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**NMD-71-5
Revision 1**

21 October 1986

SUBJECT: NOMAD SERVICE BULLETIN NMD-71-5 REVISION 1

Ladies and Gentlemen,

Service Bulletin NMD-71-5 (Reference No 80) is now issued as NMD-71-5 Revision 1 (Reference No. 165) and incorporates the following changes.

(1) Page 1

Reference No. 80 amended to No. 165

(2) Page 2 Para 1C

Para extended to include reference to Para 1J for weight and balance data.

(3) Pages 3, 4 and 5 Para 1J

Para 1I re-identified as Para 1J, transferred to Page 3 and weight and balance data added for repaired cowls and cowls with Mod N315 incorporated.

(4) Page 5 Paras 1K and 1L

Paras 1J and 1K re-identified as Paras 1K and 1L respectively.

(5) Page 5 Para 1L

N22 and N24 Series Weight and Balance Manuals added, 12.28F-1 and 12.58F-1 Flight Manuals added to list of publications affected.

(6) Page 6 Para 2 (7) and (8)

Reference to BETA 1722 contact adhesive deleted.

...2/.

(7) Page 6 Para 3A

BETA 1722 contact adhesive deleted from parts listing.

(8) Page 7 Para 4

Para reworded.

(9) Page 8 Figure 1 Note 4

Reference to BETA 1722 contact adhesive deleted.

(10) Revision 1 and new date 21 October 1986 added to all pages.

(11) Revised and new text identified by black bars at LH side of affected pages.

(12) The original issue of Service Bulletin NMD-71-5 is to be destroyed and replaced by Service Bulletin NMD-71-5 REVISION 1.

Bill Henderson

(W HENDERSON)

PRODUCT SUPPORT MANAGER

Nomad

SERVICE BULLETIN

SUBJECT: ENGINE NACELLE LOWER COWL - REPAIR

1. Planning Information

A. Effectivity:

(1) Aircraft Affected:

Nomad N22 Series Aircraft

N22-2	N22B-21M	N22B-50	N22F-83
N22-3M	N22B-22M	N22-51M	N22S-84
N22-4	N22B-23M	N22B-52M	N22B-85M
N22B-5M	N22-24M	N22B-53	N22S-86
N22B-6M	N22B-25	N22B-54M	N22S-87
N22B-7	N22B-26	N22B-56	N22B-88M
N22-8M	N22B-27	N22B-57	N22S-90
N22-9M	N22B-31M	N22B-58	N22B-91M
N22B-11M	N22B-33	N22B-59	N22S-92
N22B-12M	N22B-35	N22F-61	N22B-93
N22B-13M	N22B-37	N22-63M	N22B-94M
N22B-14	N22-40M	N22B-65M	N22B-95
N22B-15M	N22-41M	N22B-66	N22B-97M
N22B-16M	N22-43M	N22B-67M	N22B-100M
N22-17M	N22-45M	N22B-68	N22B-102
N22B-18M	N22-47M	N22B-69	N22B-103
N22B-19M	N22-48M	N22B-70	N22B-104
N22B-20M	N22-49M	N22S-82	N22B-105
			N22B-106
			N22B-107

Nomad N24 Series Aircraft

N24-30	N24A-46	N24A-74	N24A-81
N24-32	N24-60	N24A-75	N28A-89
N24-34	N24A-62	N24A-76	N24A-96
N24-36	N24A-64	N24A-77	N24A-98
N24-38	N24A-71	N24A-78	N24A-99
N24-42	N24A-72	N24A-79	N24A-101
N24A-44	N24A-73	N24A-80	N24A-115
			N24A-117

(2) Spares Affected:

<u>Nomenclature</u>	<u>Part Number</u>	<u>Recommended Disposition</u>
Cowl Assy, Lower	1/N-50-365	Rework (Ref Para 2)

B. Reason

In service cracking of the lower cowl has been reported.

C. Description

The cowls are reinforced by rivetting a doubler to the inside of the cowl skin and by the addition of stiffening brackets where the latches are bolted to the cowl. Edge seals are fitted to the front and rear edges of the cowl to prevent fretting damage to the nacelle skin. Mod N315 introduces a strengthened lower cowl P/N 2A/N-50-365 manufactured from heavier gauge metals. (Refer Para 1.J for respective weight and balance data for modified and repaired lower cowls).

D. Compliance

Repair of the cowls is to be carried out as required, but as the cracking is vibration induced it is recommended that the cowls have this repair scheme incorporated at the next opportune aircraft servicing.

E. Approval

The repair scheme detailed herein has been approved pursuant to Air Navigation Regulation 40 and conforms with the type certificate requirements.

F. Manpower

8 manhours per cowl.

G. Material, Price and Availability

The parts required (Ref Para 3) are to be procured from the operators stock or from local sources.

H. Tooling, Price and Availability

Nil.

J. 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) Lower Cowls with Mod N315 embodied

(a) N22-Series aircraft Weight and Balance Manual in Metric Units.

<u>Weight</u> (Kg)	<u>Arm</u> (mm)	<u>Index Units</u> $\left(\frac{\text{Kg mm}}{1000}\right)$
+ 2.1	4267	+ 8.96

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

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 4.6	168	+ 0.77

(c) N24-Series aircraft Weight and Balance Manual in Metric Units.

<u>Weight</u> (Kg)	<u>Arm</u> (mm)	<u>Index Units</u> $\left(\frac{\text{Kg mm}}{1000}\right)$
+ 2.1	4978	+ 10.45

(d) N24-Series aircraft Weight and Balance Manual in Imperial Units.

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 4.6	196	+ 0.90

(e) Flight Manual 12.28F-1

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 4.6	168	+ 0.77

(f) Flight Manual 12.58F-1

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 4.6	196	+ 0.90

(2) Repaired Lower Cowls

(a) N22-Series aircraft Weight and Balance Manual in Metric Units.

<u>Weight</u> (Kg)	<u>Arm</u> (mm)	<u>Index Units</u> $\left(\frac{\text{Kg mm}}{1000}\right)$
+ 1.54	4267	+ 6.58

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

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 3.4	168	+ 0.57

(c) N24-Series aircraft Weight and Balance Manual in Metric Units.

<u>Weight</u> (Kg)	<u>Arm</u> (mm)	<u>Index Units</u> $\left(\frac{\text{Kg mm}}{1000}\right)$
+ 1.54	4978	+ 7.68

(d) N24-Series aircraft Weight and Balance Manual in Imperial Units.

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $\left(\frac{\text{lb in}}{1000}\right)$
+ 3.4	196	+ 0.666

(e) Flight Manual 12.28F-1

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $(\frac{\text{lb in}}{1000})$
+ 3.4	168	+ 0.57

(f) Flight Manual 12.58F-1

<u>Weight</u> (lb)	<u>Arm</u> (in)	<u>Index Units</u> $(\frac{\text{lb in}}{1000})$
+ 3.4	196	+ 0.666

K. References

MM - Maintenance Manual
IPC - Illustrated Parts Catalogue

L. Publications Affected

IPC
N22-Series Weight and Balance Manuals
N24-Series Weight and Balance Manuals
12.28F-1 Flight Manual
12.58F-1 Flight Manual

2. Accomplishment Instructions

- (1) Remove the engine nacelle lower cowl(s) P/N 1/N-50-365 (Ref M.M. 71-10-00).
- (2) Remove the following items from the cowl.
 - (a) One exhaust stack P/N 1/N-50-364.
 - (b) Reinforcing ring P/N 1D/N-50-365 located at engine drains aperture.
 - (c) Two stiffening angles P/N 1B/N-50-365, located six inches each side of cowl centre line.

NOTE: The above listed items are removed to facilitate the fitting of the doubler P/N 1A/N-03-606. The exhaust stack is to be refitted after the doubler has been installed, and the reinforcing ring and the two stiffening angles are to be scrapped.

- (3) Fabricate the doubler P/N 1A/N-03-606 and the stiffening brackets P/N 1V/N-50-365 (Ref Figure 1) and paint with epoxy primer (Ref Service Letter 78-14).
 - (4) Degrease the cowl and the exhaust stack.
 - (5) Fit and rivet the doubler to the inside of the cowl (Ref Figure 1).
 - (6) Refit the exhaust stack removed at step (2).
 - (7) Strip the paint for 0.625 in from the inner and outer surfaces of the front and rear edges of the cowl. Degrease the bared edges, dry with a clean cloth and apply a thin coating of PR 1421 or 1422 sealant to both edges.
 - (8) Fit Brouillet edging No 4 to the front and rear edges of the cowl and press the edging firmly onto the PR sealant. Allow 48 hours for the sealant to cure.
- NOTE: A high quality Nitrile rubber edging of similar shape and size may be used as an alternative to Brouillet edging No 4.
- (9) Re-identify the repaired cowl on the inner surface, using ink, to 1/N-03-606 (Ref Figure 1).
 - (10) Refit the cowl (Ref MM 71-10-00) and adjust the tension on the cowl latches by fitting washers P/N AN960D10 (Ref IPC 71-10-00 Figure 1 Item 16) between the latch and the angle flange to which the latches are bolted. The latches should be adjusted so that positive but not excessive pressure is required to actuate the latch to the locked position.

3. Material Information

A. Parts required per cowl

<u>Nomenclature</u>	<u>Part No</u>	<u>Qty</u>
Doubler	1A/N-03-606	1
Stiffening bracket	1V/N-50-365	2
Rivets	MS20470AD3-3	113
Rivets	MS20470AD3-4	20
Edging Brouillet	No 4	60 in
Adhesive (Fuel resistant)	PR1422 or PR1421	AR

B. Parts required to modify spares

As per Para 3A.

C. Parts removed per cowl

<u>Nomenclature</u>	<u>Part No</u>	<u>Qty</u>	<u>Disposition</u>
Reinforcing Ring	1D/N-50-365	1	Scrap
Stiffening Angle	1B/N-50-365	2	Scrap

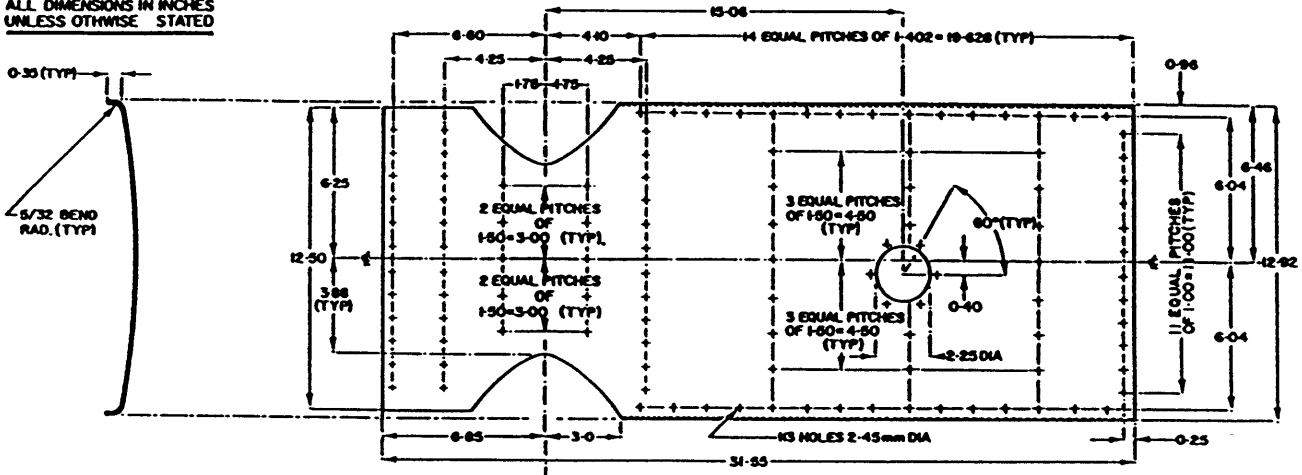
D. Special Tools and Equipment Required

None.

4. Recording Action

Record compliance with Service Bulletin NMD-71-5 Revision 1 in the airframe log book.

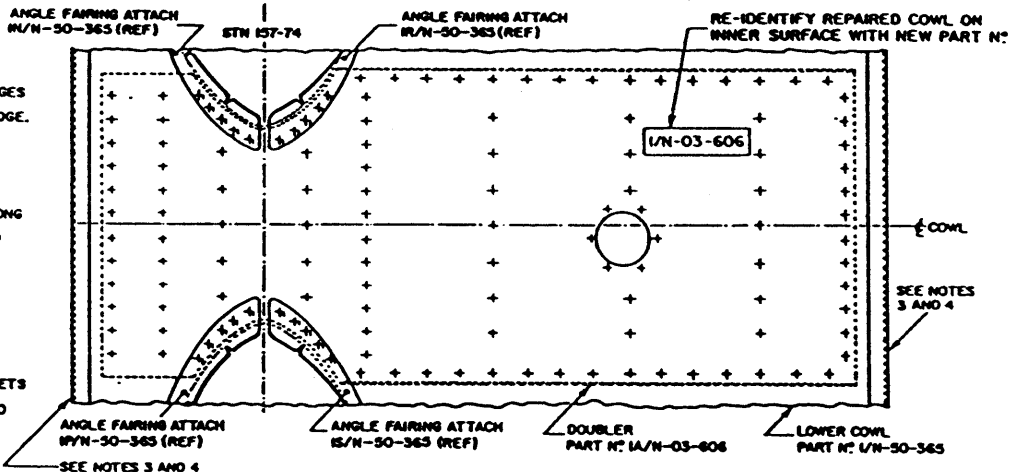
12.49.41-1
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE STATED



DOUBLER, PART N° 1A/N-03-606, MATERIAL 0-050 00-A-250/5 T3 (5024 T3)

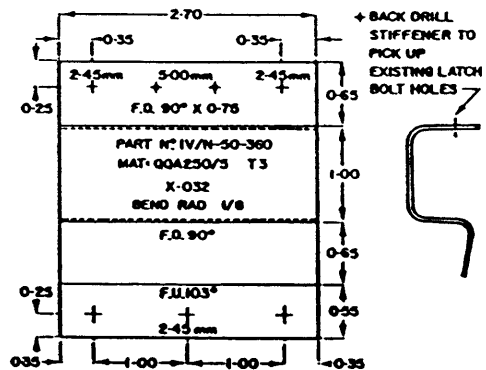
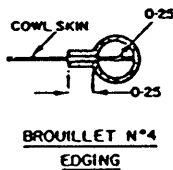
NOTES:

- 1 STRIP PAINT FROM LOWER COWL 1A/N-30-363 FRONT AND REAR EDGES A DISTANCE OF 0-625 FROM THE EDGE.
- 2 REMOVE SHARP EDGES.
- 3 APPLY BROUILLET N°4 EDGING ALONG THE FULL LENGTH OF FRONT AND REAR EDGES.
- 4 ADHERE WITH PR1421 OR PR1422 SEALANT.
- 5 DOUBLER TO PICK UP EXISTING RIVETS WHICH ATTACH ANGLE FAIRINGS TO LOWER COWL.
- 6 POSITION DOUBLER 1A/N-03-606 CENTRALLY AS SHOWN.

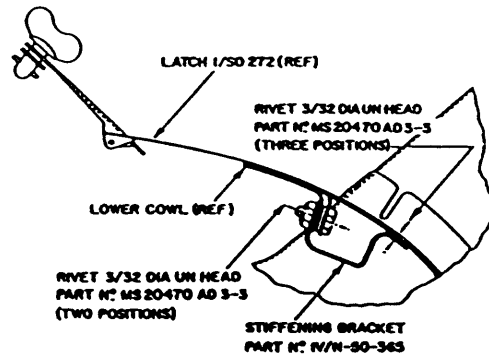


SCRAP VIEW SHOWING DOUBLER INSTALLATION

- 7 RIVETS: + = PART N° MSD20470AD3-3
4 = PART N° MSD20470AD3-4
- 8 O/S RIVETS MAY BE USED PROVIDING THE EDGE DISTANCE FROM CENTRE OF HOLE IS EQUIVALENT TO TWICE THE DIAMETER OF THE RIVET.



STIFFENING BRACKET



SCRAP VIEW SHOWING STIFFENING BRACKET INSTALLATION

LOWER COWL ASSEMBLY
REPAIR SCHEME
FIGURE 1