

# *Nomad*

## SERVICE BULLETIN

### CREW SEATS – RELOCATION TO AVOID PROPELLER PLANE

#### 1. PLANNING INFORMATION

##### A. Effectivity

##### (1) Aircraft Affected

##### (a) Nomad N22 and N22B aircraft

N22-2, N22-4, N22B-7, N22B-25, N22B-26, N22B-27 and N22B-28.

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

##### (2) Spares Affected

Part Number	Nomenclature	Recommended Disposition
G358-5	Seat Assy	Rework
G358-6	Seat Assy	Rework
1F/N-10-535	Seat Rail	Rework
1/N-45-1206SF	Control Wheel Assy	Rework
1/N-45-1207SF	Control Wheel Assy	Rework
1/N-45-1209	Shaft	Rework
1/N-10-743	Guard	Rework
1/N-10-744	Guard	Rework
1/N-10-745	Guard	Rework
1/N-10-746	Guard	Rework
1/N-10-749	Guard	Rework
1/N-10-750	Guard	Rework
1/N-10-751	Guard	Rework
1/N-10-752	Guard	Rework
1/N-10-757	Guard	Rework
1/N-10-758	Guard	Rework
1/N-80-96	Lower Instrument Panel LH	Rework
1/N-80-97	Lower Instrument Panel RH	Rework
1/N-45-1148	Rod Assy	Rework
1/N-88-92	Gust Lock	Rework

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**B. Reason**

With the present fore and aft position of the two crew seats, a portion of the occupants body lies within a zone defined as 5° both forward and aft of the propeller mean plane of rotation, and struck from the propeller centre line.

**C. Description**

This Service Bulletin requires that both crew seats be moved forward to clear the previously described zone. In addition the rudder pedals are moved forward and knee clearance is improved at the auxiliary instrument panel.

**D. Compliance**

Before 1st May, 1977.

**E. Approval**

The rework described herein has been approved by the DOT. Designated Engineering Representative at Government Aircraft Factories.

**F. Manpower**

Approximately 16 manhours with a crew of two men are required to accomplish this modification.

**G. Material, Price and Availability**

The kit required to accomplish this modification shall be procured direct from GAF. Kit PN N22-25-1-1 is classified "FOC." and a "no charge" Purchase Order must be placed upon GAF. within 90 days to receive this offer.

Kits will become available on a progressive basis commencing 1st April, 1977.

**H. Tooling, Price and Availability**

None.

**I. Weight and Balance**

Not Affected.

**J. References**

Maintenance Manual Chapters 25 and 27.

**K. Publications Affected**

Illustrated Parts Catalogue  
Maintenance Manual  
Weight and Balance Manual.

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### 2. ACCOMPLISHMENT INSTRUCTIONS



**WARNING**

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



**CAUTION**

ELECTRICALLY GROUND THE AIRCRAFT.

- A. Remove both crew seats part number G358-5 and -6 from the aircraft and modify them as follows:
- (1) Remove the outer collars from each front leg by driving the retaining roll pin inwards so that it drops out through the centre of the tube. Retain the collars and roll pins.
  - (2) Drill new attachment holes .2512/.2500 dia. H9 in each front leg 19.625 inches forward of the rear attach hole as shown in Fig 1. Refit the collars in the new position and cut off the leg flush with the lower end of the collar. In order to clear the aircraft floor when the seats are refitted it will be necessary to file a chamfer on the lower side of each forward collar as shown in Fig 1.
- B. Rework seat rails PN 1F/N-10-535 (4 each) as detailed below and as shown in Fig 2 and 3.
- (1) Make and fit reinforcing plates (PN 1A/N-03-415) to the outer faces of each seat rail per Fig 2. Drill new rear seat attach holes in each seat rail at Stn 123-20 i.e. 3 inches forward of existing rear hole.
  - (2) Make and fit reinforcing plates (PN 1B/N-03-415) to the outer surface of each seat rail per Fig 3 at the forward seat leg position.
  - (3) Before drilling the new hole (.2512/.2500 dia H9) as shown in Fig 3 place the seat in position, temporarily fit the bolts in the rear legs and check the position of the hole in the front leg, which should be 0.14 inch below horizontal datum. Drill .2512/.2500 inch dia H9 hole.
  - (4) Fit and attach both crew seats.
  - (5) It will be necessary to reduce the set in the lever arm of each seat height adjust lever in order to achieve a suitable hand clearance.
- C. Shorten both control columns as detailed below.
- (1) Remove both control columns PN 1/N-45-1206 and 1207 from the aircraft as per MM. Chap 27-10-14.
  - (2) Remove the hand wheels from both column tubes PN 1/N-45-1209. Reduce tube length to 20.13 inches. Refer Fig 4. Drill new hole 11/32 dia through the top centre line of the tube for the gust lock and refit handwheel.
  - (3) Refit both control columns to the aircraft.

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- D. Remove floor panels PN 1/N-10-737 from both sides and take the following action:
- (1) Cut notches as shown in Fig 5 and 6 to left and right hand guards PN 1/N-10-743 and 1/N-10-744. These are required to ensure clearance for nuts on the brake linkage system.
  - (2) To allow for the shortening of the rudder control rods in Para F. it will be necessary to increase the length of slots in the brush sealed slots by filing upper and lower rudder pedal guards PN 1/N-10-745, -746, -749, -750, -751, -752, -757 and -758 at the forward end as shown in Fig 7,  
  
On left and right hand nosewheel well walls add extension to rudder pedal rubbing strips as shown in Fig 8.

### NOTE

Some early aircraft did not have this rubbing strip fitted, in which case, this requirement should be ignored.

- E. Remove the lower right and left hand auxiliary instrument panels and rework as shown in Fig 9 to give additional leg clearance. Relocation of equipment fitted to these panels are covered on Service Bulletins N22-35-1 and N22-24-1. Refit panels after rework.
- F. On the pilots side remove the rudder control rods PN 1/N-45-1148 as per MM. Chap 27-20-00 and rework by shortening the rods as shown in Fig 10. Refit the two control rods.  
  
Repeat on the co pilots side.
- G. Rework the Gust Lock PN 1/N-88-92 by fitting modified gust lock base PN 1/N-88-172 per Fig 11. Do not finally drill and pin the cut off top portion of existing lock until the gust lock has been located on the aircraft. When a satisfactory fit is obtained drill and fit taper pins.
- H. Modify the gust lock stowage under the right hand pilots seat as shown in Fig 12.

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### 3. MATERIAL INFORMATION

#### A. Parts Required per Aircraft

- (1) One each Kit Part No. N22-25-1-1 is required per aircraft.

NEW PART NO	QTY PER-1 KIT	NOMENCLATURE	OLD PART NO
1/N-88-172	1	End Fitting	
Bruillet No. 4	6FT	Plastic Extrusion	
AGS2050-424BS	4	Rivet	AGS2050-424BS
AN4-21A	4	Bolt	AN4-20A
AN4-22A	4	Bolt	AN4-20A
AN960PD1OL	16	Washer	
MS20426AD5-5	20	Rivet	
MS21042L3	16	Nut	
M524692-107P	8	Taper Pin	M524692-107P
MS24692-113P	2	Taper Pin	M524692-113P
NAS1303-3	16	Bolt	
NAS1398MW4-2	4	Rivet	NAS1398MW4-2

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

QTY	PART NO	NOMENCLATURE
8	QQA250-5T3	Alclad plate .125" thick 4.75" x 2.0C Manufacture per Fig 2.
2	QQA250-ST3	Alclad plate .125".thibk 1.75" x 1.25" Manufacture per Fig 8.
8	QQA250-5T3	Alclad plate .080 thick 3.75" x 1.25" Manufacture per Fig 3.
AR	Bostik 1489 or equivalent	Contact Adhesive.

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

NEW PART NO	NOMENCLATURE	OLD PART NO
1F/N-10-535	Seat Rail	
1/N-10-743	Guard	3/N-10-743
1/N-10-744	Guard	3/N-10-744
1/N-10-745	Guard	2/N-10-745
1/N-10-746	Guard	2/N-10-746
1/N-10-749	Guard	3/N-10-749
1/N-10-750	Guard	3/N-10-750
1/N-10-751	Guard	3/N-10-751
1/N-10-752	Guard	3/N-10-752
1/N-10-757	Guard	3/N-10-757
1/N-10-758	Guard	3/N-10-758
1/N-45-1148	Rod Assy	2/N-45-1148
1/N-45-1206	Control Wheel Assy LH	2/N-45-1206
1/N-45-1207	Control Wheel Assy RH	2/N-45-1207
1/N-45-1209	Shaft	1/N-45-1388
1/N-80-96	Lower Inst. Panel LH	1/N-80-415
1/N-80-97	Lower Inst. Panel RH	1/N-80-416
1/N-88-92	Gust Lock	1/N-88-173
G358-5	Crew Seat LH	358-001-9
G358-6	Crew Seat RH	358-001-9

### B. Parts Required to Modify Spares

- (1) Spare Seat Rails 1F/N-10-535 are to be reworked to Para 2.B. of this Service Bulletin. The following parts are required to modify each Seat rail.

2 each QQA250-5T3 Alclad Sheet .125TK 4.75 x 2.00

2 each QQA250-5T3 Alclad Sheet .080TK 3.75 x 1.25

These items to be manufactured by the operator per Figure 2 and 3.

- (2) Spare Control Wheel Assy 1/N-45-1206SF and 1/N-45-1207SF are to be reworked to Para 2. C.(1) & (2) of this Service Bulletin. The following parts are required to modify each Control Wheel Assy.

2 each NAS1398MW4-2 Rivet

- (3) Spare Lower Control Panels 1/N-80-96 and 1/N-80-97 are to be reworked to Para 2.E. of this Service Bulletin. The following parts are required to modify each Lower Control panel.

3FT Bruillet No. 4 Plastic Extrusion

- (4) Spare Rod Assy 1/N-45-1148 are to be reworked to Para 2.F. of this Service Bulletin. The following parts are required to modify each rod assy.

2 each MS24692-107P Taper Pin

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- (5) Spare Gust Locks 1/N-88-92 are to be reworked to Para 2.G. of this Service Bulletin. The following parts are required to modify each Gust Lock.

1 each 1/N-88-172 End Fitting

2 each MS24692-113P Taper Pins

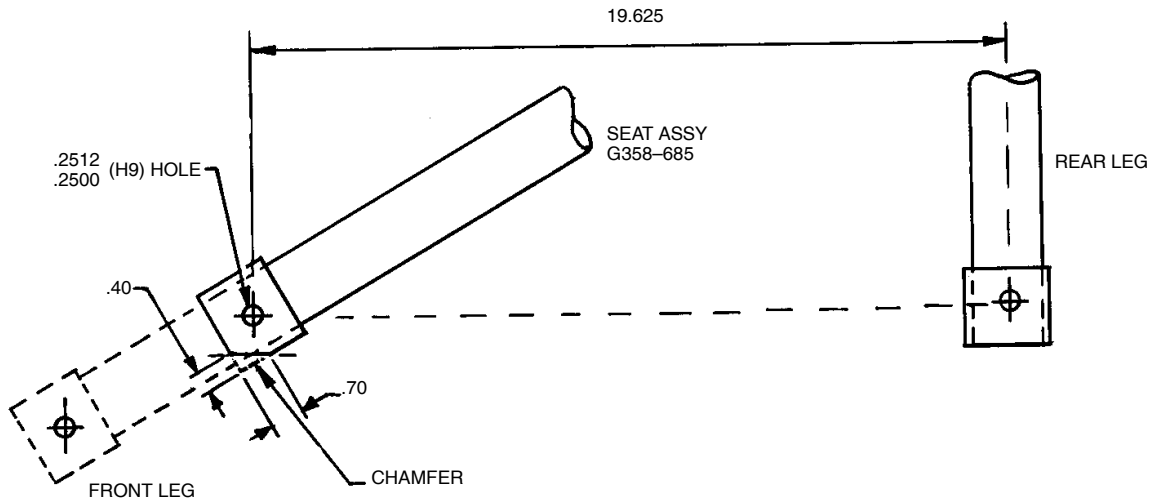
### C. Removed Parts

PART NO.	NOMENCLATURE	RECOMMENDED DISPOSITION
AN4-20A	Bolt	Scrap

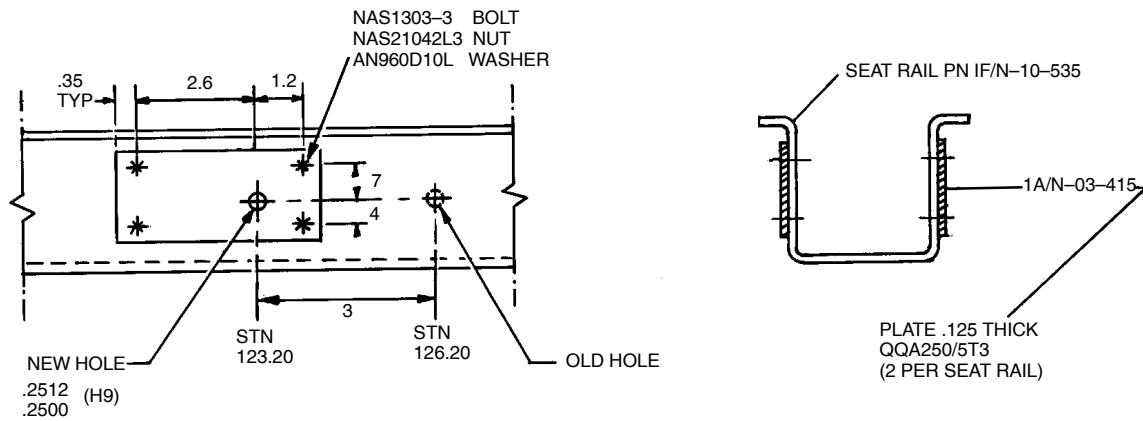
### 4. SPECIAL TOOLS AND EQUIPMENT REQUIRED

None.

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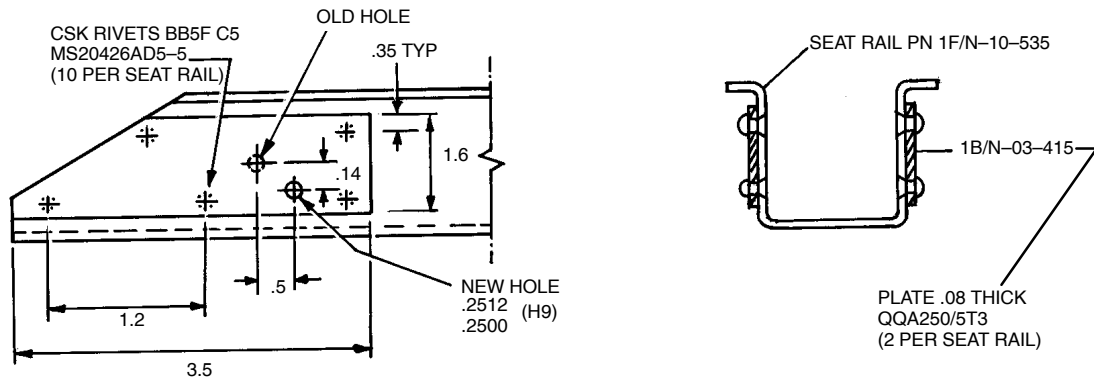


**Figure 1 Forward Collar**



**Figure 2 Rear Seat Attachment**

NOTE:  
ALL DIMENSIONS  
IN INCHES

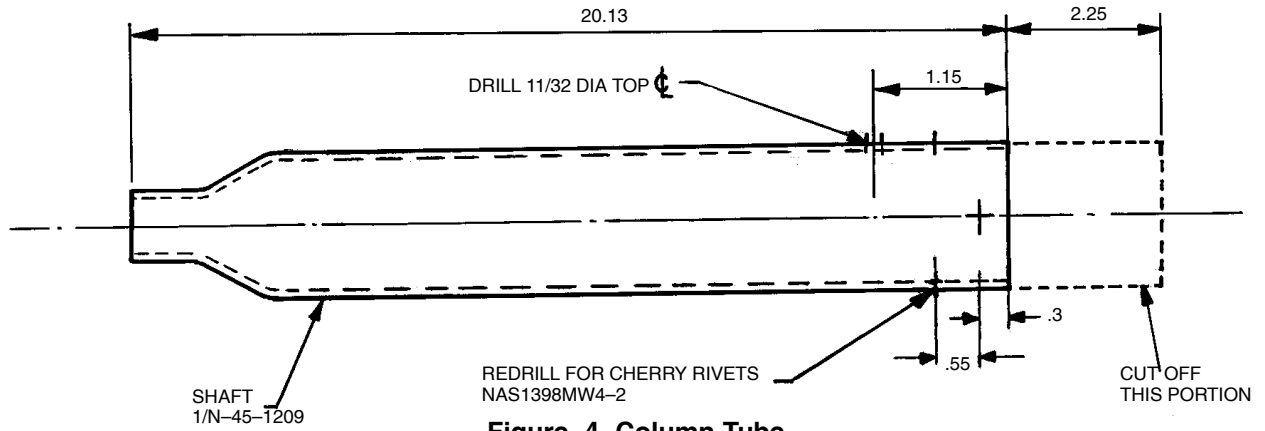


**Figure 3 Front Seat Attachment**

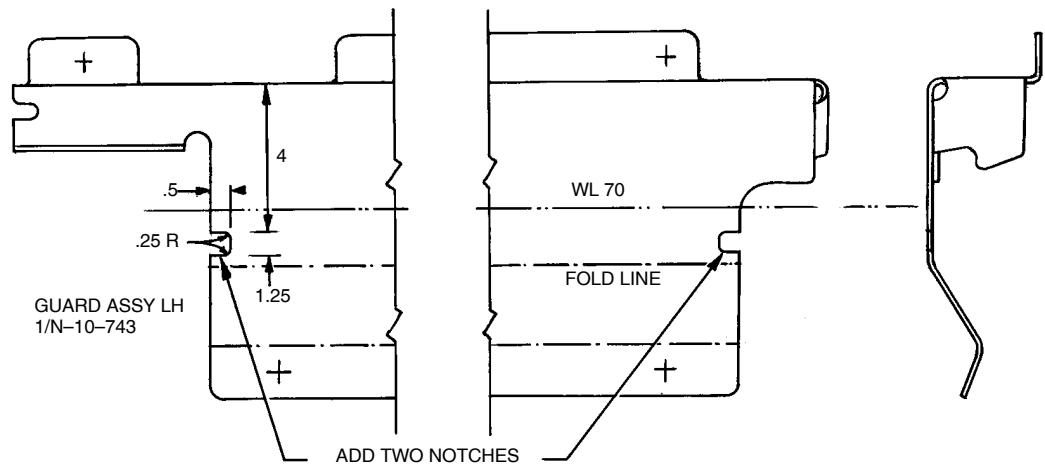
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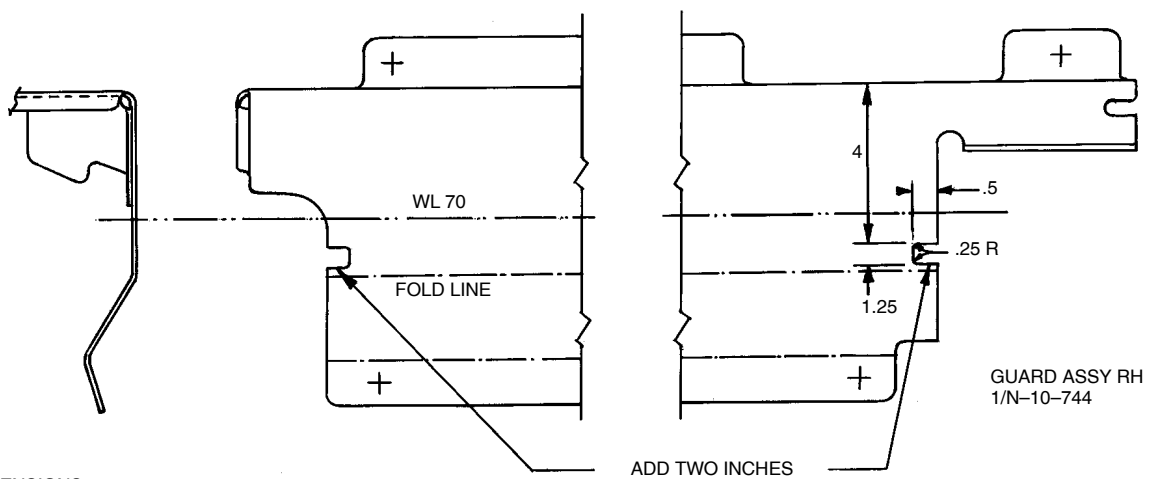
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**Figure 4 Column Tube**



**Figure 5 LH GUARD ASSY**



**Figure 6 RH GUARD ASSY**

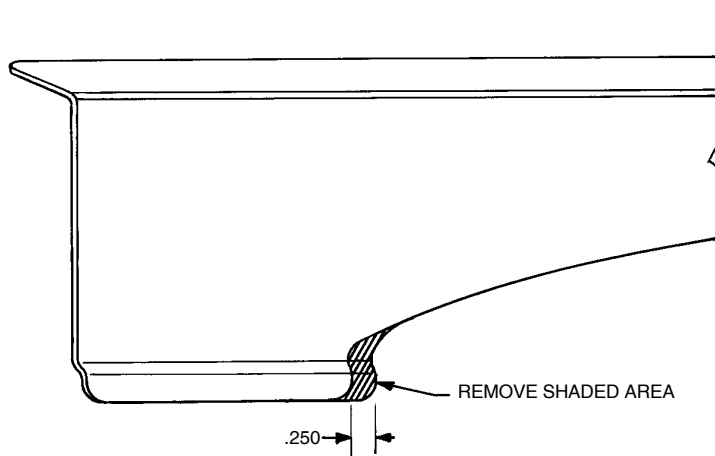
NOTE:  
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IN INCHES

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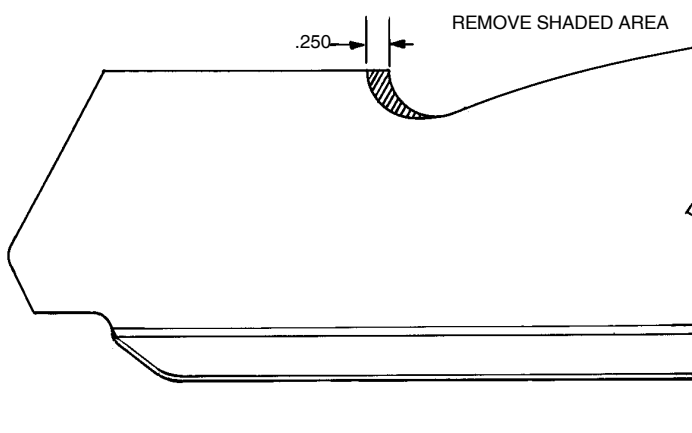
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← FOREWORD



GUARD ASSY 1/N-10-757/758, 745/746

← FOREWORD



GUARD ASSY 1/N-10-749/750, 751/752

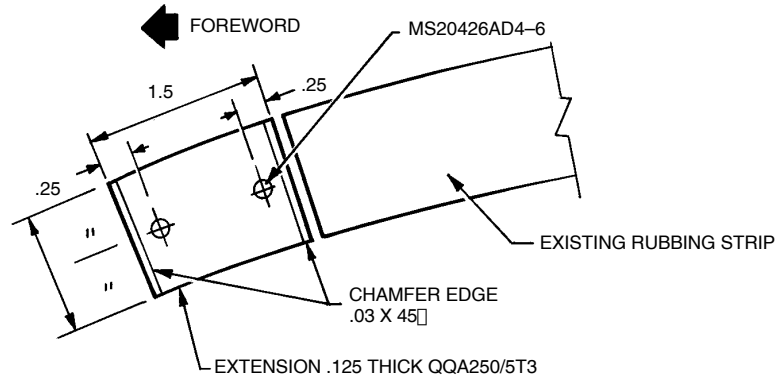
NOTE:  
ALL DIMENSIONS  
IN INCHES

Figure 7 GUARD ASSY

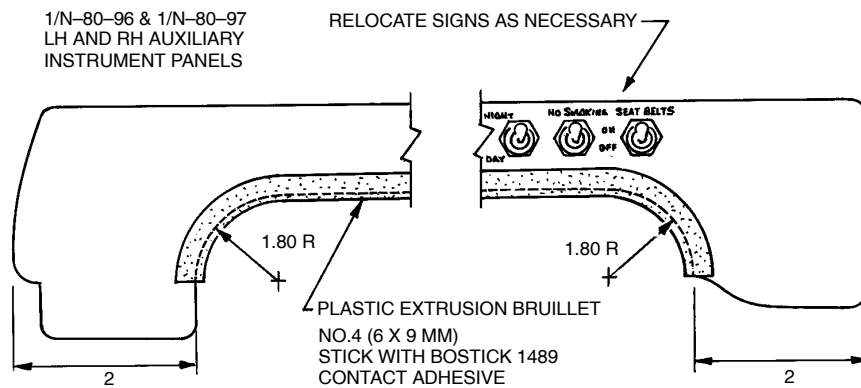
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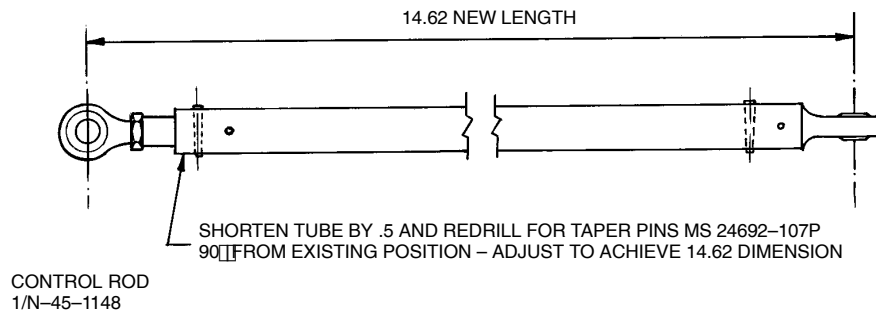
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**Figure 8 Rudder Pedal Rubbing Strip**



**Figure 9 LH & RH AUX INSTRUMENT PANELS**



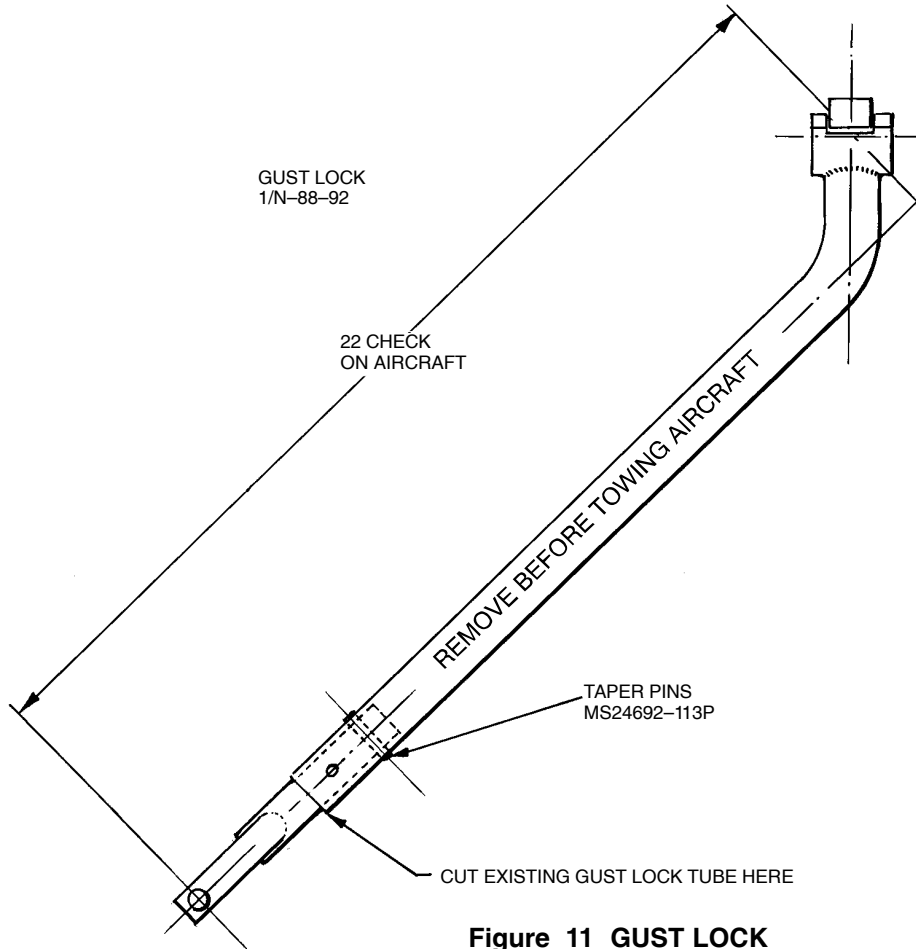
**Figure 10 CONTROL ROD**

NOTE:  
ALL DIMENSIONS  
IN INCHES

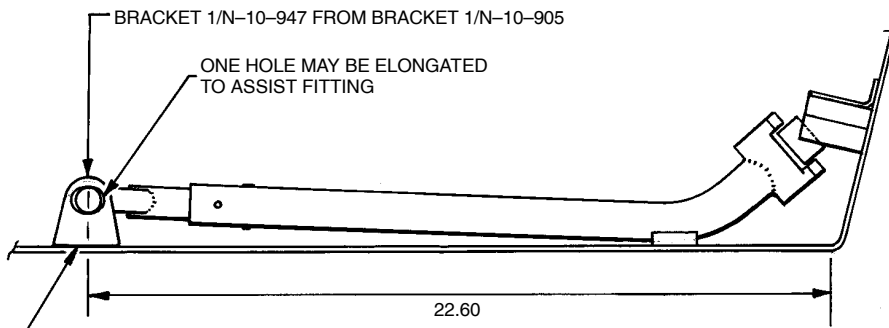
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**Figure 11 GUST LOCK**



REPOSITION THIS BRACKET TO NEW DIMENSION AND ATTACH WITH POP RIVETS AGS2050/424BS  
(EXISTING HOLES MAY BE LEFT REDUNDANT)

**Figure 12 Gust Lock Stowage**

NOTE:  
ALL DIMENSIONS  
IN INCHES

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