

GROUP F 2

NAVIGATION AND ANTI-COLLISION LAMPS (CODE N)

(Completely revised to include Mod 1380)

CONTENTS

	Para
Introduction	1
DESCRIPTION	
<i>Navigation lamps</i>	2
<i>Anti-collision lamps</i>	3
OPERATION	
<i>Navigation lamps</i>	4
<i>Anti-collision lamps</i>	5

	Para
SERVICING	6

	Para
REMOVAL AND ASSEMBLY	7
<i>General</i>	7

	Fig.
<i>Navigation lamps (routeing and theoretical)</i>	1
<i>Anti-collision lamps (routeing and theoretical)</i>	2

TABLE

	Table
<i>Equipment Type and Air Publication reference</i>	1

Introduction

1. This Group contains the description and operation of the navigation and anti-collision lamps supply and control circuits together with information on the servicing required to maintain them in an efficient condition. Routeing and theoretical circuit diagrams are included. The aircraft electrical system is described in Groups A 1, A 2 and A 3 and detailed information on the standard items of equipment used in the circuits will be found in the AP's listed in Table 1.

DESCRIPTION**Navigation lamps**

2. Three navigation lamps fitted in housings covered with transparent plastic are provided, one in the tip of each outer wing and the other in the tip of the anti-buffet fairing at the tail end. The wing tip lamps are carried in standard lamp holders and the tail lamp in a standard small bayonet batten type holder in a BAe designed lamp housing. The lamps are controlled by a double-pole, three-position switch on the

centre instrument panel which is marked FLASH/OFF/STEADY and the circuit includes a flasher unit mounted on frame 7 in the cabin.

Anti collision lamps

3. Two Grimes anti-collision lamps are fitted to the fuselage skin, the upper lamp to a mounting plate on the spine fairing panel between frames 26-33 and the lower lamp to the outer skin of the engine access door between frames 34- 37 (pre Mod 1478), or on the rear fuselage between frames 42-43 (post Mod 1478). Control of the two lamps supply is by a two-position switch identified ANTI-COLL

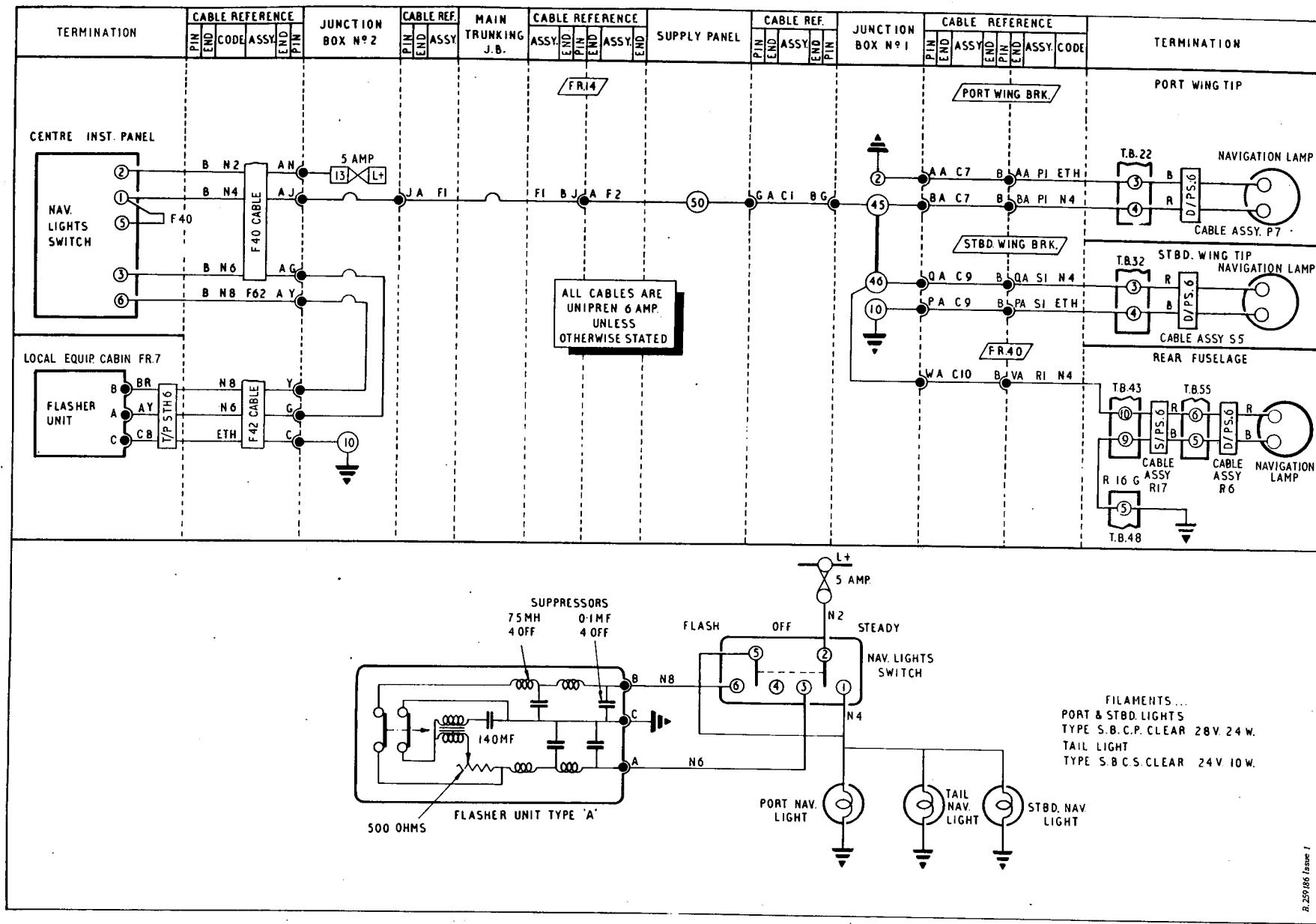


Fig.1 Navigation lamps (routeing and theoretical)

LIGHTS mounted above the IFF/SSR control unit in the port gyro gunsight position (pre-Mod 1430) or on the centre instrument panel (post-Mod 1430).

OPERATION

Navigation lamps

4. The operation of the navigation lamps circuit is such that when the control switch is placed in the STEADY position, the lamps are supplied direct from the control switch, and give steady illumination. When the switch is placed in the FLASH position, the flasher unit is brought into circuit and the lamps are then switched on and off at a rate depending on the operation of the switch mechanism in the flasher unit.

Anti-collision lamps

5. Provided the ENGINE MASTER switch is ON, selecting the ANTI-COLL switch to ON

completes a separate circuit to each of the anti-collision lamps. The upper lamp circuit is from fuse 4 in the main fuse box across switch terminals 2-1 to the two 40W filaments in the upper lamp and, via the noise filter, to the d.c. motor to operate the lamp reflector oscillating mechanism. As a result the lamp commences to sweep through 182 deg. in the horizontal plane at a rate of 40 to 45 times per minute. This movement gives the effect of 80-90 flashes per minute when the beam is viewed from any direction. The noise filter prevents interference with communications circuits. The supply circuit to the lower lamp, also from fuse 4 in the main fuse box, is across switch contacts 5-4 to the filaments and motor of the lamp. The operation of the lower lamp is then identical to the upper.

SERVICING

General

6. For general servicing of the electrical system

as a whole, reference should be made to Group A 1 which also includes a table giving details of the lamps used in the navigation lamps circuit. Apart from keeping all components clean and carrying out the routine tests for security and serviceability, no further servicing should be necessary.

REMOVAL AND ASSEMBLY

General

7. Once access has been obtained the removal and assembly of components forming the navigation and anti-collision lamps circuits should present no unusual difficulties. Should it be necessary to remove the spine fairing panel on which the upper anti-collision lamp is mounted, it is first necessary to remove the spine panel immediately forward of it. This is because of the interlocking of the panels. The location and access to all components of the installation is indicated in Group A3.

TABLE 1

Equipment Type and Air Publication reference

Equipment Type	Air Publication
Lamp holders port and starboard Type B ...	AP113F-0227-1
Lamp holder tail ...	BAe Design
Switch, Control	
Navigation lamps, CWC Type XD784 No.4 ...	AP113D-1100 Series
Anti-collision lamps, Honeywell, Type 2-TL1-3G ...	AP113D-1201-1
Lamps, anti-collision, Grimes, Type G9950-1 ...	AP113F-0208-1
Flasher unit, Specto, Type A ...	AP113F-0618-1

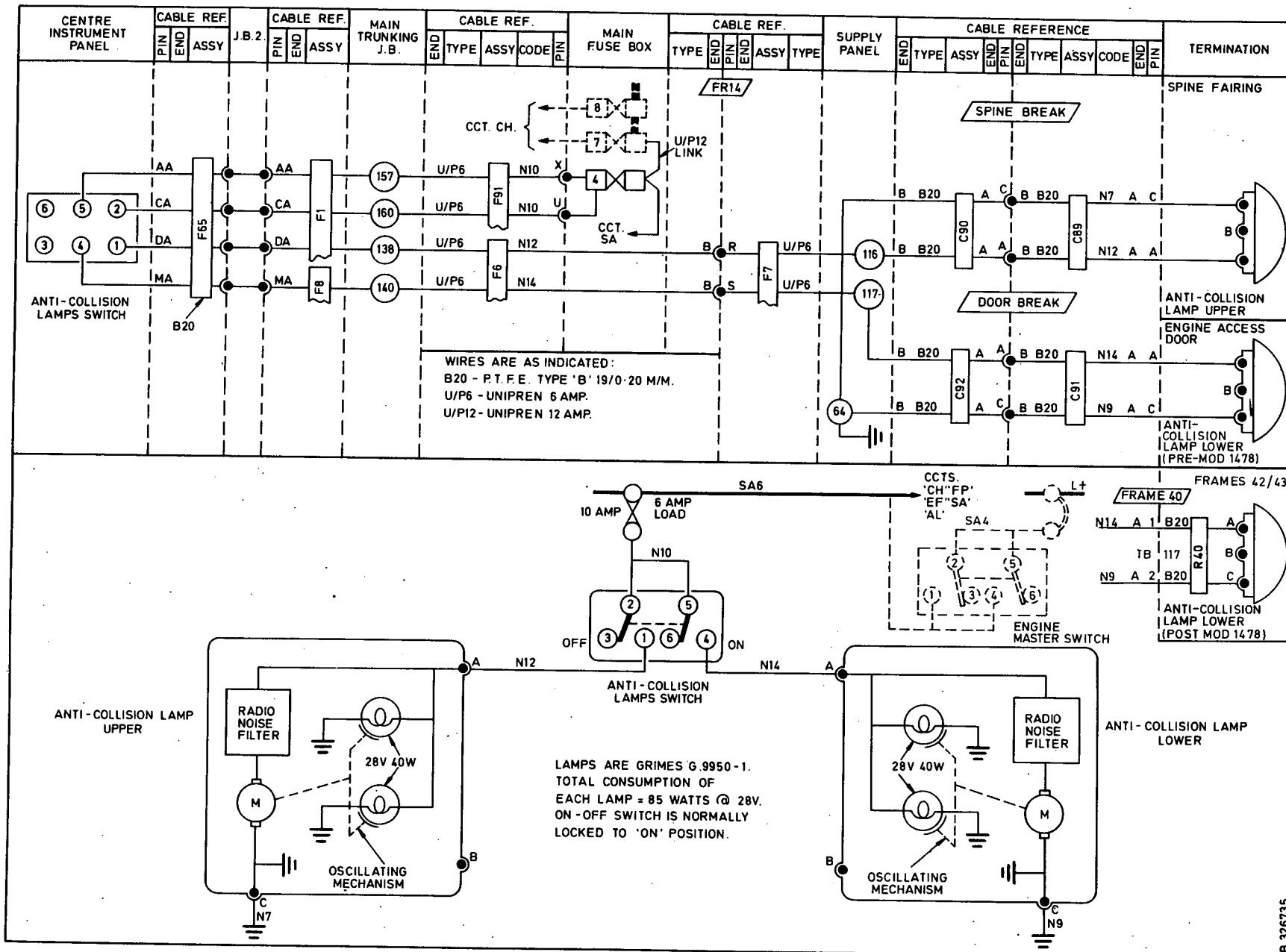


Fig. 2 Anti-collision lamps (routeing and theoretical)

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