# *Nomad*
# SERVICE BULLETIN

## FLIGHT CONTROLS — CABLE TERMINAL ENDS INSPECTION

1. **PLANING INFORMATION**

A. **Effectivity**

(1) Aircraft affected:

(a) **N22 Series** line sequence numbers 1 to 9, 11 to 29, 31, 33, 35, 37, 39 to 41, 43, 45, 47 to 59, 61, 63, 65 to 70, 82 to 88, 90 to 95, 97, 100, 102 to 114, 116, 118, 125,126, 131 to 134, 136 to 138, 141, 143 to 170.

(b) **N24 Series** line sequence numbers 10, 30, 32, 34, 36, 38, 42, 44, 46, 60, 62, 64, 71 to 81, 89, 96, 98, 99, 101, 115, 117, 119 to 124, 127 to 130, 135, 139, 140, 142.

(2) Spares

Not applicable

B. **Reason**

(1) The US NTSB have issued safety recommendations concerning the stress corrosion cracking of cable terminal ends made from 303 Stainless Steel (SS) on aircraft older than 15 years.

(2) Nomad aircraft have cable terminal ends made from 303 SS. As the aircraft are older than 15 years and many operate in corrosive environments, Nomad aircraft may be affected.

C. **Description**

(1) All flight control cable terminal ends are inspected for corrosion pitting and cracking. Areas of particular concern are change of cross section locations (Ref Fig 1).

D. **Compliance**

(1) NDT Inspection

Inspection of all installed cables older than 15 years at next B, C or D service but no later than 12 months of receipt of this Service Bulletin.

E. **Approval**

The requirement detailed herein has been approved by a person authorised under Civil Aviation Regulation 35 and conforms to the type certification requirements.

F. **Manpower**

24 manhours.

| Page No | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Rev No | 0 | 0 | 0 | 0 |



Aerospace Technologies of Australia Limited
ABN 56 008 622 008
(A Wholly Owned Subsidiary of Boeing Australia Holdings Pty Ltd)

G. **Material – Price and availability**

None

H. **Tooling**

None

I. **Weight and Balance Change**

None

J. **References**

Maintenance Manual Chapters 27-10-03, 27-20-02, 27-20-03, 27-21-01, 27-40-01, and 27-41-01.

K. **Publications Affected**

Inspection Requirements Manual

2. **ACCOMPLISHMENT INSTRUCTIONS**

A. **NDT Inspection**

(1) Gain access to each terminal end of all flight control cable assemblies in accordance with the applicable Maintenance Manual Chapter (Ref Table 1).

**Table 1 - LIst of Affected Cable Assemblies**

| Cable Assy | P/N | MM Reference |
|---|---|---|
| Cable Assy - Aileron (Pre N586) | N-45-1279 | 27-10-03 |
| Cable Assy - Aileron (Pre N586) | N-45-1280 | 27-10-03 |
| Cable Assy - Aileron | N-45-1332 | 27-10-03 |
| Cable Assy - Aileron | N-45-1333 | 27-10-03 |
| Cable - Aileron (Post N586) | N-45-1633 | 27-10-03 |
| Cable - Aileron (Post N586) | N-45-1635 | 27-10-03 |
| Cable Assy - Rudder, Primary, Top, Forward | N-45-1270 | 27-20-02 |
| Cable Assy - Rudder, Primary, Bottom, Forward | N-45-1271 | 27-20-02 |
| Cable Assy - Rudder | N-45-1335 | 27-20-02 |
| Cable Assy - Swaged | N-45-1264/1265 | 27-20-03 |
| Cable Assy - Rudder, Trim, Top, Forward | N-45-1281 | 27-21-01 |
| Cable Assy - Rudder, Trim, Bottom, Forward | N-45-1282 | 27-21-01 |
| Cable Assy - Tailplane | N-45-1334 | 27-40-01 |
| Cable Assy - Tailplane, Trim, Top, Forward | N-45-1283 | 27-41-01 |
| Cable Assy - Tailplane, Trim, Bottom, Forward | N-45-1284 | 27-41-01 |



Aerospace Technologies of Australia Limited
ABN 56 008 622 008
(A Wholly Owned Subsidiary of Boeing Australia Holdings Pty Ltd)

**Table 1 - LIst of Affected Cable Assemblies (continued)**

| | | |
|---|---|---|
| Cable Assy - Tailplane, Trim, Dive, Top, Rear | N-45-1287 | 27-41-01 |
| Cable Assy - Tailplane, Trim, Climb, Bottom, Rear | N-45-1288 | 27-41-01 |

**NOTE**

This table is a quick reference guide only, and is not comprehensive as some cables introduced or superseded by mods may not be included. It is the responsibility of the operator to ensure that all flight control cables are inspected.

(2) Ensure the full visibility of all surfaces of the terminal ends. Where applicable:

(a) Loosen or disconnect the terminal.

(b) Gain access to fork holes.

(c) Remove the locking wire or clip and barrel.

(d) Expose the terminal end threads.

(e) Slide back the white tubing from the turnbuckle.

(3) Once the cable assembly terminal ends are accessible, inspect as follows:

(a) Visually inspect all surfaces of cable terminal ends for pitting corrosion and cracks at both ends of each cable assembly.

(b) Inspect all surfaces of the cable terminal end using the fluorescent penetrant method or an approved dye penetrant method. Refer to ASTM E 1417, SAE AMS2647 and MIL-STD-1907, grade A.

**NOTE**

The cable is unserviceable if corrosion pitting or cracks are found.

(c) Replace the unserviceable cable assembly with a new one installing in accordance with applicable section of Maintenance Manual (Ref Table 1).

(4) Where possible, slide the white tubing back on the turnbuckle body and ensure that it sits tightly in place. If the white tube is loose, remove and discard.

(5) Restore the aircraft configuration and close the access in accordance with applicable section of Maintenance Manual (Ref Table 1).



Aerospace Technologies of Australia Limited
ABN 56 008 622 008
(A Wholly Owned Subsidiary of Boeing Australia Holdings Pty Ltd)

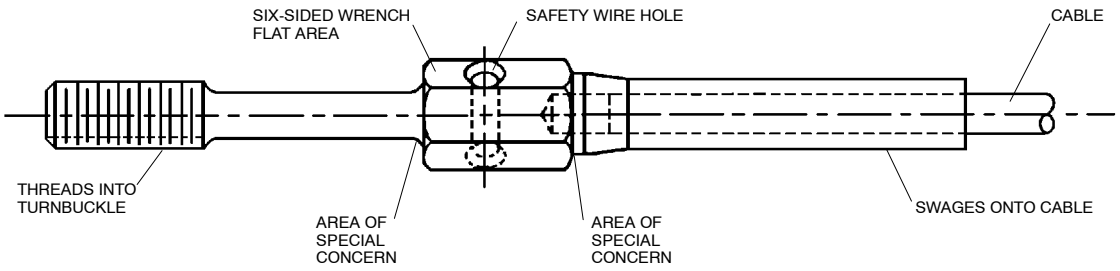


**Figure 1 Areas of Special Concern**

3. **MATERIALS INFORMATION**

None

4. **SPECIAL TOOLS AND EQUIPMENT**

None

5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD–27–52 in the Airframe Log Book.



Aerospace Technologies of Australia Limited
ABN 56 008 622 008
(A Wholly Owned Subsidiary of Boeing Australia Holdings Pty Ltd)