CONFIDENTIAL

ARROW 1 SERVICE DATA

SECTION 39

ELECTRICAL SYSTEM

INTERNAL AND EXTERNAL

LIGHTING

(This data supersedes previous issue dated 12 Mar 1957)

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LIST OF REVISIONS

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ELECTRICAL SYSTEM

INTERNAL AND EXTERNAL LIGHTING

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DESCRIPTION

GENERAL

1 The internal lighting system consists of lighting circuits for the illumination of the front and the rear cockpit instruments, switches and controls. The external lighting system consists of a navigation light circuit and a landing and taxying lights circuit.

FRONT COCKPIT LIGHTING

2 The following five circuits comprise the front cockpit lighting:

(a) A circuit for the instrument lights and the edge lights of the main instrument panel and undercarriage actuation panel. The instrument lights and the edge lights are red coloured.

(b) A circuit for console panel edge lights which are red lights.

(c) A circuit for the console flood lights which are red lights.

(d) A circuit for the console high altitude flood lights which are amber lights.

(e) A circuit for the map and emergency flood light which is a red or clear light, as selected.

3 The instrument lights, edge lights, and console flood lights circuits each incorporate a dimming control. The controls are marked MAIN PANEL, CONSOLE PANELS and CONSOLE FLOOD. The dimming is controlled by switching the tapping points of three variable transformers fitted one in each circuit. The transformers and their controls are located on panel E17 in the RH console and they derive a power supply from 'A' phase of the main AC bus-bars via circuit breakers on the main circuit breaker panel E1.

4 A dimming control is not provided for the console high altitude flood lights. The control switch for the lights is marked HIGH ALT LIGHTING and is located on panel E17. The circuit derives a power supply from the main DC bus via a circuit breaker located on the main circuit breaker panel E1.

5 The map and emergency flood light, located above the RH console, is provided with a rheostat dimming control incorporated with the on and off switch housing which is an integral part of the case. The circuit is supplied from the emergency DC bus via a circuit breaker on the main circuit breaker panel E1.

6 A table listing the circuit breaker, fuse (if fitted), operating controls and associated lights, is provided for each of the five lighting circuits in the front cockpit. These tables, figs 3 to 7, will facilitate operating and servicing the circuits.

REAR COCKPIT LIGHTING

7 The following four circuits comprise the rear cockpit lighting:

(a) A circuit for the instrument lights and the console panel edge lights. The instrument lights and the edge lights are red coloured.

(b) A circuit for the console flood lights which are red lights.

(c) A circuit for the console high altitude flood lights which are amber lights. (Not fitted at present).

(d) A circuit for the map and emergency flood light which is a red or clear light, as selected.

8 Dimming controls are provided for the instrument lights, edge lights and console lights circuits. A common dimming control is provided for the instrument lights and the instrument edge lights. A separate dimming control is provided for the console flood lights. The controls are marked PANEL LIGHTS and CONSOLE FLOOD and they control the dimming by switching the tapping points of two variable transformers. The transformers and their controls are located on panel E26 in the RH console and they derive a supply from 'A' phase of the main AC bus-bars via circuit breakers mounted on panel E1 located in the nose-wheel well.

9 A dimming control is not provided for the console high altitude flood lights. The

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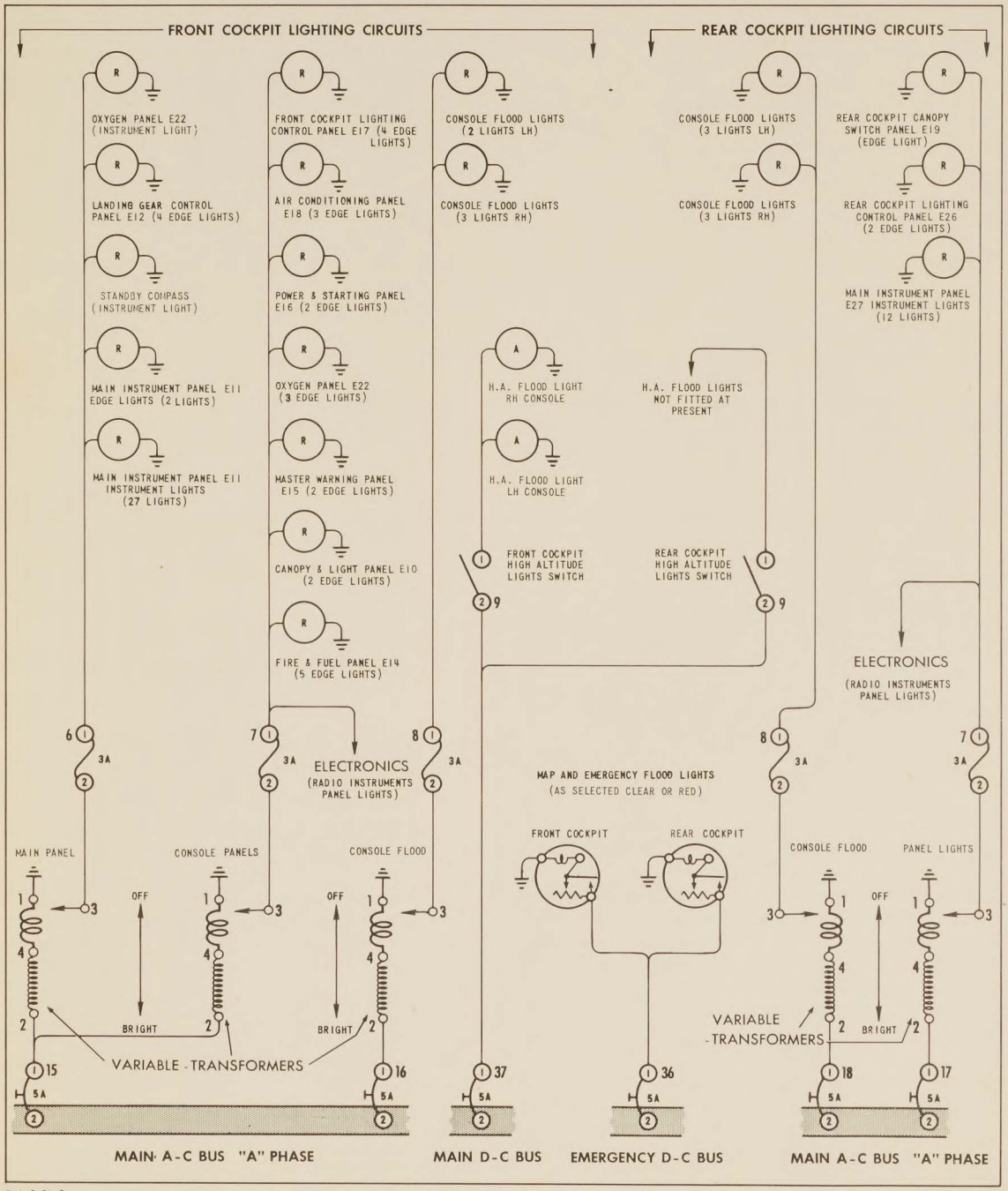

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FIG. 1 INTERNAL LIGHTING CIRCUITS SCHEMATIC

ARROW 1 SERVICE DATA

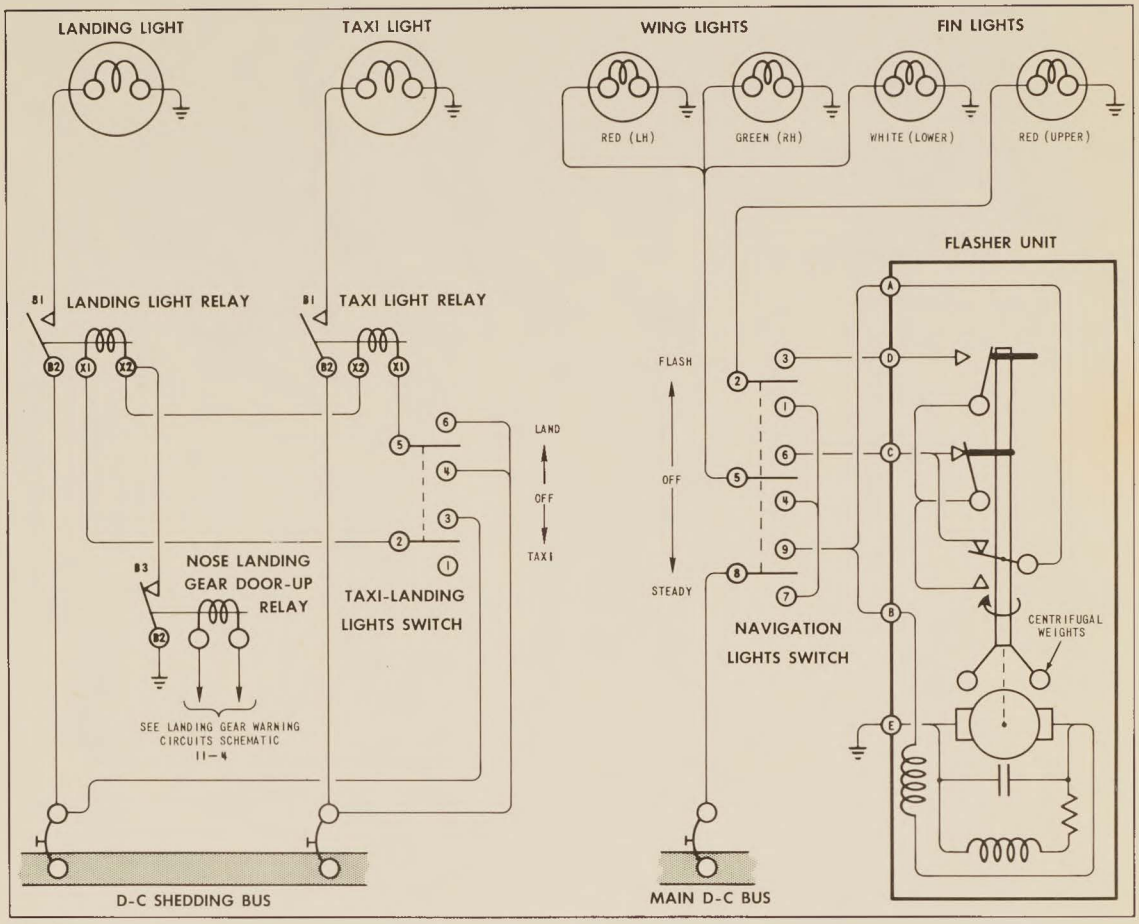

FIG. 2 EXTERNAL LIGHTING CIRCUITS SCHEMATIC

control switch for the lights is marked HIGH ALT LIGHTING and is located on panel E26. The circuit derives a power supply from the main DC bus via a circuit breaker on the main circuit breaker panel E1.

10 The map and emergency flood light, located above the RH console, is provided with a rheostat dimming control incorporated with the on and off switch housing which is an integral part of the case. The circuit is supplied from the emergency DC bus via a circuit breaker on the main circuit breaker panel E1.

11 Tables similar to those provided for the front cockpit lighting circuits are provided for the rear cockpit lighting circuits. See figs 8 to 11.

NAVIGATION LIGHTS

12 The navigation lights circuit comprises a red (LH) and a green (RH) wing tip light, a red (upper) and a white (lower) fin tip light, a flasher unit and a selector switch marked NAV LIGHTS, FLASH-OFF-STEADY. When the selector switch is set to the STEADY position, a power supply circuit derived from the main DC bus is completed through the selector switch contacts to the four navigation lights.

When the switch is selected to FLASH, the flasher unit located on the RH side of the nose-wheel well adjacent to panel E3 is operative. The flasher unit will illuminate the wing tip lights and fin tip white light alternately with the fin tip red light. If the flasher unit fails, it will automatically revert the lights to a steady indication with the exception that, dependent upon the position in which the flasher halts, the fin tip red light may not illuminate.

13 Fig 12, which is similar to those tables for the front cockpit and the rear cockpit lighting circuits, is provided for the navigation lights circuit.

LANDING AND TAXYING LIGHTS

14 Two lights are fitted on the nose landing gear leg; one on the steering portion of the leg for taxying, and the other on the fixed portion of the leg for landing. The selection and operation of the lights is controlled by a double pole double throw switch marked TAXI-OFF-LAND located on the LH console in the front cockpit.

15 Two single pole single throw relays control the supply circuit to the landing light and taxi light respectively. Selecting the control switch to the LAND position will energize both relays. Selecting the switch to the TAXI position will energize only the taxi light control relay. The circuits derive their power supply from the DC shedding bus.

16 Fig 13 is provided for the landing lights and taxi lights circuit and is similar to those of the front cockpit, rear cockpit and navigation lights circuits.

FUNCTION TESTING

FRONT COCKPIT LIGHTING CIRCUITS TEST

17 To check the operation of the front cockpit lighting circuits proceed as follows:

(a) Ensure that the following circuit breakers on panel E1 are switched on:

(1) INST & EDGE - FRONT C/P LTS.

(2) FLOOD - FRONT C/P LTS.

(3) HIGH ALT. - C/P LTS.

(4) EMERG - C/P LTS.

(b) Check that the three fuses in the lighting control panel E17 are serviceable.

(c) On panel E17, set the MAIN PANEL control to BRIGHT and check that the lights listed in fig 3 are lit.

(d) Rotate the MAIN PANEL control toward OFF and note that the brilliance of the lights is progressively reduced.

(e) On panel E17, set the CONSOLE PANELS control to BRIGHT and check that the lights listed in fig 4 are lit.

(f) Rotate the CONSOLE PANELS control toward OFF and note that the brilliance of the lights is progressively reduced.

(g) On panel E17, set the CONSOLE FLOOD control to BRIGHT and check that the lights listed in fig 5 are lit.

(h) Rotate the CONSOLE FLOOD control to OFF and check that the brilliance of the lights is progressively reduced.

(j) On panel E17, select the HIGH ALT LIGHTING switch to ON. Check that the high altitude light on the RH console and the high altitude light on the LH console are lit.

(k) Select the HIGH ALT LIGHTING switch to OFF.

(m) Release the map and emergency flood light from its stowage clip on the RH console. Operate the integrally mounted rheostat control and note that the brilliance of the light increases as the control is rotated. Rotate the bezel ring and check that the light is red or clear, as selected.

(n) Select the control to the off position and note that the switch action is positive.

REAR COCKPIT LIGHTING CIRCUITS TEST

18 To check the operation of the rear cockpit lighting circuits proceed as follows:

(a) Ensure that the following circuit breakers on panel E1 are switched on:

(1) INST & EDGE - REAR C/P LTS.

(2) FLOOD - REAR C/P LTS.

(3) EMERG - C/P LTS.

(4) HIGH ALT - C/P LTS.

(b) Check that the two fuses in the lighting control panel E26 are serviceable.

(c) On panel E26, set the PANEL LIGHTS control to BRIGHT and check that the lights listed in Fig 8 are lit.

(d) Rotate the PANEL LIGHTS control to OFF and note that the brilliance of the lights is progressively reduced.

(e) On panel E26, set the CONSOLE FLOOD control to BRIGHT and check that the lights listed in fig 9 are lit.

(f) Rotate the CONSOLE FLOOD control to OFF and note that the brilliance of the lights is progressively reduced.

(g) On panel E26, select the HIGH ALT LIGHTING switch to ON. Check that the high altitude light on the LH console and the high altitude light on the RH console are lit.

(h) Release the map and emergency flood light from its stowage clip on the RH console. Operate the integrally mounted rheostat control and note that the brilliance of the light increases as the control is rotated. Rotate the bezel ring and check that the light is red or clear as selected.

(j) Select the control to the off position and note that the switch action is positive.

NAVIGATION LIGHTS CIRCUIT TEST

19 To check the operation of the navigation lights proceed as follows:

(a) Ensure that the NAV-EXT. LTS circuit breaker on panel E1 is switched on.

(b) On panel E22, select the NAV LIGHTS switch to the STEADY position and check that the LH wing tip light and the RH wing tip light and both lights in the fin tip are lit.

(c) Select the NAV LIGHTS switch to the FLASH position and check that both wing tip lights and the white light in the fin tip flash alternately with the red light in the fin tip.

(d) Select the NAV LIGHTS switch to OFF.

LANDING AND TAXYING LIGHTS CIRCUIT TEST

20 To check the operation of the landing and taxying lights proceed as follows:

(a) Examine the lens of both lights for chips or cracks. Clean the lenses, if necessary. Check the bulbs visually and replace if they appear to be 'black'.

(b) Ensure that the LAND-EXT LTS circuit breaker and the TAXI-EXT LTS circuit breaker both located on panel E1 are switched on.

(c) On panel E10, select the LIGHTS switch to the LAND position and check that the landing light and the taxi light are lit.

(d) Select the LIGHTS switch to the TAXI position and check that the TAXI light only is lit.

(e) Select the LIGHTS switch to OFF.

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; INST. & EDGE - FRONT C/P LTS.	Panel E1-15
Fuse; forward one of three	Panel E17-6
Control; MAIN PANEL	Panel E17-3
Oxygen Panel, Instrument Light	Panel E22-8
Main Instrument Panel, Edge Light	Panel E11-21
Main Instrument Panel, Edge Light	Panel E11-22
Standby Compass, Instrument Light	Panel E11-31
Main Instrument Panel, Instrument Lights (27)	Panel E11-35 to 61 (incl)
Undercarriage Actuation Panel, Edge Light	Panel E12-7
Undercarriage Actuation Panel, Edge Light	Panel E12-8
Undercarriage Actuating Lever, Edge Lights (two)	Panel E12-3

FIG. 3 FRONT COCKPIT INSTRUMENT AND EDGE LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; INST & EDGE - FRONT C/P LTS.	Panel E1-15
Fuse; centre one of three	Panel E17-7
Control; CONSOLE PANELS	Panel E17-4
Lighting Control Panel, Edge Light	Panel E17-10
Lighting Control Panel, Edge Light	Panel E17-11
Lighting Control Panel, Edge Light	Panel E17-16
Lighting Control Panel, Edge Light	Panel E17-17
Air Conditioning Panel, Edge Light	Panel E18-6
Air Conditioning Panel, Edge Light	Panel E18-7
Air Conditioning Panel, Edge Light	Panel E18-11
Power and Starting Panel, Edge Light	Panel E16-5
Power and Starting Panel, Edge Light	Panel E16-8
Oxygen Panel, Edge Light	Panel E22-10
Oxygen Panel, Edge Light	Panel E22-11
Oxygen Panel, Edge Light	Panel E22-18
Warning Lights Panel, Edge Light	Panel E15-25
Warning Lights Panel, Edge Light	Panel E15-26
Canopy and Lights Panel, Edge Light	Panel E10-4
Canopy and Lights Panel, Edge Light	Panel E10-5
Fire and Fuel Panel, Edge Light	Panel E14-14
Fire and Fuel Panel, Edge Light	Panel E14-15
Fire and Fuel Panel, Edge Light	Panel E14-16
Fire and Fuel Panel, Edge Light	Panel E14-17
Fire and Fuel Panel, Edge Light	Panel E14-21
TELECOMMUNICATIONS SYSTEM PANELS	
Pilot's Switch Panel R4; Edge Lights (two)	Panel R4 -6 and -7
Pilot's Radio Compass Control Panel C-1513A; Edge Lights (two)	Panel R111
IFF Control Panel C-1158/APX; Edge Lights (two)	Panel R116
UHF Control Panel C-1057/ARC-34; Edge Lights (two)	Panel R136
J4 Compass Control Panel; Edge Lights (two)	Panel R143
Pilot's Interphone Control Panel C-824/AIC-10; Edge Lights (two)	Panel R148
Damper Circuit Breaker Panel R8; Edge Lights (two)	Panel R8 -21 and 22
Damper Function Selector; Edge Light (one)	Panel R211

FIG. 4 FRONT COCKPIT CONSOLE PANEL EDGE LIGHTS CIRCUIT COMPONENTS

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CIRCUIT COMPONENT	LOCATION
Circuit Breaker; FLOOD - FRONT C/P LTS.	Panel E1-16
Fuse; aft one of three	Panel E17-8
Control; CONSOLE FLOOD	Panel E17-5
Console Flood Light, Forward	RH Console, E1004-2 (cable)
Console Flood Light, Centre	RH Console, E1004-3 (cable)
Console Flood Light, Rear	RH Console, E1004-5 (cable)
Console Flood Light, Forward	LH Console, E1003-2 (cable)
Console Flood Light, Centre	LH Console, E1003-3 (cable)
Console Flood Light, Rear	LH Console, E1003-5 (cable)

FIG. 5 FRONT COCKPIT CONSOLE FLOOD LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; HIGH ALT. - C/P LIGHTS	Panel E1-37
Switch; HIGH ALT LIGHTING	Panel E17-9
High Altitude Flood Light	RH Console, E1004-4 (cable)
High Altitude Flood Light	LH Console, E1003-4 (cable)

FIG. 6 FRONT COCKPIT HIGH ALTITUDE FLOOD LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; EMERG - C/P LIGHTS	Panel E1-36
Map and Emergency Flood Light (Switch and dimmer combined)	RH Console, E1503-1 (cable)

FIG. 7 FRONT COCKPIT MAP AND EMERGENCY FLOOD LIGHT CIRCUIT COMPONENTS

ARROW 1 SERVICE DATA

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; INST. & EDGE - REAR C/P LTS.	Panel E1-17
Fuse; aft one of two	Panel E26-7
Control; PANEL LIGHTS	Panel E26-5
Canopy and Light Panel, Edge Light	Panel E19-4
Lighting Control Panel, Edge Light	Panel E26-10
Lighting Control Panel, Edge Light	Panel E26-11
TELECOMMUNICATIONS SYSTEM PANELS	
R.O. Switch Panel R5; Edge Lights (two)	Panel R5-7 and -8
R.O. Radio Compass Control Panel C-1513A; Edge Lights (two)	Panel R112
R.O. Interphone Control Panel C-824/AIC-10; Edge Lights (two)	Panel R149
Rear Cockpit Instrument Panel - 12 instrument lights	Panel E27 -5 to 16 inclusive

FIG. 8 REAR COCKPIT INSTRUMENT AND CONSOLE PANEL EDGE LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; FLOOD - REAR C/P LTS	Panel E1-18
Fuse - forward one of two	Panel E26-8
Control; CONSOLE FLOOD	Panel E26-4
Console Flood Light, Forward	RH Console, E1010-2 (cable)
Console Flood Light, Centre	RH Console, E1010-3 (cable)
Console Flood Light, Rear	RH Console, E1010-4 (cable)
Console Flood Light, Forward	LH Console, E1013-3 (cable)
Console Flood Light, Centre	LH Console, E1013-5 (cable)
Console Flood Light, Rear	LH Console, E1013-6 (cable)

FIG. 9 REAR COCKPIT CONSOLE FLOOD LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; HIGH ALT. - C/P LTS Switch; HIGH ALT LIGHTING High Altitude Flood Light)) Not fitted. High Altitude Flood Light)	Panel E1-37 Panel E26-9 RH Console, E1010-5 (cable) LH Console, E1013-4 (cable)

FIG. 10 REAR COCKPIT HIGH ALTITUDE FLOOD LIGHTS CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; EMERG - C/P LTS Map and Emergency Flood Light (Switch and dimmer combined)	Panel E1-36 RH Console, E1504-1 (cable)

FIG. 11 REAR COCKPIT MAP AND EMERGENCY FLOOD LIGHT CIRCUIT COMPONENTS

CIRCUIT COMPONENT	LOCATION
Circuit Breaker; NAV - EXT. LTS Switch; NAV LIGHTS, STEADY-OFF-FLASH Navigation Lights Flasher	Panel E1-38 Panel E22-5 Nose Wheel Well, E102 (EQ No.)
Wing Light - Red	Left Wing Tip, E1155-2 (cable)
Wing Light - Green	Right Wing Tip, E1156-2 (cable)
Fin Light - White	Fin Tip, Lower, E158-2 (cable)
Fin Light - Red	Fin Tip, Upper, E1046-2 (cable)

FIG. 12 NAVIGATION LIGHTS CIRCUIT COMPONENTS

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CIRCUIT COMPONENTS	LOCATION
Circuit Breaker; LAND - EXT. LTS	Panel E1-39
Circuit Breaker; TAXI - EXT. LTS	Panel E1-40
Switch; LIGHTS, LAND-OFF-TAXI	Panel E10-3
Landing Light Relay	Panel E6-13
Taxi and Landing Lights Relay	Panel E6-10
Landing Light	Nose Undercarriage; E201 (EQ No.)
Taxi Light	Nose Undercarriage; E202 (EQ No.)

FIG. 13 LANDING AND TAXI LIGHTS CIRCUIT COMPONENTS

ARROW 1 SERVICE DATA

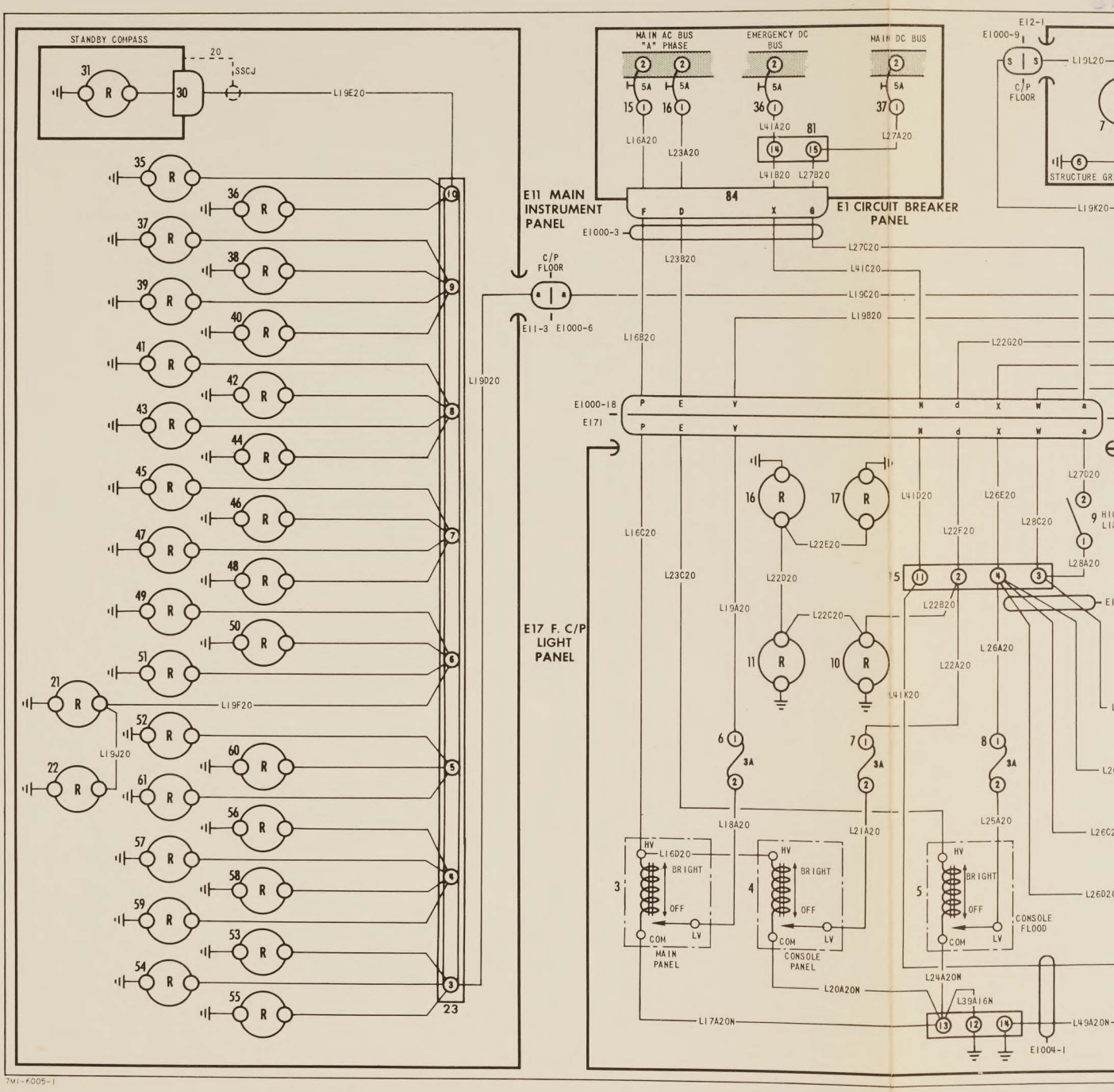

FIG. 14 FRONT COCKPIT INTERNAL LIGHTING CIRCUITS

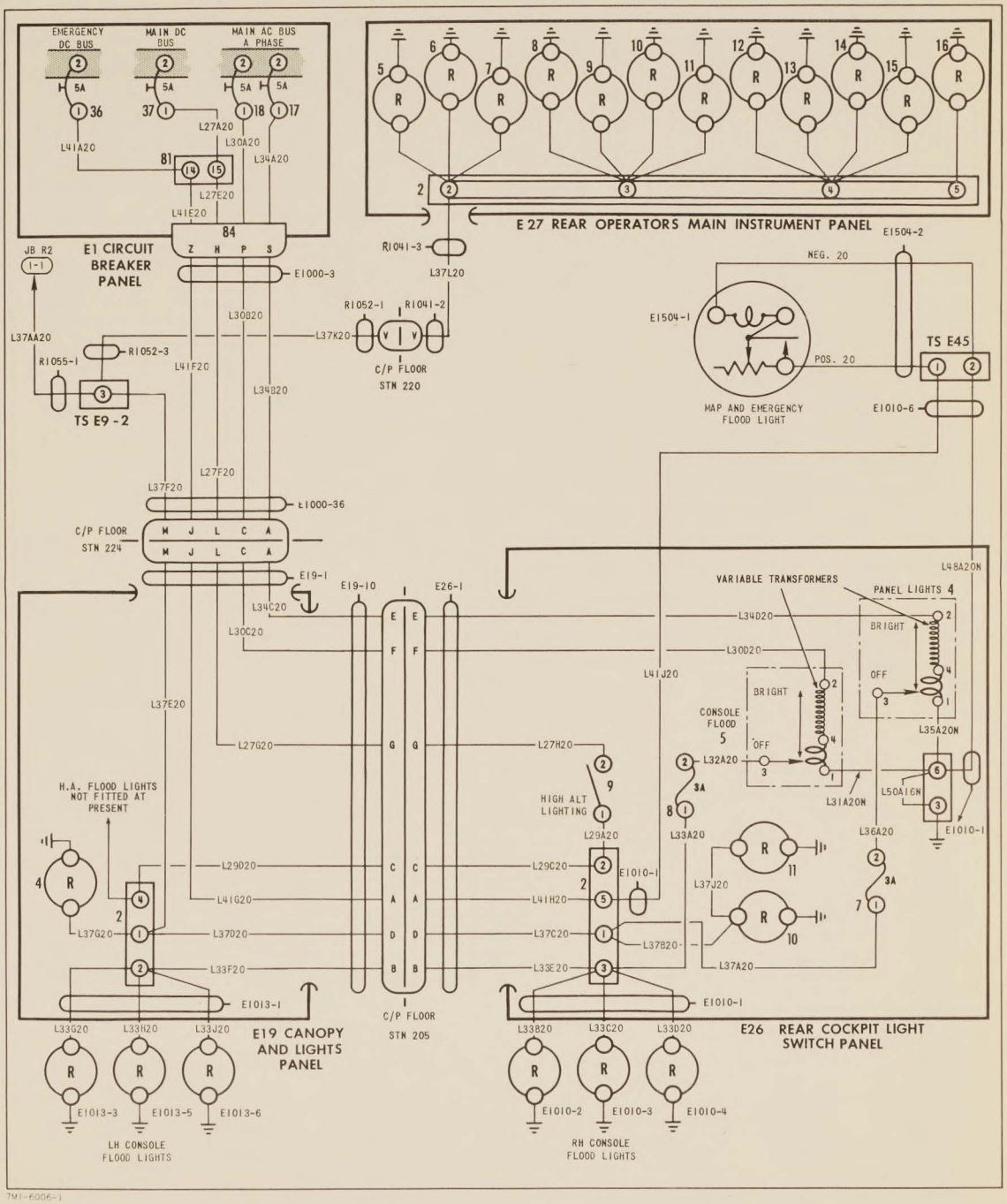

FIG. 15 REAR COCKPIT INTERNAL LIGHTING CIRCUITS

ARROW 1 SERVICE DATA

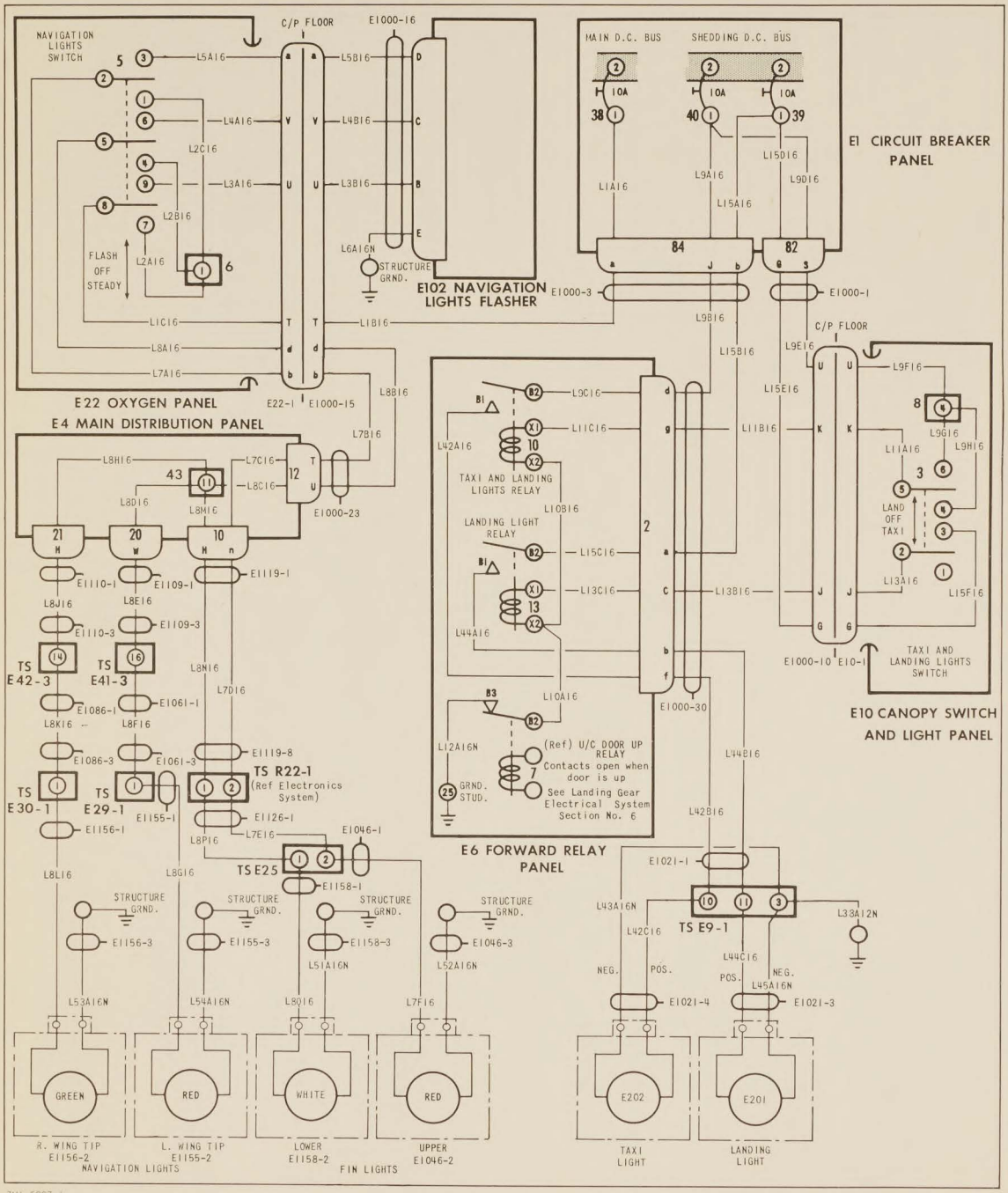

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FIG. 16 EXTERNAL LIGHTS CIRCUITS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Front Cockpit Light Panel - E17	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
17-1252-77	Avro Aircraft Ltd.		25201

OVERHAUL LIFE: KNOWN- ESTIMATED- 1500 hours

FUNCTION

To house three variable transformers, three fuses and a switch used for the front cockpit lights illumination and control.

LOCATION

Front cockpit, RH console.

ACCESS — MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE — MEN X MINUTES

Connect and secure circuit wiring to the components of the panel.
Locate the panel in the console and secure - five screws.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the panel is securely fitted. Operate the dimming controls and switches; check that the action is not rough or sluggish.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Light Controls (3) - Front Cockpit	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
CS-T-134			25201

OVERHAUL LIFE: KNOWN- ESTIMATED- 1500 hours

FUNCTION

To control the brilliance of the cockpit lighting. One light control is provided for each of the following groups of lights:
(a) Instrument lights.
(b) Console flood lights.
(c) Console edge lights.

LOCATION

Mounted on the front cockpit light panel E17 - RH console.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Locate and secure the control to the panel - one nut.
Connect the circuit wiring - four connections.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the control is securely and properly fitted. Check that the circuit wiring is securely and properly connected. Operate the control and check that the action is not rough or sluggish.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Switch - Front Cockpit High Altitude Lighting	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
	Cutler-Hammer	8801K16	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To provide on-off switching for the front cockpit high altitude flood lights.

LOCATION

Mounted on the front cockpit light panel E17 - RH console.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Locate and secure the switch to the panel - one nut.
Connect the circuit wiring - two connections.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the switch is securely and properly fitted. Check that the circuit wiring is securely and properly connected. Operate the switch and check that the action is not rough or sluggish.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Map and Emergency Flood Light Assembly	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
	Grimes	D-7825	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To provide a source of illumination which can be moved within a radius of approximately 30 inches.

LOCATION

Front cockpit, RH side.

ACCESS

Unobstructed.

MEN X MINUTES	

REPLACEMENT PROCEDURE

Locate and secure the assembly stowage clip to the structure- two mounting bolts.
Connect the light assembly circuit wiring - two electrical connections.
Fit the light assembly in the stowage clip.

MEN X MINUTES	

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INSPECTION	MEN X MINUTES	
Check that the filament is not blackened and examine the lens and the casing for signs of crazing or cracks. Check that the stowage clip is securely and properly fitted and that the light assembly circuit connections are securely connected. Operate the switch and check that the action is not rough or sluggish.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Rear Cockpit Light Panel - E26	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
7-1252-123	Avro Aircraft Ltd.		25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To house two variable transformer, two fuses and a switch used for the rear cockpit lights illumination and control.

LOCATION

Rear cockpit, RH console.

ACCESS

MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE

MEN X MINUTES

Locate the panel in the console and secure - four quick-fasteners.
Connect and secure the circuit wiring supplied with the panel to the terminal strip located on the aft face of the pilot's seat bulkhead.

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INSPECTION	MEN X MINUTES
Check that the panel is securely fitted. Operate the dimming controls and switches, check that the action is not rough or sluggish. Check that the circuit wiring to the terminal strip is securely and properly fitted.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Light Controls (2) - Rear Cockpit	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
CS-T-134			25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To control the brilliance of the cockpit lighting. One light control is provided for the console flood lights and one control for the console edge lights and instrument panel lights.

LOCATION

Mounted on the rear cockpit light panel E26 - RH console.

ACCESS — MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE — MEN X MINUTES

Locate and secure the control to the panel - one nut.
Connect the circuit wiring - three connections.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the circuit wiring is securely and properly connected. Check that the control is securely and properly fitted. Operate the control and check that the action is not rough or sluggish.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

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COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Switch - Rear Cockpit High Altitude Lighting	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
8801-K16	Cutler-Hammer	8801-K16	25201

OVERHAUL LIFE: KNOWN- ESTIMATED- 1500 hours

FUNCTION

To provide on-off switching for the rear cockpit high altitude flood lights.

LOCATION

Mounted on the rear cockpit light panel E26 - RH console.

ACCESS — MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE — MEN X MINUTES

Locate and secure the switch to the panel - one nut.
Connect the circuit wiring - two connections.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the circuit wiring is securely and properly connected. Check that the switch is securely and properly fitted. Operate the switch and check that the action is not rough or sluggish.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Map and Emergency Flood Light Assembly	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
	Grimes	D-7825	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To provide a source of illumination which can be moved within a radius of approximately 30 inches.

LOCATION

Rear cockpit, RH side.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Locate and secure the assembly stowage clip on the structure - two mounting bolts.
Connect the light assembly circuit wiring - two electrical connections.
Fit the light assembly in the stowage clip.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the filament is not blackened and examine the lens and the casing for signs of crazing or cracks. Check that the stowage clip is securely and properly fitted and that the light assembly circuit connections are securely connected. Operate the switch and check that the action is not rough or sluggish.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Navigation Lights Control Switch	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
	Cutler-Hammer	7662K5	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To provide off control of the navigation lights and facilitate selection of steady or flashing illumination.

LOCATION

Front cockpit, RH console panel E22.

ACCESS

MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE

MEN X MINUTES

Fit and secure the switch to the panel using the lockwasher and nut provided.
Connect and secure the circuit wiring to the switch.
Locate the panel in the console and secure - six screws.
Reconnect one pipeline to the oxygen gauge.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the panel is securely fitted. Operate the switch and check that the action is not rough or sluggish. Check that the oxygen pipeline is correctly and securely fitted.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Flasher Unit - Navigation Lights	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
CS-F-106	Lucas-Rotax	61370	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To illuminate the wing tip lights and the fin tip white light alternately with the fin tip red light.

LOCATION

Nose wheel well, RH side at station 120.00.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Fit and secure the unit to the structure - four bolts.
Connect and secure one electrical connector.

MEN X MINUTES

VANGUARD SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the unit is securely fitted. Check that the electrical connector is securely and properly fitted.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Navigation Light, RH Wing Tip (Green)	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
2-CS-L-129-1	Aviation Electric (Grimes)	B8020G	25201

OVERHAUL LIFE: KNOWN- ESTIMATED- 1500 hours

FUNCTION

To indicate the position and the direction of motion of the aircraft.

LOCATION

RH wing tip.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Connect and secure one electrical connector.
Fit and secure the light to the wing tip - three screws.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the light is securely and properly fitted. Check that the bulb is not blackened. Check the lens for crazing or cracks.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Navigation Light, LH Wing Tip (Red)	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
1-CS-L-129-1	Aviation Electric (Grimes)	B8020R	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To indicate the position and the direction of motion of the aircraft.

LOCATION

LH wing tip.

ACCESS | MEN X MINUTES

Unobstructed.

REPLACEMENT PROCEDURE | MEN X MINUTES

Connect and secure one electrical connector.
Fit and secure the light to the wing tip - three screws.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the light is securely and properly fitted. Check that the bulb is not blackened. Check the lens for crazing or cracks.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Navigation Light, Fin Tip (Red)	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
7-1183-11	Soderberg		25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To indicate the position and the direction of motion of the aircraft.

LOCATION

Trailing edge of fin tip.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Fit and secure one connector.
Locate the light in the fairing.
Fit and clamp the lens.
Fit and secure the light to fin structure - two screws.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the light is securely and properly fitted. Check that the bulb is not blackened. Check the lens for crazing and cracks.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Navigation Light, Fin Tip (White)	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
7-1183-11	Soderberg		25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To indicate the position and the direction of motion of the aircraft.

LOCATION

Trailing edge of fin tip.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Fit and secure one connector.
Locate the light in the fairing.
Fit and clamp the lens.
Fit and secure the light to the fin structure - two screws.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the light is securely and properly fitted. Check that the bulb is not blackened. Check the lens for crazing and cracks.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Landing and Taxi Lights Control Switch	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
	Cutler-Hammer	8820K10	25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To permit the selection of the landing light and the taxi light or the taxi light only.

LOCATION

Front cockpit, LH console panel E10.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Fit and secure the switch to the panel using the lockwasher and locknut supplied.
Connect and secure the circuit wiring to the switch - five electrical connections.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the switch is securely fitted and that the circuit wiring is correctly and securely connected. Operate the switch and check that the action is not rough or sluggish.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Relay - Interlock, Landing and Taxi Lights	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
CS-R-122			25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To complete the electrical circuit to the taxi light when energized by the selection of the landing and taxi light switch to the taxi or land position.

LOCATION

Mounted on panel E6 located on roof of nose wheel well.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Locate and secure the relay to the panel - one mounting nut.
Connect the circuit wiring - four connections.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES	
Check that the relay is securely fitted to the panel. Check that the circuit wiring is securely and properly fitted.		

FUNCTIONAL CHECKS	MEN X MINUTES	

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Relay - Interlock, Landing Light	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
CS-R-122			25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To complete the electrical circuit to the landing light when energized by the selection of the landing and taxi light switch to the land position.

LOCATION

Mounted on panel E6 located on roof of nose wheel well.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

Locate and secure the relay to the panel - four bolts.
Connect circuit wiring - five connections.

MEN X MINUTES

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the relay is securely fitted to the panel. Check that the circuit wiring is securely and properly connected.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Landing Light	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
AN-3129-4523	Jarry Hydraulics		25201

OVERHAUL LIFE: KNOWN– ESTIMATED– 1500 hours

FUNCTION

To illuminate the foreground while landing the aircraft.

LOCATION

Bottom of the nose leg.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

MEN X MINUTES

UNIT REPLACEMENT

Connect the circuit wiring to the lamp - two connections.
Locate and secure the cable-retaining ferrule nut in position.
Secure the lens in position - seven screws.
Position the unit correctly - one positioning bolt.
Secure the unit in the correct position - one bolt and nut.

LAMP REPLACEMENT

Fit the lamp retaining ring and rubber gasket.
Connect the circuit wiring to the lamp - two connections.
Locate and secure the cable-retaining ferrule nut.
Secure the lens in position - six screws.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the unit is securely fitted to the nose leg assembly. Check the unit for corrosion and damage. Check that the lens is not cracked or chipped. Check that the cable-retaining ferrule nut is secured firmly.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS

ARROW 1 SERVICE DATA

COMPONENT DATA SHEET

SYSTEM	SUB-SYSTEM	COMPONENT	REF. NO.
ELECTRICAL	INTERNAL AND EXTERNAL LIGHTING	Taxi Light	11-13

AVRO PART NO.	MANUFACTURER	MAN'F'R'S PART NO.	AIRCRAFT EFFECTIVITY
G.E. 4523	Jarry Hydraulics		25201

OVERHAUL LIFE: KNOWN- ESTIMATED- 1500 hours

FUNCTION

To illuminate the foreground when landing or taxying the aircraft.

LOCATION

Bottom of the nose leg.

ACCESS

Unobstructed.

MEN X MINUTES

REPLACEMENT PROCEDURE

MEN X MINUTES

UNIT REPLACEMENT

Connect the circuit wiring to the lamp - two connections.
Locate and secure the cable-retaining ferrule nut.
Secure lens in position - six screws.
Position the unit correctly - one positioning bolt.
Secure unit in the correct position - one bolt and nut.

LAMP REPLACEMENT

Fit the lamp retaining ring and rubber gasket.
Connect the circuit wiring to the lamp - two connections.
Locate and secure the cable-retaining ferrule nut.
Secure the lens in position - six screws.

ARROW 1 SERVICE DATA

INSPECTION	MEN X MINUTES
Check that the unit is securely fitted to the nose leg assembly. Check the unit for corrosion and damage. Check that the lens is not cracked or chipped. Check the electrical connections for security. Check that the cable-retaining ferrule nut is secured firmly.	

FUNCTIONAL CHECKS	MEN X MINUTES

GROUND HANDLING AND GROUND TEST EQUIPMENT

SPECIAL TOOLS TO REMOVE OR SERVICE

REMARKS