

Section

T

Contents List

Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
				1	2	3	4	5	6	
				Introduced by A.L. No.						
T 1	CABIN CONDITIONING EXPANSION JOINT	875	26							
T 2	CABIN CONDITION DUCTSTAT BOARD.	1045	110							
T 3	CABIN CONDITIONING.	1065	120							
T 4	CABIN CONDITIONING SYSTEM.	1038	144	171	219					
T 5	Cabin Conditioning Pipe joints	1147	197							
T 6										
T 7										
T 8										
T 9										
T 10										
T 11										
T 12										
T 13										
T 14										
T 15										
T 16										
T 17										
T 18										
T 19										
T 20										
T 21										
T 22										
T 23										
T 24										
T 25										
T 26										

NOTE TO USER :—

Insert relevant A.P. No. at top of page.

M 193
1
A.L. No. 26
(Cabin conditioning - expansion joint)

A.P.4347J, Vol. 2
Leaflet No. T.1

Hunter F.G.A. Mk. 9 Aircraft - Centre Fuselage, Cabin Conditioning Feed Pipe, Expansion Joint Revised

(Mod. No. Hunter/875.)

(Class C/3, on replacement of cabin conditioning feed pipe and/or expansion joint)

(AB/A/11335. - 13.7.60.)

1. INTRODUCTION

To prevent failure of the expansion joints in the feed pipes for cabin conditioning system, improved joints and joint supports have been introduced.

- (1) This modification does not supersede or render unnecessary any work called for by approved modifications, Command modifications, S.T.I.s., S.I.s., or S.R.I.M.s.
- (2) This modification is not essentially connected with any other approved modification.

2. EMBODIMENT

This modification is to be embodied on replacement of cabin conditioning feed pipe and/or expansion joint.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 44 man-hours (40 to strip and re-assemble; 4 to embody).

4. DRAWINGS REQUIRED

The following drawing is required, and is to be demanded in accordance with A.P.3158, Vol. 2, Leaflet No. D.7:-

Drawing No.	Title
C.236291	Assy. of Expansion Joints and Supports

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

- (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. 26FX/100875:-

Ref. No.	Part No.	Nomenclature	Qty.	Class Equip
26FX/-	A.235791	Sea Housing	2	C
26FX/-	F.236292	Thrust Plate	2	C
26FX/-	F.236293	Studs	4	C
28M/13124	A.27/C.T.	Nut	8	C
28M/10288	AGS.2001/C.1	Nut	8	C
28D/9353	AS.1248/1/4C	Bolt	4	C
28W/9419475	SP.15C	Washer	4	C
28W/1200071	SP.23C	Washer	4	C
27QA/781	G.D.2001/C.25	'O' Ring	4	(Dowty C Seals Ltd.)

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R.A.F. Units abroad, and all other users, are to demand separately their requirements of kits as listed above, in accordance with current regulations.

- (b) The following ~~parts~~ material is also required and is to be provided under Unit arrangements:-

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
30A/3055	-	Stainless Steel, Wire, 22.s.w.g. As reqd Spec. D.T.D.189.		C

(2) Special Tools or Test Equipment

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

SPARES AFFECTED

No spares are affected by this modification.

CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Reference, Part or Assembly Numbers as a result of this modification.

SEQUENCE OF OPERATIONS

The following is the sequence of operations:-

- (1) Remove access doors for fuel vent connections forward of frame 26, port and starboard
- (2) Breakdown the expansion joint connections on the cabin conditioned feed-pipes between pipes, Part No. C.201553/6 and C.202090 (port) and between pipes Part No. C.201553/23 and C.202090 (starboard), retaining outer sleeves, Part No. AGS.904/K.
- (3) Remove half-clamps Part No. A.188353 about pipes, Part No. C.201553/6 (port) and C.201553/23 (starboard) forward of frame 26.
- (4) Modify frame 26 and fill redundant holes in frame with bolts, Part No. AS.1248/1/4C, washers, Part No. SP.15C, and nuts, Part No. AGS.2001/C1, as shown on Drawing No. C.236291.
- (5) Re-assemble the half-clamps about pipes, Part No. C.201553/6 (port) and C.201553/23 (standard) together with studs, Part No. F.236293 and washers, Part No. SP.23C, as shown on Drawing No. C.236291.
- (6) Fit thrust plates, Part No. F.236292 to studs and between the pipe connections as shown on Drawing No. C.236291.
- (7) Re-assemble the expansion joint connections (port and starboard) using existing outer sleeves, Part No. AGS.904/K together with seal housings, Part No. A.235791 and 'O' rings, Dowty Part No. GD.2001/C.25 and fully tighten connections, as shown on Drawing No. G C.235291.
- (8) Adjust the lock nuts on the studs to ensure that thrust plates are tight against the outer sleeve to give rigid support to the expansion joint connections (port and starboard).
- (9) Wire lock the expansion joints over the thrust plates using 22 s.w.g. stainless steel wire Spec. B.T.D.189.

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(10) Replace the access doors for the fuel vent connections (port and starboard) .

9. TESTING AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10. RECORDING ACTION

Record on Form 700.

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 A.P.830, Vol. 1 (5th Edition), Leaflet A.19/1:-

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FX/1385	F.190242	Collar	2	
26FX/4601	F.203207	Spacer Tube	2	
26FX/1659	STD.1744/10	Sleeve	2	

12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a change in weight of plus 0.75 lb. with a change in the moment of minus 8 lb. in. about the C.G. Datum.

RESTRICTED

M193
A.L. No. 110

(Cabin condition, ductstat guard - intro.)

W. O. HARRIS
A.P. 4347J, Vol.2
Leaflet No. T.2

Hunter FGA. Mk.9 Aircraft - Cabin conditioning System - Ductstat Guard Introduced

(Mod. No. Hunter 1045.)

(Class B/2.)

(AB/A/14160.- 11.5.62.)

1. INTRODUCTION

A guard is introduced to prevent ice fracturing the ductstat element.

(1) This modification does not supersede or render unnecessary any work called for by approved modifications, Command modifications, S.T.I.s, S.I.s or S.R.I.M.s.

(2) This modification is not essentially connected with any other approved modification.

2. EMBODIMENT

This modification is to be embodied by:-

2nd Line Servicing Units: At the first opportunity and not later than 1 month after receipt of parts

3rd Line Servicing Units (R.S.U.): As detailed in A.P.3158, Vol.2, Leaflet B/6

4th Line Servicing Units (Repair Depots): Before issue of aircraft

Aircraft Storage Units: In accordance with the Standard of Preparation.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 3 man-hours.

4. DRAWINGS REQUIRED

Drawing No. A.P.4347J/T.2/62 is incorporated in this leaflet.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts or Materials

The Modification Kit which consists of the following items supplied by the Contractor, will be assembled by No.16 Maintenance Unit under Ref.No.26FX/101045:-

Ref.No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FX/	A.250536	Guard	1	
26FX/8993	F.211740	Washer	2	C
28D/12531	A.25.3.C	Bolt	4	C
28D/8342	AS.1248.2.C	Bolt	4	C

The above items will be issued to R.A.F. Units at home on issue order - no demands are to be submitted. R.A.F. Units abroad, and all other users, are to demand separately their requirements of kits as listed above.

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(2) Special Tools or Test Equipment

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

6. SPARES AFFECTED

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

Ref.No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FX/6087	C.205316	Four way piece - N.R. Valve to cabin feed pipes.		

Parts required:-

26FX/	A.250536	Guard	1	
26FX/8993	F.211740	Washer	2	C
28D/8342	AS.1248.2.C	Bolt	4	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (D.G.E.)

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

Ref.No.	Old Part/Assy. No.	Nomenclature	Ref.No.	New Part/Assy. No.
26FX/6087	C.205316	Four way piece - N.R. Valve to cabin feed pipes	26FX/10703	C.251103

8. 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.

(1) Render the aircraft electrically safe.

(2) Locate 4-way piece, Part No. C.205316 situated to the port side of the cockpit aft of the pilots seat, and disconnect cable assembly F.80, Part No. B.207872 from ductstat, Part No. F.H.G./A/49.

(3) Remove ductstat, Part No. F.H.G./A/49 complete with bolts, Part No. AS.1248.1.C (4 off); spring washers, Part No. SP.47.C (4 off); backing plate, Part No. F.211739 and sealing washer, Part No. F.211740.

(4) Insert guard, Part No. A.250536; sandwiching between two new washers, Part No. F.211740, as shown on the drawing.

(5) Re-assemble ductstat, Part No. F.H.G./A/49 complete with existing spring washers, Part No.SP.47.C (4 off) and backing plate, Part No. F.211739 using new bolts as shown on the drawing.

(6) Repart number 4-way piece, Part No. C.205316 and C.251103.

(7) Reconnect cable assembly F.80, Part No. B.207872 to ductstat.

(8) Reinstate the electrical supply (A.P.4347F, Vol.1, Sect.5, Chap.1 refers).

Note:- 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.

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9. TESTING AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10. RECORDING ACTION

Record on the Aircraft Form 700.

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 A.P.830, Vol.1 (5th Edition), Leaflet No. A.19/1:-

<i>Ref.No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FX/8993	F.211740	Sealing Washer	2	C

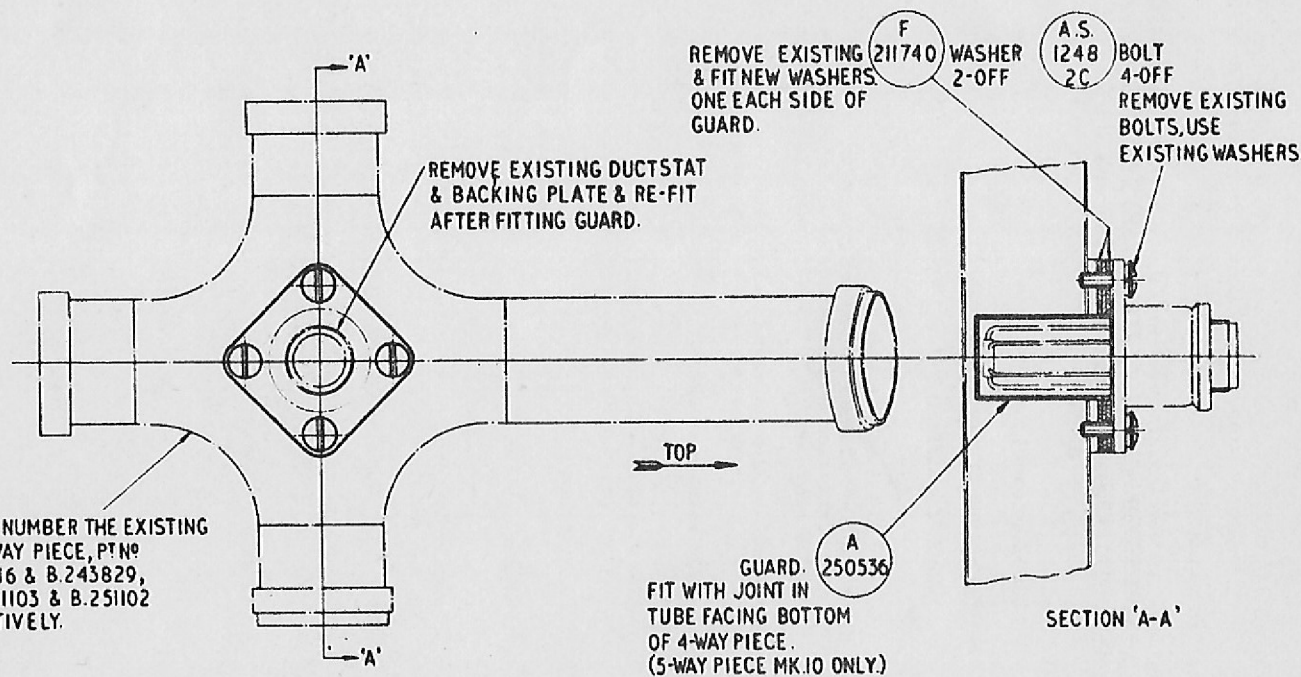
12. EFFECT ON WEIGHT, MOMENT AND SERVICING

- (1) This modification has no effect on weight or moment.
- (2) This modification has no effect on the Servicing Schedule.

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Drawing No. A.P.4347J/T.2/62

RE-PART NUMBER THE EXISTING
4 OR 5 WAY PIECE, PTN^o
C.205316 & B.243829,
AS C.251103 & B.251102
RESPECTIVELY.



Hunter F.G.A. Mk. 9 Aircraft - Cabin Conditioning System.
To introduce Controller Type 'A' (Ref. No. 27KD/510) with
enlarged Orifice (Mod. No. Normalair/146)

(Mod. No. Hunter/1065.)

(Class B/2.)

(AB/A/14696. - .62.)

1. INTRODUCTION

Normalair Mod. No. 146 is introduced to provide a large orifice in the type 'A' Controller to reduce excessive cabin pressure fluctuations. This modification introduces this new type of controller to the aircraft.

(1) This modification does not supersede or render unnecessary any work called for by approved modifications, Command modifications, S.T.I.s., S.I.s. or S.R.I.M.s.

(2) This modification is essentially connected with Normalair Mod. No. 146 (Controller type 'A' (Ref. No. 27KD/510) orifice size increased), if that work is not already embodied it must be effected concurrently.

2. EMBODIMENT

This modification is to be embodied by:-

2nd Line Servicing Units: At the first opportunity and not later than one month after receipt of parts

3rd Line Servicing Units (R.S.U.s): As detailed in A.P.3158, Vol. 2, Leaflet No. B/6

4th Line Servicing Units (Repair Depots): Before issue of aircraft

Aircraft Storage Units: In accordance with the Standard of Preparation

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 5 man-hours.

4. DRAWINGS REQUIRED

No drawings are required for the embodiment of this modification.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

(a) See Normalair Mod. No. 146 A.P.1275A, Vol. 2, Leaflet No. K.19.

(b) The following material is also required and is to be provided under Unit arrangements:-

RESTRICTED

11/193
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F.S. MAXWELL
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A.L. No. 219
(Cabin conditioning system)

A.P. 4347J, Vol. 2
Leaflet No. T. 4
(Alteration 2)

Hunter FGA Mk.9 Aircraft - Cabin Conditioning System
Revised to Improve Water Extraction

(AB/A/14675. - 3.6.64.)

1. A.P.4347J, Vol. 2, Leaflet No. T.4 (Mod. No. Hunter 1038) is amended as follows:-

(1) Para. 1, Introduction. *Add* sub-para (3):

"(3) It is recommended that Mod. No. Hunter 1147 (Cabin Conditioning System, Pipe Joints Improved), be embodied concurrently with this modification in order to avoid the breakdown of 'Araldite' joints."

(2) Para. 4, Drawings Required. *After* Drawing No. D.250327 *insert*: "Issue No. 2 (ASH.1200/35)."

(3) Para. 8, Sequence of Operations, Operation (27), "NOTE, line 2. *After* "glare shields", *insert* "On pre Mod. 378 aircraft, glare shields may be cut away as shown on Drawing No. D.250327 to clear possible fouling and for ease of assembly."

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A.L.No. 171
(Cabin conditioning system)
(A.L.No. 144 cancelled)

A.P. 4347J, Vol. 2
Leaflet No. T.4
(Alteration 1 incorporated)

**Hunter F.G.A. Mk. 9 Aircraft - Cabin Conditioning System
Revised to improve Water Extraction**

(Mod. No. Hunter/1038.)

(Class B/2, C.W.P.)

(AB/A/14675. - 18.1.63.)

*Note:- This leaflet supersedes A.P. 4347J, Vol. 2,
Leaflet No. T.4 and is the authority for cancelling A.L.
No. 144.*

1. INTRODUCTION

To clear water which may be formed in the cabin conditioning system when aircraft are flying at low level in high humidity conditions this modification introduces drains at the hood and windscreen spray pipes.

- (1) This modification does not supersede or render unnecessary any work called for by approved modifications, Command modifications, S.T.I.s, S.I.s or S.R.I.M.s.
- (2) This modification is not essentially connected with any other approved modification.

2. EMBODIMENT

This modification is to be embodied by Contractor's Working Party in Commands at Home and by Command arrangements overseas:

2nd Line Servicing Units: At the first opportunity and not later than 1 month after receipt of parts

3rd Line Servicing Units (R.S.U.s): As detailed in A.P. 3158, Vol. 2, Leaflet No. B/6

4th Line Servicing Units (Repair Depots): Before issue of aircraft

Aircraft Storage Units: In accordance with the Standard of Preparation.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 50 man-hours (30 to strip and re-assemble; 20 to embody).

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4. DRAWINGS REQUIRED

- (1) Drawing No. A.P. 4347J/T.4/63, Sheets 1 and 2 is incorporated in this leaflet.
- (2) The following drawings are also required, and are to be demanded in accordance with A.P. 3158, Vol. 2, Leaflet No. D7:-

<i>Drawing No.</i>	<i>Title</i>
D.250327	Assy. of Hood and Windscreen Drains
C.232141	Windscreen Front Panel Assy. (Ref.)

5. PARTS AND SPECIAL TOOLS REQUIRED

- (1) Parts and/or Materials

- (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. 26FX/101038:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FX/-	D.250327/1	Tube, $\frac{1}{2}$ in. o/d x $\frac{1}{4}$ in. i/d Gryflex translucent tubing x 31 in. long	1	-
26FZ/-	D.250327/2	Tube, $\frac{1}{2}$ in. o/d x $\frac{1}{4}$ in. i/d Gryflex translucent tubing x 16 $\frac{1}{2}$ in. long	1	-
26FX/-	D.250327/3	Tube, $\frac{1}{2}$ in. o/d x $\frac{1}{4}$ in. i/d Gryflex translucent tubing x 33 in. long	1	-
26FX/-	D.250327/4	Tube, $\frac{1}{2}$ in. o/d x $\frac{1}{4}$ in. i/d Gryflex translucent tubing x 24 in. long	1	-
26FX/-	C.185829/41	Pipe	1	-
26FX/-	B.251062	Sub-assy. of bottle	1	-
26FX/-	B.251063	Sub-assy. of bottle	1	-
		Fr. 10 - Stbd.		
26FX/-	B.251064	Sub-assy. of bottle	1	-
		Fr. 12 - Port		
26FX/-	F.250287	Drain, Hood Spray (port)	1	-
26FX/-	F.250288	Drain, Hood Spray (Stbd.)	1	-
26FX/-	F.250289	Drain, Screen Spray (port)	1	-
26FX/-	F.250417	Drainage vent	1	-
26FX/-	F.251468	Drain, Screen spray (Stbd.)	1	-
28D/ 1007971	A.25.1.B	Bolt	2	C
28D/ 1010658	A.25.1.B	Bolt	4	C

RESTRICTED

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomen'ature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
28D/1008149	A.25.2.B	Bolt	4	C
28D/9138768	A.25.1.C	Bolt	4	C
28D/9436920	A.25.1.C	Bolt	5	C
28D/9133011	A.25.2.C	Bolt	2	C
28D/1011019	A.25.8.C	Bolt	2	C
28D/12534	A.25.9.C	Bolt	2	C
26FX/-	STD.821/6	Washer	1	-
26FX/-	STD.1507/2/	Distance tube	1	-
	077			
26FX/-	STD.1507/23/	Distance tube	3	-
	070			
26FZ/-	STD.1507/24/	Distance tube	1	-
	070			
28F/9438104	A.G.S.1105/C	Union adaptor	1	C
28M/10288	A.G.S.2001.	Nut	15	C
	C1			
28M/10327	A.G.S.2002.	Nut	10	C
	B1			
28Q/9417235	A.G.S.2050/	Rivet pop	1	C
	624/BH			
28Q/7655	AS.164/404	Rivet	4	C
28W/9419474	SP.15.B	Washer	10	C
28W/9419475	SP.15.C	Washer	15	C
5F/2281	H.V.3341	Hellerman strap-	5 ft.	C
		ping		
5F/9434855	N.Y.3342	Hellerman stud	18	C
32C/509		Tube, 3/16 in.	3 ft.	C
		1/d x 9/16 in.		
		o/d Type 3 Briad		
		reinforced, Specn.		
		D.T.D. 625A		
26FX/-	-	20G Galvanised	9 in.	-
		soft iron wire		
26FX/-	-	Tube, PVC 1 1/2 1/d	5 in.	C

All the above will be issued to R.A.F. Units at home on issue order - no demands are to be submitted. R.A.F. Units abroad, and all other users, are to demand separately their requirements of kits as listed in sub-para. (a) above, in accordance with current regulations.

- (b) The following materials are also required and are to be provided under Unit arrangements:-

<i>Ref. No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
33H/9450627	Compound Sealing, Bostik 1752	As reqd.	C
33H/39	Adhesive, Araldite AY.121	As reqd.	C

RESTRICTED

<i>Ref. No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
33H/2202078	Hardener No. HY. 951	As reqd.	C
30A/3339	Wire, S.S. Locking, specn. D.T.D. 189A 22 s.w.g.	As reqd.	C
32A/94	Cord, Specn. F.35	As reqd.	C
5F/9400444	Tape insulating $\frac{1}{2}$ in. wide	As reqd.	C

(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 details the spares etc. which are affected by this modification and which can be modified and the parts required to modify them:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FX/9945	C.232141	Windscreen Front Panel Assy.		
Part required:-				
32C/509		Tube 3/16 in. 1/dia. x 9/16 in. o/dia, Type 3 Braid reinforced, Specn. D.T.D. 625A	36 in.	C
26FX/-		Wire, soft iron galvan- ised x 20 s.w.g.	9 in.	C

Spares will be modified by R.A.F. Stations and the Stock Holding Unit as directed by the Air Ministry (D.G.E.).

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>Ref. No.</i>	<i>New Part/Assy. No.</i>
26FX/9945	C.232141	Windscreen Front Panel Assy.	26FX/10779	F.251909

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:-

Note:- Before any electrical circuit is disturbed or disconnected, all electrical supplies in, to or from the aircraft are to be disconnected. Power supplies are to be reconnected only when the

RESTRICTED

person responsible for embodying or inspecting the modification is satisfied that all action has been taken to make the aircraft safe for reconnection.

- (1) Render the aircraft electrically safe (A.P. 4347, Vol. 1, Sect. 5, Chap. 1 refers).
- (2) Remove the sliding hood (A.P. 4347, Vol. 1, Sect. 3, Chap. 1 refers).
- (3) Remove the pilot's seat (A.P. 4288B, Vol. 1 refers).
- (4) Remove the centre instrument panel (A.P. 4347, Vol. 1, Sect. 5, Chap. 2 refers).
- (5) Remove the port and starboard glare shields.
- (6) Remove the forward hood lock guards.
- (7) Remove the hood spray pipes (port and starboard), windscreen and quarter light spray pipe and quarter light (starboard) spray pipe.
- (8) Remove the gun pack (A.P. 4347, Vol. 1, Sect. 7, Chap. 3, refers).
- (9) Remove air drier, Part No. A.5500 (Triplex) from forward face, starboard side, frame 8. Detach from windscreen banjo as shown on the drawing.
- (10) Locate and drill 2 holes Morse No. 25 at aft face, port side, of frame 7 as shown on the drawing.
- (11) Remove vacated spring clips, Part No. AS.2294/9 (2 off) from frame 8, open holes to Morse No. 25 and bolt to frame 7 as shown on the drawing.
- (12) Remove tube from air drier and fit new tube 3/16 in. dia. x 9/16 in. o/dia. x 36 in. long, type 3, braid reinforced (ref. No. 32C/509) to air drier. Clip air drier into position at frame 7 and join up to banjo on windscreen as shown on the drawing (see also instructions at detail 'F' on Drawing No. C.232141).
- (13) Remove existing clip for air drier tube from frame 7 starboard side and fit to port side at existing tooling hole in strap plate using existing fixings. Clip tube into position.
- (14) At frame 8, forward face, starboard side, at position vacated by clips removed at operation (9), open up existing holes to Morse No. 10. From sub-assy. of bottle, Part No. B.251062, temporarily remove bottle and bolt bracket to frame 8. Re-fit bottle

RESTRICTED

ensuring that it is tightly screwed up to cap before tightening up clips as shown at detail 'C' of Drawing No. D.250327.

- (15) At frame 10, starboard side, drill out rivets and remove existing clip, Part No. F.199515, re-fit, in position shown and fill redundant holes as shown on the drawing.
- (16) Temporarily remove bottle from sub-assy. of bottle, Part No. B.251063. Locating from existing tooling hole, mark off and drill 1 hole Morse No. 10 in frame. Drill out rivet and open up hole to Morse No. 10. Bolt bracket to frame. Mark off 1 hole in bracket and drill 1 hole Morse No. 10 through bracket and frame and fit bolt and distance tube. Re-fit bottle ensuring that it is tightly screwed up to cap as shown in detail 'B' of drawing No. D.250327.
- (17) Remove crowbar (Ref. No. 1A/3948) from attachments at frames 11 and 12 (if fitted).

Note:- Crowbar now becomes redundant.

- (18) From frame 11, port side, remove crowbar attachments, spring clip, Part No. A.111330 and bracket, Part No. A.199574.
- (19) From frame 12, port side, remove crowbar attachments, Spring clip, Part No. A.111330, bracket, Part No. A.199573 and stop bracket, Part No. F.200175.
- (20) Temporarily remove bottle from sub-assy. of bottle, Part No. B.251064. Mark off and drill 1 hole Morse No. 11 in frame. Bolt bracket to frame and re-fit bottle ensuring that it is tightly screwed up to cap, as shown in detail 'A' of Drawing No. D.250327.
- (21) Aft of frame 14, remove existing vent pipe, Part No. C.18529/19 from between the water extractor and the port side of the fuselage together with existing union adaptor and washer. Remove existing draining vent, Part No. F.187848. Fit new pipe, Part No. C.185829/41 using union adaptor, Part No. A.G.S. 1105/C and washer, Part No. STD. 821/6 and drainage vent, Part No. F.250417 as shown on Drawing No. D.250327.

Note:- Connection to be locked with stainless steel wire, Specn. D.T.D. 189A S.W.G.

RESTRICTED

- (22) To forward end of hood spray pipe, Part No. E. 234189, fit drain, Part No. F.250287, and using tube on drain as guide, drill 1 hole 5/32 in. dia. through lagging into pipe, as shown on Drawing No. D. 250327 (Bolt heads to be outboard).
- (23) To forward end of hood spray pipe, Part No. E.235170 fit drain, Part No. F.250288. Drill 5/32 in. dia. hole as in operation (22) as shown on Drawing No. D. 250327 (Bolt heads to be inboard).
- (24) Fit drain, Part No. F. 250289 to windscreen and quarter light spray pipe, Part No. C.207909 as close to bend as possible. Drill 5/32 in. dia. hole as in operation (22), as shown on Drawing No. D. 250327.
- (25) Fit drain, Part No. F-251438 to quarter light spray pipe, Part No. B. 207910 as close to bend as possible. Drill 5/32 in. dia. hole as in operation (22), as shown on Drawing No. D. 250327.

Note: - Ensure that all swarf is removed from pipes after drilling. Drains must be sealed when clamped to pipes with Araldite A.V. 121N (Ref. No. 33H/39) and hardener HY951 (Ref. No. 33H/2202C78).

- (26) Re-fit the modified hood spray pipes (port and starboard), windscreen and quarter light spray pipe and quarter light spray pipe complete with drains. Seal the joints of the windscreen pipes inside and out with Bostik 1752 (Ref. No. 33H/9450627) as shown on Drawing No. D. 250327.

Note: - Wrap slit socket joints (4) with 1/4 in. wide insulating tape (Ref. No. 5F/9400444) to prevent water seepage. ►

- (27) Temporarily fit port and starboard glare shields and drain tubes, Part No. D. 250327/384. Mark off glare shields to suit. Remove glare shields and drill 5/8 in. dia. std. hole in each, as shown on Drawing No. D. 250327.

Note: - It may be found necessary to elongate these holes to 3/4 in. to give satisfactory fitting of glare shields.

- (28) Re-fit glare shields.
- (29) Fit tube, Part No. D.250327/1 between drain at hood spray pipe (port) and sub-assy. of bottle, Part No. B.251064 on front face of frame 12 (port). Fit tube, Part No. D.250327/2 between drain at hood spray pipe (stbd.) and sub-assy. of bottle, Part No. B.251063 on aft face of frame 10 (stbd.). Fit tubes, Part Nos. D.250327/3 and D.250327/4 to drains on

RESTRICTED

windscreen spray pipe and quarter light pipe respectively and connect to sub-assy. of bottle, Part No. B.251062 on forward face of frame 8 (Stbd.) as shown on Drawing No. D.250327.

- (30) Strap tubes into position, re-setting, if necessary, oxygen and cabin conditioning pipes and re-stowing any electrical cables or sockets stowed locally to give free access to bottles. Bind oxygen pipe union aft of frame 7, starboard side, with P.V.C. tube x 1½ in. dia. tying into position with cord, Specn. F.35, as shown on Drawing No. D.250327.
- (31) Re-fit the forward hood lock guards removed in operation (5) cutting away locally, if necessary, to prevent chafing of tubes.
- (32) Replace the centre instrument panel (A.P. 4347, Vol. 1, Sect. 5, Chap. 1 refers).
- (33) Replace the pilot's seat (A.P. 4288B, Vol. 1 refers).
- (34) Replace the sliding hood (A.P. 4347, Vol. 1, Sect. 3, Chap. 1 refers).
- (35) Replace the gun pack (A.P. 4347, Vol. 1, Sect. 7, Chap. 3 refers).
- (36) Reinstate the electrical supply (A.P. 4347K, Vol. 1, Sect. 5, Chap. 1 refers).
- (37) Record the embodiment of this modification on the front fuselage modification plate.

9. SPECIAL TESTS AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10. RECORDING ACTION

Record on Form 700.

11. DISPOSAL OF REDUNDANT PARTS

- (1) The undermentioned parts rendered redundant by the embodiment of this modification are to be returned to No. 7 Maintenance Unit, R.A.F., Quedgeley:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
1A/3948	-	Crowbar	1	(if fitted)
27AU/515	23782	Drain Coupling (Sir George Godfrey Ltd.)	1	

- (2) The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of as scrap in accordance with A.P. 830, Vol. 1, (5th Edition), Leaflet No. A.19/1:-

RESTRICTED

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FX/2787	C. 185829/19	Pipe	1	C
26FX/4101	A. 111330	Spring clip	2	C
26FX/-	A. 199573	Bracket	1	-
26FX/-	A. 199574	Bracket	1	-
26FX/-	F. 187848	Drainage vent	1	-
26FX/-	F. 200175	Stop bracket	1	-

12. EFFECT ON WEIGHT AND MOMENT

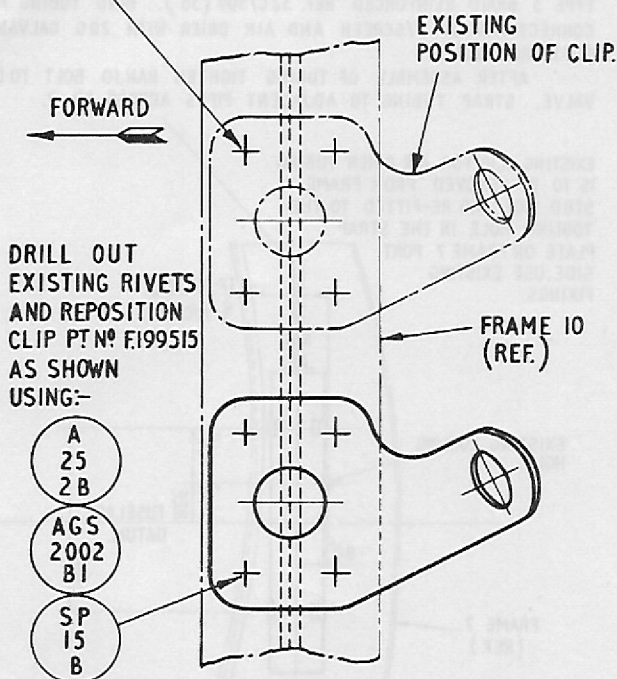
This modification causes a change in the basic weight of plus 3.25 lb. with a change in the moment of minus 501 lb. in. about the C.G. datum.

13. EFFECT ON SERVICING AND SERVICING SCHEDULE

This modification affects the servicing schedule.

RESTRICTED

REDUNDANT HOLES TO
BE FILLED WITH:-



VIEW LOOKING OUTB'D.-STBD. SIDE.

CLIP FOR PILOT'S HARNESS
FR.10 REPOSITIONED.

DRG. No. A.P. 4347J/T4/63
SHEET 1

Hunter FGA Mk.9 Aircraft - Cabin Conditioning System. Pipe Joints
improved.

(Mod. No. Hunter/1147.)

(Class B/2, to aircraft embodying Mod. 1038
and to be embodied concurrently with Mod.
1038 if not already embodied.)

(AB/A/17622.-8-11-83.)

1. INTRODUCTION

To prevent leakage of water at the joints of the cabin conditioning gallery pipes this modification introduces rubber sleeves over the push on joints and improved sealing at the collection points.

- (1) This modification does not supersede or render unnecessary the work called for by any approved Modifications, Command Modifications, S.T.I.s, S.I.s or S.R.I.M.s.
- (2) This modification is applicable to aircraft embodying Mod. No. Hunter/1038 (Cabin Conditioning System Revised to improve Water Extraction); if that work is not already embodied it must be effected concurrently.

2. EMBODIMENT

This modification is to be embodied by:-

2nd Line Servicing Units: At the first opportunity and not later than 2 months after receipt of parts. Failure to embody within this time limit is to be reported in accordance with A.M.O. A.222/58 as amended by A.M.O. A.221/82.

3rd Line Servicing Units (R.S.U.s): As detailed in A.P.3158, Vol. 2, Leaflet No. B/6, para.11

4th Line Servicing Units (Repair Depots): Before issue of aircraft.

Aircraft Storage Units: In accordance with the Standard of Issue/Delivery.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 30 man-hours (7 to strip; 10 to embody; 13 to reassemble).

4. DRAWINGS REQUIRED

The following drawing is required and is to be demanded in accordance with A.P.3158, Vol.2, Leaflet No. D.7:-

RESTRICTED

Drawing No.

Title

D.256665

Spray Pipe Joints Improved.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

- (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. 28FX/101147:-

Ref. No.	Part No.	Nomenclature	Qty	Class of Equipment
28FX/-		Clip - Minox No. 2	4	-
28FX/		Clip - Minox (special)) range 0.94 in. to 1.42 in.)	4	-
28FX/		Sleeve, silicone rubber, Spec. D.T.D. 818, L.4, $\frac{3}{4}$ in. 1/d x 1/16 in. wall x $1\frac{1}{2}$ in. (70 Shore) (Bells Asbestos Engineer- ing Ltd.).	2	-
28FX/		Sleeve, silicone rubber, Spec. D.T.D. 818, L.4, 1.0 in. 1/d x 1/16 in. wall x $1\frac{1}{2}$ in. (70 Shore) Bells Asbestos Engineering Ltd.)	2	-

All the above items will be issued to R.A.F. Units at home on issue order; no demands are to be submitted. R.A.F. Units abroad and all other users, are to demand separately their requirements of kits as listed in sub-para. (a) above, in accordance with current regulations;

- (c) The following materials are to be provided under Unit arrangements:-

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
33H/237	-	"Hermetal" double bond cream	As reqd.	C

(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:-

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28FX/10034	E.235169	Assy. of hood spray pipe		B
28FX/10035	E.235170	Assy. of hood spray pipe		B
28FX/7006	C.207909	Windscreen & port quarter light spray pipe		B
28FX/7007	B.207910	Stbd. quarter light spray pipe		B
33H/237	-	"Hermetal" double bond cream	As reqd.	C

RESTRICTED

Spares will be modified by the Stock Holding Depot and R.A.F. Stations as directed by Air Ministry (D.G.E.).

7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

<i>Old</i>			<i>New</i>	
<i>Ref. No.</i>	<i>Part/Assy. No.</i>	<i>Nomenclature</i>	<i>Ref. No.</i>	<i>Part/Assy. No.</i>
28FX/10034	E.235169	Assy. of hood spray pipe	28FX/11059	E.258410
28FX/10035	E.235170	Assy. of hood spray pipe	28FX/11060	E.258411
28FX/7006	C.207909	Windscreen & port quarter light spray pipe	28FX/11061	C.258496
28FX/7007	B.207910	Stbd. quarter light spray pipe	28FX/11062	B.258497

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.

- (1) Remove the pilots seat (A.P.4288 B, Vol.1 refers).
- (2) Disconnect and remove the hood spray pipes (port and starboard) windscreen and quarter light spray pipe and quarter light (starboard) spray pipe.
- (3) Cut away flanges on windscreen and port quarter light spray pipe, Part No. C.207909 and Stbd. quarter light spray pipe, Part No. B.207910 as shown at Details 'A' and 'B' on Drawing No. D.256665.
- (4) Remove drains from hood spray pipes, Part Nos. E.235169 and E.235170 and pipes, Part Nos. C.207909 and B.207910.
- (5) Cut away lagging and re-fit drains in original positions, filling gap between pipe and drain with "Hermetal" double bond cream, as shown at "Detail 'C'" on Drawing No. D.256665.

Note:- Ensure that bolts are fitted as shown on Drawing No. D.256665.

- (6) After drains are permanently secured to pipes, drill 5/32 in. dia. std. hole in pipes using the drain tube as a guide.
- (7) Re-part number modified pipes, Part Nos. E.235169, E.235170, C.207909 and B.207910 as E.258410, E.258411, C.258496 and B.258497 respectively.
- (8) Re-fit the modified hood spray pipes as shown on Drawing No. D.256665 and reconnect with existing "Gryflex" drain tubing.

RESTRICTED

- (9) Re-fit the modified windscreen and quarter light spray pipe and the quarter light spray pipe using rubber sleeves and clips as shown at details 'A' and 'B' on Drawing No. D.256665 and reconnect with existing "Gyrflex" drain tubing.

- (10) Replace the pilots seat (A.P.4288 B, Vol.1, refers).

9. SPECIAL TESTS AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10. RECORDING ACTION

Record in Aircraft F.700.

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 A.P.830, Vol. 1 (5th Edition), Leaflet No. A.19/1:-

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FX/10883	STD.851/30	Clip	2	C
26FX/	Std. 851/38	Clip	2	-

12. EFFECT ON WEIGHT AND MOMENT

This modification has no effect on weight or moment.

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 AND SERVICING SCHEDULE

- (1) This modification affects the servicing in that rubber sleeves, and an improved sealing are introduced.
- (2) This modification affects the servicing schedule.

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