

RESTRICTED

AL No 411
(Elevator Connecting Rods - intro)

AP 4781A, Vol 2
Leaflet No D 53

Gnat T Mk 1 Aircraft - Flying Controls - To introduce Elevator Connecting Rods, Part 'A':- Part No 1845/4877 (Ref No 26DN/1496907) in place of Part No 1845/2291 (Ref No 26DN/3298)(BSF); Part 'B':- Part No 1845/4877UN (Ref No 26DN/1496908) in place of Part No 1845/2291UN (Ref No 26DN/5688)

(Mod No Gnat/684)

(Class C/3)

(AB/A/23206.- 4.11.69)

1. INTRODUCTION

Defect Reports have been received from the Service, of cracked fork ends and threaded inserts due to stress corrosion; this modification introduces new elevator connecting rod assemblies with fork end fittings of steel in place of light alloy.

(1) This modification supersedes SI No Gnat/28 (Elevator and Rudder Control Rods: Cracking of Fork Ends and Threaded Inserts).

(2) This modification is to be embodied in Gnat T185D Aircraft Serial Nos XM705 to XM 709 (exclusive of XM707) and XM 697.

2. EMBODIMENT

This modification is to be embodied as directed by Command Headquarters.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately $9\frac{1}{2}$ man hours; and normal functioning time to test.

4. DRAWINGS REQUIRED

No drawings are required for the embodiment of this modification.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

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Part 'A' - Pre Mod 303

(a) The Modification Kit which consists of the following items supplied by the Contractor, will be assembled by No 16 Maintenance Unit under Ref No 26DN/110684:-

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/1496907	1845/4877	Rod, Connecting assy (elevator)	2	B
28P/9527619	SP 90/C7	Split pin	4	C

Part 'B' - Post Mod 303

(a) The Modification Kit which consists of the following items supplied by the Contractor will be assembled by No 16 Maintenance Unit under Ref No 26DN/120684:-

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/1496908	1845/4877UN	Rod, Connecting assy (elevator)	2	B
28P/9527619	SP 90/C7	Split pin	4	C

The above items will be issued to RAF Units at home on issue order; no demands are to be submitted. RAF Units abroad and all other users, are to demand separately their requirements of Kits as listed in sub-para (a) of Parts 'A' and 'B' in accordance with current regulations.

(2) Special Tools and/or Test Equipment

No special tools or test equipment are required for the embodiment of this modification.

6. MODIFICATION OF SPARES

The following list shows the spares affected by this modification and the parts required to modify them:-

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/3298	1845/2291	Rod, connecting assy (elevator)		B
26DN/5688	1845/2291UN	Rod, connecting assy (elevator)		B
26DN/1669	1245/429	Fork end		C

These parts cannot be modified.

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7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Reference, Part and Assembly Numbers as follows:-

<u>Old</u>			<u>New</u>	
<u>Ref No</u>	<u>Part/Assy No</u>	<u>Nomenclature</u>	<u>Ref No</u>	<u>Part/Assy No</u>
26DN/1483970	1830/381A/6	Tail plane, port	26DN/1496909	1830/381A/7
26DN/205	1830/382A/2	Tail plane, stbd	26DN/1496910	1830/382A/3
26DN/1483971	1830/381A/UN/6	Tail plane, port	26DN/1496911	1830/381A/UN/7
26DN/206	1830/382A/UN/2	Tail plane, stbd	26DN/1496912	1830/382A/UN/3

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:-

Note: Before any electrical circuit is disturbed or disconnected, all electrical power supplies in, to or from the aircraft are to be disconnected. Power supplies are to be reconnected only when the person responsible for embodying or inspecting the modification is satisfied that all action has been taken to make the aircraft safe for reconnection.

Part 'A' Pre UN

- (1) Remove the "L" shaped access panels on port and starboard tail planes.
- (2) Remove the split pins, nuts, washers and bolts attaching connecting rod assembly (Part No 1845/2291A) to elevator lever assembly (Part No 1845/2241 and 2242) port and stbd. Retain nuts, washers and bolts but discard the split pins.
- (3) At the other end of the connecting rod assembly, remove the split pins, nuts, washers and bolts attaching the rod assembly to the elevator operating levers. Retain nuts, washers and bolts but discard the split pins.
- (4) Withdraw the connecting rod assembly and discard.
- (5) Assemble new connecting rod assembly (Part No 1845/4877) into tail plane, connecting to elevator lever assembly, port and stbd with existing bolts, washers and nuts removed at operation (2) but new split pins (Part No SP 90/C7 - 2 off).

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(6) Connect the other end of the new connecting rod assembly to the elevator operating levers using existing bolts, washers and nuts removed at operation (3), but new split pins (Part No SP 90/C7 - 2 off).

(7) Check the movement of elevator controls in accordance with AP 101B-1801-1A, Sect 3, Chap 4.

(8) Re-fit access panels to port and stbd tail planes.

(9) Alter the Part Numbers of the port and stbd tail planes from 1830/381A/6 and 1830/382A/2 to 1830/381A/7 and 1830/382A/3, respectively.

(10) Record Mod No 684 on the modification plates located on the port and stbd tail planes.

Part 'B' Post UN

Proceed as Part 'A' but substitute UN parts.

9. SPECIAL TESTS AFTER EMBODIMENT

When this modification has been embodied and inspected the following special tests are to be carried out:-

As the embodiment of this modification involves disturbance of the elevator control system, an independent check of the control system is to be made in accordance with AP 3158, Vol 2, Leaflet B28.

10. RECORDING ACTION

When this modification has been embodied and inspected in accordance with current authorised procedure, the relevant entries are to be made in the appropriate aircraft records.

11. DISPOSAL OF REDUNDANT PARTS

The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of as scrap in accordance with current procedure:-

<u>Ref No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Class of Equipment</u>
26DN/3298	1845/2291A	Rod, connecting assy (elevator)		
26DN/5688	1845/2291A/UN	Rod, connecting assy (elevator)		

12. EFFECT ON WEIGHT AND MOMENT

This modification causes a change in the Basic Weight of plus 0.18 lb with a change in moment of plus 61 lb ins. about the CG datum.

13. EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

This modification does not affect the operation or handling of the aircraft or equipment.

14. EFFECT ON SERVICING

Embodiment of this modification supersedes the work called for by SI Gnat/28, on the elevator controls.

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