

Nomad

SERVICE BULLETIN

CONTROL COLUMN COVER (MOD N557)

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 N557 or compliance with Service Bulletin NMD-27-31.

Pre-certification implementation of the intent of this Service Bulletin is recorded in the airframe log book as Mod N557.

(2) Spares Affected

Nil.

B. Reasons

To provide a cover which will prevent any loose objects falling between the control column guide channels and obstruct the travel of the control column.

C. Description

The heating duct support bracket is removed from the control column guide channels and a cover is attached to the top flanges of the guide channels. The foot-warmer outlet duct is attached by brackets to the top of the cover and the sides of the guide channels.

D. Compliance

It is strongly recommended that operators incorporate the rework detailed in this Service 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

Twelve manhours.

G. Material – Price and Availability

Parts are to be manufactured and/or procured locally.

(1) Sheet metal parts are to be manufactured locally. For manufacturing data refer to Figure 3.

(2) For general hardware refer to Para 3.A.(2).

H. Tooling – Price and Availability

None Required

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I. Weight and Balance

The following information is to be inserted into:

- (1) The Weight and Balance Manual for N22 Series aircraft issued with this manual.
- (2) The Weight and Balance Manual for N24 Series aircraft issued with this manual.
- (3) Flight Manual 12.28F for N22 Series aircraft not issued with a Weight and Balance Manual.
- (4) Flight Manual 12.58F for N24 Series aircraft not issued with a Weight and Balance Manual.
 - (a) N22 and N24 Series aircraft Weight and Balance Manual in Metric Units.

Weight/(kg)	Arm/(mm)	Index Units (kg mm)/1000
0.4	1980	0.79

- (b) N22 and N24 Series aircraft Weight and Balance Manual in Imperial Units.

Weight/(lb)	Arm/(in)	Index Units (lb in)/1000
0.9	77.9	0.07

- (c) Flight Manuals 12.28F and 12.58F.

Weight/(lb)	Arm/(in)	Index Units (lb in)/1000
0.9	77.9	0.07

J. References

Maintenance Manual
Illustrated Parts Catalogue.

K. Publications Affected

Maintenance Manual
Illustrated Parts Catalogue
Weight and Balance Manual

2. ACCOMPLISHMENT INSTRUCTIONS

A. Remove foot-warmer duct and bracketry from the flight compartment.

- (1) Remove the instrument panel shroud to gain access to the foot-warmer ducting.
- (2) Remove the two nuts, washers and bolts attaching the ducting to the support bracket on the LH control column assembly guide channels. Retain the nuts, washers and bolts.
- (3) Slacken the nut securing the control cable to the lever on the foot-warmer control valve. Withdraw the cable from the abutment.
- (4) Slacken the top clamp from the valve body and withdraw the duct from the valve.

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- (5) Remove the duct from the aircraft and seal the opening in the foot-warmer control valve.
- (6) Using a 3.3mm dia drill, drill out the six pop rivets attaching the duct support bracket to the LH control column assembly support channels.
- (7) Repeat steps (2) to (6) for RH foot-warmer duct installation.

B. Manufacture of Sheet Metal Parts.

The parts listed in Para 3.A.(1) are to be locally manufactured in accordance with the data detailed in Figure 3.

C. Fit control column cover.

- (1) Position control column covers PN 1A/N-10-1383 over the LH and RH control column assemblies guide channels with the rear edge 7.0 inches from the end of the guide channel (Ref Figure 1).
- (2) Drill six 5.00mm dia holes into the control column guide channels using the cover plates as templates. Remove the cover plates and deburr the guide channels.
- (3) Position the two clip mounts PN 1C/N-10-1383 in the guide channels. The rear edge of the clip mounts on the LH control column guide channels should be positioned 10.2 in from the rear end of the guide channels (Ref Figure 1).
- (4) Drill four holes 2.45mm dia through each of the clip mounts and guide channels. Remove the clip mounts and deburr the clip mounts and guide channels. Countersink the 2.45mm dia holes on the inboard face of the outboard guide channels and on the outboard face of the inboard channels using a 100° countersinking tool to a depth of $0.036 \frac{+.003}{-.001} in$
- (5) Repeat Para 2.C.(3) and (4) on the RH control column guide channels with the exception that the rear edge of the clip mounts should be positioned 8.2 in from the rear end of the guide channels (Ref Figure 1).
- (6) Position an anchor nut on each of the clip mounts (Ref Figure 2) and drill two off 2.45mm dia holes in each for the anchor nut retaining rivets. Countersink the retaining rivet holes to a depth of $0.036 \frac{+.003}{-.001} in$
- (7) Rivet anchor nuts PN MS21069-3 to the clip mounts using countersunk rivets PN MS20426AD3-4. Rivet the clip mounts to the control column guide channels using rivets PN MS2046AD3-4.
- (8) Position three anchor nuts on each control column guide channel over the three 5.0mm dia holes in each channel and drill the anchor nut rivet retaining holes 2.45mm dia using the anchor nuts as templates.
- (9) Remove the three anchor nuts from the guide channels and deburr the rivet holes. Using a 100° countersinking tool countersink the holes from the top of the guide channels to a depth of $0.036 \frac{+.003}{-.001} in$

Relocate the anchor nuts inside the channels and rivet up using rivets PN MS20426AD3-4.

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- (10) Position the duct support PN 1B/N-10-1383 on top of LH cover plate with the rear edge of the duct support 3.0 inches from the rear end of the cover. The remaining duct support is to be positioned similarly on the RH control column cover plate except that the rear edge of the duct support is to be 1.0 inch from the rear edge of the cover plate. Ensure the duct supports are central to the centre line of the covers and drill the four holes in each using a 3.3mm dia drill. Remove the duct supports and deburr. Reposition the duct supports onto the covers and rivet up using rivets PN MS20470AD4-4.
- (11) Position a 4.4in length of Bruillet No.4 protective plastic extrusion strip centrally over the rear edge of each control column cover (Ref Figure 2).
- (12) Locate the covers in position over their respective control column guide channels and secure with bolts PN AN3-4A and washers PN AN960-C10L. Torque tighten the bolts to between 12 and 15 lb in.

D. Install Foot-warmer Ducting

- (1) Remove the seal from the open end of the LH foot-warmer control valve. Locate the duct in the control valve and tighten the clamp.
- (2) Locate the foot-warmer control cable in the abutment and tighten the nut securing the cable to the lever on the foot-warmer control valve.
- (3) Install a bolt, washer and nut, retained from disassembly (Ref Para 1.A.(2)), through the insuloid clip around the foot-warmer ducting and secure to the duct support on top of the cover plate. Torque tighten the nut to between 20 and 25 lb in.
- (4) Install a new bolt PN AN3-5A and washer PN AN960-C10L through the insuloid clip around the foot-warmer duct outlets on each side of the LH control column guide channels and into the support bracket anchor nuts. Torque tighten the bolts to between 12 and 15 lb in.
- (5) Ensure working area is clean and free of swarf and foreign objects.
- (6) Repeat steps (1) to (5) for RH foot-warmer ducting installation.
- (7) Operate the control columns over their full range of travel and check for freedom and ease of movement.
- (8) Refit the instrument panel shroud.

3. MATERIAL INFORMATION

A. Parts Required per Aircraft

- (1) The following parts, which are to be locally manufactured (Ref Figure 3), are required to modify each aircraft.

Item PN	Qty	Title
1A/N-10-1383	2	Control Column Cover
1B/N-10-1383	2	Duct Support
1C/N-10-1383	4	Clip Mount

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

Item PN	Qty	Title
AN3-5A	4	Bolt
AN960-CI0L	16	Washer
MS21069-3	16	Anchor Nut
AN3-4A	12	Bolt
MS20470AD4-4	8	Rivet
MS20426AD3-4	48	Rivet, Countersunk
Bruillet No.4	8.8in	Extrusion
Ludowici No.145 (Alt)	8.8in	Extrusion

B. Parts Modified and Re-identified by Operator

None

C. Parts Required to Modify Spares

None

D. Parts Removed

Item PN	Qty	Title	Recommended/Disposition
1/N-74-291	2	Support Bracket	Scrap

4. SPECIAL TOOLS AND EQUIPMENT

None

5. RECORDING ACTION

Record compliance with Service Bulletin NMD-27-31 in the airframe log book.

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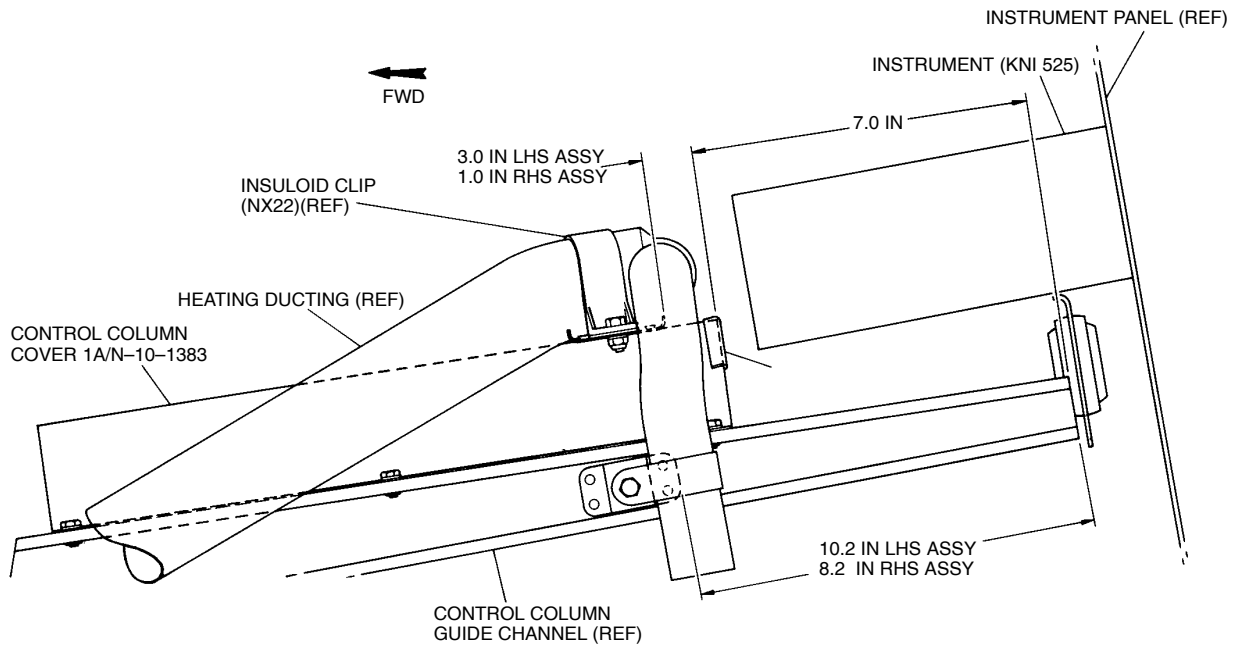


Figure 1 View Looking Inboard LH Control Column

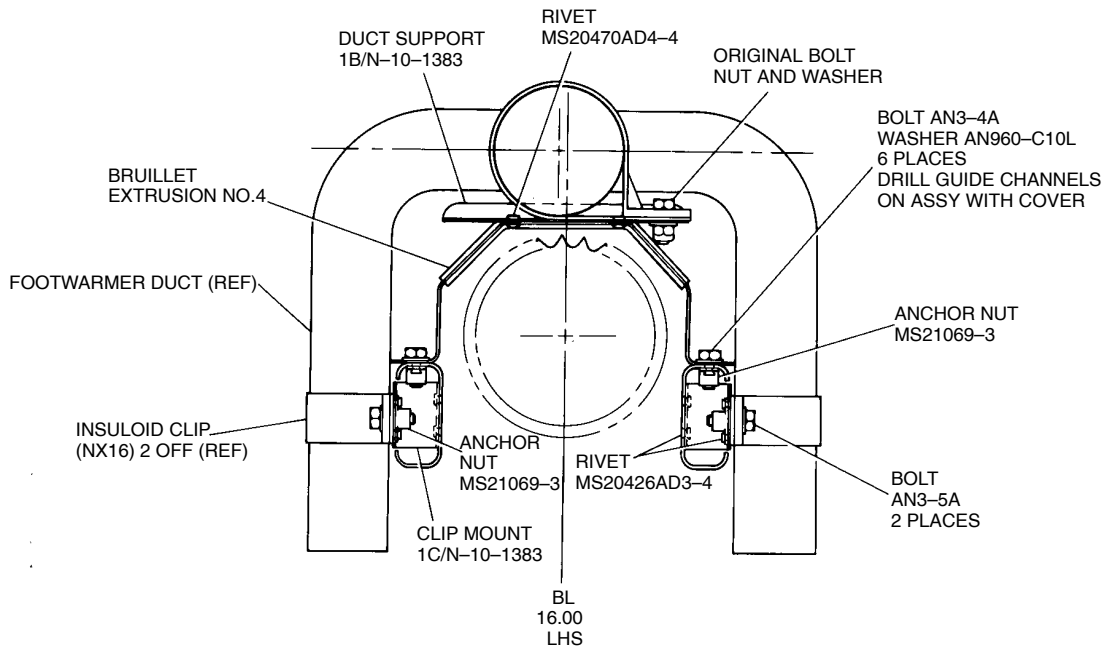
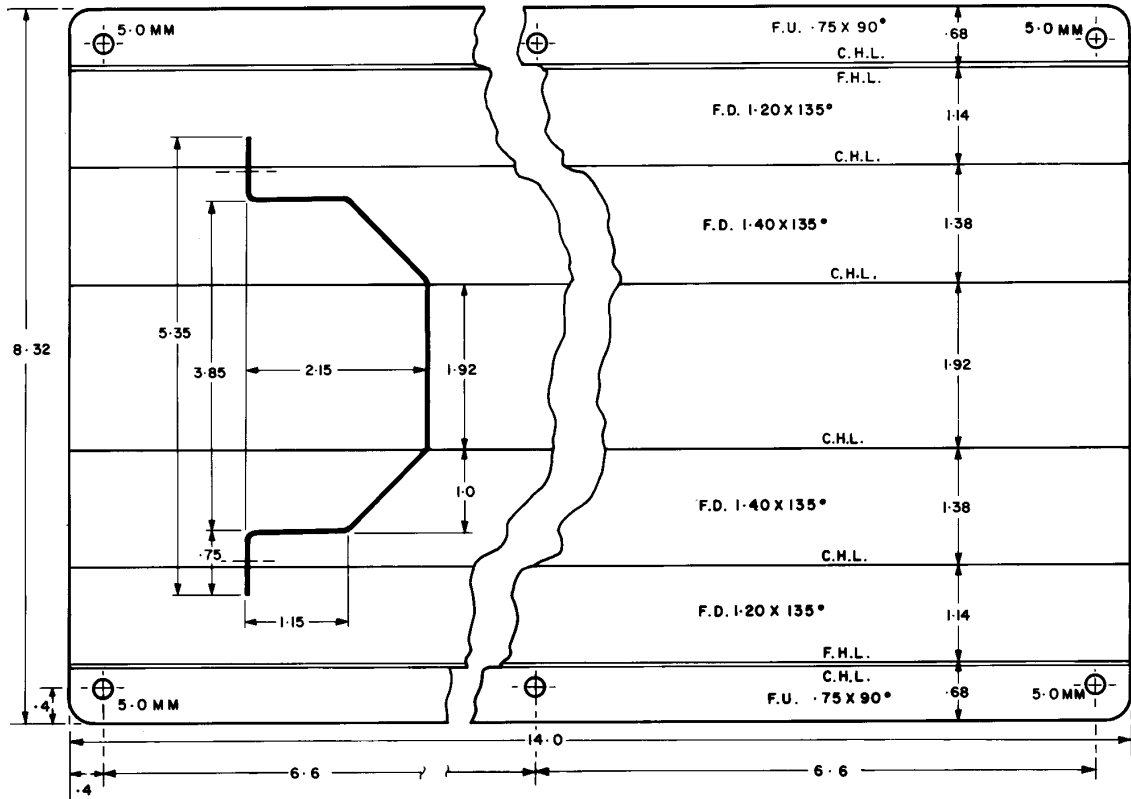


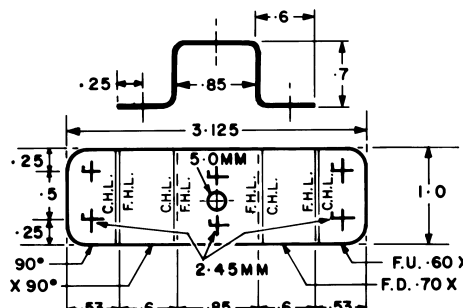
Figure 2 Sectional View Looking Aft LH Control Column

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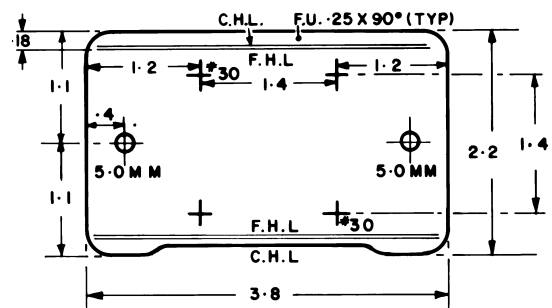
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CONTROL COLUMN COVER PN 1A/N-10-1383 (2 OFF)



CLIP MOUNT PN 1C/N-10-1383 (4 OFF)



DUCT SUPPORT PN 1B/N-10-1383 (2 OFF)

- NOTES:
1. ALL PARTS TO BE MANUFACTURED FROM .032 MATERIAL SPEC QQ-A-250/5,T3 OR T42
 2. ALL BEND RADIUS TO BE 1/8 RADIUS
 3. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE STATED
 4. ALL PARTS TO BE PAINTED WITH EPOXY PRIMER PROTECTIVE FINISH
 5. ALL PARTS TO BE IDENTIFIED WITH RESPECTIVE PART NUMBERS

Figure 3 Manufacturing Data for Mod N557