

ALERT SERVICE BULLETIN

SUBJECT: RUDDER - INSPECTION AND MODIFICATION OF INTERCOSTALS AND TRIM
TAB CONTROL ROD. (MODIFICATION N437)

1. Planning Information:A. Effectivity:(1) Aircraft AffectedNomad N22 Series:

N22-2	N22-3M	N22-4	N22B-5M
N22B-6M	N22B-7	N22-8M	N22-9M
N22B-11M	N22B-12M	N22B-13M	N22B-15M
N22B-16M	N22-17M	N22B-18M	N22B-19M
N22B-20M	N22B-21M	N22B-22M	N22B-23M
N22-24M	N22B-25	N22B-26	N22B-27
N22B-31M	N22B-33	N22B-35	N22B-37
N22-40M	N22-41M	N22-43M	N22-45M
N22-47M	N22-48M	N22-49M	N22B-50
N22-51M	N22B-52M	N22B-53	N22B-54M
N22B-55	N22B-56	N22B-57	N22B-58
N22B-59	N22B-61	N22-63M	N22B-65M
N22B-66	N22B-67M	N22B-68	N22B-69
N22B-70	N22S-82	N22B-83	N22S-84
N22B-85M	N22S-86	N22S-87	N22B-88M
N22S-90	N22B-91M	N22S-92	N22B-93
N22B-95	N22B-97M	N22B-100M	N22B-101
N22B-102	N22B-103	N22-104	

Nomad N24 Series

N24-30	N24-32	N24-34	N24-36
N24-38	N24-42	N24A-44	N24A-46
N24-60	N24A-62	N24A-64	N24A-71
N24A-72	N24A-73	N24A-74	N24A-75
N24A-76	N24A-77	N24A-78	N24A-79
N24A-80	N24A-81		

Affected aircraft other than those listed above will be modified prior to delivery or included in a subsequent revision to this Alert Service Bulletin.

Nomad

ALERT SERVICE BULLETIN

Compliance with this Alert Service Bulletin will be indicated by a certification for modification N437 in the Aircraft Log Book.

(2) Spares Affected

<u>Part Number</u>	<u>Nomenclature</u>	<u>Recommended Disposition</u>
3/N-33-125	Rudder	Rework
101/N-33-125	Rudder	Rework

B. Reason:

Instances have been reported of partial failure of an intercostal and chafing of the trim tab control rod during aircraft operation.

C. Description:

- Part 1. Inspection of rudder skin for loose rivets and cracked intercostal flanges.
- Part 2. Inspection of rudder trim tab control rod for chafing.
- Part 3. (a) Replace rudder intercostal between W.L. 140.55 and W.L. 165.95 with improved type or strengthen existing intercostal flanges.
- (b) Rework lower intercostal lightening hole and angle to prevent chafing of rudder trim control rod.
- (c) Cut inspection hole in lower rib.

D. Compliance

Aircraft over 400 hours.

- Part 1. Within 30 flying hours after receipt of this Alert Service Bulletin, thereafter at intervals not exceeding 100 flying hours until part 3 is complied with.
- Part 2. Within 100 flying hours after receipt of this Alert Service Bulletin.

Nomad

ALERT SERVICE BULLETIN

Part 3. Before 1st July 1980.

Aircraft with less than 400 hours.

Part 1. Within 100 flying hours after receipt of this Alert Service Bulletin, thereafter at intervals not exceeding 100 flying hours until part 3 is complied with.

Part 2. Within 100 flying hours after receipt of this Alert Service Bulletin.

Part 3. Before 1st July 1980.

E. Approval

The inspection described herein has been approved under Regulation 40 by the authorised design signatory at G.A.F. as so authorised by the Secretary to the Department of Transport (Australia) and conforms with the type certification requirements.

F. Manpower

Part 1. 1 man 1/2 hour.

Part 2. 1 man 1 hour.

Part 3. 1 man 14 hours.

G. Material, Price and Availability

The parts required for this Alert Service Bulletin are to be obtained from the operators stock or from local sources.

H. Tooling, Price and Availability

None.

I. Weight and Balance

Negligible effect on aircraft weight and balance.

Nomad

ALERT SERVICE BULLETIN

J. References

Illustrated Parts Catalogue (I.P.C.)
Maintenance Manual (M.M.)

K. Publications Affected

I.P.C.

2. Accomplishment Instructions:

WARNING:

TO AVOID INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT, ENSURE ADEQUATE PRECAUTIONS ARE TAKEN WHILE PERFORMING ANY WORK IF ELECTRICAL POWER IS APPLIED TO THE AIRCRAFT.

CAUTION:

ELECTRICALLY GROUND THE AIRCRAFT.

Part 1.

- A. Inspect intercostal between WL 140.55 and WL 165.95 (Ref detail A fig 1 for intercostal location) for working/loose rivets. If more than 3 consecutive rivets are found working/loose they are to be replaced before further flight with AGS 2050 () pop rivets.
- B. Place a straight edge (12 inch steel rule) across flutes along the intercostal rivet line.

Using light finger pressure depress each flute individually between WL 140.55 and WL 165.95 and measure deflection between straight edge and flute. If deflection exceeds 0.75 inches part 3 of this Alert Service Bulletin must be complied with before further flight.

Part 2

- A. Remove rudder trim tab control rod P/N 1/N-33-161 (Ref IPC 27-20-01 fig 2-1A).

Nomad

ALERT SERVICE BULLETIN

- B. Inspect control rod for evidence of chafing. Chafing not to exceed 0.005 inches in depth or over 25% of control rod circumference.
- C. Control rod to be rejected if the above limits are exceeded.

Part 3

- A. Remove rudder from aircraft (Ref M.M. 55-40-00).
- B. Suitably trestle rudder to obviate distortion. De-rivet and remove right-hand side skin between WL 110.38 and 165.95.
- C. Remove intercostal P/N IBE/N-33-130 (ref detail A fig 1 for location).
- D. Inspect intercostal for signs of cracks. No cracks are permissible.
- E. If no cracks are evident, reinforce both flanges of intercostal in accordance with fig 1; or replace with intercostal locally manufactured (heavier gauge without lightening holes) in accordance with figure 2.

Note

Locally manufactured intercostals from heavier gauge do not require the additional flange reinforcing detailed in figure 1.

- F. Refit intercostal picking up existing rivet holes.
- G. Remove rudder trim tab control rod. Rework lower intercostal hole and fit reinforcing bracket and grommet in accordance with figure 3.
- H. Cut access hole in lower rib as shown in figure 3. Cover access hole with doped fabric or speed tape or commercial equivalent.
- I. Remove angle and install locally manufactured angle in accordance with figure 3.
- J. Refit rudder trim tab control rod.

Nomad

ALERT SERVICE BULLETIN

K. Attach right-hand rudder skin using AGS 2050 pop rivets along trailing edge, and between WL 110.38 and up to (but not including) rivet line at WL 140.55.

Use cherry rivets CR 3223-4-1 and CR 3223-4-2 between WL 140.56 and W 165.95 (refer Service Bulletin NMD-51-1 figure 2).

L. Change rudder structure P/N from 3/N-33-130 to 4/N-33-130.

Note (1)

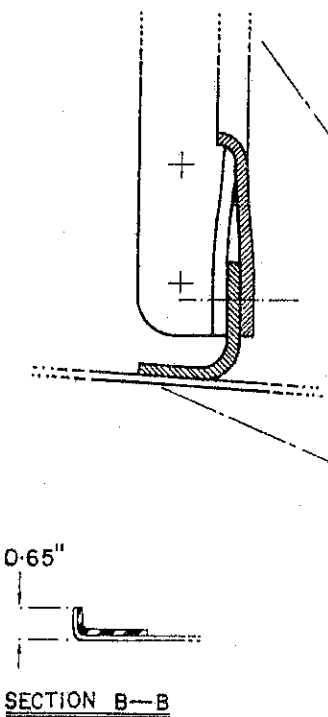
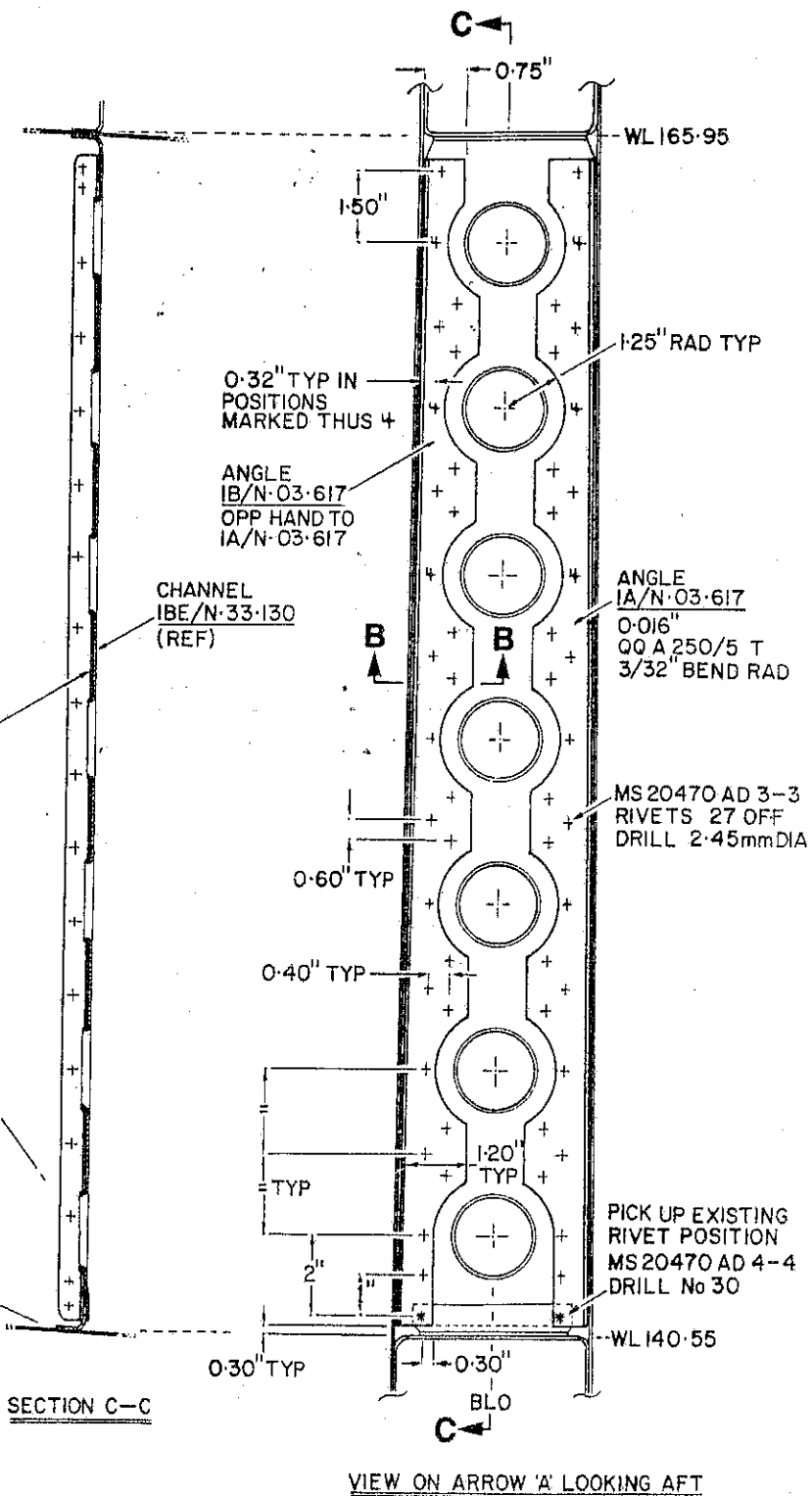
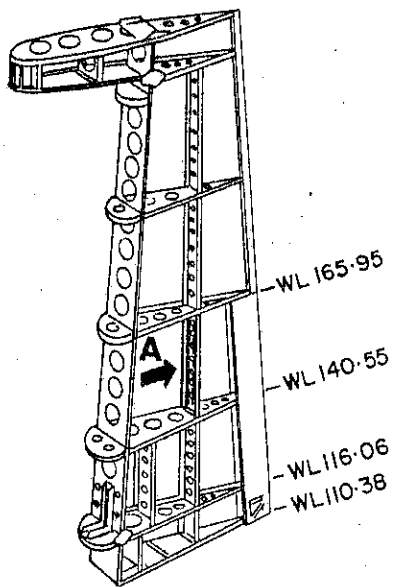
If operator so desires rudder skin may be attached using all cherry CR 3223-4-() series or solid MS20470AD-4-() rivets.

Note (2)

When attaching intercostal, reinforcing angles, rivets and skin etc., wet assemble using a barium chromate pigmented jointing compound or equivalent.

Recording Action:

When parts 1, 2 and 3 are complied with, record in aircraft log book that Mod N437 has been incorporated.



SECTION C-C

FIG 1

VIEW ON ARROW 'A' LOOKING AFT

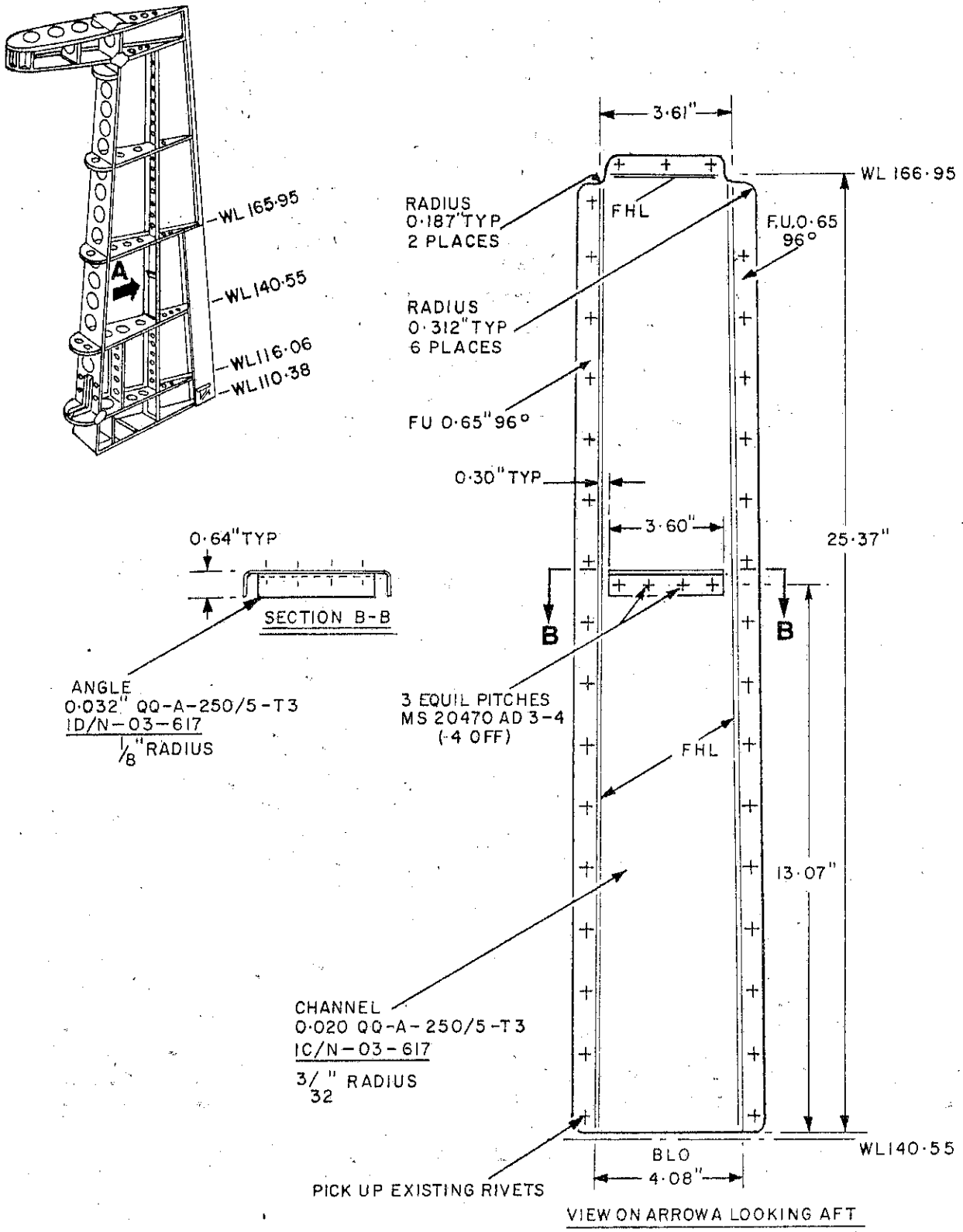


FIG 2

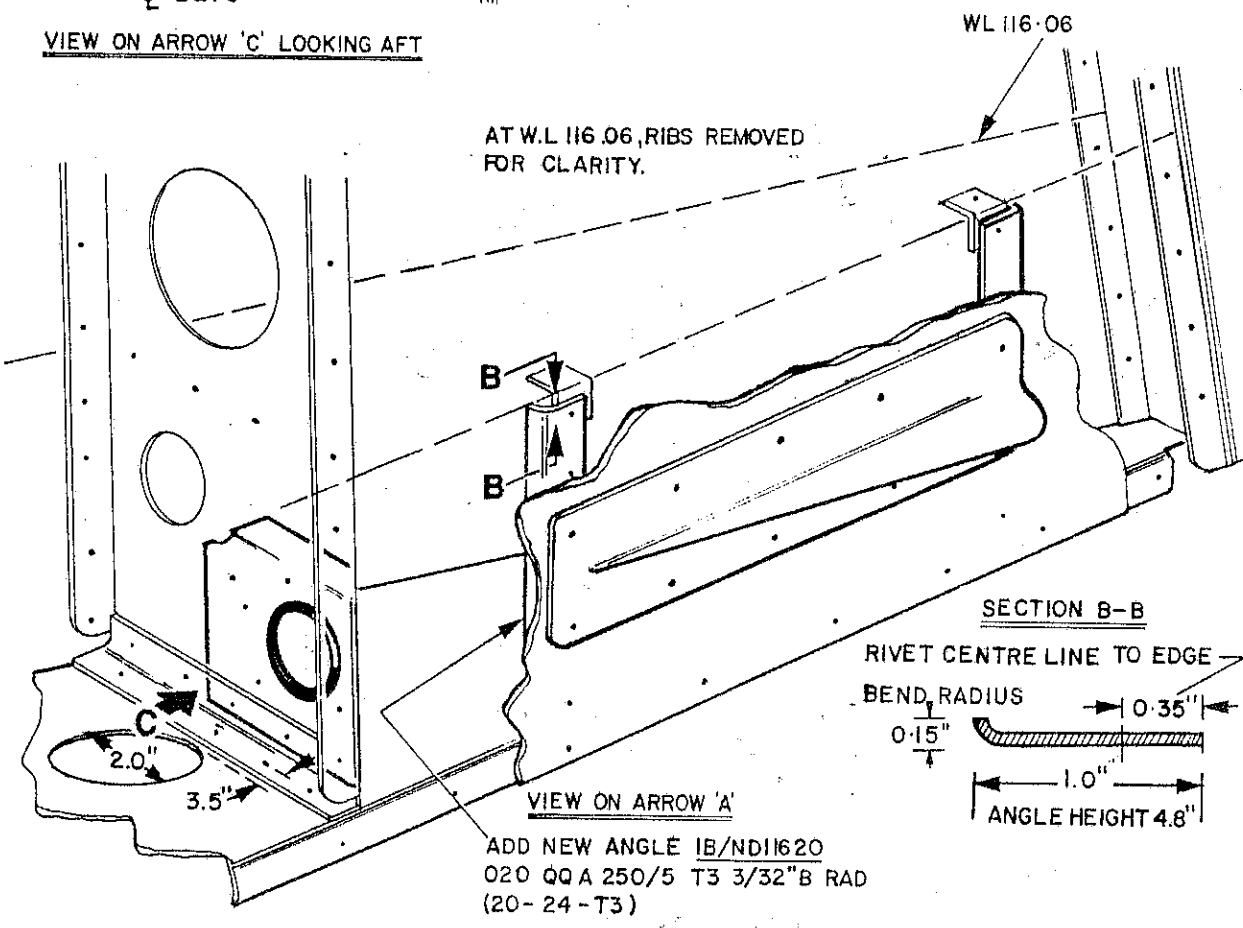
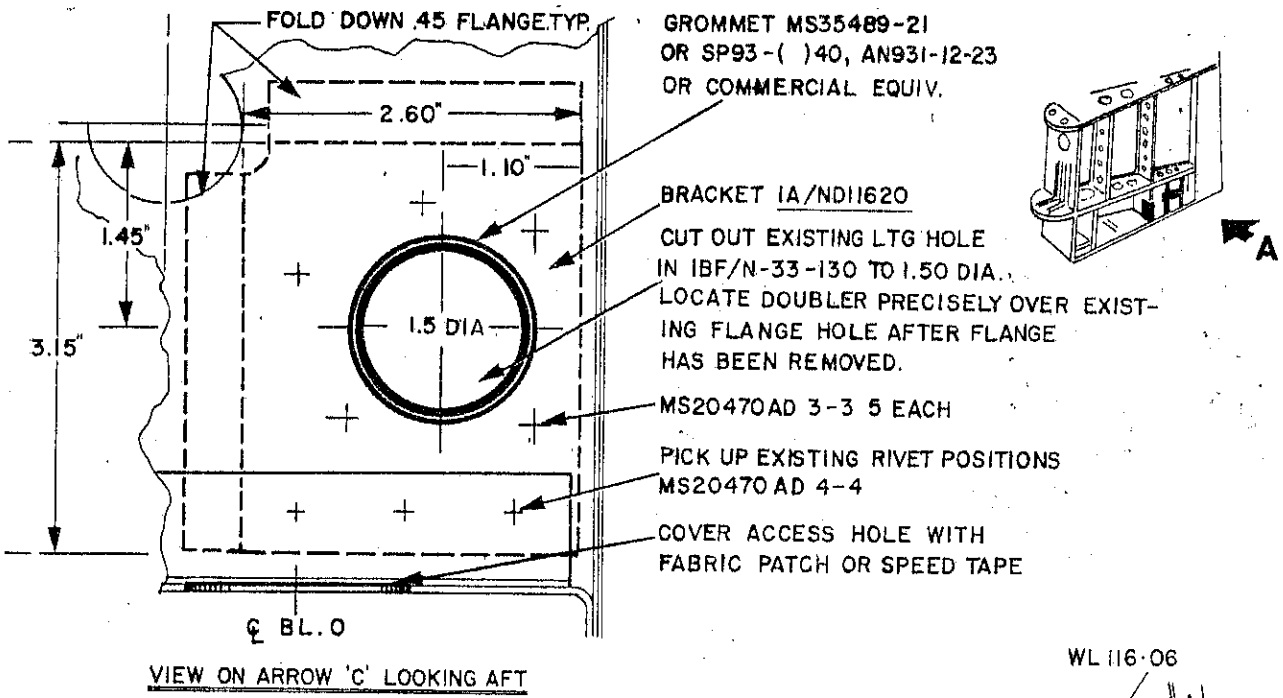


FIGURE 3

Nomad

ALERT SERVICE BULLETIN

3. Material Information

A. Parts Required per Aircraft

(1) None.

(2) The following parts are to be manufactured or procured from operators stock or local source.

Part 1

<u>Part No</u>	<u>Qty</u>	<u>Nomenclature</u>
AGS2050() BS	AR	Rivet

Part 2

<u>Part No</u>	<u>Qty</u>	<u>Nomenclature</u>
1A/N-03-167	1	Angle) Make from
1B/N-03-167	1	Angle) QQA250-5T3 .016 TK Alclad Sht 26" x 2" Manuf. per figure 1.
	OR	
1/N-03-617	1	Intercostal - Make from QQA250-5T3 .020 TK Alclad Sht 26" x 6" and QQA250-5T3 .032 TK Alclad sht 4" x 2" Manuf. per figure 2.
1A/ND11620	1	Reinforcing Bracket - make from QQA250-5T3 .020 TK Alclad sht 4" x 3.5" Manuf. per fig 3

Nomad

ALERT SERVICE BULLETIN

1B/ND11620	1	Angle - Make from QQA250-5T3 .020 TK Alclad Sht 5" x 1.5" Manuf. as per fig 3.
AN931-12-23	1	Grommet
OR		
MS35489-21		
OR		
SP93-()-40		
OR		
Commercial Equiv		
AGS2050-()BS	AR	Rivet
*CR3223-4-1	AR	Rivet
*CR3223-4-2	AR	Rivet
MS20470AD3-3	AR	Rivet
MS20470AD4-4	AR	Rivet

*Note:

These items are supplied in Service Bulletin NMD-51-1 Kit of Parts.

- (3) Part to be modified and reidentified by the operator.

<u>Old Part No</u>	<u>Nomenclature</u>	<u>New Part No</u>
3/N-33-130	Rudder Structure Assy	4/N-33-130

B. Parts Required to Modify Spares

Spare Rudder Assy's 3/N-33-125 and 101/N-33-125 are to be reworked to para 2 Part 3 of this Service Bulletin. The requirement quote in para 3A (2) Part 3 will be required to rework each rudder assy. After rework reidentify as per para 3A (3) of this Service Bulletin.

C. Removed Parts

<u>Part No</u>	<u>Nomenclature</u>	<u>Recommended Disposition</u>
1BE/N-33-130	Intercostal	Scrap

Nomad

ALERT SERVICE BULLETIN

D. Special Tools and Equipment Required

NONE

APPROVED BY:

PRODUCT SUPPORT

J. M. Laidler

POST DESIGN SECTION

A. L. C.

for GOVERNMENT AIRCRAFT FACTORIES