

Nomad **SERVICE BULLETIN**

FLIGHT CONTROLS - RUDDER PEDALS - BRAKE PUSH ROD - INSPECTION

1. PLANNING INFORMATION

A. Effectivity

- (1) Aircraft Affected
All Nomad N22 Series and N24 Series aircraft.
- (2) Spares Affected
All spares in stock.

B. Reason

An instance has been reported in which failure of the brake push rod end fitting PN 1/N-45-970 has occurred. Further investigation has revealed that excessive depth of the lightning hole in the end fitting caused the rod end fitting to fail. This Service Bulletin has been released to eliminate possible failure of brake push rod end fittings.

Reason for Revision 1

To amend the rod end fitting hole depth specified in Figure 2 and include additional requirements to parts availability.

C. Description

Four off brake push rod assemblies PN 1/N-45-969 are removed from the aircraft and the internally drilled lightning hole in each end fittings PN 1/N-45-970 is inspected for correct depth.

D. Compliance

- (1) Incorporation of this Service Bulletin is mandatory.
- (2) Aircraft — At the next 100 hourly inspection or within three month following receipt of this Service Bulletin whichever occurs first.
- (3) Spares — Prior to sale or being placed into service.

E. Approval

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

F. Manpower

Approximately 8 man-hours.

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G. **Materials Price and Availability**

Parts required to incorporate this Service Bulletin are available free of charge upon request to customer services - ASTA Defence.

NOTE

All end fittings requiring replacement are to be returned to ASTA Defence before the new parts will be supplied. If this causes undue hardship please contact customer spares direct.

H. **Tooling - Price and Availability**

None.

I. **Weight and Balance**

None.

J. **References**

Maintenance Manual	Chap 27-20-05
Illustrated Parts Catalogue	Chap 27-20-02

K. **Publications Affected**

None.

2. **ACCOMPLISHMENT INSTRUCTIONS**

A. **Disassembly**

- (1) Gain access to all four brake push rod assemblies PN 1/N-45-969 (Ref Fig 1 and MM Chap 27-20-05).
- (2) Disconnect the brake push rods from the upper and lower brake arms (Ref Fig 1). Refit the attachment parts in the removal sequence on the upper and lower brake arms.
- (3) Remove the brake push rod assemblies PN 1/N-45-969 from the aircraft and appropriately tag each push rod to identify the location.
- (4) Measure and record the length of each push rod assembly prior to disassembly.
- (5) Loosen the jam nut and remove the self aligning bearing PN MS21243S03 (Ref Fig 2) then remove the jam nut.
- (6) File off the peened ends of two taper pins securing the upper end fitting PN 1/N-45-970 (Ref Fig 1) and punch out the taper pins.
- (7) Withdraw the upper end fitting PN 1/N-45-970 (Ref Fig 2 Detail A) from the brake push rod assembly.

B. **Inspection**

- (1) Measure the depth of the lightning hole in the upper end fitting (Ref Fig 2) using a suitable depth gauge.

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- (2) Fit a new upper end fitting PN 1/N-45-970 if the depth exceeds 0.9 in as shown in Fig 2.
- (3) If the upper end fitting is to be renewed proceed to 2.D. otherwise continue.

C. Reassembly - Using old end fitting

- (1) Insert the upper end fitting into the brake push rod tube and align the taper pin holes.
- (2) Insert a taper pin PN MS24692-158P into the upper hole and gently tap in.
- (3) Ream the lower taper pin hole to suit taper pin PN MS24692-181P using standard tapered reamer and insert a new taper pin PN MS24692-181P. Gently tap the taper pin in to maintain alignment.
- (4) Remove the taper pin from the upper hole and ream the hole to suit taper pin PN MS24692-181P.
- (5) Disassemble and de-burr the reamed holes.
- (6) Wet assemble upper end fitting to the brake push rod tube and align the taper pin holes.
- (7) Wet assemble the taper pins PN MS24692-181P.
- (8) Ensure taper pin end protrusion is between $\frac{1}{2}$ to 1 diameter of the taper pin. Trim taper pin ends as required to achieve this dimension.
- (9) Support large end of the taper pin and peen small end.
- (10) Touch up paint as required.
- (11) Assemble self aligning bearing together with the jam nut and adjust the brake push rod to the original length recorded in step 4. Torque tighten the jam nut to 60-90 lb in. Check the length again and re-adjust if required.
- (12) Position and attach the brake push rods (4 off) to the upper and lower brake arms using the bolt washer and new self locking nut. Torque tighten the self locking nut to 20-25 lb in.

WARNING

AFTER ALL MAINTENANCE ACTIVITIES INVOLVING FLYING CONTROLS, OR WHENEVER FLYING CONTROL SERVICING AND ACCESS PANELS ARE REMOVED ENSURE THAT THE AREAS CONCERNED ARE CLEAN AND FREE FROM FOREIGN OBJECTS.

- (13) Refit all items removed for access.
- (14) Check the operation of the wheel braking system (Ref MM Chap 32-40-00).

D. Reassembly - Using new end fitting

- (1) Discard the old end fitting.
- (2) On the new end fitting, mark the centre of the lower taper pin hole 0.3 in from the lower end as shown in Fig 2.
- (3) Using No 30 (0.1285 in) drill in a drill press pilot drill the lower taper pin hole through both sides of the new end fitting.

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- (4) Insert the new end fitting into the brake push rod tube and align the pilot hole and centre of the existing lower taper pin hole in the push rod tube.
- (5) Maintaining the alignment firmly clamp the push rod tube and the end fitting in a drill press then open up the pilot hole using No 20 (0.161 in) drill.
- (6) Using standard tapered reamer, ream the hole to suit taper pin PN MS24692-181P.
- (7) Insert a taper pin PN MS24692-181P into the reamed hole and gently tap in to maintain alignment.
- (8) Drill upper taper pin hole from each side using No 20 (0.161 in) drill and ream to suit taper pin PN MS24692-181P using standard tapered reamer.
- (9) Disassemble parts and de-burr the holes.
- (10) Carry out step C.(6) to step C.(14).

3. MATERIALS INFORMATION

Following materials are required for each aircraft.

New Part No	Qty	Description	Old Part No	Instruction/Disposition
Parts removed				
MS24692-181P	8	Pin, Tapered	MS24692-158P	Discard used taper pins
1/N-45-970	4	End fitting, Upper	1/N-45-970	Check and reuse if complies with this Service Bulletin

4. SPECIAL TOOLS AND EQUIPMENT

None.

5. RECORDING ACTION

Record compliance with Service Bulletin NMD-27-45 in the Airframe Log Book.

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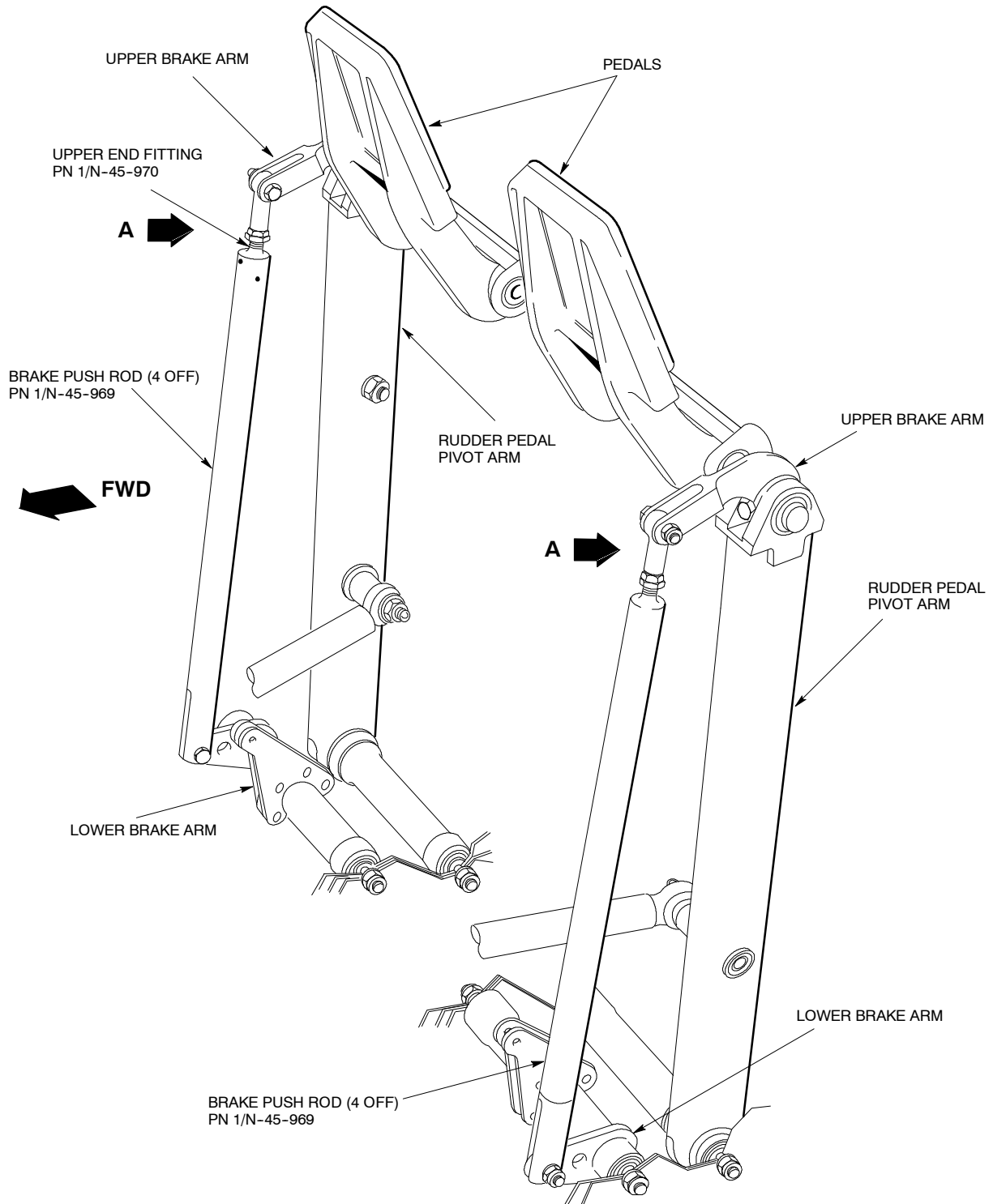


Figure 1 Brake Push Rod Assembly

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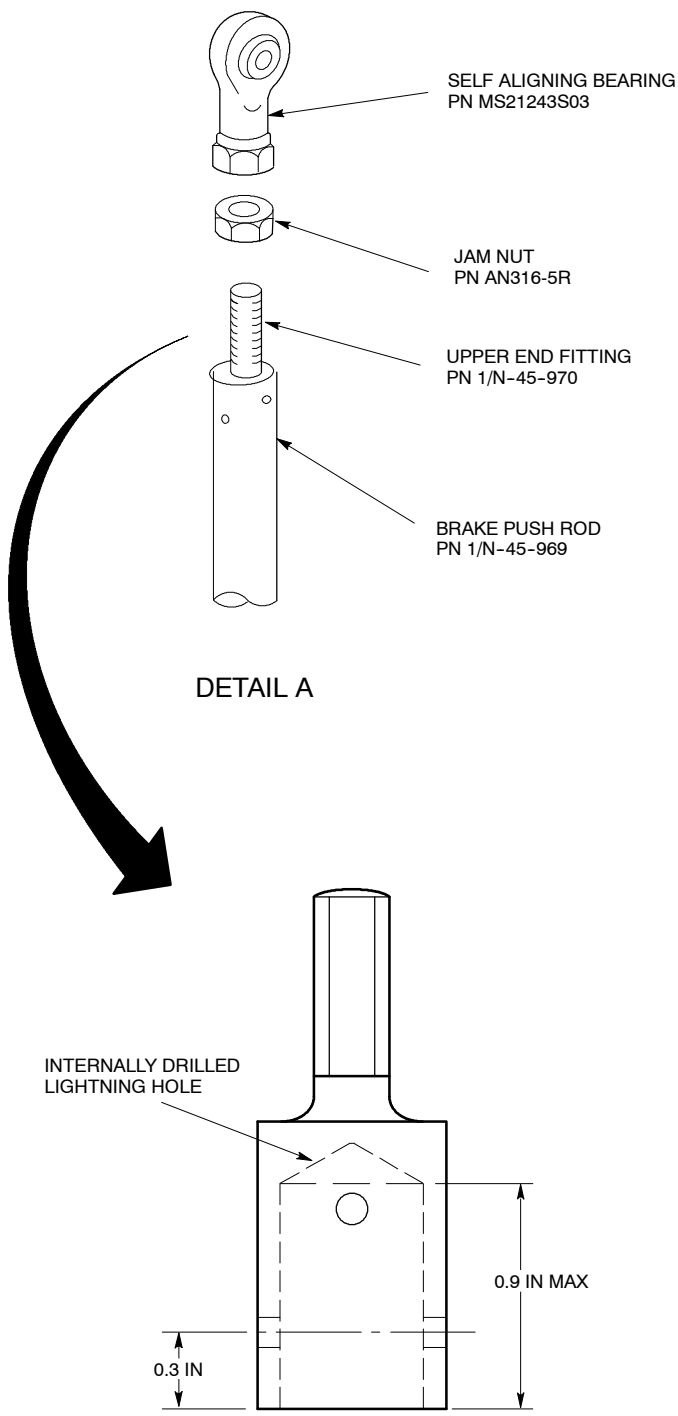


Figure 2 Upper End Fitting — Brake Push Rod