

Nomad

SERVICE BULLETIN

Reference No 230

TRANSMITTAL LETTER
FOR
SERVICE BULLETIN NMD-55-21 Rev 1

UPPER FIN REAR SPAR PICK-UP PLATE (Mod N602)

Reason

1. To improve the fatigue life of the upper fin rear spar pick-up plate and to reinforce the rear spar in the adjacent area.
2. Revision 1 corrects part numbers (page 5), plus minor editorial changes.

Instructions

3. Remove Service Bulletin NMD-55-21 dated 19 Oct 84 from Service Bulletin binder and insert the attached Service Bulletin NMD-55-21 Rev 1, dated 7 May 91. Annotate the Service Bulletin Index accordingly.

Revision Status

Original	19 Oct 84
Revision 1	7 May 91

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UPPER FIN REAR SPAR PICK-UP PLATE (MOD N602)

1. PLANNING INFORMATION

A. Effectivity

All Nomad N22 Series and N24 Series aircraft whose log books do not already record the embodiment of Mod N602 or compliance with Service Bulletin NMD-55-21.

Pre-certification implementation of the intent of this service bulletin is recorded in the airframe log book as Mod N602.

B. Reason

To improve the fatigue life of the upper fin rear spar pick-up plate and to reinforce the rear spar in the adjacent area.

C. Description

The existing rear pick-up plate is removed and replaced by a re-designed plate of increased thickness and two reinforcing support angles are added.

D. Compliance

- (1) At 3000 hrs time in service for aircraft not having Mod N602 embodied.
- (2) For aircraft not having Mod N602 embodied but whose time in service exceeds 3000 hrs, within 300 hrs after receipt of this Service Bulletin but not later than 31st March 1985.

NOTE

It is recommended to incorporate modification N602 (this Service Bulletin) and N600A or N600B (Service Bulletin NMD-53-5) at the same.

E. Approval

The modification detailed herein has been approved pursuant to CAR 35 and conforms to type certification requirements.

F. Manpower

Four Manhours.

G. Material - Price and Availability

The initial issue of parts required to incorporate modification N602 are available free of charge as Kit PN NMD-55-21-1 from the operator's local distributor or from ASTA General Aviation. Distributors are to place a "No Charge" purchase order on ASTA General Aviation through the normal procurement procedure. Purchase Orders are to quote the Aircraft Serial No and Service Bulletin No NMD-55-21.

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H. Tooling - Price and Availability

None required.

I. Weight and Balance

Use the following information to amend the appropriate Flight Manual and the Weight and Balance Manual (if issued).

(1) N22-Series aircraft

Weight	+ 0.24 kg (+ 0.53 lb)
Arm	+ 11 521 mm (+ 452.8 in)
IU (kg mm/1000)	+ 2.77 $\frac{\text{kg mm}}{1000}$ $\left(+ 0.24 \frac{\text{lb in}}{1000} \right)$

(2) N24-Series aircraft

Weight	+ 0.24 kg (+ 0.53 lb)
Arm	+ 12 645 mm (497.8 in)
IU (kg mm/1000)	+ 3.04 $\frac{\text{kg mm}}{1000}$ $\left(+ 0.26 \frac{\text{lb in}}{1000} \right)$

(3) Flight Manual 12.28F

Weight	+ 0.53 lb
Arm	+ 452.8 in
IU (lb in/1000)	+ 0.24 $\frac{\text{lb in}}{1000}$

(4) Flight Manual 12.58F

Weight	+ 0.53 lb
Arm	+ 497.8 in
IU (lb in/1000)	+ 0.26 $\frac{\text{lb in}}{1000}$

J. References

Maintenance Manual Chap 55-30-00 and 55-40-00

Service Bulletin NMD-53-5

K. Publications Affected

Illustrated Parts Catalogue

Weight and Balance Manual

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2. ACCOMPLISHMENT INSTRUCTIONS

- A. Remove the rudder (Ref MM Chap 55-40-00) and upper fin (Ref MM Chap 55-30-00). Retain fin attaching parts, nuts PN MS17826-5 (2 off) and washers PN AN960D516 (4-off). Discard cotter pins PN MS24665-153. (Ref SB NMD-53-5 Para 2, Part A step (19)).
- B. Drill out the 24 rivets attaching the pick-up plate PN 1B/N-32-129 to the upper fin assembly (Ref Fig 1 for diameter and type of rivets to be removed).
- C. Mark the aft side (painted surface) of the pick-up plate (required for step F) then remove the plate from the upper fin.
- D. Deburr the rivet holes in the pick-up plate and associated rivet holes in the upper fin rear spar.

NOTE

Take care not to enlarge the rivet holes when deburring. The removed pick-up plate is to be used as a drill guide when drilling the new pick-up plate PN 1/N-32-163-950 (Ref step G).

- E. Clean off the old jointing compound from where the pick-up plate was attached to the upper fin and remove sufficient paint finish from upper fin rear spar to accommodate the extra length of the new pick-up plate.
- F. Bolt the removed pick-up plate to the new pick-up plate so that the marked face of the removed plate (Ref step C) is against the unstepped face of the new plate. Use the rear pick-up plate attachment bolts, nuts and washers to bolt the two plates together.
- G. Using the old pick-up plate as a drill guide, spot drill the new pick-up plate (Ref Fig 2).
- H. Separate the plates, and using a drill stand, drill the spotted holes completely through the new pick-up plate. Deburr the holes and discard the old pick-up plate and attachment bolts.
- I. Using a No 30 drill, drill out the seven rivets (Pre-Mod N475, 1/8 in dia pop rivets; Post-Mod N475, 3/32 in dia universal head solid rivets) detailed in Figure 1, attaching the LH skin to the upper fin rear spar assembly. Drill out similarly positioned rivets in the RH skin. Deburr the rivet holes.
- J. Using service pins attach the new pick-up plate PN 1/N-32-163-950 to the fin utilising holes other than the 4.8 mm dia holes nominated, as shown in Figure 2. Drill the uppermost hole of the plate through the fin rear spar. This is necessary to establish the position of the new LH support angle PN 1/N-32-165-950.
- K. Gaining access into the inside of the upper fin through the lightening hole in the bottom of the structure, insert and locate the LH support angle PN 1/N-32-165-950 so that it fits into the corner formed by the LH side skin and the rear spar assembly. With the wide flange 'undrilled' against the LH side skin, slide the angle up or down until the pilot drilled hole aligns with the uppermost hole of the new pick-up plate. Service bolt the angle in position.
- L. Maintaining the angle in this position, mark the positions of the seven rivet holes on the angle. Remove the angle from the upper fin and using a No 30 drill, drill the seven rivet holes. Deburr the holes.

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- M. Refit the LH support angle inside the upper fin and secure in position using service pins.
- N. Repeat steps K to M but with the RH support angle PN 1/N-32-166-950 fitted into the corner formed by the RH side skin and the rear spar assembly.
- O. Using the pick-up plate as a drill guide drill five 4.8 mm dia holes in each of the LH and RH support angles. Remove the pick-up plate.
- P. Using a No 30 drill, drill the 10 new rivet holes through the rear spar assembly and support angles. (Ref Fig 2).
- Q. Remove the support angles and deburr rivet holes drilled at steps O and P. Remove all drill swarf from the upper fin.
- R. Using pigmented jointing compound, wet assemble the support angles and pick-up plate to the upper fin with service pins.
- S. Rivet the angles and pick-up plate to the upper fin using rivets detailed in Figure 2. Remove excess jointing compound.
- T. Re-identify the upper fin assembly PN 1/N-32-120 as PN 2/N-32-120 NMD-55-21 in the area shown in Figure 2.
- U. Refit the upper fin and rudder (Ref MM Chap 55-30-00 and 55-40-00). Use the two new rear pick-up plate attachment bolts PN NAS1105-8, retained nuts PN MS17826-5 and washers PN AN960D516 (Ref Step A) and new split pins PN MS24665-153.

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3. MATERIALS INFORMATION

A. Parts Required per Aircraft

The following items represent one aircraft set of parts.

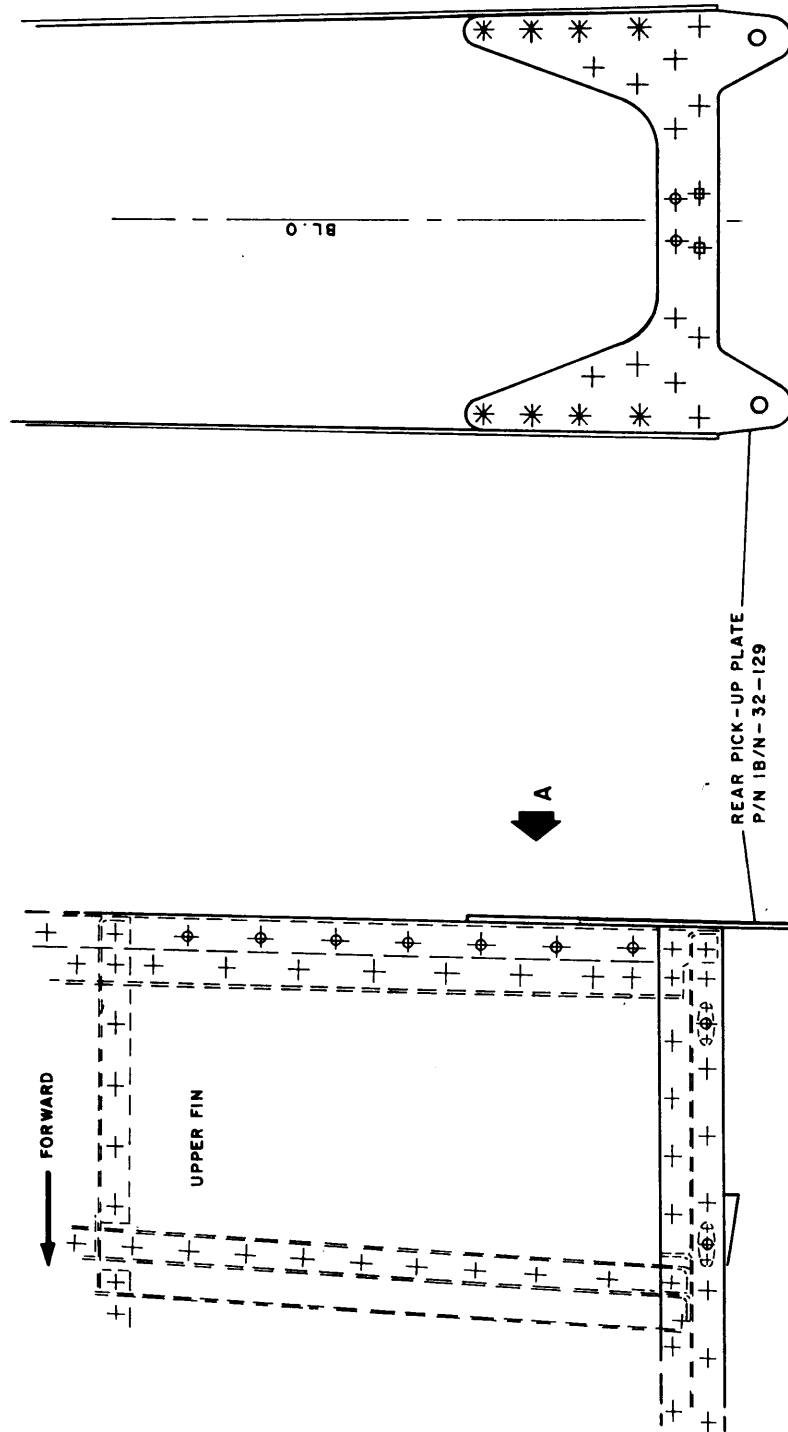
New Part No	Qty	Description	Old Part No	Instruction/Disposition
Modification kit PN NMD-55-21-1				
1/N-32-163-950	1	Rear Pick-up Plate	1/N-32-163	Replace
1/N-32-165-950	1	LH Support Angle	1/N-32-165	Replace
1/N-32-166-950	1	RH Support Angle	1/N-32-166	Replace
MS20470AD4-4	10	Rivet, 1/8 dia UNI Head	MS20470AD4-4	Replace
MS20470AD4-5	14	Rivet, 1/8 dia UNI Head	MS20470AD4-5	Replace
MS20470AD4-7	2	Rivet, 1/8 dia UNI Head	MS20470AD4-7	Replace
MS20470AD4-8	6	Rivet, 1/8 dia UNI Head	MS20470AD4-8	Replace
MS20470AD4-9	4	Rivet, 1/8 dia UNI Head	MS20470AD4-9	Replace
MS20470AD6-9	4	Rivet, 3/16 dia UNI Head	MS20470AD6-9	Replace
MS20470AD6-10	4	Rivet, 3/16 dia UNI Head	MS20470AD6-10	Replace
MS20470AD6-11	2	Rivet, 3/16 dia UNI Head	MS20470AD6-11	Replace
MS20426AD4-5	2	Rivet 1/8 dia C/S Head	MS20426AD4-5	Replace
CR3223-4-4	2	Rivet, 1/8 dia Cherry Max	CR3223-4-4	Replace
NAS 1105-8	2	Bolt, 5/16 dia UNF	NAS 1105-8	Replace
MS24665-153	2	Cotter Pin, Split 1/16 dia x 3/4 long	MS24665-153	Replace
Parts modified and re-identified by operator				
2/N-32-120 NMD-55-21	1	Fin Assembly	1/N-32-120	Rework
Removed Parts				
	2	Bolt	NAS1105-5	Scrap
	1	Rear Pick-up Plate	1B/N-32-129	Scrap

4. RECORDING ACTION

Record compliance with Service Bulletin NMD-55-21 in the airframe log book.

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VIEW ON ARROW A

NOTE: RIVETS MARKED \oplus TO BE REMOVED FROM BOTH SIDES OF UPPER FIN (SEVEN OFF EACH SIDE)
RIVET HOLES TO BE OPENED UP TO N° 30 DRILL SIZE

RIVET CODE

\oplus $\frac{1}{8}$ IN DIA 'POP' RIVET (PRE-MOD N475)
 \oplus $\frac{3}{32}$ IN DIA UNI HEAD RIVET (POST MOD N475)

RIVET CODE

\oplus $\frac{1}{8}$ IN DIA C/S HEAD 2-OFF
 \oplus $\frac{1}{8}$ IN DIA UNI HEAD 12-OFF
 \ast $\frac{3}{16}$ IN DIA UNI HEAD 8-OFF
 \oplus $\frac{1}{8}$ IN DIA 'POP' RIVET 2-OFF
(PRE-MOD N475)
 \oplus $\frac{1}{8}$ IN DIA CHERRY MAX 2-OFF
(POST MOD N475)

Figure 1 View on LHS of Upper Fin - Pre-Mod N602

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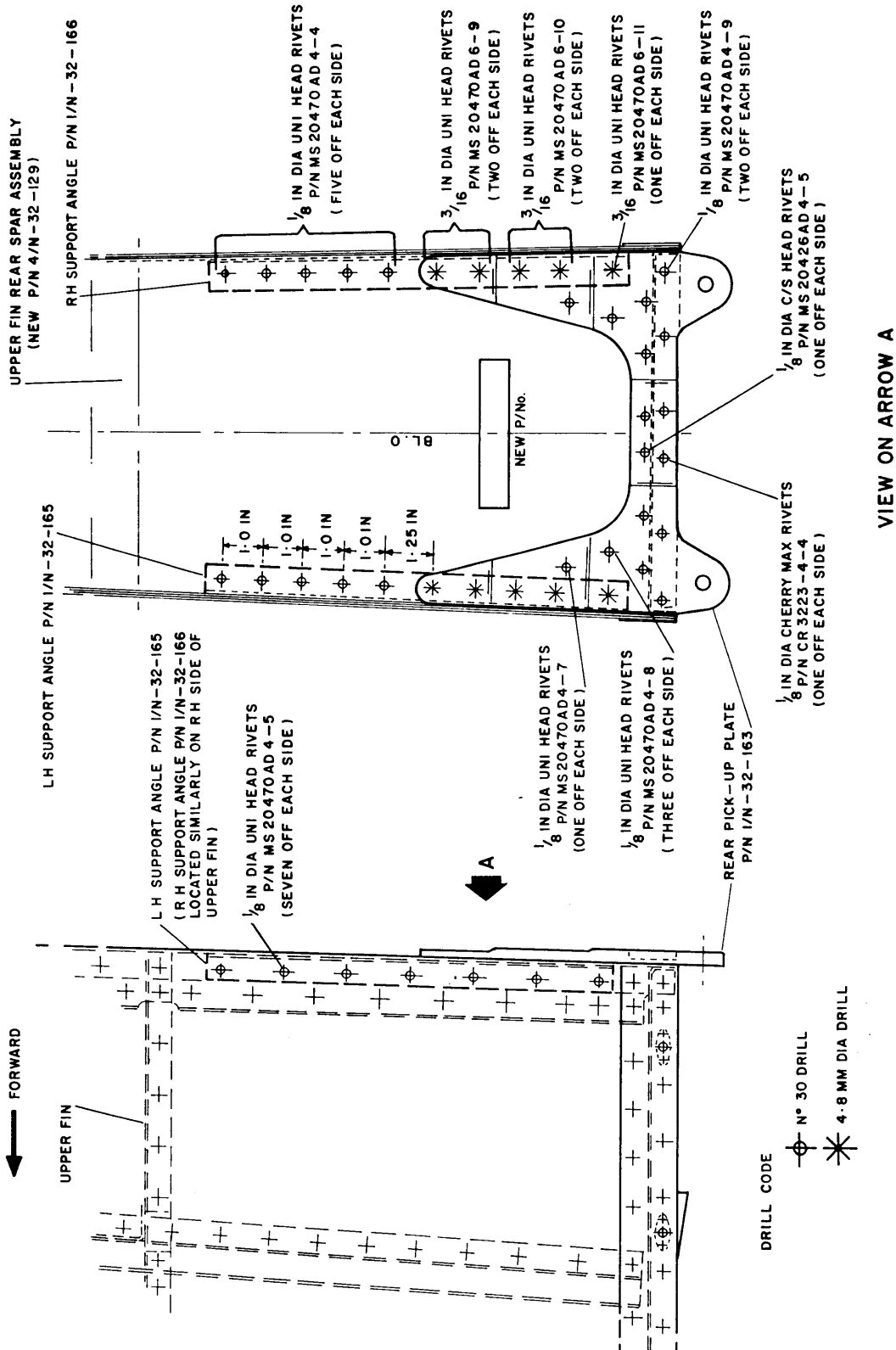


Figure 2 View on LHS of Upper Fin - Post-Mod N602