

Nomad SERVICE BULLETIN

Reference No 238

TRANSMITTAL LETTER
FOR
SERVICE BULLETIN NMD-21-1

AIR CONDITIONING - DISTRIBUTION — PLENUM CHAMBER FLAPPER VALVE ASSEMBLY REPLACEMENT (MOD N774)

Reason

1. To overcome high flapper valve assembly failures by strengthening the flapper assembly and improving in-service reliability

Remarks

2. Nil

Instructions

3. Insert Service Bulletin NMD-21-1, dated 06 Jan 92, into Service Bulletin binder. Annotate Service Bulletin Index accordingly.

Revision Status

Original 06 Jan 92

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AIR CONDITIONING - DISTRIBUTION - PLENUM CHAMBER FLAPPER VALVE ASSEMBLY REPLACEMENT (MOD N774)

1. PLANNING INFORMATION

A. Effectivity

(1) Aircraft affected.

Nomad N22S Searchmaster II aircraft LS 159 to 165 whose log books do not reflect compliance with Mod N774 or Service Bulletin NMD-21-1.

(2) Spares affected.

All Flapper Assemblies PN 1/N-74-409.

B. Reason

To overcome high flapper assembly failures by strengthening the flapper assembly and improving in-service reliability.

C. Description

A new Flapper Assembly PN 1/N-74-457 is manufactured and installed in lieu of Flapper Assembly PN 1/N-74-409. The flapper plate is increased in thickness from 0.040 to 0.080 in and a 0.040 in thick reinforcing strip added.

D. Compliance

At or before the next 100 hr service for flapper assemblies installed on aircraft and when convenient but before installation for spares.

E. Approval

This Service Bulletin is approved pursuant to Civil Aviation Regulation 35 and complies with type certification requirements.

F. Manpower

Aircraft installations	2 manhours
Spares	1 manhour

G. Materials - Price and Availability

Obtain materials from own stock and/or local sources.

H. Tooling - Price and Availability

No special tooling is required.

I. Weight and Balance

None.

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J. References

Customer Options R596 and R597
Modification N774

2. ACCOMPLISHMENT INSTRUCTIONS

A. Manufacture new Flapper Assembly PN 1/N-74-459 as follows (Ref Fig 1):

- (1) Manufacture Plate PN 1A/N-74-457.
- (2) If available, use a superseded Plate PN 1A/N-74-409 to back-drill the three holes in the strip and the three rivet holes in the plate. If not refer to Figure 1. Deburr all edges and holes.
- (3) Alodine plate and epoxy prime (one coat).
- (4) Manufacture Sealing Strip PN 1B/N-74-457. Use Plate PN 1A/N-74-457 as a template to cut three sealing strip holes.
- (5) Bond sealing strip to plate using Araldite AW106/HV953U (Ref Fig 1 Sect A-A).
- (6) Manufacture Riveting Plate PN 1C/N-74-457. Deburr all edges and holes.
- (7) Alodine plate and epoxy prime (one coat).
- (8) Rivet riveting plate to flapper assembly (Ref Fig 1 Sect A-A).

NOTE

Ensure rivet heads are on riveting plate side of assembly. Do not over compress rubber sealing strip.

- (9) Manufacture Strip PN 1D/N-74-457 (Ref Fig 1).
- (10) Bond strip to flapper plate using Araldite AW106/HV9534. Ensure holes in strip are aligned with flapper plate holes.

B. Remove the Plenum and Fan Assemblies as follows (Ref CO R596 and R597):

- (1) Trip FANS CONT, FANS (3) and FLAPPER circuit breakers on cabin circuit breaker panel.
- (2) Remove necessary items to allow access to Plenum and Fan Assemblies.
- (3) Remove Plenum and Fan Assemblies (Ref MM CO R596 and R597).
- (4) Expose flapper assembly by detaching fan from plenum chamber.

C. Remove Flapper Assembly PN 1A/N-74-409 as follows:

- (1) Remove the three capscrews and washers from flapper assembly pivot shaft. Discard screws but retain washers.

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- D. Install replacement Flapper Assembly PN 1/N-74-457 as follows:
- (1) Ensure reinforcing strip is on the chamber side of the pivot (Ref MM CO R596 and R597).
 - (2) Using new capscrews, wet assemble flapper assembly to pivot with PR 1422-A2 or Proseal 890A-2. Securely tighten screws.
- E. Replace Plenum and Fan Assemblies as follows:
- (1) Replace the fan on the plenum chamber.
 - (2) Replace Plenum and Fan Assemblies (Ref MM CO R596 and R597).
 - (3) Set FANS CONT, FAN (3) and FLAPPER circuit breakers on cabin circuit breaker panel.
 - (4) Check electrical operation of Flapper and Fan Assemblies.
 - (5) Refit all items removed for access.
 - (6) Carry out a functional check of all items refitted in step (5).
- F. Rework all spare Flapper Assemblies/Plenum Assemblies. Scrap all superseded items.

3. MATERIALS INFORMATION

A. Parts Required Per Aircraft

New Part No	Qty	Description	Old Part No	Instruction/Disposition
1/N-74-457	2	Flapper assembly	1/-74-409	Scrap
NAS1352-04-6P	6	Capscrew	NAS1352-04-4P	Scrap

B. Special Tools and Equipment

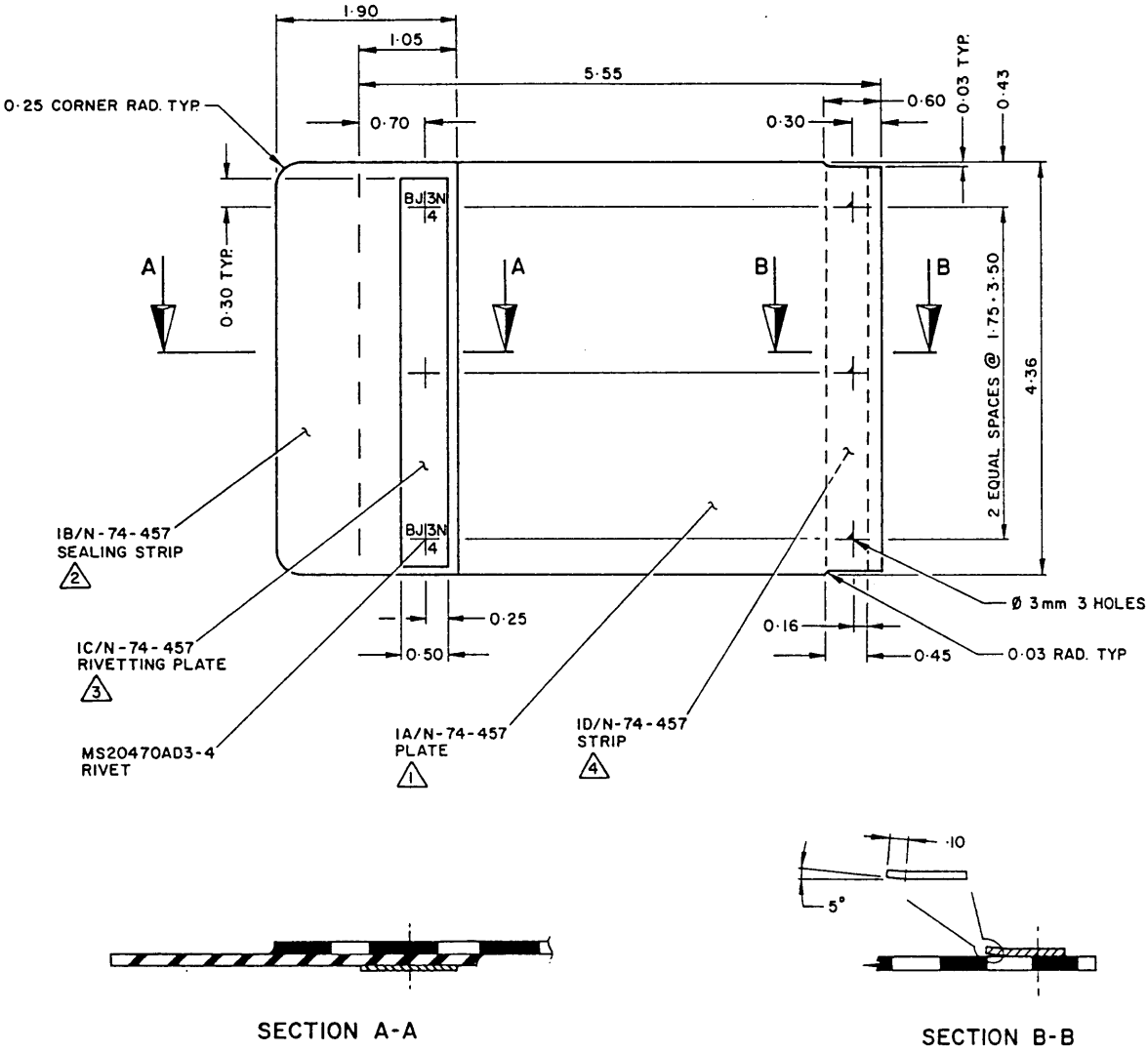
None required.

4. RECORDING ACTION

Record compliance with Service Bulletin NMD-21-1 (Mod N774) in Airframe Log Book.

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12-60-213-1



NOTES:	1. MAKE FROM	0.080 x 4.36 x 5.65	ALUMINIUM ALLOY	QQ-A-250/5
	2. MAKE FROM	0.062 x 1.90 x 4.36	ACRYLONITRILE BUTADIENE RUBBER	BS 2751
	3. MAKE FROM	0.020 x 0.50 x 4.10	ALUMINIUM ALLOY	QQ-A-250/5
	4. MAKE FROM	0.040 x 0.45 x 4.30	CRES	MIL-S-6721

DIMENSIONS IN INCHES UNLESS OTHERWISE STATED

Figure 1 Flapper Assembly — Manufacture