

GROUP F 2

NAVIGATION AND ANTI-COLLISION LAMPS (CODE N)

► (Completely revised to include Mod 1429 and 1443) ◀

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TABLE 1

Equipment type and Air Publication reference

Equipment	Air Publication
Flasher unit, Type A	AP113F-0618-1
Lampholders, port and starboard, Type B	AP113F-0227-1
Lampholder, tail	BAe design
Switch, double-pole, centre off, Type Honeywell 2TL1-1	AP113D-1100 Series
Power unit, Type Hella 8ES003417-00	AP113F-0284-1
Lamp unit, Type Hella 2LA003849-00	AP113F-0284-1
Switch, single pole, centre off, Type Honeywell 1TL1-1	AP113D-1100 Series

Introduction

1. This group describes and illustrates the navigation and anti-collision lamps circuits installed in this aircraft. The main components in the circuits are listed in Table 1 together with the appropriate Air Publication to which reference should be made for detailed descriptions and information of the servicing required to maintain the components in a serviceable condition. Group A1 of this chapter contains details on general servicing of the aircraft electrical system and Group A3 includes location of the components in the navigation and anti-collision lamps installations.

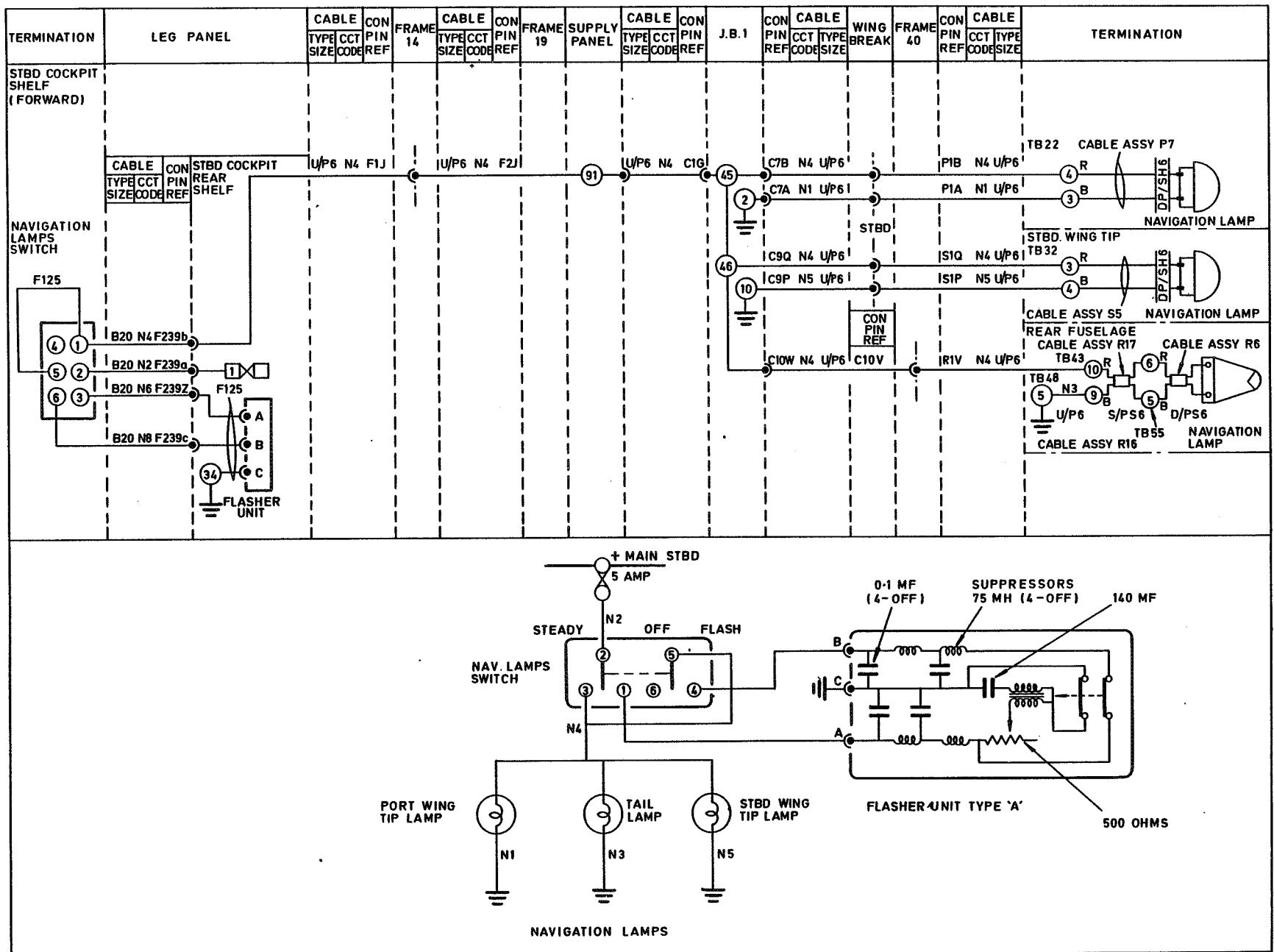


Fig.1 Navigation lamps (routeing and theoretical, pre-Mod NSM 3012)

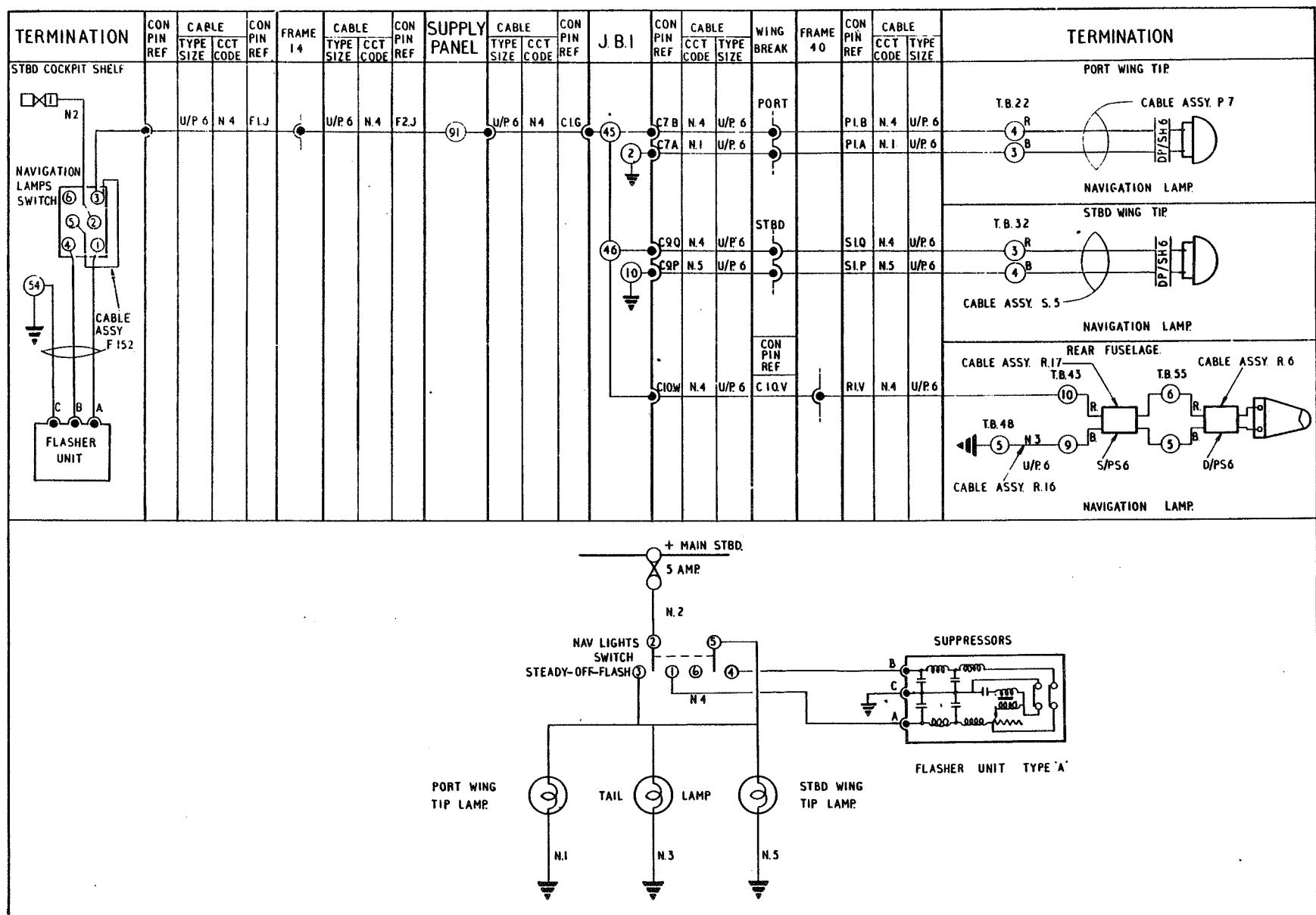


Fig.1A Navigation lamps (routeing and theoretical, pre-Mod NSM 3012) – pre-Mod 1429

DESCRIPTION	WARNING...	(b) After switching off, a minimum period of two minutes shall be allowed to elapse before any disconnection is made at the lamp unit, the power unit or the interconnecting cable. This is to allow the high energy capacitive components of the power unit to discharge.
Navigation lamps	Aircraft High Intensity Strobe Light Systems – Safety Precautions.	<p>General</p> <p>(1) The health and safety hazards associated with high energy strobe light systems are:</p> <ul style="list-style-type: none"> (a) The brilliance of the white light and ultra violet radiation emitting from the lamp unit can cause damage to the eyes. (b) Electric shock – the energy produced by the power unit is of lethal magnitude. <p>(2) The following safety precautions are therefore to be observed by all ground personnel whose duties bring them within close proximity of strobe light systems and are to be adopted as a standard code of practice.</p>
Operation	Eye protection	<p>Eye protection</p> <p>(3) (a) Whenever strobe light systems are to be activated, all personnel within the immediate vicinity are to be warned and instructed not to look directly at the light.</p> <p>(b) The white flash can be an eye hazard at distances of two metres or less. Personnel shall avoid imaging the strobe.</p> <p>(c) At close range, ultra violet emissions from the flash tube can cause UV keratitis. The lamp unit glass lens will give complete protection and is always to be fitted when the strobe light is operating.</p>
Anti-collision lamps	Protection from electric shock	<p>Protection from electric shock</p> <p>(4) (a) Strobe light systems are to be switched off before disconnecting or removing any part of the system.</p>

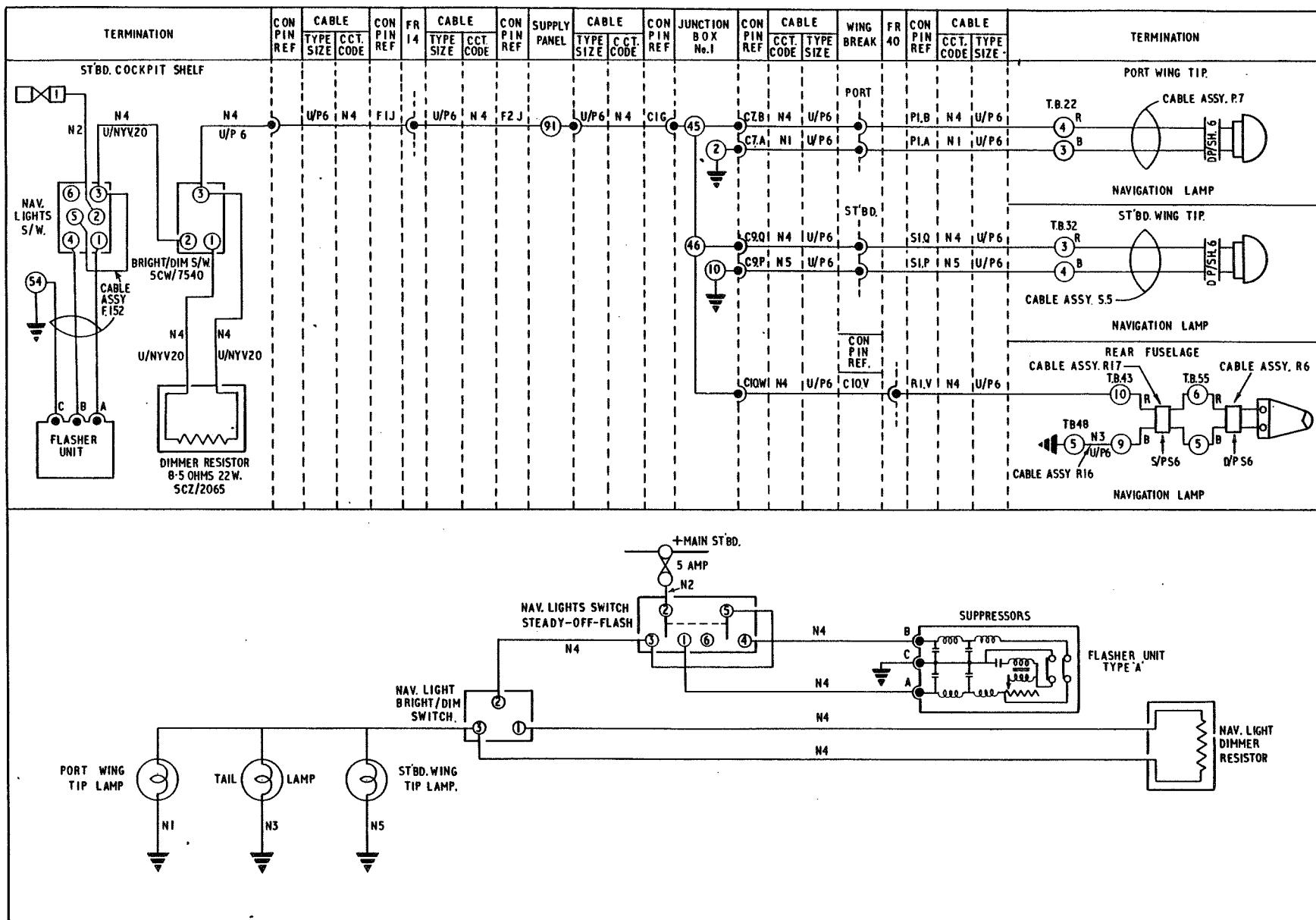


Fig.2 Navigation lamps (routing and theoretical, post-Mod NSM 3012)

circuit is so arranged that when both units are selected they will flash alternately. The upper lamp unit is located centrally on the fuselage spine fairing between frames 45 and 46 whilst the lower unit is located on the centre fuselage engine access door.

Operation

8. 28 V d.c. is routed from the L+ busbar through supply panel fuses 23 and 18 to the upper and lower power units respectively. The pulse generator within the upper unit controls the pulse generator within the lower unit by means of a wire link between P2 pin E on the upper unit and P2 pin F on the lower unit. A second wire link on the upper unit, between P2 pins A and D, ensures correct synchronization of the upper and lower lamps. 28 V d.c. is also routed from the L+ busbar to the wipers of the switches in the cabin through fuse number 3 on the cabin starboard rear shelf. When either switch is selected to RED or WHITE, the control logic in the associated power unit selects the appropriate flash tube within the corresponding lamp unit which then flashes at the prescribed rate.

SERVICING

General

WARNING...

Aircraft High Intensity Strobe Lights Systems – Safety Precautions. Refer to the warning detailed in Para 4.

CAUTION...

Insulation resistance tests using a standard 250 volt tester shall not be applied to the navigation lamps flasher unit as this unit contains a capacitor with a working voltage of 30 volts.

9. Apart from keeping components clean and applying the routine tests for security and serviceability, no further servicing should be necessary to either the navigation or anti-collision lamps circuits.

10. Components which become defective shall be removed from the aircraft and a replacement item fitted. Group A1 of this Chapter includes a table giving details of the filament lamps used in the navigation lamps circuit.

REMOVAL AND ASSEMBLY

General

WARNING...

Aircraft High Intensity Strobe Lights Systems – Safety Precautions. Refer to the warning detailed in Para 4.

11. Once access has been gained, the removal and assembly of the components forming the navigation and anti-collision lamps circuits should present no difficulties. The location and means of access to components is indicated in Group A3 of this chapter. Before components are removed, the aircraft shall be rendered electrically safe as detailed in Group A1 of this chapter and, in the case of components forming the anti-collision lamps circuit, the WARNING detailed in Para 4 shall be observed. Approved caps and covers shall be fitted to all plugs and sockets when cable looms are disconnected.

Strobe lamp unit glass

12. When fitting a strobe lamp unit glass, the glass retaining screws are to be tightened to a maximum torque of 1.5 NM.

Note...

Due to the position of the lower strobe lamp unit it is subject to contamination by spilt fluids. To prevent accumulation of these fluids within the lamp unit glass, the bung surrounding the glass retaining screws shall be removed before fitting the glass to a lower lamp unit.

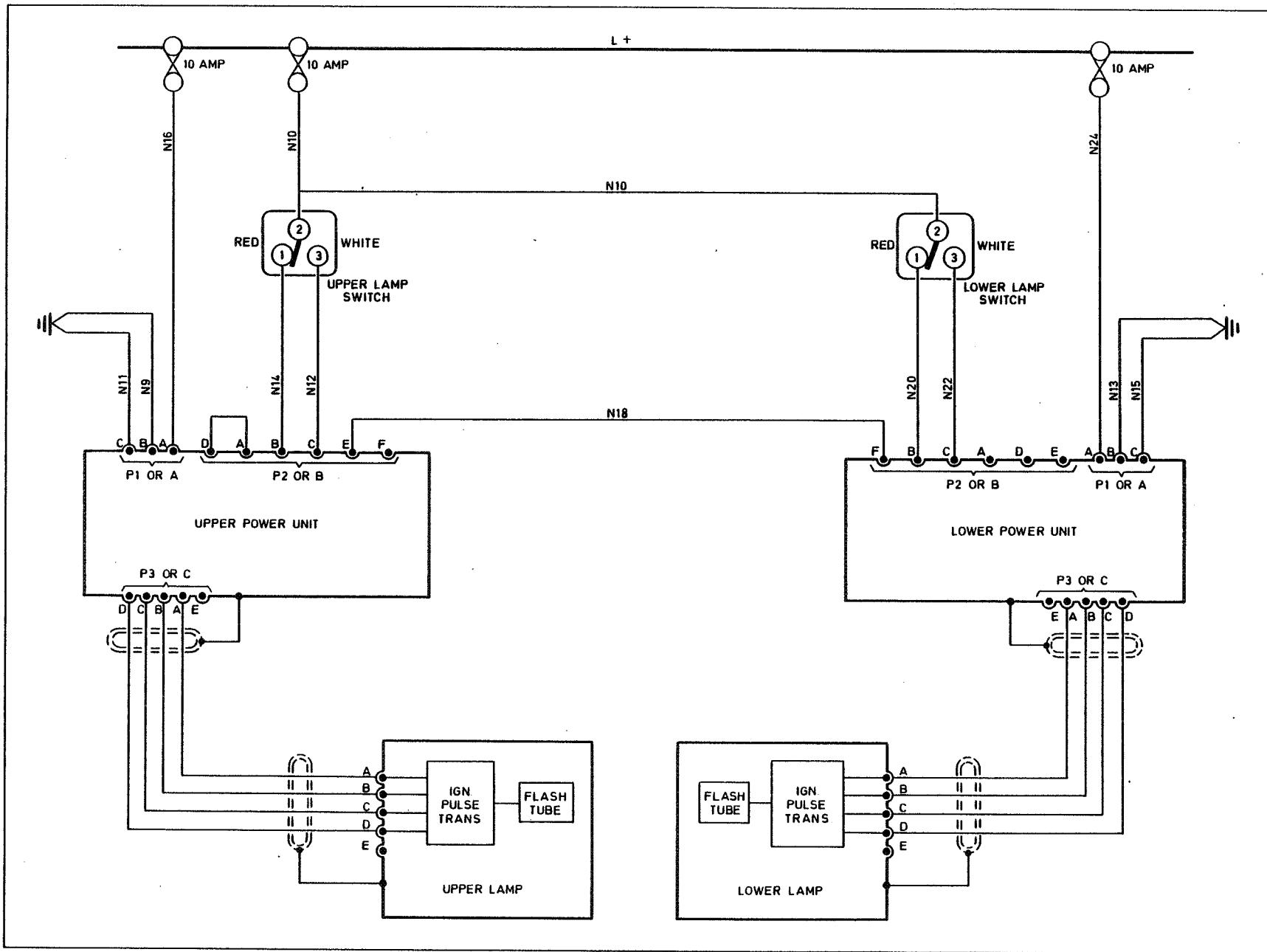


Fig. 3 Anti-collision lamps (theoretical)

► (Fuse ratings changed) ◄

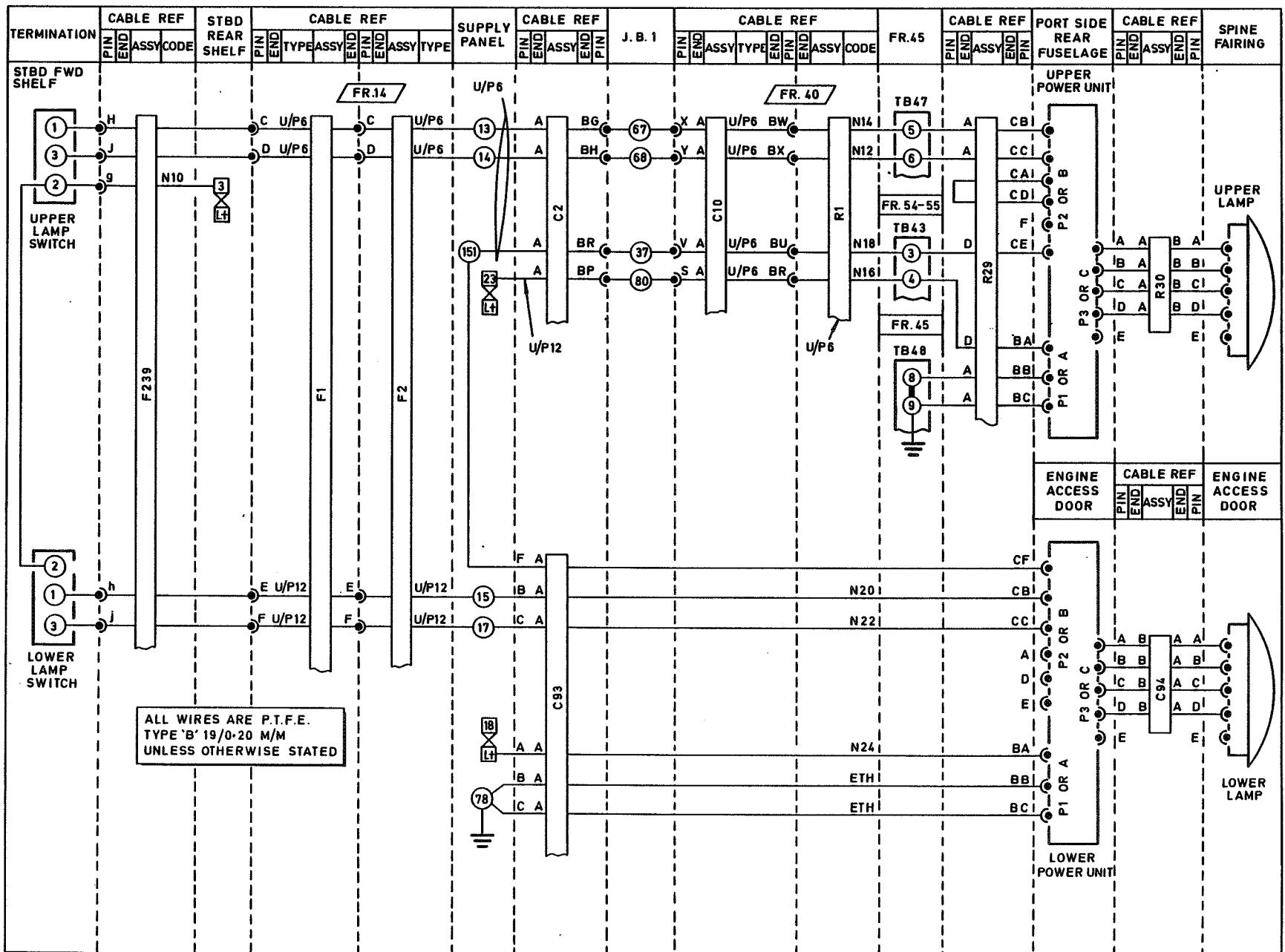
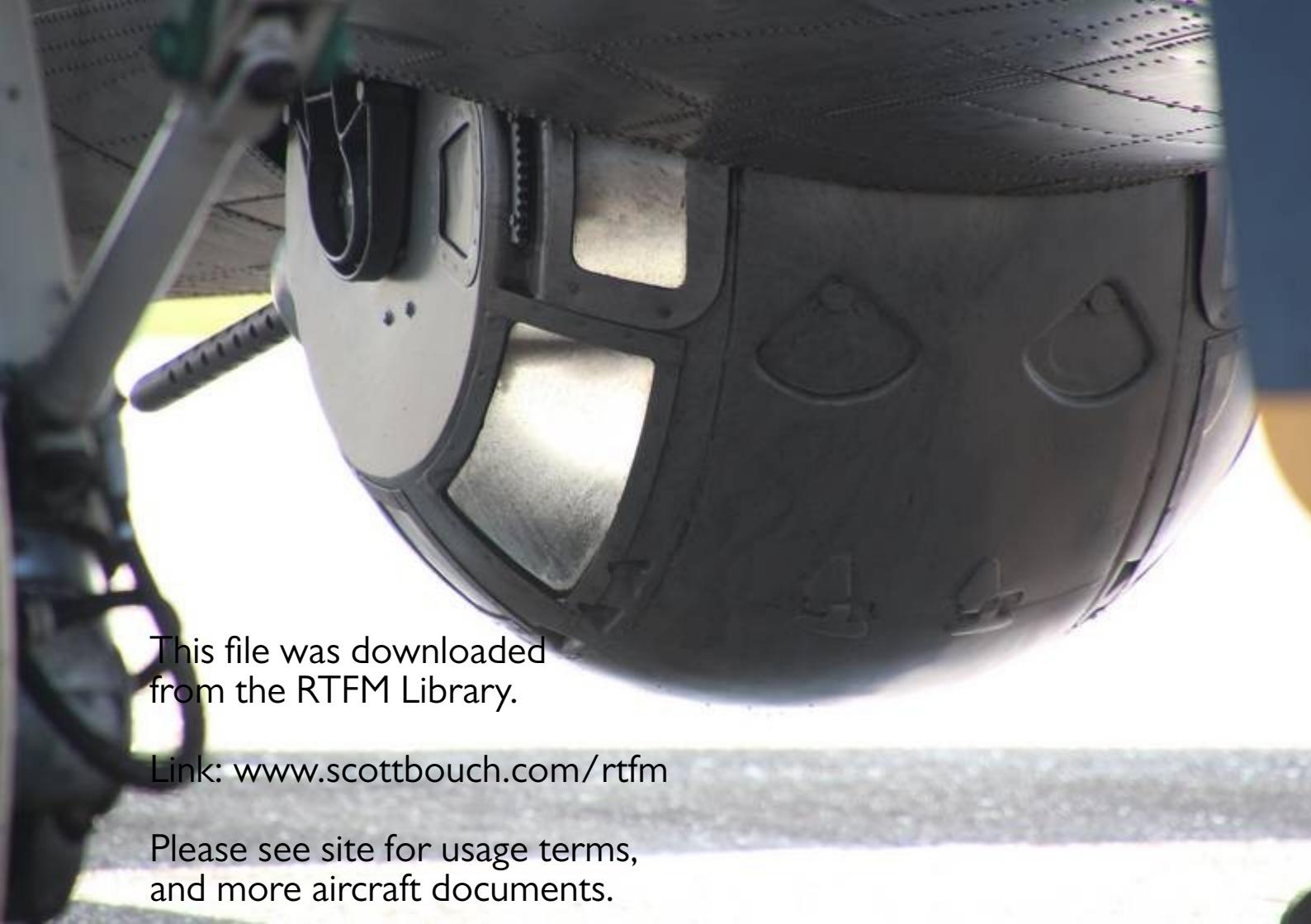


Fig. 4 Anti-collision lamps (routeing)



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