSTEM DETAILS

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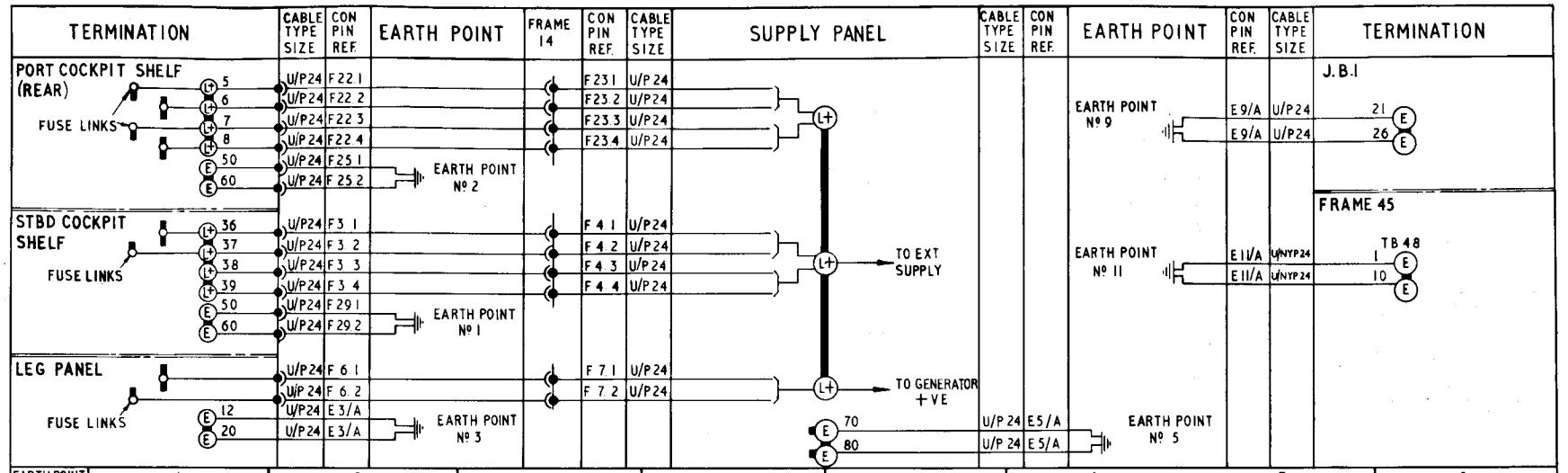
Introduction

1. This group contains a general description of the electrical system as a whole, together with wiring details and general servicing information. Tables listing the ratings and Reference numbers of the circuit breakers and filament lamps are also given, together with a loading chart including a circuit index. For detailed information concerning the standard items of equipment, reference should be made to the appropriate Air Publications, a list of which will be found at the beginning of this volume.

2. This system is of the 28-volt, single pole, earth return, voltage regulated type. It is supplied by two Type 517 generators, connected in parallel and stabilized by two Type J, 24-volt, 25 amp.hour batteries, which are connected in parallel and float across the output of the generators. The



EARTH POINT	1	2	3	4	5	6	7	8
LOCATION	STBD COCKPIT SHELF SIDE WALL	PORT COCKPIT SHELF SIDE-WALL	LEG PANEL MTG ANGLE	HOOD FAIRING	BATTERY MOUNTING	GUN PACKAGE FORMER E	GUN PACKAGE KEEL MEMBER	GUN PACKAGE FORMER C
SERVING	STBD COCKPIT SHELF	PORT COCKPIT SHELF	LEG PANEL	TEMP. CONT. VALVE ACTUATOR	SUPPLY PANEL	GUN PACKAGE	INNER GUNS	OUTER GUNS
CIRCUIT	A.C. SUPPLIES CABIN LIGHTING ENGINE ANTI-ICING FUEL COCK FUEL CONTENTS TANK PUMPS A.C. JUNCTION BOX A.C. SUPPLIES ARIFICIAL HORIZON G4F COMPASS CABIN TEMPERATURE RADAR RANGE A.C. DISTRIBUTION BOX ENGINE TEMPERATURE AUTO-STABILIZER (PRE MOD 1026)	AILERON TRIM CABIN PRESSURIZATION GYRO GUN SIGHT HOOD CONTROL HYDRAULIC PRESSURE U/C CONTROL U/C INDICATOR V.H.F. RADIO RADAR RANGE AIR BRAKE	CABIN PRESSURIZATION FIRE WARNING GENERATORS & BATTERIES GUNSIGHT MOUNTING CAMERA SERVICING LAMPS TURN & SLIP INDICATOR	CABIN PRESSURIZATION	D.M.E. ENGINE STARTER FIRE EXTINGUISHER FUEL CONTENTS FUEL PRESSURE GENERATORS & BATTERIES GUN FIRING GUN HEATING GUN VENTILATION I.F.F. SERVICING LAMPS V.H.F. RADIO FUEL FILTER DE-ICING FUEL COCK TANK PUMPS	GUN FIRING	GUN FIRING	GUN FIRING
EARTH POINT	9	10	11	12	13	14	15	
LOCATION	FRAME 25	CENTRE FUSELAGE	FRAME 45	RADIO EQPT MOUNTINGS		CONTROLS CASING (CABIN)	RADIO BAY V.H.F. PANEL	
SERVING	J.B.1	Nº 1 GENERATOR	T.B. 48	TYPE 200 INVERTER				
CIRCUIT	AILERON TRIM POSN IND. CABIN PRESSURIZATION ENGINE ANTI-ICING FIRE EXTINGUISHER FLAP CONTROL FLAP POSN INDICATOR FUEL FILTER DE-ICING NAVIGATION LAMPS POWER AILERONS PRESSURE HEAD HEATER PRESSURE REFUELLING SERVICING LAMPS U/C CONTROL V.H.F. RADIO	GENERATOR & BATTERIES	RUDDER TRIM POSN IND. NAVIGATION LAMPS POWER ELEVATORS TAIL PLANE CONTROL TAIL PLANE POSN IND. AIRBRAKE	L.F.F.		V.H.F. RADIO	V.H.F. RADIO	
	16	17	18	19		20		
	CENTRE FUSELAGE			FRAME 54		FRAME 25		
	Nº 2 GENERATOR			TELE-BRIEF EXTERNAL PLUG		STARTER PUMP MOTOR		
	GENERATORS & BATTERIES			V.H.F. RADIO		LIQUID FUEL STARTER		

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Fig.1 Supply and earth routeing chart

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batteries are coupled into circuit by Cannon type plugs and are provided with protective covers which are vented to atmosphere.

3. The wiring cable assemblies are run between junction boxes and panels located at points convenient for distribution to the equipment and for breaking down the aircraft. The majority of the cable assemblies are provided with fully weatherproof multipole plug and socket breakdown points. Whenever possible the cable connections to the plug and socket pins are crimped. To facilitate servicing and testing, the earth return connections are restricted in number and taken to stud type earth points, which are shown on the cable assembly layout, *(Group A.3, fig.1)* and listed on the supply and earth routeing chart, fig.1 of this group.

4. The generators are mounted on, and driven by the auxiliary gearbox situated in the engine bay, and their control equipment is mounted on a panel located on the starboard side of the radio bay. The batteries are mounted on a platform also located in the radio bay. The supply from the generators and batteries to the fuse bus-bars is shown, together with the earth return points, on fig.1 of this group.

REFERENCING AND GENERAL SERVICING OF COMPONENTS

Junction, control, and distribution boxes

5. These are of welded aluminium, waterproof construction with the insides suede finished to obviate chafing and condensation. They contain terminal blocks, fuse blocks and certain other equipment. Junction boxes are referenced numerically, with the exception of those which are labelled according to the circuits they feed, the numbers being preceded by the letters J.B. or, in the case of the armament junction boxes, ARM.J.B. Each box contains a wiring diagram. The terminals in the boxes are numbered and may be identified by reference to the wiring diagrams, spare terminals being starred on the diagrams to denote that they are spares. When a cable passes through a box without connecting to a terminal, the cable is wired pin to pin between its associated plugs, i.e. pin A to pin A or pin B to pin B, etc. The cable outlets on the junction boxes are either multi-pole plugs and sockets or rubber grommets.

6. Junction box 1 is the major box and is located at the bottom of the centre fuselage on the rear face of the main spar. Junction box 2 is located in the front fuselage above the cabin port shelf between frames 11 and 12 and is used mainly for distribution to the equipment on the port side of the cabin. Junction box 3 is mounted on the engine auxiliary gearbox access door and is used to interconnect the engine starting equipment. Junction box 4 is situated in the cabin on the starboard side of the floor behind the seat, and is employed in the a.c. supplies circuit.

7. The A.C. junction box is mounted aft of the cabin starboard shelf, and is used to supply the flight instruments and radar installation. The G4F compass and autostabilizer junction box is mounted in the fin between frames 51 and 52 just above the tailplane actuator, and is used to feed the G4F compass and the autostabilizer circuits. The power controls junction box is located in the front fuselage, on the starboard side under the cabin floor between frames 11 and 12, being mounted on the aft end of the cabin well. It contains a terminal block and fuses, which are part of the elevator and aileron power control circuit.

8. The ARM.J.B.1 is located on the forward face of the starboard fuel tank access panel on frame 19, above the battery platform. ARM.J.B.2 is mounted aft of the cabin port shelf. ARM.J.B.'s 3 and 4 are located in the port wing, being mounted on the top skin of the wheel bay and the diaphragm between interspar ribs Q and R, respectively. ARM.J.B.5 and 6 are located in similar positions in the starboard wing. All these junction boxes are used as breakdown and distribution points for the armament services.

9. The A.C. distribution box is located on the starboard side of the cabin aft of the pilots seat, mounted on the upper surface of the longeron tie member at frame 13 Internally it contains terminal blocks and fuses, while mounted on the lid, externally, is a suppressor. Its function is to distribute the a.c.supply to the engine temperature control and the autostabilizer circuits. The top temperature a.c.control box is mounted on the port side of the front fuselage at

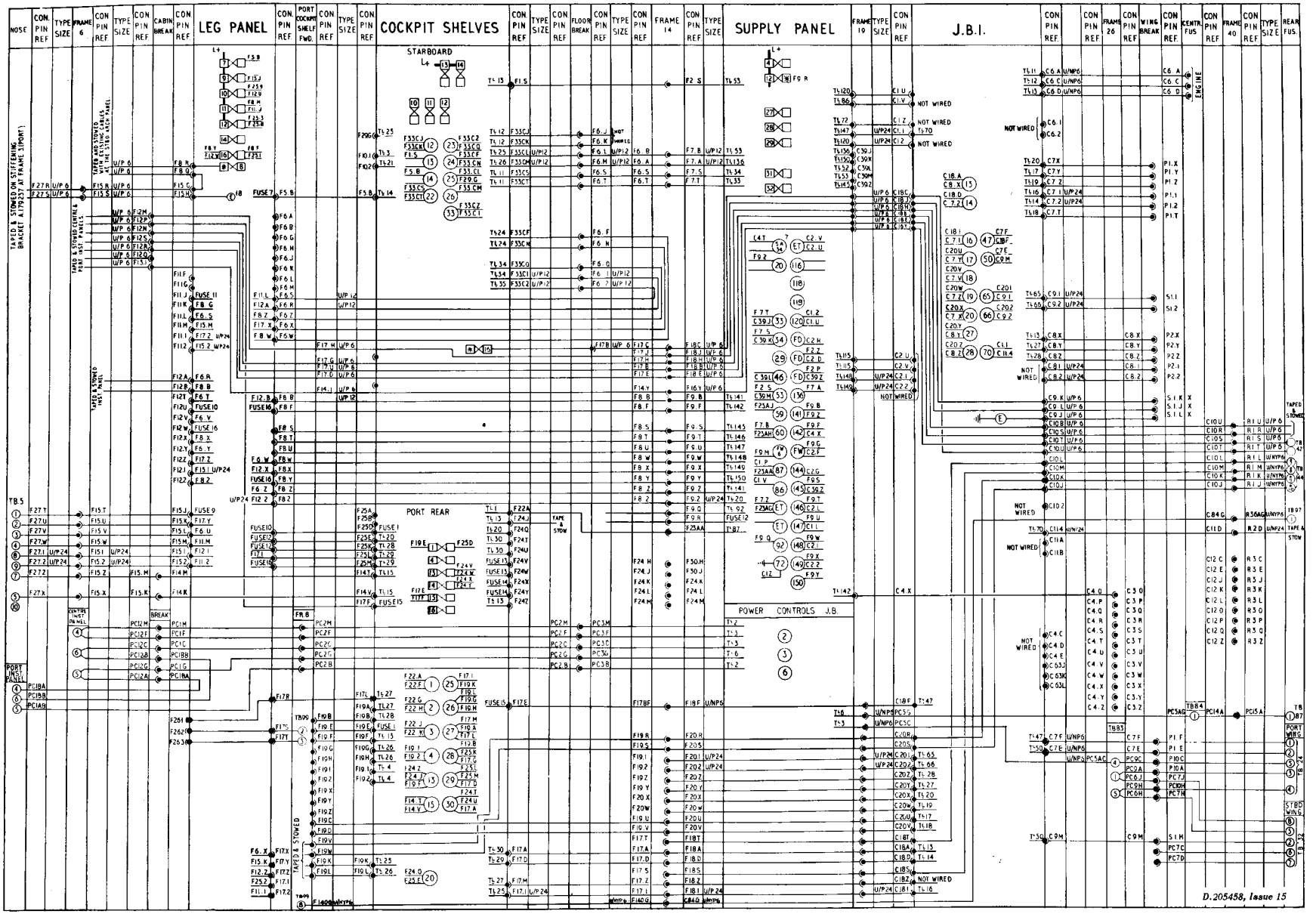

Fig. 2 Available spare wiring

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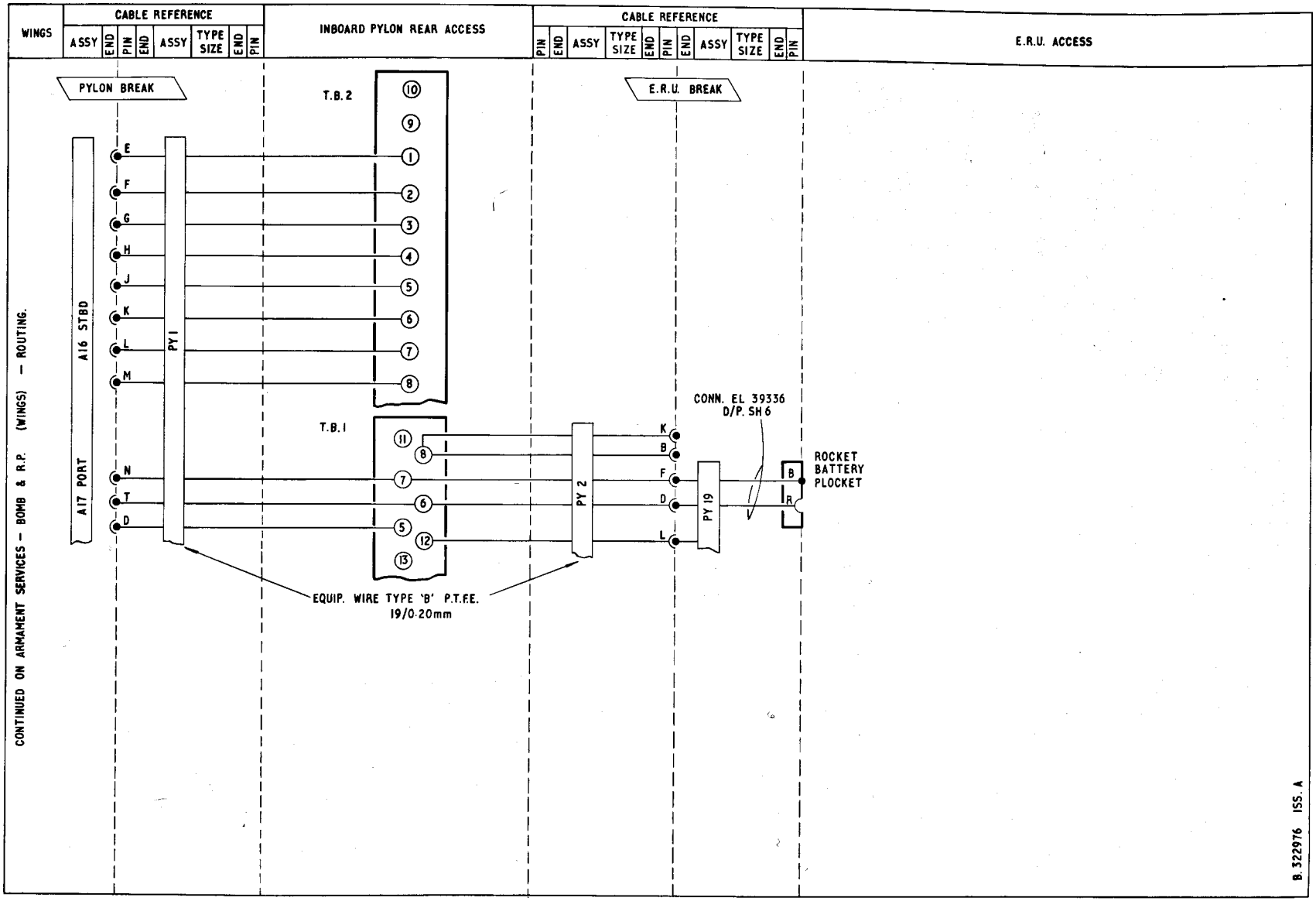


Fig.2A Available spare wiring Mk.6A – post Mod. 1394 (inboard pylons)

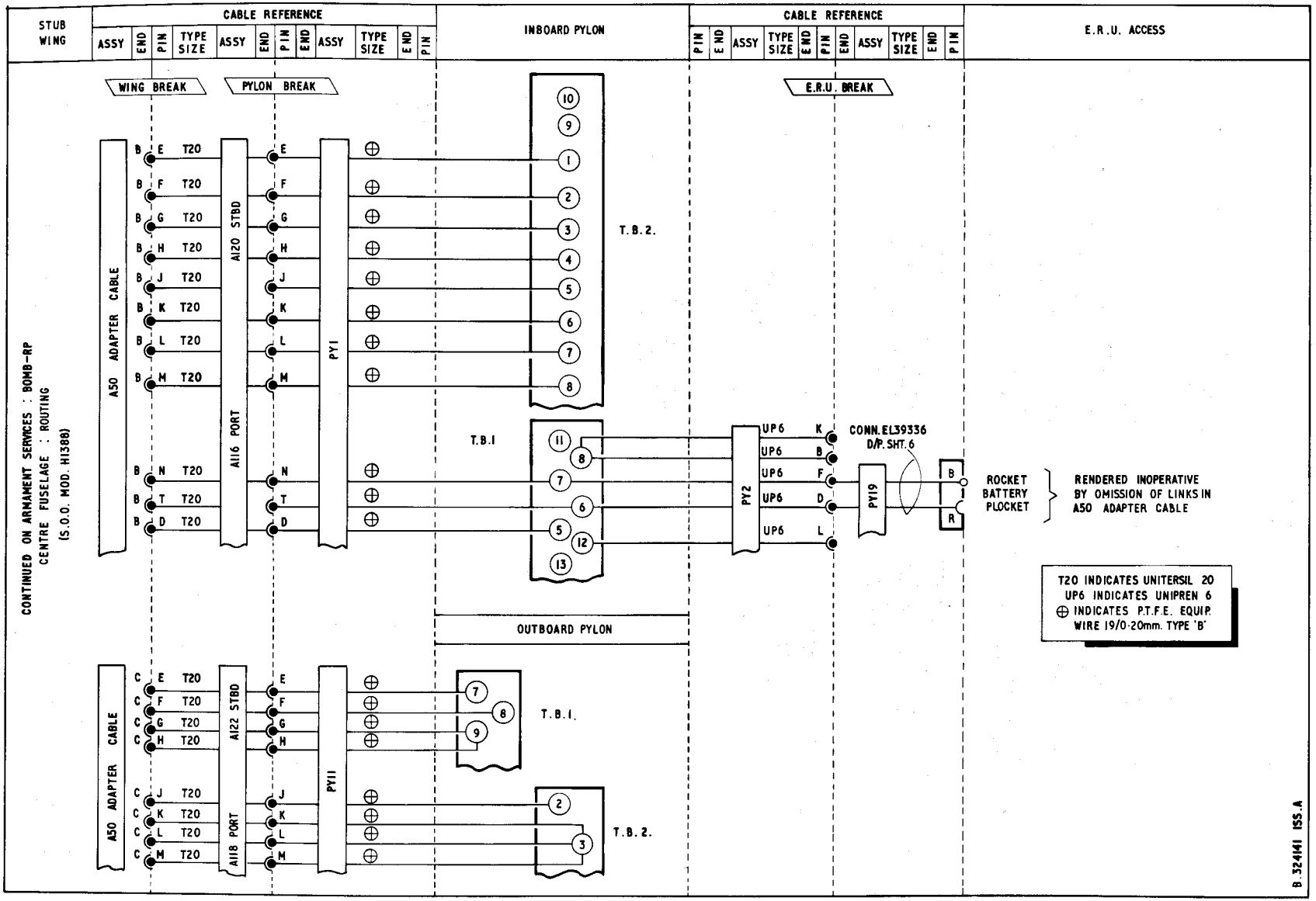


Fig.2B Available spare wiring Mk.6A – post Mod. 1388 (inboard and outboard pylons)

SERVICE	CCT CODE	MAX. LOAD IN AMPS: LEG PANEL	PORT COCKPIT SHELF	STBD COCKPIT SHELF	SUPPLY PANEL	REMARKS	MAX. FLIGHT LOAD IN AMPS: ENGINE START TO TAKE OFF DAY	ENGINE START TO TAKE OFF NIGHT	TAKE OFF TO LANDING APPROACH DAY	TAKE OFF TO LANDING APPROACH NIGHT	LANDING APPROACH TO ENGINE STOP DAY	LANDING APPROACH TO ENGINE STOP NIGHT	AVERAGE POWER CONSUMPTION IN AMP. MINUTES: 10 MIN. UP TO TAKE-OFF DAY	10 MIN. UP TO TAKE-OFF NIGHT	½ HOUR FLIGHT DAY	½ HOUR FLIGHT NIGHT	1 HOUR FLIGHT DAY	1 HOUR FLIGHT NIGHT	2 HOUR FLIGHT DAY	2 HOUR FLIGHT NIGHT	3 HOUR FLIGHT DAY	3 HOUR FLIGHT NIGHT	10 MIN. APPROACH AND LANDING DAY	10 MIN. APPROACH AND LANDING NIGHT
AILERON TRIM INDICATOR	AD	–	–	–	0.15	ON ALL THE TIME	0.15	0.15	0.15	0.15	0.15	0.15	1.50	1.50	4.50	4.50	9.00	9.00	18.00	18.00	27.00	27.00	1.50	1.50
AILERON TRIM CONTROL	A	–	.55	–	–	OCCASIONAL USE 10% OF FLIGHT	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	1.65	1.65	3.30	3.30	6.60	6.60	9.90	9.90	.55	.55
AIR-BRAKE CONTROL	AB	–	1.10	–	–	IN USE FOR 15% OF FLIGHT	–	–	1.10	1.10	1.10	1.10	–	–	4.45	4.45	9.90	9.90	19.80	19.80	29.70	29.70	11.00	11.00
A.C.SUPPLIES PANEL *	CH	–	–	15.00	–	1 INVERTER ON ALL TIME & 1 ON 50% OF FLIGHT	15.00	15.00	15.00	15.00	15.00	15.00	118.75	118.75	337.50	337.50	675.00	675.00	1350.00	1350.00	2025.00	2025.00	118.75	118.75
ARTIFICIAL HORIZON INSTALLN.	H	–	–	–	–	ON ALL THE TIME A.C.SUPPLIED FROM INVERTERS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
AUTOSTABILIZER (Pre Mod.1026)	AS																							
CABIN LIGHTING	M	–	1.60	–	–	NIGHT ONLY 75% IN USE ALL THE TIME	–	1.60	–	1.60	–	1.60	–	12.00	–	36.00	–	72.00	–	144.00	–	216.00	–	12.00
CABIN PRESSURE & TEMP.CONTL.	CP	–	3.20	–	–	ON-OFF ONCE PER FLIGHT	–	–	3.20	3.20	3.20	3.20	–	–	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40	–	–
CAMERA GUN G.90.	CG	4.0	–	–	–	2 AMP HEATER - 2 AMP WHILE RUNNING	2.00	2.00	2.00	2.00	2.00	2.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
CAMERA RECORDER		–	0.55	–	–	ON FOR MOST OF FLIGHT	0.55	0.55	0.55	0.55	0.55	0.55	5.50	5.50	16.50	16.50	33.00	33.00	66.00	66.00	99.00	99.00	5.50	5.50
COMPASS INSTALLATION G4F	C	–	–	–	–	ON ALL THE TIME A.C.SUPPLIED FROM INVERTERS	0.13	0.13	0.13	0.13	0.13	0.13	1.30	1.30	3.90	3.90	7.80	7.80	15.60	15.60	23.40	23.40	1.30	1.30
DROP TANK-OUTBD.EMPTY IND.	FC	–	–	0.12	–	ON FOR FIRST HOUR OF FLIGHT	0.12	0.12	0.12	0.12	0.12	0.12	1.20	1.20	3.60	3.60	–	–	–	–	–	–	–	–
REAR TANKS EXPLOSION SUPPRESSION	EX	–	–	–	–	A.C. SUPPLIED FROM INVERTERS																		
ENGINE TEMP.CONTROL	ET	–	1.00	–	–	ON FOR 30 SEC. AT TAKE-OFF ONLY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ENGINE ANTI-ICING	EA	–	–	1.25	–	OCCASIONAL USE 15 MIN. PER FLIGHT	1.25	1.25	1.25	1.25	1.25	1.25	–	–	18.75	18.75	18.75	18.75	18.75	18.75	18.75	18.75	–	–
LIQUID FUEL STARTER	S	–	–	–	–	DIRECT BATTERY LOAD AT START ONLY	212.00	212.00	–	–	–	–	28.26	28.26	–	–	–	–	–	–	–	–	–	–
ENGINE STARTER CONTROL	SA	–	–	–	5.90	AT START AND RELIGHT ONLY	5.90	5.90	5.90	5.90	5.90	5.90	–	–	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90
ENGINE SPEED INDICATOR	RA	–	–	–	–	SUPPLIES ITS OWN POWER	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FUEL LOW LEVEL	FL	–	–	–	–																			
FLAP ANGLE INDICATOR	FD	–	–	–	0.01	ON ALL THE TIME	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.30	0.30	0.60	0.60	1.20	1.20	1.80	1.80	0.03	0.03
FIRE WARNING & EXTINGUISHER	FW & F	–	–	–	1.26	OCCASSIONAL USE ONLY EMERGENCY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
FUEL CONTENTS GAUGE	FC	–	–	–	4.4	ON ALL THE TIME	4.40	4.40	4.40	4.40	4.40	4.40	44.00	44.00	132.00	132.00	264.00	264.00	528.00	528.00	792.00	792.00	44.00	44.00
FUEL TANK PUMP	BP	–	–	35.00	–	ON ALL THE TIME EXCEPT FOR BALANCING	35.00	35.00	35.00	35.00	35.00	35.00	350.00	350.00	1050.00	1050.00	2100.00	2100.00	4200.00	4200.00	6300.00	6300.00	350.00	350.00
FUEL LOW PRESSURE WARNING LT.	FP	–	–	0.12	–	INDICATES LOSS OF FUEL PRESSURE	0.12	0.12	0.12	0.12	0.12	0.12	–	–	0.60	0.60	0.60	0.60	1.25	1.25	1.25	1.25	1.25	1.25
FUEL FILTER DE-ICING		–	–	–	–																			
GENERATOR & ACCUMULATOR	GA	–	–	–	–	SOURCE OF ALL POWER SUPPLY REF.ONLY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GENERATOR FAILURE WARNING	GA	–	–	–	–	0.37 AMP DIRECT BATTERY LOAD WHEN GENS.FAIL	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.37	0.37
GYRO-GUNSIGHT	GS	–	4.00	–	–	ON FOR MOST OF FLIGHT	4.00	4.00	4.00	4.00	4.00	4.00	40.00	40.00	120.00	120.00	240.00	240.00	480.00	480.00	720.00	720.00	–	–
GUN HEATING	GH	–	–	–	1.80	TEMPERATURE CONTROLLED 4 SEC. PER OPERATION	1.80	1.80	1.80	1.80	1.80	1.80	3.00	3.00	9.00	9 00	18.00	18.00	36.00	36.00	54.00	54.00	–	–
GUN VENTILATION	GV	–	–	–	2.10	ON FOR 15 SEC. PER GUN BURST	–	–	2.10	2.10	–	–	–	–	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	–	–
GUN FIRING	GF	–	–	–	4.3	ON FOR 8 SEC. PER FLIGHT	–	–	4.33	4.33	–	–	–	–	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	–	–
HOOD CONTROL	HC	–	10.0	–	–	ON FOR TAKE OFF & LANDING	10.00	10.00	–	–	10.00	10.00	5.00	5.00	–	–	–	–	–	–	–	–	5.00	5.00
HYDRAULIC POWER FAILURE	HP	–	–	–	0.16	ON ONLY WHEN HYDRAULICS FAIL	0.16	0.16	0.16	0.16	0.16	0.16	–	–	–	–	–	–	–	–	–	–	1.60	1.60
JET TEMPERATURE GAUGE	ET	–	–	–	–	SELF-GENERATING	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LANDING FLAPS	F	–	0.40	–	–	2 VALVES. 1 ON ALL THE TIME	0.40	0.40	0.40	0.40	0.40	0.40	4.00	4.00	12.00	12.00	24.00	24.00	48.00	48.00	72.00	72.00	4.00	4.00
NAVIGATION LIGHTS	N	–	–	2.20	–	ON ALL THE TIME AT NIGHT	–	2.20	–	2.20	–	2.20	–	22.00	–	66.00	–	132.00	–	264.00	–	396.00	–	22.00
OIL PRESSURE GAUGE	OP	–	–	–	–	ON ALL THE TIME A.C.SUPPLIED FROM INVERTERS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
OXYGEN FLOW INDICATOR	OX	–	–	–	0.06		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1.80	1.80	3.60	3.60	7.20	7.20	10.80	10.80	0.60	0.60
POWER ASSISTED CONTROLS	PA & PE	–	1.00	–	–	ON FOR POWER CONTROLS OFF	1.00	1.00	1.00	1.00	1.00	1.00	10.00	10.00	30.00	30.00	60.00	60.00	120.00	120.00	180.00	180.00	10.00	10.00
PRESSURE HEAD HEATER	P	6.00	–	–	–	ON ALL THE TIME	6.00	6.00	6.00	6.00	6.00	6.00	60.00	60.00	180.00	180.00	360.00	360.00	720.00	720.00	1080.00	1080.00	60.00	60.00
PRESSURE RE-FUELLING	PR	–	–	–	1.20	ON WHILE REFUELLING ONLY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
R.P.INSTALLATION		–	–	–	12.00	SPECIAL SERVICE SHOCK CHARACTERISTIC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RUDDER TRIM CONTROL	R	–	0.55	–	–	OCCASIONAL USE, 10% OF FLIGHT	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	1.65	1.65	3.30	3.30	6.60	6.60	9.90	9.90	0.55	0.55
RUDDER TRIM INDICATOR	RD	–	–	–	0.15	ON ALL THE TIME	0.15	0.15	0.15	0.15	0.15	0.15	1.50	1.50	4.50	4.50	9.00	9.00	18.00	18.00	27.00	27.00	1.50	1.50
SERVICING LAMPS	L	0.26	–	–	0.26	NOT USED IN FLIGHT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TAILPLANE ACTUATOR & INDR.	T & TD	–	12.0	–	0.08	FREQUENT USE 30% OF FLIGHT	12.08	12.08	12.08	12.08	12.08	12.08	36.24	36.24	108.72	108.72	217.44	217.44	434.88	434.88	652.32	652.32	36.24	36.24
TURN AND SLIP INDICATOR	TS	0.25	–	–	–	ON ALL THE TIME	0.25	0.25	0.25	0.25	0·25	0.25	2.50	2.50	7.50	7.50	15.00	15.00	30.00	30.00	45.00	45.00	2.50	2.50
UNDERCARRIAGE CONTROL	UC	–	0.41	–	–	2 VALVES, EITHER ONE ON ALL THE TIME	0.41	0.41	0.41	0.41	0.41	0.41	2.00	2.00	6.00	6.00	12.00	12.00	24.00	24.00	36.00	36.00	2.00	2.00
UNDERCARRIAGE INDICATOR	U	–	0.50	–	–	ON FOR TAKE-OFF & LANDING	0.50	0.50	–	–	0.50	0.50	5.00	5.00	–	–	–	–	–	–	–	–	5.00	5.00
D.M.E.	DM	–	–	–	6.00	ON ALL THE TIME	6.00	6.00	6.00	6.00	6.00	6.00	60.00	60.00	180.00	180.00	360.00	360.00	720.00	720.00	1080.00	1080.00	60.00	60.00
I.F.F. RADAR SET MK.10	IF	–	–	–	33.30	ON JUST BEFORE AIRBORNE	33.30	33.30	33.30	33.30	33.30	33.30	333.00	333.00	999.00	999.00	1998.00	1998.00	3996.00	3996.00	5994.00	5994.00	333.00	333.00
RADIO V.H.F.	RT	–	–	–	7.50	2 SETS. 1 ON ALL THE TIME	7.50	7.50	7.50	7.50	7.50	7.50	82.50	82.50	165.00	165.00	330.00	330.00	660.00	660.00	990.00	990.00	82.50	82.50
RADAR RANGE	RS	–	–	–	30.0	USUALLY ON 50% OF FLIGHT TIME	30.00	30.00	30.00	30.00	30.00	30.00	150.00	150.00	450.00	450.00	900.00	900.00	1800.00	1800.00	2700.00	2700.00	150.00	150.00

NOTE – WHERE SERVICES ARE ALTERNATIVE THE GREATEST LOAD ONLY HAS BEEN TAKEN

* BATTERY IS ASSUMED CAPABLE OF HOLDING ONLY 90% RATED CAPACITY

BATTERY CHARGING EFFICIENCY = 90%

LOAD ANALYSIS IN AMPS.

	DAY	NIGHT
MAX.POSSIBLE LOAD ON GROUND CHECK	224.39	224.39
MAX.LOAD ON TAKE-OFF	400.89	404.69
MAX.LOAD DURING FLIGHT	192.27	196.07
MAX.LOAD DURING APPROACH AND LANDING	196.34	200.14
AVERAGE LOAD DURING FLIGHT	142.45	146.34
MAX.OUTPUT FROM 2 - 517 GENERATORS = 400 AMP	AMP	CONT.

2 VARLEY BATTERIES
24 V. 25 A.H. IN PARALLEL = 50 A.H.

POWER ANALYSIS IN AMP. MINUTES

			½ HOUR FLIGHT DAY	½ HOUR FLIGHT NIGHT	1 HOUR FLIGHT DAY	1 HOUR FLIGHT NIGHT	2 HOUR FLIGHT DAY	2 HOUR FLIGHT NIGHT	3 HOUR FLIGHT DAY	3 HOUR FLIGHT NIGHT
BATTERY CAPACITY AT ENGINE START:-	ASSUMED 80% FULLY CHARGED	a	2400	2400	2400	2400	2400	2400	2400	2400
POWER GENERATED UP TO TAKE-OFF:-	MAXIMUM POWER AVAILABLE	b	1629	1666	1629	1666	1629	1666	1629	1666
POWER CONSUMED UP TO TAKE-OFF:-	FROM TABLE	c	1391	1425	1391	1425	1391	1425	1391	1425
RESULTANT BATTERY CAPACITY AT TAKE-OFF	(a + 90% b – c) =	d	2475	2475	2475	2475	2475	2475	2475	2475
POWER GENERATED DURING FLIGHT:-	MAXIMUM POWER AVAILABLE	e	4882	4996	9458	9673	18590	19048	27727	28407
POWER CONSUMED DURING FLIGHT:-	FROM TABLE	f	4169	4271	8288	8481	16506	16914	24729	25341
RESULTANT BATTERY CAPACITY FOR APPROACH	(d + 90% e – f) =	g	2700	2700	2700	2700	2700	2700	2700	2700
POWER GENERATED DURING APPROACH & LANDING:-	MAXIMUM POWER AVAILABLE	h	1570	1608	1570	1608	1570	1608	1570	1608
POWER CONSUMED DURING APPROACH & LANDING:-	FROM TABLE	i	1413	1447	1413	1447	1413	1447	1413	1447
RESULTANT BATTERY CAPACITY FOR NEXT FLIGHT	(g + 90% h – i) =	a¹	2700	2700	2700	2700	2700	2700	2700	2700

Fig.3 Loading chart and circuit index

RESTRICTED

frame 17A in the radio bay above the radio sets. It contains a torque switch and relay, both of which are employed in the engine top temperature control circuit. The air-brake relay control box containing the relays employed in the airbrake control circuit, is situated in the cabin over the port shelf between frames 10 and 11.

Servicing of junction, distribution and control boxes.

10. A regular examination of these boxes should be carried out to ensure that they are correctly supported, clean and undamaged. All the components in the boxes should also be examined for security, and an examination of the wiring and terminals made for damage and corrosion.

11. The boxes are provided with readily detachable lids and have been designed for ease of removal, being supported on quick-release mountings. When major servicing is necessary, it is recommended that the boxes are removed from the aircraft and replaced with fully serviced components, thus reducing the time in which the aircraft is unserviceable. The faulty boxes should then be serviced, on the bench, and returned to store to be held as spares. The method of removing the boxes is described in Group A.2 of this chapter.

Generator control and supply panels

12. These two panels are located together between frames 16 and 19 on the starboard side of the radio bay in the front fuselage. The supply panel is outboard of the generator control panel and is curved to conform with the inside contour of the fuselage skin, being attached by studs on frames 17 and 18, which engage with channel members on the panel. The panel carries a number of terminal blocks, fuse boxes and relays, together with plugs for the cable assemblies to and from the panel. The generator control panel is hinged to the top longeron and fits over the supply panel to form a lid, being attached to the latter panel by four Dzus fasteners along the lower edge. The panel contains all the generator control components, fuse boxes and testing equipment. When raised for access to the supply panel, the generator control panel may be retained in the "up" position by a hook attached to a length of chain secured to the radio mounting structure.

Leg panel

13. This panel is in the form of a box, being bolted to the cabin floor, below the centre instrument panel and just forward of the control column. It is provided with a hinged door on the port side and a sloping plate carrying the plugs for the cable assemblies on its forward face. The rear face carries the oil pressure gauge, generator power failure warning lamps, ignition and starter switches, together with the gyro gun sight circuit breaker and a number of control switches. The box contains relays, terminal blocks and fuse blocks, these latter components being mounted on the inside face of the door for easy accessibility.

Cabin port shelves

14. The cabin port shelf, as a whole, extends between frames 8 and 12, and the two portions about to be described form removable parts of this structure. The forward portion is located just inboard of the throttle lever at the forward end of the structure, while the rear portion extends aft from just behind the throttle lever to the end of the structure. Each portion is attached to the fixed structure by a number of screws and Dzus fasteners and is in the form of a panel with a side member. The rear portion is also provided with an end plate which carries the plugs for connection with the cable assemblies to and from this shelf. The panels carry the radio controllers, control switches, warning lamps and indicators, while below a hinged door, in the top surface of the rear portion, are a number of terminals and fuse blocks supplying the equipment.

Cabin starboard shelf

15. This shelf, of which the removable portion about to be described is the major part, extends between frames 8 and 12. The removable portion is attached to the fixed structure by a number of Dzus fasteners and is in the form of a panel with a side member and end plate. The end plate carries the plugs for the cable assemblies to and from the shelf while the panel incorporates a number of switches and circuit breakers, together with the fuel contents gauges; below a hinged door, at its rear end, are a number of fuse and terminal blocks supplying the equipment.

Gun-firing panel

16. This panel is bolted below the radio mounting structure on the port side of the front fuselage and carries the gun-firing equipment, consisting of an inverter and a number of relays, together with terminal and fuse blocks supplying the equipment.

Radio relay box

17. This box is mounted on the fuselage bottom longeron below the radio mounting structure just aft of frame 16 and contains the radio supply fuses and control relays, together with a number of plugs for the radio connectors to and from the box. For further details of this box, reference should be made to Sect.6, Chap.1 of this volume.

Servicing of panels and shelves

18. The equipment panels and cabin shelves should be regularly examined to ensure that they are correctly supported, clean and undamaged. All the components should likewise be examined for security, and an examination of the wiring and terminals made for signs of damage and corrosion. The Dzus fasteners securing these panels and shelves should also be examined to ensure that they are correctly engaged and not damaged or distorted in any way, paying particular attention to the springs. Any fasteners found to be unlocked must be re-engaged and any found defective renewed as described in A.P.1464B, Vol.1, Part 2, Sect.6, Chap.3.

19. When major servicing is necessary to these panels and shelves, it is recommended that they are removed from the aircraft and replaced with fully serviceable components, thus reducing the time in which the aircraft is unserviceable. The faulty panel or shelf should then be serviced, on the bench, and returned to store to be held as a spare. The method of removing these components is given in Group A.2 of this chapter.

Cable assemblies

20. These consist of a number of cables assembled together, most of which are fitted at each end with multi-pole plugs or sockets. The assemblies are referenced numerically, the number being prefixed with a letter denoting their location in the aircraft or, with special circuits, the service which they supply. Front fuselage cable assemblies are prefixed by the letter F, centre fuselage assemblies by the letter C and rear fuselage assemblies with the letter R. Cable assemblies in the port wing are prefixed by the letter P, while those in the starboard wing carry the letter S. The artificial horizon, GM.4F compass and armament cable assemblies are prefixed with the letters AH, GC and A respectively. The cable assemblies in the engine bay hot zones consist of Nypren insulated cables.

21. A periodical examination of the cable assemblies should be made for signs of oil soakage and to ensure that they are properly supported and not chafing, cut or damaged in any way. Damaged cables must be renewed and all slack support clips re-tightened.

Cables

22. The ends of each cable are identified, in one of two ways, by means of rubber sleeves. At equipment the sleeve gives the item and terminal to which the cable core is connected, while at terminal blocks the sleeve gives the equipment and terminal from where the cable core originated. For the type of cable employed in the various circuits, reference should be made to the routeing diagrams and Table 3. The method of servicing and repairing the cables and P.V.C. conduit is contained in A.P.4343, Sect.12 and A.P.4343C, Vol.1, Book 3, Sect.5.

Multi-pole plugs and sockets

23. Plessey standard and pressure-proof plugs and sockets, together with the Mk.4 miniature types, are used on the cable assemblies, junction boxes and panels, etc. These are fully described in A.P.4343C, Vol.1, Book 3, Sect.5, Chap.1 and 8, and consist of internal mouldings, holding the plug pins and sockets inserts, which float in fully weather-proof metal housings. The plug pins and socket inserts are each identified by a letter or number on the internal moulding and are arranged in a pattern so as to prevent incorrect assembly with their associated component, thus preventing cross-connection or short-circuiting.

24. Those plugs and sockets fitted to cable assemblies outside junct'o boxes and panels etc., are provided with rubber sleeves and bungs, which seal the cable entry to prevent the ingress of moisture.

The sleeves and bungs are retained in position by inner and outer ferrules locked by a coupling nut. Each socket may be identified by the cable assemblies to which it is attached, the reference being printed on the rubber sleeve or P.V.C.conduit. Each plug is also identified by its associated cable assembly reference or colour which is painted on the junction box or panel to which the plug is attached. Where two or more identical plugs or sockets are situated together, they are coloured for easy identification.

25. Before an attempt is made to remove a Plessey standard or pressure-proof socket from its associated plug, the coupling nut, retaining the sleeve and bung or ferrule and P.V.C. assembly to the socket, must be slackened. This is necessary as the coupling nut also serves to lock the socket when it is mating with its plug. It should also be noted that this nut should be slackened before fitting the socket and the socket screwed in by hand, being assisted home by pushing on the back. A spanner or undue force must *not* be used, or damage will result.

26. The plugs and sockets should be examined periodically for signs of corrosion which, if found, must be removed without delay. When removing corrosion, care must be taken not to damage the plated surface of the plug pins or socket inserts or early re-corrosion will result. The importance of cleanliness and the need for regular lubrication of the plug and socket screw threads cannot be over-emphasized if seizing of these threads is to be avoided. Grease MS-4 *(Ref.33H/9424829)* is to be used and all excess wiped off. On no account should a lubricant with a graphite base be employed.

27. When it is required to examine or service the cable connections to plugs and sockets incorporating rubber sleeves and bungs, access may be gained by releasing the sleeve at the coupling nut and rolling it back until clear of the connections.

Fuses

28. The circuit fuses are contained in quick-release fuse blocks in the A.C. junction box and attached to the various panels and cabin shelves carrying the electrical equipment. They are referenced numerically, each panel and shelf having its own series of numbers. In most instances, these numbers, together with the fuse rating and the code letters of the circuit it serves, appear on a small plate in the block adjacent to each fuse. In certain instances this information is given on a photographic label attached to the appropriate fuse block. The majority of the fuses are of the type S series, but a few Type 33 fuses are used on the gun firing panel and reference should be made to the panel and shelf wiring diagrams for the Reference numbers, ratings and fuse numbers. The fuses should be examined periodically to ensure that they are serviceable and of the correct value.

Circuit breakers

29. All the circuit breakers, apart from those on and below the generator control panel and that on the gun-firing panel, which are located in the radio bay, are accessible from the cabin. They are not referenced, but may be identified by the name of the circuit that they protect. this being given adjacent to each breaker. The interior of the circuit breakers is inaccessible and servicing is theretore restricted to the functional and insulation tests given in A.P.4343B, Vol.1, Book 2, Sect.10, Chap.6. Table 1 lists the circuit breakers together with their ratings and Reference numbers.

Note . . .

The starter and booster pump circuit breakers and those below the generator control panel are fitted with rubber packing at their mountings to prevent tripping due to vibration (S.T.1/Hunter/290). When replacing these circuit breakers ensure that this packing is refitted.

Relays

30. The relays are located in the junction boxes and on the various panels and shelves carrying the electrical equipment. They are referenced alphabetically, the letters being given adjacent to each unit and on the wiring diagrams. The relays should be inspected at regular intervals to ensure that the contacts are kept clean and that the units are undamaged and secure. They should also be subjected periodically to the functional tests given in A.P.4343C, Book 2, Vol.1, Sect.3.

Note . . .

Relays that are operating correctly

are best left alone and it is, therefore, not recommended that the covers are removed or the contacts cleaned, unless absolutely necessary.

Switches

31. The switches employed in this aircraft are sealed units and cannot be readily dismantled for servicing, they should, however, be examined for cracks and signs of strain, paying particular attention to the switch dolley.

Terminal blocks

32. Apart from those inside junction boxes and on the panels carrying electrical equipment, terminal blocks are also used as distribution and breakdown points throughout the aircraft. These are of the Plessey quick-release 2, 3, 5, 10 and 20-way type and are referenced numerically, the numbers being preceded by the letters T.B. Each terminal carries a coding plate on which is marked the terminal numbers, as given in the wiring diagrams. The terminal blocks may be located on the cable assembly layout and location diagrams contained in Group A.3 of this chapter.

Note . . .

Terminal Blocks 11, 22, 24, 32, 42, 44 45, 46, 47, 48, 73, 79, 87, 97, 98 should not be fitted with perspex covers (introduced by STIs 182A and 262).

Filament lamps

33. When renewing filament lamps, reference should be made to Table 2 to ensure that the correct type is used.

TABLE 1

Circuit Breakers

Circuit	Rating (amp.)	Stores Ref.
Gun-firing	5	5CY/2559
Gun sight mounting	10	5CY/2560
No.1 generator, field	15	5CY/2561
No.2 generator, field	15	5CY/2561
Bomb release	10	5CY/2560
D.M.E.	10	5CY/2560
Flight instrument control Normal	15	5CY/2561
Stand-by	15	5CY/2561
Tail plane control	25	5CY/2562
Hood control	25	5CY/2562
(Mod.325)	15	5CY/2561
I.F.F. *(pre Mod.1343)*	15	5CY/2561
I.F.F./S.S.R. *(post Mod.1343)*	10	5CY/2560
Tank pumps		
Port	25	5CY/2562
Starboard	25	5CY/2562
Engine starting	45	5CY/2564
Radar ranging	45	5CY/2564
No.1 generator, main	200	5CY/2853
No.2 generator, main	200	5CY/2853

Earth points

34. Apart from the guns, engine starter, inverters, suppressors, and radio sets, which are earthed internally or adjacent to their mountings, all the other earth leads are grouped, for ease of servicing and insulation resistance testing, and connected to the aircraft structure at a number of stud-type main earth points. All the main earth points are numbered and may be located on the cable assembly layout in Group A.3 and on the supply and earth routeing chart *(fig.1)* of this group. When refitting earth leads, care must be taken to ensure that the surfaces in contact are perfectly clean and in particular, free from grease and paint. Completed assemblies should be protected against corrosion by applying one coat of blue oil-base paint to D.T.D. Spec.827.

External supply socket

35. This is mounted on the battery support structure below the batteries; access is gained by opening the radio access panel. It is used to connect an external supply to eht aircraft services by means of a standard plug and it is most important that when servicing, the external supply is used to prevent the aircraft batteries from being discharged. When the external supply is in use, the generators are automatically isolated to prevent a reverse feed *(Group B.1)* and it is recommended that the battery master switch, located on the leg panel, is placed in the OFF position to prevent discharge of the aircraft batteries should the external supply voltage fall below that of the batteries.

Rendering aircraft electrically safe

36. When not required for flight, and during any servicing operations not requiring the electrical supply, the aircraft must be rendered electrically safe to eliminate the possibility of a short-circuit

resulting in the accidental operation of the guns, hydraulic units, etc., with consequent damage to the aircraft or injury to personnel. When electrical power is required, during servicing, an external supply should be used. To render safe, it is recommended that the leads from the batteries be disconnected, as operation of the battery master switch will not render the system completely safe. Also ensure that the external supply is disconnected.

TABLE 2

Filament Lamps

Lamp	Circuit	No.off	Voltage	Wattage	Service Ref.
Power failure warning	Generator and batteries	2	28	3.5	5L/9951273
Fuel pressure warning	Fuel pressure	1	28	3.5	5L/9951273
Cabin pressure warning	Cabin pressurization and temperature control	1	28	3.5	5L/9951273
Alighting gear indicator	Alighting gear indicator	9	28	3.5	5L/9951272
Alighting gear warning	Alighting gear indicator	1	28	3.5	5L/9951273
Ultra-violet lamps	Cabin lighting	2	12	7.5	5L/9952261
Red lamps	Cabin lighting	9	24	2.8	5L/9951263
Red stand-in lamps	Cabin lighting	2	24	2.8	5L/9951263
Wing-tip navigation	Navigation lamps	2	28	24	5L/9952431
Tail navigation	Navigation lamps	1	24	10	5L/9952276
Service lamps	Service lamps	2	28	7	5L/9953271
Gun sight	Gun sight	4	22	12	5L/9951260
Radar locked-on and range	Gun sight	2	28	1.1	5L/9959118
Hydraulic pressure	Hydraulic pressure indicator	1	28	3.5	5L/9951273
V.H.F. control	V.H.F.	2	2.5	0.5	5L/9951122
Tele-briefing	V.H.F.	1	28	3.5	5L/9951273
Radar locked-on	Radar ranging and supply	1	28	3.5	5L/9951273
Fire warning	Fire warning and extinguisher	1	28	3.5	5L/9951272
Refuelling indicator	Pressure refuelling	6	24	2.4	5L/9959211
Tank pump	Tank pumps	2	28	3.5	5L/9951273
E.2B compass	Cabin lighting	1	28	1.1	5L/9959121
I.F.F./S.S.R. Failure warning	I.F.F.	1	24	2.4	5L/9959118

Use of spare cables for emergency servicing

37. Fig.2 shows the spare cables available in the cable assemblies, Fig.2A shows the spare cables available in the inboard pylons Mk.6A (post Mod.1394) and Fig.2B shows the available spare wiring in the inboard and outboard pylons Mk.6A (post Mod.1388). These are provided for future modifications and additions to the existing installations but may also be used in an emergency, to replace a defective cable. Under this condition, having found the defective portion of cable, refer to figs.2, 2A and 2B to find a similar cable which can be used. At suitable points, modify the existing cable run to use the spare cable and isolate the defective cable. Amend the junction box, panel and shelf wiring diagrams to agree and note the fact of this change in the aircraft log book, with the instruction that the cable assembly containing the defective cable must be changed or repaired at the next available opportunity.

Note...

The above procedure is only to be adopted as a temporary measure to keep the aircraft operational and must not be allowed to carry on indefinitely.

Insulation resistance testing

38. As an interim measure, pending the introduction of a full insulation resistance test, the following procedure, which only covers the minimum requirements, should be carried out.

(1) Remove all lamps.
(2) Disconnect the inverters.
(3) Disconnect earth points (1 to 20).
(4) Remove the white compass plug from the A.C. junction box.
(5) Remove the red and green radar plugs from the A.C. junction box.

(6) Remove the plugs from the fire extinquishers.
(7) Remove the supply plug to both fuel contents gauge amplifiers.
(8) Disconnect the gun sight suppressor F5.
(9) Remove the voltmeter, if this has been fitted.
(10) Remove the lamps from the Type A cut-outs.
(11) Bridge all other suppressors.
(12) Remove the engine igniter plugs.
(13) Disconnect the Rebecca Mk.8.
(14) Place all switches to the ON position.
(15) Connect a 250-volt insulation resistance tester to positive terminal and to an earth point of the aircraft.

Note . . . .

It is not necessary to disconnect the suppressors if an insulation resistance tester, Type C (Stores Ref.5G/152) is used.

Bonding check

◀ **39.** It is not required to carry out bonding checks on those parts of the airframe, or airframe systems which are capable of movement, or of being moved over an electrically conductive bearing (e.g. *control columns, rudder bars, etc.*), physical examination that these items are correctly bonded being sufficient. The following items should, however, be checked using a Safety Ohmmeter Ref. 5G/1006388 or other suitable Safety Ohmmeter:-

(1) Metal frames of radio and radar equipment.

(2) Aerial mounting brackets.

(3) Electrical control and distribution panels.

(4) Fuel pipelines.

(5) Hydraulic pipelines.

(6) Engine.

(7) Jet pipe.

With the battery master switch OFF and the external supply disconnected, check each item from an aircraft main earth point. The maximum permissible resistance is 4.5 ohms. ▶

Electrical cables on throttle lever

40. The engine throttle lever carries the gyro gun sight twist grip control unit, which incorporates the radio press-to-transmit and air brake control switches. The cables from these switches are clamped to the throttle lever and pass through a grommet in the cabin port shelf. To avoid accidental operation of the hood control switch due to fouling by these cables, it is important that all excessive slack be eliminated as follows:-

(1) With the throttle lever fully forward, i.e. throttle open, draw the cables through the grommet in the cabin port shelf so that all slack between the throttle lever and grommet is taken up. Care must be taken during this operation to avoid kinking the cables at the clamp block on the throttle lever.

(2) Reposition the cable strapping to clear the guard on the hood control switch box.

Main undercarriage electrical cables replacement.

41. When replacing the electrical cable looms from the compression microswitches on each main undercarriage leg, as called for during Major Servicing, the following points must be observed.

(1) The run and strapping of the cables is to be in accordance with fig.4.

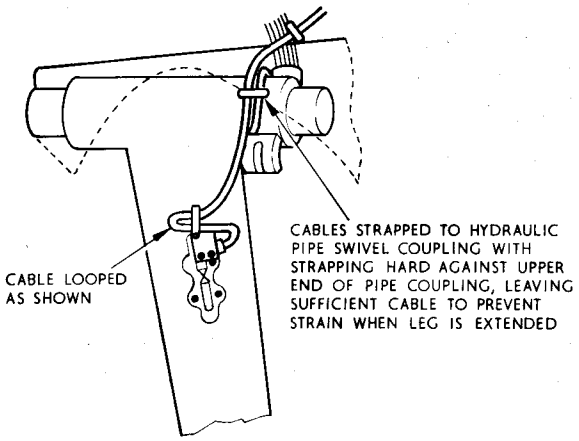
(2) Uninyvin 20 cable must not be used in this connection because of its lack of flexibility. Unitersil 20 cable should be used.

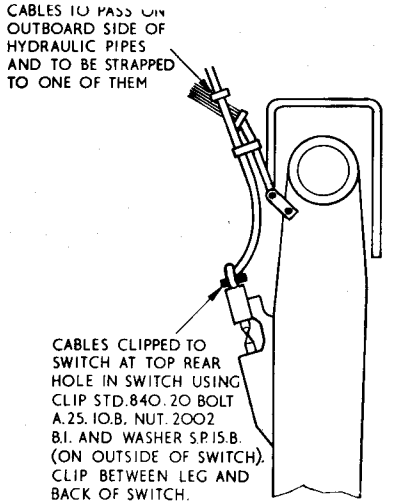
(3) Hellerman Twin Grip Ring Tags *(Ref. 5X/7553)* should be fitted to the cable terminations at the microswitches when the cable looms are changed.

INTERPRETATION OF DIAGRAMS

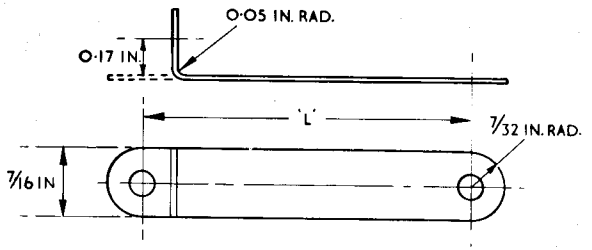
General

42. The wiring of all the circuits in this aircraft is shown by means of routeing and theoretical diagrams. The routeing diagrams show the complete wiring for each individual circuit and the physical relationship



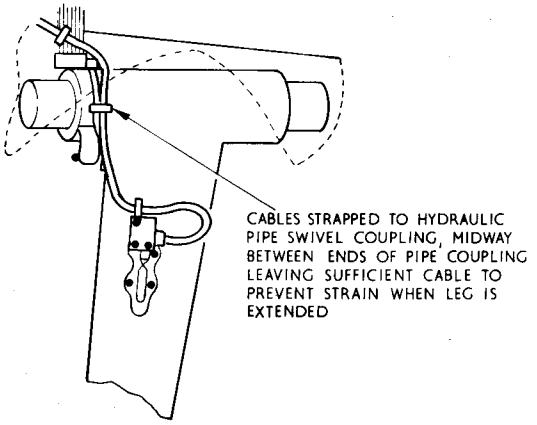


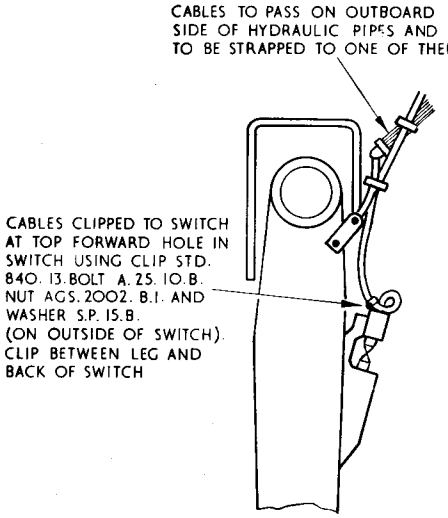
PORT LEG



DETAIL OF STD. 840 CLIP
MAKE FROM 22 G. L.A.

STD. 840. 13 'L'=1·31N.
STD. 840. 20 'L' 2·0 IN.
HOLES MORSE No.10





STARBOARD LEG

CABLES STRAPPED WHERE SHOWN WITH HELLERMAN STRAPS AND STUDS, HV 3341 (1/2 IN. WIDE) AND HV 3342 ON POST MOD. 178 OR MOD. 197 AIRCRAFT.
ON PRE MOD. AIRCRAFT CABLES CLIPPED TO SWITCH AS SHOWN BUT STRAPPED TO FLEXIBLE HYDRAULIC PIPES AS BEFORE

Fig. 4 Clipping of cables from undercarriage compression switch

between the electrical components. The diagrams are divided into a number of columns which bear the names of the junction box and equipment panels through which the wiring passes and also the circuit code, connector pin references, and cable type, together with all break points and terminations. A plug and socket connection is shown by a small semi-circle embracing a black dot; the semi-circle denotes the socket insert and the black dot the plug pin. Terminals in the junction boxes and on equipment panels are represented by small circles with their reference numbers enclosed. Fuses are numbered and, in most instances, are shown in the equipment panel columns. These numbers refer only to the terminals and fuses in the box or on the panel concerned, each unit having its own series of numbers, as shown on the diagrams. The external connections to the equipment are shown in their correct relationship, but the internal wiring is not shown as this is given in the theoretical diagrams.

43. In the theoretical diagrams, the equipment is shown by symbols complete with internal wiring. Each symbol is annotated and designed to make the operation of the circuit readily understandable; brief explanatory notes are also given where necessary. As the diagrams are drawn for ease of reading, the symbols are not given in their correct physical relationship, but are positioned to give a straight-forward presentation, the connections being arranged to assist in this direction. The fuse rating is given adjacent to each fuse and each section of the circuit is referenced at suitable points with the circuit code. It must be noted that these circuit codes are for reference only and will not be found on the cables in the aircraft, but are shown in every terminal connection through which the wire may pass, by means of a lable or wiring diagram. It will assist when reading theoretical and routeing diagrams to refer to the cable assembly layout in Group A.3 and to note that all positive cables are given an even reference number, while all negative cables bear an odd number.

44. Unless indicated otherwise, all the routeing and theoretical diagrams are drawn with the circuits in the condition found when the aircraft is at rest on the ground with its alighting gear down, the throttle closed, the engine stopped and electrical power off.

Method of reading a theoretical diagram

45. Reading theoretical diagrams is a straight-forward matter if a start is made at the fuse or circuit breaker, given at the top of each circuit, and the diagram followed through to the earth point at the bottom. As an example, take the pressure head heater circuit in Group F.2. From the 10-amp. fuse, the positive supply, referenced P.2, is taken to the control switch, which is a single-pole switch marked OFF and ON. From the switch, the positive supply cable, referenced P.4, passes to the heater element in the pressure head. The negative return from the heater, which is referenced P.1. is connected to earth.

46. From the above example and a study of the diagram, it will be seen that, when the switch is closed, the heater element will be supplied with current and will thus heat the pressure head.

Method of reading a routeing chart

47. Routeing charts are divided into a number of columns, and all circuits commence from the fuse or circuit breaker shown in one of the shelf, panel, or termination columns. As an example of how to read a routeing chart, consider the pressure head heater circuit in Group F.2.

48. From fuse number 5, on the leg panel, the positive supply is conducted by a unipren 12 cable, referenced P.2, to terminal 2 of the pressure head switch, which is also mounted on this panel. From terminal 1 of the switch, a further unipren 12 cable, referenced P.4, connects with pin Q of plug F17, which is mounted on the leg panel. Cable assembly F17 mates with this plug and a further unipren 12 cable, also referenced P.4 and connected to pin Q of the socket, continues the supply to pin R of a plug and socket break at frame 14.

49. After this break, the cable assembly number changes to F18 and the unipren 12 cable, still referenced P.4, is connected to pin R and continues to another plug and socket break at frame 19. At this point, the cable assembly number changes to C18 and the unipren 12 cable, still referenced P.4 continues to pin R of plug C18 attached

to J.B.1. The cable passes through the junction box and leaves it, still referenced P.4, via pin H of plug C7, which is also attached to the box. Cable assembly C7 mates with this plug and runs to the port wing plug and socket break.

50. After this break, the cable assembly number changes to P.1 and the unipren 12 cable, still referenced P.4, is connected to pin H of the socket on this cable assembly and continues to terminal 2 of T.B.22 in the port wing-tip. From this terminal the red core of the pressure head heater cable continues the supply to the heater element.

51. The negative return from the heater is the blue core. It is connected to terminal 1 of T.B.22 and a unipren 12 cable, referenced P.1, from the terminal block enters cable assembly P.1 and is connected to pin G of the plug and socket break in the port wing. After this break, the cable assembly number changes to C7 and the cable, still referenced P.1, is connected to pin G of the plug on this cable assembly and runs to J.B.1, where it is connected to pin G of plug C7 attached to the junction box. From the plug a further length of unipren 12 cable connects with earth terminal 3 in J.B.1.

Cable abbreviations

52. The following table should be used in conjunction with the cable type and size column on the routeing charts to define the type of cable employed in the various circuits of this aircraft.

Loading chart and circuit index

53. This chart *(fig.3)* contains the loading for each circuit and remarks giving the duration of load, together with the total power available. An analysis of the maximum load and the power used during the duration of flight is also given. The chart may also be used as a circuit index as it gives the circuit titles and codes.

Junction box, panel, and shelf wiring diagrams

54. To facilitate servicing, each junction box, equipment panel, and shelf of this aircraft contains a diagram of its electrical wiring. These diagrams give the cable size, terminal numbers and plug references, together with the fuse numbers, ratings and Reference numbers.

TABLE 3

Cable Abbreviations

Abbreviation	Definition		
U/P	Unipren	D/PM	Duprenmet
D/P	Dupren	T/PM	Tripenmet
T/P	Tripen	U/NYP	Uninypren
D/P SHEATH	Duprensheath	U/FIRE	Unifire
T/P SHEATH	Tripensheath	D/CS	Ducralsil
Q/P SHEATH	Quinprensheath	D/CV	Ducralvin
U/PM	Uniprenmet	Miniature cables 2C(etc)