

*Nomad*

SERVICE BULLETIN

SUBJECT: INSTALLATION OF LIGHTNING PROTECTION
EARTHING BRAIDS BETWEEN RADAR INSTALLATION
AND AIRCRAFT FUSELAGE (MODIFICATION N370)

1. Planning Information

A. Effectivity

(1) Aircraft Affected

All Nomad N24-Series aircraft fitted with weather radar (Option G115-24, Option R115T-24, Option G122A-24, Option G122B-24 or Option G123-24) whose log books do not already record the embodiment of Mod N370 or compliance with Service Bulletin NMD-34-1.

Pre-certification implementation of the intent of this service bulletin is recorded in the Airframe Log Book as Mod N370.

(2) Spares Affected

None.

B. Reason

To provide additional lightning protection for aircraft fitted with a weather radar option.

C. Description

Two earthing braids are connected between the radar mounting channels and the aircraft structure at the rear of the baggage compartment. The earthing braids are routed along either side of the baggage compartment floor, under the floor mat, and bonded to the floor with epoxy adhesive.

D. Compliance

Within 200 hours Time in Service after receipt of this service bulletin.

E. Approval

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

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F. Manpower

One man four hours.

G. Material - Price and Availability

The parts and materials required (Ref Para 3.A.) are to be locally procured by the operator.

H. Tooling - Price and Availability

None required.

J. Weight and Balance

Negligible effect.

K. References

Maintenance Manual (MM)

L. Publications Affected

Maintenance Manual.

Illustrated Parts Catalogue.

2. Accomplishment Instructions

A. Open the forward baggage compartment door.

B. Remove and retain the bottom floor mat P/N 1/N-10-1086 secured by Velcro tape to the baggage compartment floor.

C. Prepare two 50 inch lengths of tinned or untinned one inch flat earthing braid.

D. Install the L.H. earthing braid.

(1) Locate channel assembly P/N 101/N-10-896 which is situated near the forward L.H. corner of the baggage compartment (Ref Figure 1, Detail A). Drill a 5.0 mm dia. hole in the bottom of the channel assembly and mid-way between the two existing bolts (Ref Figure 1, Detail B).

(2) Crimp a terminal lug P/N MS25036-126 to one end of one of the earthing braids, then bend the crimped terminal lug as shown in Figure 1, Detail C.

- (3) Clean and the prepare the area around the hole drilled in the channel assembly (Ref MM 20-20-00 Standard Practices). Attach the terminal lug to the channel assembly using the attaching parts and order of assembly shown in Figure 1, Detail C.
 - (4) Locate packer P/N 101AC/N-10-503 which is situated near the rear L.H. corner of the baggage compartment (Ref Figure 1, Details A and D). Drill out the existing rivet fitted through angle P/N 101C/N-10-503 approximately 0.5 inch outboard of the packer (Ref Figure 1, Detail D). Enlarge this hole to 5.0 mm dia.
 - (5) Route the L.H. earthing braid from channel assembly P/N 101/N-10-896 to packer P/N 101AC/N-10-503. Fashion the braid to follow the contour of the baggage compartment floor. At the points where the braid crosses the Velcro tape which secures the mat to the floor, cut away the tape to allow the braid to lie against the floor surface.
 - (6) Crimp a terminal lug P/N MS25036 to the rear end of the earthing braid, trimming off any excess length of braid. Bend the terminal lug as shown in Figure 1, Detail E.
 - (7) Clean and prepare the area around the hole drilled in the angle (Ref MM 20-20-00 Standard Practices). Attach the rear terminal lug to the angle using the attaching parts and order of assembly shown in Figure 1, Detail E.
- E. Install the R.H. earthing braid following the same procedure as for the L.H. earthing braid (Ref Para D.(1) to D.(7) inclusive), but:
- (1) substitute channel assembly P/N 101/N-10-897 for P/N 101/N-10-896;
 - (2) substitute packer P/N 101AD/N-10-503 for P/N 101AC/N-10-503; and
 - (3) route the braid directly from the front R.H. corner to the rear R.H. corner of the baggage compartment.
- WARNING:** THE FOLLOWING PROCEDURE INVOLVES THE USE OF METHYL ETHYL KETONE (MEK) OR METHYLATED SPIRIT (METHANOL). THESE SOLVENTS ARE HIGHLY INFLAMMABLE AND MILDLY TOXIC. ENSURE ADEQUATE VENTILATION AND WEAR SUITABLE PROTECTIVE CLOTHING.
- F. Use Grade 400 aluminium oxide abrasive paper to thoroughly clean the baggage compartment floor along the areas beneath the L.H. and R.H. earthing braids. Remove all abrasive dust, then wipe the cleaned areas with a clean cloth dampened with methyl ethyl ketone (MEK) or methylated spirit (methanol).

- G. Bond the L.H. and R.H. earthing braids to the baggage compartment floor using rapid-cure epoxy applied along the entire areas of contact.

NOTE: Do not mix or use epoxy in conditions of relative humidity exceeding 70%.

- H. Allow the epoxy to cure, then apply a strip of 2-inch wide adhesive-backed PVC or Mylar tape over the entire length of each braid (Ref Figure 1, Detail F).
- J. Install the floor mat in its normal position on the baggage compartment floor. Remove the Velcro tape from the mat at the points where the tape intersects with the earthing braids before finally pressing the front and rear edges of the mat into position.

3. Materials Information

A. Parts Required per Aircraft

The following items and materials are required for each aircraft. They are to be procured by the operator from stock or local sources:

<u>Item P/N</u>	<u>Title</u>	<u>Qty</u>
-	Braid, tinned or untinned copper, 1 inch flat x 50 inches long	2
MS25036-126	Terminal lug or	4
AMP322.122	Terminal lug or	Alt
AMP322.125	Terminal lug	Alt
AN3-5A	Bolt, 10-32 UNF	4
AN960-10	Flat washer, steel, cadmium plated	8
AN960-D10	Flat washer, aluminium alloy	4
MS35338-43	Spring washer or	4
AN935-10	Spring washer	Alt
MS21083-N3	Nut, 10-32 UNF	4
-	Epoxy rapid-cure adhesive such as Avdel Bond E 01, or 5-minute Araldite	As required

B. Existing Aircraft Parts Modified and Re-identified by the Operator

Nil.

C. Parts Required to Modify Spares

Nil.

D. Removed Parts

Nil.

E. Special Tools and Equipment Required

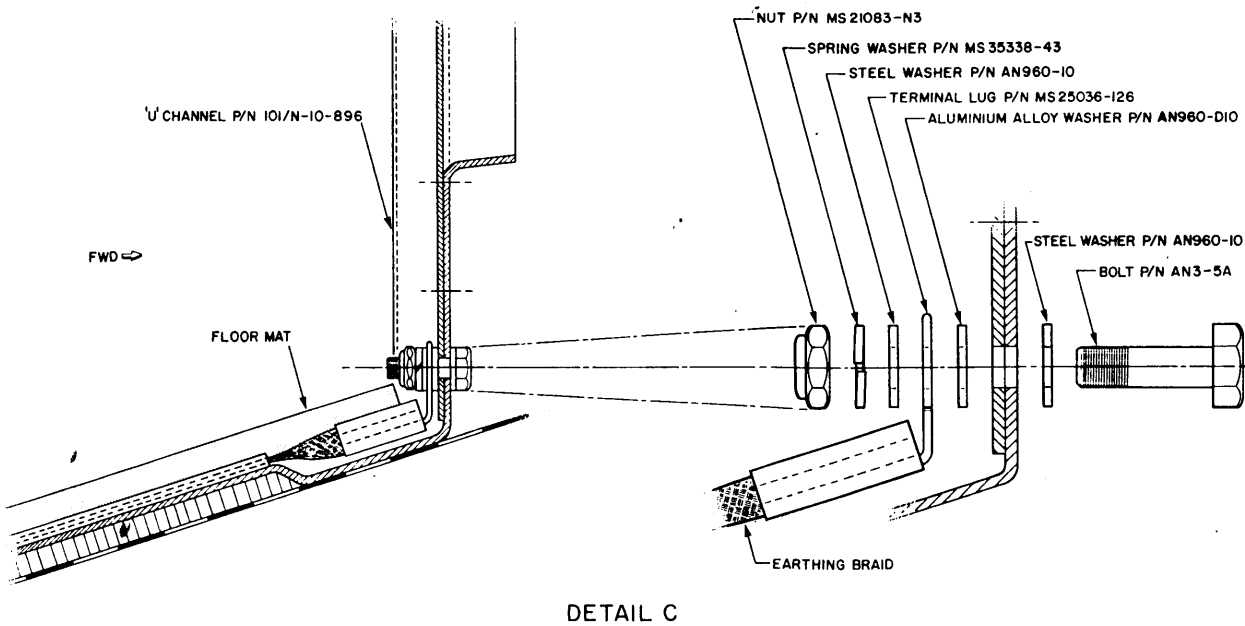
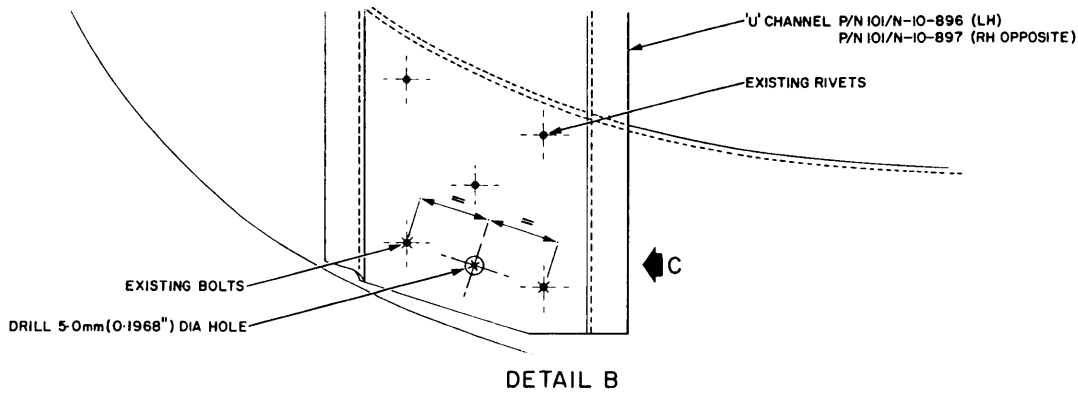
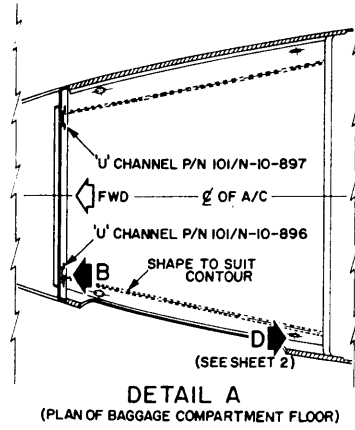
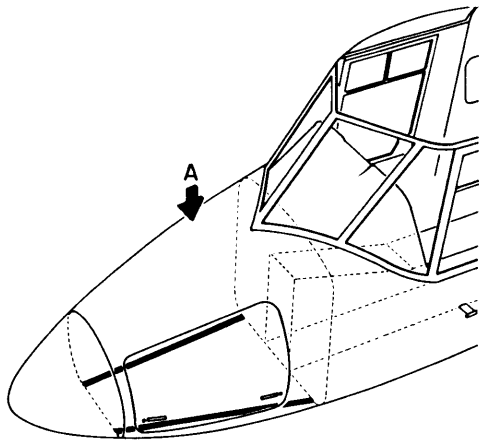
Nil.

F. Superseded Special Tools

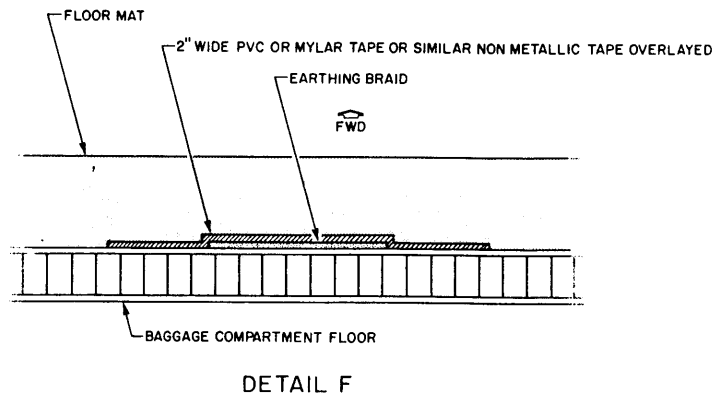
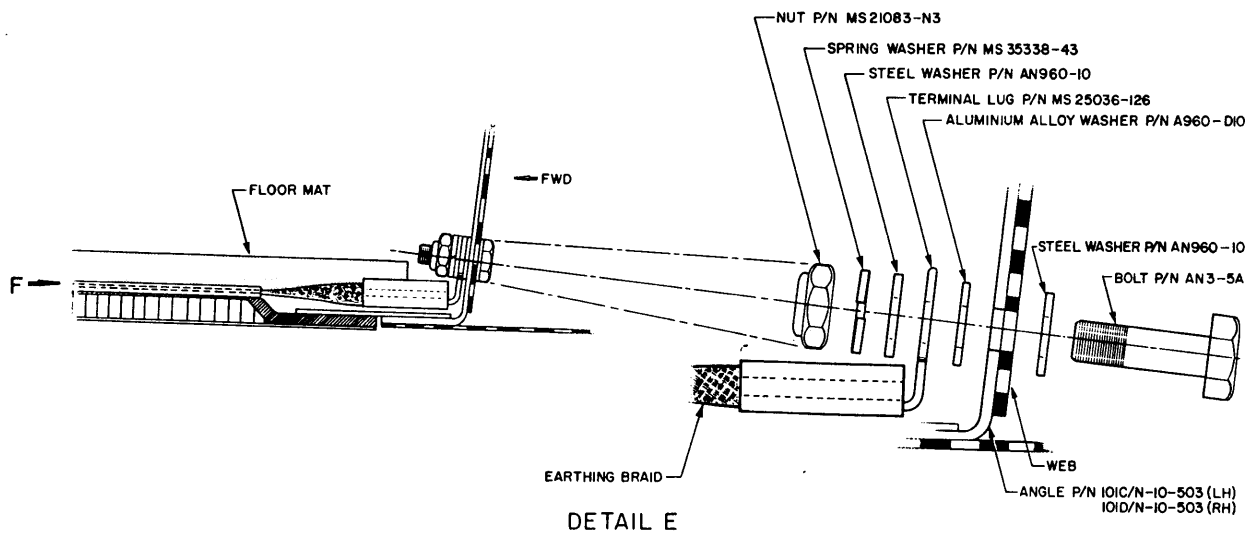
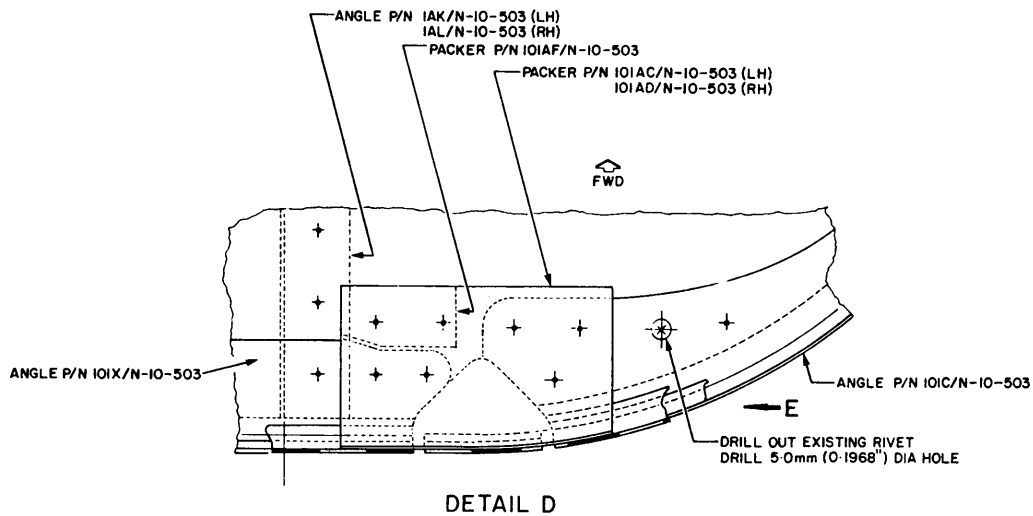
Nil.

4. Recording Action

Record compliance with Service Bulletin S/B NMD-34-1 in the Airframe Log Book.



Installation of Earthing Braids
Figure 1 Sheet 1



Installation of Earthing Braids
Figure 1 Sheet 2