

Nomad**SERVICE BULLETIN**

SUBJECT: INTRODUCTION OF PILOT'S MAP LIGHT
IN FLIGHT COMPARTMENT (MOD N546)

1. Planning Information**A. Effectivity****(1) Aircraft Affected**

All Nomad N22-Series and N24-Series aircraft whose log books do not already record the embodiment of Mod N546 or compliance with Service Bulletin NMD-33-2.

Pre-certification implementation of the intent of this Service Bulletin is recorded in the airframe log book as Mod N546.

(2) Spares Affected

Nil

B. Reason

To comply with Australian Dept. of Aviation Air Navigation Orders ANO 20.18 Appendix 4 Sub-para 5 requiring illumination for reading maps and other flight documents during night flying.

C. Description

A detachable utility light mounted on the LH side of the overhead console at sta 124.50 provides flight compartment illumination. The light is connected via a flexible cord and locking device on the mounting socket which enables the light to be secured at any selected angle. The light has integral controls for colour, brightness and beam. Red or white illumination and flood or spot light control is selected by rotating a sleeve on the front section of the unit. A rheostat knob on the rear of the unit is used as a brightness and ON/OFF control. A push button on the rear of the unit switches the light to maximum brightness regardless of the rheostat setting. The light is powered by 27.5V DC via the 5A PANEL LT LH circuit breaker and a 2-way terminal board TB56, both located on the overhead console. The map light part number is MS17245-5 but GRIMES utility light part number 15-0007-89 may be used as an alternative.

D. Compliance

Within 300 hrs Time in Service from receipt of kit P/N NMD-33-2-1 but not later than 31 December 1984.

E. Approval

The modification detailed herein has been approved pursuant to Air Navigation Regulation 40 and conforms with the type certification requirements.

F. Manpower

Four manhours.

G. Material - Price and Availability

The parts required to incorporate the modification detailed in this Service Bulletin are available free of Charge as Kit No. NMD-33-2-1 from the operator's local distributor. Distributors are to place a "No Charge" purchase order on G.A.F. through the normal procurement procedure. Purchase orders are to quote the Aircraft Serial No. and Service Bulletin No. NMD-33-2. This Kit will be available ex-factory from September 1984.

H. Tooling - Price and Availability

None required.

J. Weight and Balance

The following information is to be inserted into:

- (1) The Weight and Balance Manual for N22-Series aircraft issued with this manual.
- (2) The Weight and Balance Manual for N24-Series aircraft issued with this manual.
- (3) Flight Manual 12.28F for N22-Series aircraft not issued with a Weight and Balance Manual.
- (4) Flight Manual 12.58F for N24-Series aircraft not issued with a Weight and Balance Manual.
 - (a) N22 and N24-Series aircraft Weight and Balance Manual in Metric Units.

<u>Weight</u> (Kg)	<u>Arm</u> (mm)	<u>Index Units</u> $\left(\frac{\text{Kg mm}}{1000}\right)$
0.5	3165	1.58

(b) N22 and N24-Series aircraft Weight and Balance Manual in Imperial Units

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
1.0	124.6	0.12

(c) Flight Manual 12.28F and 12.58F

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
1.0	124.6	0.12

K. References

MM - Maintenance Manual
IPC - Illustrated Parts Catalogue
WDM - Wiring Diagram Manual

L. Publications Affected

MM - Maintenance Manual
IPC - Illustrated Parts Catalogue
WDM - Wiring Diagram Manual
W&BM - Weight and Balance Manual

2. Accomplishment Instructions

- A. Remove all external power supply from the aircraft and disconnect the aircraft battery (Ref MM 24-30-01).
- B. Remove the MANOEUVRE RESTRICTIONS and IFR APPROVAL labels (Ref IPC 39-10-03, Figure 1, Sheet 2, Items 50 and 51) from the LH side of the overhead console and affix new labels P/N 1/N-80-311 and 1/N-80-312 six inches to the rear of their original position.
- C. Remove the metal and plastic fuel selector panels from the overhead console to gain access to cable abutment plate at sta 120 (Ref Figure 2).
- D. Locate terminal board P/N MS27212-1-2 on the aft face of the cable abutment plate .63 inches to the left of centre of the plate.
- E. Attach the terminal board to the cable abutment plate with two screws P/N MS35206-215 and two locknuts P/N MS21083-N04.

- F. Locate the channel P/N 1A/N-80-206 centrally about sta 124.50 on the LH inside face of the console. Back drill the console, using the channel as a guide, with a 3.3 mm (0.1285 in) dia drill through the upper four positions and a 5.0 mm (0.1968 in) dia drill through the lower two positions. Deburr the overhead console and channel.
- G. Drill a hole 5/16 inch dia at sta 125.75 w/ 115.75 on the LH side of the overhead console. Deburr the hole and install the split grommet P/N MS35490-4.
- H. Rivet the channel with the four upper holes in the channel to the LH inside face of the overhead console using rivets P/N MS20470AD4-5 and then attach the utility light P/N MS17245-5 to the LH side of the overhead console and secure using screws P/N MS35207-263, washers P/N AN960-D10 and nuts P/N MS21042-L3 at the two lower holes through the overhead console and channel.

NOTE: Ensure aft flange of channel does not foul the LH fuel shut-off valve control cable. Flange of channel may be trimmed if necessary.

- J. Crimp a terminal lug P/N AMP51862 to each free end of the white and black leads of the utility light flexible cord. Feed the flexible cord through the grommet (Ref step G) and connect the white lead to No. 1 terminal and the black lead to No. 2 terminal on terminal board TB56 (Ref Figure 1).
- K. Install cable assembly P/N 1/N-80-632/950 (Ref Figure 1).
- (1) Connect the larger of the terminal lugs on cable L196A22 to the PANEL LT LH 5A circuit breaker and if necessary, replace the existing terminal screw with panhead screw P/N MS36206-243 to ensure adequate safety length of screw. Then connect one end of cable L197A22N to the earth bolt at sta 110.68.
 - (2) Route the cable assembly through the overhead console to terminal board TB56 and connect cable L196A22 to terminal No. 1 and cable L197A22N to terminal No. 2. Fit terminal board cover P/N MS18029-1S-2.

- L. Install the plastic and metal fuel selector panel.

NOTE : Prior to fitting panels, etc. an inspection must be carried out to ensure the area is free from foreign objects.

- M. Reconnect aircraft battery and restore external power supply. Carry out function test for correct operation.

3. Material Information

A. Parts Required per Aircraft

(1) One kit P/N NMD-33-2-1 is required per aircraft.

(2) Kit NMD-33-2-1 comprises the following items :

<u>Item P/N</u>	<u>Title</u>	<u>Qty</u>
MS17245-5	Light, Utility	1
15-0007-89	Light, Utility, Grimes (ALT)	1
MS27212-1-2	Terminal Board	1
MS18029-1S-2	Cover, Terminal Board	1
MS35490-4	Grommet, Rubber, Split	1
1A/N-80-206	Channel	1
AMP51862	Terminal Lug	2
MS25036-102	Terminal Lug (ALT)	2
1/N-80-632/950	Cable Assembly	1
MS35207-263	Screw	2
MS21042-L3	Nut	2
AN960-D10	Washer	2
MS20470AD4-5	Rivet	4
MS35206-215	Screw	2
MS21083-N04	Stiffnut	2
MS35649-264	Nut, Plain	2
AN960-C6L	Washer	4
MS35338-136	Lockwasher	2
MS35206-243	Screw	1
1/N-80-311	Label	1
1/N-80-312	Label	1

B. Parts Modified and Re-identified by Operator

None.

C. Parts Required to Modify Spares

None.

D. Parts Removed

<u>Item P/N</u>	<u>Title</u>	<u>Qty</u>
1/N-80-311	Label	1
1/N-80-312	Label	1

The above items are to be scrapped when removed from the overhead console (Ref Para 2.B).

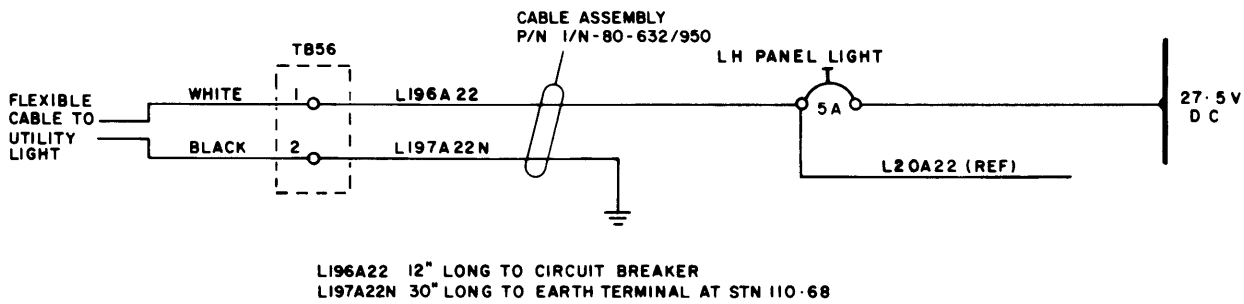
E. Special Tools and Equipment

None.

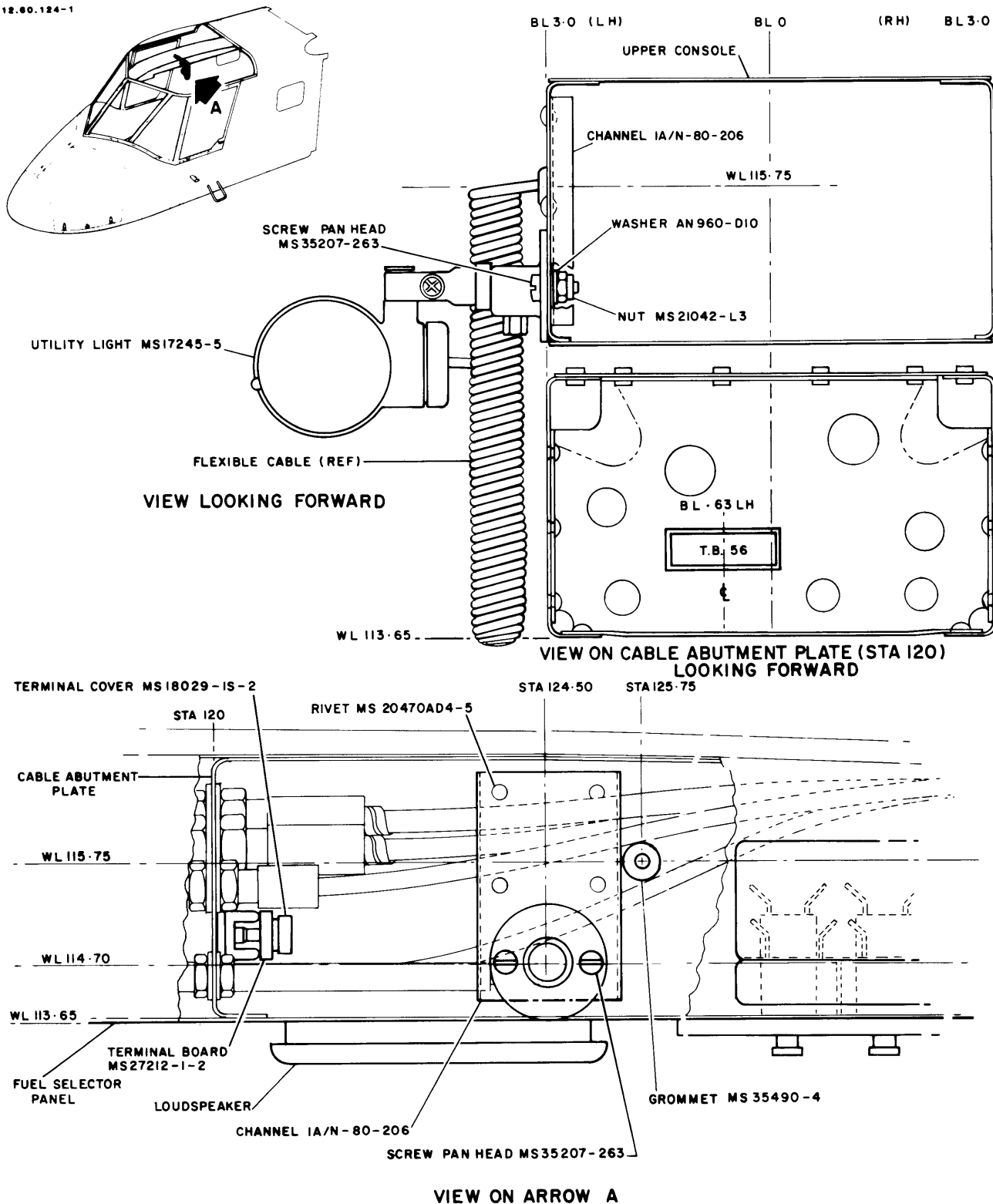
4. Recording Action

Record compliance with Service Bulletin NMD-33-2 in the airframe log book.

12.60.125-1



Wiring Diagram Mod N546
Figure 1



Introduction of MapLight ModN546
Figure 2