INDICATION/RECORDING SYSTEM — AURAL WARNING UNIT — RELOCATION OF CIRCUIT BREAKERS (MOD N613)

1. PLANNING INFORMATION

A. Effectivity

- (1) Aircraft affected:
 - (a) N22 Series line sequence numbers 1 to 9, 11 to 29, 31, 33, 35, 37, 39 to 41, 43, 45, 47 to 59, 61, 63, 65 to 70, 82 to 88, 90 to 95, 97, 100, 102 to 114, 116, 118, 125, 126, 131 to 134, 137, 138, 141, 143 to 158, 166 to 170.

NOTE

FAA Certificated N22S aircraft line sequence numbers 159 to 165 inclusive were fitted with Mod N613 during manufacture.

- (b) **N24 Series** line sequence numbers 10, 30, 32, 34, 36, 38, 42, 44, 46, 60, 62, 64, 71 to 81, 89, 96, 98, 99, 101, 115, 117, 119 to 124, 127 to 130, 135, 136,139, 140, 142.
- (2) Spares affected:

None

B. Reason

To provide independent circuit breakers for stall warning and landing gear warning.

Revision 1

To correct part numbers in Section 2. paragraph B.(2) and Section 3.A.

C. Description

Modification N613 increases the capacity of the aural warning circuit breaker on the battery panel in the LH pod, and provides for two circuit breakers on the cockpit overhead panel. These independently protect the landing gear warning and stall warning elements of the aural warning unit.

D. Compliance

- (1) Compliance with this Service Bulletin is recommended.
- (2) Carry out at the next scheduled major inspection.

E. Approval

The requirement detailed herein has been approved by a person authorised under Civil Aviation Regulation 35 and conforms to the type certification requirements.

F. Manpower

10 Hrs.

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G. Materials, Price and Availability

Circuit breakers, cabling and attachments and labels to be sourced locally.

H. Tooling, Price and Availability

N/A

I. Weight and Balance

Negligible effect

J. References

Maintenance Manual	Chaps 24, 27, 31, 32, 39 and 52
Wiring Diagram Manual	Chap 27-50-00
Illustrated Parts Catalogue	Chap 24, 31 and 39

K. Publications Affected

Maintenance Manual Illustrated Parts Catalogue

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation for Modification

- (1) Set BATTERY switch on the overhead console to OFF.
- (2) Open LH pod nose cone (Ref MM Chap 52-40-00).
- (3) Trip all circuit breakers on the battery panel (Ref Fig 1).
- (4) Remove the lockwire and unscrew the battery connector.
- (5) Remove and retain the four screws (MS25206-226) securing the battery circuit breaker panel (Ref MM Chap 24-50-00) to the pod bulkhead.
- (6) Remove and retain cover assembly (MS18029-1S10).
- (7) Disconnect and discard wire W15A22 (Ref WDM Chap 27-50-00, Sheet 2 Pre-Mod N613) between terminal 2 on TB3 and 5A circuit breaker labelled AURAL WARNING. Retain nuts and washers for re-use.
- (8) Remove and discard circuit breaker (MS22073-5).
- (9) Remove and discard wire W15B22 (Ref WDM Chap 27–50–00, Sheet 2, Pre-Mod N613) between terminal 2 on TB3 and GEAR+ terminal on the Aural Warning Unit on the cockpit bulkhead. Retain nuts and washers for re-use. Alternatively, this wire may be left in place with the lugs removed and the ends capped.
- (10) Remove and discard wire W15C22 link (Ref WDM Chap 27-50-00, Sheet 2 Pre-Mod N613) between STALL+ and GEAR+ terminals on the Aural Warning Unit. Retain nuts and washers for re-use.



B. Installation of Mod N613

- (1) Install circuit breaker (MS24510-A-20) in the space vacated in step 2.A.(8) above.
- (2) Make link cable to busbar using wire (M22759/34-10-9), lugs (MS25036-156) as per Figure 1. Identify as 1C/N-81-814. Attach to busbar with screw (MS35206-242) and nut (MS21083N08) and to circuit breaker with screws provided.
- (3) Make up wire W145A14 using wire (M81044/9-14-9), lugs (MS25036-107 and MS25036-153) and ident sleeving. Attach to circuit breaker with supplied screws and washers and to terminal 2 of TB3 with retained nut and washer.
- (4) Prepare wire W145B14 using wire (M81044/9-14-9) and lug (MS25036-107) and ident sleeving. Attach to terminal 2 of TB3 with retained nut and washer. Wire is to be run into cockpit overhead console with main loom, tying off as required with appropriate nylon cordage or tie-straps.
- (5) Refit cover on TB3 and secure circuit breaker panel to pod bulkhead with retained screws.
- (6) In the cockpit, release fasteners and drop overhead circuit breaker panel (Ref MM Chap 39-10-00, Fig 5, Sheet 3).
- (7) Fit new circuit breakers (MS26574-1½) in positions shown in Fig 2. Connect to busbar using supplied screws and washers.
- (8) Make up and fix labels as shown in Fig 2.
- (9) Fit lug (MS25036-153) to wire W145B14 and connect to circuit breaker labelled L/G AURAL WARNING (Ref WDM Chap 27-50-00, Sheet 2, Post-Mod N613) with supplied screws and washers.
- (10) Make up wire W145C14 using wire (M81044/9-14-9), lugs (MS25036-153) and ident sleeving. Attach to L/G AURAL WARNING and STALL WARNING circuit breakers (Ref WDM Chap 27-50-00, Sheet 2, Post-Mod N613) with supplied screws and washers.
- (11) Make up wire W146A22 using wire (M81044/9-22-9), lugs (MS25036-149 and MS25036-102) and ident sleeving. Attach to STALL WARNING circuit breaker with supplied screws and washers and to STALL+ terminal of Aural Warning Unit (Ref WDM Chap 27-50-00, Sheet 2, Post-Mod N613) with retained nut and washer.
- (12) Make up wire W147A22 using wire (M81044/9-22-9), lugs (MS25036-149 and MS25036-102) and ident sleeving. Attach to L/G AURAL WARNING circuit breaker with supplied screws and washers and to GEAR+ terminal of Aural Warning unit (Ref WDM Chap 27-50-00, Sheet 2, Post-Mod N613) with retained nut and washer.
- (13) Perform continuity check on newly installed circuit (Ref WDM Chap 27–50–00, Sheet 2 Post-Mod N613).
- (14) Refit overhead circuit breaker panel.
- (15) Reconnect battery and wirelock.
- (16) Perform tests of Aural Warning System as per MM Chap 32-60-00 and 27-50-00.
- (17) Close and secure pod nose cone (Ref MM Chap 52-40-00).



3. MATERIALS INFORMATION

A. Parts Required per Aircraft

New Parts			
Part No	Description	Qty	Instruction/Disposition
MS24510-A-20	Circuit breaker 20 Amp	1	
MS26574-11/2	Circuit breaker 11/2 Amp	2	
MS25036-102	Terminal Lug	2	
MS25036-107	Terminal Lug	2	
MS25036-149	Terminal Lug	2	
MS25036-153	Terminal Lug	3	
MS25036-156	Terminal Lug	2	
M81044/9-14-9	Electrical Wire	A/R	
M81044/9-22-9	Electrical Wire	A/R	
M22759/34-10-9	Electrical Wire	A/R	
MS21083N08	Nut, self-locking	1	
MS35206-242	Screw	1	

Parts Removed			
Part No	Description	Qty	Instruction/Disposition
MS22073-5	Circuit breaker 5 Amp	1	Discard
			Discard
			Discard
			Discard

4. SPECIAL TOOLS AND EQUIPMENT

None.

5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD-31-2 in the Airframe Log Book.



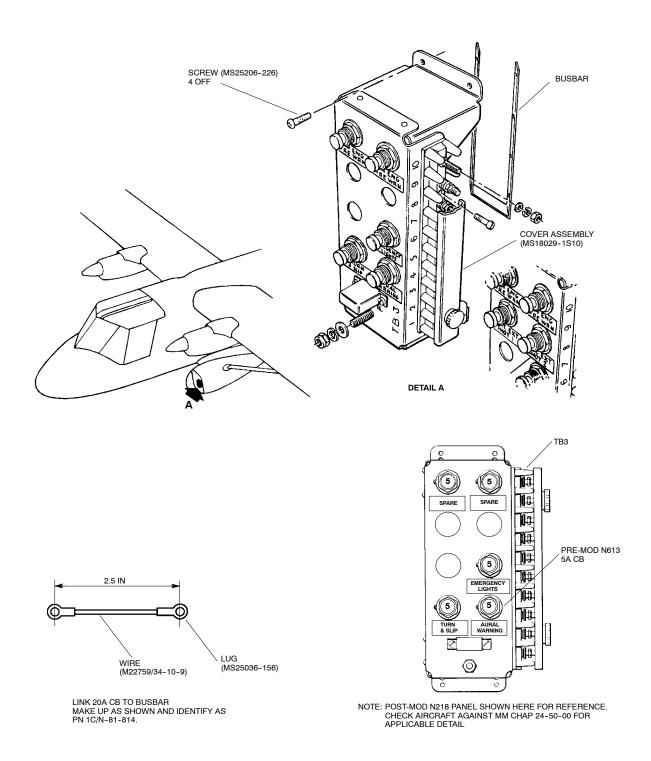
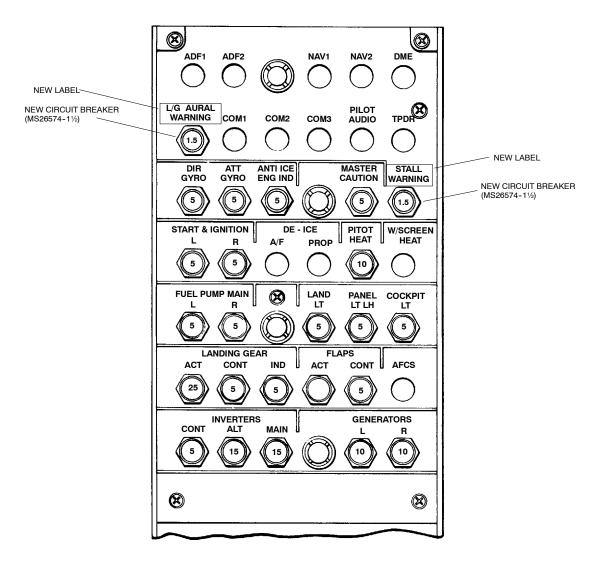


Figure 1 Battery Circuit Breaker Panel (LH Pod)

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NOTE: PANEL SHOWN HERE IS POST-MOD N374, N421 CHECK AIRCRAFT AND MM CHAP 24-50-00 FOR APPLICABLE DETAIL

Figure 2 Overhead Console Circuit Breaker Panel

