FITMENT OF OUTER RUDDER PEDAL GUARD PLATE (MODIFICATION N642)

1. PLANNING INFORMATION

A. Effectivity

(1) All Nomad N22 Series and N24 Series aircraft whose log books do not already record the embodiment of Mod N642 or compliance with Service Bulletin NMD–27–34. Pre-certification implementation of the intent of this Service Bulletin is recorded in the airframe log book as Mod N642.

(2) Spares Affected

Nil.

B. Reason

A number of instances have been reported of the outboard rudder pedals fouling the adjacent structure at Sta 93.1. The degree of obstruction to rudder pedal movement only occurs when the pedals are adjusted to the fully aft or near aft position combined with the magnitude of side force applied to the pedals.

C. Description

A guard plate is riveted to the LH and RH structures between Sta 88.0 and 97.0 approximately and between waterlines 66.50 and 69.25 to cover the structural areas where rudder pedal fouling may occur. A PTFE 'button' is fitted in the outer end of each outboard rudder pedal pivot pin to minimise any friction resulting from contact between the pedal assembly and the guard plate.

D. Compliance

Incorporation of the intent of this Service Bulletin is to be accomplished within 100 hours time in service after receipt of Service Bulletin Kit PN NMD–27–34–1, but not later than 1st January 1986.

E. Approval

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

F. Manpower

Eight Manhours.

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G. **Material–Price and Availability**

The parts required to incorporate the modification detailed in this Service Bulletin are available free of charge as Kit Part No. NMD–27–34–1 from the operator's local distributor. Distributors are to place a "No Charge" purchase order on GAF through the normal procurement procedure. Purchase orders are to quote the Aircraft Serial No. and Service Bulletin No. NMD–27–34. Kits will be available ex-factory from Oct 1985.

H. **Tooling–Price and Availability**

None required.

I. **Weight and Balance**

The following information is to be used to amend the appropriate Flight Manual, and also Weight and Balance Manual (if issued).

(1) N22 Series and N24 Series aircraft Weight and Balance Manuals in Metric Units.

Weight (Kg)	Arm (mm)	Index Units (Kg mm /1000)
+0.16	2375	+0.38

(2) N22 Series and N24 Series aircraft Weight and Balance Manuals in Imperial Units.

Weight (lb)	Arm (in)	Index Units (lb in /1000)
+0.35	94.29	+0.033

(3) Flight Manuals 12.28F and 12.58F.

Weight (lb)	Arm (in)	Index Units (lb in /1000)
+0.35	94.29	+0.033

J. **References**

Maintenance Manual

Illustrated Parts Catalogue

K. **Publications Affected**

Illustrated Parts Catalogue

Weight and Balance Manual

Flight Manuals 12.28F–1 and 12.58F–1

Maintenance Manual

Inspection Requirements Manual

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2. **ACCOMPLISHMENT INSTRUCTIONS**

WARNING

DO NOT OPERATE FLIGHT CONTROLS WITH CONTROL COMPONENTS DISCONNECTED OR WHEN PERSONNEL ARE WORKING IN THE AREA CONCERNED. SERIOUS INJURY TO PERSONNEL OR DAMANGE TO FLIGHT CONTROL COMPONENTS AND STRUCTURE COULD OCCUR.

A. Remove the LH flight compartment seat (Ref MM Chap 25–10–00 Maintenance Practices) for access to area to be reworked.

B. Remove the control column guards and pedal guards (Ref IPC Chap 53–20–02 Figure 1) from the pilot's position for access to area to be reworked.

C. Remove the Pilot's rudder pedal release cable (Ref MM Chap 27–20–03 Maintenance Practices).

D. Remove the self–locking nut, washer and Phillips recessed 100° countersunk head bolt (Ref IPC Chap 27–20–02 Figure 2 items 16, 17 and 18) from the pilot's outboard pedal assembly.

NOTE

If difficulty is experienced in getting a Phillips screwdriver on the head of the countersunk bolt, disconnect the forward pivot arm from the link (Ref IPC Chap 27–20–02 Figure 2 items 33 and 15 respectively) and push the forward pivot arm forward for better access to the head of the countersunk bolt.

E. Insert the PTFE button PN 1/N–10–1434 into the outboard end of the pedal pivot pin (Ref IPC Chap 27–20–02 Figure 2 item 20) so that with the bolt holes of the button, pivot pin and link of the pedal assembly (Ref step D.) aligned, the radiused end of the button protrudes from the end of the pivot pin. Refit the countersunk bolt, washer and self-locking nut removed at Step D. and torque tighten the nut to between 50 and 60 lb in.

F. If the forward pivot arm has been disconnected from the link (Ref step D. NOTE), reconnect the arm to the link with bolt, washer and self–locking nut (Ref IPC Chap 27–20–02 Figure 2, items 26, 25 and 24). Ensure that the head of the bolt faces away from the associated pedal. Torque tighten the self-locking nut to between 20 and 25 lb in.

G. Cut the required length of grommet material PN Bowthorpe G51P/A and adhere to the periphery of the hole in the LH guard plate P/N–10–1432 with Bostik 1489 contact adhesive or suitable alternative.

H. Place the LH guard in position (Ref Figure 1) and using a No. 30 (3.3 mm) dia drill, drill the three rivet holes (middle of guard plate) through the plate and structure. Fit grip pins in top and bottom holes to retain plate in position then drill remaining five rivet holes through plate and structure using same size drill.

NOTE

When drilling the rivet holes, take care not to damage the pipes passing fore and aft through the adjacent structure.

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I. Remove the LH guard plate and countersink the three holes in the middle of the plate with a 100° countersink to suit rivets PN MS 20426AD4–4.

J. Touch up all bare metal with suitable primer; when dry, wet assemble the guard plate to the structure using pigmented chromate jointing compound and rivet up with rivets as detailed in Figure 1. Remove excess jointing compound.

NOTE

Ensure that countersunk head rivets are flush with guard plate surface, otherwise rivet heads may accelerate wear on PTFE button.

K. Refit the pilot's rudder pedal release cable ensuring that it passes through the hole in the guard plate (Ref MM Chap 27–20–03 Maintenance Practices).

L. Check the rudder for full and free range of movement (Ref MM Chap 27–00–00 Figure 1) and that the pilot's rudder pedals (particularly the outboard pedal) can be operated satisfactorily at all adjustable positions (Ref MM Chap 27–20–03 Maintenance Practices).

M. Refit the control column guards and pedal guards removed at Step B., then repeat Step M. again.

N. Refit the pilot's seat (Ref MM Chap 25–10–00 Maintenance Practices).

O. Repeat Steps A. to M. inclusive for rework to the co-pilot's outboard rudder pedal and fitment of the RH guard plate PN 1/N–10–1433.

P. Refit the co-pilot's seat (Ref MM Chap 25–10–00 Maintenance Practices).

3. **MATERIAL INFORMATION**

A. **Parts Required per Aircraft**

One kit PN–27–34–1 is required per aircraft.

(1) Each kit PN NMD–27–34–1 comprises the following items:

Item PN	Qty	Title
1/N–10–1432	1	Guard Plate LH
1/N–10–1433	1	Guard Plate RH
1/N–10–1434	2	Button (PTFE)
MS20426AD4–4	6	Rivet 1/8 in dia, 100° G/S
MS20470AD4–4	8	Rivet 1/8 in dia, Universal Head
MS20470AD4–5	2	Rivet 1/8 in dia, Universal Head
G51P/A	6 ins	Grommet

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(2) The following item is to be obtained from the operator's stock or local sources:

Item P/N	Qty	Title
–	AR	Bostik 1489 Contact Adhesive or Suitable alternative

B. **Parts Modified and Re–identified by Operator**

None.

C. **Parts Required to Modify Spares**

None.

D. **Parts Removed**

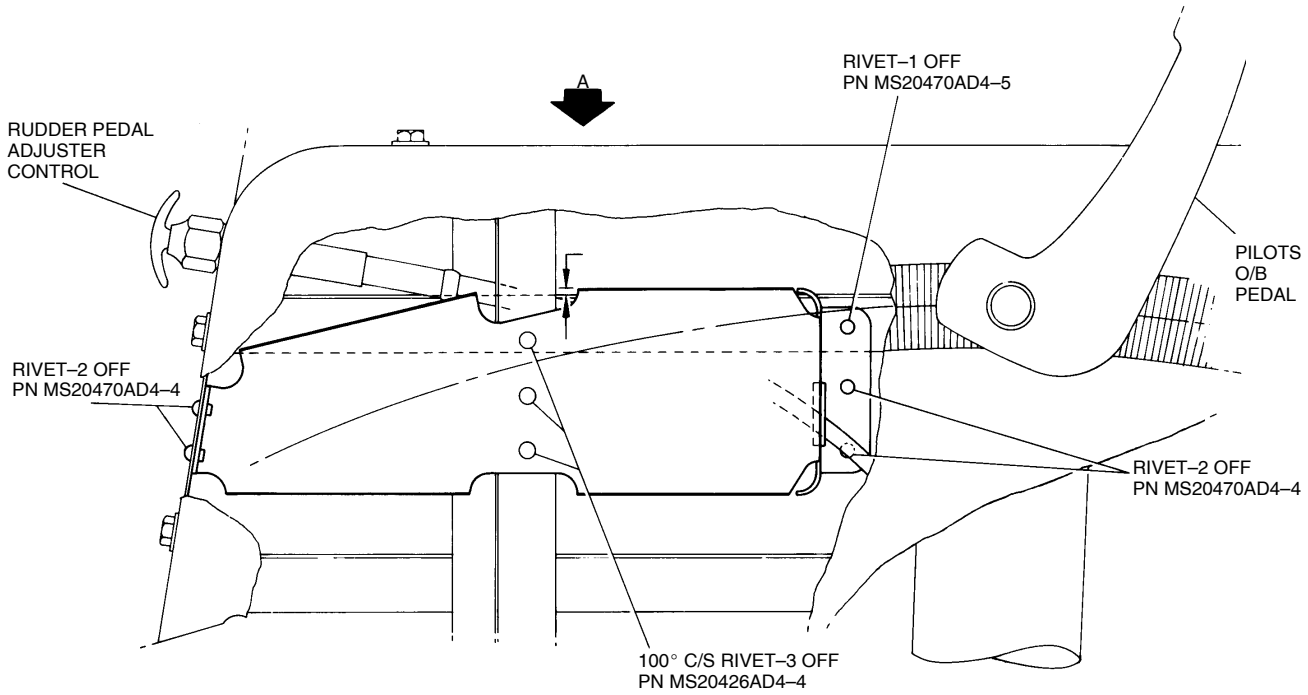
None .

4. **SPECIAL TOOLS AND EQUIPMENT**

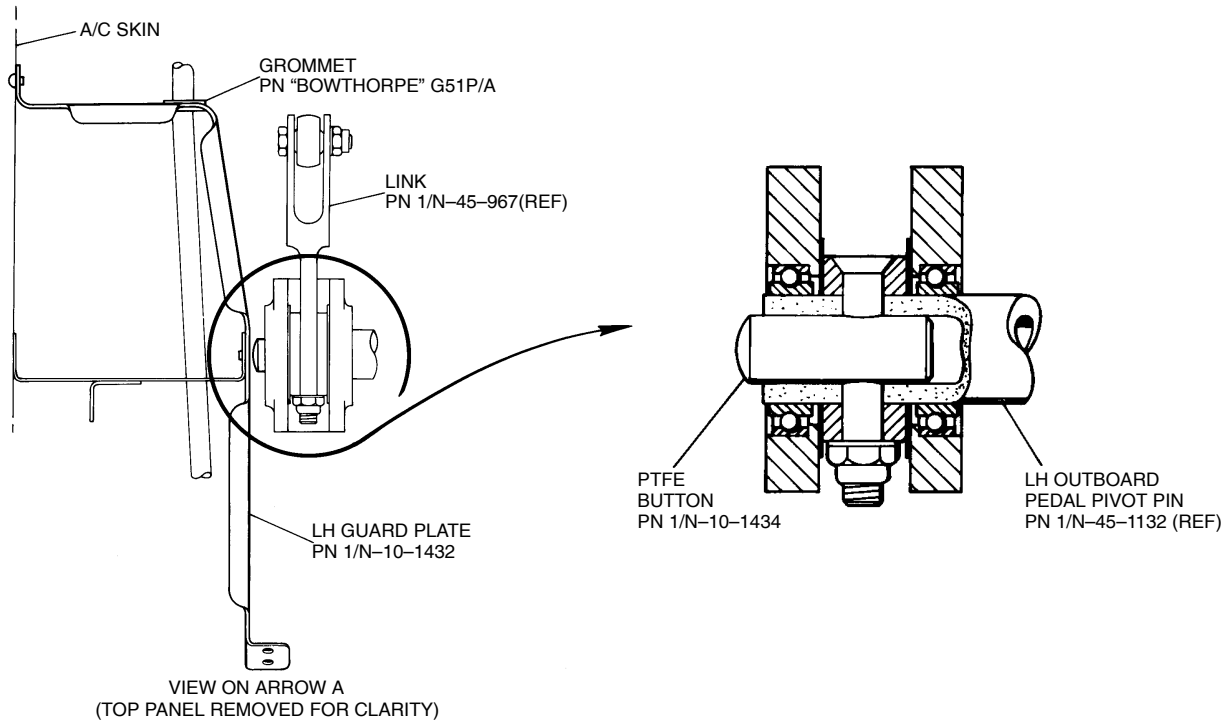
None .

5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD–27–34 in the airframe log book.



VIEW LOOKING OUTBOARD LH SIDE OF AIRCRAFT



VIEW ON ARROW A
(TOP PANEL REMOVED FOR CLARITY)

Figure 1 Installation of Mod N642

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