

Nomad

SERVICE BULLETIN

REPOSITIONED AILERON CABLE FAIRLEAD (MOD N497)

1. PLANNING INFORMATION

A. Effectivity

(1) Aircraft Affected

All Nomad N22-Series and N24-Series aircraft whose log books do not already record the embodiment of Mod N497 or compliance with Service Bulletin NMD-27-30.

Pre-certification implementation of the intent of this Service Bulletin is recorded in the airframe log book as Mod N497.

(2) Spares Affected

Nil.

B. Reason

The spacing of the existing aileron cable fairleads along the wing produce an aileron cable resonance frequency that is within the range of the propeller rotational frequencies. Propeller out of balance can thus cause the cables to resonate resulting in cable wear and wire breakage.

C. Description

The existing aileron fairleads at wing stations 39.17, 80.4 and 124.1 are removed from the wing trailing edge skin and replaced by a single fairlead of the same type fitted at wing station 74.3. This lowers the cable resonance frequency out of the range of the propeller rotational frequencies.

D. Compliance

It is strongly recommended that operators incorporate the rework described in this bulletin as soon as possible.

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.

G. Material - Price and Availability

Use existing parts.

H. Tooling - Price and Availability

None Required.

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I. **Weight and Balance**

Negligible effect.

J. **References**

Maintenance Manual

Illustrated Parts Catalogue

K. **Publications Affected**

Maintenance Manual

Illustrated Parts Catalogue

Weight and Balance Manual

2. **ACCOMPLISHMENT INSTRUCTIONS**

A. **Remove the aileron cable fairleads and brackets.**

- (1) Extend the aircraft flaps (Ref MM Chap 27-50-00, Flap Operation).
- (2) Open the LH and RH wing trailing edge doors to gain access to the aileron cable fairleads at wing stations 39.17, 80.4 and 124.1 (Ref MM Chap 57-00-00).

WARNING

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

- (3) Remove and retain the two bolts and two washers attaching the fairleads to their respective brackets at wing stations 39.17, 80.4 and 124.1. Remove and retain the fairleads.
- (4) Drill out the four rivets retaining each of the fairlead brackets to the trailing edge skin using a No.30 (3.3 mm) dia drill. Retain the brackets.
- (5) At each fairlead bracket position in the trailing edge skin, plug the redundant rivet holes using rivets PN MS20470AD4-3.

B. **Install the aileron cable brackets and fairleads at LH & RH wing station 74.3.**

- (1) Check aileron cables for correct tension (Ref MM Chap 27-10-00 Adjustment/Test Aileron and Spoiler).
- (2) Measure inboard 6.1 in from wing station 80.4 and mark the wing trailing edge skin with a straight line fore and aft.

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- (3) Install one of the previously removed fairleads over the aileron cables and using the bolts and washers retained on disassembly attach it to one of the brackets. Slide the assembly so that it lies centrally in position over the line and adjust fore and aft so that the aileron cables run centrally through the fairlead guide holes without rubbing.

NOTE

Adjustment inboard or outboard may be required to ensure that the bracket lies centrally about the swage in the top skin.

- (4) Using a No 30 (3.3 mm) dia drill back drill through the fairlead bracket rivet holes and through the trailing edge skin.
- (5) Remove the bolts, washers and fairleads from the bracket. Remove the bracket and deburr the bracket and trailing edge skin.
- (6) Reposition the bracket to the trailing edge skin and rivet in position using rivets PN MS20470AD4-4.
- (7) Position the fairleads over the aileron cables and attach the fairleads to the brackets using the bolts PN AN3-11A and washers PN AN960-PD10 retained on disassembly.

WARNING

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

- (8) Re-check aileron cables for correct tension (Ref MM Chap 27-10-00 Adjustment/Test Aileron and Spoiler). Operate the aileron controls through their full range of movement and check that the aileron cables move freely through the fairleads at wing station 74.3 and do not rub against the trailing edge support structure or flap support brackets.

NOTE

If Customer Option G48 is fitted release aileron servo cable clamps prior to checking primary circuit tension. After checking primary circuit tension reconnect aileron servo cable and clamps. Check cable tension as per Customer Option G48.

WARNING

AFTER MAINTENANCE ACTIVITIES INVOLVING FLYING CONTROLS, OR WHENEVER FLYING CONTROL SERVICING AND ACCESS PANELS ARE REMOVED ENSURE THAT THE AREAS CONCERNED ARE CLEAN AND FREE FROM FOREIGN OBJECTS.

- (9) Close and secure the wing trailing edge doors.
- (10) Retract the aircraft flaps (Ref MM Chap 27-50-00, Flap Operation).

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- (11) Retain the redundant fairleads (if serviceable) as spares and scrap remaining fairlead brackets and attaching parts.

3. MATERIAL INFORMATION

A. Parts required per aircraft.

- (1) The following parts are retained and re-used after removal from aircraft.

Item PN	Title	Qty
1/N-10-27	Fairlead	2
1IN-10-22	Fairlead	2
1/N-45-718	Bracket, Fairlead Assembly	2
AN3-11A	Bolt	4
AN960-PD10	Washer	4

- (2) The following items are to be obtained from the operator's or local sources.

Item PN	Title	Qty
MS20470AD4-4	Rivet	8
MS20470AD4-3	Rivet	16

B. Parts Modified and Re-identified by Operator

None

C. Parts Required to Modify Spares

None

D. Removed Parts

Item PN	Title	Qty	Recommended/Disposition
1/N-10-27	Fairlead	4	Retain for spares
1/N-10-22	Fairlead	4	Retain for spares
1/N-45-718	Bracket, Fairlead Assy	4	Scrap
AN3-11A	Bolt	8	Retain for spares
AN960-PD10	Washer	8	Retain for spares

4. SPECIAL TOOLS AND EQUIPMENT

None

5. RECORDING ACTION

Record compliance with Service Bulletin NMD-27-30 in the airframe log book.