LANDING GEAR — NOSE GEAR RETRACTION CHAIN — IDLER SPROCKET LATERAL ADJUSTMENT (MOD N840)

1. PLANNING 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, 63, 65 to 70, 82 to 88, 90 to 95, 97, 100, 102 to 104, 106, 108 to 114, 116, 118, 125, 126, 131 to 134, 137, 138, 141, 143 to 170.

(b) **Floatplane**. N22 Series aircraft modified in accordance with Wipline STC No SA428GL have a different landing gear system not addressed by this Service Bulletin, and those aircraft known to have been so modified are excluded from the serial number applicability above.

(c) **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, 136, 139, 140, 142.

(2) Spares affected:

None

B. Reason

To provide for lateral adjustment of the nose gear actuator chain idler sprocket, if required.

This may occur following:

- repair to a damaged idler sprocket mounting bracket,
- replacement of major landing gear components, or
- replacement of worn sprockets and chain as part of routine maintenance.

C. Description

This modification requires the existing spacers to be removed and replaced with new components that allow for washers to be used to adjust the lateral alignment of the sprocket. It is a prerequisite that Mod N553 (Service Bulletin NMD-32-15) be implemented.

D. Compliance

(1) Compliance with this Service Bulletin is recommended.

(2) Carry out at the next scheduled inspection of the Nose Landing Gear Chain or at the next 300 hour check, whichever occurs first.

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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**

16 Hrs.

G. **Materials, Price and Availability**

Price and availability of kit required to incorporate this Service Bulletin is available upon request from Nomad Customer Support – Boeing Aerospace Support – ASTA.

H. **Tooling, Price and Availability**

N/A

I. **Weight and Balance**

Negligible effect

J. **References**

Maintenance Manual	Chap 32
Illustrated Parts Catalogue	Chap 32

K. **Publications Affected**

Maintenance Manual

Illustrated Parts Catalogue

2. **ACCOMPLISHMENT INSTRUCTIONS**

A. **Inspection for Misalignment**

(1) Jack up aircraft until the wheels are at least 2.5 in clear of the ground (Ref MM Chap 7-00-00).

(2) Ensure that the landing gear ACT, IND and CONT circuit breakers are tripped and the BATTERY switch is set to OFF.

(3) Remove existing upper chain cover PN 1A/N-03-715, or 1/N-40-949 or 2/N-40-949 (Ref MM Chap 32-30-12).

(4) Inspect idler sprocket for lateral misalignment using tool 1/N-88-268 (Ref Figure 3) or similar. If idler sprocket is within $\pm$0.020 in of the drive sprocket lateral position, alignment is acceptable. If lateral alignment is outside this limit and rectification is not possible by normal means, (i.e. repair/rework to the idler sprocket mounting bracket), install Mod N840 as detailed in Para 2.B. below, at the next scheduled inspection of the Nose Landing Gear Chain or at the next 300 hour check, whichever occurs first.

B. **Installation of Mod N840**

(1) Jack up aircraft until the wheels are at least 2.5 in clear of the ground (Ref MM Chap 7-00-00).

(2) Ensure that the landing gear ACT, IND and CONT circuit breakers are tripped and the BATTERY switch is set to OFF.

(3) Remove existing upper chain cover PN 1A/N-03-715, or 1/N-40-949 or 2/N-40-949 (Ref MM Chap 32-30-12) and rework as shown in Figure 1. Deburr edges and apply primer. Re-part number 1A/N-40-954.

(4) Disassemble the idler sprocket assembly and discard the spacer (1/N-40-863), bolt (AN174-13A), washer (AN970-4) and nut (MS21083N4).

(5) Refit the idler sprocket assembly to the mounting bracket using new bolt (NAS6604-17), spacer (1/N-40-955), cap washer (1/N-40-956), flat washers (AN960KD616L), washer (AN960KD416) and nut (MS21083N3) as shown in Figure 2. Using alignment tool (1/N-88-268), (Ref Fig 3) align the idler sprocket assembly with respect to the screwjack sprocket and drive sprocket using the above thin washers. Washers removed from one side of the mounting bracket are to be added to the opposite side to ensure bolt clamp-up. Alignment within 0.008 in (i.e. half the thickness of an AN960KD616L adjustment washer) should be achievable.

(6) Adjust the idler sprocket assembly and tension the chain in accordance with MM Chap 32-30-12. Check for adequate clearance between chain and adjacent structure.

(7) Refit the chain cover. Attach cover seal (1B/N-40-954) with Silastic RTV731, or RTV140, or RTV734 or PR1422. Seal all gaps between the chain cover and the idler sprocket mounting bracket with a bead of the above sealant.

(8) Reset circuit breakers, set BATTERY switch ON and carry out landing gear retraction test in accordance with MM Chap 32-30-00.

(9) Set BATTERY switch to OFF and lower aircraft to the ground (Ref Chap 7-00-00).

3. MATERIALS INFORMATION

A. Parts Required per Aircraft

New Parts - Kit, NMD-32-21 consisting of the following:			
Part No	Description	Qty	Instruction/Disposition
1/N-40-955	Spacer	1	
1/N-40-956	Washer - Capped	1	
1B/N-40-954	Cover - Seal	1	
NAS6604-17	Bolt	1	
MS21083N4	Nut	1	
AN960KD616L	Washer - Flat	10	
AN960KD416	Washer - Flat	1	

Parts Removed			
Part No	Description	Qty	Instruction/Disposition
1/N-40-863	Spacer	1	Discard
AN174-13A	Bolt	1	Discard
AN970-4	Washer	1	Discard
MS21083N4	Nut	1	Discard

4. **SPECIAL TOOLS AND EQUIPMENT**

Alignment tool 1/N-88-268 may be manufactured as per Figure 3.

5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD-32-21 in the Airframe Log Book.

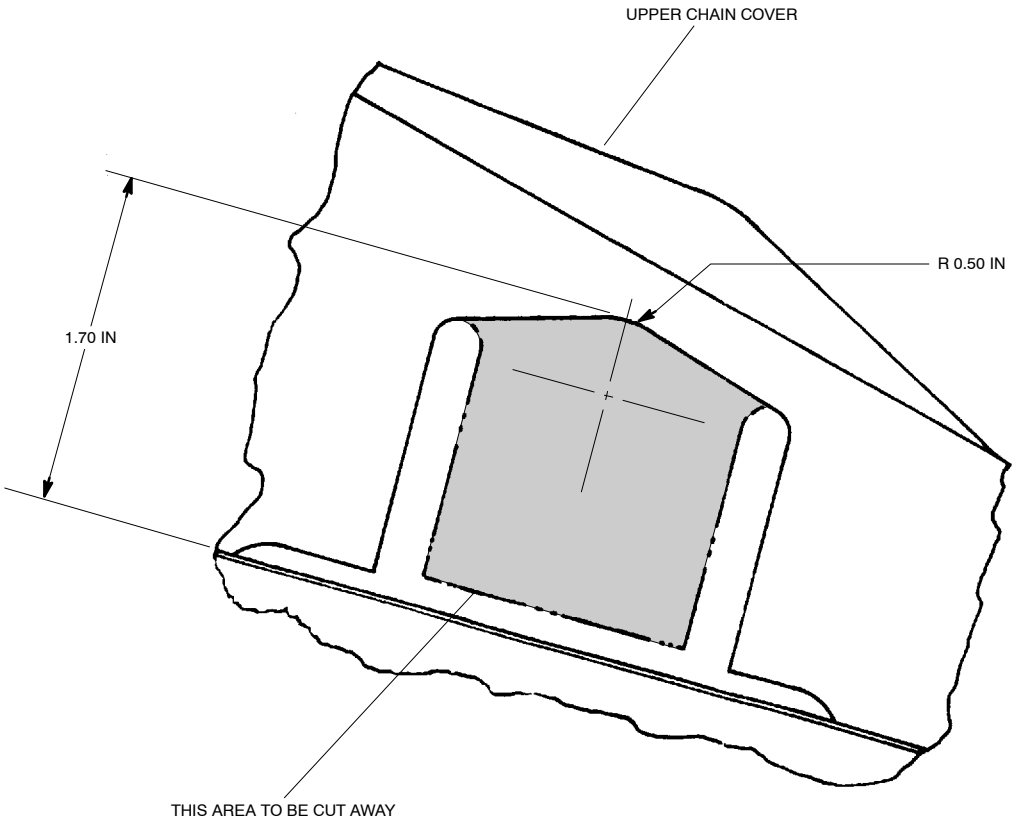

Figure 1 Rework to Chain Cover

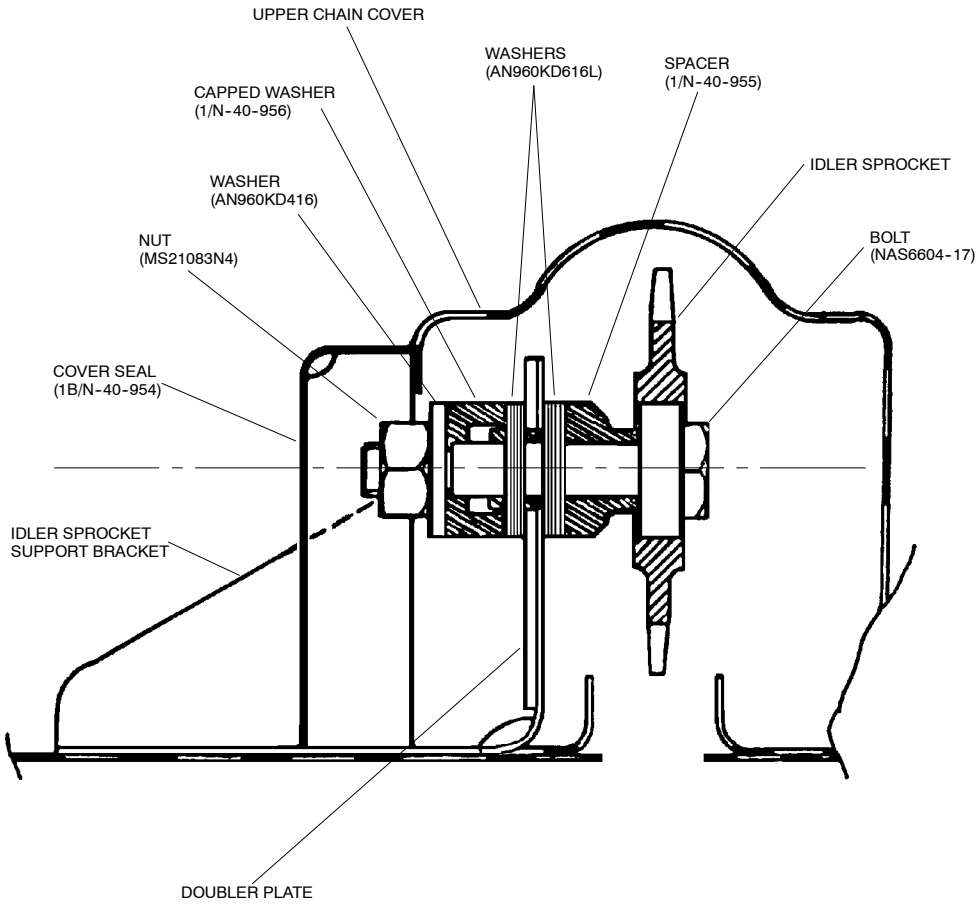

Figure 2 Assembly of Idler Sprocket

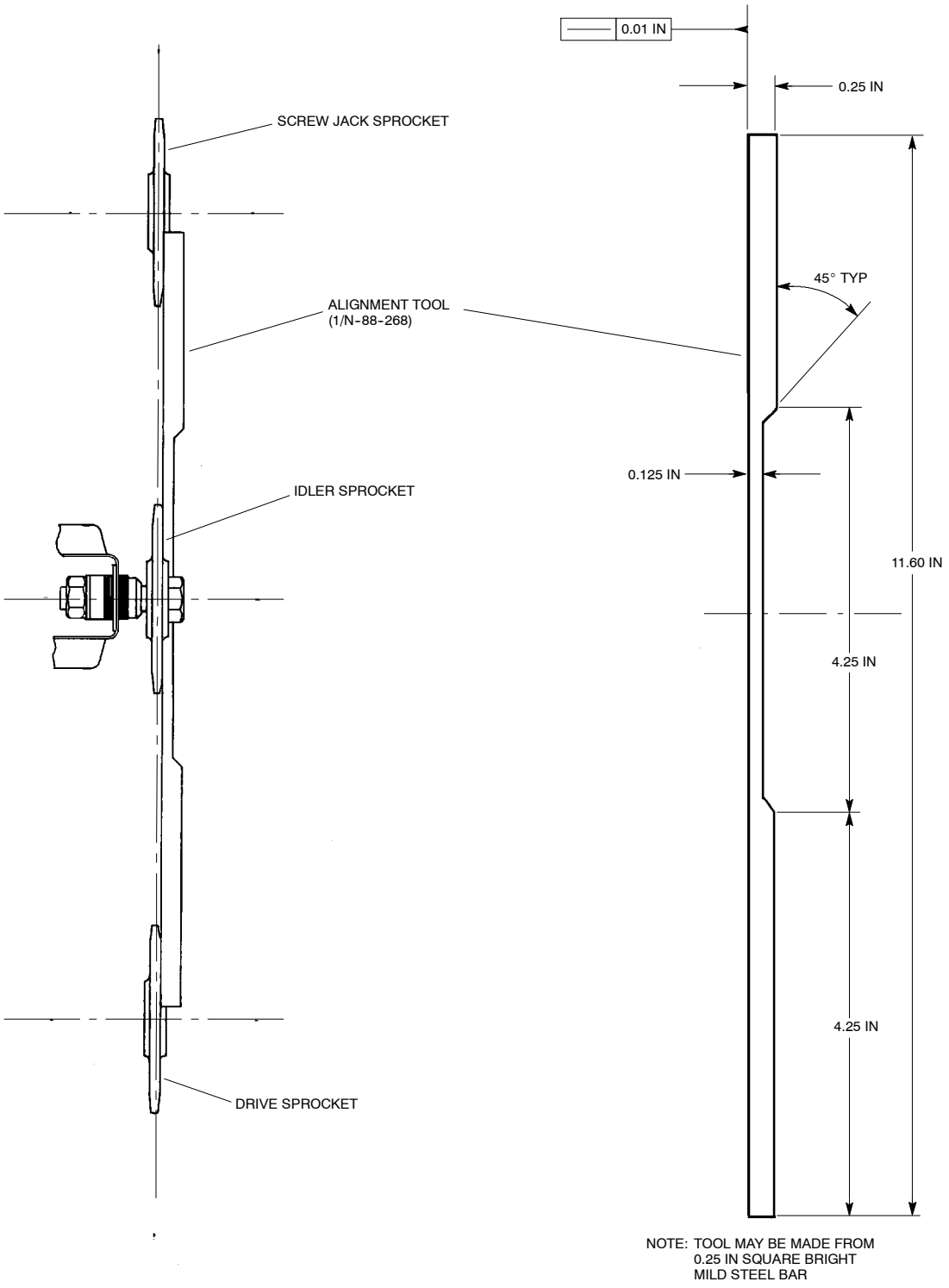

Figure 3 Use of Alignment Tool (1/N-88-268)