

# Nomad

# SERVICE BULLETIN

## INCORRECT ASSEMBLY OF INBOARD BRAKE PUSH ROD UPPER BOLT

### 1. PLANNING INFORMATION

#### A. Effectivity

(1) Aircraft Affected

All Nomad N22 Series and N24 Series aircraft whose log books do not already record compliance with Service Bulletin NMD-27-32.

(2) Spares Affected

None.

#### B. Reason

Instances have occurred in which the bolt attaching the brake push rods to the rudder pedal levers have been incorrectly assembled and have been able to foul the brake system hydraulic pipes which pass over the nosewheel well. Fouling only occurs when the rudder pedals are operated in the fully forward adjusted position.

#### NOTE

The maintenance manual Chap 27-20-04 Page 202 Figure 1 shows the bolt assembled incorrectly, i.e. with the bolt head nearest the associated pedal. Refer to IPC Chap 27-20-02 Page 0 Figure 2 for correct assembly.

#### C. Description

The bolt attaching the brake push rods to the inboard rudder pedal levers are inspected for correct assembly and the adjacent hydraulic brake pipes inspected for damage. Incorrectly assembled bolts are to be reassembled correctly and brake pipes subject to any degree of damage are either repaired or replaced (Ref Para 2.).

#### D. Compliance

Within 100 hours time in service from receipt of this bulletin.

#### E. Approval

The inspection and rework procedures detailed herein has been approved pursuant to Air Navigation Regulation 40 and conforms with the type certification requirements.

#### F. Manpower

Four manhours (not including removal and renewal of defective hydraulic brake pipes).

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### G. **Material – Price and Availability**

Not applicable

### H. **Tooling – Price and Availability**

None required.

### I. **References**

Maintenance Manual.

Illustrated Parts Catalogue.

### J. **Publications Affected**

Maintenance Manual.

## 2. **ACCOMPLISHMENT INSTRUCTIONS**

### A. **Inspection**

- (1) Remove the upper inboard rudder pedal guards (Ref IPC Chap 53–20–02 Page Figure 1 items 11 and -12).
- (2) Inspect the bolts attaching the brake operating push rod to the rudder pedal lever (Ref IPC Chap 27–20–02 Figure 2 Item 26) for correct installation. The bolt head should be facing away from the pedal side of the lever (Ref Figure 1) .

#### **NOTE**

The illustration in the Maintenance Manual (Ref Chap 27–20–04 Page 202 Figure 201) is incorrect. It shows the bolts installed with the bolt heads facing the wrong way.

- (3) Bolts fitted incorrectly are to be removed and refitted with the bolt heads furthest away from the associated rudder pedal, as shown in IPC Chap 27–20–02 Page 0 Figure 2. Torque tighten the nut to between 20 and 25 lb in.
- (4) Inspect the brake hydraulic pipes which pass over the forward end of the nosewheel well (Ref Figure 2) for damage caused by either incorrect fitment of the push rod bolt or by incorrect positioning of the pipes. Damage to the pipes may be rub marks or gouges. If the pipes are badly marked they should be replaced (Ref IPC Chap 32–40–00 Page 1 Figure 2 items 14, 16, 19 and 21). Light scratches may be blended out and a conversion coating (Alodine) applied.
- (5) Ensure that the pipes are correctly positioned as close to the nosewheel well wall and as far forward as possible but without obstructing the transverse control rod assembly (Ref IPC Chap 27–20–02 Figure 5 item -1A) which connects the pilot's and co-pilot's rudder torque shafts.

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- (6) Adjust the rudder pedals to the fully forward position and deflect the rudder pedal arms until the PTFE rubbing pad on the pivot arm (Ref IPC Chap 27-20-02 Page 0 Figure 2 item 14B) contacts the rubbing strip on the nosewheel well wall. Check that adequate clearance exists between the pipes and the pedal assembly.

### **NOTE**

1. Apply force to the rudder pedal to produce as much deflection as possible in the rudder pedal arms since this will result in the most critical case.
  2. The PTFE rubbing pad on the two inboard rudder pedal arms should be checked for wear since this may be a cause of reduced clearance. The rubbing pads are .28 ±.010 inches thick and should be replaced if worn to below .23 inches.
- (7) Ensure that both the pilot's RH rudder pedal and co-pilot's LH pedal assemblies are inspected as detailed in steps (1) to (6) inclusive.
- (8) Refit the upper inboard rudder pedal guards then check that the correctly installed bolts (attaching the brake operating push rod to the rudder pedal lever) do not foul the ends of the slots in the rudder pedal guards. (Ref IPC Chap 53-20-02 Page 0 Figure 1 items 11 and -12). Trim the ends of the bolts (if not already done), back until only one full thread protrudes through the nut (See view on B in Figure 1).
- (9) Check rig the rudder system.
- (10) Pending the issue of revisions to the N22 and N24 Series Maintenance Manuals incorporating revised installation of the bolt attaching the brake operating push rod to the rudder pedal lever (Ref Chap 27-20-04 Figure 201) and revised installation and inspection procedures (Ref Chap 27-20-04 Maintenance Practices Page 203 Para 1B step (7) and Page 204 Para 2A step (4), it is recommended that the attached revised steps be pasted over existing instructions detailed above.

### **3. MATERIALS INFORMATION**

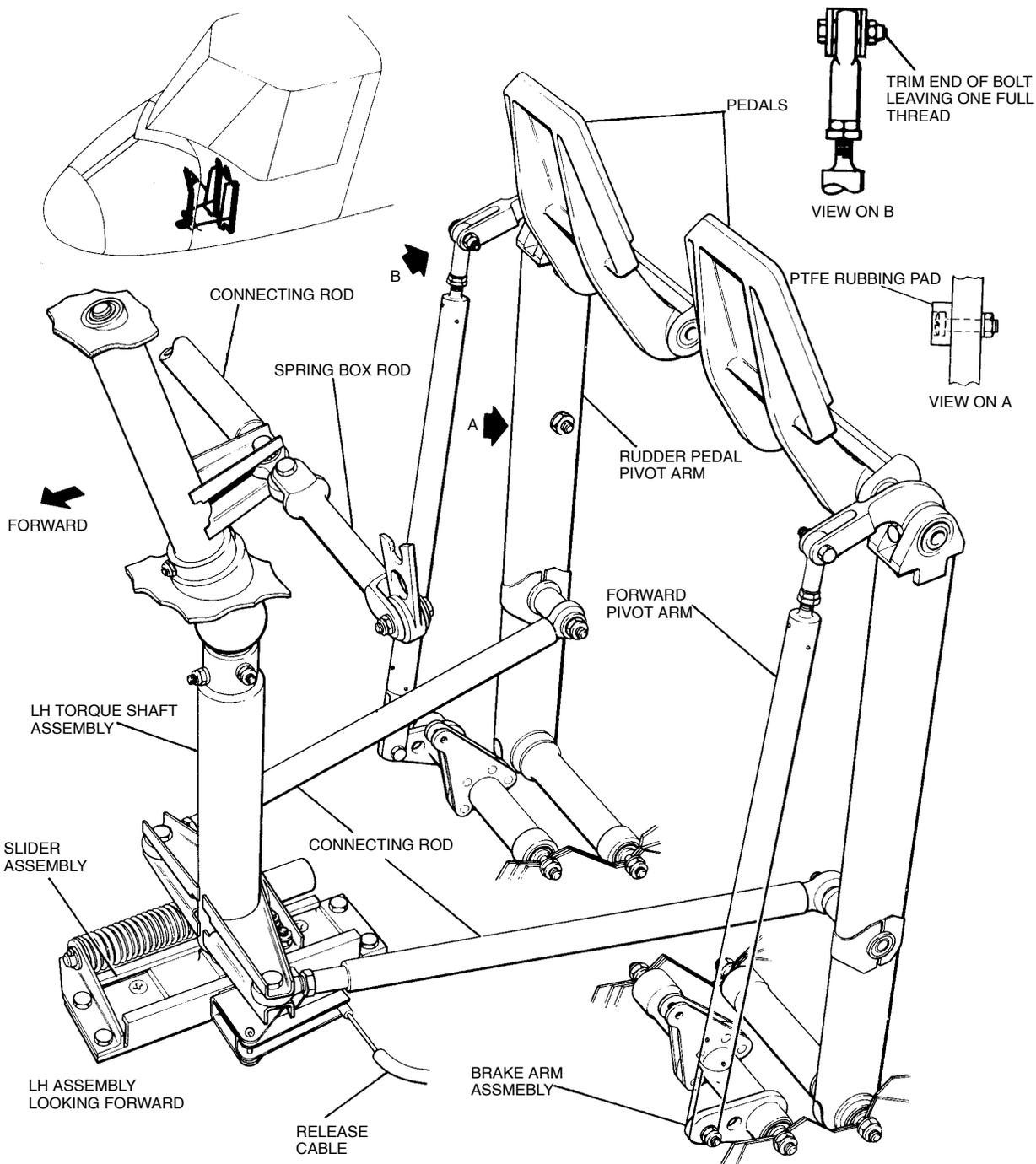
None

### **4. RECORDING ACTION**

Record compliance with Service Bulletin NMD-27-32 in the airframe log book.

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(POST MOD N33)

**Figure 1 Rudder Pedal Pivot Arm and Control Rods**

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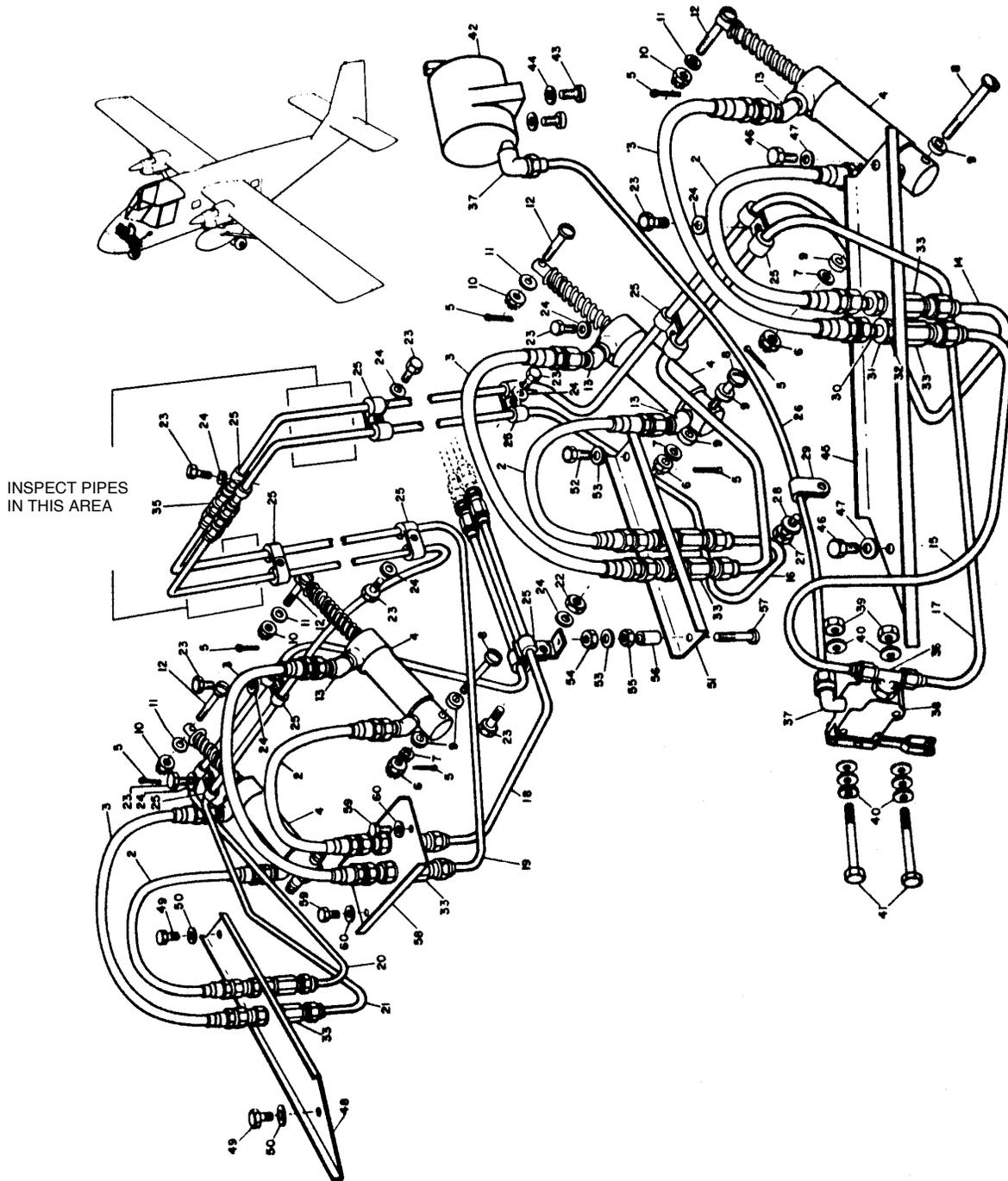


Figure 2 Braking System Stn 64.00 to Stn 91.13

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