

# Section

I

## Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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.						
I 1										
I 2										
I 3										
I 4										
I 5										
I 6										
I 7										
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
				1	2	3	4	5	6	
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I 27										
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§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
Demand it now.

Wk. 48.83/137,711 16m. 1/51 W.H.A.S. 670,00



Introduction and make-up of A.P.4099G, Vol. 2, Part 1

(7/Prtg./11775.—5.4.51.)

GENERAL INTRODUCTION

1. Air Publication No. 4099G has been allotted to the Vampire F.B. Mk. 9 aircraft. The Vol. 2, Part 1, of the A.P. will contain General Orders and Modification leaflets, and will conform to the "Revised (1948) System for Recording Leaflets".

2. To assemble the Vol. 2, Part 1:—

(1) Comply with any "Note to Users" on the attached "Preliminaries":—

(a) Binder (cover label affixed)

(b) Amendment Record Sheet (R.A.F. Form 2096E)

*Note.*—In top R.H. corner amend 'II' to read "2".

(c) Index of Assemblies (R.A.F. Form 2097)

*Note.*—Add "INFORMATORY—I" immediately before "FUSELAGE OR HULL—J"

(d) Section Contents Lists (R.A.F. Form 3850A to T and Z)

(2) Insert in the binder the Amendment Record Sheet, Index of Assemblies, and Section Contents Lists in that order.

**RESTRICTED**

**P.T.O**

**LEAFLET RECORDING AND INCORPORATION**

3. . This leaflet and all further leaflets issued in this Vol. 2, Part 1, are to be dealt with in accordance with the Revised (1948) System. The system, together with examples of the method of the recording and incorporation of leaflets, is detailed in Air Publication 113, Part 1, Section 2, Appendix "A".

**RESTRICTED****Z.7374.R.**

# Section J Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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.						
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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.						
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§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
Demand it now.

Wt.64855/BJ1311 5m, 3/56 W.H.&S. 717/36

A.L. No. 4  
(Cabin pressure valve)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. J.1  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Normalair Cabin Pressure Control Valve Mk. 11 (Stores Ref. 27H/2896) replaces Normalair Cabin Pressure Control Valve Mk. 9 (Stores Ref. 27H/2767)—Introduction

(MOD. NO. VAMPIRE/871.)

(Class B/2 for aircraft which incorporate either Mod. No. Vampire/650, 784 or 905.)

(Class D/4 for aircraft not incorporating either Mod. No. Vampire/650, 784 or 905.)

(7/Mods/10,870.—15.12.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(44445/841) 529726 8245 125 2/56 (H.P.W.) (Gp. 19/1)



A.L. No. 7  
(Fuselage nose cowl catch)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. J.2  
(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—Detachable Fuselage Nose Cowl Improved  
—Catch—Introduction**

(MOD. NO. VAMPIRE/942.)

(Class B/2.)

(7/Mods/12,938.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(43222/115) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)





Vampire F.B. Mk. 9 Aircraft—Re-designed Stop Pin for Canopy Winding  
Handle to Facilitate Replacement of Pin—Introduction

(Mod. No. VAMPIRE/970.)

(Class C/2.)

(7/Mods/13,587.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with the underlisted alterations:—

*Alteration No.**Introduced by*

1

A.L. No. 45

2

A.L. No. 134

will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R****RESTRICTED**

(43222/113) 529721 8245 125 7,55 (H P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Check Cable in place of Cord for Pilot's  
Footstep—Introduction

(MOD. NO. VAMPIRE/984.)

(Class B/2.)

(7/Mods/13,866.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(43222/128) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Fitting Instruction Notice on Canopies to  
ensure Correct Assembly to Fuselage—Introduction

(Mod. No. VAMPIRE/3108.)

(Class C/3.)

(7/Mods/15,798.—15.12.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.



**RESTRICTED**

(44445/849) 599728 8245 125 2/56 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—To Extend area of Protection from Acid  
Corrosion from Batteries in Fuselage—Introduction

(MOD. NO. VAMPIRE/3035.)

(Class C/3.)

(7/Mods/14,247.—15.12.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(44445/843) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)





Vampire F.B. Mk. 9—Guard in Radio Compartment to prevent  
Inadvertent Operation of Canopy Jettison Control Cable by Ground  
Personnel—Introduction

(Mod. No. VAMPIRE/3114.)

(Class C/3.)

(7/Mods/16,909.—23.5.56.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with Alteration 1, introduced by A.L. No. 94, will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9–11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(45243/522) 129949 8245 125 6/56 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Improved Neoprene faced canopy Seals—  
Introduction

(Mod. No. VAMPIRE/3190.)

(Class C/4.)

(7/Mods/18,456.—18.3.53.)

1. This modification is necessary because the present type canopy seals are deteriorating, and it introduces neoprene faced canopy seals in their place. It supersedes Mod. No. Vampire/699.

The work will take approximately 2 man-hours.

2. This modification is to be embodied when the canopy seals next require replacing.

3. The following is the sequence of operations;—

(1) Remove the canopy.

(2) Unlock and remove the connection to the canopy seal Schrader valve which is located on the starboard side of the cockpit; then remove the existing canopy seal, Part No. A00 5177A (ref. only).

(3) Slightly open out the seal retaining channel and offer up the new canopy seal, Part No. 12-FC-89A. After ensuring that the seal is well seated in the retaining channel, gently close it so that the canopy seal is firmly held in place.

(4) Replace the connection to the Schrader valve and re-lock with nickel alloy 22 gauge wire.



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P.T.O.

- (5) Replace the canopy.
- (6) Carry out a cabin pressure test.

4. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/6727	12-FC-89A	Strip, sealing	1	C
30A/3064	—	Wire, locking, nickel alloy, 22 S.W.G.	As reqd.	C

5. The following items are rendered redundant and are to be disposed of in accordance with Air Publication 3045:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/4175	A00 5177A	Strip, sealing	1	C

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(38021/214) M.46420 R665 300 3/53 H.P.W. (Gp.19/1)

(Canopy)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. J.9**Vampire F.B. Mk. 9 Aircraft—Nitrided Stop Pin for Canopy Winding Gear—Introduction**

(MOD. NO. VAMPIRE/3255.)

(Class B/2.)

(7/Mods/19,548.—25.4.53.)

1. This modification results from excessive wear on the stop pin of the canopy winding gear, resulting in disengagement of the locking and subsequent loss of the canopy, and makes provision for the introduction of a hardened pin to obviate this. This modification supersedes and cancels Mod. No. Vampire/970.

The work will take approximately one man-hour.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first opportunity and not later than next Intermediate (or equivalent) Servicing

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

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

*Aircraft Storage Units:* Before issue of aircraft.

3. The following is the sequence of operations:—

(1) Locate the canopy winding gearbox on the starboard side of the cockpit.

(2) Remove and retain the special pin, Part No. AOO.7363A (ref. only), that locks the crank of the canopy winding handle to the link assembly of the gearbox, thus allowing the handle to be moved away from the face of the gearbox and facilitating removal of the now redundant stop pin, Part No. AOO.7263A (ref. only).

*Notes:—*(a) Access to the head of the special pin is gained through a hole drilled in one side of the crank.

(b) As this hole is burred over to retain the pin, it will be necessary to clear the hole carefully before removal of the pin.

(3) Insert the new stop pin, Part No. 12 FC 93, and secure with a new nut, Part No. A16Y/ET. Peen the pin over to lock.

(4) Re-secure the crank to the gearbox link, using the original special pin, which should *not* be screwed up tight. Now burr the edge of the hole to lock the pin. Check the winding gear for correct functioning and locking.

4. The undermentioned part number alterations become necessary upon embodiment of this modification:—

<i>Stores Ref.</i>	<i>Old Part No.</i>	<i>Nomenclature</i>	<i>New Part No.</i>	<i>Stores Ref.</i>
26FC/5627	AOO.7267A	Handle assembly	AOO.7363A	26FC/6764
26FC/6707	AOO.2053A/4	Assembly of gearbox canopy winding gear	AOO.7365A	26FC/6765

5. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The Set is to be issued as a Modification Kit (Stores Ref. 26FC/103255). Demands for Modification Kits, which must quote the Stores reference number, are to be submitted in accordance with A.M.O. A.692/51, para. 6 or 7, as appropriate, to P.S.C.O., No. 25 M.U.:

**RESTRICTED**

P.T.O.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/6766	12.FC.93	Pin, stop	1	C
28L/776	A16Y/ET	Nut	1	C

6. The following items are rendered redundant and are to be disposed of in accordance with current authorized procedure :--

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/5628	AOO.7263	Pin, stop	1	C

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Vampire F.B. Mk. 9 Aircraft—Relief Valve in Fuel System Vent Line—  
Introduction

(MOD. NO. VAMPIRE/3044.)

(Class C/3.)

(7/Mods/17,622.—20.6.56.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with Alteration 1, introduced by A.L. No. 111 will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix "D", paras 9—11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

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(45423/688) 129950 8245 125 7/56 (H.P.W.) (Gp. 19/1)





(Canopy)

Leaflet No. J.11

(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Engagement of Canopy Winding Handle—  
Re-rigged and improved

(7/Mods/18,238.—7.10.53.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet, No. J.11 (A.L. No. 76) (Mod. No. Vampire/3211), is amended as follows:—

- (1) Para. 3. Re-number operations (7)-(11) as operations “(8)”, “(9)”, “(10)”, “(11)” and “(12)”, and *after* operation (6) *insert* new operation (7)  
“(7) Slide the spacer, made up in operation (1), over the link, and assemble link, spacer and plunger to the gearbox as shown in the drawing. Connect the link to the handle crank with the special pin, Part No. A.00106 (ref. only), and lock the pin by burring the edge of the hole in the crank.”

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(39122/275) 6495 R665 400 10/53 H.P.W. (Gp.15/1)



(Canopy)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. J.11**Vampire F.B. Mk. 9 Aircraft—Engagement of Canopy Winding Handle—  
Re-rigged and improved**

(MOD. NO. VAMPIRE/3211.)

(Class C/3, N.C.P.)

(7/Mods/18,238.—19.5.53.)

1. This modification results from the possibility of the canopy opening in flight and introduces a spacer which pre-loads and therefore strengthens the locking spring in the canopy winding gearbox. This re-rigging also cures any tendency for the canopy not to jettison at low air speeds and at low altitudes without cabin pressure. This modification supersedes S.T.I/Vampire/68.

The work will take approximately 4 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Minor (or equivalent) Servicing

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

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

*Aircraft Storage Units:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/J.11/53.)

(1) Make up the spacer, Part No. A00.7337, as detailed in the drawing, from 17 s.w.g.  $\frac{3}{8}$  in. o/d. mild steel, Specification T.26, and coat with grease.

(2) Locate the canopy winding gear torque tube on the starboard side of the cockpit, and release the 2 B.A. nut and bolt securing the spline socket to the splined joint. Temporarily mark the torque tube and the joint tube to ensure that the same splines are engaged on re-assembly.

(3) Remove the eight 2 B.A. countersunk bolts, washers and nuts attaching the canopy winding gearbox to the fuselage.

(4) Remove and retain the gearbox, torque tube and gasket from the aircraft. Make up a new gasket, Part No. A00.116, from  $\frac{1}{16}$  in. jointing material, D.T.D.762.

(5) Carefully drill out the eight  $\frac{3}{32}$  in. dia. countersunk rivets securing the back plate to the gearbox housing, and remove the back plate.

(6) Refer to the drawing, and unscrew the special pin connecting the link to the handle assembly. Access to the head of this pin is gained by a hole drilled in one side of the lever shaft. Pull the plunger and link out through the back of the gear box.

(7) Ensure that the gearbox is packed with low temperature grease, Specification D.T.D.825; re-assemble the back plate to the gearbox and re-attach with eight  $\frac{3}{32}$  in. dia. rivets, Part No. AS.2229/306.

(8) Clean all the mating surfaces and re-assemble the gearbox and the new gasket made up in operation (4) to the fuselage, using Bostik 1751 (primer) and Bostik 1790 (sealant). When offering up the gearbox and torque tube, check that the spline socket at the end of the torque tube is engaging the same splines on the splined joint as originally.

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(9) Attach the gearbox to the fuselage, using the bolts, nuts and washers removed in operation (3). Tighten the nut and bolt at the end of the torque tube to secure the splined socket.

(10) Wind the canopy winding gear handle hard forward, keeping the stop pin in the crank handle clear of the holes in the stop plate, then release it to find its own position. Remove the five countersunk screws retaining the stop plate and turn the plate to give a 'one diameter' position in relation to the stop pin, as shown in the "Scrap view" in the drawing. Re-attach the stop plate in this new position with the five screws, and then engage the stop pin in the stop plate.

(11) Check the canopy winding gear for correct functioning.

*Note:*—With an operator in the cockpit and the canopy locked by the winding handle, the maximum gap between windscreen and canopy under pressure is not to exceed 0.30 in. on each side.

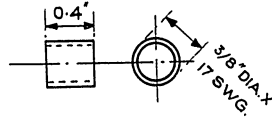
4. The undermentioned Part number alterations become necessary upon embodiment of this modification:—

<i>Stores Ref.</i>	<i>Old Part No.</i>	<i>Nomenclature</i>	<i>New Part No.</i>	<i>Stores Ref.</i>
26FC/5629	A00.2053A/3	Assy. of gear box canopy winding gear	A00.2053A/4	26FC/6707

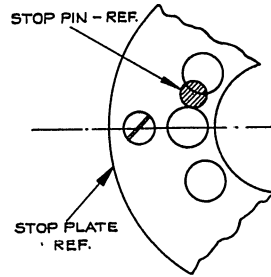
5. The undermentioned items are required per aircraft set and are to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
30A/969	—	Tubing, M.S., $\frac{3}{8}$ in. o/d. $\times$ 17 s.w.g. $\times$ 0.4 in., Spec. T.26	As reqd.	C
32B/773	—	Jointing, cork, $\frac{1}{16}$ in. $\times$ 4.0 in. $\times$ 4.0 in., Spec. D.T.D.762 (D.T.D.789 as alternative)	As reqd.	C
34B/222	—	Grease, low temperature, Spec. D.T.D.825	As reqd.	C
33C/1216		Solvent, naphtha coal tar	As reqd.	C
33C/1138		Compound, Bostik 1790 (sealant)	As reqd.	C
33C/1139		Compound, Bostik 1751 (primer)	As reqd.	C
28Q/6677	AS.229/306	Rivet	8	C

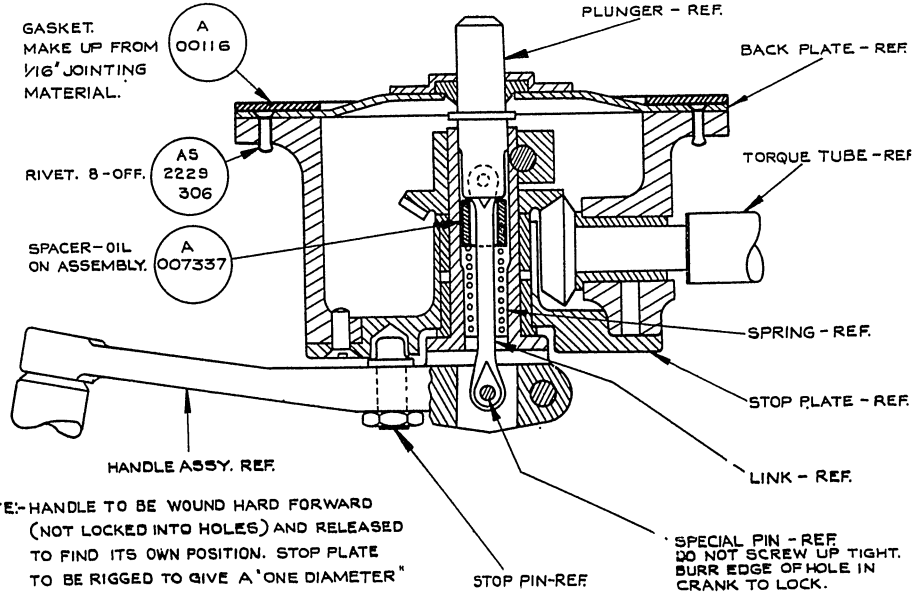
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DETAIL OF SPACER.  
PART N° A007337



SCRAP VIEW SHOWING  
RELEASED POSITION OF  
STOP - PIN.



NOTE:- HANDLE TO BE WOUND HARD FORWARD  
(NOT LOCKED INTO HOLES) AND RELEASED  
TO FIND ITS OWN POSITION. STOP PLATE  
TO BE RIGGED TO GIVE A "ONE DIAMETER"  
POSITION AS SHOWN IN SCRAP VIEW  
USING THE VERNIER ADJUSTMENT.

SECTIONAL VIEW OF CANOPY WINDING GEAR BOX ASSEMBLY.

LP26460 5/53 350 C & P Gp. 959 (4)

DRG. N° A.P40996/J.11/53

(



Vampire F.B. Mk. 9 Aircraft—To improve Locking of Ammunition  
Doors—Part A: Strengthened Venom Doors plus Venom Locks

(MOD. NO. VAMPIRE/926, PART A.)

(Class B/2.)

(7/Mods/11,630.—20.8.53.)

1. This modification results from reports of doors being lost in flight due to lock failures, and makes provision for the fitting of a re-designed Venom type door with stronger locks. The doors specified under this modification incorporate Mod. No. Vampire/3085.

The work will take approximately 2 man-hours.

2. This modification is to be embodied by Contractor's Working Party in Commands at Home. In Commands-Overseas it is to be embodied by:—

*2nd Line Servicing Units:* At first opportunity and not later than next Intermediate (or equivalent) Servicing

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

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

3. The following is the sequence of operations and refers to port and starboard doors:—

(1) Locate the ammunition door between bulkheads 2 and 3. Open it and then remove and dispose of the six attachment nuts and bolts securing it to the fuselage.

(2) Ascertain whether Mod. Nos. Vampire/926, Part B, and 3085 have been embodied, and if so, remove the locks, Part No. 12 F 897A (ref. only), from the door. Retain the locks and the shims, Part No. A00 331 (ref. only), which may be needed when embodying operation (4) below, and dispose of the remaining items. If the modifications quoted have not been embodied, then the items listed in para. 7 below are to be obtained as detailed.

(3) Position the locks and the new packing pieces, Part No. 12 F 239, on the new door, Part No. 12 F 1211A/ND, port, 12 F 1212A/ND, starboard, and, if necessary, locally trim back the rubber moulding and its attachment strip to clear the locks. Firmly secure them in position with six bolts, Part Nos. AS.1242/11C (4-off) and AS.1242/8C (2-off), and six nuts, Part No. A16Y/CP, coating the bolts and the mating surfaces of the packing pieces with pigmented varnish jointing compound (Stores Ref. 33C/885) whilst assembling.

(4) Place the new handles, Part No. 12 F 637A, in the correct position through the locks and secure each with a washer and nut, Part Nos. A.G.S.160/D and A16Y/ET, respectively. If there is any play in the handles after reasonable tightening of the nuts, then remove the nuts and washers and shim the handles, as necessary. Replace the nuts and washers, and if satisfactory results have been obtained,peen over or centre-punch the handle and the bolts, fitted in the previous operation, to lock. Should additional shims be required, it is suggested that the ones retained in operation (2) be utilized, if serviceable.

*Note:*—Upon the completion of operation (4), the doors become Part Nos. 12 F 909A, L.H., and 12 F 910A, R.H.

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P.T.O.

(5) Clean off any adhesive or sealing compound adhering to the hinge recess in the door frame; then apply a coat of primer paint in this position. Whilst the paint is still wet, offer up the door and loosely fit in position, using six nuts and bolts, Part Nos. A16Z/CP and AS.2920/8C, respectively, coating the bolts with repellant, as specified in this operation, whilst assembling, and re-attaching any bonding tags that were disconnected.

(6) Close the door and check that it fits snugly in position, follows the contour of the fuselage, and also that the locks are effective. If necessary, move the door about the hinge until a satisfactory position is obtained. Open the door and securely tighten the hinge bolts fitted in operation (5), taking care that the door does not move out of alignment. Peen over or centre-punch the bolts to lock.

(7) Clean off any surplus paint and repair the finish internally and externally with primer and cellulose matching.

(8) Close and lock the door and check for security.

4. The undermentioned part number alterations become necessary upon embodiment of this modification:—

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/—	Z00 5899A/1	Assy. fuselage ammo. doors, L.H.	12 F 909A	26DV/1533
26FC/—	Z00 5900A/1	Assy. fuselage ammo. doors, R.H.	12 F 910A	26DV/1534

5. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The Set is to be issued as a Modification Kit (Stores Ref. 26FC/100926A). Demands for Modification Kits are to be submitted to P.S.C.O., No. 25 M.U., through Command Headquarters, *vide* A.M.O. A.692/51, paras. 6 and 7, and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/—	A00 331	Shim	12	C
26DV/691	12 F 239	Packing piece	4	C
26DV/1008	12 F 637A	Handle assy.	4	C
26FC/—	12 F 1211A.ND	Door assy.	1	B
26FC/—	12 F 1212A.ND	Door assy.	1	B
28D/10168	AS.1242/11C	Bolt	8	C
28D/8312	AS.1242/8C	Bolt	4	C
28D/12734	AS.2920/8C	Bolt	12	C
28M/5316	A16Y/CP	Nut	12	C
28L/776	A16Y/ET	Nut	4	C
28M/6435	A16Z/CP	Nut	12	C
28W/3072	A.G.S.160/D	Washer	4	C

6. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

Stores Ref.	Nomenclature	No. off	Class of Store
33C/885	Compound, jointing, pigmented varnish	As reqd.	C
33A/559	Paint, primer	As reqd.	C
33B/208, 261, 672, 674, 676 and 692	Primer and cellulose finishing, matching	As reqd.	C

7. The undermentioned part is required if Mod. Nos. Vampire/926, Part B, and 3085, have not previously been embodied, and is to be provided under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26DV/1602	12 F 897A	Lock assy.	4	C

8. The undermentioned parts are rendered redundant by this modification and are to be disposed of in accordance with current authorized procedure:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26DV/688	12 F 91A	Ammo. door, L.H.	1	B
26DV/689	12 F 92A	Ammo. door, R.H.	1	B

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(Barostat pipe run)

Leaflet No. J.13

(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Revised Pipe Run for total Head Air  
Supply to Barostat—Introduction

(7/Mods/15,628.—1.1.54.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. J.13 (Mod. No. Vampire/3098), is amended as follows:—

- (1) Heading. Classification. *Delete* "C/3" and *substitute* "B/2"
  - (2) Para. 2, line 3. *Delete* "Minor" and *substitute* "Intermediate"
  - (3) Para. 3. *Note* between operations (15) and (16), line 4. *Amend* "22 S.W.G." to read "26 S.W.G."
  - (4) Para. 3, operation (18), line 5. *Amend* "22 S.W.G." to read "26 S.W.G."
  - (5) Para. 5, list of items required. Last item in list. *Amend* to read
- | <i>Stores Ref.</i> | <i>Nomenclature</i>   | <i>No. off</i> | <i>Class of Store</i> |
|--------------------|---|----------------|-----------------------|
| "30B/1623          | Strip, tinned copper, 26 S.W.G. x $\frac{1}{4}$ in. x 3 ft. | 1              | C"                    |
- (6) DRG. NO. A.P.4099G/J.13/53. SHEET 1. *Amend* "22 SWG." to read "26 SWG."

## RESTRICTED

(39708/90) 6498 R665 400 1/54 H.P.W. (Gp.19/1)



**Vampire F.B. Mk. 9 Aircraft—Revised Pipe Run for total Head Air Supply  
to Barostat—Introduction**

(MOD. NO. VAMPIRE/3098.)

(Class C/3.)

(7/Mods/15,628.—15.9.53.)

1. It has been found that, with the existing total head air supply from the generator cooling inlet duct, the air flow is disturbed, resulting in fluctuating barostat pressure. This modification introduces a new pipe run from the nose of the aircraft to obviate this.

The work will take approximately 13 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first opportunity and not later than next Minor (or equivalent) Servicing

*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:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/J.13/53, Sheets 1-6.)

(1) Remove the detachable nose panel, the starboard cannon spout, the gun bay doors and the upper and lower forward engine cowlings.

(2) Ascertain if provision has been made in the aircraft for the installation of a total head airline, as shown in Sheets 1, 3 and 4 of the drawing. If provision has been made, it will not be necessary to embody the following operations (3) to (8).

*Note:*—On aircraft with Mod. No. Vampire/533 embodied, it will not be necessary to cut a slot in the front panel, as detailed in operation (3), as the slot in the clamping block, Part No. ROO 1489-90 (ref. only), fitted in the above mentioned modification, may be utilized.

(3) Refer to "Detail 'A' " Sheet 3 of the drawing, and mark out the slot on the R.H. lower face of the front floor panel, as shown. Cut the slot to shape.

(4) Cut two pieces of  $\frac{1}{8}$  in. ply to suit the flange on the pipe, Part No. POO 1463 AND, and locally remove the protective finish from the cannon beam where they are to be glued, as shown in "Detail 'B' " in Sheet 3 of the drawing.

(5) Glue the ply to the forward and aft face of the cannon beam, using adhesive synthetic resin, type B.70 (Stores Ref. 33C/972), and hardener G.B.M. (Stores Ref. 33C/973) and allow to dry thoroughly.

*Note:*—At a normal temperature of 60 deg. F., the minimum drying period is 4 hours, but with the application of radiant heat to a temperature of 70 deg. F., the drying time is accelerated to a minimum of 3 hours.

(6) Refer to "Detail 'B' " in Sheet 3 of the drawing, and mark out and drill the  $\frac{1}{8}$  in. dia. hole through the ply packings and the beam, making sure the drill runs parallel with the edge of the beam and fuselage datum. Repair the protective finish with primer and cellulose matching.

(7) Working on the forward face of bulkhead No. 2, mark out and drill the  $\frac{1}{8}$  in. dia. hole as shown in "Detail 'C' " in Sheet 4 of the drawing. Ensure that the drill runs parallel to the fuselage datum and at 5 deg. to the face of the bulkhead.

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(8) Mark out and drill the  $\frac{1}{8}$  in. dia. hole in bulkhead No. 4, as shown in "Detail 'D' " in Sheet 4 of the drawing, and then clear from the aircraft all metal and wood drillings that have resulted from this and previous operations.

(9) Mark out and drill the  $\frac{5}{16}$  in. dia. hole in the nose panel, as shown in Sheet 6, Fig. 1, of the drawing, that is, in line with the vertical centre of the camera aperture and parallel with the fuselage datum.

(10) Refer to Sheet 6, Fig. 1, of the drawing, and correctly position the new air inlet assembly, Part No. ROO.2575A, on the inner face of the nose panel as shown. Make certain that it is positioned true to the line of flight, and, if necessary, locally trim back the inlet flange to clear the camera aperture seal. When a satisfactory position has been obtained, drill four No. 41 (0.0961 in. dia.) holes in the nose panel, using the four holes in the inlet flange as drill guides. Remove the air inlet, thoroughly deburr the holes and clear from the nose any metal drillings that have resulted from this and the previous operation.

(11) Coat the mating surface of the inlet flange and the nose panel with pigmented varnish jointing compound (Stores Ref. 33C/885). Place the inlet on the inner face of the nose panel, as in the previous operation, and rivet in position, using four rivets, Part No. AS.2228/303. Paint the heads of the rivets to suit the surrounding colour scheme.

(12) Place the pipe, Part No. ROO.1463A.ND, through the cannon beam and bulkhead No. 2, so that the flange on the pipe is flush to the face of the beam, or the ply packing fitted in operation (5) for aircraft not embodying provision for this pipe run.

*Note:*—The following operation (13) is only applicable to aircraft in which provision for the pipe run was not embodied. Operation (14) is only applicable to aircraft in which provision for this installation did exist.

(13) With a No. 11 (0.191 in. dia.) drill, and using any two opposite holes in the pipe flange as guides, drill two holes through the ply packages and the cannon beam as shown in "Detail 'B' " in Sheet 3 of the drawing. Clear away the wood drillings and coat the mating surface of the flange and the beam with primer paint. Whilst the primer paint is still wet, secure the flange to the beam with two nuts, bolts and washers, Part Nos. AS.1247/18C, A.G.S.2001/C3 and SP.15/C, respectively. Coating the bolts with primer paint, as specified, whilst assembling.

(14) Coat the mating surfaces of the flange and the beam with primer paint and secure the flange to the beam with four woodscrews, Part No. A.G.S.252/19.

(15) Refer to "Detail 'Z' " in Sheet 4 of the drawing, and clamp the pipe in position at the aft face of bulkhead 2, as shown, using two support blocks, Part Nos. ROO.1437ND and ROO.1439ND, and securing with two woodscrews, Part No. A.G.S.252/41.

*Note:*—In the following operations (16) to (28) it should be noted that each pipe joint, with the exception of the drain assembly, is effected with a hose joint, Part No. DHS.159/B.20, and two clips, Part No. A.G.S.605/00, bonded with a  $\frac{1}{4}$  in. wide, 22 s.w.g. tinned copper strip.

(16) Connect the pipe, Part No. ROO.1339 ND, to the air inlet assembly fitted in operation (11), but do not fully tighten the hose connections, as it may become necessary to manipulate the pipe in subsequent operations.

(17) Connect the pipe, Part No. ROO.1341 ND, to the pipe fitted in operation (12), which is protruding from the forward face of the cannon beam, and secure it with two 'P' clips, Part No. DHS.30/4, to any two conveniently spaced existing bolts along the bottom of the fuselage shell.

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(18) Refer to "Detail 'F' " in Sheet 5 of the drawing, and assemble the two pipe assemblies, Part Nos. ROO.1455A ND and ROO.1459A ND, as shown, using a hose joint, Part No. DHS.159/E20, two clips, Part No. A.G.S.605/1, and bonding with a  $\frac{1}{4}$  in. wide, 22 s.w.g. tinned copper strip. Secure this assembly to the pipe fitted in the previous operation.

(19) Position the pipe, Part No. ROO.1487 ND, through the slot in the front floor, or the clamping block, Part No. ROO.1589-90 (ref. only), if Mod. No. Vampire/533 is embodied. Connect one end to the pipe fitted in operation (16) and the other to the pipe assembly fitted in the previous operation, but do not fully tighten the hose connections, as it may be necessary to manipulate the pipe when embodying the following operations to obtain true alignment.

(20) Place a 'P' clip, Part No. DHS.30/4, on the pipe fitted in operation (16), and drill a No. 26 (0.147 in. dia.) hole in a convenient position on the flange of the starboard nose stiffener, Part No. AOO.2812 ND (ref. only), to accommodate the clip. Secure the clip to the stiffener with a nut, bolt and washer, Part Nos. A.G.S.2001/B1, A25/1B and SP.13/B, respectively, and fully tighten the hose connections fitted in operations (16) and (19).

*Notes (a)* The part of operation (20) relating to the clipping of pipe, Part No. ROO.1339 ND; is only applicable to aircraft not embodying Mod. No. Vampire/533, or Mk. 9 aircraft with Mod. No. Vampire/905 embodied. In aircraft with Mod. No. 533 embodied, lash the pipe to the cold air pipe assembly, Part No. ROO.1281 AND (ref. only), with braided stringing cord (Stores Ref. 32A/94) previously waxed with beeswax (Stores Ref. 33C/10).

*(b)* Operation (21) is only applicable to aircraft not embodying Mod. No. Vampire/533 or provision for the pipe run. Operation (22) is only applicable to aircraft not embodying Mod. No. 533 but in which provision for the pipe run did exist.

(21) Refer to "Detail 'A' " in Sheet 5 of the drawing, and clamp the pipe, Part No. ROO.1487 ND, on the upper surface of the starboard front floor, as shown. Hold the support blocks, Part Nos. ROO.2630ND and ROO.2631ND, in position, and using the holes in them as guides, drill four No. 26 (0.147 in. dia.) holes in the floor. Remove the blocks, thoroughly deburr the holes and clear away the resultant metal drillings. Position the blocks again and secure them to the floor with four nuts, bolts and washers, Part Nos. A.G.S.2001/B1, A25/2B and SP.13/B, respectively.

(22) Refer to "Detail 'A' " in Sheet 5 of the drawing, and clamp the pipe, Part No. ROO.1487 ND, on the upper surface of the starboard front floor, as shown. Hold the support blocks, Part Nos. ROO.2630 ND and ROO.2631 ND, in position and check whether the existing holes in the floor line up with those in the blocks. If the holes do not line up, enlarge the holes in the floor to suit, then clear away the resultant metal drillings. Position the blocks again and secure them to the floor with four nuts, four bolts and four washers, Part Nos. A.G.S.2001/B1, A25/2B and SP.13/B, respectively.

(23) Refer to "Detail 'E' " in Sheet 5 of the drawing, position the spruce block, Part No. ROO.1481 ND, between the pipe, Part No. ROO.1487 ND, and the wooden former supporting the base of bulkhead No. 1, as shown. Place a clip, Part No. DHS.28/4, over the pipe, and secure it to the spruce block and the former with two woodscrews, Part No. A.G.S.252/24.

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(24) Pass the pipe, Part No. ROO 1461A ND, through the hole in bulkhead 4, so that the flange lies flush against the aft face of the bulkhead. Drill two No. 26 holes in the bulkhead to suit those in the flange. Deburr the holes and then bolt in position with two bolts, nuts and washers, Part Nos. A25/1B, A.C.S.2001/B1 and SP.13/B, respectively.

*Note* — In aircraft where provision did exist for the installation of the pipe run it will not be necessary to drill the holes referred to in the previous operation, as they are existing and should be utilized as described.

(25) Connect the pipe, Part No. ROO 2627 ND, to the pipe fitted in operation (12), which is protruding from the aft face of bulkhead No. 2, and the pipe fitted in the previous operation, which is protruding from the forward face of bulkhead No. 4. Refer to Sheet 1 and Sheet 6, Fig. 2, of the drawing and secure the pipe to the fuselage shell stiffening member, using two 'P' clips and two wood screws, Part Nos. DHS 30/4 and A.C.S.252/19, respectively.

(26) Locate the air bleed pipe, Part No. ROO 318 ND (ref. only), attached to the generator cooling pipe on the starboard side of the engine bay, and disconnect it from the pipe, Part No. ROO 321 ND (ref. only), which is connected to the total head inlet of the B.P.C. unit. Cut the bleed pipe reasonably close to the generator cooling pipe, squeeze approximately one inch of the pipe flat and fold it back, thus sealing the end. Lash the remaining portion of the bleed pipe to the cannon heating pipe with braided stringing cord previously waxed with beeswax.

*Note* — If considered necessary, a strip of solder may be run across the flattened end of the bleed pipe after folding, to ensure effective sealing.

(27) Secure one end of the pipe, Part No. ROO 2633 ND, to the pipe added in operation (11), and the other end to the total head line, Part No. ROO 321 ND (ref. only). Secure the pipe to the engine mounting with braided stringing cord previously waxed with beeswax, as shown in Sheet 2 of the drawing.

(28) Replace and secure the detachable nose panel, the starboard cannon spout, the gun bay doors and the upper and lower forward engine cowlings.

4. The following Part number alterations become necessary upon embodiment of this modification —

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/4022	ROO 433A	Pipe assembly	ROO 1727A	26FC/6997

5. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The set is to be issued as a Modification Kit (Stores Ref. 26FC/103098). Demands for Modification Kits are to be submitted to P.S.C.O. No. 25 M.U. through Command Headquarters, vide A.M.O. A.692/51, paras. 6 and 7, and are to quote the relevant Stores reference number —

Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26FC/6989	ROO 1339ND	Pipe	1	C
26FC/6990	ROO 1341ND	Pipe	1	C
26FC/-	ROO 1437ND	Block, support	1	C
26FC/-	ROO 1439ND	Block, support	1	C
26FC/6991	ROO 1455A/ND	Pipe assy.	1	C
26FC/6992	ROO 1459A/ND	Pipe assy.	1	C
26FC/8344	ROO 1461A/ND	Pipe assy.	1	C
26FC/8538	ROO 1463A/ND	Pipe assy.	1	C
26FC/-	ROO 1481ND	Block, spruce	1	C
26FC/6993	ROO 1487ND	Pipe	1	C

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Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26FC/6994	ROO 2575A	Air inlet assembly	1	C
26FC/6995	ROO 2627ND	Pipe	1	C
26FC/-	ROO 2630ND	Block support	1	C
26FC/-	ROO 2631ND	Block support	1	C
26FC/6996	ROO 2633ND	Pipe	1	C
26FC/-	DHS 28/4	Clip	1	C
26FC/-	DHS 30/4	Clip P	6	C
26FC/-	DHS 159/B/20	Hose	9	C
26FC/-	DHS 159/E/20	Hose	1	C
28S/2288	A.G.S. 252/19	Woodscrew	6	C
28S/2323	A.G.S. 252/24	Woodscrew	2	C
28S/2324	A.G.S. 252/41	Woodscrew	2	C
28E/10154	A.G.S. 605/00	Clip	18	C
28E/8183	A.G.S. 605/1	Clip	2	C
28M/10287	A.G.S. 2001/B1	Nut	6	C
28D/12528	A25/1B	Bolt	2	C
28D/12511	A25/2B	Bolt	4	C
28Q/10852	AS 2228/303	Rivet	4	C
28W/12305	SP 13/B	Washer	6	C
30B/1622	—	Strip, tinned copper, 22 s.w.g. x 4 in. x 3 ft.	1	C

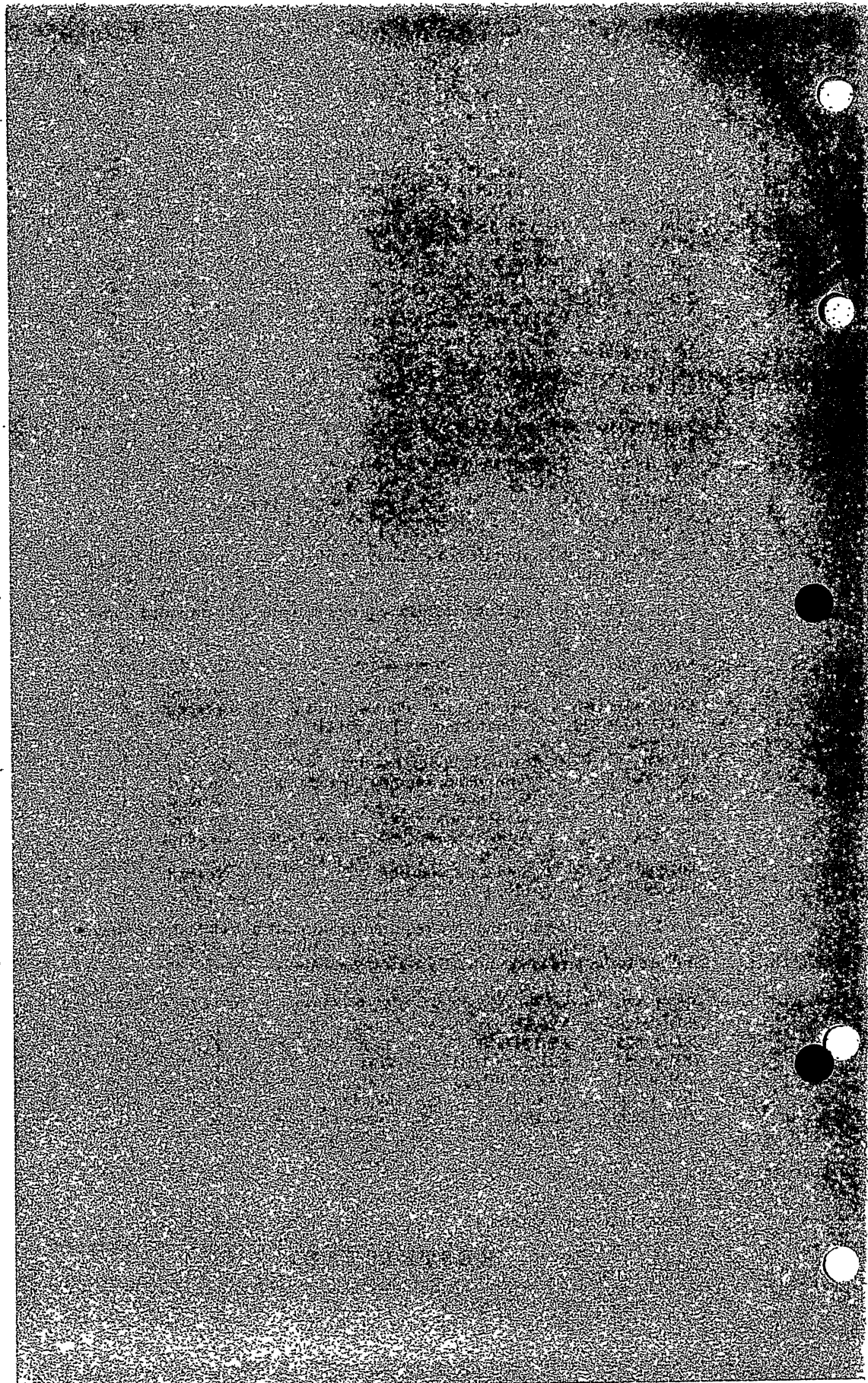
\*In the case of aircraft not embodying Mod. No. Vampire/533, one of these clips will be redundant.

6. The following items are also required and are to be provided under Unit arrangements —

Stores Ref.	Nomenclature	No. off.	Class of Store
33A/559	Paint, primer	As reqd.	C
33B/208 or 261 672-674 676 or 692	Primer and cellulose finish matching (D.T.D. 751-4)	As reqd.	C
32A/94	Cord, stringing braided	As reqd.	C
33C/885	Compound, pigmented jointing	As reqd.	C
33C/10	Beeswax	As reqd.	C
33C/973	Hardener, G.B.M.	As reqd.	C
33C/972	Adhesive, synthetic resin, type B70	As reqd.	C
33C/288	Soldering solution	As reqd.	C
31A/29	Ply, 1 in. thick	2	C

7. The following items are required for aircraft not embodying Mod. No. Vampire/533, or in which provision for the pipe run is not incorporated and are to be provided under Unit arrangements —

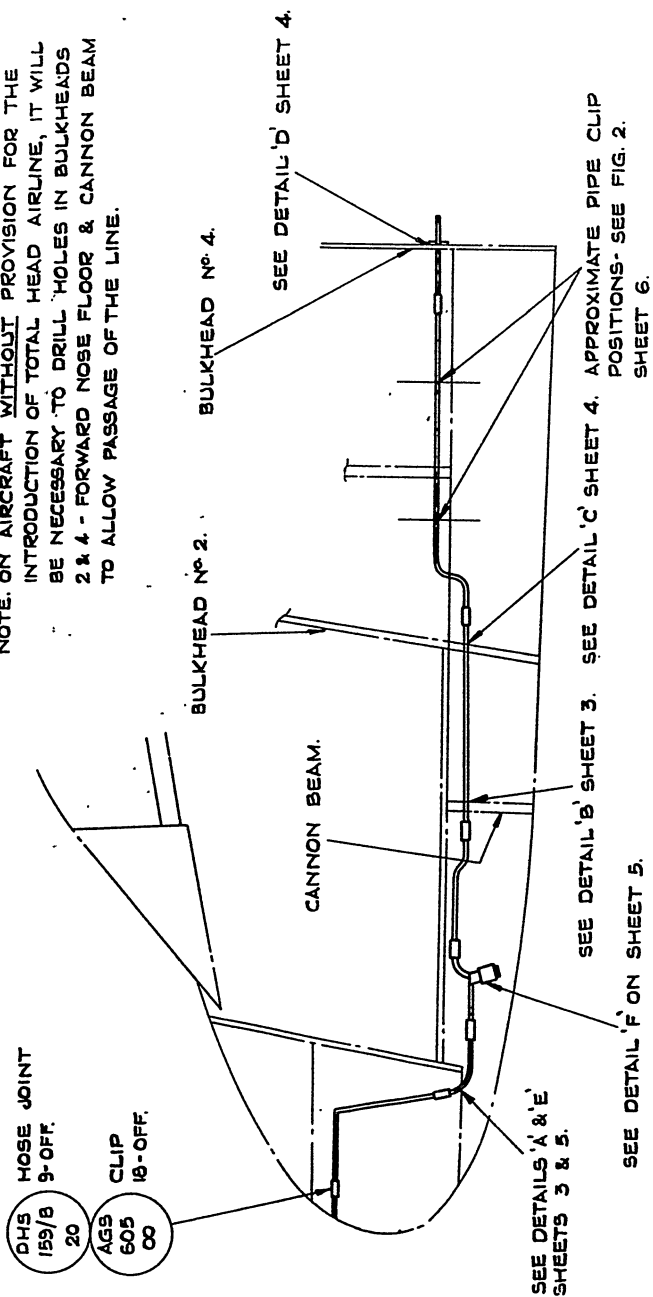
Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
28D/12528	A25/1B	Bolt	1	C
28D/14575	AS 1247/18C	Bolt	2	C
28M/10287	A.G.S. 2001/B1	Nut	1	C
28M/10281	A.G.S. 2001/C3	Nut	2	C
28W/12305	SP 13/B	Washer	1	C
28W/12296	SP 15/C	Washer	2	C





NOTE ALL HOSE JOINTS TO BE BONDED WITH  
A TINNED COPPER STRIP  $\frac{1}{4}$ " WIDE X 22 SWG.

NOTE. ON AIRCRAFT WITHOUT PROVISION FOR THE  
INTRODUCTION OF TOTAL HEAD AIRLINE, IT WILL  
BE NECESSARY TO DRILL HOLES IN BULKHEADS  
2 & 4 - FORWARD NOSE FLOOR & CANNON BEAM  
TO ALLOW PASSAGE OF THE LINE.



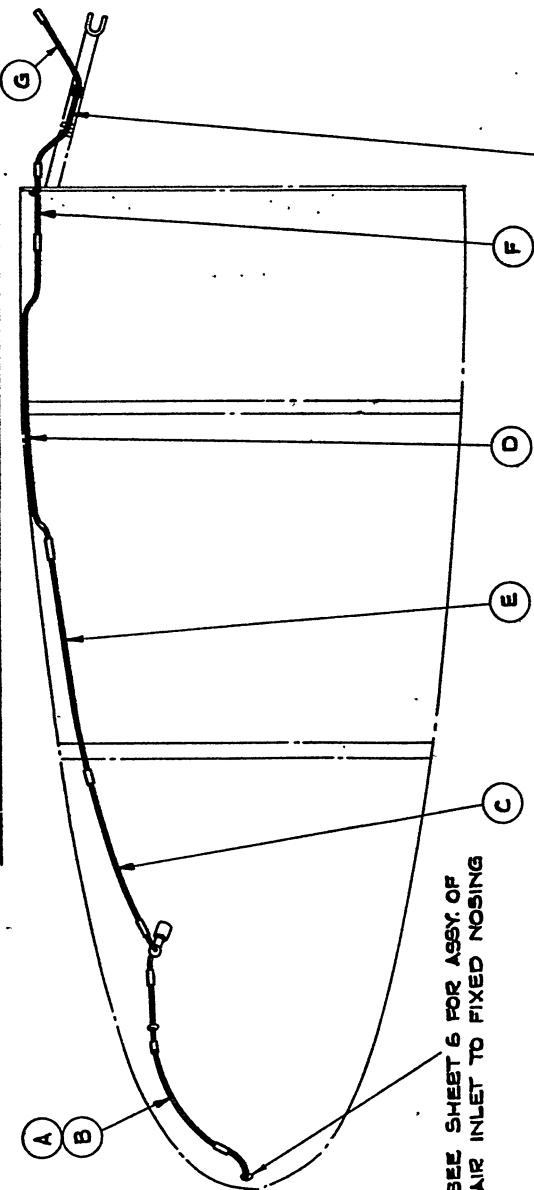
ARRANGEMENT OF TOTAL HEAD AIRLINE TO BAROSTAT.

RESTRICTED

DRG. No A.P.4 099 G/J.13/53  
SHEET I

RESTRICTED

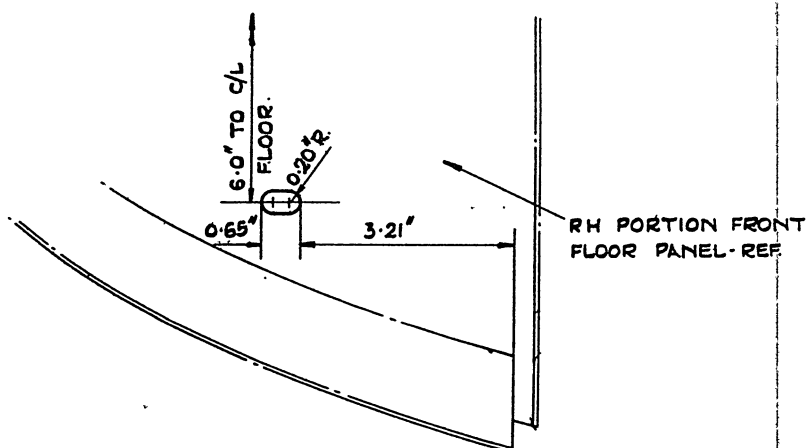
PLAN VIEW OF FUSELAGE - USE IN CONJUNCTION WITH SHEET 1



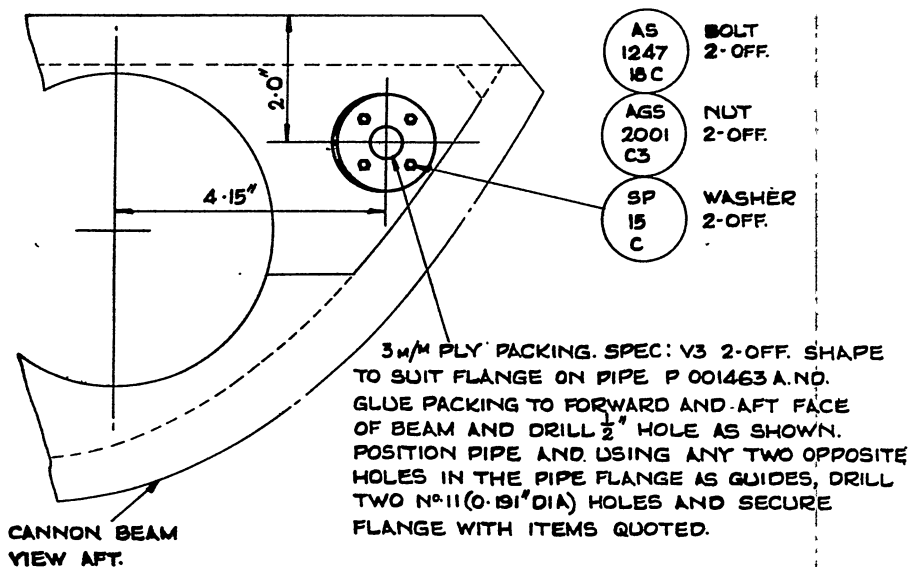
PART N°	NOMENCLATURE	N° OFF
A	R001335 ND	PIPE
B	DHS 30/4	'P' CLIP #
	A25/16	BOLT #
	AGS 200/161	NUT #
	SP13/8	WASHER #
C	R001341 ND	PIPE
D	R002627 ND	PIPE
E	R001463A/N0	PIPE ASSY.
F	R001461A/ND	PIPE ASSY.
G	R002633 ND	PIPE ASSY.

STARRED ITEMS FOR USE PRE-  
MOD. 533 ONLY.

DRG. N° A.P.4099 G / J.1 3 / 53  
SHEET 2



DETAIL 'A'-(REFER TO SHEET 1)-APPLICABLE ONLY TO AIRCRAFT PRE MOD. 533. & NOT EMBODYING PROVISION FOR TOTAL HEAD AIRLINE.

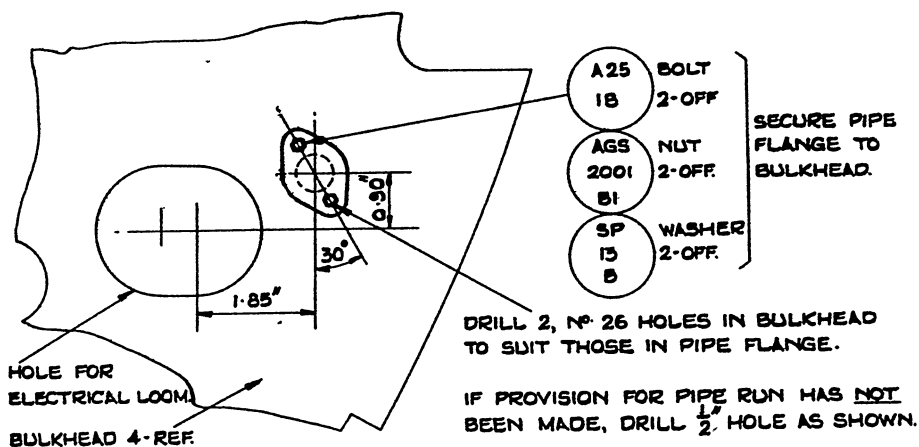


DETAIL 'B'-(REFER TO SHEET 1) APPLICABLE ONLY TO AIRCRAFT NOT EMBODYING PROVISION FOR TOTAL HEAD AIRLINE.

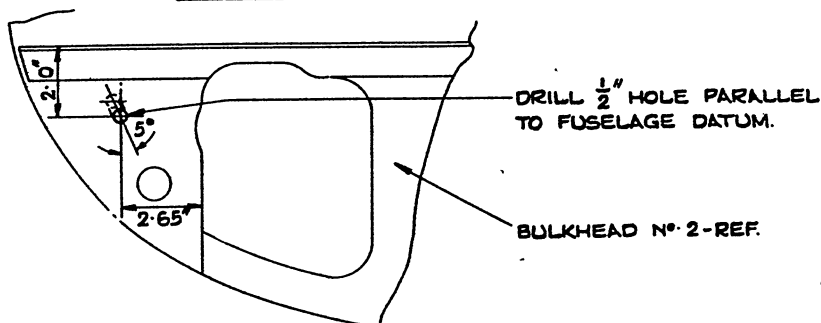
**RESTRICTED**

DRG. NO A.P.4099G/J.13/53  
SHEET 3

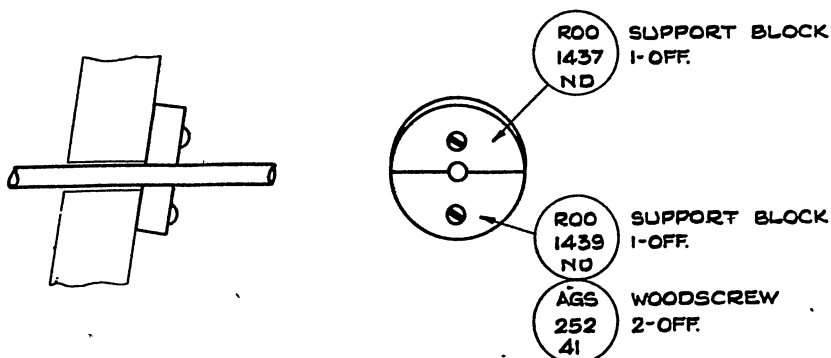
LP26887 9/53 350 C&P Gp. 959(4)



DETAIL 'D'-(REFER TO SHEET 1)



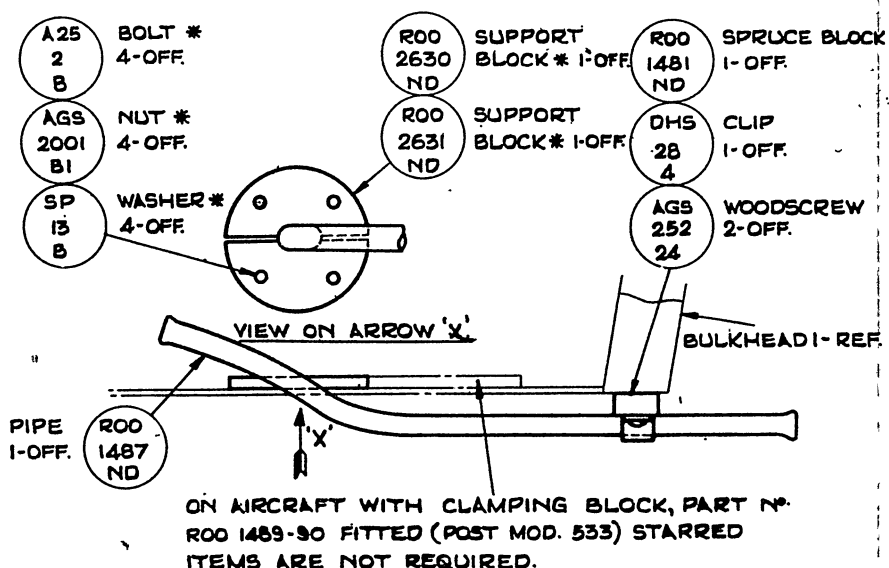
DETAIL 'C'-(REFER TO SHEET 1)-APPLICABLE ONLY TO AIRCRAFT NOT EMBODYING PROVISION FOR TOTAL HEAD AIRLINE.



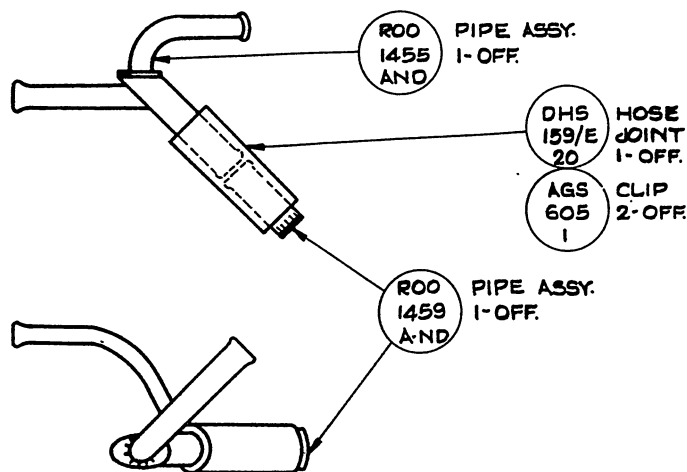
DETAIL 'Z'-SUPPORT OF PIPE AT BULKHEAD 2.

**RESTRICTED**

DRG. No A.P.4099 G/J.13/53  
SHEET 4



DETAIL 'E' - (REFER TO SHEET 1) ARRANGEMENT OF ADAPTOR AT STBD. FRONT FLOOR..



DETAIL 'F' - (REFER TO SHEET 1) - DRAIN ASSEMBLY.

**RESTRICTED**

DRG. N° A.P.40 99 G / J.13 / 53  
SHEET 5

LP26887 9/53 350 C & P Gp. 959 (4)

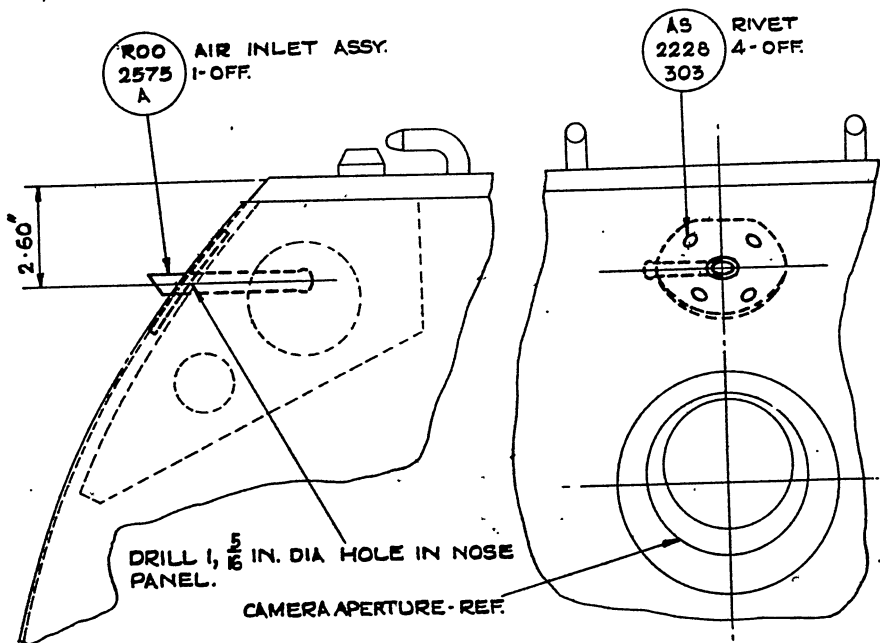


FIG. 1. ASSY. OF AIR INLET TO NOSE.

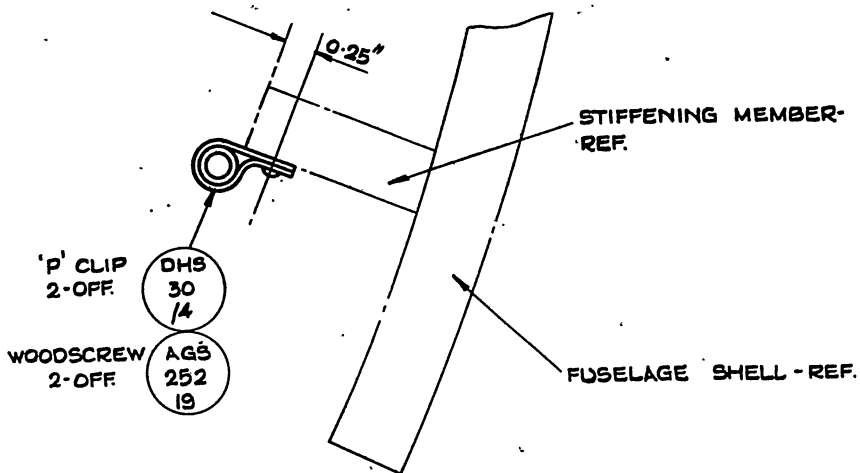


FIG. 2 PIPE ATTACHMENT BETWEEN BULKHEADS 2 & 4.

**RESTRICTED**

DRG. NO A.P.4099G/J.13/53  
SHEET 6

LP26887 9/53 350 C & P Gp. 959 (4)

**Vampire F.B. Mk. 9 Aircraft—Fuselage—Canopy Winding Gear—Safety  
Lanyard to Handle—Introduction**

(MOD. NO. VAMPIRE/3307.)

(Class C/3, N.C.P.)

(7/Mods/22,662.—10.4.54.)

**1. INTRODUCTION**

This modification introduces a short lanyard to the starboard side of the cockpit, for use on the canopy winding handle. Cases have occurred of the canopy inadvertently opening in flight, and this lanyard is to secure the canopy hood, by preventing the winding handle travelling aft past its top dead centre position.

Painted notices are also added to the port and starboard ammunition doors, giving instructions for the jettison of the canopy and the release of the pilot in emergency, when the aircraft is on the ground.

**2. EMBODIMENT**

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity and not later than six months after receipt of parts.

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

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

*Aircraft Storage Units:* Before issue of aircraft.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 3 man-hours.

**4. DRAWINGS REQUIRED**

(i) Drawing No. A.P.4099G/J.14/54, Sheets 1 and 2, is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED****(1) Parts and/or Materials**

(a) The following materials are required, and are to be provisioned under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
30B/1728	—	Aluminium alloy sheet	(1 off, $\frac{5}{8}$ in. $\times$ $1\frac{1}{2}$ in. $\times$ 16 s.w.g.)	C
32A/141	—	Cord, nylon	15 in. long	C
32B/653	—	Thread, linen	As reqd.	C
33B/205	—	Finish, night, matt, synthetic	As reqd.	C
33B/208	—	Primer, universal, dark grey	As reqd.	C
33B/912	—	Colour, ident, red	As reqd.	C

**(2) Special Tools and Test Equipment**

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

**6. SPARES AFFECTED**

There are no spares affected by this modification.

R

**RESTRICTED**

7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS  
The following assembly is introduced by this modification:—

<i>New</i>		
<i>Stores Ref.</i>	<i>Part/Assy. No.</i>	<i>Nomenclature</i>
26FC/—	12.FC.101A	Lanyard assembly

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Refer to Sheet 2 of the drawing, and using 16 s.w.g. alum. alloy sheet (Spec. B.S.L.72, Stores Ref. 30B/1728), make up the attachment lug, Part No. 12.FC.97ND. It is essential that the inside of the  $\frac{3}{8}$  in. (0.375 in. diam.) hole is radiused, and that all burrs are removed.

Apply primer, synthetic (Stores Ref. 33B/510) to the lug, and allow to dry. Finish in night, matt synthetic (Spec. D.T.D.314, Stores Ref. 33B/205).

(2) Again referring to Sheet 2 of the drawing, make up the lanyard, Part No. 12.FC.99ND, using cord, nylon (Stores Ref. 32A/141). This lanyard must not be longer than the six inches as stated on the drawing, and the free end is to be a good fit over the knob of the winding handle. After splicing the lanyard, serve the splices using linen thread (Stores Ref. 32B/653). The assembly of the lanyard and lug becomes Part No. 12.FC.101A.

(3) On the starboard forward canopy rail, count back from the instrument panel the eighth 2 B.A. locknut visible, and remove this nut. Assemble the attachment lug of the lanyard to the bolt, and replace the locknut, as shown in Sheet 1 of the drawing. With the canopy winding handle in its most forward position, push the free end of the loop of the lanyard over the handle, and check that the lanyard prevents the handle rotating aft past its top dead centre position.

(4) On the port ammunition door, using colour, ident, red (Spec. D.T.D.772 (Stores Ref. 33B/912)), print in half-inch high letters the wording "TO JETTISON CANOPY AND RELEASE PILOT SEE OTHER SIDE".

(5) On the starboard ammunition door, and using colour, ident, red (Spec. D.T.D.772, Stores Ref. 33B/912), print in half-inch high letters the wording "TO RELEASE PILOT PULL DOWN CABLE PAINTED RED INSIDE AND LIFT OFF CANOPY".

(6) Open the starboard ammunition door, and inside, locate the guard assembly covering the canopy lock release cable. Using colour, ident, red, paint the cable where it is visible at the three inch cut away in the guard assembly.

9. TESTING AFTER EMBODIMENT

There are no special tests required after the embodiment of this modification.

10. RECORDING ACTION

Record on Form 700.

11. DISPOSAL OF REDUNDANT PARTS

There are no parts rendered redundant by the embodiment of this modification.

12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.1 lb., and a change of moment of  $\pm$  Nil lb. ft.

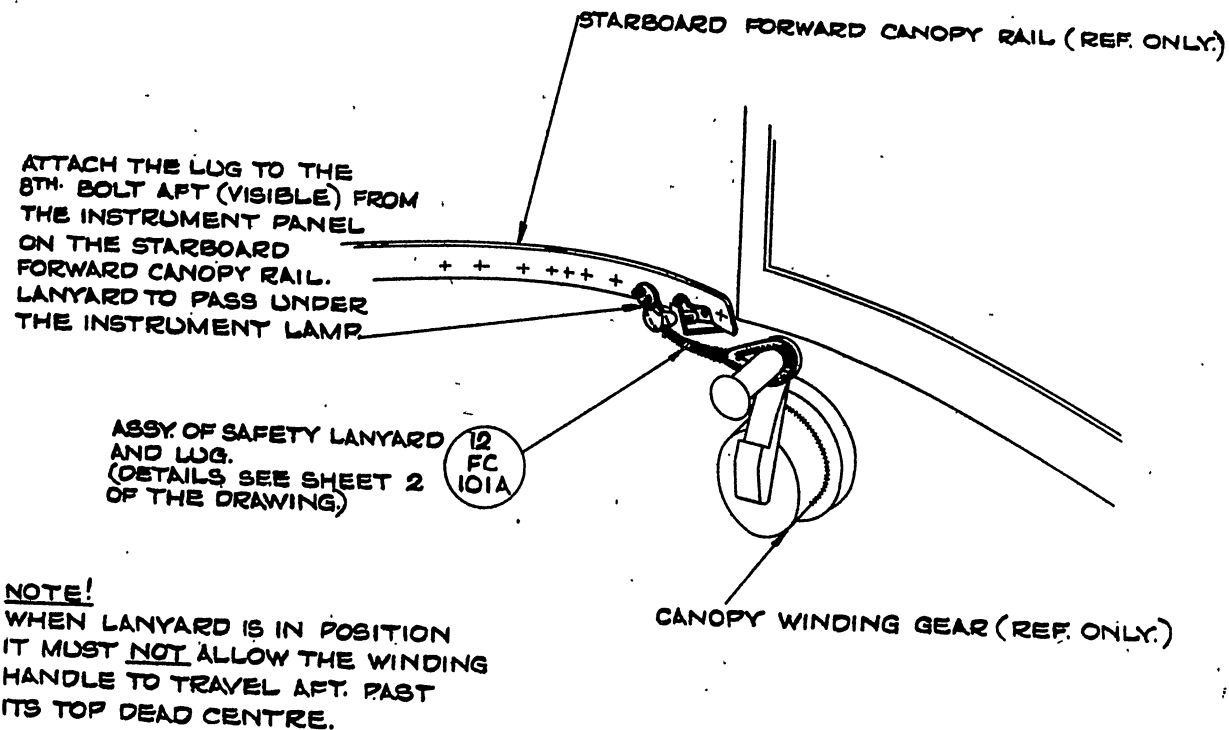
L31521 5/54 400 C & P Gp. 1

**RESTRICTED**



**RESTRICTED**

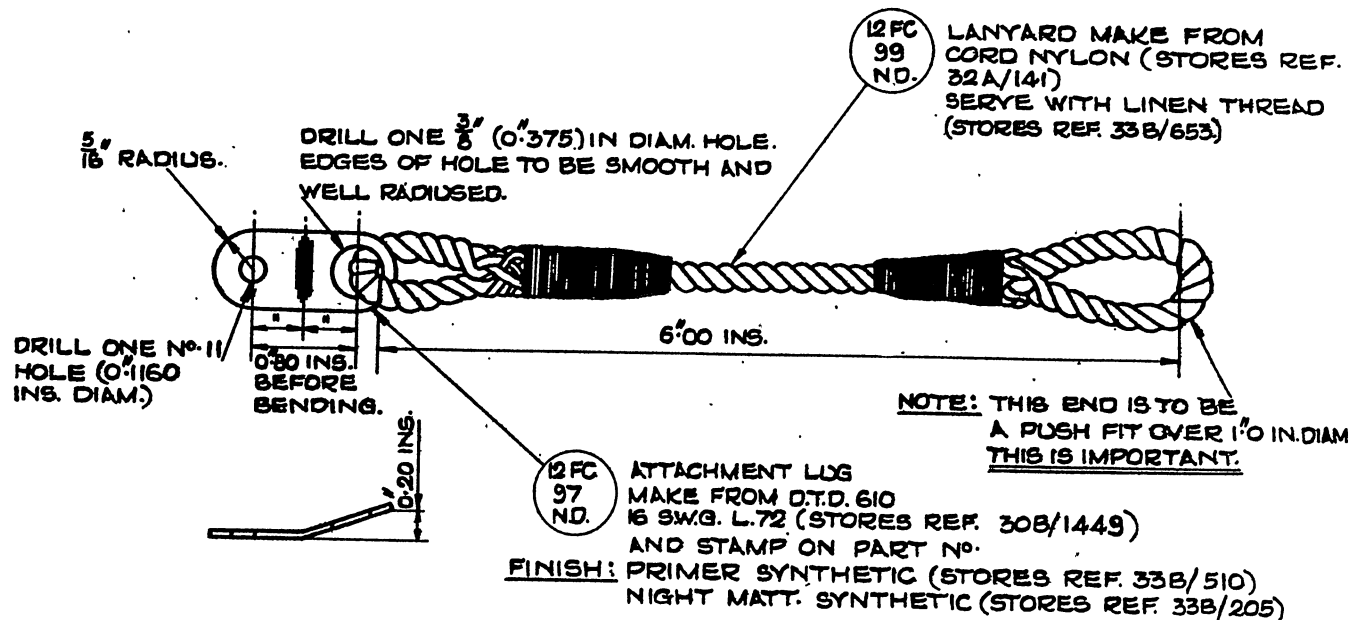
DRG. NO. A.R. 4099 G/J. 14/54  
SHEET 1



MODIFICATION TO STARBOARD CANOPY RAIL.

RESTRICTED

DRG. NO. A.P. 4099 G / J. 14 / 54  
SHEET 2



DETAILS OF ATTACHMENT LUG AND LANYARD.

FULL SIZE.

MODIFICATION TO STARBOARD CANOPY RAIL (DETAILS)

(Canopy winding gear)

Leaflet No. J.14

(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Fuselage—Canopy Winding Gear—Safety  
Lanyard to Handle—Introduction

(7/Mods/22,662.—14.7.54.)

1. A.P.4099G, Vol. 2, Leaflet No. J.14 (Mod. No. Vampire/3307) is amended as follows:—

(1) Para. 5, list of parts required, Item 2. *Amend* to read

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
"32A/10	—	Cord, kite, 2 lb., Spec. 4.F.32	15 in. long	"C"

(2) Para. 8, operation (2), lines 2 and 3. *Delete* "cord, nylon (Stores Ref. 32A/141)" and *substitute* "cord, kite, 2 lb., Specification 4.F.32 (Stores Ref. 32A/10)".(3) DRG. NO. A.P.4099G/J.14/54, SHEET 2. In top R.H. corner. *Delete* "CORD NYLON (STORES REF. 32A/141)", and *substitute* "CORD, KITE, 2 LB. SPECIFICATION 4.F.32 (STORES REF. 32A/10)".**RESTRICTED**

(41008/144) 428518 8245 400 8/54 (H.P.W.) (Gp.19/1)



(Canopy winding gear)

Leaflet No. J-14

(Alteration 2)

Vampire F.B. Mk. 9 Aircraft—Fuselage—Canopy Winding Gear—Safety  
Lanyard to Handle—Introduction

(7/Mods/22,662—12.2.55.)

1. A.P.4099G, Vol. 2, Leaflet No. J-14, (Mod. No. Vampire/3307), is amended as follows:—

(1) Para. 8, operation (6). *Delete and substitute:*

(6) Open the starboard ammunition door, and inside, locate the guard assembly covering the canopy lock release cable. Using bright red identification colour (Stores Ref. 33B/989), paint the visible portion of the cable to a distance of one inch beneath the guard at either side of the cut out. Paint the wording, CABLE HERE, above the cut out and at either side paint an arrow pointing toward the cable.

(2) Para. 5, sub-para. (1) (a). *Add:*

Stores Ref. Part No.

Nomenclature

Qty

Class of Store

33B/989

Colour, ident. synthetic, red,  
bright Spec. D.T.D.314

As reqd.

C

**R****RESTRICTED**

(42360/310A) 428525 8245 500 3/55 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Canopy—Single Skin Canopy and Redesigned  
Demisting System—Introduction

(MOD. No. VAMPIRE/3113.)

Class C/3. (C.W.P.)

(AB/A/994.—30.12.55.)

1. INTRODUCTION

To overcome the misting up that takes place, under certain conditions, between the two skins of the canopy at present fitted to this aircraft, this modification introduces a single skin type canopy, a redesigned demisting system and the necessary structural alterations to facilitate their fitment.

(1) This modification does not cancel, 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.

(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 Comman arrangements overseas.

*2nd Line Servicing Units:* At the first opportunity (not later than 6 months after receipt of parts)

*3rd Line Servicing Units (R.S.U.s):* 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 103 man-hours (23 to strip; 50 to embody; 30 to reassemble).

4. DRAWINGS REQUIRED

Drawing No. A.P. 4099G/J.15/55, Sheets 1—7 is incorporated in this leaflet.

5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

(a) The Modification Kit consists of the following items:—

(i) Items to be supplied by the Contractor:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26BY/1227	A.98522	Nipple	2	C
26FC/-	A00.7427	Special Nut	2	—
26FC/-	A00.7431A	Sealing diaphragm (bulkhead 3)	1	—
26FC/-	A00.7433ND	Spruce insert, 1.25 in. x 1.12 in.	2	—
26FC/-	A00.7435ND	Ply patch	1	—
26FC/-	R00.2413ND	Gasket, $\frac{1}{8}$ in. thick x 2.75 in. o/d.	1	—
26FC/11328	R00.2675ND	Branch pipe	1	C

RESTRICTED

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty</i>	<i>Class of Store</i>
26FC/-	R00.2681A/ND	Pipe Assembly	1	—
26FC/-	R00.2685A/ND	Pipe Assembly	1	—
26FC/-	R00.2687A/ND	Block, wood, 1.5 in. dia. x 0.9 in. long	1	—
26DV/1585	12-F.913	Canopy retaining bracket	1	C
26FC/-	12-F.931ND	Packing (retaining bracket)	1	—
26DV/1672	12-V.497A/ND	Pipe assembly, port	1	C
26DV/1671	12-V.499A/ND	Pipe assembly, starboard	1	C
26DV/1675	12-V.501A/ND	Pipe assembly, port	1	C
26DV/1674	12-V.503A/ND	Pipe assembly, starboard	1	C
26FC/-	12-V.593ND	Block, spruce, 4.25 in. x 1.0 in.	1	—
26DV/1691	12-V.595	Clip, pipe, L.H.	1	C
26DV/1794	12-V.596	Clip, pipe, R.H.	1	C
26BY/6964	D.H.S.103/Mk.2	Ferrule, 2 B.A.	5	C
26FC/-	D.H.S.401F/23	Pipe coupling, 1.0 in. i/d. x 2.3 in. long	1	—
26FC/-	D.H.S.401F/25	Pipe coupling, 1.0 in. i/d. x 2.5 in. long	2	—
26FC/-	D.H.S.401H/23	Pipe coupling, 1.25 in. i/d. x 2.3 in. long	1	—
26FC/-	D.H.S.401K/25	Pipe coupling, 1.5 in. i/d. x 2.5 in. long	1	—
28D/12512	A.25/1C	Bolt, 2 B.A. x 0.55 in.	2	C
28D/12513	A.25/2C	Bolt, 2 B.A. x 0.65 in.	8	C
28S/2493	A.G.S.251/39	Screw, wood, M.S. csk/hd. No. 6 x $\frac{3}{4}$ in.	8	C
28S/2515	A.G.S.251/41	Screw, wood, M.S. csk/hd. No. 6 x 1.0 in.	2	C
28S/2678	A.G.S.253/41	Screw, wood, M.S. rd./hd. No. 6 x 1.0 in.	12	C
28E/8183	A.G.S.605/1	Clip hose	4	C
28E/8184	A.G.S.605/2	Clip, hose	2	C
28F/5722	A.G.S.904/B	Sleeve, outer, $\frac{1}{4}$ in. B.S.P.	1	C
28F/11018	A.G.S.1159/B	Cone, cap, $\frac{1}{4}$ in. B.S.P.	1	C
28M/10288	A.G.S.2001/C1	Nut, stiff, 2 B.A. standard hexagon	8	C
28M/10328	A.G.S.2002/C1	Nut, stiff, 2 B.A. thin hexagon	2	C
28L/11069	A.G.S.2035/C	Washer, shakeproof	5	C
28D/9295	AS.1242/7B	Bolt, 90 deg. csk./hd. 4 B.A. x 1.05 in.	2	C
28D/12691	AS.1246/ $\frac{1}{2}$ C	Bolt, rd. hd. 2 B.A. x 0.45 in.	5	C
28E/14086	AS.3181/16C	Clip, 'P', 2 B.A. 1.0 in. dia.	2	C
28E/14087	AS.3181/20C	Clip, 'P', 2 B.A. 1.25 in. dia.	5	C
28Q/6675	AS.2229/304	Rivet, 90 deg. csk. $\frac{3}{8}$ in. dia. x $\frac{1}{4}$ in.	12	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. x 1.0 in. long	2	C
28P/12262	SP.9/E6	Pin, split, $\frac{3}{32}$ in. dia. x 0.75 in. long	2	C
28P/12465	SP.9/G12	Pin, split, $\frac{1}{8}$ in. dia. x 1.5 in. long	2	C
28W/12252	SP.13/C	Washer, 18 s.w.g., 2 B.A.	8	C
28S/11558	Type Z. No. 4 x $\frac{3}{16}$ in.	Screw, Parker-Kalon, steel	2	C

**RESTRICTED**



(ii) Items to be assembled by the Maintenance Unit to complete the kit:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
*26FC/-	A007419A	Sliding hood assembly with aerial	1	—
†26DV/1580	12-FC 41A	Sliding hood assembly	1	B

*Note:—\*Only applicable to aircraft embodying Mod. No. Vampire/951 (Lear Radio compass. Part (a) The Installation Excluding the Compass. Part (b) The Lear Radio Compass only—Introduction.)*

*Note:—†Only applicable to aircraft not embodying Mod. No. Vampire/951.*

The complete kit is to be demanded from No. 35 Maintenance Unit under Stores Ref. 26FC/103113.

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

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
5K/200	—	Strip, bonding, copper, tinned, $\frac{1}{8}$ in. x 26 s.w.g.	As reqd.	C
29D/2136	—	Brads, brass, gauge 21 x $\frac{3}{8}$ in.	As Reqd.	C
30A/3055	—	Wire, locking, nickel alloy, 22 s.w.g.	As Reqd.	C
32C/537	—	Strip, sealing, linatex, $\frac{3}{8}$ in. thick x $1\frac{1}{2}$ in. wide	As Reqd.	C
33B/205 (Overseas)	—	Finish, synthetic, night	As Reqd.	C
33B/1108 (Home)	—	—	—	—
33B/510	—	Thinner, synthetic	As Reqd.	C
33C/31	—	Paper, glass, No. 1	As Reqd.	C
33C/1264	—	Compound, pigmented varnish jointing	As Reqd.	C
33C/1188	—	Adhesive, synthetic resin, type B.70	As Reqd.	C
33C/973	—	Hardener G.B.M.	As Reqd.	C
33C/1138	—	Compound Bostik sealant 1790	As Reqd.	C
33C/1139	—	Compound Bostik primer 1751	As Reqd.	C
33C/1173	—	Cement, rubber resin	As Reqd.	C
33B/1027	—	Lacquer ('Plyceal') (Farrow and Ball Ltd.)	As Reqd.	C

## (2) Special Tools and Test Equipment

The following special tool is required but provision is limited to 1 each for Flying Training and Far East Commands. Units requiring the jig are to make application to the appropriate Command Headquarters:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/9098	J.36477	Setting jig	1	A

## 6. SPARES AFFECTED

There are no spares affected by this modification.

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Stores Ref., Part or Assembly Nos., as a result of this modification.

**RESTRICTED**

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

*Important Note 1:*— All pipes disconnected during the embodiment of this modification and still remaining in the aircraft, must be temporarily sealed as a precaution against the entry of foreign matter.

*Important Note 2:*— Throughout the embodiment of this modification, it is important to ensure that prior to fitment, all new pipe assemblies are clear internally of any foreign matter.

(1) Trestle the aircraft and jack the wheels clear of the ground as detailed in A.P.4099G, Vol. 1, Sect. 4, Chap. 3, fig. 5.

(2) Remove the sliding hood, Part No. A004929A (aircraft not embodying Mod. No. Vampire/951); A00.7283A (aircraft with Mod. No. Vampire/951 embodied), and dispose of it in accordance with current authorised procedure.

(3) Remove the pilot's seat from the cockpit and retain it with its attachment items for reassembly.

(4) Remove the fuselage tank as detailed in A.P. 4099G, Vol. 1, Sect. 5, fig. 5.

(5) Drain the hydraulic reservoir, disconnect and remove it from the aircraft as detailed in A.P. 4099G, Vol. 1, Sect. 5, retaining it with its attachment items for reassembly.

(6) Locate the pipe, Part No. A00.1867/A/ND, connecting from the port side of the upper instrument panel to the flexible pipe, Part No. A00.2737A/ND, which in turn connects in the roof of the sliding hood. Remove the six tubular clips securing the pipe at intervals along the port cockpit rail and, using a No. 30 (0.1285 in. dia.) drill, remove the two rivets securing the saddle clip to the sealing diaphragm mounted on the top forward face of bulkhead No. 3. Dispose of this pipe, its attachment items and the flexible pipe referred to at the beginning of this operation.

(7) Carefully ease out the canopy sealing strip from the redundant sealing diaphragm, Part No. A00.2340A/1, located in operation (6), mounted on the top forward face of bulkhead No. 3. Locate the twelve rivets securing the diaphragm to the corner bracket at either side of the cockpit and using a No. 41 (0.096 in. dia.) drill, carefully remove these rivets. Remove the nuts, bolts, washers and woodscrews securing the diaphragm to the fuselage decking and bulkhead No. 3, then carefully ease it from the bulkhead and dispose of it with two of the nuts, two of the 0.4 in. o/d. washers and all the woodscrews, retaining the remaining items for reassembly. The two corner brackets are now unattached and should be removed and retained for future use. Clean the rubber sealing strip and Bostik compound, which was beneath the diaphragm, from the face of the bulkhead. On aircraft embodying Mod. No. Vampire/951, the contact strip, Part No. N00.3259A, mounted on the redundant diaphragm, is to be removed but allowed to remain attached to the aerial connector assembly. To facilitate the reassembly of this item, a note of its position should be made prior to removal.

(8) Locate the air distributor mounted on the starboard cockpit wall, below the punkah louver, and from it disconnect the pipe, Part No. R00.2409ND, connecting to the rear starboard gallery pipe, Part No. R00.2159A, routed along the starboard cockpit rail. Remove the pipe from the cockpit and dispose of it, with the two hose couplings and two of the hose clips in accordance with current authorised procedure. The remaining two hose clips are required for future use.

**RESTRICTED**

(9) Locate the pipe, Part No. R00.2403A, connecting from the air distributor, referred to in operation (8), to the hose connection aft of bulkhead No. 2. Disconnect the hoses, remove the five woodscrews securing the pipe to the lower starboard face of the bulkhead and dispose of the pipe. Retain all other items, less the hose coupling at the distributor and the gasket beneath the pipe flange on the face of the bulkhead, for use on reassembly.

(10) Break the locking wire and unscrew the Schrader, pump connector from the canopy seal connection on the starboard side of the cockpit. Release the hose clip securing the gallery pipe, Part No. R00.2159A, referred to in operation (9), routed along the starboard cockpit rail, remove the pipe from the cockpit and dispose of it, together with the hose clip.

(11) Locate the forward starboard gallery pipe, Part No. R00.2157ND which connects from the pipe removed in operation (10) to the port gallery pipe, Part No. R00.2151A/ND, aft of the front windscreen. Release the two clips, Part Nos. R00.2163 and R00.2165, securing the pipe above the starboard blind flying panel screen fixing plate, remove the pipe from the aircraft and dispose of it with the clips and their attachment items.

(12) Release the three clips, Part Nos. R00.2163 (1-off), R00.2165 (2-off), securing the port gallery pipe, Part No. R00.2151A/ND, referred to in operation (11) in position around the port cockpit rail. Remove the pipe from the aircraft and dispose of it with the clips and their attachment items.

(13) Refer to Sheet 1 of the drawing and locally remove the front ply face of bulkhead No. 3 to the extent shown. Offer up the two new spruce inserts, Part No. A00.7433ND, and glue in the positions shown on the drawing, using adhesive synthetic resin type B70 and hardener G.B.M. (Stores Refs. 33C/1188 and 33C/973 respectively).

*Note:*— It is recommended that, at a normal temperature of 60 deg. fahrenheit, a minimum drying period of four hours be allowed for synthetic resin adhesive; but it should be noted that, with the application of radiant heat at a temperature of 70 deg. fahrenheit, this period could be accelerated to a minimum of three hours.

Failure to observe the minimum times quoted will result in "Crazing of the Cement" and a consequent loss in adhesive strength.

(14) Still referring to Sheet 1 of the drawing, offer up the new ply patch, Part No. A00.7435ND, and scarf to suit the ply face of the bulkhead. Coat the mating faces of the patch and the bulkhead with synthetic resin adhesive type B.70 and hardener G.B.M., place the patch in position and secure with eight countersunk head, No. 6 x  $\frac{3}{4}$  in. woodscrews, Part No. A.G.S.251/39. The note at the end of operation (13), regarding drying times, is also applicable to this operation and must be carried out. Apply a brush coat of lacquer (Stores Ref. 33B/1027) over the new ply patch and the surrounding woodwork and allow to dry for 48 hours.

*Note:*— It is most important to ensure that the new ply patch is scarfed to the bulkhead facing, over the existing spruce inserts as shown on the drawing.

(15) Using cement rubber resin (Stores Ref. 33C/1173) secure an even covering of  $\frac{3}{8}$  in. thick x  $1\frac{1}{2}$  in. wide linatex strip (Stores Ref. 32C/537) to the top forward face of bulkhead No. 3 in the area to which the redundant sealing diaphragm, removed in operation (7), was fitted. Referring to Sheet 2 of the drawing, offer up the new sealing diaphragm, Part No. A00.7431A, and secure to the bulkhead using the attachment items retained in operation (7), two new special nuts and twelve round

head No. 6 x 1.0 in. woodscrews, Part Nos. A00.7427 and A.G.S.253/41 respectively as shown on the drawing. Prior to fitment, liberally coat the bolts and woodscrews with a mixture of Bostik sealant 1790 and Bostik primer 1751 (Stores Refs. 33C/1138 and 33C/1139 respectively). The mating surfaces of the two corner brackets retained in operation (7), whose refitment is detailed on Sheet 2 of the drawing and must be effected during the embodiment of this operation, are to be coated with Bostik primer 1751 before re-riveting, using twelve 90 deg. countersunk  $\frac{3}{8}$  in. dia. x  $\frac{1}{4}$  in. rivets, Part No. AS.2229/304. It is extremely important to ensure that the heads of the rivets, securing the corner brackets, lay flush with the face of the sealing diaphragm and that no rough edges exist which may cause damage to the rubber sealing strip. Refit and secure the aft portion of the sealing strip, released from the redundant sealing diaphragm in operation (7), into the recess provided around the new sealing diaphragm.

(16) Secure the canopy retaining bracket, Part No. 12-F.913, in position on the setting jig, Part No. J.36477, and slide the jig along the canopy runners until the face of the bracket is flush with the aft face of the new sealing diaphragm, fitted in the previous operation (15). Using a No. 11 (0.191 in. dia.) drill, and utilizing the eight holes in the sealing diaphragm to suit. Remove the jig, release and retain the bracket, thoroughly deburr the newly drilled holes and clear away all swarf and metal drillings.

(17) Temporarily clamp the packing, Part No. 12-F.931ND, to the forward face of the retaining bracket, referred to in operation (16), and again using the No. 11 drill, drill eight holes in the packing to suit those in the bracket. Remove the packing and deburr the holes.

(18) Coat the mating surfaces of the canopy retaining bracket, Part No. 12-F.913, the packing, referred to in the previous operation (17), and the sealing diaphragm with pigmented varnish jointing compound (Stores Ref. 33C/1264). Correctly position them over the eight holes drilled in operation (16) and secure as shown on Sheet 2 of the drawing, using eight 2 B.A. x 0.65 in. bolts, eight 2 B.A. stiffnuts and eight 2 B.A. washers, Part Nos. A.25/2C, A.G.S.2001/C1 and SP.13/C respectively. The stiffnuts and washers are to be fitted to the forward face of the sealing diaphragm. Peen the bolt ends to lock the nuts.

(19) Using a No. 11 (0.191 in. dia.) drill, enlarge the existing hole in the port blind flying panel screen fixing plate used for attaching the pipe clip removed in operation (12) and the forward of the two holes in the starboard fixing plate used for attaching the pipe clip removed in operation (11). Refer to Sheets 3, 4 and 5 of the drawing, offer up the pipe assemblies, Part Nos. 12-V. 497A/ND (Port); 12-V. 499A/ND (Starboard), and utilizing the two holes enlarged at the commencement of this operation, secure to the port and starboard fixing plates, using two 2 B.A., 1.0 in. dia. 'P' clips, Part No. AS.3181/16C, two 2 B.A. x 0.55 in. bolts, Part No. A.25/1C, and two 2 B.A. thin stiffnuts, Part No. A.G.S.2002/C1. Do not fully tighten the stiffnuts at this stage.

(20) Refer again to Sheet 4 of the drawing and carefully remove and dispose of the two existing bolts through the port and starboard sides of the forward canopy sealing member, in the positions to be occupied by the two new 90 deg. countersunk, 4 B.A. x 1.05 in. bolts, Part No. AS.1242/7B. Referring to Sheet 4 of the drawing, secure the free ends of the pipes, positioned in operation (19), to the port and starboard sides of the forward canopy sealing member as detailed. It is extremely important to ensure that the heads of the two bolts quoted previously in this operation, lay flush with the face of the sealing member and that no rough edges exist which may cause damage to the rubber sealing strip. Do not fully tighten the attachment items at this stage.

**RESTRICTED**

(21) *Refer* to Sheets 3 and 5 of the drawing and offer up the pipe assembly, Part No. R00.2681A/ND, temporarily securing it to the pipe assembly, Part No. 12-V 497A/ND, positioned in operation (19), using a 1.0 in. i/d. x 2.3 in. long pipe coupling, Part No. D.H.S.401F/23.

(22) *Refer* to Sheets 5 and 6 of the drawing and offer up the pipe assembly, R00.2685A/ND, temporarily securing it to the pipe aft of bulkhead No. 2 using the pipe coupling retained in operation (9) and to the unconnected end of the pipe positioned in operation (21) using a 1.25 i/d. x 2.3 in. long pipe coupling, Part No. D.H.S.401H/23.

(23) *Refer* to Sheet 6 of the drawing, offer up and position the branch pipe, Part No. R00.2675ND, temporarily securing it to the distributor and to the remaining unconnected end of the pipe assembly, Part No. R00.2685A/ND, positioned in operation (22), using two 1.0 i/d. x 2.5 in. long pipe couplings, Part No. D.H.S.401F/25.

(24) *Refer* to Sheets 4 and 5 of the drawing and remove from the new sliding hood assembly, Part No. 12-FC. 41A (aircraft not embodying Mod. No. Vampire/951); A007491A (aircraft with Mod. No. Vampire/951 embodied), the eight screws in those positions to which the attachment brackets, welded to the new pipe assemblies, Part Nos. 12-V.501A/ND (Port); 12-V. 503A/ND (Starboard), are to be fitted and retain them for reassembly. Coat the mating surfaces of the brackets, referred to above, and the sliding hood, with pigmented varnish jointing compound and secure the pipe assemblies in their correct positions using the eight screws retained in the previous stage of this operation. Lock the screws by centre punching around the heads.

(25) Offer up and fit the new sliding hood assembly as detailed in A.P.4099G, Vol. 1, Sect. 5, fig. 7, omitting stage 7. It is most important to ensure that the gap of 0.1 in. and the overlap of 0.3 in. between the angle bracket, attached to the sliding hood rear fairing, and the canopy retaining bracket, fitted in operation (18), is existent. If necessary, trim the lower edge of the sliding hood rear fairing to clear the fuselage by  $\frac{1}{16}$  in.

(26) With the canopy in the fully closed position, ensure that a clearance of 0.1 in. exists between the ends of the pipes secured to the port and starboard sides of the forward canopy sealing member, in operation (20), and the pipes secured to the new sliding hood in operation (24). Reference to Sheets 4 and 5 of the drawing will clarify the exact positions of these pipes when the sliding hood is in the closed position. When these pipes are satisfactorily positioned, tighten the stiffnuts and nipples, fitted in operations (19) and (20), securing them to the blind flying panel screen fixing plates and the forward canopy sealing member. Lock the nipples by peening the bolts.

(27) *Refer* to section 'W-W' on Sheet 4 of the drawing and using a No. 40 (0.098 in. dia.) drill, drill the two holes in the pipe assemblies, Part Nos. 12-V.497A/ND (Port); 12-V.499A/ND (Starboard), for the two type Z, No. 4 x  $\frac{3}{16}$  in., Parker-Kalon screws, using the existing holes in the pipe clips, Part Nos. 12-V.595 (L.H.); 12-V.596 (R.H.), positioned on the port and starboard sides of the forward canopy sealing member in operation (20) as guides. Fit the two screws, carefully remove the sliding hood and with the aid of an air pressure line, blow from the pipes any metal drillings that may have entered whilst embodying this operation. On aircraft embodying Mod. No. Vampire/951, prior to removing the hood, offer up the contact strip, Part No. N00.3259A, removed in operation (7), and position it on the new sealing diaphragm at bulkhead No. 3 in a similar manner to the position it occupied on the redundant diaphragm. Ensure that the contact strip lays centrally about the contact already fitted to the new sliding hood, mark on the sealing diaphragm the position of the two holes for its attaching screws then release the strip.

**RESTRICTED**

*Note:*— The following operation (28) is only applicable to aircraft embodying Mod. No. Vampire/951.

(28) Carefully ease the rubber sealing strip from the sealing diaphragm in the position in which the two holes marked from the contact strip, in operation (27), are to be drilled. Using a No. 11 (0.191 in. dia.) drill, drill these two holes and cut countersink them in the upper face of the diaphragm (that is the surface immediately below the rubber sealing strip) 90 deg. x 0.32 in, to suit the heads of the attaching screws. Thoroughly deburr the holes and remove all trace of metal drillings and swarf. Offer up and position the contact strip, as in operation (27), and secure with its existing attachment items, retained in operation (7), re-securing the cable 'P' clip under the R.H. attaching stiffnut, coating the bolts and the mating surface of the contact strip and sealing diaphragm with Bostik primer 1751 prior to fitment. It is extremely important to ensure that the heads of the bolts lay flush with the upper surface of the sealing diaphragm and that no rough edges exist which may cause damage to the rubber sealing strip. Refit and secure the sealing strip in the recess provided around the sealing diaphragm.

(29) Ensure that the correct clearance exists between the ends of the pipes temporarily fitted in operations (21), (22) and (23), and when these pipes are satisfactorily positioned, mark the centres for the five ply ferrules, Part No. D.H.S.103, Mk. 2, two of which are to be fitted to the forward face of bulkhead No. 2 and the remainder to the port cockpit wall. The approximate position of these ferrules are shown on Sheets 3, 5 and 6 of the drawing. Dismantle the three pipes and retain them with their respective hose couplings.

(30) Using a  $\frac{3}{8}$  in. Fosner or Wilpat bit, drill the holes for the five ferrules to a depth of 0.43 in. at the positions marked in operation (29). Locally remove the finish from around the holes, using No. 1 glass paper (Stores Ref. 33C/31), clear away all wood drillings and dust, then secure the ferrules in their respective positions using adhesive synthetic resin type B.70, hardener G.B.M. and  $\frac{3}{8}$  in. brass brads (Stores Ref. 29D/2136). Allow the adhesive to dry in accordance with the recommended procedure at the end of operation (13).

(31) Apply a brush coat of 'Plyceal' over the ferrules and that area of the bulkhead and cockpit wall from which the finish was removed in operation (30), and allow to dry for 48 hours. Renew the finish to the cockpit, using synthetic thinner and synthetic night finish (Stores Refs. 33B/510 and 33B/205 or 1108 respectively) and allow to dry.

*Note:*—Throughout the embodiment of the following operations (32), (33) and (34), all new pipe assemblies are to be bonded with a suitable length of tinned copper strip (Stores Ref. 5K/200) routed across and under either end of the pipe couplings and secured in position by the hose clips.

(32) Refer to Sheets 3 and 5 of the drawing and position the pipe assembly, Part No. R00.2681A/ND, as in operation (21). Secure with the pipe coupling quoted in that operation, two new hose clips, Part No. A.G.S.605/1, and attaching the pipe to the ferrules mounted on the port cockpit wall in operation (30), using three 2 B.A. 1.25 in. dia. 'P' clips, three round head 2 B.A. x 0.4 in. bolts and three shakeproof washers, Part Nos. AS.3181/20C, AS.1246/ $\frac{1}{2}$ C and A.G.S.2035/C respectively. Coat the bolts with Bostik primer 1751 prior to fitment.

(33) Refer to Sheets 5 and 6 of the drawing, place the new gasket, Part No. R00.2413ND, over the appropriate end of the pipe assembly, Part No. R00.2685A/ND, and position the pipe as in operation (22). Secure with the pipe couplings quoted in that operation, two new hose

**RESTRICTED**

clips, Part No. A.G.S.605/2 and the two existing hose clips, retained in operation (9). Secure the pipe flange to the bulkhead using the five woodscrews retained in operation (9), and the pipe to the two ferrules mounted on the bulkhead in operation (30), using two 2 B.A. 1.25 in. dia. 'P' clips, two round head 2 B.A. x 0.4 in. bolts and two shakeproof washers, Part Nos. AS.3181/20C, AS.1246/1C and A.G.S. 2035/C respectively. Coat the bolts and woodscrews with Bostik primer 1751 prior to fitment.

(34) Refer to Sheet 6 of the drawing, offer up the branch pipe, Part No. R00.2675ND, and secure in position, as in operation (23), using the pipe couplings quoted in that operation, two new hose clips, Part No. A.G.S.605/1, and the two existing hose clips retained in operation (9). Blank off the distributor outlet as shown, using a wood block, Part No. R00.2687ND, a new 1.5 in. i/d. x 2.5 in. long pipe coupling, Part No. D.H.S.401K/25, and the two hose clips retained in operation (8).

(35) Within the pressure cabin apply the following treatment to the sealing diaphragm and corner brackets, fitted in operation (15), the new pipe flange at bulkhead No. 2, the 'P' clips and the heads of the screws securing them to the new ferrules, fitted during this modification:

(a) Brush a coat of Bostik 1751 over all nuts, bolts, rivets, woodscrews and to approximately 1.0 in. either side of all metal joints.

(b) Allow to dry for at least one hour.

(c) Apply a fillet of Bostik 1790 around all nuts, bolts, rivets, woodscrews and metal joints.

(d) Allow to dry for 24 hours.

(e) Brush coat again with Bostik 1751 as in stage (a) and allow to dry.

(36) Replace and reconnect the hydraulic tank using the attachment items retained in operation (5) and ensuring extreme cleanliness throughout. Fill and prime the hydraulic system as detailed in A.P. 4099G, Vol. 1, Sect. 4, Chap. 3.

(37) Replace and secure the fuselage tank as detailed in A.P. 4099G, Vol. 1, Sect. 5, fig. 5, ensure that the undercarriage is selected 'Down', then lower the aircraft and remove the trestles.

(38) Refer to Sheet 7 of the drawing and blank off the redundant dry air connection on the aft port face of the upper instrument panel as shown, using a  $\frac{1}{4}$  in. B.S.P. cone cap and outer sleeve, Part Nos. A.G.S.1159/B and A.G.S.904/B respectively.

(39) Replace and secure the pilot's seat in accordance with current authorized procedure, using two  $\frac{1}{16}$  in. dia., two  $\frac{3}{16}$  in. dia. and two  $\frac{1}{8}$  in. dia. split pins, Part Nos. SP.9/C8, SP.9/E6 and SP.9/G12 respectively.

(40) Reconnect the Schrader pump connector to the canopy seal connection on the starboard side of the cockpit and lock the connection with 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055).

(41) Offer up and fit the sliding hood, as in operation (25), and carry out cabin pressurisation tests as detailed in paragraph 9 of this leaflet. Whilst the cabin is pressurised, inspect the forward edge of the hood and should it be found proud, lightly dress down to suit the front windscreen contour.

(42) Clean the transparent panels of the new sliding hood in accordance with the instructions laid down in A.P.1464D, Vol. 1, Part 2, Sect. 5, Chap. 5.

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## 9. TESTING AFTER EMBODIMENT

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

Carry out a cabin pressurisation test as detailed in A.P. 4099G, Vol. 1, Sect. 4, Chap. 3. Pressure test the main fuel tank and carry out a fuel flow test in accordance with current authorised procedure.

Test the new dry air system for efficient operation.

On aircraft embodying Mod. No. Vampire/951, test the Lear radio installation in accordance with current authorised procedure.

## 10. RECORDING ACTION

Record on Aircraft Form 700.

## 11. DISPOSAL OF REDUNDANT PARTS

The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of:

(a) As scrap in accordance with Air Ministry Salvage Leaflets:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/4740	A00.1867A/ND	Pipe, joint on instrument panel to sliding hood	1	C
26FC/3756	A00.2340A/1	Diaphragm, sealing, on bulkhead No. 3	1	C
26FC/4405	A00.2737A/ND	Pipe, flexible, sliding hood to rigid pipe	1	C
26FC/-	R00.2151A/ND	Pipe, cockpit gallery, Port	1	—
26FC/4900	R00.2157ND	Pipe, cockpit gallery forward starboard	1	C
26FC/4677	R00.2159A	Pipe, cockpit gallery rear starboard	1	C
26FC/4678	R00.2163	Clip, gallery pipe in cockpit	2	C
26FC/4679	R00.2165	Clip, gallery pipe in cockpit	3	C
26FC/4897	R00.2403A	Pipe, from distributor to bulkhead No. 2	1	C
26FC/4898	R00.2409ND	Pipe, from distributor on fuse side to gallery pipe	1	C

(b) By return to No. 35 Maintenance Unit, Heywood:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/4224	A00.4929A	Canopy, sliding complete	1	B
	or			
26FC/5896	A00.7283A	Canopy sliding, with aerial complete	1	B

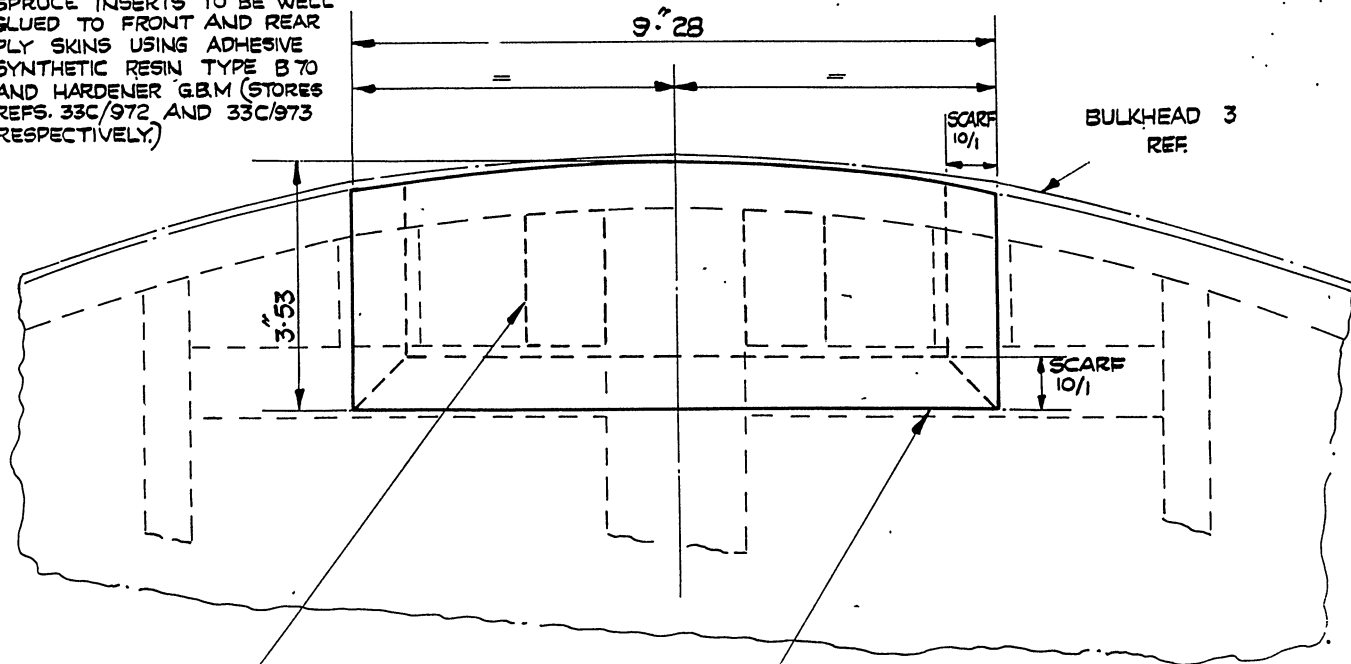
## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of — 11·5 lb., and a change of moment of + 57·5 lb. ft.



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SPRUCE INSERTS TO BE WELL  
GLUED TO FRONT AND REAR  
PLY SKINS USING ADHESIVE  
SYNTHETIC RESIN TYPE B 70  
AND HARDENER G.B.M (STORES  
REFS. 33C/972 AND 33C/973  
RESPECTIVELY.)



A00  
7433  
ND

SPRUCE INSERT  
2-OFF

PLY PATCH SCARF  
MUST LAY OVER EXISTING  
INSERTS

A00  
7435  
ND

PLY PATCH  
1-OFF

SCREW PLY PATCH TO NEW  
AND EXISTING SPRUCE INSERTS  
USING:-

AGS  
251  
39

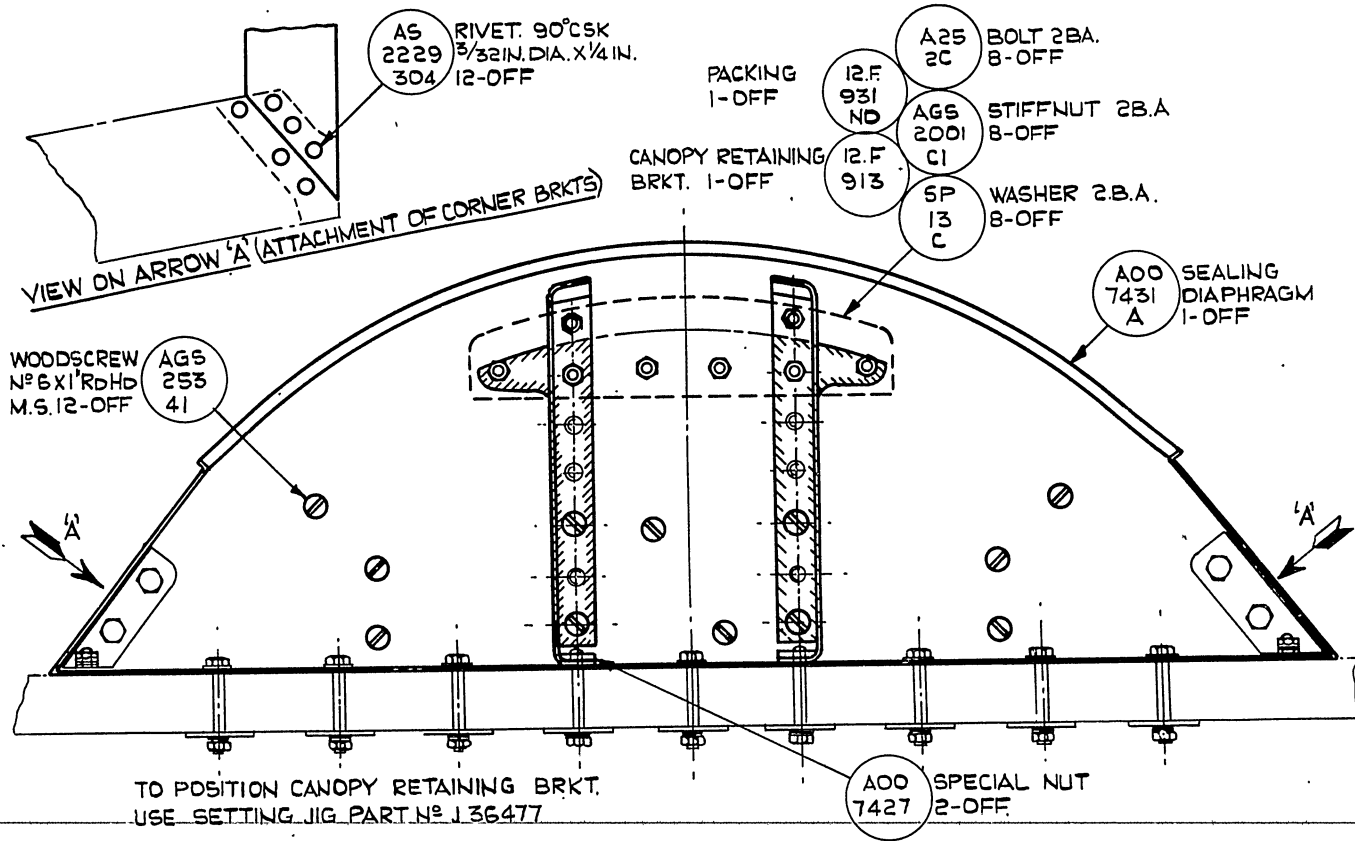
WOODSCREW  
NO. 6 X 3/4 IN. M.S.  
8-OFF

MODIFICATION TO INTERNAL STRUCTURE OF BULKHEAD 3  
TOP PORTION OF BULKHEAD, VIEW LOOKING AFT.

DRG. NO. A.P. 4099G / J.15 / 5  
SHEET 1  
4778 Wt. 6187/3005 625 / 56 W.B. 8 & 6p. 1267/2



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DETAILS FOR FITMENT OF SEALING DIAPHRAGM TO BULKHEAD Nº 3 AND FUSELAGE DECKING

DRG. Nº A.P. 40996 / J.15 / 5

SHEET 2

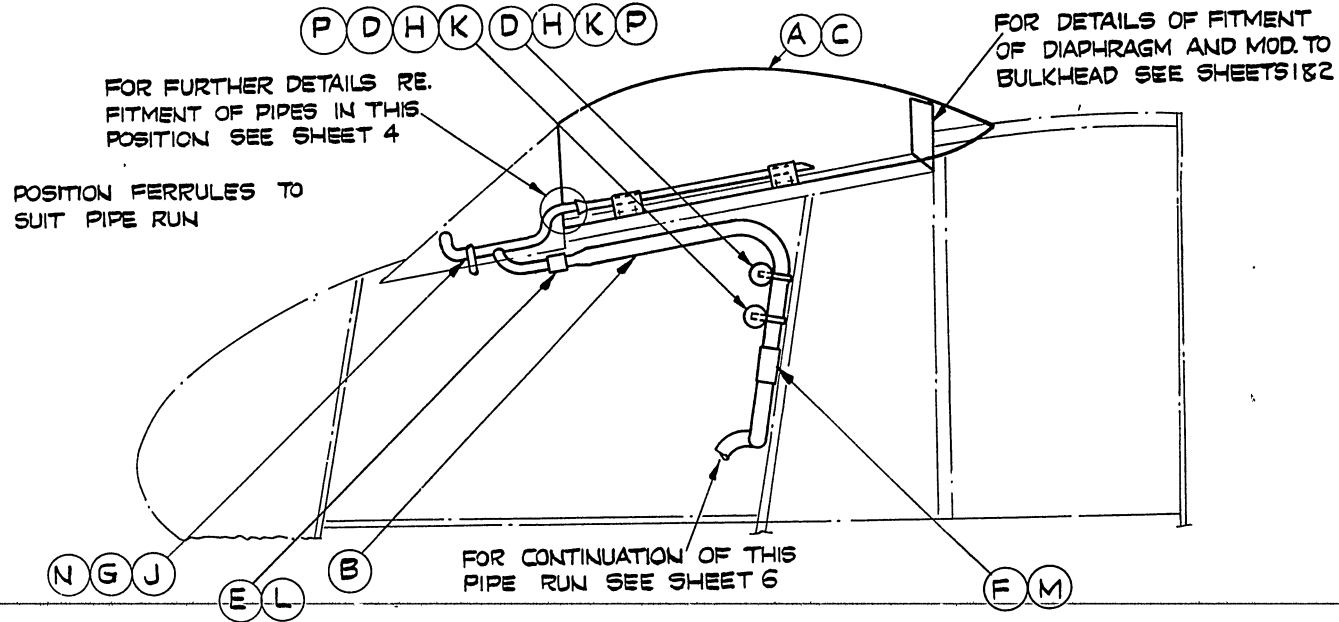
4778 W.8187/9005 625 1/56 W.B.G. Cp. 1267/2



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KEY	PART N°	NOMENCLATURE	QTY
A	A007419A	SLIDING HOOD WITH AERIAL	1
B	R002681A/ND	PIPE ASSEMBLY	1
C	12 FC 41A	SLIDING HOOD ASSY	1
D	DHS 103 MK2	FERRULE 2 BA	2
E	DHS 401F/23	PIPE COUPLING	1
F	DHS 401H/23	PIPE COUPLING	1
G	A25/1C	BOLT 2 B.A	2

KEY	PART N°	NOMENCLATURE	QTY
H	AS 1246 1/2 C	BOLT RH HD. 2 BA	2
J	AS 3181/16C	'P' CLIP 2 B.A.	2
K	AS 3181/20C	'P' CLIP 2 BA	2
L	AGS 605/1	HOSE CLIP	2
M	AGS 605/2	HOSE CLIP	2
N	AGS 2002/C1	STIFFNUT THIN 2 B.A	2
P	AGS 2035/C	WASHER SHAKEPROOF	2



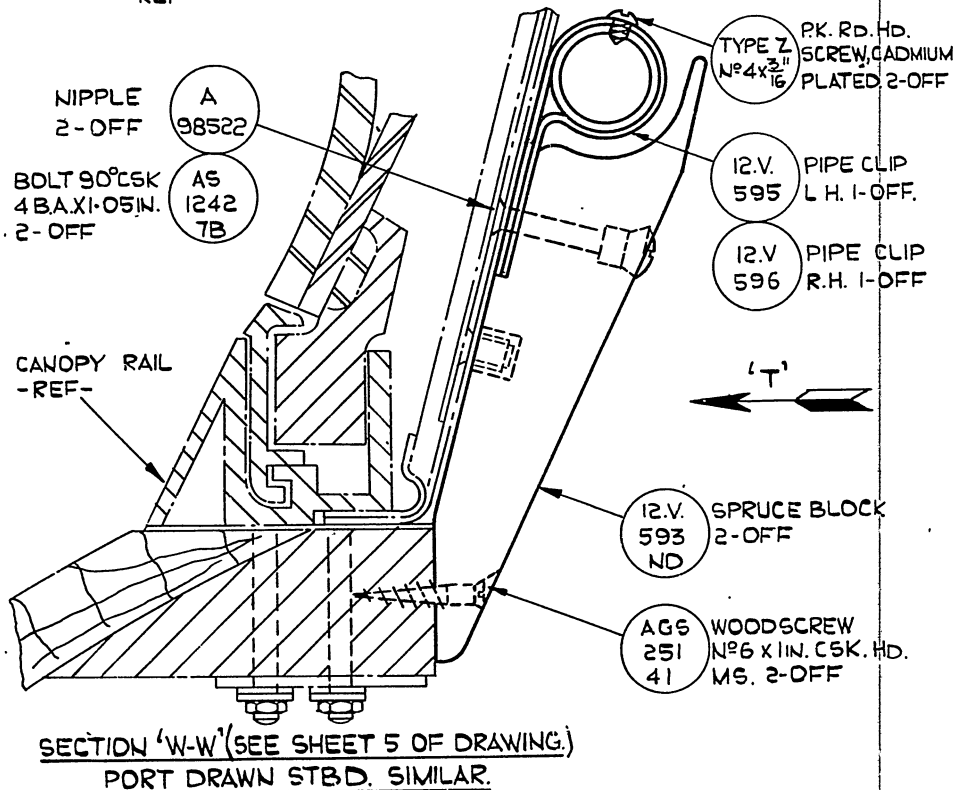
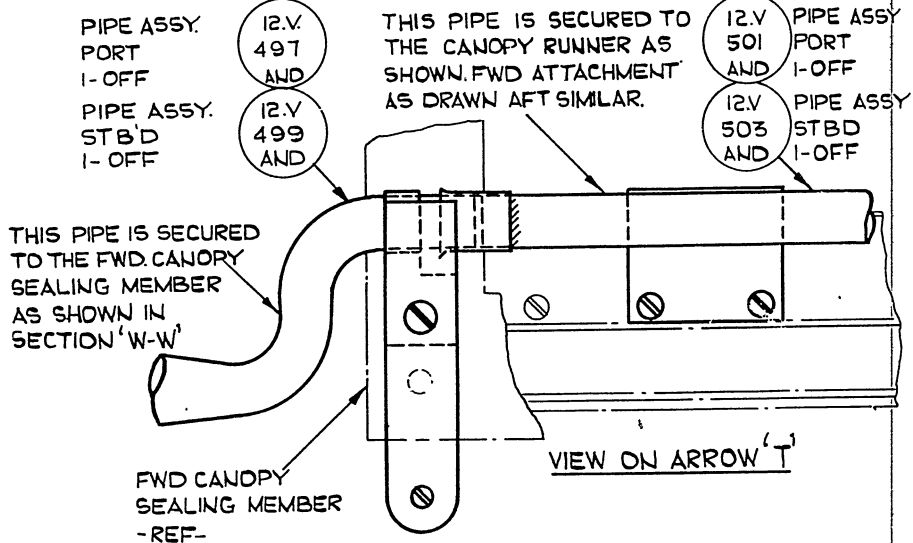
ARRANGEMENT OF AIR PIPES AROUND CANOPY AND PIPE RUN ON PORT COCKPIT WALL.

DRG. N° AP 4099G J.15 / 5

SHEET 3

4778 Wt. 8167/9005 625 /56 Wt. 8167/9005 625 /56





RESTRICTED

DRG. NO A.P. 4099G/J. 15/55

SHEET 4

4778 WT. 9/187/9005 625 1/56 W.B. 860 6p 1267/2



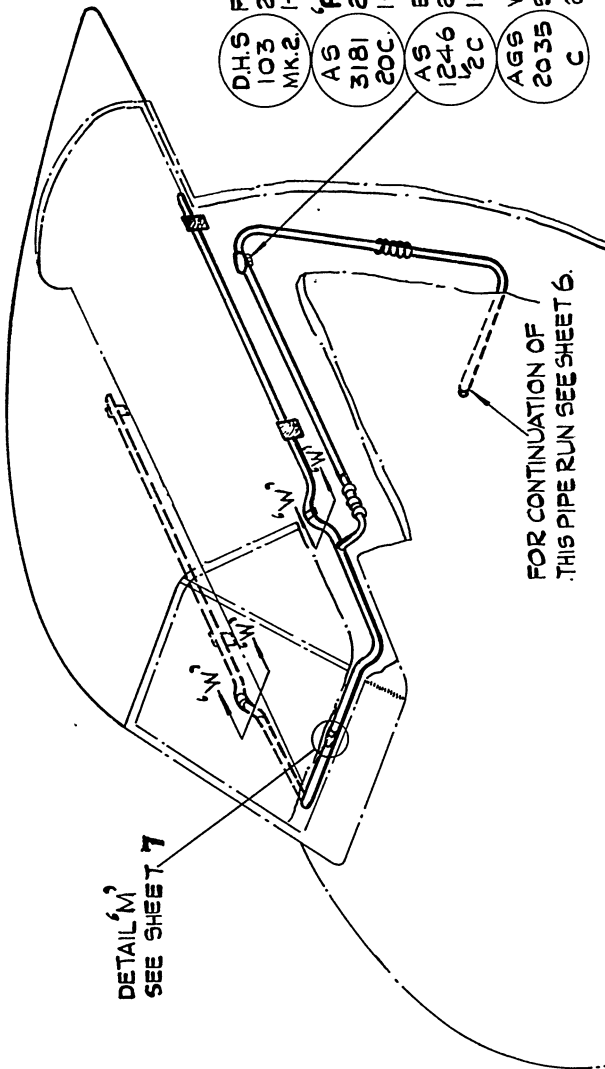


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FOR SECTION 'W-W'  
SEE SHEET 4

POSITION FERRULE TO SUIT PIPE RUN.  
FOR OTHER FERRULE POSITIONS SEE  
SHEETS 3 AND 6

DETAIL 'M'  
SEE SHEET 7



DHS FERRULE  
103 2B.A.  
MK.2 1-OFF

AS 'P' CLIP  
3181 2.B.A.  
20C 1-OFF

AS BOLT R.D. HP.  
1246 2 B.A.  
1/2 C 1-OFF

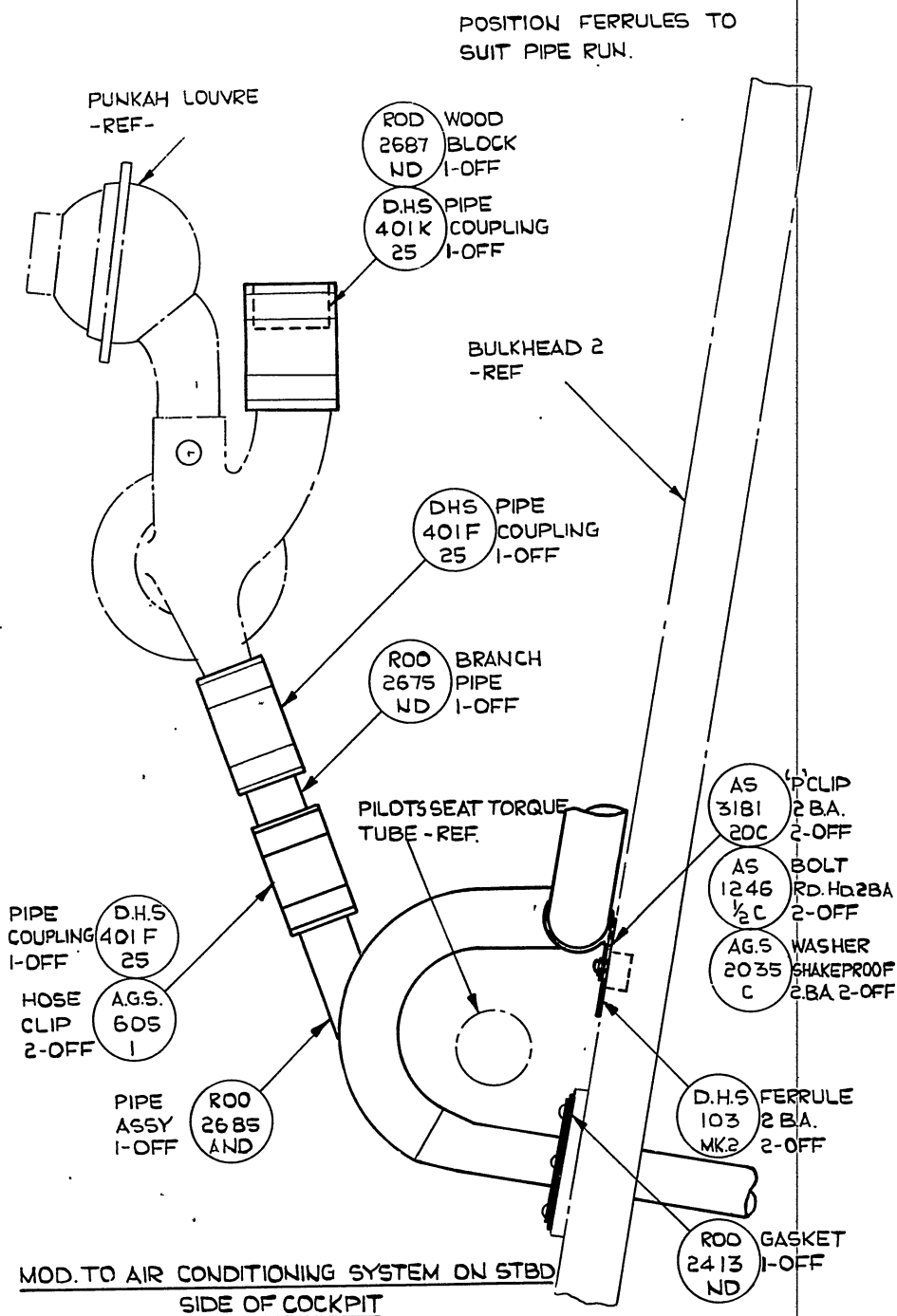
AGS WASHER  
2035 SHAKEPROOF  
C 2.B.A. 1-OFF

FOR CONTINUATION OF  
THIS PIPE RUN SEE SHEET 6.

DRG. N° A.P. 4099 G / J. 15 / 55

SHEET 5





RESTRICTED

DRG. NO A.P. 4099G/J.15 / 55  
SHEET 6

4778 Wt.8187/9005 625 1/56 W.B.86 Gp.1267/2



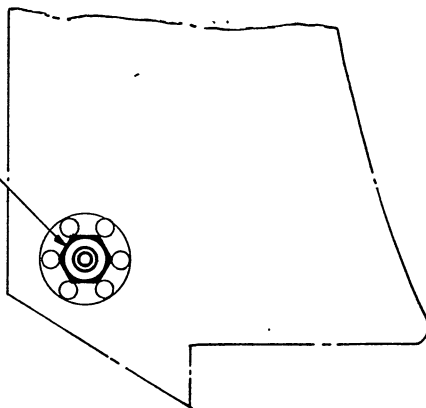
RESTRICTED

CONE CAP  
1/4 IN. B.S.P.  
1-OFF.

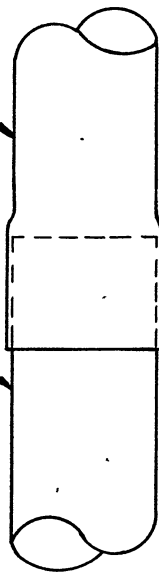
OUTER SLEEVE  
1/4 IN. B.S.P.  
1-OFF.

AGS.  
1159  
B

AGS.  
904  
B



12.V.497A/ND-REF. 12.V.499A/ND-REF  
SEE SHEET 4. SEE SHEET 4.



DETAIL M (SEE SHEET 5 OF DRAWING)

BLANKING OF REDUNDANT DRY AIR CONNECTION  
AT UPPER INSTRUMENT PANEL.

DRG. N° A.P. 4099G /J.15 / 55  
SHEET 7



(Strengthened canopy and redesigned gallery)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. J16**Vampire F.B. Mk. 9 Aircraft—Canopy—To Introduce Strengthened Canopy and Redesigned Gallery Pipes**

(Mod. No. VAMPIRE/3577.)

(Class B/2.)

(AB/A/7860.—19.5.58.)

**1. INTRODUCTION**

It has been found that the canopy perspex is fracturing in flight. To prevent this, this modification introduces a new strengthened canopy embodying an aluminium alloy front arch member. At the same time to ensure positive jettisoning of the canopy, redesigned demisting pipes are introduced.

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

(2) This modification is applicable only if Mod. No. Vampire/3113 (Canopy—To Introduce Single Skin Canopy and Redesigned Demisting System) is already embodied.

**2. EMBODIMENT**

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity (not later than 2 months after receipt of parts)

*3rd Line Servicing Units (R.S.U.s):* 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 12 man-hours (1 to strip, 10 to embody, 1 to reassemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/J.16/58, Sheets 1-3, is incorporated in this leaflet.

**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. 35 Maintenance Unit under Ref. No. 26FC/103577.—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/12967	12FC.213A	Sliding hood assembly	1	A
26DV/10104	12V.1065A	Clip, pipe (L.H.)	1	C
26DV/10105	12V.1075A	Clip, pipe (R.H.)	1	C
26FC/12972	12V.1255A/ND	Pipe, canopy demisting (L.H.)	1	C
26FC/12971	12V.1257A/ND	Pipe, canopy demisting (R.H.)	1	C
26FC/12973	12V.1273	Clip, special (L.H.)	1	C
26FC/—	12V.1275ND	Retainer, clip	2	C
26FC/12974	12V.1283	Clip, special (R.H.)	1	C

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/12969	12V.1285ND	Pipe, windscreen demisting (R.H.)	1	C
26FC/12970	12V.1287A/ND	Pipe, windscreen demisting (L.H.)	1	C
28D/12512	A.25/1C	Bolt, 2 B.A. hex./hd.	2	C
28S/2310	AGS.252/39	Woodscrew, rd./hd. No. 6	2	C
28S/2650	AGS.253/37	Woodscrew, rd./hd. No. 6	1	C
28E/15226	AGS.605/1A	Clip, hose	2	C
28M/10287	AGS.2001/B1	Nut, stiff, 4 B.A.	2	C
28M/10328	AGS.2002/C1	Nut, stiff, 2 B.A.	2	C
28Q/1780	AS.460/403	Rivet, 90 deg. csk/hd. 1 in. dia.	4	C
28Q/1791	AS.460/504	Rivet, 90 deg. csk/hd. 1/2 in. dia.	2	C
28D/8300	AS.1242/1B	Bolt, 90 deg. csk/hd. 4 B.A.	2	C
28D/8318	AS.1242/19C	Bolt, 90 deg. csk/hd. 2 B.A.	2	C
26FC/-	AS.2811/4/020	Tube, distance	1	—
28E/14074	AS.3181/16B	Clip, "P"	1	C
28W/9419474	SP.15/B	Washer, 4 B.A.	2	C

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.

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

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
30B/-	—	Packing, aluminium alloy Spec. B.S.L.72 (to the required thickness)	As reqd.	C
32B/770	—	Tape, waterproof, self adhesive, fabric	As reqd.	C
33B/1021	—	Primer, etch base	As reqd.	C
33B/1023	—	Primer, etch accelerator	As reqd.	C
33B/1058 (Home)	}	Colour, identification, cellulose, bright red	As reqd.	C
33B/912 (Overseas)		Finish, cellulose, matching, Spec. D.T.D.772	As reqd.	C
33B/-		Compound, sealing Bostik primer 1751	As reqd.	C
33C/1139	—	Compound, pigmented varnish jointing	As reqd.	C
33C/1264	—			

## (2) Special Tools and Test Equipment

The undermentioned special tool is required, and is to be demanded if not already held by the Unit:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26DV/95246	12Y.957A	Tool, canopy clearance check	1	A

**RESTRICTED**



## 6. SPARES AFFECTED

No spares are affected by this modification.

## 7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations —

*Important Note (1)*

All pipes disconnected during the embodiment of this modification and still remaining in the aircraft, must be temporarily sealed as a precaution against the entry of foreign matter.

*Important Note (2)*

Throughout the embodiment of this modification it is most important to ensure that prior to fitment all new pipe assemblies are clear internally of any foreign matter.

(1) Remove the redundant sliding hood, Part No. 12FC 41A, together with the attached redundant canopy demisting pipes.

(2) From the windscreen support arch carefully ease out the rubber sealing strip where required and remove the two 4 B.A. countersunk-head bolts, nipples and No. 6 woodscrews attaching the two now redundant spruce blocks, Part No. 12V.593ND and pipe clips, Part Nos. 12V.595 (R.H.), 12V.596 (L.H.) to the forward canopy sealing member.

(3) Working on the redundant windscreen demisting pipes, Part Nos. 12V.497A/ND (L.H.) and 12V.499A/ND (R.H.), release the redundant bolts and stiffnuts used for attaching the windscreen demisting pipes. 'P' clips to the blind flying panel fixing plates. Also release the hose clip around the pipe joint that couples the port windscreen demisting pipe to the demisting feed pipe. The redundant windscreen demisting pipes together with their redundant 'P' clips can now be removed from the aircraft.

(4) Using two 1/2 in. dia. countersunk-head rivets, Part No. AS.460/504, blank off the two holes in the forward canopy sealing member that were occupied by the two 4 B.A. bolts removed in operation (2), the rivets having been previously coated with Bostik 1751 sealant (Ref. No. 33C/1139). It is extremely important to ensure that the heads of these rivets lie absolutely flush with the face of the sealing member so that no damage may be caused to the rubber sealing strip. Refit the rubber sealing strip.

(5) Refer to Sheet 3 of the drawing and offer up the new port and starboard windscreen demisting pipes, Part Nos. 12V.1287A/ND (L.H.), 12V.1285ND (R.H.) and the two new forward attaching pipe clips, Part Nos. 12V.1065A (L.H.), 12V.1075A (R.H.) positioning them so that the pipe clips lower attachment holes line up with the countersunk-head bolts that attach the windscreen frame to the fuselage immediately aft of the control lock sockets. When the positions of these bolts are ascertained, remove them, retaining their stiffnuts and washers, and replace them with two new 2 B.A. countersunk-head bolts, Part No. AS.1242/19C, coating these bolts with Bostik 1751 sealant prior to fitment. Position the new pipe clips on these bolts and secure using the retained washers and stiffnuts. Using two new 2 B.A. hexagon-head bolts and stiffnuts, Part Nos. A.25/1C and AGS.2001/C1, respectively, through the pipe clips upper holes, tighten the pipe clips around the demisting pipes. Couple the port demisting pipe to the demisting feed pipe using the existing pipe joint and hose clip.

**RESTRICTED**

(6) Still referring to Sheet 3 of the drawing, secure the lower aft end of the new port windscreen demisting pipe to the underside of the cockpit rail using a new No. 6 woodscrew, "P" clip and distance tube, Part Nos. AGS 253/37, AS 3181/16B and AS 2811/4/020 respectively.

(7) Carefully ease out the canopy sealing strip that runs along the sides of the cockpit. Referring to Sheets 1 and 2 of the drawing, position the new clip retainer, Part No. 12V 1275ND on the starboard canopy seal guard as shown. Using the predrilled holes in the retainer as guides, and using a No. 30 (0.1285 in. dia.) drill, drill the rivet attachment holes through the seal guard, counter-sinking the outer face of the guard 0.22 in. dia.  $\times$  90 deg. Thoroughly deburr. Having coated the mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264), rivet the clip retainer in position using two 1 in. dia. countersunk head rivets, Part No. AS 460/403, making sure that the rivet heads lie absolutely flush with the outer face of the seal guard. The heads of these rivets are to be covered with self-adhesive waterproof fabric tape (Ref. No. 32B/770) to protect the rubber seal.

(8) Still referring to Sheet 1 of the drawing, position the new starboard canopy demisting pipe, Part No. 12V 1257A/ND, as shown, sliding the open end onto the starboard windscreen demisting pipe. Adjust the position of the new canopy demister pipe so that the canopy seal inflator connection lies in the slot in the pipe as shown. Keeping this pipe in position and using the predrilled hole in the aft attachment lug on the pipe as a guide, drill through the seal guard using a No. 26 (0.147 in. dia.) drill. Countersink the outer face of the guard 0.22 in. dia.  $\times$  90 deg. and deburr. Secure the lug to the seal guard using a 4 B.A. countersunk head bolt, washer and stiffnut, Part Nos. AS 1242/1B, SP 15/B and AGS 2001/B1 respectively coating the bolt with Bostik 1751 sealant prior to fitment. The head of the bolt is to be covered with self-adhesive waterproof fabric tape in order to protect the rubber seal. Secure the forward end of the pipe to the windscreen demisting pipe using a nose clip, Part No. AGS 605/1A. Position the special clip, Part No. 12V 1283 (R.H.) over the pipe, as shown on Sheets 1 and 2 of the drawing, and secure to the cockpit rail using a No. 6 roundhead woodscrew, Part No. AGS 252/39.

(9) The method of installing the new port canopy demister pipe, Part No. 12V 1255A/ND, and its special clip, Part No. 12V 1273 is identical to that described in operations (7) and (8) except there will be no canopy seal inflator connections. Refit the canopy sealing strip to the cockpit sides.

(10) With the canopy jettison mechanism set at "JETTISON", offer up the new sliding hood, Part No. 12FC 213A, with the original canopy latch rail and position them so that the arrow head marked on the canopy latch and the arrow stem on the canopy rail are in line. Set the canopy jettison mechanism in the port ammunition bay by pulling the special resetting cable. The latch pegs should now be at the forward end of their slots with the red arrow head and stem out of line. Wind the sliding hood fully forward and ensure that the winding handle is in such a position that when the canopy seal cock is "on" and the canopy is opened from the inside, the initial movement of the handle will partly turn the cock to "off".

*Note.*—Should the sliding hood foul the windscreen seal bracket, the seal bracket is to be dressed to allow the sliding hood to be wound fully forward, to ensure that a correct seal is obtained.

**RESTRICTED**

(11) If the winding handle is not in the correct position, the following procedure is to be carried out to obtain this setting. Wind the sliding hood aft, till it comes into contact with the port aft stop. Depress this stop, and wind the hood back further to the secondary stop. Depress this stop also, and wind the hood back even further till the gear teeth on the hood, and the gear teeth on the idler wheel, are just out of mesh. (This can be seen from inside the cockpit on the starboard aft side). Judge now the number of turns, or part of a turn, to make on the hood winding handle in order to correct the setting of the winding handle when in the fully closed position. This procedure may have to be carried out a number of times before the correct setting is obtained. Adjust the micrometer locking plate for the winding handle so that when the sliding hood is fully closed, the stop pin on the winding handle will be on the edge of a locking hole. That is, the winding handle will have to be turned forward a distance equal to  $\frac{1}{4}$  of the diameter of the stop to engage the stop in the locking hole. The plate may be adjusted by removing the five securing screws and rotating the plate to the desired position before replacing the screws.

(12) From the fully closed position, wind back the sliding hood approximately one and a half turns of the winding handle, and inspect the marked pinion and idler teeth through the starboard ammunition door, to ensure that they are in mesh. Pull the jettison lever in the cockpit, having one man to assist by maintaining a counter pressure on the jettison resetting cable, access through the port ammunition door, so as to avoid damage to the jettison mechanism. The arrow stem on the canopy rail will now line up with the arrow head on the canopy latch. Paint a further red arrow on the sliding hood, using bright red, high gloss, identification colour (Ref. No. 33B/1058, or 912) to coincide with the red arrow already marked on the latch and rail. Reset the jettison mechanism.

(13) It is most important to ensure that the maximum gap of 0.10 in. is not exceeded and the minimum overlap of 0.30 in. is maintained between the angle bracket, attached to the sliding hood rear fairing and the canopy retaining bracket. This can be checked by offering the 'No Go' ends of the special checking tool, Part No. 12Y.957A, to the gap produced between the two brackets. Any necessary adjustment is to be carried out by the adding or deletion of aluminium-alloy packing, Spec. B.S.L.72 (Ref. No. 30B/-) between the angle bracket and the canopy retaining bracket. It may also be necessary to trim the lower edge of the sliding hood rear fairing to clear the fuselage by  $\frac{1}{8}$  in.

(14) Finish the heads of the new bolts that pass through the windscreen frame (fitted in operation (5)) using primer, etch base and accelerator (Ref. Nos. 33B/1021 and 33B/1023 respectively) and matching cellulose finish (Ref. No. 33B/-).

## 9. TESTING AFTER EMBODIMENT

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

- (1) Carry out a cabin pressurisation test in accordance with A.P.4099G, Vol. 1, Sect. 4, Chap. 3, and while the cabin is pressurised inspect the forward edge of the hood. Should it be found proud, slightly reduce it to ensure an even contour with the front windscreen.
- (2) Test the new demisting system for correct functioning.
- (3) Check the operation of the sliding hood ensuring a full and free movement.

**RESTRICTED**

# 10. RECORDING ACTION

Record on 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 Air Ministry Salvage Leaflets:-

Ref. No.	Part No.	Nomenclature	Qty	Class of Equipment
26DV/1580	12FC 41A	Sliding hood assembly	1	B
26DV/1672	12V 497A/ND	Pipe, assy., windscreen demisting (L.H.)	1	C
26DV/1671	12V 499A/ND	Pipe, assy., windscreen demisting (R.H.)	1	C
26DV/1675	12V 501A/ND	Pipe, assy., canopy demisting (L.H.)	1	C
26DV/1674	12V 503A/ND	Pipe, assy., canopy demisting (R.H.)	1	C
26FC/-	12V 593ND	Block, spruce	2	-
26DV/1691	12V 595	Clip, pipe (R.H.)	1	C
26DV/1794	12V 596	Clip, pipe (L.H.)	1	C

# 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of -9.13 lb. and a change in moment of +45.0 lb. ft.

RESTRICTED

DRG. NO. A.P. 4099G/116/58

SHEET 1

LP32697 5/58 500 C & P Gp. 959 (4)

FOR WINDSCREEN DEMISTER  
PIPES SEE SHEET 3 OF  
DRAWING.

CLIP  
HOSE  
1-OFF.

AGS  
605  
1A

PIPE  
CANOPY DEMISTER  
STBD.  
1-OFF.

12V  
1257  
A ND

PIPE  
CANOPY DEMISTER  
PORT  
1-OFF.

12V  
1255  
A ND

RIVET  
1/8 IN. DIAC'SKHD.  
2-OFF

AS  
460  
403

CLIP RETAINER  
1-OFF.

12V  
1275  
N.O.

12V  
1273  
CLIP, SPECIAL  
L.H.  
1-OFF.

12V  
1283  
CLIP, SPECIAL  
R.H.  
1-OFF.

AGS  
252  
39  
WOODSCREW  
No. 6. RND. HD.  
1-OFF.

BOLT  
4 BA C'SK HD.  
1-OFF

AS  
1242  
1B

NUT  
4 BA  
1-OFF

AGS  
2001  
B1

WASHER  
4 BA  
1-OFF

SP  
15  
B

FOR VIEWS ON ARROWS  
'C-C' AND 'D-D' SEE SHEET 2.  
OF DRAWING.

VIEW ON ARROW 'T'

DEMISTER PIPE.

CANOPY DEMISTING PIPE STBD. DRAWN PORT SIMILAR.

RESTRICTED

DRG. N° A.P.

4099G/J16/58

SHEET 2

LP32697 5/58 500 C & P Gp. 959 (4)

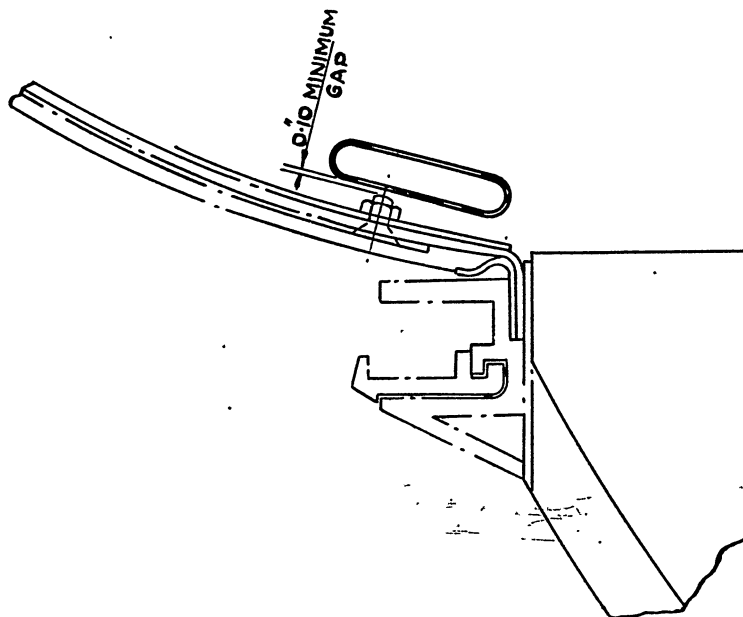


FIG. 4. VIEW ON ARROWS D-D' (FROM SHEET 1 OF DRAWING)

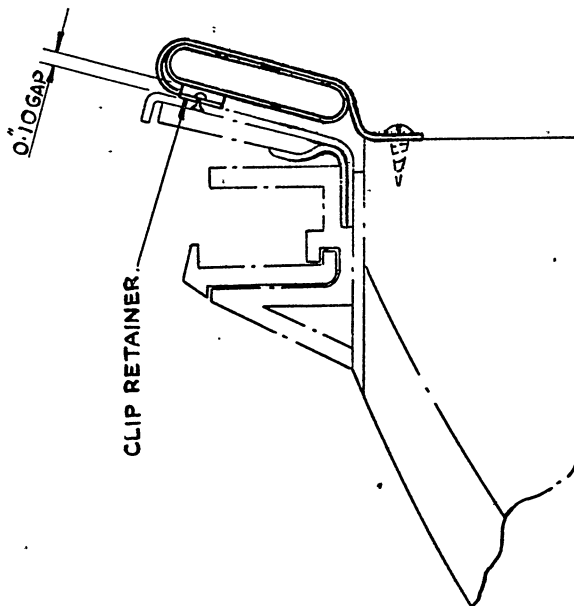


FIG. 5. VIEW ON ARROWS C-C' (FROM SHEET 1 OF DRAWING)

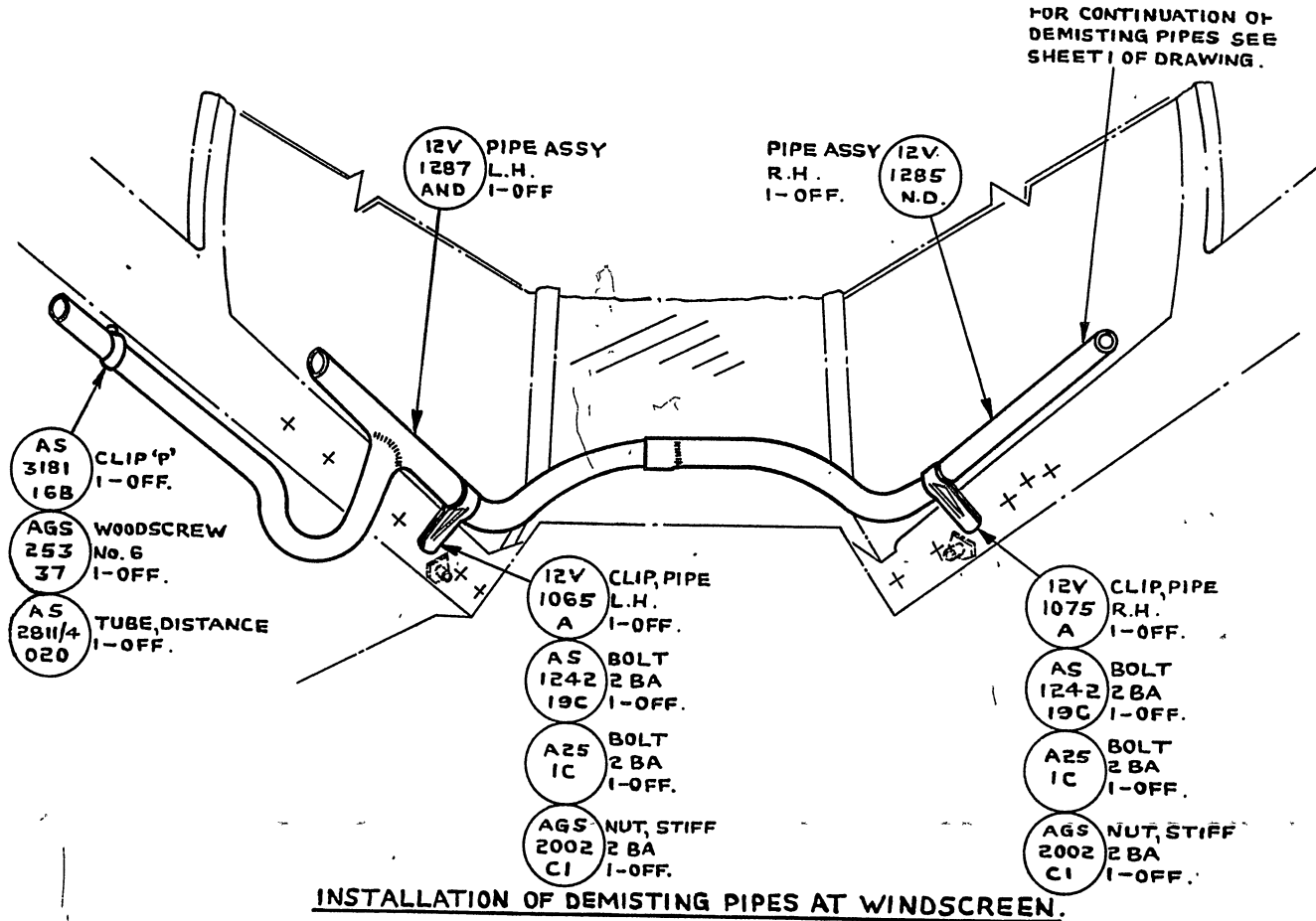
SECTION THROUGH CANOPY DEMISTING PIPE (STBD. DRAWN. PORT SIMILAR).

**RESTRICTED**

DRG. No A.P. 4099G/J16/58

SHEET 3

LP32697 5/58 500 C & P Gp. 959 (4)



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# Section K Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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.						
K 1										
K 2										
K 3										
K 4										
K 5										
K 6										
K 7										
K 8										
K 9										
K 10										
K 11										
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K 18										
K 19										
K 20										
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K 22										
K 23										
K 24										
K 25										
K 26										

K

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.						
K 27										
K 28										
K 29										
K 30										
K 31										
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K 51										
K 52										
K 53										
K 54										
K 55										
K 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.

Demand it now.

Wt.29422/BJ85 17m. 4/55 W.H.&S. 670/60

Vampire F.B. Mk. 9 Aircraft—Re-designed Stay Bracket for V.G.  
Recorder—Introduction

(Mod. No. VAMPIRE/969.)

(Class B/2.)

(7/Mods/13,586.—15.12.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(44445/844) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)



A.L. No. 41  
(Control unit, type 12)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. K2  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—To provide Securing Clip in place of Bolts for Mounting Control Unit, type 12, for Inverter for G4F Compass

(Mod. No. VAMPIRE/3033.)

(Class. C/3.)

(7/Mods/14,326.—18.7.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix D, paras 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.



RESTRICTED

(43518/726) 529723 8245 125 9/55 (H.P.W.) (Sp. 19/1)



A.L. No. 43  
(U/C position indicator)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. K.3  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Undercarriage Position Indicator, type D  
(Stores Ref. 5C/4204) in place of Indicator (Stores Ref. 5C/1009)—

#### Introduction

(Mod. No. VAMPIRE/962.)

(Class D/4.)

(7/Mods/14,022—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.
2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(43222/121) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)





(Instrument)

Leaflet No. K-4

(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Oil Pressure Gauge. (Stores Ref. 6A/1563)

deleted

(Mod. No. VAMPIRE/3076.)

(Class C/4.)

(7/Mods/16,606.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

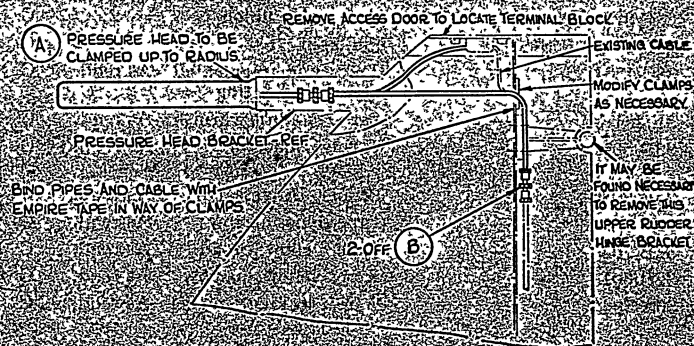
2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.



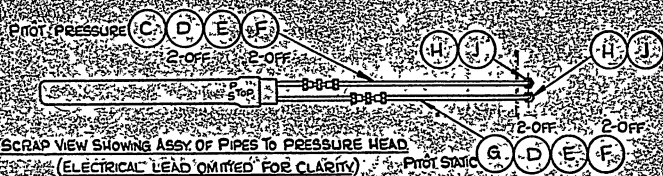
**RESTRICTED**

(43222/123) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)





ARRANGEMENT OF PROT. PIPES IN PORT FIN.



Ref	PART No	NOMENCLATURE	Qty
A	6A/3076	PRESSURE HD	1
B	AGS1102/88	ADAPTOR	2
C	12S1089/ND	PIPE 1/2" x 22g	1
D	AGS838/8	BUSH	4
E	AGS838/1	UNION BODY	2
F	AGS838/4	UNION NUT	4
G	12S1091/ND	PIPE 1/2" x 22g	1
H	AGS904/88	OUTER SLEEVE	2
J	AGS902/88	COLLAR	2

NOTE - IT IS IMPERATIVE THAT THE PRESSURE HEAD IS CLAMPED IN THE POSITION SHOWN, AND THAT THE LOW PRESSURE UNIONS ARE ACCESSIBLE WHEN THE BRACKET IS REMOVED.

THIS DRAWING IS NOT APPLICABLE TO VAMPIRE MK I A/C - (SEE SHEET 2)

ENSURE THAT THE HOLES AND SLOTS IN THE NEW HEAD ARE FREED FROM OBSTRUCTION BEFORE ASSEMBLY.

COLOUR CODING - THE PIPES MUST BE COLOUR CODED IN ACCORDANCE WITH DTD 1003. THE COLOURS TO BE:  
2 NARROW YELLOW BANDS ON STATIC SIDE.  
1 NARROW BLUE, 1 BROAD YELLOW, 1 NARROW BLUE ON PRESS SIDE.

Drg. No. A.P.4099G/K.7/53

RESTRICTED

**Vampire F.B. Mk. 9 Aircraft—Pitot Static Head Mk. 8Q (Stores Ref. 6A/3076)  
in place of type Mk. 8B (Stores Ref. 6A/729)—Introduction**

(MOD. NO. VAMPIRE/3217)

(Class C/3, N.C.P.)

(7/Mods/18,241—1.5.53.)

1. This modification results because freezing trouble is being experienced with the existing pitot static head (Mk. 8B) during high speed high altitude flying and introduces a new head Mk. 8Q.

2. The work will take approximately 10 man-hours.

3. This modification is to be embodied by—

*2nd Line Servicing Units* (At first available opportunity and not later than next Minor (or equivalent) Servicing)

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

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

*Aircraft Storage Units* Before issue of aircraft

4. The following is the sequence of operations—

(Refer to Dirg. No. A.P.4099G/K.7/53.)

(1) Remove the port rudder chalk (or similarly scribe) a guide line on the pin leading edge immediately beneath the forward end of the pressure head bracket.

(2) Refer to the drawing and locate the 2-way terminal block on the underside of the fin top rib access door, to disconnect the two pressure head leads at this terminal block.

(3) Refer to the drawing and unscrew the four attachment bolts securing both the pitot pressure pipe assembly, Part No. Q001021A ND (ref. only), and the pitot static pipe assembly, Part No. Q001018A ND (ref. only), from the two reducing cone unions situated near the upper rudder hinge bracket. Next, unscrew and remove the two reducing cone unions, Part No. A.G.S.1107/B (ref. only), and replace them with two new adapters, Part No. A.G.S.1102/BB. Blank off the open end of the adapters.

*Note*—It is suggested that the upper rudder hinge bracket be removed at this juncture both to facilitate the removal of the now redundant  $\frac{1}{2}$  in. dia. pipe assemblies and to permit easier coupling of the new pipe assemblies.

(4) Remove the external finish around the pressure head bracket and locate the six countersunk bolts attaching it to the fin. Unscrew and remove these bolts and after bending back the  $\frac{1}{2}$  in. dia. pipes into the horizontal position, carefully remove the bracket and withdraw the pitot head, its electrical lead and the pipe assemblies from the fin.

(5) Slacken off the 2 B.A. nut and bolt on the pitot head bracket and remove it from the remaining redundant items.

(6) Determine the length of electrical conduit required on the new pressure head Mk. 8Q (Stores Ref. 6A/3076) by measuring that of the redundant head and cut and bare the wires in readiness for attachment to the terminal block. Refer to the drawing and suitably bend two lengths of new  $\frac{1}{2}$  in. dia. pipe (2 ft. should be sufficient)  $\times$  22 s.w.g. (L.56).



**RESTRICTED**

*Note*—The bend radius should be approximately 1.25 inches. Place these pipes in their correct positions on the aircraft, and mark off the places at which they will need to be belled to connect with the existing adapters. Remove the pipes from the aircraft and, before belling, them, slide an outer sleeve and a collar, Part Nos. A.G.S.904/BB and A.G.S.902/BB, on to each one.

(7) Clean the pipes thoroughly internally, prime and finish with one coat of matt oil varnish grey-green externally (except in the region of the flared ends), colour code them as detailed in the drawing, and part number them, "12 S 1091ND" pitot static, "12 S 1089ND" pitot pressure.

(8) Remove the blanking from the adapters and temporarily attach the new pipes. Modify the original pipe clamps removed in operation (3) to suit these new larger diameter pipes.

*Note*—Both the new pipes and the original cable assembly will be bound with cambric varnish tape in the way of the clamps, so a small clearance should be left to accommodate this.

(9) Hold the new pressure head, with the word "top" uppermost in position (by aligning the admsed portion of the 1.25 in. dia. shank over the guide line marked in operation (1)), and determine how much should be removed, either from the pressure head piping or from the new 7 in. dia. pipes, so that the future low pressure unions will be situated forward of the fin structure. Cut and file the new pipes to suit and remove all sharp edges and swarf.

(10) Remove the new and modified items, and clean and Duralac the mating surfaces of the pressure head bracket and the fin, together with the upper rudder hinge bracket and the fin spar. Bind the new pipes and the original cable assembly with cambric varnish tape where they pass through the modified pipe clamps, and ensure that the static slots, the drain and the pressure holes in the new pressure head, are free from any obstruction.

(11) Insert the new pipes in the web of the upper rudder hinge bracket and assemble them and the bracket in their correct positions. Wire lock the connections and the rudder hinge bolts as they were previously, with 22 s.w.g. nickel alloy wire.

(12) Offer up the new pressure head, and with it suitably supported, assemble it to the new pipes, using a straight connection, two rubber rings and two union nuts, Part Nos. A.G.S.838/1, A.G.S.838/8 and A.G.S.838/4, for each connection. Connect up also the electrical lead to the terminal block on the fin top rib access door. Replace the access door securing with its original fixings.

(13) Offer up the original pressure head bracket, slide it over the pressure head, and re-attach it to the fin with its original fixings. Firmly tighten the 2 B.A. nut and bolt and then repair the external finish with primer and matching cellulose.

*Note*—The pressure head should be masked during painting.

(14) Replace the rudder using new split pins, Part No. SP.9/C8, where necessary, and carry out functional tests to check the installation of the new pressure head.

4. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements.

Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
6A/3076	—	Pressure head, MK. 8Q	1	A
30B/1195	—	Pipe, 7 in. o/d. x 22 s.w.g. (L56), approx. 2 ft.	2	C
28V/5104	A.G.S.838/1	Connection, straight	2	C
28V/5108	A.G.S.838/4	Nut, union	4	C
28V/13603	A.G.S.838/8	Ring, rubber	4	C

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Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
28F/5699	A.G.S.902/BB	Collar	2	C
28F/5723	A.G.S.904/BB	Sleeve, outer	2	C
28F/8294	A.G.S.1102/BB	Body, cone union	2	C
28P/12462	SP.9/C8	Pin, split	2	C
33C/1264	—	Compound, pigmented varnish, jointing	As reqd.	C
5F/461	—	Tape, cambric varnish	As reqd.	C
33B/501	—	Varnish, matt oil, grey-green	As reqd.	C
33B/208	—	Primer, Universal	As reqd.	C
32B/577	—	Tape, blue, narrow	As reqd.	C
32B/704	—	Tape, yellow, broad	As reqd.	C
32B/601	—	Tape, yellow, narrow	As reqd.	C
30A/3064	—	Wire, locking, nickel alloy, 22 <sup>1</sup> / <sub>2</sub> w.g.	As reqd.	C

5. The undermentioned items are rendered redundant and are to be disposed of in accordance with current authorized procedure:

Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26EC/—	12S.1018A ND	Pipe assembly, pitot static	1	C
26FC/—	12S.1021A ND	Pipe assembly, pitot pressure	1	C
6A/729	—	Pressure head, Mk. 8B	1	A

P.T.O.

Vampire F.B. Mk. 9 Aircraft—Rate of Climb Indicator Mk. 3A(P) (Stores Ref. 6A/2966) and Adapter Plate (Stores Ref. 6A/1539) in place of Mk. 1C(P) (Stores Ref. 6A/2171)—Introduction

(Mod. No. VAMPIRE/3128.)

(C/3, N.C.P.)

(7/Mods/16,272.—9.5.53.)

1. This modification introduces a Mk. 3A(P) rate-of-climb indicator (Stores Ref. 6A/2966) and an adapter plate (Stores Ref. 6A/1539), to replace the existing Mk. 1C(P) type (Stores Ref. 6A/2171).

The work will take approximately 5 man-hours.

2. This modification is to be embodied when the new type indicator and adapter plate are used as replacements for the old type indicator.

3. The following is the sequence of operations:—

(1) Disconnect the aircraft accumulators and remove the detachable nose fairing. Disconnect and remove the radio receiver, type 3121, from its mounting. Open the armoured access door in bulkhead No. 1 to locate the rear of the blind flying instrument panel.

(2) Break the locking wire and unscrew the two union nuts on the aluminium alloy static pipe connecting the climb-and-descent indicator to the air speed indicator. Temporarily remove the pipe from the aircraft and blank off the connection on the air speed indicator. Retain all the items for future re-assembly.

(3) Remove the rate-of-climb indicator (Stores Ref. 6A/2171) (ref. only) (or perhaps (Stores Ref. 6A/1301) on F. Mk. 1 and 3 aircraft) from the aircraft and transfer the T-union and its attachments from this redundant instrument to the new rate-of-climb indicator (Stores Ref. 6A/2966).

(4) Attach the adapter plate (Stores Ref. 6A/1539) to the indicator with four countersunk head screws, Part No. A45/B28, and paint the screw heads night synthetic finish. Offer up the new instrument, and secure it, in the former position in the panel, with three new 2 B.A. stiff-nuts, Part No. A.G.S.2001/C1, which also should be painted night synthetic finish.

*Note:*—The lower right-hand hole in the panel must not be used.

(5) Offer up the new pipe and bend it to suit the new instrument. Remove the blanking placed over the air speed indicator in operation (2), and firmly re-attach the pipe in its correct position with the original bushes and nuts. Wire-lock the connections with 22 S.W.G. nickel alloy wire.

*Note:*—Should it be impracticable to bend the existing pipe, a suitable length of  $\frac{5}{16}$  in. o/d. x 22 S.W.G. aluminium alloy pipe (L.56) may be used. It must be thoroughly cleaned internally, primed, and finished externally with one coat of matt oil varnish grey-green.

(6) Close and wire-lock the access door on bulkhead No. 1, and replace and re-connect the radio receiver in its mounting. Replace the detachable nose fairing; re-connect the aircraft accumulators, and then carry out functional checks to test both the installation of the new rate-of-climb indicator and the radio receiver.

4. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
6A/1539	—	Plate, adapter	1	G
6A/2966	—	Indicator, rate-of-climb, Mk. 3(A)P	1	A
28S/2145	A45/B28	Screw, csk/hd.	4	C
28M/10288	A.G.S. 2001/C1	Stiffnut	3	C
33B/501	—	†Finish, synthetic oil varnish (grey-green)	As reqd.	G
33B/205	—	Finish, synthetic oil varnish (night)	As reqd.	C
30B/1195	—	†Tube, alum. alloy, $\frac{1}{8}$ in. o/d. x 22 S.W.G., L.56	As reqd.	C
33B/208	—	†Primer	As reqd.	C
33B/3064	—	Wire, locking, nickel alloy, 22 S.W.G.	As reqd.	C

† These items are only required if the note at the end of operation (5) is applicable.

5. The undermentioned item is rendered redundant, and is to be returned to No. 14 Maintenance Unit:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
6A/2171	Indicator, rate-of-climb, Mk. 1C(P)	1	A

6. The undermentioned item is rendered redundant, and is to be disposed of in accordance with current authorized procedure:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
6A/1301*	Indicator, rate-of-climb, Mk. 1C(P)	1	A

\* These may be fitted to Vampire F. Mk. 1 or 3 aircraft in place of (Stores Ref. 6A/2171).

**RESTRICTED**



A.L.N<sup>o</sup> 88

(Pacitor gauges)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. K.9

Vampire F.B. Mk. 9 Aircraft—Fuel Contents Gauge (Pacitor type)—  
To introduce an improved Power Unit, type GP.512/001/9 or  
GP.512/001/5B/1 (Stores Ref. 6A/1998)

(Mod. No. VAMPIRE/3147.)

(Class C/3, N.C.P.)

(7/Mods/19,440.—27.5.53.)

1. This modification results from defects experienced in service and makes provision for the introduction of an improved standard of power unit.

This modification supersedes S.T.I./INST./14.

2. Refer to A.P.1275A, Vol. 2, Part 1, Leaflet No. C.11, for details of the retrospective embodiment of this modification.

**RESTRICTED**

(38532/150) 6491 R665 350 6/53 H.P.W. (Gp.19/1)



**ALN 74**  
**(Artificial horizon)**

**A.P. 4099G, Vol. 2**  
**Leaflet No. K.10**

**Vampire F.B. Mk. 9 Aircraft—Artificial Horizon. Mk. 1D (Stores Ref. 6A/3290) in place of Mk. 1B (Stores Ref. 6A/1519)—Introduction**

(Mod. No. VAMPIRE/3258.)

(Class B/2.)

(7/Mods/19,549.—28.5.53.)

1. This modification introduces a new artificial horizon in place of the existing unsatisfactory type. It does not apply to aircraft with Vampire Mod. No. 7897 embodied. The work will take approximately 2 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first available opportunity and not later than the next Intermediate (or equivalent) Servicing

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

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

*Aircraft Storage Units:* Before issue of aircraft

3. The following is the sequence of operations:—

(1) Remove the detachable nose cowling panel and lower the armour plate door in bulkhead No. 1.



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P.T.O.

(2) Disconnect the air suction pipe from both the artificial horizon and the distribution block on the panel. Plug the block to prevent the entry of dirt or moisture.

(3) Remove the old artificial horizon (Stores Ref. 6A/1519) (ref. only), from the blind flying panel and secure the new instrument (Stores Ref. 6A/3290) in position, using the attachment screws provided.

(4) Remove the plug from the suction distribution box and re-attach the suction pipe, Part No. B002707ND (ref. only), ensuring first that it is clean internally.

(5) Close the armour plate door and wire lock the wing nuts with 22 S.W.G. nickel-alloy locking wire (Spec. D.T.D.189 or 161).

(6) Replace the nose cowling panel.

4. The undermentioned items are required and are to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
6A/3290	—	Horizon, artificial, Mk. 1D	1	A
30A/3055	—	Wire, locking, nickel alloy, 22 S.W.G. (D.T.D.189 or 161)	As reqd.	C

*Note:*—Initial issues of Stores Ref. 6A/3290 will be arranged by Air Ministry, E.5, in accordance with the priority list laid down in D.Air.Eng.

5. The undermentioned part is rendered redundant by this modification and is to be returned to No. 14 M.U.:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
6A/1519	—	Horizon, artificial, Mk. 1B	1	A

**RESTRICTED**

Z.8050.R.

ALN 91  
(Turn-and-slip indicator)  
(A.L. No. 59 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. K.11  
(Leaflet No. K.6 Cancelled)

**Vampire F.B. Mk. 9 Aircraft—Automatic Change Over Relay (Stores Ref. 5C/4102) for Turn-and-Slip Indicator—Introduction**

(Mod. No. VAMPIRE/954.)

(Class B/2.)

(7/Mods/16,268.—17.8.53.)

*Note:—The substance of this leaflet supersedes and is the authority for cancelling A.P.4099E, Vol. 2, Part 1, Leaflet No. K.13, dated 31.12.52.*

1. This modification introduces a type Q automatic relay in the turn-and-slip indicator circuit for emergency operation, and segregates the circuit from that of the G4F compass. It applies only to aircraft with Mod. No. Vampire/668 embodied.

The work will take approximately 6 man-hours, excluding the setting time of the glue.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Intermediate (or equivalent) Servicing

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

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

*Aircraft Storage Units:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/K.11/53, Sheets 1-6.)

(1) Disconnect the aircraft accumulators.

(2) Open the front panel of the junction box JB1. Remove the covers of the fuseboxes, Part Nos. NOO653A/1 and NOO2487A, respectively (ref. only). Erase the existing transfer lettering on the covers and, referring to Sheet 1 of the drawing, position the two new transfers, Part Nos. NOO3351 and NOO3347, on fuseboxes, Part Nos. NOO653A/1 and NOO2487A, respectively. Erase the existing Part numbers on these fuseboxes and replace Part Nos. NOO653A/1 and NOO2487A with Part Nos. NOO3349A and NOO3345A, respectively. Refer to the new transfers on the fusebox covers and delete two type S 5 amp. fuses (Stores Ref. 5C/880) (ref. only) from fusebox Part No. NOO3349A, and replace with two type S, 2.5 amp. fuses (Stores Ref. 5C/879). Add two type S, 10 amp. fuses (Stores Ref. 5C/881) and two type S, 2.5 amp. fuses (Stores Ref. 5C/879) to fusebox, Part No. NOO3345A. Replace fusebox covers. Note that one of each of the replacement fuses is a spare to be fixed in the spare fuse holders in the fusebox covers.

(3) Refer to Fig. 2 in Sheet 2 of the drawing, and revise the internal wiring of junction box JB1 as follows:— Delete the cable coded TB+ running from switch 4 to fuse 12; delete the cable coded TB2 running from pin G on loom C1 to switch 4; using 4 amp. Unirubber cable, Specification EL.662, link fuse 12 to pin A on loom C2 (cable coded TB+) and fuse 18 to pin B on loom C2 (cable coded TB2).

(4) Remove the locking bar (Stores Ref. 5C/2612) (ref. only) locking the G4F and turn-and-slip switches (these switches are located on top of junction box JB1). Remove the label, Part No

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DHS.90, Mk. 69 (ref. only), "TURN-AND-SLIP" and replace with label, Part No. DHS.90, Mk. 32, "SPARE", using the existing screws and nuts. Re-secure the front of the junction box.

(5) Remove the nose cowling and open the armoured access door in bulkhead 1 to gain access to the rear of the instrument panel and that part of the fuselage to which the new type Q relay is to be secured.

(6) Disconnect the cables coded TB2 and E from the turn-and-slip indicator. Locate loom C1 entering junction box JB1 and detach the cable coded TB2 from pin G of the breeze socket. The cable may be completely removed from the loom.

(7) Referring to Sheet 3 of the drawing, add leads TB+ and TB2 to loom C2. A Helsyn sleeve and Twinlay marker should be attached to each end of leads TB+ and TB2; and each marker should be appropriately marked with indian ink.

(8) Detach the canopy seal pipe from the adapter on the armoured bulkhead, and referring to Sheet 4 of the drawing, mark out the position of the two ferrules. Using a Fosner or Wilpat bit, bore two holes to suit the two ferrules, Part No. DHS.103, Mk. 1. Securely glue and brad the ferrules in position as detailed in Sheet 4 of the drawing. Note that the minimum glue drying time must be strictly adhered to.

(9) Secure the type Q relay in position, using two screws, Part No. A.G.S.245/21.

(10) Refer to Sheets 2, 5 and 6 of the drawing, and complete the wiring of the circuit as follows:— Attach the cable, Part No. NOO3491A, to the turn-and-slip indicator and connect the ends to the type Q relay as detailed in Sheet 6 of the drawing (refer to para. 7); attach the cable, Part No. NOO2857A, between terminals 1 and 5 of the relay and the cable, Part No. NOO2859A, between terminal 2 of the relay and the earth terminal on the instrument panel; connect cables coded TB+ and TB2 from loom C2, to terminals 1 and 3 respectively on the relay.

(11) Re-attach the canopy seal pipe to the adapter on bulkhead 1 and firmly secure the armour plate door, locking the securing nuts with soft iron wire. Replace nose cowling.

(12) Re-connect the aircraft accumulators and check the circuit for correct functioning.

4. The undermentioned Part number alterations become necessary upon embodiment of this modification:—

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/-	NOO653A/1	Fusebox and transfer assy.	NOO3349A	26FC/-
26FC/-	NOO2487A	Fusebox and transfer assy.	NOO3345A	26FC/-
26FC/-	NOO2513	Cable loom C2 assy.	NOO2513/1	26FC/-
26FC/-	NOO2531	Cable loom C2 assy.	NOO2531/1	26FC/-
26FC/-	NOO3231	Assembly JB1 and equipment	NOO3231/1	26FC/-

5. The undermentioned parts comprise a Set. Sets are to be demanded from the P.S.C.O., No. 25 M.U. Demands for sets of parts must quote the relevant modification number:—

Note:—Modification Sets are available and demands may be submitted.

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/-	NOO3491A	Cable assembly	1	C
26FC/-	NOO2875ND	Cable	1	C
26FC/-	NOO2859A	Cable assembly	1	C

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Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/-	NOO3347	Transfer, Eagle Co.	1	C
26FC/-	NOO3351	'Waterslide' type Transfer, Eagle Co.	1	C
26EW/2026	DHS.90 Mk. 32	Label.	1	C
26BY/448	DHS.103 Mk. 1	Ferrule	2	C
28S/2857	A.G.S.245/21	Screw	2	C
5K/2576	—	Sleeve, Helsyn Lav., Twap $\times$ 1 $\frac{1}{8}$ T2 Twin-lay markers (Make from (Stores Ref. 5K/2577))	4	C

6. The undermentioned items are also required and are to be supplied under Unit arrangements:—

Stores Ref	Nomenclature	No. off	Class of Store
5C/879	Fuse, type S, 2.5 amp.	4	C
5C/881	Fuse, type S, 10 amp.	2	C
5C/4102	Relay, Type Q	1	A
5E/2151	Cable, Unirubber, Spec. EL.622 4 amp.	As reqd.	C
5E/1358	Cable, Unicel, Spec. EL.478 4 amp.	As reqd.	C
33C/936	Lacquer, clear paper	As reqd.	C
33C/972	Adhesive, synthetic resin	As reqd.	C
33C/973	Hardener	As reqd.	C
29D/915	Brads, $\frac{1}{2}$ in.	As reqd.	C
32A/112	Twine, finé	As reqd.	C
30A/1039	Wire, M.S.	As reqd.	C
33C/10	Beeswax	As reqd.	C

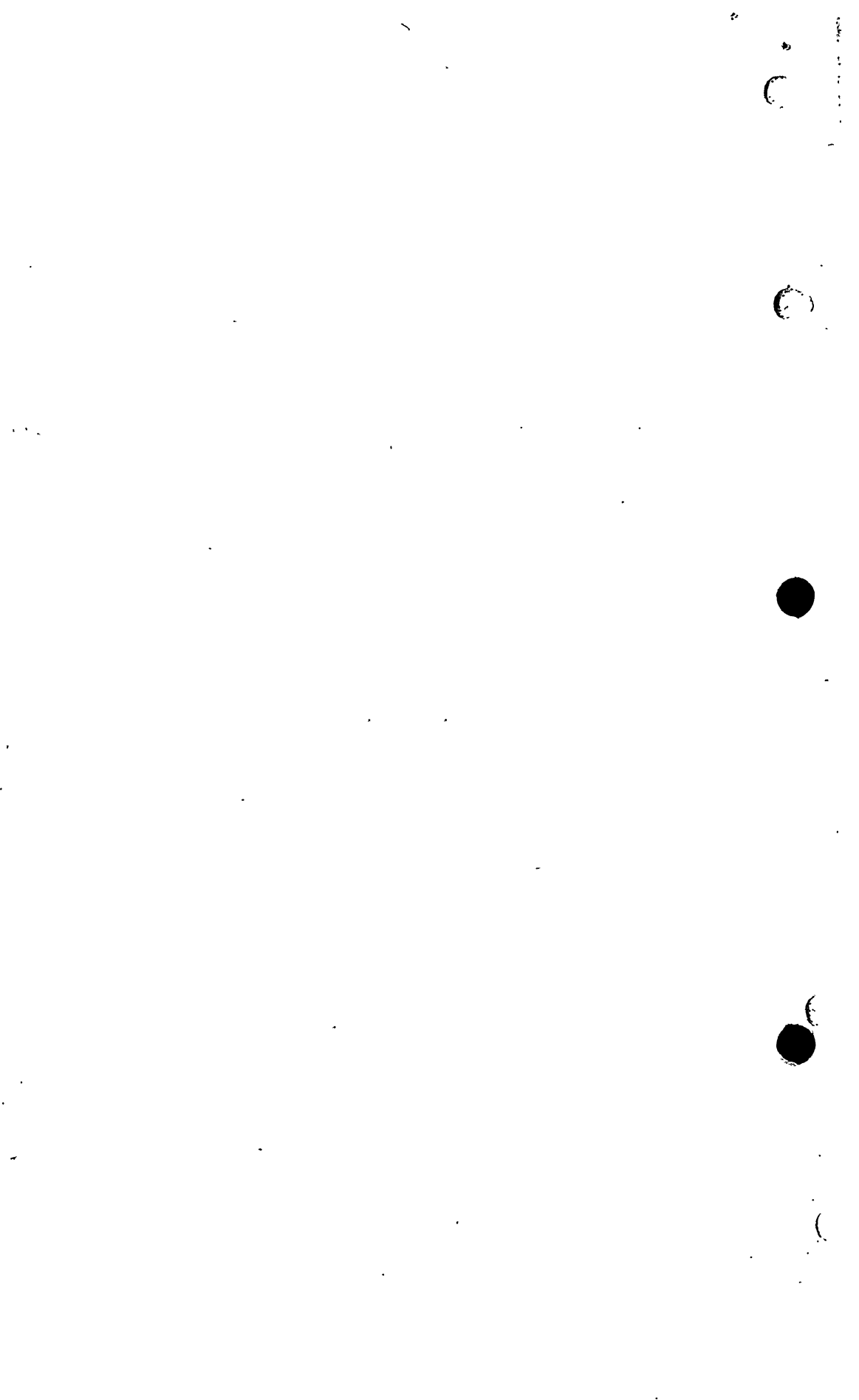
7. The following items are rendered redundant and are to be disposed of in accordance with current authorized procedure:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/-	DHS. 90, Mk. 69	Label	1	C
10H/-	CZ.49902	Coupler	1	C
10H/-	CZ.59316	Clamp, cable	1	C
10H/-	Z 62234	Waterproof entry	1	C
5C/880	—	Fuse	2	C
5C/2612	—	Coupling bar	1	C
10H/19057	—	Straight outlet	1	C
10H/19402	—	Gasket	1	C

8. In some cases Modification Sets will be issued with two cable assemblies, Part Nos. NOO2853A and NOO2855A, in place of the cable assembly, Part No. NOO3491A. In this case, the plug ends of the cables should be dismantled, and the two cables mated, utilizing the plug end parts of one of the cables. Re-code the cables TB4 to read "TB3", and then solder the two cables coded TB3 to pin A of the plug and two cables coded E to pin B. Re-part number this cable NOO3491A. If this alteration is necessary, the following items are rendered redundant and are to be disposed of in accordance with current authorized procedure:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
10H/Z560410	—	Plug	1	C
10H/-	CZ.59316	Clamp	1	C
10H/Z970058	—	Gasket	1	C
10H/Z970061	—	Outlet	1	C

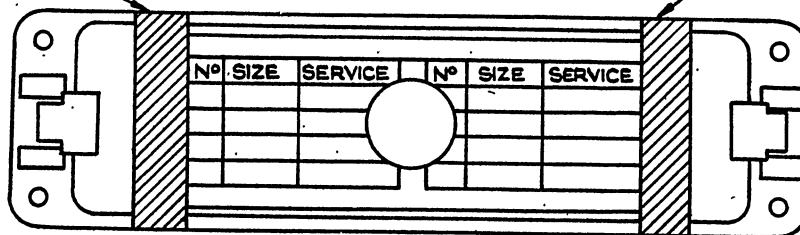
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LASSOLASTIC TAPE ATTACHED TO BODY COVER AND  
SPARE HOLDER, TOP AND SIDES. FOR COLOURS SEE TABLE.



#### FIXING INSTRUCTIONS

REMOVE OIL OR GREASE FROM FUSEBOX WITH SPIRIT  
SOAK TRANSFER IN CLEAN WATER FOR A FEW SECONDS  
SHAKE OFF WATER & SLIDE TRANSFER ABOUT TO  
ENSURE THAT IT IS RELEASED.

HOLD TRANSFER IN RIGHT HAND & PLACE LEFT HAND  
ON EDGE OF PAPER IN POSITION ON ARTICLE  
HOLD SURFACE OF TRANSFER DOWN WITH LEFT  
HAND & DRAW PAPER FROM UNDERNEATH.  
TRANSFER CAN THEN BE MOVED TO THE EXACT  
POSITION REQUIRED AND PRESSED DOWN WITH  
A SOFT CLOTH TO DRY.

FINALLY BRUSH WITH BAKELITE VARNISH.  
TRANSFER REQUIRES 3 TO 5 SECONDS SOAK ONLY  
OTHERWISE ADHESIVE GUM WILL BE REMOVED.

FUSEBOX & TRANSFER ASSEMBLY	TRANSFER NUMBER	COLOUR OF LASSOLASTIC
N003349A	N003351	GREEN
N003345A	N003347	YELLOW

DRG. N° ARA099G/K.II/53

SHEET 1

VIEW SHOWING POSITION OF TRANSFER ON FUSE BOX.

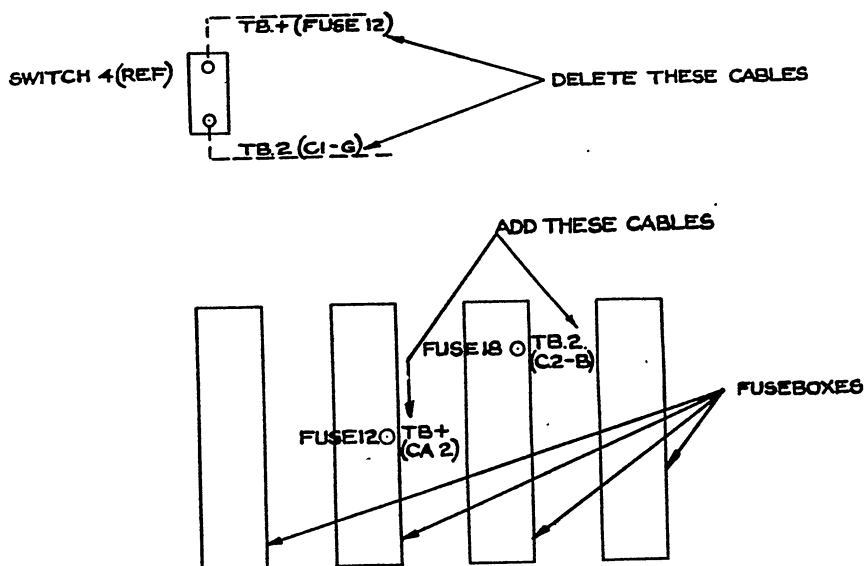


FIG.2. REVISED WIRING OF JUNCTION BOX. JBI.

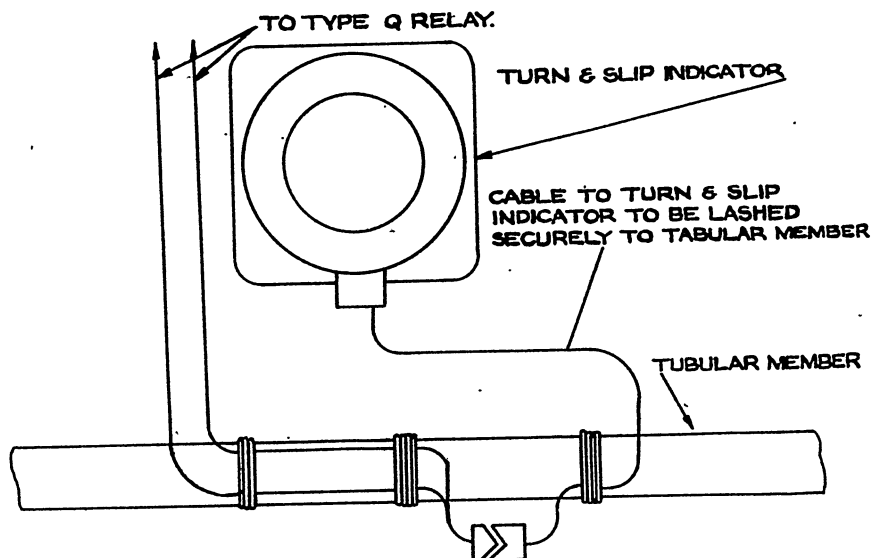


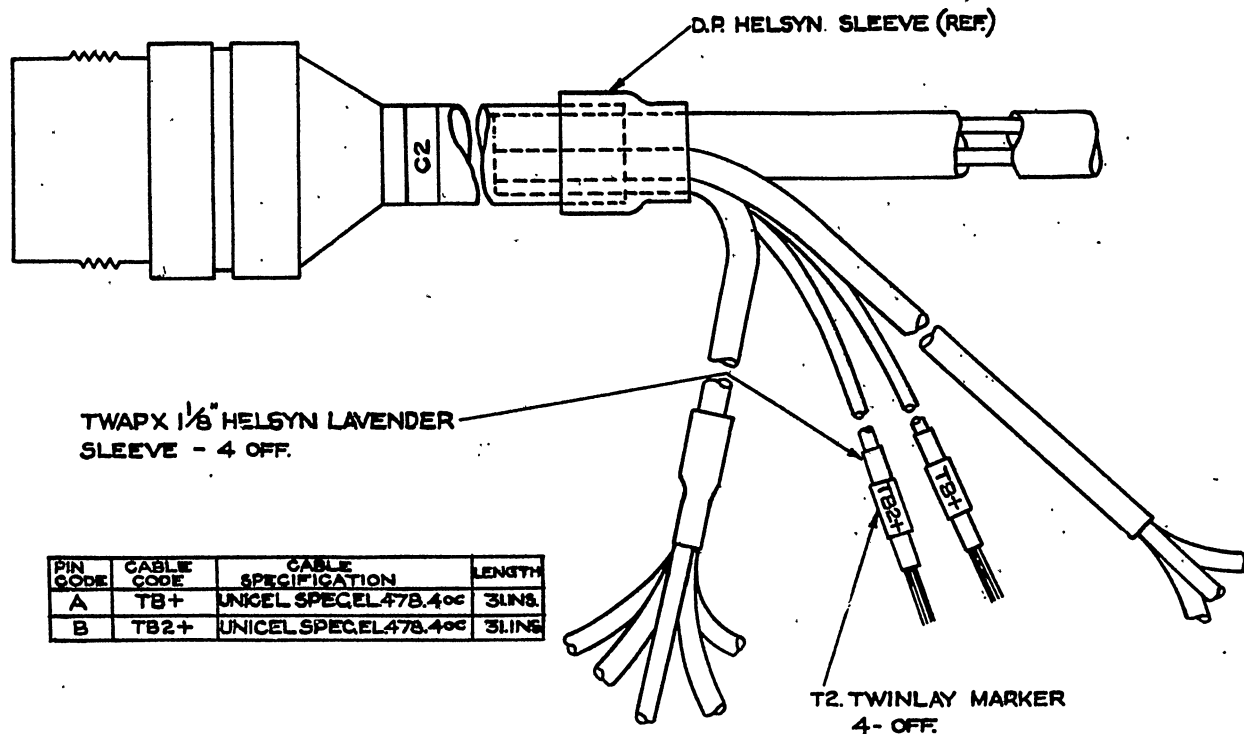
FIG.1. INSTALLATION OF WIRING FOR TURN & SLIP INDICATOR.

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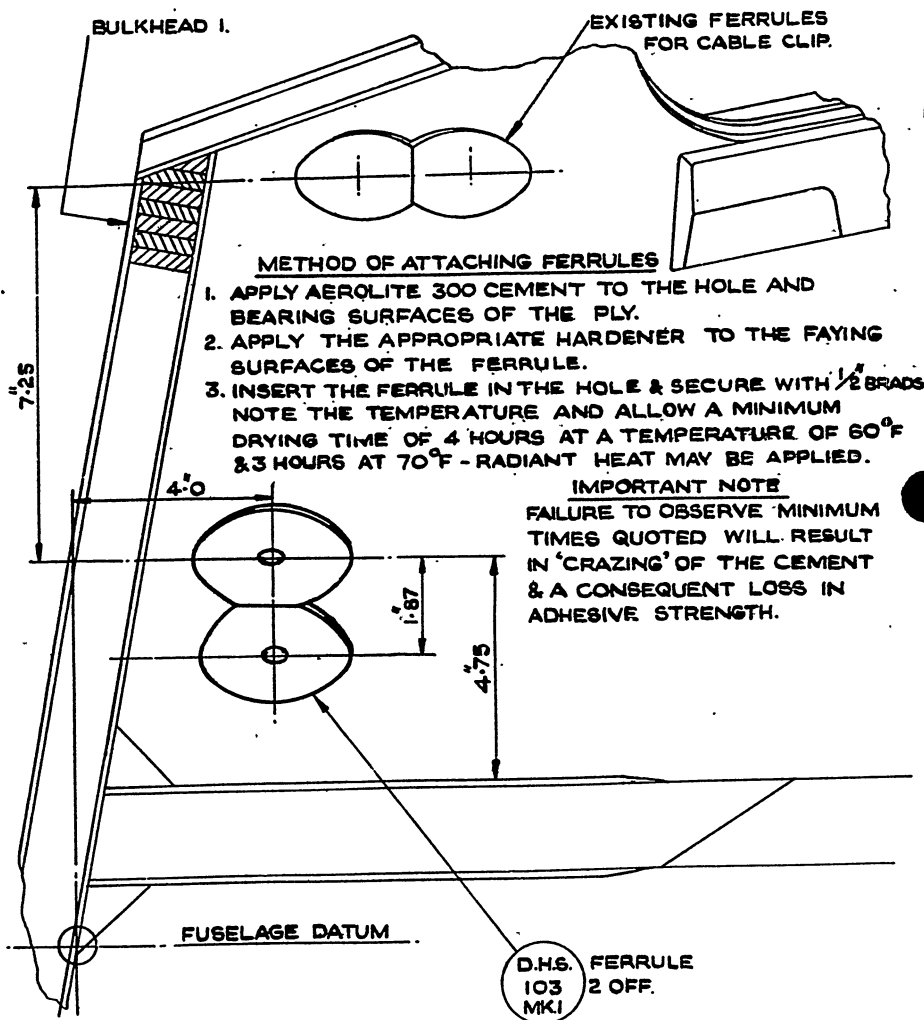
DRG. № A.P.4099 G/K.II / 53  
SHEET 2

RESTRICTED

DRG. No A.R.4099G/K.II/53  
SHEET 3



VIEW SHOWING ATTACHMENT OF LEADS TB+ & TB2+ TO LOOM C.2.



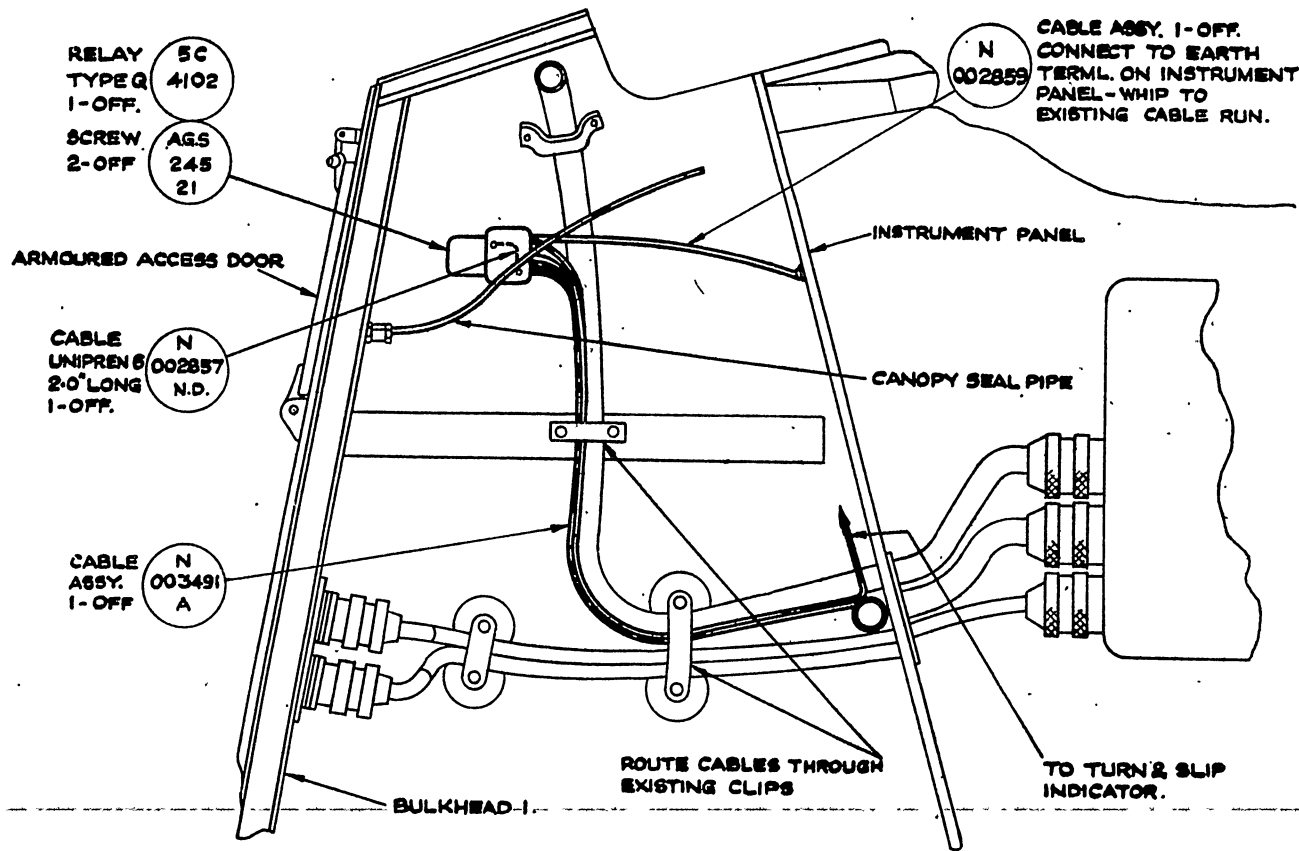
VIEW ON STARBOARD SIDE OF AIRCRAFT SHOWING LOCATION OF FERRULES FOR ATTACHMENT OF RELAY.

DRG. N° AP.4099 G / K.11 / 53  
SHEET 4

**RESTRICTED**

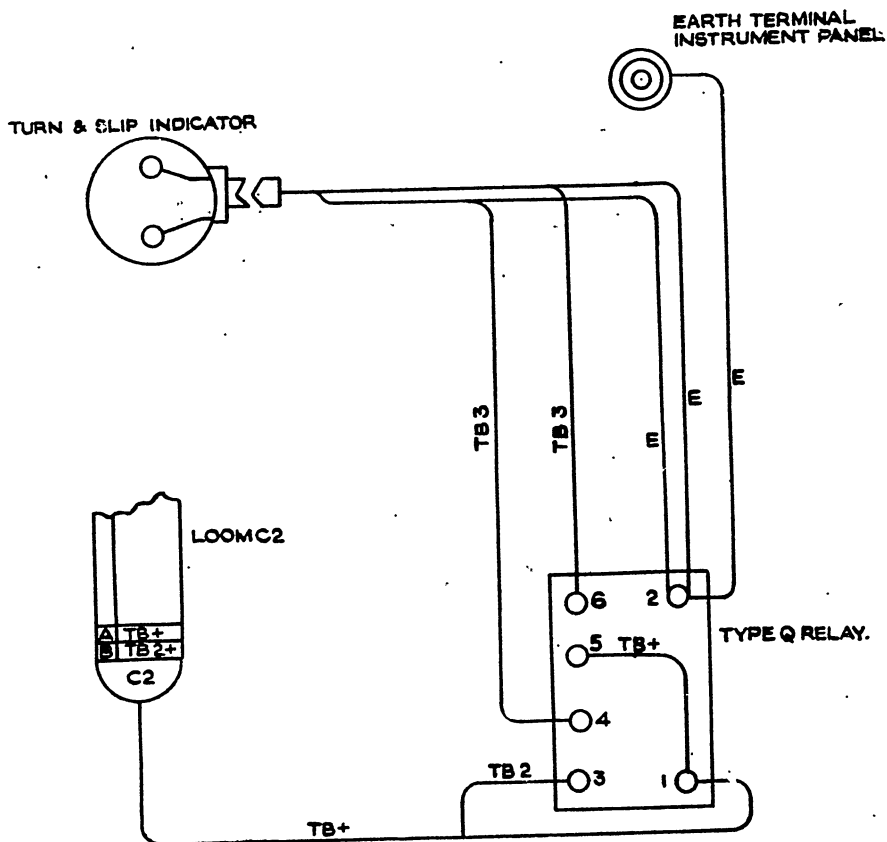
RESTRICTED

DRG. NO. A4099G/K.II./53  
SHEETS



VIEW SHOWING LOCATION OF TYPE Q RELAY & CABLE RUNS IN FUSELAGE.

CABLE CODE	FROM	TO	CABLE SPECIFICATION	PART NUMBER
TB+	LOOMC2 (PINA)	RELAY (TERML1)	UNICEL EL 478	-
TB2+	LOOMC2 (PINB)	RELAY (TERML3)	UNICEL EL 478	-
TB3	TURN & SLIP	RELAY (TERML4)	DUPRENG.EL.1470	N003481A
E	TURN & SLIP	RELAY (TERML2)	DUPRENG.EL.1470	
TB3	TURN & SLIP	RELAY (TERML6)	DUPRENG.EL.1470	
E	TURN & SLIP	RELAY (TERML2)	DUPRENG.EL.1470	
TB+	RELAY (TERML1)	RELAY (TERML5)	UNIPREN 6	N002857ND
E	RELAY (TERML2)	EARTH (TERML)	UNIPREN 6	N002859 A



WIRING DIAGRAM FOR INSTALLATION OF TYPE Q RELAY

RESTRICTED

DRG. N° A.P.4099 G/K.II/53  
SHEET 6

~~A.L. No. 1 C 1~~  
(Turn-and-slip indicator)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. K.11  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Automatic Change Over Relay (Stores  
Ref. 5C/4102) for Turn-and-Slip Indicator—Introduction**

(7/Mods/16,268.—27.11.53.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. K.11 (Mod. No. Vampire/954),  
is amended as follows:—

(1) *Note* above para. 1. *Amend* to read

*"Note:—The substance of this leaflet supersedes and is the  
authority for cancelling A.P.4099G, Vol. 2, Part 1, Leaflet No. K.6  
(A.L. No. 59)."*

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**RESTRICTED**

Z.10641.R.





(Turn-and-slip indicator)

A.P.4099G, Vol. 2, Part 1

Leaflet No. K.11

(Alteration 2)

## Vampire F.B. Mk. 9 Aircraft—Automatic Change Over Relay (Stores Ref. 5C/4102) for Turn-and-Slip Indicator—Introduction

(7/Mods/16,268.—22.3.54.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. K.11 (Mod. No. Vampire/954), is amended as follows:—

(1) Para. 1. *After line 4 insert*

“Mod. No. Vampire/3091 is to be embodied concurrently with this modification”.

(2) Para. 3, operation (2), line 12. *Delete* “two type S, 10 amp. fuses (Stores Ref. 5C/881) and”(3) Para. 3, operation (3). *Delete and substitute*

(3) Refer to Sheet 2, Fig. 2, of the drawing, and revise the internal wiring of junction box No. 1 as follows:—

(a) Remove the cable coded TB+ connecting from switch 4 to fuse 12.

(b) Remove the cable coded TB2 connecting from pin G of plug C1 to switch 4.

*Note:*—The following parts (c) and (d) of this operation are applicable to aircraft *NOT* embodying Mod. No. Vampire/568.

(c) Connect fuse 12 to pin Z of plug C2, using unirubber cable, Specification EL.662, and coding the cable ends TB+ with two Twinlay markers, Part No. T2.

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(d) Connect fuse 18 to pin 2 of plug C2, using unirubber, Specification EL.662, and coding the cable ends TB2+ with two Twinlay markers, Part No. T2.

*Note:*—The following parts (e) and (f) of this operation are applicable to aircraft embodying Mod. No. Vampire/568.

(e) Connect fuse 18 to pin B of plug C2, using unirubber cable, Specification EL.662, and coding the cable ends TB2+ with two Twinlay markers, Part No. T2.

(f) Connect fuse 12 to pin A of plug C2, using unirubber cable, Specification EL.662, and coding the cable ends TB+ with two Twinlay markers, Part No. T2."

(4) Para. 6, list of items. Item 2. *Delete.*

(5) DRG. NO. A.P.4099G/K.11/53. SHEET 2 in FIG. 2 *insert*  
"NOTE:—ON AIRCRAFT PRE MOD. NO. VAMPIRE/  
568 CONNECT FUSE 12 TO PIN Z OF PLUG C2 AND FUSE  
18 TO PIN 2 OF PLUG CZ."

(6) DRG. NO. A.P.4099G/K.11/53. SHEET 3. *Amend* the table to read as follows:—

"PIN CODE		CABLE CODE
PRE 568	POST 568	
Z	A	TB+
2	A	TB2+ "

(7) DRG. NO. A.P.4099G/K.11/53. SHEET 6.

(a) *Delete* from the table at the head of the drawing

"(PIN A)  
(PIN B)"

(b) *Amend* the present loom C2 wiring diagram to read  
"POST 568 A TB+  
B TB+2"

## RESTRICTED

A.L. No. 116

A.P. 4099G, Vol. 2, Part 1

(Compass gyro unit)

Leaflet No. K.12

(A.L. No. 69 cancelled)

(Leaflet No. K.5 cancelled)

Vampire F.B. Mk. 9 Aircraft—Magnetic Shield, type A (Stores Ref. 6B/538) or type B (Stores Ref. 6B/2575) for G4F or G4B Compass Gyro Unit, type A—Introduction

(Mod. No. VAMPIRE/3159)

(Class C/3.)

(7/Mods/16,912.—9.4.54.)

*Note:—This leaflet supersedes and is the authority for cancelling A.P. 4099G, Vol. 2, Part 1, Leaflet No. K.5 (A.L. No. 69).*

1. This modification results from excessive magnetic interference between the emergency compass and the gyro unit of the G4F or G4B compass, and introduces a magnetic shield to the gyro unit. It is applicable only to aircraft in which Mod. No. Vampire/668 is embodied.

The work will take approximately 2 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first opportunity and not later than six months after the 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:* Before issue of aircraft.

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## 3. The following is the sequence of operations:—

(1) Locate gyro unit (Stores Ref. 6B/2035) of the G4F or G4B compass, situated on the blind flying panel.

(2) Remove detachable nose panel and lower armour plate door in bulkhead No. 1. Disconnect electrical plug from rear of gyro unit.

(3) Fit magnetic shield, type A (Stores Ref. 6B/538) or type B (Stores Ref. 6B/2575), as appropriate, to gyro unit, picking up on three of existing bolts on rear of unit.

*Note:*—It is important that the correct type of shield is fitted according to the serial number of the gyro unit (*see* Air Publication 1275B, Volume 2, Part 1, Leaflet No. C.37).

(4) Replace and secure the plug in rear of gyro unit.

(5) Check compass for correct functioning.

(6) Close armour plate door and replace detachable nose panel, re-locking the armour plate door catches with 22 S.W.G. nickel alloy locking wire (Stores Ref. 30A/3055).

## 4. The undermentioned parts are required and are to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
6B/538	Shield magnetic, type A	1	A
or			
6B/2575	Shield, magnetic, type B	1	A
30A/3055	Wire, locking, nickel alloy, 22 S.W.G.	As. reqd.	C

**RESTRICTED**

(40301/160) 423514 8245 400 4/54 (H.F.W.) (Gp.19/1)

(Introducing fuel gauge GP.250/016)

**Vampire F.B. Mk. 9 Aircraft—Instruments—To Introduce Fuel Gauge, Part No. GP.250/016 in place of Part No. GP.251/001 to Record the Fuel Contents in Terms of Mass Units and to Introduce Rectifier Type GP.644/032 in place of GP.642/001 or GP.642/003**

(MOD. NO. VAMPIRE/3314)

(Class C/3 (N.C.P.) By a pool of Gauges.)

(AB/A/1221—2.3.56.)

## 1. INTRODUCTION

It has been found necessary, as an operational requirement, that fuel contents gauges shall be in terms of mass units instead of volumetric units. This modification introduces a new gauge and a new rectifier to meet this requirement. The rectifier is introduced to save man-hours on calibration, obviate scaling of an additional simulator unit and to comply with the interests of standardisation.

(1) This modification does not cancel, 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 a pool of gauges.

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 4 man-hours.

## 4. DRAWINGS REQUIRED

There are no drawings required for the embodiment of this modification.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

## (1) Parts and Materials

The following parts are required, and are to be provided under Unit arrangements:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
6A/4333	GP.250/016	Pacitor fuel contents gauge	1	A
6A/4332	GP.644/032	Pacitor rectifier unit	1	A

## (2) Special Tools and Test Equipment

The following test equipment is required and if not available is to be demanded from No. 14 Maintenance Unit, Carlisle.

Stores Ref.	Nomenclature	Qty.	Class of Store
6C/1240	Hydrometer Aviation Fuel Testing	1	B

## 6. SPARES AFFECTED

There are no spares affected by this modification.

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# CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Stores Ref., Part and Assembly Nos. as follows:

Old		New	
Stores Ref.	Pt./Assy. No.	Pt./Assy. No.	Stores Ref.
26FC/-	BOO.2535A	Bottom instrument panel	BOO.3711A 26FC/-

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:

(1) Disconnect the aircraft batteries, remove the cannon bay doors and remove the starboard outer and inner guns in accordance with the relevant Air Publication.

(2) Working on the centre lower instrument panel, disconnect and remove the redundant pacitor fuel contents gauge, Part No. GP.251/001, retaining its attaching items. Offer up to this position a new fuel contents gauge, Part No. GP.250/016, securing in position with the existing attaching items and reconnect. Re-number the bottom instrument panel as detailed in para. 7.

(3) Disconnect and remove the redundant rectifier unit, Part No. GP.642/001 or GP.642/003, situated on the starboard underside of the cannon bay floor, retaining its attaching items. Offer up to this position the new rectifier unit, Part No. GP.644/032 securing in position with the existing attaching items and reconnect.

(4) Replace the starboard inner and outer guns in accordance with the relevant Air Publication, refit the cannon bay doors and reconnect the aircraft batteries.

## 9. TESTING AFTER EMBODIMENT

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

(1) With fully drained fuel tanks, set up the aircraft at +5 deg incidence and level laterally, switch on the equipment and allow to warm up for 15 minutes.

(2) Adjust "Empty" trimmer on rectifier so that the indicator pointer reads exactly zero contents.

(3) Put 290 gallons (+1 per cent) of fuel into the aircraft—this will fill wing tanks with remainder in the fuselage tank.

(4) Measure the Specific Gravity of this fuel with an accurate Hydrometer (Accuracy of S.G. measurement  $\pm 0.002$ ).

(5) Multiply 290 gallons by 10 times the S.G. measured to obtain weight of fuel in aircraft and adjust the "Full" trimmer on the rectifier so that the indicator pointer reads exactly this figure.

(6) The fuel gauge is then aligned.

## 10. RECORDING ACTION

Record on Aircraft Form 700.

RESTRICTED

11. DISPOSAL OF REDUNDANT PARTS

(1) The undermentioned part rendered redundant by the embodiment of this modification is to be returned without delay by the Units to Simmonds Aerocessories, Treforest, Glamorgan, quoting contract 6/Inst/14740/CB.16(b) on all vouchers. Terms of issue "Contract Loan".

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
6A/2819	CP.251/001	Pacitor fuel contents gauge	1	A

(2) The undermentioned part also rendered redundant by the embodiment of this modification is to be returned to No. 14 Maintenance Unit:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
6A/2823	CP.642/001	Pacitor rectifier unit	1	A
	or			
	CP.642/003			

12. EFFECT ON WEIGHT AND C. OF G.

This modification has no effect on weight or C. of G.

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# Section

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## Contents List

**NOTE TO USER :—**  
Insert relevant A.P. No. at top of page.

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.						
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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L 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.

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(\*5161-996) Wt. 15308-UJ 238 5M 7/53 T.S. 839

# Section

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## Contents List

**NOTE TO USER:—**  
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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				Introduced by A.L. No.						
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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				Introduced by A.L. No.						
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C.P. Ltd. 51-8740

## Vampire F. B. Mk. 9—Re-designed Air Intake Guard—Introduction.

(Mod. No. VAMPIRE/G.E.993.)

(Class S.O.O.)

(7/Mods/14,761.—20.2.52.)

1. The standard starboard air intake guard cannot be fitted to F.B. Mk. 9 aircraft because of the extended boundary layer bleed fairing used on this type. Therefore, this modification introduces a re-designed guard, for the starboard side only.

2. In order to provide a set of air intake guards for Mk. 9 aircraft, the new starboard item quoted in para. 3 must be obtained, and the existing one disposed of in accordance with para. 4.

3. The undermentioned part is required per aircraft set and is becoming available at No. 25 Maintenance Unit. Issues for the type Overseas will be made under Air Ministry arrangements:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/9057	Y001082A	Guard, air intake, starboard	1	A

4. The undermentioned part is rendered redundant and is to be disposed of in accordance with current authorized procedure:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/9045	Y00520A/1	Guard, air intake, starboard	1	A

**RESTRICTED**

(35652/123) M.29191 R665 250 2/52 H.P.W. (Gp.19/1)



A.L. No. 29  
(Air intake covers)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. M.2  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Modified Weather Cover for the R.H.  
Air Intake—Introduction

(MOD. NO. VAMPIRE/GE.3047.)

(Class B/2.)

(7/Mods/15,196.—22.11.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

-(44254/671) 529727 8245 125 1/55 (H.P.W.) (Gp. 19/1)





~~A.L.N. 75~~  
(Spray ring re-positioned)

A.P.4099G, Vol. 2  
Leaflet No. M.3  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Spray Ring from Impellor Casing to  
Accessory Compartment, re-positioned

(7/Mods/13,431.—27.5.53.)

1. A.P.4099G, Vol. 2, Leaflet No. M.3 (Mod. No. Vampire/851),  
is amended as follows:—

(1) Para. 3, operation (2). *Insert* at end of operation  
“Remove the two unions, Part No. A.G.S.1104C (ref only)  
from the T-connection.”

(2) Para. 3, operation (3). *Delete* and *substitute*

“(3) Fit two new pipe unions, Part No. A.G.S.1105C, to the  
existing T-connection, utilizing the original sealing washers, Part  
No. A.G.S.1138C (ref. only), position the three new pipe assemblies,  
Part Nos. L003653A/ND; L003657A/ND and L003651A/ND,  
around the engine, as shown in the drawing. Connect to each  
other with two new unions, Part No. A.G.S.949/C, and connect to  
the new unions fitted to the T-piece.”

(3) Para. 5. *Add* to end of list of parts:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. of</i>	<i>Class of</i>
			<i>Store</i>	<i>Store</i>
“28F/10110	A.G.S.1105C	Union, adaptor	2	C”

(4) Para. 6. *Add* to end of list of parts:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. of</i>	<i>Class of</i>
			<i>Store</i>	<i>Store</i>
“28F/10410	A.G.S.1104C	Cone, adaptor	2	C”

(5) Drg. No. A.P.4099G/M.3/52. Underneath the words “EXIST-  
ING ‘T’ CONNECTION” in the top right hand corner, *insert new ballooned*  
*Part No. “A.G.S.1105/C”* with the description “UNION, ADAPTOR” and  
*arrow* to the unions shown on the drawing.



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**Vampire F.B. Mk. 9 Aircraft—Spray Ring from Impellor Casing to Accessory Compartment re-positioned**

(MOD. NO. VAMPIRE/851.)

(Class B/2.)

(7/Mods/13,431.—8.3.52.)

1. This modification is introduced because the existing fire extinguisher spray does not give sufficient cover to the accessory compartment, considered the most vulnerable zone, post Mod. No. Vampire/844. The work will take approximately 5 man-hours.

2. Subject to the availability of parts, this modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Minor (or equivalent) Servicing

*3rd Line Servicing Units (R.S.U.s):* As detailed in A.M.O. A.719/47 or A.P.3158, Vol. 2, Leaflet No. B.6

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

*Aircraft Storage Units:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/M.3/52.)

(1) Open front top and bottom engine cowling panels.

(2) Disconnect existing pipe assemblies from T-connection, and also from union body, Part No. A.G.S.1102/C, shown in the drawing. Withdraw the three pipe assemblies, after first removing the twenty-two 'P' clips which secure them to the cowling support ring.

(3) Position the three new pipe assemblies, Part Nos. L003653A ND, L003657A ND and L003661A ND, around the engine, at the diffuser casing, as shown in the drawing. Connect up to existing T-piece, and finally couple, by means of two unions, Part No. A.G.S.949/C.

(4) Secure new pipe assemblies to existing studs in the diffuser casing by means of nine new 'P' clips, Part No. L003609. Note that these studs also carry the burner ring support clamps.

(5) Ensure that the six union nuts have been correctly tightened and then lock, using 20 s.w.g. soft iron wire.

4. The undermentioned parts comprise a set. Sets are to be demanded from the P.S.C.O., No. 25 Maintenance Unit, quoting the relevant modification number.

*Note:*—Modification sets are NOT yet available. Home Commands will be advised by postagram from Air Ministry when sets have been received.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26.FC/5889	L003609	Clip, 'P'	9	C
26.FC/5765	L003653A ND	Assy. pipe	1	C
26.FC/5764	L003657A ND	Assy. pipe	1	C
26.FC/5890	L003661A ND	Assy. pipe	1	C
28.V/9990	A.G.S 949/C	Union	2	C

5. The undermentioned part is required and is to be supplied under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
30A/1039	Wire, locking, 20 s.w.g., soft iron	As reqd.	C

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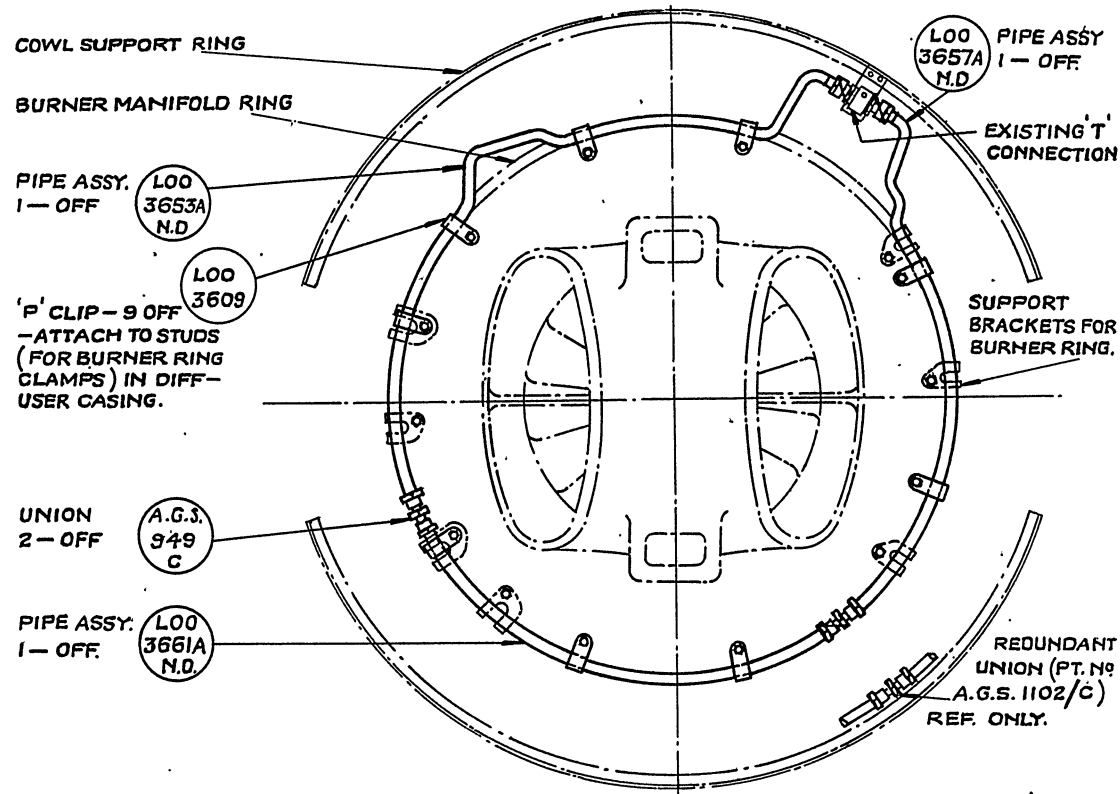
6. The undermentioned parts are rendered redundant by this modification and are to be disposed of in accordance with Air Publication 3045:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26.FC/—	L001279A ND	Assy. pipe	1 } Pre	C
26.FC/866	L001280A ND	Assy. pipe	1 } Mod. No.	C
26.FC/—	L001281A ND	Assy. pipe	1 } Vampire/P.P.8	C
	<i>or</i>			
26.FC/865	L001149A ND	Assy. pipe	1 } Post	C
26.FC/—	L001150A ND	Assy. pipe	1 } Mod. No.	C
26.FC/867	L001151A ND	Assy. pipe	1 } Vampire/P.P.8	C
26.FC/—	DHS.30/5	Clip, 'P'	22 }	C
28.F/9705	A.G.S.1102/C	Union	1 }	C

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DRG. No A.P.4099 G /M.3/52

LP24698 3/52 250 C & P GP. 959 (4)



VIEW ON FRONT OF ENGINE SHOWING POSITION OF SPRAY RING.

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A.L. No. 51  
(Brake cables)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. M.4  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Brake Cables, Part No. A.C.M.16525,  
with Torque Plates and Swaged Nipples in place of Part No. A.C.O.  
5761—Introduction

(Mod. No. VAMPIRE/3166.)

(Class C/2.)

(7/Mods/16,996.—15.10.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.



**RESTRICTED**

(44139/429) 529726 8245 125 12/55 (H.P.W.) (Gp. 19/1)





**Vampire F.B. Mk. 9 Aircraft—To remove Gland Packing from Air Conditioning Control Valve**

(MOD. NO. VAMPIRE/3200.)

(Class C/3, N.C.P.)

(7/Mods/18,001.—20.1.53.)

1. This modification is introduced because the asbestos gland packing causes a slackening of the gland nut in the air conditioning control valve, thus restricting the range of movement of the pilot's control, and makes provision for the removal of this gland packing from the valve. The work will take approximately 3 man-hours. This modification supersedes S.T.I./Vampire/60.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first opportunity and not later than next Minor (or equivalent) Servicing

*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:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/M.5/53.)

(1) Open front engine cowling and locate cockpit temperature control valves on lower starboard side.

(2) At each valve, break the wire-locking and disconnect the one in. dia. pipes that convey hot air from the engine impellor casing. While not being absolutely essential, it will increase the accessibility of the poppet valves if the valve body end plugs are removed.

(3) Refer to the drawing, and remove and retain for re-assembly the end caps, lock nuts and springs from the end of the poppet valve stems.

(4) Push the poppet valve into the valve body to gain access to the gland nut. Unscrew the gland nut and remove the asbestos string gland packing from both valves. Assemble the poppet valves to the guides with graphited grease, Specification D.T.D.806, and replace and fully tighten the gland nut.

(5) Re-assemble items removed in operation (3).

(6) Assemble valve body end plugs with colloidal graphite in alcohol. Re-connect the one in. dia. pipes to the valves and wire-lock with 22 s.w.g. nickel alloy wire.

(7) Refer to Air Publication 4099G, Vol. 1, set the 0.01 in. clearance between the hot cam and the end cap and carry out the functional checks.

(8) Replace front engine cowlings.

4. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

Stores Ref.	Nomenclature	No. off	Class of Store
34B/233	Grease, graphited, Spec. D.T.D.806	As reqd.	C
34B/—	Colloidal graphite in alcohol	As reqd.	C
30A/3064	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C

5. The following items are rendered redundant and are to be disposed of in accordance with Air Publication 3045:—

Stores Ref.	Nomenclature	No. off	Class of Store
26FC/—	Gland packing, graphited asbestos string	2	C

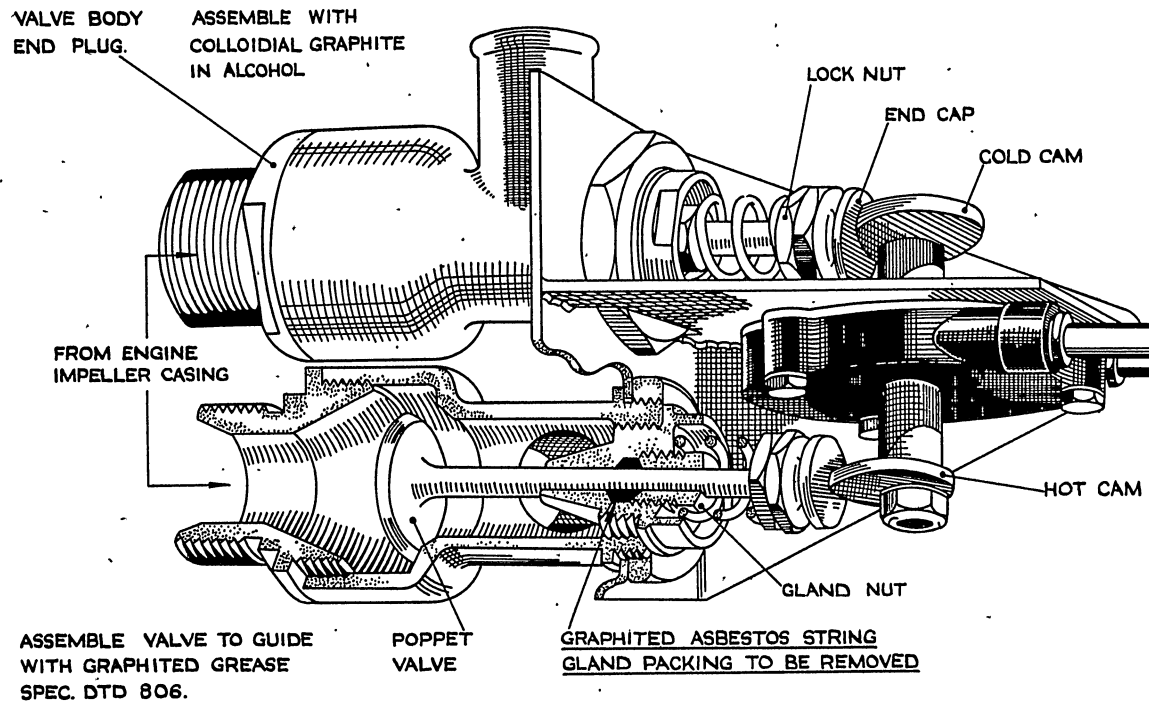
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DRG. NO. A.P.4099G/M.5/53

LP25978 I/53 300 C & P Gp. 959 (4)



ALL ITEMS SHOWN ON THIS DRAWING ARE EXISTING AND ARE LABELLED FOR REFERENCE ONLY.

SECTION THROUGH AIR CONDITIONING CONTROL VALVE ASSEMBLY

Vampire F.B. Mk. 9 Aircraft—Windscreen De-icer Pump, Rotax M 2601  
(Stores Ref. 27F/2612) in place of Pump (Stores Ref. 27F/1870)—Introduction

(MOD. NO. VAMPIRE/883.)

(Class C/3.)

(7/Mods/16,267.—20.1.53.)

1. This modification introduces an improved and lighter windscreen de-icer pump in place of the existing Rotax pump.

The work will take approximately 5 man-hours.

2. This modification is to be embodied on replacement of the de-icer pump.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/M.6/53.)

(1) Locate existing Rotax de-icer pump (Stores Ref. 27F/1870) (ref. only), located at the bottom of the R.H. instrument panel.

(2) Disconnect spray-feed and supply line tubes from de-icer pump and remove assembly of the bracket, Part No. B00217A (ref. only), and pump, from the panel.

(3) Refer to the drawing, and modify the pump clearance hole in the instrument panel, as detailed.

(4) Secure new reducing union, Part No. A.G.S.1109K, to new de-icer pump, type M2601 (Stores Ref. 27F/2162). Attach pump to new support bracket, Part No. B002525, picking up the three existing No. 26 (0.1470 in. dia.) holes, and using three new screws and nuts, Part No. A32/C16 and A.G.S.2001/B1, respectively. It will be necessary to remove the pump knob before the pump can be assembled to the support bracket.

(5) Position pump and bracket assembly on the instrument panel as detailed in the drawing.

*Note:*—There will be five existing holes in the panel, formerly used for securing the old pump support bracket, which are now redundant. The bracket assembly should be positioned so that the existing holes in the bracket clear these redundant holes. It may, however, be found that this is impracticable, and one or two elongated holes may result; this is permissible if a washer, Part No. SP.10/C, is fitted to the offending hole(s). When the bracket assembly has been satisfactorily positioned, temporarily clamp it to the panel and, using a No. 11 (0.1910 in. dia.) drill, drill the eight holes through the panel, using the bracket as a guide.

(6) Remove pump and bracket assembly from the panel and deburr the holes. Finally, secure the assembly in position, using nuts, bolts and, where necessary, washers, as detailed in the drawing. Paint all bolt heads matt black.

(7) Secure existing pipe lines to the pump, inserting a new washer at each joint, and firmly secure the unions. Lock the union on the supply line tube with 22 s.w.g. nickel alloy locking wire and secure the wire to the chain attachment on the cockpit floor.

(8) Check the de-icer system for correct functioning.

**RESTRICTED**

4. The undermentioned items will be delivered to No. 25 M.U., as a Set. No additional items are required to be added by the M.U.. The Set is to be issued as a Modification Kit (Stores Ref. 26FC/100883). Demands for Modification Kits are to be submitted to P.S.C.O., No. 25 M.U., and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/6680	B002525	Bracket	1	C
28S/2862	A32/C16	Screw	3	C
28D/11937	AS.1246/1B	Bolt	3	C
28D/11255	AS.1246/2C	Bolt	5	C
28M/10287	A.G.S.2001/B/1	Nut	3	C
28M/10288	A.G.S.2001/C/1	Nut	8	C
28F/12425	A.G.S.1109K	Union, reducing	1	C
28F/8225	A.G.S.1138A	Washer, jointing	2	C

5. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

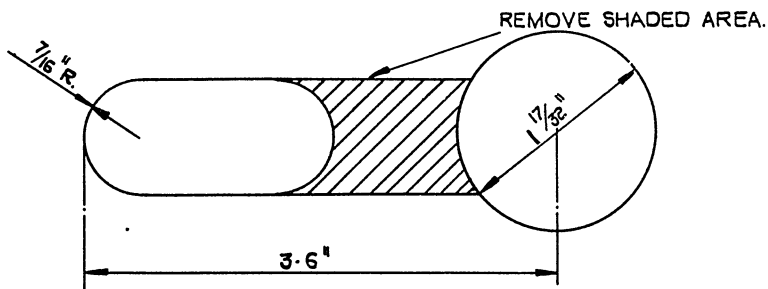
Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
27F/2162	—	Pump, Rotax, type M2601	1	A
28W/12245	SP.10/C	Washer	As reqd.	C
30A/3064	—	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C
33B/205	—	Finish, matt night	As reqd.	C

6. The undermentioned item is rendered redundant and is to be disposed of in accordance with Air Publication 3045:—

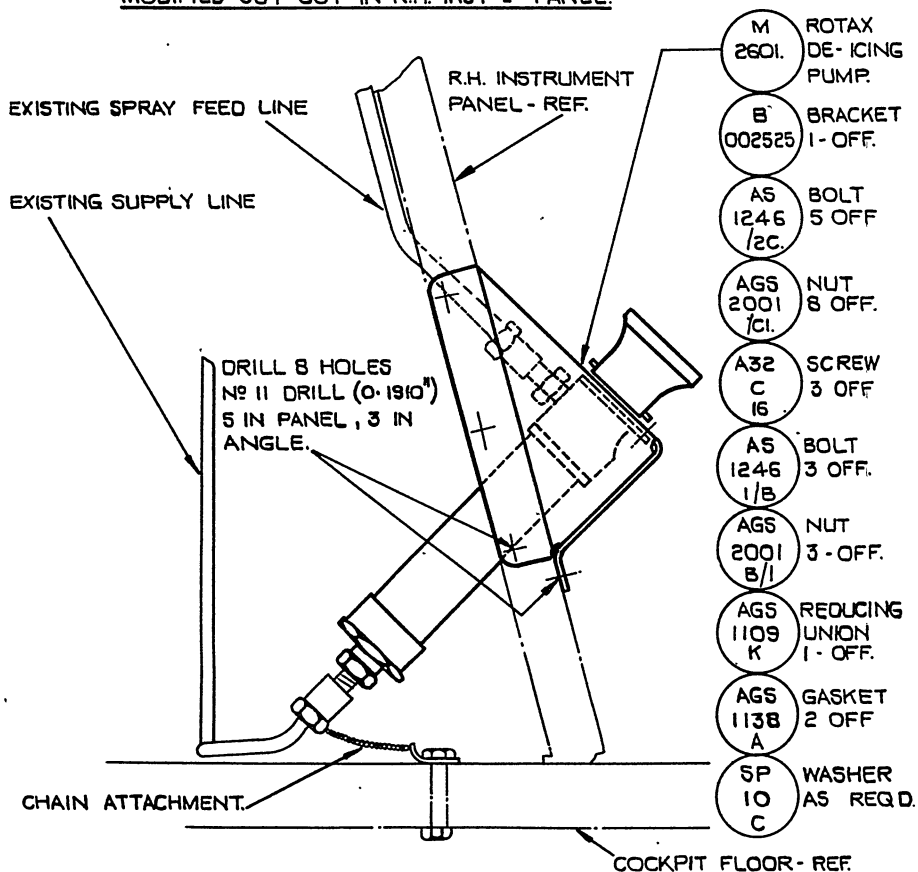
Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/936	B00217A	Bracket	1	C

7. The undermentioned item is rendered redundant and is to be returned to No. 25 M.U.:—

Stores Ref.	Nomenclature	No. off	Class of Store
27F/1870	Pump, de-icer	1	A



MODIFIED CUT OUT IN R.H. INST<sup>MT</sup>. PANEL.



ARRANGEMENT OF NEW DE-ICING PUMP IN R.H. INST<sup>MT</sup>. PUMP

**RESTRICTED**

DRG. NO A.P4099G/M.6/53

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**Vampire F.B. Mk. 9 Aircraft—To increase Gauge of Air Duct at Heat Exchanger**

(MOD. NO. VAMPIRE/3237.)

(Class C/3.)

(7/Mods/19,443.—1.5.53.)

1. This modification results from cracking of the air duct and introduces a duct manufactured from heavier gauge metal.

The work will take approximately 10 man-hours.

2. This modification is to be embodied when the air duct requires replacement.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/M.7/53.)

- (1) Remove the cold air unit and the heat exchanger.
- (2) Withdraw the redundant air duct through the access panel in the upper surface of the mainplane.
- (3) Using cement, attach a rubber seal, Part No. R002075ND, inside the new duct, Part No. R002613ND, and position it 0.3 in. from the end of the duct that fits to the forward face of the heat exchanger.
- (4) Position the duct inside the mainplane and assemble the heat exchanger and the cold air unit.
- (5) Repair the external finish to match the existing colour scheme.

4. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The set is to be issued as a Modification Kit (Stores Ref. 26FC/103237). Demands for Modification Kits, which must quote the Stores reference number, are to be submitted in accordance with A.M.O. A.692/51, para. 6 or 7, as appropriate, to P.S.C.O., No. 25 M.U.:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/4703	R002075ND	Seal, rubber	1	C
26FC/—	R002613ND	Air duct	1	C

5. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
33C/1173	Cement, rubber and resin	As reqd.	C
33B/261 & 672	Primers and cellulose matching finish	As reqd.	C

6. The following item is rendered redundant and is to be disposed of in accordance with current authorized procedure:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/—	R002073ND	Air duct	1	C

**P.T.O.**

DRAG MEMBER - REF ONLY.

HEAT EXCHANGER-REF.

AIR DUCT.

RUBBER SEAL.

A  
002613  
N.D.

A  
002075  
N.D.

ARRANGEMENT OF AIR DUCT AT HEAT EXCHANGER.

**RESTRICTED**

Drg. No. A.P. 4099G/M.7/53



**Vampire F.B. Mk. 9 Aircraft—Self-sealing Couplings in Hydraulic Pump  
Circuit at Engine—Re-positioned**

(MOD. NO. VAMPIRE/996.)

(Class C/3.)

(7/Mods/17,213.—30.6.53.)

1. This modification results from the inaccessibility of the couplings and the inability to use them when changing an engine and re-positions them.

The work will take approximately 10 man-hours.

*Note.*—This modification must be embodied prior to, or concurrently with, Mod. No. Vampire/3044, because the fuel vent relief valve cannot be fitted until the self-sealing coupling is re-positioned.

2. The modification is to be embodied when the engine is next removed.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/M.8/53, Sheets 1 & 2.)

(1) Release the hydraulic accumulator pressure and drain the hydraulic fluid from the aircraft.

(2) Remove the pressure and suction flexible hydraulic pipes, Part No. QOO.3717 A/ND and QOO.2233 A/ND (ref. only), from their adapters at the bottom of the rear face of the fireproof bulkhead and retain them for use on re-assembly.

(3) Locate the engine-driven hydraulic pump on the lower port side of the engine wheel case. Remove the redundant self-sealing stud half couplings, Part No. AVX.553 and AVX.554 (ref. only), from the "in" and "out" ports in the pump housing and replace them with the new adapters, Part No. QOO.3693 and QOO.3695.

(4) Connect the flexible hydraulic pipes removed from the fireproof bulkhead in operation (2), to the new adapters in the pump housing. Use the tube nuts that connected the pipes to the adapters on the bulkhead to connect the pipes to the pump housing adapters.

(5) Wire-lock the adapters and tube nuts with 22 s.w.g. nickel alloy wire.

(6) Disconnect the redundant hydraulic pipe assemblies, Part Nos. QOO.2280 A/ND and QOO.2281 A/ND (ref. only), from the ground test connection block on the port side of the rear face of the fireproof bulkhead. Completely remove the two pipe assemblies and their redundant hose adapters, Part Nos. QOO.1010 and QOO.2104 (ref. only), by releasing the three clamp blocks along the bottom of the bulkhead. Retain all the clamp blocks and their attachment items for use on re-assembly, with the exception of those on the starboard reinforcing angle, Part Nos. QOO.2131 and QOO.2132 (ref. only).

(7) On the forward face of the fire-proof bulkhead, lower the starboard accumulator rack and remove the accumulator in accordance with current authorized procedure.

(8) At the bottom of the lower starboard cowling support channel, drill out the first four countersunk  $\frac{1}{8}$  in. dia. rivets attaching the Ferodo Bonnet tape to the support channel, using a No. 30 (0.1285 in. dia.) drill.

(9) Remove the redundant starboard reinforcing angle, Part No. LOO.94A (ref. only), by drilling out the five  $\frac{1}{8}$  in. dia. rivets attaching it to the bulkhead and support channel, using a No. 30 (0.1285 in. dia.) drill.

**R E S T R I C T E D**

(10) Refer to Sheets 1 and 2 of the drawing. Offer up the new coupling support bracket, Part No. LOO.3689, and mark off its position on the bulkhead. Remove the bracket and drill out any existing rivets in the bulkhead necessary to pick up on, or to permit the bracket to seat flush against the bulkhead. Use a No. 30 (0.1285 in. dia.) drill for the  $\frac{1}{8}$  in. dia. rivets, and a No. 21 (0.159 in. dia.) drill for the  $\frac{3}{16}$  in. dia. rivets.

*Note.*—If Mod. No. Vampire/3044 is being embodied concurrently, the cutting back of the vertical stiffener on which the new bracket picks up should be carried out at this stage of the operations.

(11) Fill the redundant rivet holes in the bulkhead (previously used for attaching the redundant reinforcing angle) with three  $\frac{1}{8}$  in. dia. countersunk rivets, Part No. AS.2229/404, and two  $\frac{1}{8}$  in. dia. countersunk rivets, Part No. AS.2229/405.

(12) Again offer up the new coupling support bracket to the bulkhead and drill off the 13 holes with a No. 30 (0.1285 in. dia.) drill. Release the bracket, deburr all the holes, coat the mating surfaces of the bracket with compound, and then attach the bracket to the bulkhead with the rivets detailed in Sheet 1 of the drawing.

(13) Re-assemble all the items removed in operation (7).

*Note.*—If Mod. No. Vampire/3044 is being embodied concurrently, the fitment of the fuel vent relief valve and the necessary cutting back of the Ferodo Bonnet tape is most conveniently carried out at this stage in the operations.

(14) Re-attach the Ferodo Bonnet tape to the cowl support channel with four  $\frac{1}{8}$  in. dia. countersunk rivets, Part No. AS.2230/405.

(15) Refer to Sheet 2 of the drawing, and attach the two new flanged half couplings, Part No. AVA. 58C and AVA. 58D, to the new coupling support bracket, with their flanges outboard of the bracket, using eight bolts and nuts, Part Nos. A25/2B and A.G.S.2001/B1, coating the mating surfaces with compound.

(16) Obtain the new hydraulic pipe assemblies, Part No. QOO.3697 A/ND and QOO.3701 A/ND, and sluice them through with the correct hydraulic fluid for the system to ensure their absolute cleanliness.

(17) Refer to Sheet 2 of the drawing, and connect the two new pipe assemblies to the ground test connection block and the new flanged half couplings at the support bracket. Wire-lock the connections with 22 s.w.g. nickel alloy wire.

(18) Re-assemble the port and central clamp blocks and their attachment items, removed in operation (6), to secure the two new pipe assemblies along the bottom of bulkhead.

(19) When the engine is re-installed, connect the union half couplings, on the two hydraulic flexible pipes from the engine driven pump, to the flanged half couplings on the support bracket and wire-lock them with 22 s.w.g. nickel alloy wire.

(20) Fill, prime and functional test the system.

4. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The Set is to be issued as a Modification Kit (Stores Ref. 26FC/100996). Demands for Modification Kits are to be submitted to P.S.C.O., No. 25 M.U., and are to quote the relevant Stores reference number:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/—	LOO.3689	Bracket, coupling support	1	C
26FC/6783	QOO.3693	Adapter	1	C
26FC/6784	QOO.3695	Adapter	1	C

**R E S T R I C T E D**

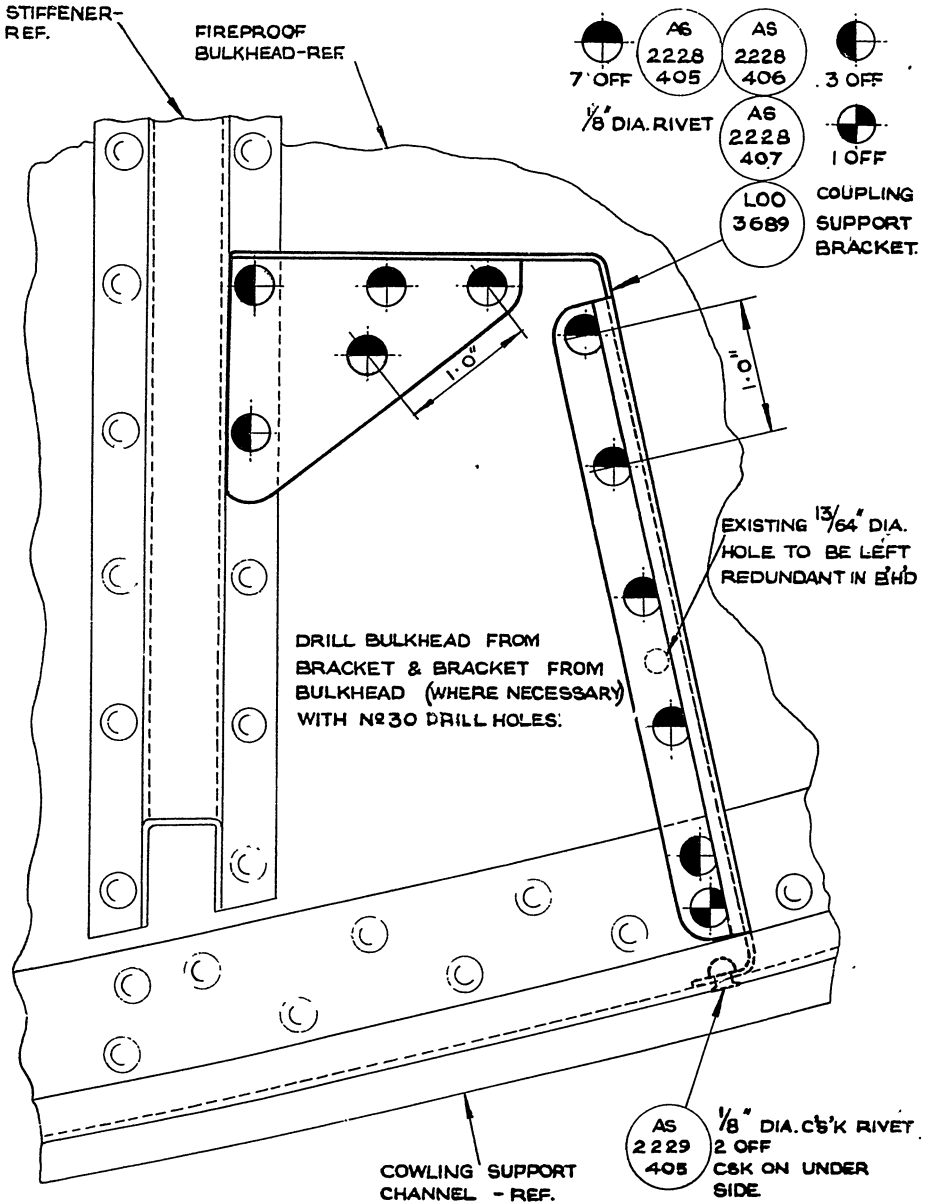
<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/6861	QOO.3697A/ND	Pipe assembly	1	C
26FC/8342	QOO.3701A/ND	Pipe assembly	1	C
27M/8762	AVA.58C	Coupling, flanged half	1	C
27M/8900	AVA.58D	Coupling, flanged half	1	C
28D/12511	A25/2B	Bolt	8	C
28M/10287	A.G.S.2001/B1	Nut	8	C
28Q/10652	AS.2228/405	Rivet	7	C
28Q/10408	AS.2228/406	Rivet	3	C
28Q/10777	AS.2228/407	Rivet	1	C
28Q/6640	AS.2229/404	Rivet	3	C
28Q/6679	AS.2229/405	Rivet	4	C
28Q/10413	AS.2230/405	Rivet	4	C

5. The undermentioned parts are required and are to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
33C/1264	Compound, pigmented varnish jointing	As reqd.	C
32B/764	Tape, adhesive	As reqd.	C
32A/112	Twine, lacing, fire	As reqd.	C
33C/10	Beeswax	As reqd.	C
30A/3064	Wire, locking, 22 s.w.g. nickel alloy	As reqd.	C

6. The following items are rendered redundant and are to be disposed of in accordance with current authorized procedure:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/1877	LOO.94A	Angle, reinforcing	1	C
26FC/3041	QOO.1010	Adapter, hose (pressure)	1	C
26FC/3042	QOO.2104	Adapter, hose (suction)	1	C
26FC/3037	QOO.2131	Clamp block	1	C
26FC/3038	QOO.2132	Clamp block	1	C
26FC/4259	QOO.2280 A/ND	Pipe assembly	1	C
26FC/5660	QOO.2281 A/ND	Pipe assembly	1	C
27M/9011	AVX.553	Coupling, stud half	1	C
27M/9012	AVX.554	Coupling, stud half	1	C



SCRAP VIEW ON REAR FACE OF FIREPROOF BULKHEAD, BOTTOM STBD SIDE.

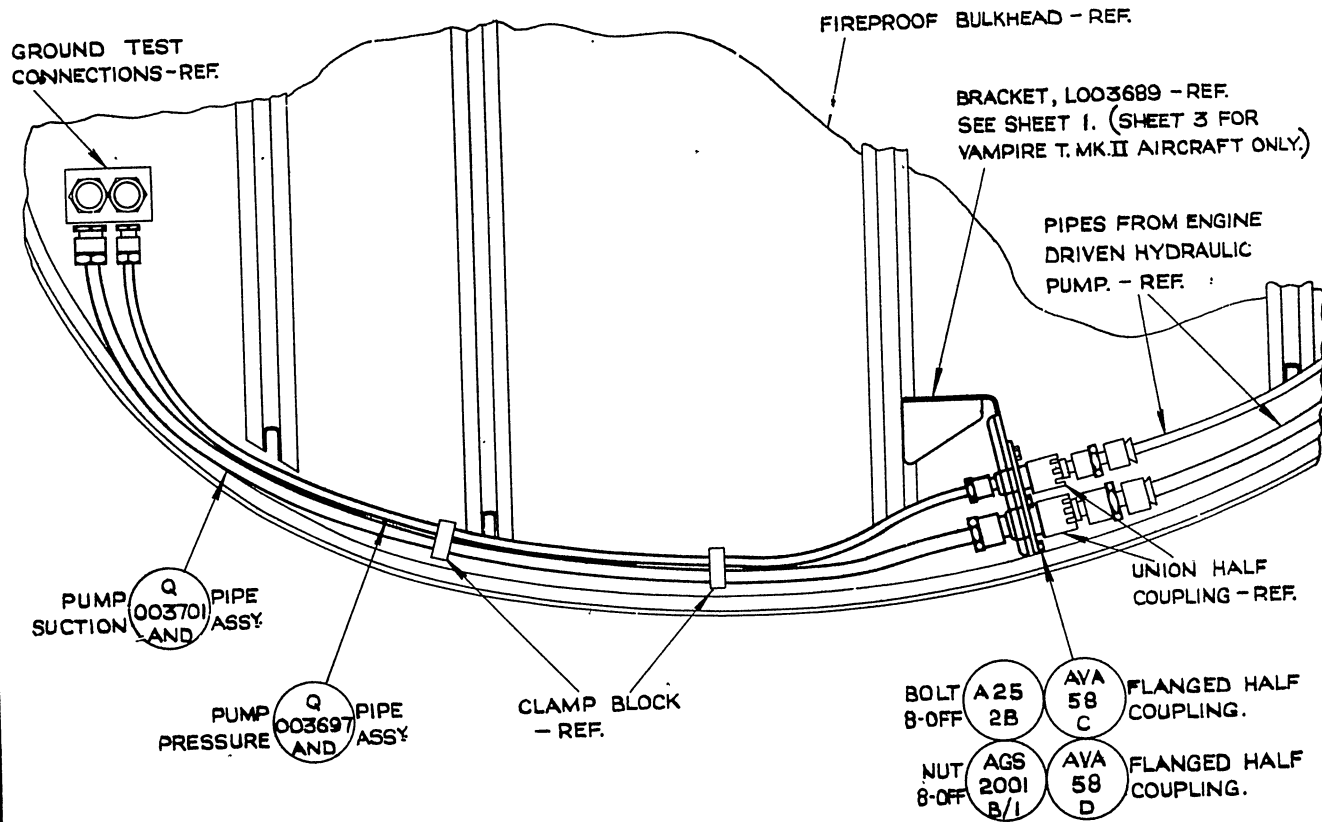
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SHEET I

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DRG. N° AR4099G/M.8/53  
SHEET 2



VIEW ON REAR FACE OF FIREPROOF BULKHEAD BOTTOM HALF.

A.L. No 132

(Fire bottle)

(A.L. No. 96 cancelled)

A.P.4099G, Vol. 2, Part 1

Leaflet No. M.10

(Leaflet No. M.9 cancelled)

**Vampire F.B. Mk. 9 Aircraft—Methyl Bromide Bottle. (Stores Ref. 27N/105) in place of 27N/67 and to change the label on the aircraft—Introduction**

(Mod. No. VAMPIRE 932.)

(Class B/3 N.C.P.)

(7/Mods/21,034.—31.7.54.)

*Note:—This leaflet supersedes and is the authority for cancelling A.P.4099G, Vol. 2, Leaflet No. M.9, dated 3.11.53 (A.L. No. 96).*

### 1. INTRODUCTION

This modification introduces a high pressure methyl bromide fire bottle to give improved coverage in the engine bay, and also provides for altering the reference numbers on the label attached to the bottle mounting bracket.

The work will take approximately 2 man-hours per aircraft, excluding paint drying time.

### 2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity and not later than six months after receipt of parts

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

*4th Line Servicing Units (Repair Depots):* Before delivery of aircraft  
*Aircraft Storage Units:* Before delivery of aircraft.

### 3. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Lower the flaps and locate the existing methyl bromide fire bottle (Stores Ref. 27N/67) (Ref. only) situated above the port flap on Rib No. 1. Withdraw the electrical socket from the bottle and disconnect the pipe union nut on the nose of the bottle. Release the strap screw securing the bottle to its mounting and remove the bottle from the aircraft.

(2) Modify the existing label on the bottle mounting by painting out the numbers "753" and "27N/67", with finish, synthetic, night, (Stores Ref. 33B/204) and substituting the numbers "21A/270" and "27N/105" respectively, in finish, synthetic, white (Stores Ref. 33B/176), when the finish, night, is thoroughly dry.

(3) Fit the new methyl bromide fire bottle (Stores Ref. 27N/105) to the mounting in the reverse order to operation (1) then lock the union nut and strap screw with wire, locking, nickel alloy, 22 s.w.g. (Stores Ref. 30A/3055) and finally raise the flaps.

### 4. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

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

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## OLD

Stores Ref.	Part No.	Nomenclature	Part No.	Stores Ref.
26FC/870	LOO 826A	Mounting Bracket	LOO 3853A	26FC/-
26FC/-	LOO 1112	Label	LOO 3855	26FC/-

## NEW

5. THE UNDERMENTIONED ITEMS ARE REQUIRED TO EMBODY THIS MODIFICATION, AND ARE TO BE SUPPLIED UNDER UNIT ARRANGEMENTS

Stores Ref.	Part No.	Nomenclature	No. Off	Glass of Store
27N/105	—	Methyl Bromide Fire Bottle	1	A
30A/3055	—	Wire, Locking, Nickel Alloy, 22 s.w.g.	As reqd.	C
33B/177	—	Finish, Synthetic, White	As reqd.	C
33B/205	—	Finish, Synthetic, Night	As reqd.	C

## 6. DISPOSAL OF REDUNDANT PARTS

The following part rendered redundant by this modification is to be returned to No. 25 Maintenance Unit.

Stores Ref.	Part No.	Nomenclature	No. off	Glass of Store
27N/67	—	Methyl Bromide Fire Bottle	1	A

**RESTRICTED**

**Vampire F.B. Mk. 9 Aircraft—Canopy—To Delete Use of Seaplane Varnish  
on Windscreen Glasses—Introduction**

(MOD. NO. VAMPIRE/3340.)

(Class B/4 on replacement of windscreen glasses.) (N.C.P.)

(AB/A/1613.—27.4.55.)

**1. INTRODUCTION**

It is found that the use of seaplane varnish to the edges of the windscreen glasses, as a sealant, causes delamination of the glasses. This modification introduces, on the replacement of windscreen glasses, Boscoprene 2100 as the sealing medium now to be used.

This modification supersedes the work called for by Mod. No. Vampire/3050.

**2. EMBODIMENT**

This modification is to be embodied on replacement of windscreen glasses.

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### 3. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

On replacement of windscreen glasses the following sealing procedure is to be adopted:—

(1). Clean from the windscreen retaining channel any existing sealant.

(2). Secure the rubber seal to the glass, using a thin film of Boscoprene 2100 (Stores Ref. 33C/1281).

(3). Assemble the new windscreen with Boscoprene 2100 as necessary.

*Note:—Primer is not to be used.*

**RESTRICTED**

# Vampire F.B. Mk. 9 Aircraft—Refrigeration System—To introduce Silicone Hose Connection between Control Valve and Cold Air Unit and in Hot Air Line to Non-return Valve

(Mod. No. VAMPIRE/3395.)

(Class. C/3, on replacement)

(AB/A/3640.—22.10.55.)

## 1. INTRODUCTION

This modification introduces hose connections with greater heat resisting properties for use in the hot air pipe circuit.

(1) This modification does not cancel, 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 hose.

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 10 man-hours.

## 4. DRAWINGS REQUIRED

There are no drawings required for the embodiment of this modification.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

The Modification Kit consists of the following items supplied by the Contractor:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
27VA/4135	DAS.393/16/2.5 in.	Dunlop silicone glass fabric	5	C
	or	coupling hose		
26FC/—	C2S/4PLY/A/C—1.0 in.	Bestabell silastic asbestos	5	—
	bore	liner sleeve, 2.5 in.		
26FC/—	DAS.393/16/2.0 in.	Dunlop silicone glass fabric	2	—
	or	coupling hose		
26FC/—	C2S/4PLY/A/C—1.0 in.	Bestabell silastic asbestos	2	—
	bore	liner sleeve, 2.0 in.		
26FC/—	DAS.393/16/9.0 in.	Dunlop silicone glass fabric	1	—
	or	coupling hose		
26FC/—	C2S/4PLY/A/C—1.0 in.	Bestabell silastic asbestos	1	—
	bore	liner sleeve, 9.0 in.		
26FC/—	DAS.393/20/2.5 in.	Dunlop silicone glass fabric	1	—
	or	coupling hose		
26FC/—	C2S/4PLY/A/C—1.25 in.	Bestabell silastic asbestos	1	—
	bore	liner sleeve, 2.5 in.		

The complete Kit is to be demanded from No. 35 Maintenance Unit under Stores Ref. 26FC/103395.

(2) Special Tools and Test Equipment

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

**RESTRICTED**

## 6. SPARES AFFECTED

There are no spares affected by this modification.

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

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

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) On the top face of the starboard mainplane, locate and remove the access panel for the cold air unit, retaining its attaching items for re-assembly. Working inside the mainplane, through the access hole, locate the air pipe from the engine to the cold air unit. From this pipe remove the 9 in. rubber pipe coupling which connects the cold air unit to a pipe adapter on rib 1, and in its place fit a new pipe coupling, Part No. DAS.393/16/9.0 in. or C2S/4PLY/A/C-1.0 in. bore.

(2) On the under face of the starboard mainplane, locate and remove the access panel for the intercooler. On the starboard side of the intercooler, locate the two rubber pipe couplings, unscrew the four Jubilee clips and remove both couplings. Replace them with two new couplings, Part No. DAS.393/16/2.5 in. or C2S/4PLY/A/C-1.0 in. bore, and re-tighten the four Jubilee clips.

(3) Raise the front upper starboard engine cowling panel and locate the air pipe which is connected to the air supply and temperature control valve at one end, and to a pipe adapter on rib 1 at the other. Unscrew the Jubilee clips securing the rubber pipe coupling at rib 1, and remove the coupling. Replace it by a new coupling, Part No. DAS.393/16/2.5 in. or C2S/4PLY/A/C-1.0 in. bore, and re-tighten the Jubilee clips.

(4) Lower the front lower starboard engine cowling panel and locate the air supply and temperature control valve. To this valve are fitted two pipes with rubber hose couplings; disconnect and remove the couplings and replace them with two new couplings, Part No. DAS.393/16/2.0 in. or C2S/4PLY/A/C-1.0 in. bore. Secure the couplings with the four original Jubilee clips.

(5) Lower the cannon bay doors and remove the starboard outer gun, as detailed in A.P.4099G, Vol. 1, Section 12, Chapter 1. Locate the air pipe which runs from bulkhead 2 to bulkhead 4, adjacent to the cannon heater pipe on the starboard fuselage wall in the cannon bay. Remove the three rubber hose couplings in this pipe assembly and replace them by three new couplings, Part No. DAS.393/20/2.5 in. or C2S/4PLY/A/C-1.25 in. bore, for the coupling just aft of bulkhead 2, and Part No. DAS.393/16/2.5 in. or C2S/4PLY/A/C-1.0 in. bore for the other two couplings.

(6) Re-fit the starboard outer cannon, as detailed in A.P.4099G, Vol. 1, Section 12, Chapter 1. Raise and secure the cannon bay doors and the starboard lower engine cowling panel. Lower and secure the front upper engine cowling panel. Re-fit to the top face and the under face of the starboard mainplane the access panels removed in operations (1) and (2), using their retained attaching items.

## 9. TESTING AFTER EMBODIMENT

There are no special tests required after the embodiment of this

## 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 Air Ministry Salvage Leaflets:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>
26FC/—	DHS.184/E/2.0 in.	Pipe coupling	2
26FC/—	DHS.184/E/2.5 in.	Pipe coupling	4
26FC/—	DHS.184/E/9.5 in.	Pipe coupling	1
26FC/—	DHS.401/F/2.5 in.	Pipe coupling	1
26FC/—	DHS.401/H/2.5 in.	Pipe coupling	1

## 12. EFFECT ON WEIGHT AND C. OF G.

This modification has no effect on weight or C. of G.

# Section N Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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## Section

## Contents List

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A.L. No. 130  
(Oxygen system)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. O:1  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Oxygen System—Deletion of Non-return  
Valve (Stores Ref. 6D/427) at 5-way piece (Stores Ref. 6D/756)—  
Introduction

(Mod. No. VAMPIRE/3309)

(Class C/3, N.C.P.)

(AB/A/140—19.3.57)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with the underlisted alterations:—

*Alteration No.*

*Introduced by*

1  
2

A.L. No. 135  
A.L. No. 140

will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix "D", paras 9—11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para 117.

R

RESTRICTED

(46881/441) 229717 8245 125 4/57 (H.P.W.) (Op. 19/1)



A.L.N. 102

(Barometric line valve)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. 0.2

**Vampire F.B. Mk. 9 Aircraft—Oxygen System—To introduce Valve  
Line Oxygen Automatic Mk. 1 (Ref. No. 6D/1782)**

(MOD. No. VAMPIRE/3433.)

(Class C/3 (N.C.P.))

(AB/A/5787—12.12.57.)

**1. INTRODUCTION**

This modification introduces a barometric line valve in the oxygen system to provide an automatic oxygen supply at 8,000 ft. cabin altitude.

- (1) This modification does not cancel, 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 (not later than 6 months after receipt of this leaflet)

*3rd Line Servicing Units (R.S.U.s):* 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 12 man-hours, excluding drying time (1 to strip; 9 to embody; 2 to re-assemble)

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/O.2/57, Sheets 1-5, is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

- (1) Parts and/or materials

The following parts and/or materials are required, and are to be provided under Unit arrangements:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
6D/113	—	Adaptor, elbow	4	C
6D/1782	—	Valve, line, oxygen, automatic, Mk. 1	1	A

**R**

26BY/6964	DHS.103/Mk. 2	Ferrule, ply, 2 B.A.	3	C
28D/11971	AS.1246/4C	Bolt, steel, rd/hd. 2 B.A.	2	C
28L/11051	AGS.2034/C	Washer, shakeproof, flat, 2 B.A.	3	C
28M/11957	AGS.2007/C1	Nut, double anchor, 2 B.A.	2	C
28Q/6619	AS.2229/303	Rivet, 90 deg csk/hd, 3/8 in. dia.	4	C
28Q/7697	AS.2229/403	Rivet, 90 deg csk/hd, 1/2 in. dia.	3	C
28S/2868	A.32/C20	Screw, steel, rd/hd, 2 B.A.	3	C
28W/9419402	SP.13/C	Washer, mild steel, thin	1	C
29D/2136	—	Brad, brass, 3/8 in. x 21 s.w.g.	As reqd.	C
30A/3055	—	Wire, nickel alloy, 22 s.w.g. Spec. D.T.D.	As reqd.	C
30B/838	—	189 Tubing, tungum, 1/8 in. x 22 s.w.g. Spec. D.T.D.323	As reqd.	C
30B/1728	—	Aluminium alloy sheet, 16 s.w.g., Spec. B.S.L. 72, 15 in. x 5 ft.	1	C
33B/208	—	Primer, universal, dark grey	As reqd.	C
33B/1021	—	Primer, etch base	As reqd.	C
33B/1023	—	Primer, etch accelerator	As reqd.	C
33B/1027	—	Lacquer, Plyceal, Spec. D.T.D.900/4285	As reqd.	C
33B/1108 (Home)	—	Finish, synthetic, matt night Spec. D.T.D. 314	As reqd.	C
33B/205 (Overseas)				
33C/31	—	Paper, glass, No. 1	As reqd.	C
33C/547	—	Trichlorethylene, Spec. B.S.S.580, type C	As reqd.	C
33C/973	—	Adhesive, synthetic resin hardener G.B.M.	As reqd.	C
33C/1188	—	Adhesive, synthetic resin, type B.70, Spec. B.S. 1204	As reqd.	C
33C/1264	—	Compound, pigmented varnish jointing, Spec. D.T.D.369A	As reqd.	C
33C/1358	—	Compound, sealing Bos-tik 1753, Spec. D.T.D. 900/4058	As reqd.	C

## (2) Special Tools and Test Equipment

The following special tool is required and is to be demanded if not already held by the units:—

Ref. No.	Nomenclature	Qty.	Class of Equipment
1A/4405	Bit, Forstner, 3/8 in.	1	B

## 6. SPARES AFFECTED

No spares are affected by this modification.

## 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>Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/-	AOO.1502A/4	Cockpit floor, starboard	AOO.1502A/5	26FC/-
26FC/-	AOO.2592A/8	Fuselage shell, half, starboard, completion of structure	AOO.2592A/9	26FC/-

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Refer to Sheet 1 of the drawing and, as detailed, make up from 16 s.w.g. aluminium alloy sheet, Spec. B.S.L.72 (Ref. No. 30B/1728) the mounting assembly, Part No. QOO.3793A. Coat all mating faces with pigmented varnish jointing compound (Ref. No. 33C/1264) and using trichlorethylene, Spec. B.S.S.580, type C (Ref. No. 33C/547) de-grease the mounting assembly prior to applying the finishing coats.
- (2) Remove the gun bay doors and disconnect the aircraft batteries. Remove the pilot's seat from the aircraft, and release the pressure in the oxygen system in accordance with the current authorised procedure. Working in the cockpit, on the starboard side of the fuselage, disconnect all the electric cable loom sockets which connect to junction box No. 1 then remove the junction box from the aircraft and retain together with its attachment items.
- (3) Working on the starboard cockpit floor, adjacent to the bottom forward end of junction box No. 1 when it is fitted in position on the aircraft, locate the packing block on which the aileron pulley and bracket is mounted, over which the elevator torque tube passes. Refer to Sheet 2 of the drawing and, as detailed, mark out on the cockpit floor the position for the two new 2 B.A. ferrules, dimensioning from the rear end of the packing block.
- (4) Refer to Sheet 3 of the drawing and working on the starboard side of the fuselage, mark out the position for the other new 2 B.A. ferrule. Temporarily offer up the newly manufactured mounting assembly, Part No. QOO.3793A, as shown on Sheet 4 of the drawing, to check and ensure that the three marked ferrule positions line up with the three attachment hole positions in the mounting assembly.
- (5) Using a  $\frac{1}{4}$  in. dia. starboard Forstner bit, counterbore the three new ferrule positions, to a depth of 0.43 in. Cut and shape the three new 2 B.A. ferrules, Part No. DHS.103/Mk. 2, as shown on Sheets 2 and 3 of the drawing, so that they seat flat on both the cockpit floor and the wall. Remove the finish locally, where the three ferrules mate with glass paper No. 1 (Ref. No. 33C/31).
- (6) Apply a liberal film of synthetic resin adhesive type B.70, Spec. B.S. 1204 (Ref. No. 33C/1188) to the inside of the three ferrule location holes and the surrounding mating surfaces, then apply a coat of hardener G.B.M. (Ref. No. 33C/973) to the mating surfaces of the three ferrules. Fit the three ferrules to their respective positions, pinning them with  $\frac{1}{8}$  in. brass brads (Ref. No. 29D/2136).

*Note.*—It is recommended that, at a normal temperature of 60 deg. F., a minimum drying period of four hours be allowed for synthetic resin adhesive but, it should be noted, that with the application of radiant heat at a temperature of 70 deg. F., this period could be reduced to a minimum of three hours. Failure to observe these minimum times quoted will result in "crazing" of the cement and a consequent loss in adhesive strength.

- (7) Apply a brush coat of lacquer, Plyceal, Spec. D.T.D.900/4285 (Ref. No. 33B/1027) over the three new ferrules fitted and to any bare surface around them, allowing at least 48 hours for the "Plyceal" to dry. Apply one coat of universal primer (Ref. No. 33B/208) to the area, and allow to dry before applying a coat of matt night synthetic finish, Spec. D.T.D.314 (Ref. No. 33B/1108 or 205). Care must be taken not to allow any foreign matter to enter the ferrule thread inserts.

- (8) Refer to Sheet 4 of the drawing and, as detailed, secure the new mounting assembly, Part No. QOO.3793A, in position with three new 2 B.A. roundhead screws, and shakeproof washers, Part Nos. A.32/C20 and AGS.2034/C respectively.

*Note.*—Prior to final assembly of the attachment screws treat their threads with Bostik sealant 1753, Spec. D.T.D.900/4058 (Ref. No. 33C/1358).

- (9) Refer to Sheet 4 of the drawing, and secure a new oxygen barometric line valve (Ref. No. 6D/1782) which has been tested in accordance with A.P.1275G, Vol. 1, Sect. 2, Chap. 12, App. 1, to the mounting assembly using two new 2 B.A. bolts and four 2 B.A. washers, Part Nos. AS.1246/4C and SP.13/C respectively. Insert two washers under each of the bolt heads. The "outlet" marked on the valve to face forward as shown on the drawing.

- (10) Locate the existing, now redundant, oxygen pipe, Part No. QOO.408ND, connecting between the filter on the forward face of bulkhead No. 2, and the oxygen pressure regulator on the starboard instrument panel. Break the locking wire on the pipe's two attachment nuts, and disconnect the pipe from the filter and the regulator, temporarily blanking off their open connections. Release the two clamps securing the pipe on the undersurface of the canopy rail. Retain the clamps and their attachment items for subsequent re-assembly and remove the redundant pipe from the aircraft.

- (11) Refer to Sheet 5 of the drawing and route a new length of  $\frac{1}{8}$  in. x 22 s.w.g. tungum tube, Spec. D.T.D.323 (Ref. No. 30B/838) to suit the aircraft, from the oxygen filter on the forward face of bulkhead No. 2, under the starboard canopy rail to the "inlet" connection on the new oxygen barometric line valve. Route another new length of  $\frac{1}{8}$  in. x 22 s.w.g. tungum tubing, to suit the aircraft, from the oxygen pressure regulator on the starboard instrument panel, to the "outlet" connection on the barometric line valve as shown on Sheets 4 and 5 of the drawing.

*Note.*—When routing the two new pipes, ensure they have a safety clearance from existing working mechanisms and components on the aircraft.

- (12) Refer to A.P.1464D, Vol. 1, Part 2, Sect. 3, Chap. 3, and following the process detailed, attach to each of the newly formed pipes, two new oxygen elbows (Ref. No. 6D/113) in the positions shown on Sheets 4 and 5 of the drawing. Temporarily blank off the open ends of the two pipes, and apply to them one coat of a 50-50 mixture of etch base primer and accelerator primer, allow to dry, then apply one coat of matt night synthetic finish, Spec. D.T.D.314, ensuring that the finish on the pipes ends within approximately  $\frac{1}{2}$  in. of the elbows.

- (13) Code the two new oxygen pipes as detailed in A.P.1464DE, Vol. 1, Part 2, Sect. 3, Chap. 2. The new pipe made to connect between the oxygen filters on bulkhead No. 2 and the "inlet" connection on the new barometric line valve becomes Part No. QOO.3773A/ND, and the new pipe from the pressure regulator to the valve, Part No. QOO.3775A/ND.

*Note.*—Prior to final fitting of the two new oxygen pipes in the following operation (14) ensure that the bore of the pipes are clean and free from foreign matter. To avoid the risk of an explosion it is essential that all components and pipe lines of the system are kept perfectly free from oil, grease and moisture.

- (14) Remove all temporary blanking, then refer to Sheets 4 and 5 of the drawing and, as detailed, route and connect the new pipes, Part No. QOO.3773A/ND. Secure the pipe under the canopy rail, as shown on the drawing, with the clamps and their attachment items retained in operation (10). Route and connect the other new pipe, Part No. QOO.3775A/ND, using 22 s.w.g. nickel alloy locking wire, Spec. D.T.D.189 (Ref. No. 30A/3055) wire lock the four attachment nuts on the two new pipes.

- (15) Refit back in its position on the aircraft, junction box No. 1 with its attachment items retained in operation (2), and connect all the disconnected cable loom sockets to their respective positions on the junction box. Replace the pilot's seat in accordance with current authorised procedure, and recharge the oxygen system as detailed in A.P.4099G, Vol. 1, Sect. 4, Chap. 2. Reconnect the aircraft batteries, then raise and secure the gun bay doors.

- (16) Remove the "on/off" handwheel on the oxygen regulator, Mk. 11c. Using a No. 58 drill, drill two holes in the handwheel diametrically opposite and  $\frac{1}{4}$  in. inwards from the edge of the straight portion of the wheel periphery. Only one hole is used, the other being available should the handwheel be replaced in a different position on its square spindle. On the regulator face panel, using a No. 58 drill, carefully drill one hole horizontally in line with the centre of the "on/off" cock spindle and  $\frac{3}{8}$  in. from the R.H. edge of the regulator front panel. Drill a second hole  $\frac{1}{4}$  in. (centre to centre) above the first, also  $\frac{3}{8}$  in. from the R.H. edge of the regulator face panel. Replace the "on/off" handwheel, and using 20 s.w.g. copper wire (Ref. No. 30B/571) through three of the four holes drilled, wire lock the cock in the fully "on" position.

## 9. TESTING AFTER EMBODIMENT

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

- (1) Test the two new pipes fitted to the oxygen system for leaks, then check the correct functioning of the oxygen system, including flow testing in accordance with A.P.1275G, Vol. 2, Part 1, Leaflet No. A.1.
- (2) Functional test all disturbed electrical services in accordance with current authorised procedure.

## 10. RECORDING ACTION

Récord on Aircraft Form 700.



## 11. DISPOSAL OF REDUNDANT PARTS

The undermentioned part, rendered redundant by the embodiment of this modification, is to be disposed of as scrap in accordance with Air Ministry Salvage Leaflets:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	QOO 408ND	Pipe, oxygen	1	—

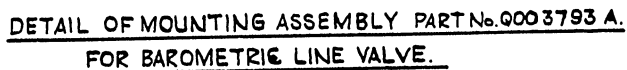
## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of 4.233 lb. and a change of moment of — 16.0 lb. ft.

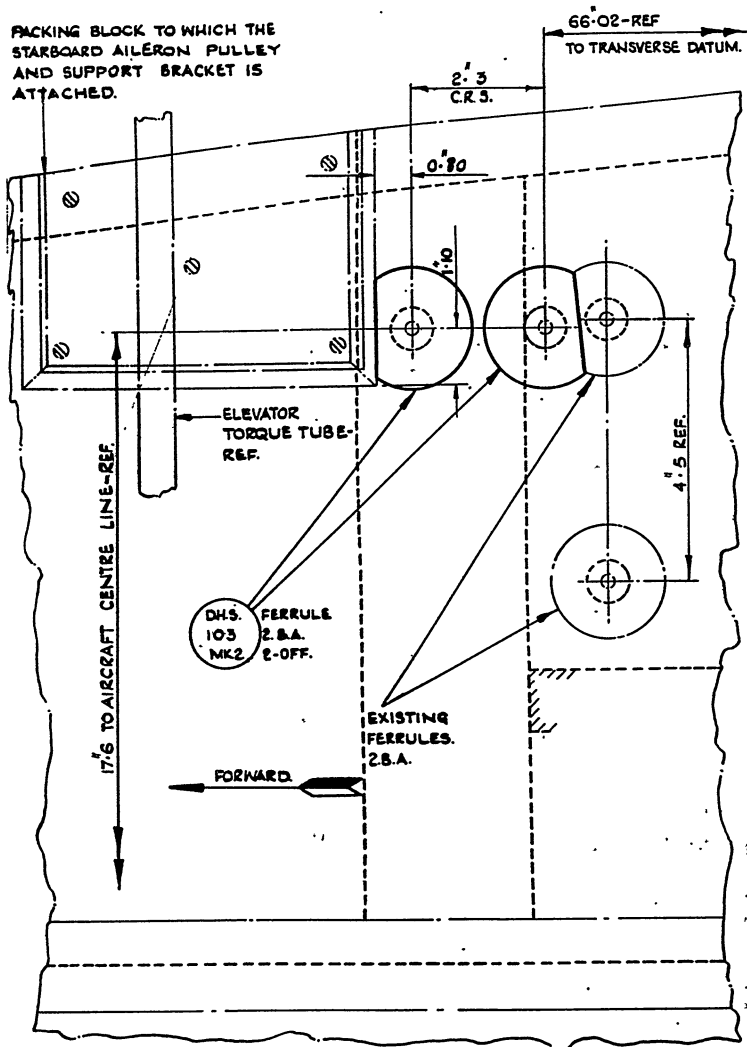


1241 K. L. Ford (388)

**SHEET 1**



PACKING BLOCK TO WHICH THE  
STARBOARD AILERON PULLEY  
AND SUPPORT BRACKET IS  
ATTACHED.

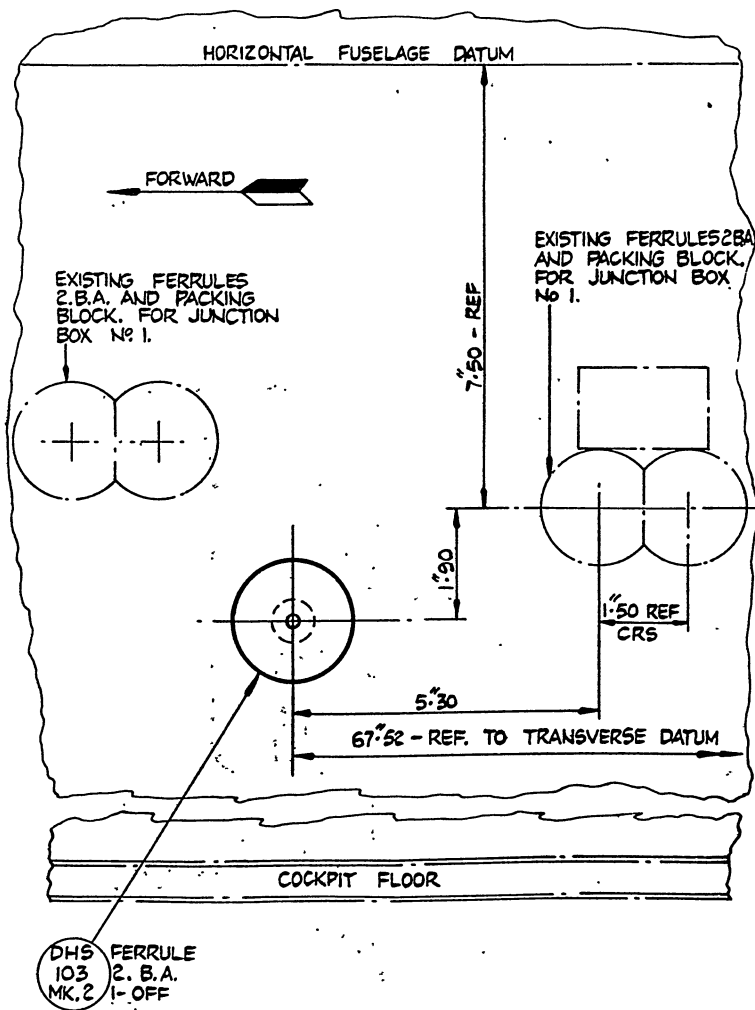


POSITIONING OF TWO NEW FERRULES ON STARBOARD COCKPIT FLOOR.

DRG. NO. A.P.4099G 10.2/57

SHEET 2

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1241 K.L.M. (388)

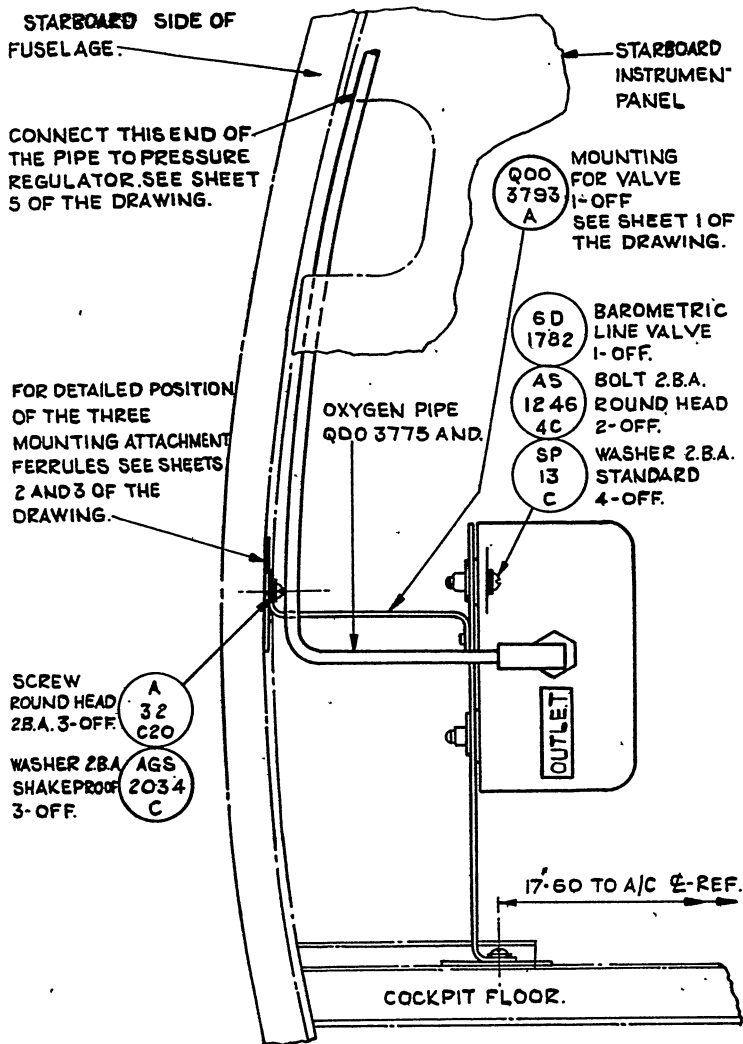


NEW FERRULE POSITION IN STARBOARD SIDE OF FUSELAGE.

DRG. NO A.R 4099G / 0.2/57

SHEET 3

**RESTRICTED**  
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VIEW LOOKING AFT, SHOWING VALVE AND MOUNTING ATTACHMENT.

DRG. NO. A.R. 4099G / 0.2/5 7

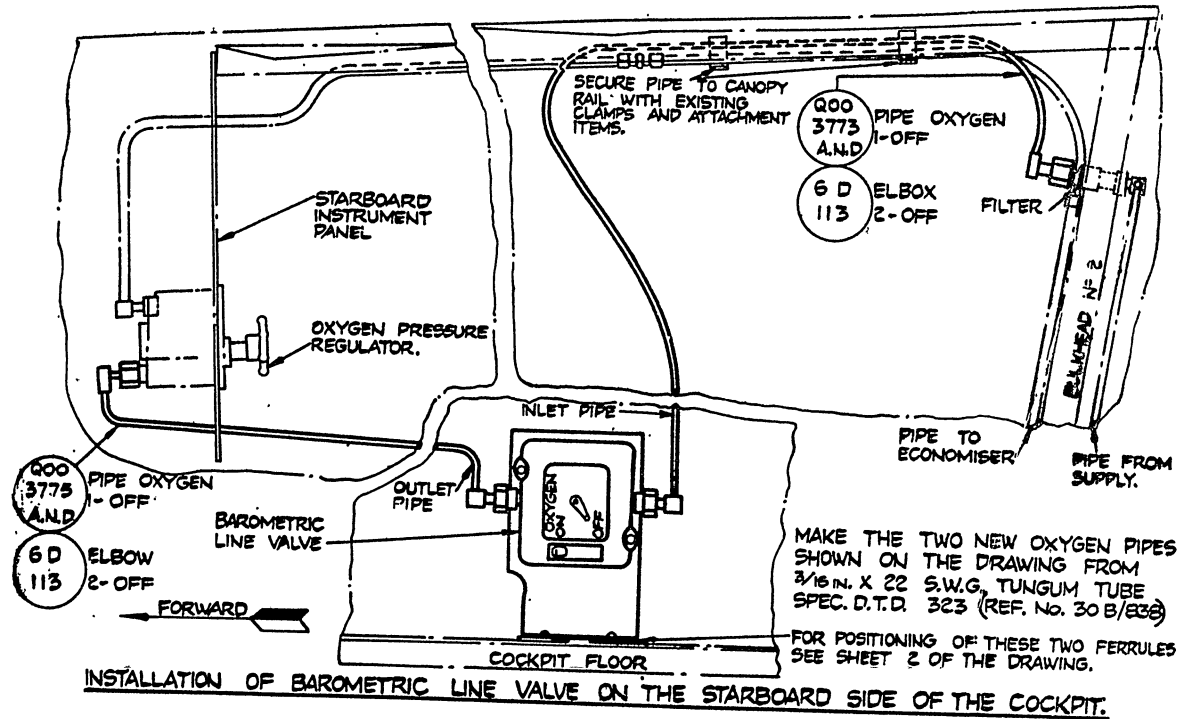
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SHEET 5



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**NOTE TO USER :—**  
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A.L. No. 15  
(Engine mounting)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.I  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Re-designed Bolts for Engine Mounting  
(Provision for Bullet)—Introduction

(MOD. NO. VAMPIRE/808.)

(Class C/4 on replacement.)

(7/Mods/14,072.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with Alteration 1. introduced by A.L. No. 26, will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.



**RESTRICTED**

(43222/119) 529721 8245 125 7/55 (H.P.W) (Gp. 19/1)



A.L. No. 33  
(Power plant labels deleted)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.2  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Power Plant Identification Plates and  
Holders deleted from Engine Bay—Introduction

(Mod. No. VAMPIRE/990.)

(Class C/3.)

(7/Mods/14,075.—15.10.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

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**RESTRICTED**

(44139/430) 528726 8245 125 12/55 (H.P.W.) (Gp. 19/1)



A.L. No. 46  
(Hydraulic pump hose)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.3  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Dunlop Single Wire Braid Hose, Type WH3/1, for High Pressure Line at Hydraulic Pump in place of existing alternatives, Weatherhead and Silvolflex—Introduction

(Mod. No. VAMPIRE/3116.)

(Class C/4.)

(7/Mods/16,510.—22.3.57.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix "D", paras. 9—11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

R

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(46881/476) 229717 8245 125 .4/57 (H.P.W.) (Gp. 19 1)



(Engine mountings)

**Vampire F.B. Mk. 9 Aircraft—Solid shims in lieu of Laminated shims  
at engine Mounting—Introduction**

(MOD. NO. VAMPIRE/3165.)

(Class C/4.)

(7/Mods/16,915.—13.12.52.)

1. This modification is introduced as the result of reports that the laminated shims at the engine mountings have disintegrated, allowing the eyebolts to become loose, and provision is made for fitting solid shims.

2. The modification will be embodied in new production aircraft and during repair. Retrospective embodiment is not called for.

**RESTRICTED**

(37623/12) M.46418 R665 300 1/53 H.P.W. (Gp.19/1)





**Vampire F.B. Mk. 9 Aircraft—Aircraft Front Jet Pipe Drain and Fireguard  
Drain through Cowling to Atmosphere—Extended**

(MOD. NO. VAMPIRE/3161.)

(Class B/2.)

(7/Mods/16,913.—1.5.53.)

1. This modification is introduced because of the risk of fire, when starting on the ground, due to excess fuel being trapped inside the engine cowling. It extends both the jet pipe drain, and the fireguard drain through the cowling to the atmosphere.

The work will take approximately 5 man-hours.

2. Subject to the availability of parts this modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Intermediate (or equivalent) Servicing

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

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

*Aircraft Storage Units:* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Drg. No. A.P.4099G/P.5/53, Sheets 1 & 2.)

(1) Remove the upper and lower middle engine cowlings, the rear cone fairing, and the redundant fuel drain pipe connector, Part No. L00 956A (ref. only), from the drain pipe assembly.

(2) Remove the lower half of the tail pipe to allow removal of the drain pipe assembly, Part No. L00 954A (ref. only). Replace drain pipe by the new one, Part No. L00 3721A, and wire-lock it, in the same manner as previously, with 22 s.w.g. nickel alloy wire, and then replace the lower half of the tail pipe.

(3) Remove the redundant drain elbow adapter, Part No. L00 958A (ref. only), from the lower landing of the rear cone, and fill the four redundant holes in the landing with rivets, Part No. AS.2229/505. Open the redundant holes out, if necessary, with a No. 21 (0.159 in. dia.) drill.

(4) Refer to "Detail 'A'" in Sheet 2 of the drawing, and using two rivets, Part No. AS.2229/404, modify the rear channel of the lower middle cowl, as shown; then, referring to the "View in direction of arrow 'A'" in the same drawing, drill out, with a No. 30 (0.1285 in. dia.) drill, the eight rivets called for replacement. Offer up the new tail pipe guide tube assembly, Part No. L00 3713A, and drill eight (No. 30 drill) rivet holes in conjunction with those just vacated in the channel and the skin; drill also two more holes into the guide tube assembly, the channel and the skin; 1.25 in. on either side of the cone centre line and at the same edge distance as the existing ones. Countersink these two holes on the outer skin surface to a diameter of 0.22 in.  $\times$  90 deg., after deburring and removing all swarf from within the channel, and coating the surfaces with compound, firmly rivet the tube assembly in position with ten countersunk-head rivets, Part No. AS.2229/406. Finally, drill two  $\frac{1}{4}$  in. dia. drain holes in the positions shown in Sheet 2 of the drawing.

(5) Using a  $\frac{3}{32}$  in. dia. drill, drill out the six rivets attaching the redundant well drain pipe, Part No. L00 2346 (ref. only), to the lower middle cowl, and then mark out and file a circular disc which will just fit inside the recess left after the removal of the drain.

*Note:*—It is suggested that a piece of 16 s.w.g. (0.064 in.) D.T.D.610 sheeting be used for making the disc. The disc should have a centre line, and a new datum line parallel to, and 0.2 in. from,

**RESTRICTED**

the centre line, as shown at "Detail 'B' " in Sheet 2 of the drawing. Position the disc in the recess, and, with the mid point of the new datum as centre, lightly scribe a circle of 2.85 in. radius on the inside face of the cowl. Remove the disc and position the new reinforcing plate, Part No. L00 3747ND, within the area just marked out.

(6) With the reinforcing plate in its correct position, drill out the eighteen rivet attachment positions, and the four  $\frac{3}{16}$  in. dia. drain holes, in the skin, using the existing holes in the plate as guides and the No. 30 drill for the rivet holes. Temporarily attach the plate to the skin, with skin pins and/or slave bolts, after each drilling. Firmly scribe the profile of the  $2\frac{1}{16}$  in. dia. hole on the skin, and, by drilling a series of holes and filing, form the cut-out to the scribed shape.

(7) Insert the new fire guard drain, Part No. L00 3711A, and, working from outside the cone and with the No. 30 drill, drill the six holes (on the smaller pitch circle diameter), into the flange of the fireguard drain. Remove the new items and countersink the eighteen rivet holes to a diameter of 0.22 in. by 90 deg. on the outer skin surface.

(8) Coat the mating surfaces of the skin, the reinforcing plate and the fireguard drain with compound, and then rivet them together in their correct positions with eighteen countersunk-head rivets, Part No. AS.2229/405.

(9) Paint the new items to match the existing colour scheme and replace the upper and lower engine cowlings and the rear cone fairing.

4. The undermentioned Part number alterations become necessary upon the embodiment of this modification:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>New Part No.</i>	<i>Stores Ref.</i>
26FC/1040	L00 58A	Lower middle cowl panel	L00 58A/1	26FC/6760
26FC/1552	L00 605	Lower middle cowl—rear channel	L00 605/1	26FC/6761
26FC/1041	L00 853	G.A. of rear cone	L00 853A/1	26FC/6762
26FC/—	L00 3540A ND	Sub-assembly of lower middle cowl, less dowel pins	L00 3761A ND	26FC/—

5. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The set is to be issued as a Modification Kit (Stores Ref. 26FC/103161). Demands for Modification Kits, which must quote the Stores reference number, are to be submitted in accordance with A.M.O. A.692/51, para. 6 or 7, as appropriate, to P.S.C.O., No. 25 M.U.:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/—	L00 3711A	Fireguard guide tube assembly	1	C
26FC/—	L00 3713A	Tail pipe guide tube assembly	1	C
26FC/8193	L00 3721A	Drain pipe assembly	1	C
26FC/—	L00 3747ND	Plate, reinforcing	1	C
28Q/6640	AS.2229/404	Rivet	2	C
28Q/6679	AS.2229/405	Rivet	18	C
28Q/6870	AS.2229/406	Rivet	10	C
28Q/11162	AS.2229/505	Rivet	4	C

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6. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
30B/1449	Sheet, alum. alloy, D.T.D.610, 16 s.w.g. (0.064 in.) approx. 2 in. × 2 in.	1	C
33C/1264	Compound, pigmented varnish jointing	As reqd.	C
33B/672 or 692	Finish, matching	As reqd.	C
30A/3064	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C

7. The undermentioned items are rendered redundant and are to be disposed of in accordance with current authorized procedure:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/5369	L00 954A	Drain pipe assembly	1	C
26FC/2666	L00 956A	Connector, drain pipe	1	C
26FC/956	L00 958A	Adapter, drain elbow	1	C
26FC/—	L00 2346	Pipe, well drain	1	C

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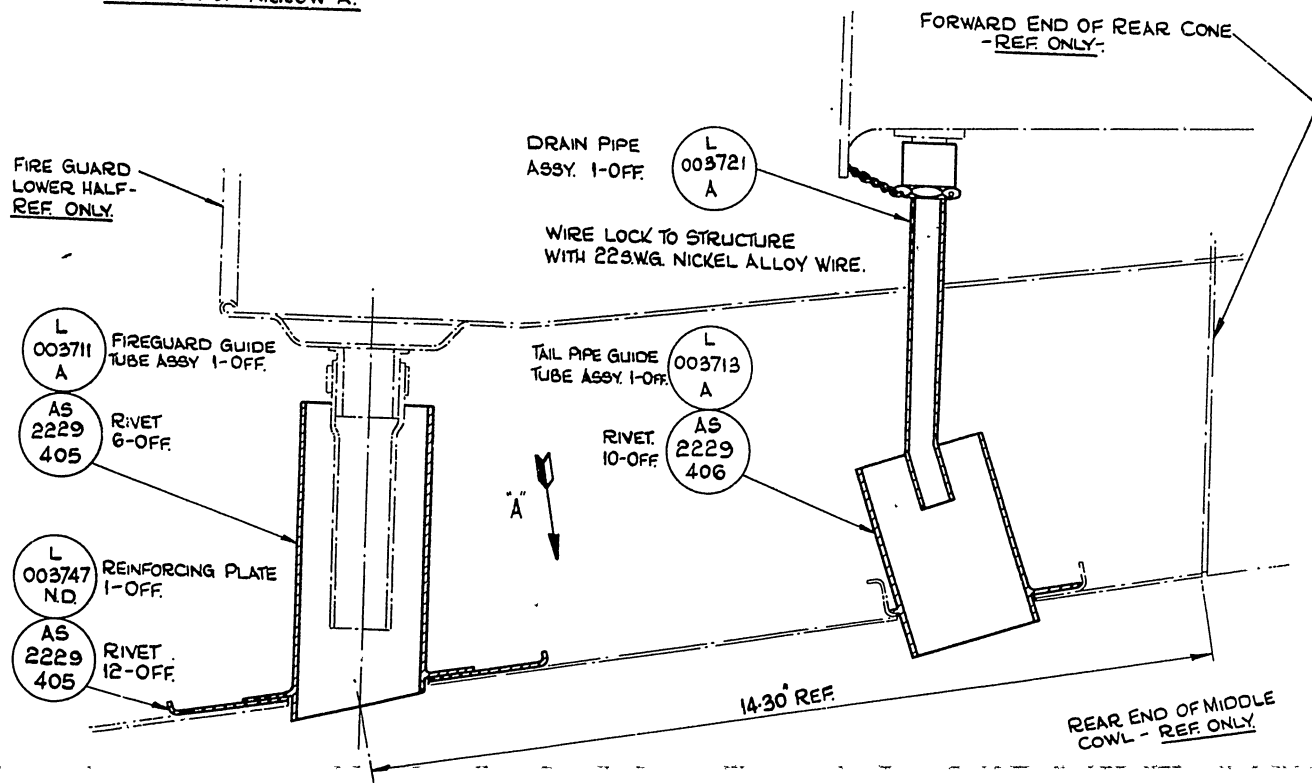


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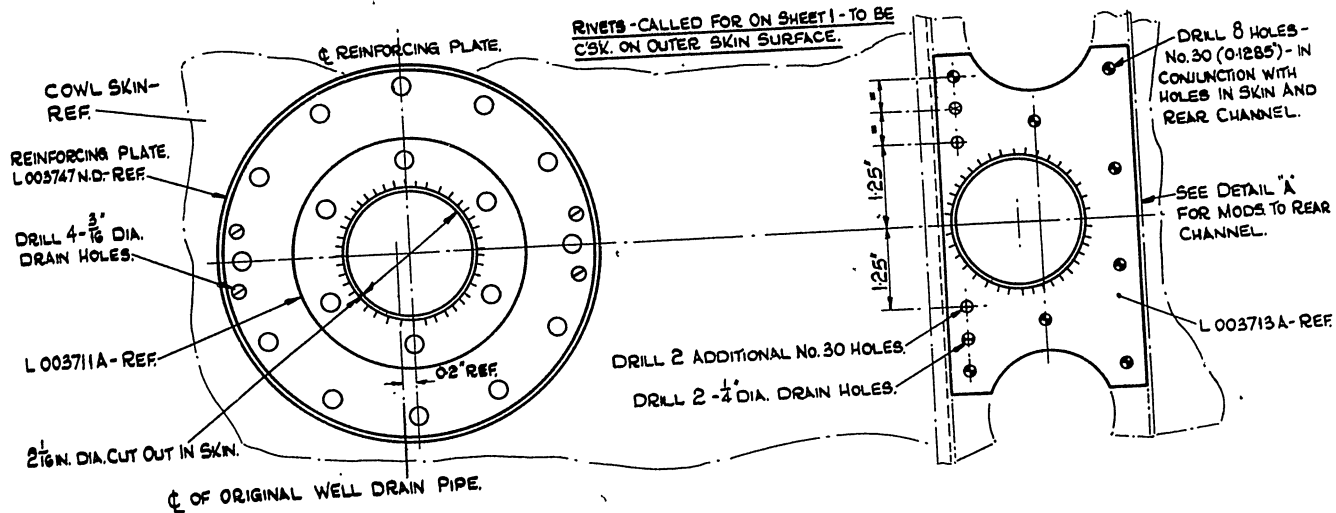
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SHEET 1

NOTE:- REFER TO SHEET 2 FOR VIEW IN THE  
DIRECTION OF ARROW 'A'.

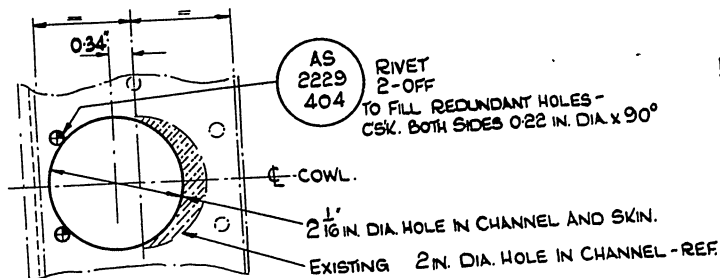


SECTIONAL VIEW - ON CENTRE LINE OF LOWER MIDDLE ENGINE COWL PANEL - SHOWING GENERAL ARRANGEMENT OF THE NEW DRAINS.

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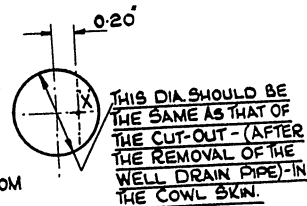


VIEW IN DIRECTION OF ARROW 'A' - ON SHEET 1.



DETAIL "A" - SHOWING MODIFICATIONS TO LOWER MIDDLE COWL REAR CHANNEL.

NOTE:- THE POINT "X" IS THE CENTRE OF THE 5.7 IN. DIA. CIRCLE REFERRED TO IN OPERATION 5 OF THE TEXT.



MAKE THIS DISC FROM 16 SWG. DT.D. 610.

DETAIL "B" - GIVING DETAILS OF A DISC - TO FACILITATE POSITIONING OF THE REINFORCING PLATE.

DRG. No A.P.4099G/P 5 / 53

SHEET 2

A.L. No. 97  
(Fire resistant rubbing tape)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.7  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Ferobestos B.N.4 Fire Resistant Rubbing  
Tape in place of Bonrest Tape at Engine Bay—Introduction

(MOD. NO. VAMPIRE/3262.)

(Class C/4 on replacement.)

(7/Mods/20,413.—19.6.56.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

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(45423/662) 129950 8245 125 7/56 (H.P.W.) (Gp. 19/1)

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**Vampire F.B. Mk. 9 Aircraft—To make provision for Overboard Drain Pipe at rear of Engine Jet Pipe**

(MOD. NO. VAMPIRE/3163.)

(Class B/2.)

(7/Mods/19,441.—30.6.53.)

1. This modification makes provision for an overboard drain pipe at the rear of the engine jet pipe, to reduce the risk of fire by the re-lighting of trapped fuel in the cowling. The modification must be embodied prior to or concurrently with Mod. No. Goblin/903.

The work will take approximately 5 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units.* At first opportunity and not later than next Intermediate (or equivalent) Servicing

*3rd Line Servicing Units (R.S.U.s.)* As detailed in A.P.3158, Vol. 2.

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

*Aircraft Storage Units.* Before issue of aircraft.

3. The following is the sequence of operations:—

(Refer to Dwg. No. A.P.4099G/P.6/53, Sheets 1 & 2.)

(1) Remove the rear cone.

(2) Locate the cone forward ring and mark out the bottom centre line both internally and externally. Refer to Sheet 1 of the drawing, and cut back the bottom centre stiffener to permit the fitment of the new reinforcing plate, Part No. LOO 3759.

(3) Refer to Sheet 1 of the drawing, and after drilling out the six rivets which are situated in the way of the reinforcing plate (with a No. 31 (0.12 in. dia. drill)), position the plate centrally on the front ring.

(4) Drill through (with a No. 30 (0.1285 in. dia. drill), into the reinforcing plate, the six holes cleared in the last operation. Temporarily attach the plate by means of skin pins and/or slave bolts, and then scribe the profile of the drain hole on to the skin and forward ring.

(5) Locally remove the external finish and offer up the new fairing, Part No. 12 EC 815. Carry out all the drilling and counter-sinking detailed in Sheets 1 and 2 of the drawing, and scribe the profile of the cut-out in the fairing on to the external face of the cone skin.

(6) Remove the plate and fairing, and then drill a series of holes within the periphery of the lines scribed in operations (4) and (5). File the cut-out to suit the scribed shape and slightly radius its edges. Deburr all the holes drilled in operations (4) and (5).

(7) Coat the mating surfaces of the fairing, the skin, the forward ring and the reinforcing plate with jointing compound (Stores Ref. 33C/885), and rivet them in their correct positions with the rivets detailed in Sheet 2 of the drawing.

*Note:—*The two rivets, which are to be located on the forward flange of the front ring, on either side of the cone centre line, must be riveted before the fitment of the fairing.

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(8) Repair the finish both internally and externally to D.T.D.751-4 to match the existing colour scheme. This operation is only applicable if the companion Mod. No. Goblin is not being embodied at this stage.

(9) Replace the cone on the aircraft. This operation is only applicable if Mod. No. Goblin/903 is being concurrently embodied.

(10) Remove the drain nut from the new drain and replace the cone on the aircraft. Replace the nut and wire-lock it with 22 s.w.g. nickel alloy wire.

4. The undermentioned part number alteration become necessary upon embodiment of this modification:—

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/6762	LOO 853A/1	G.A. of engine cowling	LOO 853A/2	26FC/6871
26FC/6763	LOO 853A/1/ Col. C	G.A. of engine cowling	LOO 853A/2/ Col. C	26FC/6872

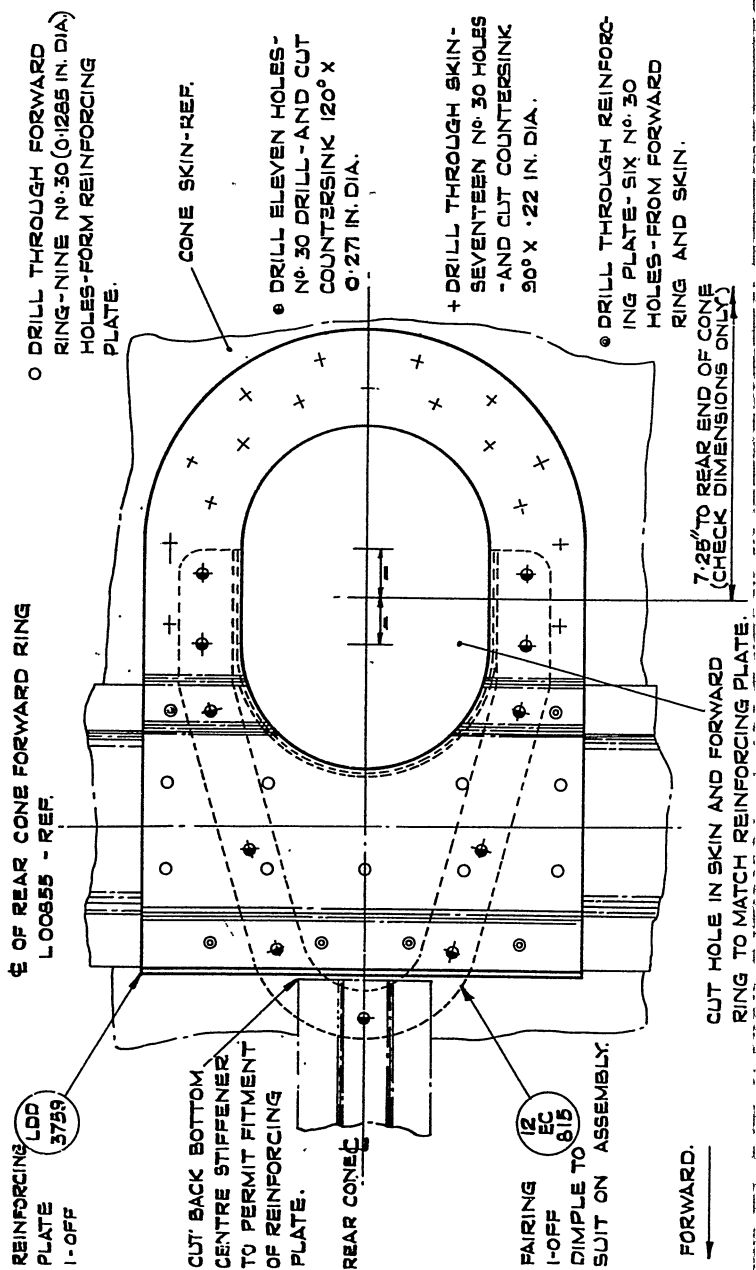
5. The undermentioned items comprise the Modification Kit (Stores Ref. 26FC/103163) and are to be assembled into a Kit by No. 25 M.U. Demands for Modification Kits are to be submitted to P.S.C.O., No. 25 M.U., through Command Headquarters, vide A.M.O. A.692/51, paras. 6 and 7, and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26FC/-	LOO 3759	Plate, reinforcing	1	C
26FC/-	12 EC 815	Fairing	1	C
28Q/6646	A.G.S.2045/406	Rivet, sp/hd. Chobert	9	C
28Q/6651	A.G.S.2046/406	Rivet, 120 deg. csk/hd. Chobert	3	C
28Q/6247	A.G.S.2047/404	Pin, sealing	3	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd.	17	C
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd.	6	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd.	4	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd.	4	C

6. The undermentioned items are, also, required and are to be provided under Unit arrangements:—

Stores Ref.	Nomenclature	No. off.	Class of Store
30A/3055	*Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C
33C/885	Jointing compound, pigmented varnish	As reqd.	C
33B/672 or 674 or 676 or 692	Finish, matching (D.T.D.751-4) cellulose	As reqd.	C

\*Required only if Mod. No. Goblin/903 is being embodied concurrently.

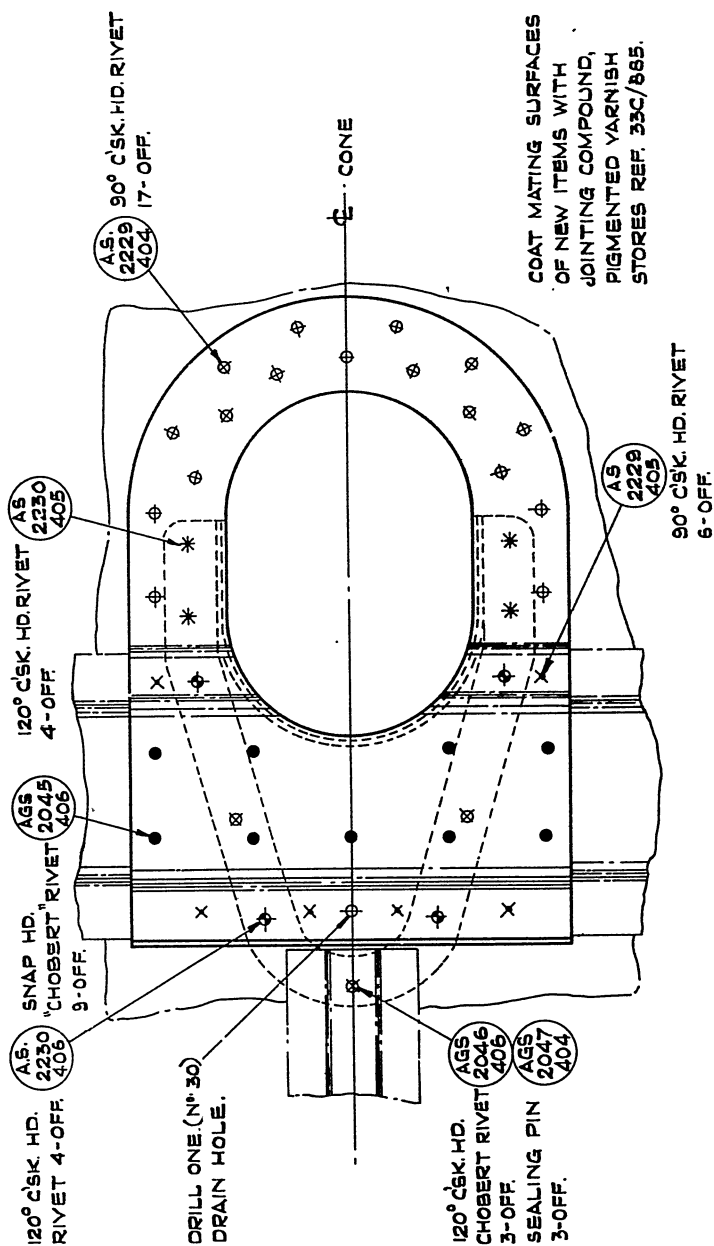


PLAN VIEW ON INSIDE OF REAR CONE SHOWING DRILLING DETAILS FOR ATTACHMENT OF REINFORCING PLATE AND FAIRING.  
 -SEE SHEET 2 FOR RIVETING INSTRUCTIONS.-

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DRG. No A.P.4099 G/P.6 /53  
 SHEET I

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DRG. N° A.P.4099 G / P. 6 / 53  
SHEET 2

RIVETING DETAILS.  
SEE SHEET 1 FOR DRILLING INFORMATION.

A.L.Nº 124

(Goblin Mk. 3 aero-engine)

A.P.4099G, Vol. 2, Part 1

Leaflet No. P.8

(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Goblin Mk. 3 Aero-engine in place of  
Goblin Mk. 2—Introduction

(7/Mods/21,820.—14.6.54.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. P.8 (Mod. No. Vampire/3299),  
is amended as follows:—

(1) Para. 3, operation (15). *Amend* Part No. "13 PT 1603 A/ND"  
to read Part No. "3 PT 1603 A/ND"

(2) Para. 5, item 9. *Amend* Part No. "13PT1603A/ND" to read  
"3PT1603A/ND"

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(40862/116) 428517 8245 400 7/54 (H.P.W.) (Gp.19/1)



**Vampire F.B. Mk. 9 Aircraft—Goblin Mk. 3 Aero-engine in place of  
Goblin Mk. 2—Introduction**

(Mod. No. VAMPIRE/3299.)

(Class S.C.O.)

(7/Mods/21.820—63.54.)

1. The modification makes provision for the installing of a Goblin Mk. 3 aero-engine in a Vampire F.B. Mk. 9 aircraft. The engine supplied for this modification incorporates Mod. No. Goblin/477 in principle. This provides standard Goblin Mk. 2 air supply tapping for cockpit pressurization to Mod. No. Vampire/905 standard.

The work will take approximately 37 man-hours.

Mod. No. Goblin/964 must be embodied concurrently with this modification. Mod. Nos. Vampire/885 and 8098 must be embodied prior to or concurrently with this modification.

*Note.*—Mod. No. Vampire/955 is not applicable to aircraft with Goblin Mk. 3 aero-engines installed. Any aircraft being converted which embody Mod. No. Vampire/955 must be de-modified and filters installed to Mod. No. Vampire/987 or 8092 standard.

2. This modification is to be embodied to Special Order only.

3. The following is the sequence of operations—

(Refer to *Dirg. No. A.P.4099G/P.8/54, Sheets 1 & 2*)

(1) Remove the Goblin Mk. 2 engine.

(2) Fit the engine driven accessories and components to the Mk. 3 engine. These are obtainable from the Goblin Mk. 2 engine with the following exceptions—

(a) The fire extinguisher spray ring (see operations (3) and (4)).

(b) The drain hoses at the common drain box on the lower cowl support ring (see operation (5)).

*Note.*—The filter and pipes, Part Nos. B.25698, R.00320ND and R.00321ND (ref. only), which are part of the total head air line to the B.P.C., are to be fitted to the Goblin Mk. 3 engine in a similar manner as on the Goblin Mk. 2 engine, the difference being that the pipe, Part No. R.00320ND (ref. only), is to be shortened, as necessary, to suit the new installation. The pipe now becomes Part No. R.002669ND (ref. only).

(3) Locate the fire extinguisher spray ring fitted to the Goblin Mk. 2 engine. Break the locking wire at the respective union connections and dismantle the three pipe assemblies which make up the spray ring. Dispose of the pipe assemblies, but retain eight of the 'P' clips, Part No. L.OO.3609 (ref. only), and the two union bodies, Part No. A.G.S.949/C (ref. only). The two gaskets, Part No. A.G.S.1188/C (ref. only), and the two adapters, Part No. A.G.S.1105/C (ref. only), are to be left in the T-piece connection on the upper support ring, fitted to the new engine in operation (2).

(4) Refer to Sheet 1 of the drawing and fit the new fire extinguisher spray ring to the Goblin Mk. 3 engine using the pipe assemblies, Part Nos. L.OO.3677A/ND, L.OO.3681A/ND and L.OO.3705A/ND as detailed, and the items retained in the previous



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operation. Lock the pipe coupling with wire, locking, nickel alloy (Stores Ref. 30A/3055) and whip the spray ring to any engine component where chafing is liable to occur, using thread, waxed linen (Stores Ref. 32B/498).

(5) Locate the common drain box on the lower cowl support ring and modify the box as detailed on Sheet 1, Fig. 1, of the drawing. The hose, Part No. LOO.2294A, connecting from the accumulator to the common drain box, is to be secured with two 'P' clips, Part Nos. DHS.30/17 and DHS.30/48, the former being secured by an existing bolt on the cowl rail and the latter to an existing stud on the nearest burner. In the vicinity where the clips will be fitted, wrap a few turns of tape, self-adhesive (Stores Ref. 32B/896) around the hose.

*Note.*—The fitting of the 'P' clip, Part No. DHS.30/48 referred to in the above operation, cannot be effected until operations (18) and (19) have been embodied.

(6) Disconnect the aircraft accumulators.

(7) Disconnect the loom, C14, from junction box 2 and dismantle the socket as follows—

(a) Cut the thread, waxed linen, securing the cables in position under the ferrule and unscrew the coupling nut.

(b) Slide the ferrule and coupling nut over the loom so that they are clear of the socket.

(c) Using a pin extractor, remove from the socket the two vacant pins at connections 'M' and 'N'.

(8) Make up the new cable as detailed in Sheet 1, Fig. 2, of the drawing. Solder the two socket pins, removed in the previous operation, to the cable, using solder, resin cored (Stores Ref. 30B/1607).

(9) Pass the cable under the ferrule and coupling nut and connect the lead coded 'SV2' to pin 'M' and the lead coded 'E' to pin 'N'. Replace the ferrule, secure the coupling nut and bind a few turns of twine, waxed coreless, over the slot in the ferrule.

(10) Route the new cable along the top port bracing tube and down the port engine mounting side frame, whipping at intervals to the existing cable run and engine bearers with twine, waxed coreless. This new cable forms the connection to the solenoid isolating valve on the single fuel pump engine.

*Note.*—The following operation is only applicable to aircraft embodying Mod. No. Vampire/685 retrospectively.

(11) Locate the cable assembly, Part No. NOO.543A (ref. only), connected from the terminal block mounted on the top starboard engine mounting side frame, to the terminal block mounted on the starboard rib 1. Remove the cover of the terminal block at the rib and disconnect the two leads coded 'BT1' and 'BT2'. Replace the terminal block cover, tape up the two leads in an approved manner, using tape, insulating adhesive (Stores Ref. 5F/2232), and to prevent fouling, whip to the main body of the cable, using thread, waxed linen. The two vacant terminals provide a test point when required.

(12) Slacken off the two clips securing the hose, Part No. POO.2863ND (ref. only), connecting from the fuel feed pipe, Part No. PP.3429A (ref. only), at the base of the fuselage tank to the non-return valve on the bottom starboard tank bay bracing tube. Remove the clip and spacer block, Part Nos. POO.2761 and POO.2762 (ref. only), securing it to the adjacent fuel hose, Part No. POO.2027ND (ref. only); then remove it from the aircraft. Loosen

**RESTRICTED**



the clips and remove the hose (Part No. POO.2859ND (ref. only) connecting from the non-return valve to the special hose adapter on the fireproof bulkhead. Retain the two clips, Part No. A.G.S.605/I (ref. only), which secured the hose connection from the fuel feed pipe to the non-return valve and dispose of the remaining items removed in this operation.

(13) Disconnect the hose, Part No. POO.1822 (ref. only), connecting to the special hose adapter referred to in the above operation, on the aft face of the fireproof bulkhead. Remove the non-return valve, Part No. 6130/B (ref. only), with its attachment items, from the starboard tank bay bracing tube and the special hose adapter from the fireproof bulkhead. Dispose of all these items, other than two of the nuts and bolts removed with the adapter.

(14) Apply a coating of compound, pigmented varnish, jointing (Stores Ref. 330/885) to the blanking disc, Part No. P.002540ND, and position it on the forward face of the fireproof bulkhead over the hole left by the redundant special hose adapter. Secure with the two nuts and bolts, retained in operation (13), utilizing two of the holes left in the bulkhead by the adapter attachment items. The heads of the bolts are to be fitted to the aft face of the bulkhead.

(15) Fit the hose and blanking plug, Part Nos. DHS.160/D/20 and 13.PT.1603A/ND, respectively, to the redundant connection on the fuel feed pipe, and secure with the two hose clips retained from operation (12).

(16) Locate the fuel pressure warning switch (Stores Ref. 6A/1912) (ref. only), on the low pressure fuel filter mounted on the lower port engine mounting side frame. Unscrew and remove the banjo bolt, Part No. A.G.S.1135/B (ref. only), securing the switch to the filter, and retain it with the underneath soft aluminium washer, Part No. A.G.S.568/B (ref. only) for re-assembly. Now carefully move the switch to one side, leaving it still attached to the cable assembly, Part No. NOO.3403 (ref. only), and retain the other soft aluminium washer which is located under the switch.

(17) Unscrew and remove the banjo pillar, Part No. POO.2668 (ref. only), securing the redundant hose assembly, Part No. POO.1821A (ref. only), to the low pressure filter. Dispose of the hose assembly, but retain the banjo pillar with its two gaskets, Part No. A.G.S.1138/J (ref. only), for re-assembly.

(18) Fit the lower cowl support ring in the engine bay, using the attachment items removed from the Goblin Mk. 2 engine, and then effect the installation of the new engine.

(19) Connect up all the hoses from the common drain and whip to any engine component where chafing is liable to occur, using thread, waxed linen, as necessary. Now lock all the connections made in this and operation (5) with wire locking, nickel alloy, 22 s.w.g.

(20) Position the new hose assembly, Part No. POO.3663A, on the low pressure filter and connect the reduction adapter end to the fuel pump. Replace all the attachment items, using the reverse procedure to that described in operations (16) and (17) and lock with wire, locking, nickel alloy, 22 s.w.g.

(21) Locate the total head air inlet pipe protruding from the nose of the aircraft and carefully trim it back flush to the skin. Thoroughly deburr the pipe and repair the finish with primer and highspeed finish to D.F.D.722.

**RESTRICTED**

(22) Re-connect the aircraft accumulators, replace the engine cowlings and carry out engine running and ancillary tests.

4. The undermentioned Part number alterations become necessary upon embodiment of this modification:—

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/-	NOO 2713A	Cable loom assy.	NOO 2729A/1	26FC/-
		C14		
26FC/-	ROO 320ND	Air pipe	ROO 2669ND	26FC/-

5. The undermentioned items will be delivered to No. 25 M.U. as a set. No additional items are required to be added by the M.U. The set is to be issued as a Modification Kit (Stores Ref. 26FC/103299). Demands for Modification Kits are to be submitted to P.S.C.O. No. 25 M.U. through Command Headquarters vide A.M.O. A 692/51, paras 6 and 7 and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26FC/5856	LOO 2294A	Accumulator drain	1	C
26FC/5804	LOO 2295	Pump gland drain	1	C
26FC/5868	LOQ 2409	Lockheed pump drain	1	C
26FC/5769	LOO 3677A/ND	Pipe assembly	1	C
26FC/5770	LOO 3681A/ND	Pipe assembly	1	C
26FC/6613	LOO 3705A/ND	Pipe assembly	1	C
26FC/-	POO 2540ND	Disc blanking	1	C
26FC/-	POO 3663A	Hose assembly	1	C
26FC/10290	13PT 1603A/ND	Plug	1	C
26FC/-	DHS 30/17	Clip	1	C
26FC/-	DHS 30/48	Clip	1	C
28F/5721	A.G.S. 904/A	Sleeve, outer	1	C
28F/5722	A.G.S. 904/B	Sleeve, outer	2	C
28F/10482	A.G.S. 1140/A	Plug, nipple	1	C
28F/8212	A.G.S. 1140/B	Plug, nipple	2	C
28P/12462	SP 9/C8	Pin, split	3	C
5K/2577	BP	Sleeve, Helsyn lavender	1	C
5K/2577	TWBP	Sleeve, Helsyn lavender	4	C
5K/2577	T2/1	Marker, Twinlay (coded SY2)	2	C
5K/2577	T2/1	Marker, Twinlay (coded E)	2	C
5E/3062	—	Cable, Dupren 12 Spec. EL 1470	8 ft.	C
26FC/-	DHS 160/D/20	Hose joint	1	C

6. The undermentioned items are required to embody this modification and are to be supplied under Unit arrangements:—

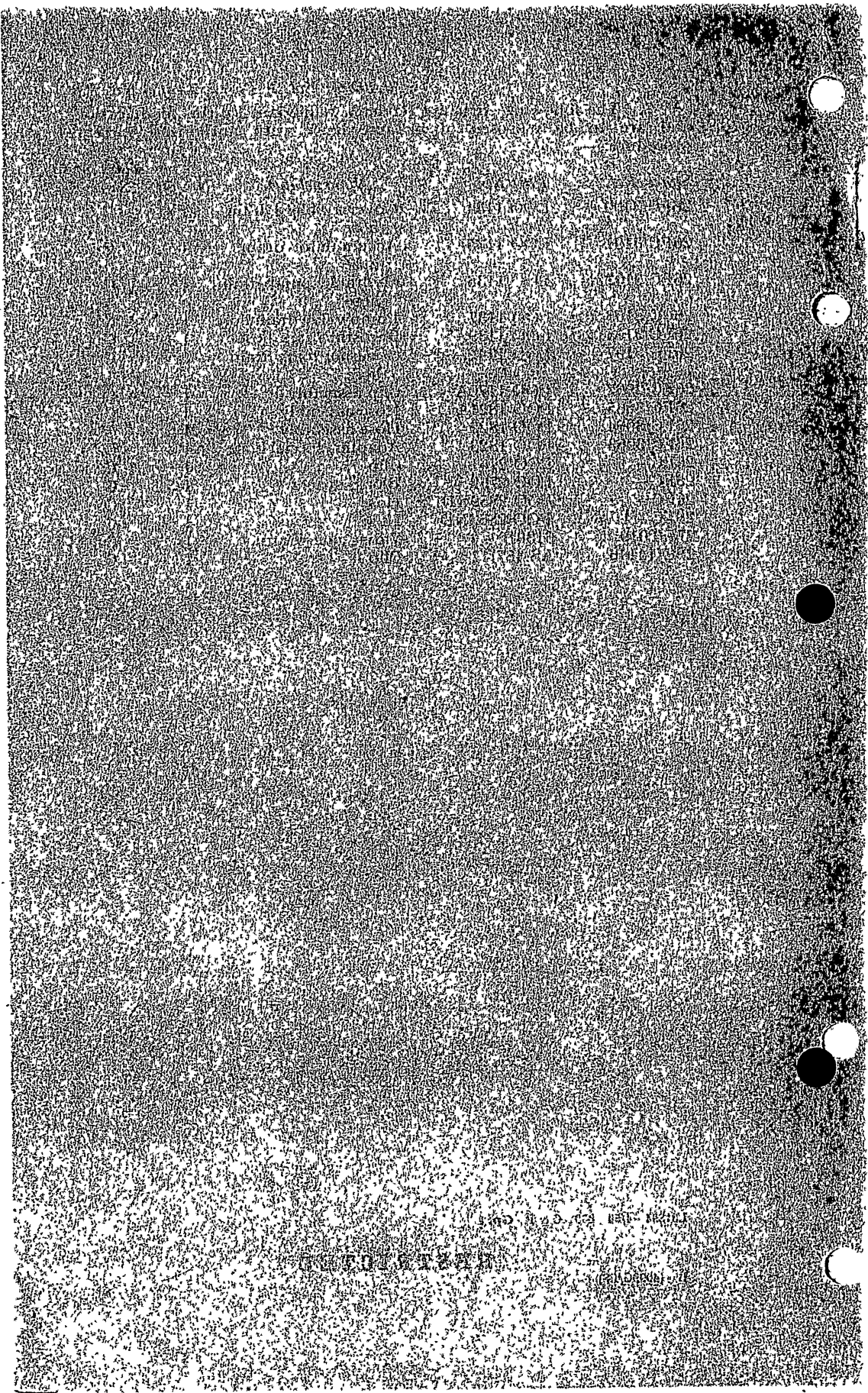
Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
5E/2232	—	Tape, insulating adhesive	As reqd.	C
30A/3055	—	Wire, locking, nickel alloy 22 s.w.G.	As reqd.	C
30B/1607	—	Solder, resin cored	As reqd.	C
32B/498	—	Thread, waxed linen	As reqd.	C
32B/896	—	Tape, self-adhesive	As reqd.	C
33C/885	—	Compound, pigmented varnish jointing	As reqd.	C
33B/208 or 261, 865, 954, 948 or 951	—	Primer and highspeed finish to D.T.D.772	As reqd.	C

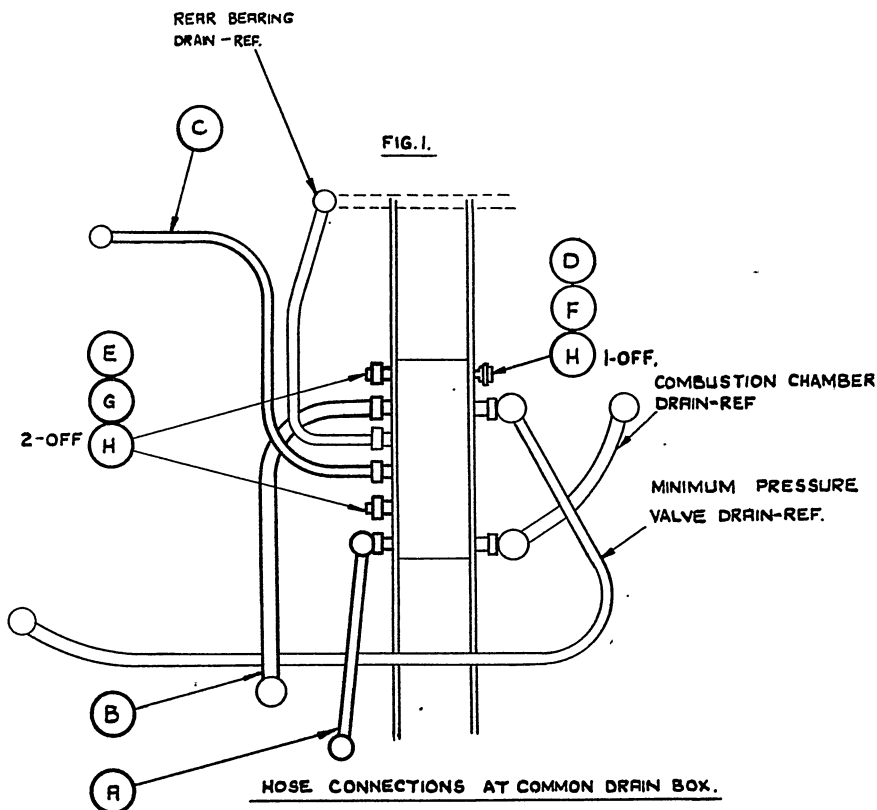
**RESTRICTED**



7. The following parts are rendered redundant by this modification and are to be disposed of in accordance with authorized current procedure.—

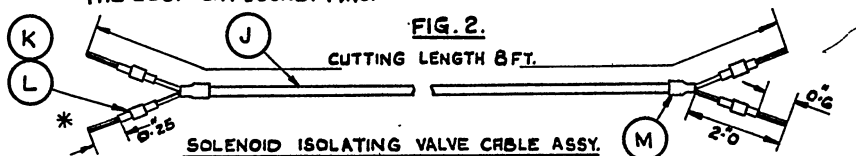
Stores Ref.	Part No.	Nomenclature	No. off.	Class of Store
26FC/3100	LOO 1134	Governor bleed drain hose	1	C
26FC/3101	LOO 1135	Accumulator drain hose	1	C
26FC/3102	LOO 1136	Hydraulic pump drain hose	1	C
26FC/3103	LOO 1137	Pump valve drain hose	1	C
26FC/3105	LOO 1139	Barostat drain hose	1	C
26FC/3107	LOO 1142	Governor main drain hose	1	C
26FC/2962	POO 1170A	Clip assembly	1	C
26FC/3065	POO 1821A	Hose assembly	1	C
26FC/3064	POO 1822	Hose assembly	1	C
26FC/3063	POO 1823	Adapter, special hose	1	C
26FC/-	POO 2761	Clip	1	C
26FC/-	POO 2762	Block, spacer	1	C
26FC/-	POO 2859ND	Hose	1	C
26FC/-	POO 2863ND	Hose	1	C
27F/2019	6130B	Valve, non-return	1	C
28E/14146	AS.487/11	Clip	1	C





KEY	PART N°	NOMENCLATURE	N°	KEY	PART. N°	NOMENCLATURE	N°
A	L.002294 A	ACCUMULATOR DRAIN	1	H	SP9/C8	SPLIT PIN	3
B	L.002295	PUMP GLAND DRAIN	1	J	DUPREN 12	CABLE TO EL 1470	1
C	L002409 A	LOCKHEED PUMP DRAIN	1	K	TWBPX 1/8"	HELSYN SLEEVE	4
D	AGS.904/ A	OUTER SLEEVE	1	L	T2/1	TWINLAY MARKER.	4
E	AGS.904/B	OUTER SLEEVE.	2	M	BP.	HELSYN SLEEVE	2
F	AGS.1140/A	NIPPLE PLUG.	1				
G	AGS.1140/B	NIPPLE PLUG.	2				

**NOTE:-** THE END OF THE CABLE SHOWN \*  
(SEE FIG.2) IS TO BE SOLDERED TO  
THE LOOM C.14-SOCKET PINS.



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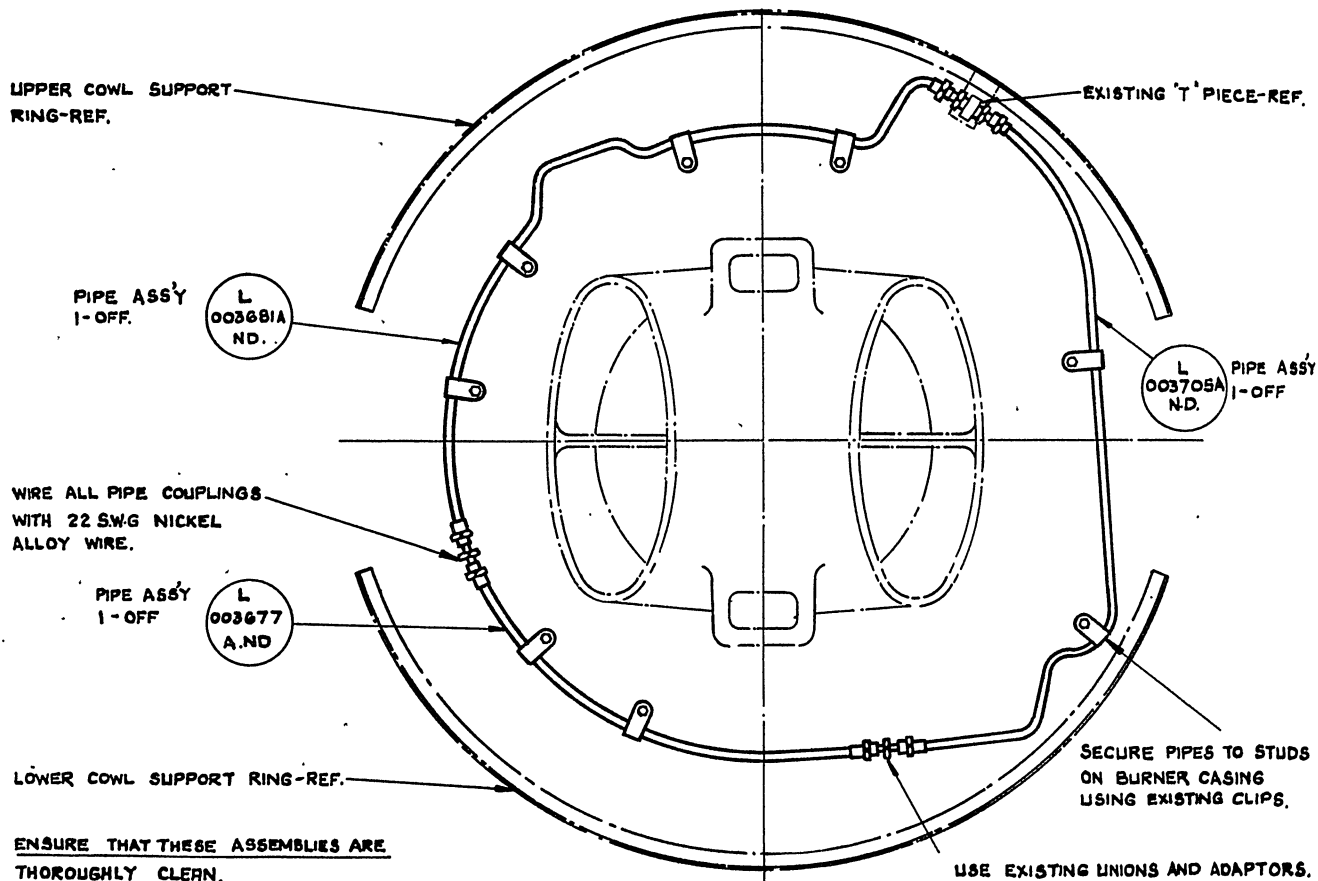
**DRG. N° A.P. 4099 G / P. 8 / 54**  
**SHEET 1**

LP27686 3/54 400 C & P Gp.959 (4)

RESTRICTED

LP27686 3/54 400 C & P Gp. 955 (4)

DRG. NO. A.P. 4099 G / P. 8 / 54  
SHEET 2



GENERAL ARRANGEMENT OF FIRE EXTINGUISHER SPRAY RING.



(Engine cowling—redesigned tail cone)

Leaflet No. P:10

# Vampire F.B. Mk. 9 Aircraft—Engine Cowling—Redesigned Tail Cone with increased diameter Jet Orifice—Introduction

(Mod. No. VAMPIRE/3226.)

(Class C/3 when old type spares are consumed.)

(AB/A/939—1.7.55.)

## 1. INTRODUCTION

This modification introduces a larger rear ring for the tail cone, to give increased clearance between the jet pipe and the rear cone to accommodate the increase in diameter of the jet pipe orifice.

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

## 2. EMBODIMENT

This modification is to be embodied when the new type spare (Stores Ref. 26FC/11462) Part No. LOO.3961A Rear Ring is issued as a replacement for (Stores Ref. 26FC/970) Part No. LOO.854 Rear Ring.

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 8 man-hours, not including drying time.

## 4. DRAWINGS REQUIRED

There are no drawings required for the embodiment of this modification.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

### (1) Parts and Materials

The following materials are required, and are to be provided under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
28Q/6640	AS.2229/404	Rivets, $\frac{1}{8}$ in. dia. 90 deg. csk.	230	C
33B/261	—	Primer, universal, light grey	As reqd.	C
33B/501	—	Finish, grey-green, matt, synthetic, D.T.D.314	As reqd.	C
33B/510	—	Primer, synthetic, D.T.D.314	As reqd.	C
33B/939	—	Finish, high gloss, medium sea grey, D.T.D.772	As reqd.	C
33B/945	—	Finish, high gloss, P.R.U.F. blue, D.T.D.772	As reqd.	C
33C/1264	—	Compound, pigmented, varnish jointing	As reqd.	C

### (2) Special Tools and Test Equipment

There are no special tools or test equipment 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:—



RESTRICTED

A.L.N. 152

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. P-10

(Engine cowling—redesigned tail cone)

Vampire F.B. Mk. 9 Aircraft—Engine Cowling—Redesigned Tail Cone  
with increased diameter Jet Orifice—Introduction

(Mod. No. VAMPIRE/3226.)

(Class G/3 when old type spares are consumed.)

(AB/A/939—1.7.55)

# 1. INTRODUCTION

This modification introduces a larger rear ring for the tail cone, to give increased clearance between the jet pipe and the rear cone to accommodate the increase in diameter of the jet pipe orifice.

This modification does not cancel or supersede, or render unnecessary, any work called by approved modifications or Command modifications, or S.T.I.s, S.L.s, or S.R.I.M.s.

# 2. EMBODIMENT

This modification is to be embodied when the new type spare (Stores Ref. 26FC/11462) Part No. LOO.3961A Rear Ring is issued as a replacement for (Stores Ref. 26FC/970) Part No. LOO.854 Rear Ring.

# 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 8 man-hours, not including drying time.

# 4. DRAWINGS REQUIRED

There are no drawings required for the embodiment of this modification.

# 5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

The following materials are required, and are to be provided under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
28Q/6640	AS.2229/404	Rivets, 1/4 in. dia. 90 deg. csk.	230	C
33B/261	—	Primer, universal, light grey	As reqd.	C
33B/501	—	Finish, grey-green, matt, synthetic, D.T.D.314	As reqd.	C
33B/510	—	Primer, synthetic, D.T.D.314	As reqd.	C
33B/939	—	Finish, high gloss, medium, sea grey, D.T.D.772	As reqd.	C
33B/945	—	Finish, high gloss, P.R.U. blue, D.T.D.772	As reqd.	C
33C/1264	—	Compound, pigmented varnish jointing	As reqd.	C

(2) Special Tools and Test Equipment

There are no special tools or test equipment 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:—

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Stores Ref.	Part No.	Nomenclature	Qty	Class of Store
26FC/10411	LOO.853A/5	Rear Cone		

Parts required:				
26FC/—	LOO.3961A	Rear ring	1	
		Attaching parts for LOO.3961A		

Stores Ref.	Part No.	Nomenclature	Qty	Class of Store
28Q/6640	AS.2229/404	Rivets, $\frac{1}{8}$ in. dia. 90 deg. csk. head	230	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry, E.2.

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Stores Ref., Part, and Assembly Nos. as follows:

Old	New
Stores Ref.	Stores Ref.
26FC/10221	LOO.853A/4
LOO.853A/4	Rear cone
LOO.853A/5	26FC/10411

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:

(1) Remove the rear cone from aircraft retaining the attaching items.

(2) Using a No. 30 (0.1285 in. dia.) drill, drill out the existing flush rivets securing the aft ring to the skin. Do not remove the Chobert snaphead rivets. Remove the existing aft ring, Part No. LOO.854 ref. only, and to its position offer up the new aft ring, ensuring that the vertical centre line of the aft ring coincides with the vertical centre line of the rear cone. Using the existing rivet holes in the rear cone skin as a guide and using the No. 30 drill, drill in a pilot hole each side of the vertical and horizontal centre lines through the new aft ring, and secure the ring to the skin through these pilot holes with  $\frac{1}{8}$  in. dia. skin pins. Continue with the No. 30 drill and drill through all the existing rivet holes into the ring.

(3) Carefully mark the position of the ring in relation to the cone skin and remove it from the cone. Deburr all the new rivet holes, and to the mating surfaces of the ring and cone apply compound pigmented varnish jointing (Stores Ref. 33C/1264). Offer up the completed new aft ring, Part No. LOO.3961A, to the cone and rivet in position, using two hundred and thirty  $\frac{1}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/404, ensuring that all rivets are a flush fit on the cone skin.

(4) Repair the finish internally and locally in the rear cone using primer synthetic D.T.D.314 (Stores Ref. 33B/510) and finish, grey green, matt, synthetic D.T.D.314 (Stores Ref. 33B/501). Repair the finish locally externally using primer universal light grey (Stores Ref. 33B/261) and finish, medium sea grey, D.T.D.772, glossy (polished) (Stores Ref. 33B/939) for upper and lower surfaces respectively and finish P.R.U. blue, D.T.D.772, glossy (polished) (Stores Ref. 33B/945) on the under surfaces.

(5) Replace the rear cone to the aircraft using the existing attaching items.

## 9. TESTING AFTER EMBODIMENT

There are no special tests required after the embodiment of this modification.

## 10. RECORDING ACTION

Record on Aircraft Form 700.

**RESTRICTED**

# 11. DISPOSAL OF REDUNDANT PARTS

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

Stores Ref.	Part No.	Nomenclature	Qty	Class of Store
26FG/970	LOO.854	Rear ring	1	C

# 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.2 lb. and no change of moment.

**RESTRICTED**

A.L. No. 227

(Engine cowling—redesigned tail cone)  
(A.L. No. 152 cancelled)

A.P.4099G, Vol. 2, Part 1

Leaflet No. P.10  
(Alteration 1 incorporated)

**Vampire F.B. Mk. 9 Aircraft—Engine Cowling—Redesigned Tail Cone with increased diameter Jet Orifice—Introduction**

(MOD. NO. VAMPIRE/3226.)

(Class C/3 when old type spares are consumed.)

(AB/A/939—23.3.59.)

*Note:—This leaflet supersedes A.P.4099G, Vol. 2, Part 1, Leaflet No. P.10 and is the authority for cancelling A.L. No. 152.*

**1. INTRODUCTION**

This modification introduces a larger rear ring for the tail cone, to give increased clearance between the jet pipe and the rear cone to accommodate the increase in diameter of the jet pipe orifice.

This modification does not cancel, 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. EMBODIMENT**

This modification is to be embodied when the new type spare (Ref. No. 26FC/11462), Part No. LOO.3961A, Rear Ring is issued as a replacement for (Ref. No. 26FC/970), Part No. LOO.854, Rear Ring.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 8 man-hours, not including drying time.

**4. DRAWINGS REQUIRED**

There are no drawings required for the embodiment of this modification.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

**(1) Parts and Materials**

The following materials are required, and are to be provided under Unit arrangements:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28Q/6640	AS.2229/404	Rivets, $\frac{1}{8}$ in. dia. 90 deg. csk.	230	C
33B/261	—	Primer, universal, light grey	As reqd.	C
33B/501	—	Finish, grey-green matt, synthetic D.T.D.314	As reqd.	C
33B/510	—	Primer, synthetic, D.T.D.314	As reqd.	C
33B/939	—	Finish, high gloss, medium, sea grey, D.T.D.772	As reqd.	C
33B/945	—	Finish, high gloss, P.R.U. blue, D.T.D.772	As reqd.	C
33C/1264	—	Compound, pigmented varnish jointing	As reqd.	C

**(2) Special Tools and Test Equipment**

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

**RESTRICTED**

## 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
26FC/10221	LOO.853A/4	Rear Cone	—	—

The method of modifying the above spares is detailed in Paragraph 8, operations (2), (3) and (4).

Parts required:—

26FC/11462	LOO.3961A	Rear ring	1	B
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Attaching part for LOO.3961A, rear ring

28Q/6640	AS.2229/404	Rivet, 90 deg. csk.hd. 1/8 in. dia.	230	C
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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:—

Old		New	
Ref. No.	Part/Assy. No.	Ref. No.	Part/Assy. No.
26FC/10221	LOO.853A/4	LOO.853A/5	26FC/10411

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Remove the rear cone from aircraft, retaining the attaching items.
- (2) Using a No. 30 (0.1285 in. dia.) drill, drill out the existing flush rivets securing the aft ring to the skin, do not remove the Chobert snaphead rivets. Remove the existing aft ring, Part No. LOO.854, and to its position offer up a new aft ring, Part No. LOO.3961A, ensuring that the vertical centre line of the aft ring coincides with the vertical centre line of the rear cone. It is important to assemble the new ring so that the brackets are off set approx. 0.15 in. below the horizontal centre line of the tail cone. Then, using the existing rivet holes in the rear cone skin as guides, drill a pilot hole each side of the vertical and horizontal centre lines through the new aft ring using the No. 30 drill. Secure the ring to the skin through these pilot holes with 1/8 in. dia. skin pins. Continue with the No. 30 drill and drill through all existing rivet holes into the ring.
- (3) Carefully mark the position of the ring in relation to the cone skin and remove it from the cone. Deburr all the new rivet holes, and to the mating surfaces of the ring and cone apply compound pigmented varnish jointing (Ref. No. 33C/1264). Offer up the completed new aft ring, Part No. LOO.3961A, to the cone and rivet in position, using two hundred and thirty 1/8 in. dia. 90 deg. counter-sunk head rivets, Part No. AS.2229/404, ensuring that all rivets are a flush fit on the cone skin.

*Note:—*If, after drilling out the existing rivets, it is found that the holes are oversize, for the rivets supplied, then the next size diameter rivets are to be used.

- (4) Repair the finish internally and locally in the rear cone using primer synthetic D.T.D.314 (Ref. No. 33B/510) and finish, grey-green matt, synthetic D.T.D.314 (Ref. No. 33B/501). Repair the finish locally externally using primer universal light grey (Ref. No. 33B/261), and finish, medium sea grey, D.T.D.772, glossy (polished) (Ref. No. 33B/939) for upper and lower surfaces respectively, and finish P.R.U. blue, D.T.D.772, glossy (polished) (Ref. No. 33B/945) on the under surfaces.
- (5) Replace the rear cone to the aircraft using the existing attaching items.

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## 9. TESTING AFTER EMBODIMENT

There are no special tests required after the embodiment of this modification.

## 10. RECORDING ACTION

Record on Aircraft Form 700.

## 11. DISPOSAL OF REDUNDANT PARTS

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

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/970	LOO.854	Rear ring	1	C

## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.2 lb. and no change of moment.

**RESTRICTED**



ALN 201  
(Hydraulic hand pump system)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.11  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Hydraulics—To Introduce Relief Valve, Part  
No. AIR 42704 in Hand Pump Line

(AB/A/4431—16.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. P.11 (Mod. No. Vampire/3345) is  
amended as follows:—

- (1) Heading, class, *Delete* Class "B/2" and *substitute* "B/4."
- (2) Para. 2, *delete in toto* and *substitute*:

"2. EMBODIMENT

No further retrospective action is required on this modification."



1267 W. LTD.

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(Hydraulic hand pump system)

**Vampire F.B. Mk. 9 Aircraft—Hydraulics—To Introduce Relief Valve  
Part No. AIR.42704 in Hand Pump Line**

(MOD. NO. VAMPIRE/3345.)

(Class B/2.)

(AB/A/4431.—28.4.56.)

**1. INTRODUCTION**

This modification introduces a relief valve in the hand pump line to obviate excessive pressure being applied to the hydraulic system when ground tests are being carried out.

(1) This modification does not cancel, 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 2 months after receipt of parts

*3rd Line Servicing Units (R.S.U.s):* 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 12 man-hours, excluding drying time (4 to strip, 4 to embody and 4 to reassemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.11/56, Sheets 1 and 2, is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED****(1) Parts and Materials**

(a) The Modification Kit consists of the following items:—

(i) Items to be supplied by the Contractor

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/—	AOO.7411ND	Packing piece	2	—
26FC/—	QOO.3757A/ND	Pipe assembly	1	—
26FC/—	QOO.3763A/ND	Pipe assembly	1	—
26DV/8184	12-S.1677A/ND	Pipe assembly	1	C
26DV/2665	12-3S.677	Body, banjo, special	1	C
26DV/7915	12-21S.2507	Body, banjo, special	1	C
26DV/8185	12-21S.2517	Bolt, banjo, special	1	C
26BY/4148	D.H.S.103 Mk. 1	Ferrule, ply, 4 B.A.	2	C
28D/13674	A.25/14A	Bolt, hex/hd., 6 B.A.	2	C
28S/2643	A.G.S.253/36	Screw, wood, No. 6 x $\frac{3}{8}$ in.	4	C
		rd/hd.		
28F/11078	A.G.S.1136/C	Bolt, banjo	1	C
28F/12048	A.G.S.1186/B	Washer, sealing, $\frac{1}{4}$ in.	2	C
28F/11958	A.G.S.1186/C	Washer, sealing, $\frac{3}{8}$ in.	2	C
28L/11067	A.G.S.2035/B	Washer, shakeproof, 4 B.A.	2	C
28D/12947	AS.1246/ $\frac{1}{2}$ B	Bolt, rd/hd., 4 B.A.	2	C
28E/14065	AS.3181/3B	Clip, 'P', plain, 4 B.A., $\frac{3}{16}$ in. dia.	4	C

**RESTRICTED**

(ii) Item to be assembled by the Maintenance Unit to complete the Kit

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
27M/692	AIR.42704	Valve, pressure relief	1	A

The complete Kit is to be demanded from No. 35 Maintenance Unit under Stores Ref. 26FC/103345.

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

Stores Ref.	Nomenclature	Qty.	Class of Store
29D/2136	Brad, brass, $\frac{3}{8}$ in. long, 21 gauge	As reqd.	C
30A/3055	Wire, nickel alloy, 22 s.w.g.	As reqd.	C
32B/896	Tape, self-adhesive, P.V.C., $\frac{1}{2}$ in.	As reqd.	C
33B/1023	Primer, etch, accelerator	As reqd.	C
33B/1021	Primer, etch, base	As reqd.	C
33B/1027	Lacquer, Plyceal	As reqd.	C
33B/1108 (Home) or 33B/205 (Overseas)	Finish, synthetic, night, D.T.D.314	As reqd.	C
33C/31	Paper, glass, No. 1	As reqd.	C
33C/973	Adhesive, hardener, G.B.M.	As reqd.	C
33C/1138	Compound, Bostik 1790	As reqd.	C
33C/1139	Compound, Bostik primer 1751	As reqd.	C
33C/1188	Adhesive, synthetic resin, Type B.70	As reqd.	C

## (2) Special Tools and Test Equipment

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

## 6. SPARES AFFECTED

There are no spares affected by this modification.

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

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

## 8. SEQUENCE OF OPERATIONS

Refer to Sheets 1 and 2 of the drawing.

The following is the sequence of operations:—

(1) Remove the pilot's seat from the aircraft. Remove the port inner and outer guns in accordance with the procedure detailed in A.P.4099G, Vol. 1, Section 12, Chapter 1. Remove the forward lower engine cowlings.

(2) Release the pressure from the hydraulic accumulator and drain the main and hand pump compartments of the reservoir. The main compartment is drained from the suction line of the ground test coupling on the firewall, directing the flow into a clean container. The hand pump compartment is drained by disconnecting the hand pump pressure line at the manually operated non-return valve in the gun bay. Operate the hand pump and direct the flow of fluid into a clean container.

**Note:** When dealing with the hydraulic system, absolute cleanliness is essential. All disconnected pipe ends and adapters must be sealed off to prevent ingress of foreign matter. Prior to fitting a new length of pipe, the bore must be thoroughly cleaned by being subjected to a dry air blast. No dirt is to enter the system or fluid at any time.

**RESTRICTED**

(3) Remove the tank key from the forward face of bulkhead No. 2 and its upper clips and attachment items. Retain all items except the 6 B.A. bolts for reassembly. Drill a No. 31 hole (0.120 in. dia.) through the centre of the two new packing pieces, Part No. AOO.7411ND. Offer up the packing pieces to the bulkhead as shown on Sheet 1 of the drawing and mark off their location. Mark off and drill two holes 0.43 in. deep with a  $\frac{3}{8}$  in. dia. Fosner or Wilpat bit to suit the two new 4 B.A. ply ferrules, Part No. D.H.S.103 Mk. 1. Remove the finish locally from the bulkhead, where the new packing pieces and ply ferrules will seat, using No. 1 glass paper (Stores Ref. 33C/31).

(4) Secure the new packing pieces and ply ferrules to the bulkhead with Type B.70 synthetic resin adhesive and G.B.M. hardener (Stores Refs. 33C/1188 and 33C/973 respectively), and  $\frac{3}{8}$  in. long brass brads (Stores Ref. 29D/2136).

*Note:* It is recommended that, at a normal temperature of 60 deg. F. a minimum drying period of 4 hours be allowed for synthetic resin adhesive; but it should be noted that, with the application of radiant heat at a temperature of 70 deg. F. this period could be reduced to a minimum of 3 hours.

Failure to observe the minimum times quoted will result in 'crazing' of the cement and a consequent loss in adhesive strength.

(5) Apply a brush coat of 'Plyceal' lacquer (Stores Ref. 33B/1027) over the bare fly face of the bulkhead, new packing pieces and ferrules and allow a minimum of 48 hours to dry. Apply around the joints a mixture of Bostik primer 1751 and Bostik 1790 sealing compound (Stores Refs. 33C/1139 and 33C/1138 respectively), and allow 2 hours to dry. Repair the finish locally using accelerator and base etch primers and night synthetic finish, Spec. D.T.D.314 (Stores Refs. 33B/1023 and 33B/1021 and 33B/1108 or 205 respectively). Mount the tank key clips on the packing pieces and secure with the original items and two new 6 B.A. bolts, Part No. A.25/14A, dipping the bolts in Bostik primer 1751 prior to assembly.

(6) Break the wire-locking and disconnect the hand pump suction pipe at the hydraulic reservoir, which is the forward one of the three connections on the port side of the reservoir. Remove the existing adapter from the reservoir and replace by the new special banjo body, banjo bolt and two sealing washers, Part Nos. 12-21S.2507, A.G.S.1136/C and A.G.S.1186/C respectively. Reconnect the suction pipe to the new banjo bolt.

(7) Disconnect and remove the now redundant pressure pipe, Part No. QOO.447A/ND, from the underside of the hand pump to bulkhead No. 2. Remove the existing adapter from the hand pump and replace by the new special banjo body, special banjo bolt and two sealing washers, Part Nos. 12-3S.677, 12-21S.2517 and A.G.S.1186/B respectively. Connect the new pressure pipe, Part No. QOO.3757A/ND, to the new banjo bolt and the existing adapter on bulkhead No. 2.

(8) Connect the new pipe, Part No. 12-S.1677A/ND, to the new banjo body at the hand pump. Refer to Sheet 1 of the drawing. Fit the new relief valve, Part No. AIR.42704, set to relieve at 2500 lb./sq. in.  $\pm$  150 lb./sq. in., with the inlet orifice outboard, to the pipe just fitted.

(9) Offer up the new pipe, Part No. QOO.3763A/ND, close to the bulkhead and secure to the outlet orifice of the relief valve and to the banjo body of the reservoir. Before clipping, protect the pipe at the clip positions, and also adjacent to the armour plate and pilot's seat support casting, using polyvinyl tape (Stores Ref. 32B/896). Secure the two new clips, Part No. AS.3181/3B, to the ferrules, using bolts, Part No. AS.1246/ $\frac{1}{2}$ B, and two shakeproof

**RESTRICTED**

washers, Part No. A.G.S.2035/B, having previously dipped the bolts in Bostik primer 1751. Apply a brush coat of Bostik primer 1751 over the bolt heads after assembly, and allow to dry for a minimum of 1 hour.

(10) Mark off a point 8-30 in. on the port side of the vertical centre-line, and 13-2 in. above the horizontal datum. Protect the pipe adjacent to this point, with polyvinyl tape, affix a new clip, Part No. AS.3181/3B, and secure to the bulkhead with a new screw, Part No. A.G.S.253/36, previously dipped in Bostik primer 1751. Apply a brush coat of Bostik primer 1751 over the screw head, and allow to dry for a minimum of 1 hour.

(11) Refer to Sheet 2 of the drawing. At the position shown, protect the pipe with polyvinyl tape, and affix a new clip, Part No. AS.3181/3B, secured to the deck with a new screw, Part No. A.G.S.253/36, previously dipped in Bostik primer 1751. Apply a brush coat of Bostik primer 1751 over the screw head, and allow to dry for a minimum of 1 hour.

*Note:* In order to maintain the efficiency of the pressure cabin it is essential to perform the sealing requirements as detailed when fitting the clips. All holes made by screws incorrectly placed are to be filled with Bostik 1790 compound immediately the screws are removed. Allow to dry for at least 1 hour.

(12) Wire-lock all pipe couplings with 22 s.w.g. nickel alloy wire (Stores Ref. 30A/3055). Replace the tank key, port guns and pilot's seat. Fill and prime the hydraulic system in accordance with current authorized procedure. Replace the forward lower engine cowl.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected carry out a leak and functional test on the hydraulic hand pump circuit and the complete hydraulic system.

#### 10. RECORDING ACTION

Record on Aircraft Form 700.

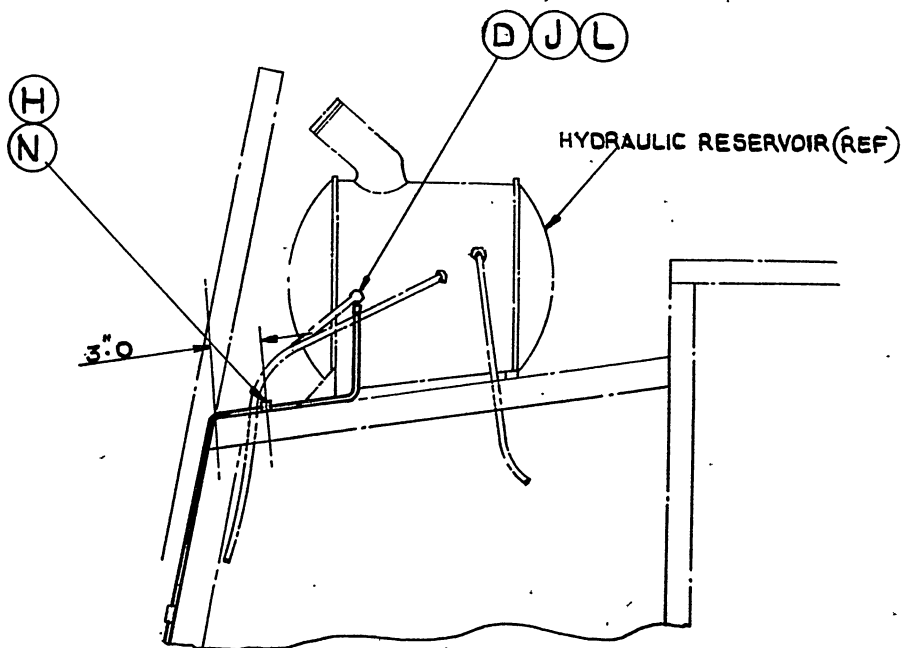
#### 11. DISPOSAL OF REDUNDANT PARTS

The undermentioned part, rendered redundant by the embodiment of this modification, is to be disposed of as scrap in accordance with Air Ministry Salvage Leaflets:-

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/4764	QOO.447A/ND	Pipe assembly	1	C

#### 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.25 lb. and a change of moment of -1.0 lb. ft.



VIEW IN DIRECTION OF ARROW 'A' SEE SHEET 1 OF DRAWING.

REF	PART No.	NOMENCLATURE	QTY	REF	PART No.	NOMENCLATURE	QTY
A	Q003763 A/ND	PIPE ASSEMBLY	1	J	AGS.1136/C	BANJO BOLT	1
B	12.5.1677 A/ND	PIPE ASSEMBLY	1	K	AGS.1186/B	WASHER, SEALING	2
C	12.35-677	SPECIAL BANJO BODY	1	L	AGS.1186/C	WASHER, SEALING	2
D	12.215.2507	SPECIAL BANJO BODY	1	M	AS.1246/28	BOLT RD. HEAD	2
E	12.215.2517	SPECIAL BANJO BOLT	1	N	AS.3181/38	CLIP	4
F	DHS.103 MK1	FERRULE	2	P	AGS.23058	SHAKEPROOF WASHER	2
G	AIR 42704	RELIEF VALVE	1	Q	A00741/ND	1/8" PLY PACKING	2
H	AGS.253/36	SCREW RH. HEAD	2	R	A25/14 A	BOLT 6 BA	2
				S	Q003757 A/ND.	PIPE ASSEMBLY	1

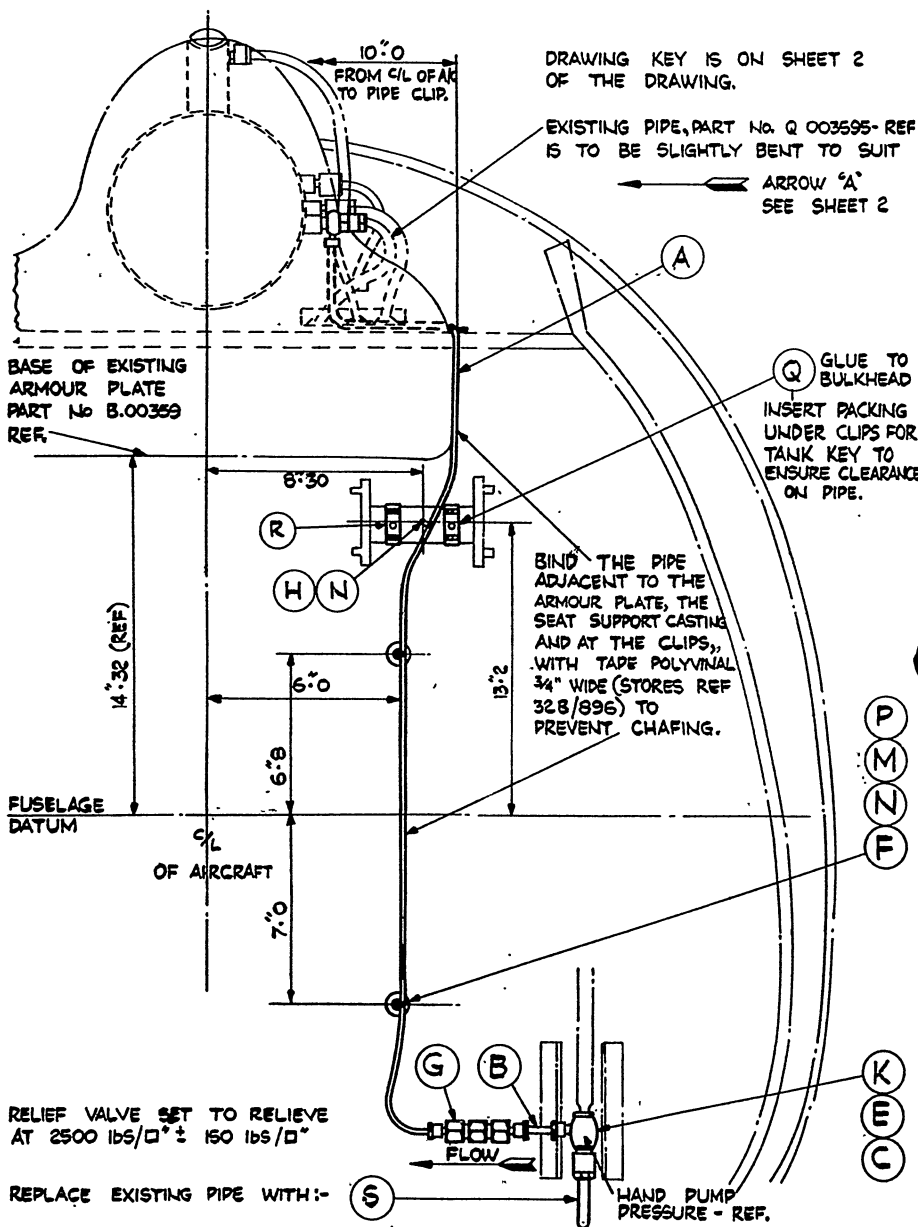
MODIFICATION TO HYDRAULIC SYSTEM.

**RESTRICTED**

DRG. NO A.R. 4099 G / P. 11 / 56

**SHEET 2**

LP31038 4/56 625 C & P Gp. 959 (4)



INSTALLATION OF RELIEF VALVE AND RETURN PIPE LINE FROM HAND PUMP ON FORWARD FACE OF BULKHEAD No. 2.

DRG. No. A.P. 4099 G / P. 11 / 56

SHEET |

**RESTRICTED**

LP31038 4/56 625 C & P Gp. 959 (4)

(Engine driven pump—improved hose)

A.P. 4099C, Vol. 2, Part 1

Leaflet No. P.12

Vampire F.B. Mk. 9 Aircraft—Hydraulic System—To Introduce Dunlop Twin Wire Braided Pressure Hose Type WH3/2 in place of Dunlop Single Wire Braid Hose Type WH3/1 at Engine Driven Pump

(MOD. NO. VAMPIRE/3476)

(Class B/2.)

(AB/A/5083.—13.7.56.)

## 1. INTRODUCTION

This modification introduces a double wire braid hose to withstand the surge pressures due to intermittent surges in the hydraulic system which impose a load on the hose above normal working pressures.

- (1) This modification supersedes the work called for by Mod. No. Vampire/3116.
- (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 one month after receipt of parts

*3rd Line Servicing Units (R.S.U.s):* 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 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 Materials

- (a) The Modification Kit, which consists of the following item, supplied by the Contractor, will be assembled by No. 35 Maintenance Unit under Stores Ref. 26FC/103476:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/11882	Q00.3779	Flexible hose	1	C

The Kit, comprising the above item, will be supplied to R.A.F. Units on issue order—no demands are to be submitted. Users other than R.A.F. are to submit their requirements to Air Ministry (E.4), Harrogate.

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
30A/3055	—	Wire, locking, nickel alloy 22 s.w.g.	As reqd.	C



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## (2) Special Tools and Test Equipment

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

## 6. SPARES AFFECTED

No spares are affected by this modification.

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

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

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Remove the lower engine inspection doors and release the pressure from the hydraulic system.

(2) Locate the now redundant hydraulic pressure hose, Part No. QOO.3715, routed from the engine driven pump to the flanged coupling on the aft face of the fireproof bulkhead. Remove this hose and replace it by a new hose assembly, Part No. QOO.3779, relocking the hose connections with 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055).

*Note:* During the embodiment of this modification the necessary precautions are to be taken as regards fluid spillage and avoidance of ingress of foreign matter.

(3) Check the level of the hydraulic fluid in the reservoir and top up if necessary. Replace the engine inspection doors.

## 9. TESTING AFTER EMBODIMENT

When this modification has been embodied, on the next engine run carry out a check for leaks on all disturbed couplings.

## 10. RECORDING ACTION

Record on Aircraft Form 700.

## 11. DISPOSAL OF REDUNDANT PARTS

The undermentioned part, rendered redundant by the embodiment of this modification, is to be disposed of as scrap in accordance with Air Ministry Salvage Leaflets:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/6438	QOO.3715	Flexible hose	1	C

## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of + 0.24 lb. and a change of moment of — 2.0 lb. ft.

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## (2) Special Tools and Test Equipment

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

## 6. SPARES AFFECTED

The following list shows the spare affected by this modification, and the parts required to modify it:

Stores Ref.	Part No.	Nomenclature
26FC/10207	LOO.1060A/1	Lower cowl ring assembly

The work involved in modifying this spare is detailed in Para. 8, operation

## (2). There are no parts required to modify this spare.

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2).

## 7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

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

Old			New	
Stores Ref.	Part/Assy No.	Nomenclature	Part/Assy No.	Stores Ref.
26FC/10207	LOO.1060A/1	Lower cowl ring assembly	LOO.1060A/2	26FC/11867

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:

- (1) Remove the lower front and lower middle engine cowling panels and locate the lower cowling support ring, Part No. LOO.1060A/1. Release the pipes secured to this ring, retaining the clips and their securing items for subsequent re-assembly. Remove the lower cowling support ring assembly from the aircraft, retaining it for modification; retain its attaching items for subsequent re-assembly.
- (2) Refer to the drawing. From the centre-line on the inner face of the ring mark off a point 4.40 in. outboard to port and from this point mark out and cut the 0.25 in. deep cut-away, making the correct radius on all the corners, as shown in detail 'A' of the drawing. Re-number this lower cowl ring assembly "LOO.1060A/2".
- (3) Refit the lower cowl ring to its correct position on the aircraft, using the retained attaching items. Refit the pipes which were removed from the ring, using the retained clips and attaching items. Refit and secure the lower front and lower middle engine cowlings.

## 9. TESTING AFTER EMBODIMENT

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

## 10. RECORDING ACTION

Record on Aircraft Form 700.

A.L.N. 181

1

A.P.4099G, Vol. 2, Part 1

(Lower cowling support ring)

Leaflet No. P.13

**Vampire F.B. Mk. 9 Aircraft—Engine Installation—To introduce  
Cut-out in Lower Cowl Rail to Accommodate Oil Feed Pipes**

(Mod. No. VAMPIRE/3502.)

(Class B/2, N.C.P. satisfied by S.T.I./Goblin/11A.)

(AB/A/4914—9.10.56.)

**1. INTRODUCTION**

This modification introduces a cut-out in the lower cowling support ring to give clearance to the oil supply pipes from the metering pump to the engine rear bearing.

- (1) This modification partially supersedes the work called for and is satisfied by S.T.I./Goblin/11A.
- (2) This modification is not essentially connected with any other approved modifications.

**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 this leaflet.

*3rd Line Servicing Units (R.S.U.s):* 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 (1 to strip, 2 to embody, 1 to re-assemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.13/56 is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

- (1) Parts and Materials  
No parts or materials are required for the embodiment of this modification.

R

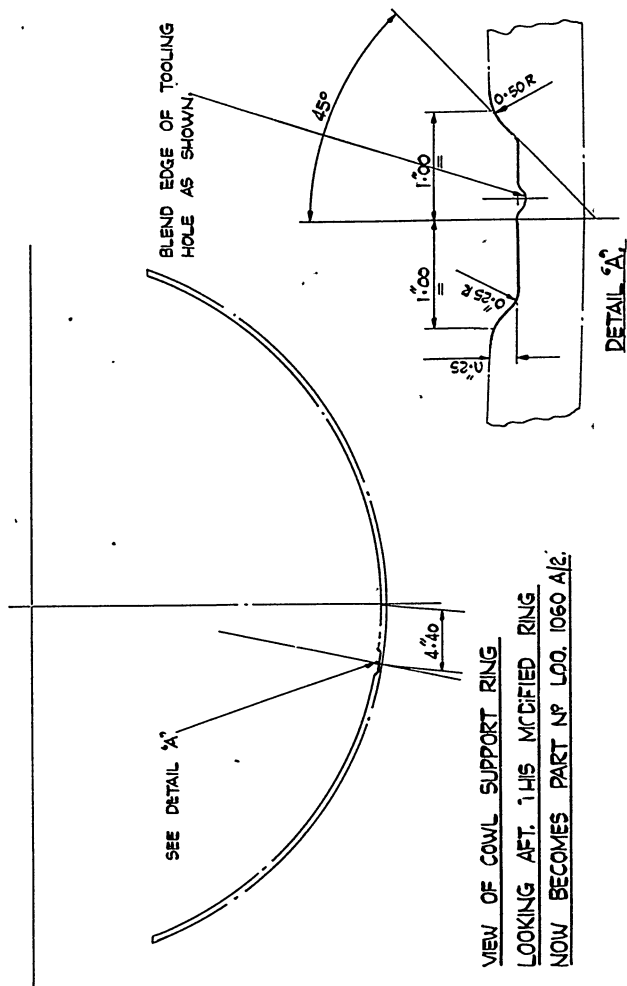
#### 11. DISPOSAL OF REDUNDANT PARTS

There are no parts rendered redundant by the embodiment of this modification.

#### 12. EFFECT ON WEIGHT AND C. OF G.

The embodiment of this modification has no effect on weight or C. of G.





VIEW OF COWL SUPPORT RING  
 LOOKING AFT. THIS MODIFIED RING  
 NOW BECOMES PART N° LOO. 1060 A/2.

**RESTRICTED**  
 1241 K.L. (114)

DRG. No. A.P. 4099 G/P.13/56



(Lower cowl rail)

Leaflet No. P.14

(Alteration 2)

# Vampire F.B. Mk. 9 Aircraft—Engine Installation—To introduce Reinforcing Channel in Lower Cowl Rail

(AB/A/5791—8:4.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. P.14 (Mod. No. Vampire/3531), is amended as follows:—

(1) Heading, class. *Delete* "(Class B/4)" and *substitute* "(Class B/2 to be embodied concurrently with Mod. 3502 if not already embodied)"

(2) Para. 2. *Delete in toto and substitute*

## "2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity (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 B/6

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

*Aircraft Storage Units:* In accordance with the Standard of Preparation"

# RESTRICTED

(48982/743) 331441 8245 500 4/58 (H.P.W.) (Gp. 19/1)





ALN<sup>o</sup>206  
(Lower cowl rail)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.14  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Engine Installation—To Introduce  
Reinforcing Channel in Lower Cowl Rail**

(AB/A/5791—16.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. P.14 (Mod. No. Vampire/3531), is amended as follows:—

(1) Heading, class, *Delete* "(Class B/2 concurrently with Mod. 3502 if the latter is not already embodied)" and substitute "(Class B/4)".

(2) Para. 2. *Delete in toto and substitute*

**2. EMBODIMENT**

No further retrospective action is required on this modification."

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**RESTRICTED**



**A.L. No. 191**

A.P.4099G, Vol. 2, Part 1

(Fire detector units)

Leaflet No. P.15

(A.L. No. 187 cancelled)

(Cancellation)

Vampire F.B. Mk. 9 Aircraft—Engine Installation—To delete 8 'Split Can' Re-setting Type Fire Detectors around Engine at Rib No. 1

(AB/A/4598.—11.6.57.)

*Note:—A.P.4099G, Vol. 2, Part 1 (Mod. No. Vampire/3475), Leaflet No. P.15 (A.L. No. 187), is hereby cancelled.*

**R**

**RESTRICTED**

(47247/81) 229719 8245 625 6/57 (H.P.W.) (Gp. 19/1)



**Vampire F.B. Mk. 9 Aircraft—Engine Installation—To Introduce Reinforcing Channel in Lower Cowl Rail**

(Mod. No. VAMPIRE/3531.)

(Class B/2 concurrently with Mod. 3502 if the latter is not already embodied.)

(AB/A/5791.—6.11.56.)

**1. INTRODUCTION**

Cracking of the lower cowl rail can occur on aircraft embodying Mod. No. Vampire/3502, which introduces a cut out in the cowl rail to accommodate the rear bearing oil feed pipes. This modification introduces a stiffener to this cut away area to obviate the possibility of future cracking.

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

(2) This modification is essentially connected with Mod. No. Vampire/3502 (Engine Installation—To Introduce Cut Out in Lower Cowl Rail to Accommodate Oil Feed Pipes); 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 (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 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 ( $\frac{1}{2}$  to strip; 2 to embody;  $\frac{1}{2}$  to re-assemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.14/56 is incorporated in this leaflet.

**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. 35 Maintenance Unit under Stores Ref. 26FC/103531:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	LOO.4041	Stiffener	1	—
28Q/10652	AS.2228/405	Rivet, $\frac{1}{8}$ in. dia. mrm./hd.	16	C
28Q/6640	AS.2229/404	Rivet, $\frac{1}{8}$ in. dia. 90 deg. csk./hd.	19	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 in sub-para. (a), in accordance with current regulations.

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**RESTRICTED**

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

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28Q/10412	AS.2230/404	Rivet, $\frac{1}{8}$ in. dia., 120 deg. csk/head	As reqd.	C
33C/1264	—	Compound pigmented varnish jointing	As reqd.	C
33C/1327	—	Adhesive bostik 1410	As reqd.	C

(2) Special Tools and Test Equipment

There are no special tools or test equipment 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:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/11867	LOO.1060A/2	Cowl ring assembly, lower		

The method for modifying the above spare is detailed in Para. 8, operations (2) and (3) and on the drawing.

Parts required:

26FC/-	LOO.4041	Stiffener	1	—
Attaching parts for LOO.4041 stiffener:				
28Q/10652	AS.2228/405	Rivet, $\frac{1}{8}$ in. dia. mush. head	16	C
28Q/6640	AS.2229/404	Rivet, $\frac{1}{8}$ in. dia., 90 deg. csk. head	19	C
28Q/10412	AS.2230/404	Rivet, $\frac{1}{8}$ in. dia. 120 deg. csk. head	As reqd.	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2).

7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Stores Ref., Part and Assembly Nos., as follows:

<i>Stores Ref.</i>	<i>Old Pt./Assy. No.</i>	<i>Nomenclature</i>	<i>New Pt./Assy. No.</i>	<i>Stores Ref.</i>
26FC/11867	LOO.1060A/2	Support ring assembly	LOO.1060A/3	26FC/12456

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Remove the lower front and lower middle engine cowlings, and locate the lower cowl support ring, Part No. LOO.1060A/2. Release the pipes secured to this ring, retaining their attaching items for re-assembly, then release and remove the support ring assembly complete, for subsequent modification, retaining also, its attaching items.

(2) Working on the support ring, release its attached cowl tape in the vicinity of the cut out by carefully drilling out its existing  $\frac{1}{8}$  in. dia. rivets. Position the new stiffener, Part No. LOO.4041, centrally over the cut out in the support ring, and using the existing holes in the stiffener as guides and a No. 30 (0.1285 in. dia.) drill, drill first through the bottom of the support

**RESTRICTED**

ring, countersinking these holes on the lower surface at 90 deg.  $\times$  0.22 in., then through the sides of support ring. Temporarily secure the stiffener in position with  $\frac{1}{8}$  in. dia. locating pins. Working from the bottom and using the three existing tape attachment holes as guides (as shown on the drawing) and a No. 30 drill, extend these holes through the stiffener. Use the existing  $\frac{1}{2}$  in. dia. hole in the support ring as a guide and drill through the stiffener. Finally blend the existing rivet hole in the support ring flange, to form an even contour in the stiffener. Remove the stiffener and thoroughly deburr all holes in both the stiffener and the support ring.

(3) Referring to the drawing, coat the mating surfaces of the stiffener and the support ring with compound, pigmented varnish jointing (Stores Ref. 33C/1264) and offer the stiffener up to its intended position. Secure it first through the base of the support ring with nineteen  $\frac{1}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/404, then through the flange holes with sixteen  $\frac{1}{8}$  in. dia. mush-head rivets, Part No. AS.2228/405. Finally, after coating the mating surface of the cowl tape with bostik 1410 (Stores Ref. 33/1327) and positioning it in its original position, secure it to the cowl ring and through the stiffener with 120 deg. countersunk-head rivets, Part No. AS.2230/404.

(4) Re-assemble the support ring to the aircraft using the attaching items retained in operation (1). Refit the pipes which were removed from the ring, using the retained clips and attaching items. Refit and secure the lower front and lower middle engine cowlings.

#### 9. TESTING AFTER EMBODIMENT

There are no special tests required after the embodiment of this modification.

#### 10. RECORDING ACTION

Record on Aircraft Form 700.

#### 11. DISPOSAL OF REDUNDANT PARTS

There are no parts rendered redundant by the embodiment of this modification.

#### 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.10 lb., and no change of moment.

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RESTRICTED

DRG. No. A.P.4099G/P.14/56

AS  
2228  
405 RIVET  $\frac{1}{8}$ " DIA  
MUSH HEAD  
16-OFF.

BLEND IN EXISTING RIVET  
HOLE AS DETAILED.

LOO  
4041 STIFFENER  
1-OFF.

AS  
2229  
404 RIVET  $\frac{1}{8}$ " DIA  
90° CS'K HEAD  
19-OFF.

DRILL ONE  $\frac{1}{32}$ " DIA HOLE  
THROUGH STIFFENER  
FROM EXISTING HOLE IN  
COWL RING.

EXISTING RIVETS SECURING COWL  
TAPE TO BE REMOVED. HOLES TO  
BE EXTENDED THROUGH THE  
STIFFENER WITH A No.30  $\phi$  1285 DIA  
DRILL ON FITMENT OF STIFFENER  
TAPE TO BE RESECURED WITH :-

AS  
2230  
404 RIVET  $\frac{1}{8}$ " DIA  
120° CSK  
HEAD 3-OFF.

DRILL 19 No.30 HOLES  
FROM STIFFENER  
THRO' COWL RING. CS'K  
THE UNDERSURFACE  
AT 90° X  $\phi$  22 DIA.

VIEW ON ARROW 'A'

DETAIL OF ATTACHMENT OF STIFFENER TO LOWER COWL RING.



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

Ref. No.	Part No.	Nomenclature	Qty	Class of Equipment
33B/1021		Primer etch base	As reqd.	C
33B/1023		Primer etch accelerator	As reqd.	C
33B/1070 (Home)	}	Finish, cellulose,	As reqd.	C
33B/939 (Overseas)		medium sea grey, D.T.D.772		
33C/1264		Compound, pigmented varnish jointing D.T.D.369A	As reqd.	C

## (2) Special Tools and Test Equipment

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

## G. 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
26FC/957	LOO.77A	Front fish plate, for centre bulkhead		

The work involved in modifying this spare is detailed in para. 8, operation (2) and on sheet 2 of the drawing. There are no parts required for modifying this spare.

### Spares affected:—

26FC/10411 LOO.853A/5 G.A. of rear cone

The work involved in modifying these spares is detailed in para. 8, operations (1) to (7) and on sheets 1 to 5 of the drawing.

### Parts required to modify the above spare:—

26FC/—	15.EC.211	Plate, cut-out reinforcing	1	—
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### Attaching parts for 15.EC.211 Plate

28Q/6638 and 26FC/—	AS.2227/404	Rivet, $\frac{1}{4}$ in. dia. sp/hd.	13	C
26FC/—	15.EC.213	Plate, cut-out reinforcing	1	—

### Attaching parts for 15.EC.213

28Q/6638	AS.2227/404	Rivet, $\frac{1}{4}$ in. dia. sp/hd.	21	C
28Q/6639 and 26FC/—	AS.2227/405	Rivet, $\frac{1}{4}$ in. dia. sp/hd.	14	C
26FC/—	15.EC.215ND	Plate, stiffener	1	—
26FC/—	15.EC.219ND	Packing piece	1	—
26FC/—	15.EC.221ND	Packing piece	1	—

### Attaching parts for 15.EC.215ND, 15.EC.219ND and 15.EC.221ND Packing and Stiffener Plates

28Q/10413	AS.2230/405	Rivet, $\frac{1}{4}$ in. dia., 120 deg. csk/hd.	16	C
28Q/10681 and 26FC/—	AS.2230/406	Rivet, $\frac{1}{4}$ in. dia., 120 deg. csk/hd.	7	C
26FC/—	15.EC.217ND	Plate, stiffener	1	—

**RESTRICTED**

(Fouling of jet pipe thermocouple lead)

**Vampire F.B. Mk. 9 Aircraft—Engine Installation—To Introduce Rear Cone Cowling Incorporating Provision for Engines with Re-routed Jet Pipe Thermocouple**

(Mod. No. VAMPIRE 3575.)

(Class C/3 essential when fitting Engines embodying Goblin Mod. No. 1064.)

(AB/A/7127—25.9.57.)

**1. INTRODUCTION**

Where Goblin engines with Mod. No. Goblin 1064 are installed, a foul occurs between the jet pipe thermocouple lead and three of the formers in the rear tail cone, due to re-routing the jet pipe thermocouple from the inside of the engine fireguard to the outside. This modification introduces cut-outs in the three rear tail cone formers to provide a clearance for the jet pipe thermocouple lead.

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

(2) This modification is essentially connected with Mod. No. Goblin 1064 (Thermocouple—Exhaust Cone—Improved Insulation) when that work is embodied this modification must be effected concurrently.

**2. EMBODIMENT**

This modification is to be embodied when fitting engines embodying Goblin Mod. 1064.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 10 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.16/57, Sheets 1-5, is incorporated in this leaflet.

**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. 35 Maintenance Unit under Ref. No. 26FC/103575:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	15.EC.211	Plate cut-out reinforcing	1	—
26FC/-	15.EC.213	Plate cut-out reinforcing	1	—
26FC/-	15.EC.215ND	Plate stiffener	1	—
26FC/-	15.EC.217ND	Plate stiffener	1	—
26FC/-	15.EC.219ND	Packing piece	1	—
26FC/-	15.EC.221ND	Packing piece	1	—
28Q/6638	AS.2227/404	Rivet, 1/4 in. dia. sp/hd.	34	C
28Q/6639	AS.2227/405	Rivet, 1/4 in. dia. sp/hd.	14	C
28Q/10412	AS.2230/404	Rivet, 1/4 in. dia. 120 deg. csk/hd.	8	C
28Q/10413	AS.2230/405	Rivet, 1/4 in. dia. 120 deg. csk/hd.	23	C
28Q/10681	AS.2230/406	Rivet, 1/4 in. dia. 120 deg. csk/hd.	7	C

R.A.F. Units at home and abroad, and all other users are to demand separately their requirements of kits. Demands should not be submitted before October 1957.

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Class of  
Equipment

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
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Attaching parts for 15.EC.217ND Plate

28Q/10412	AS.2230/404	Rivet, $\frac{1}{8}$ in. dia., 120 deg. csk/hd.	8	C
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28Q/10413	AS.2230/405	Rivet, $\frac{1}{8}$ in. dia., 120 deg. csk/hd.	7	C
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Spare affected:—

26FC/971	LOO.855	Front ring rear tail cone		
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The work involved in modifying this spare is detailed in para. 8 operation (4) and on sheets 4 and 5 of the drawing.

There are no parts required for modifying this spare.

Spare affected:—

26FC/965	LOO.856	Bulkhead rear rear tail cone		
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The work involved in modifying this spare is detailed in para. 8 operation (3) and on sheet 3 of the drawing.

Parts required:—

26FC/-	15.EC.211	Plate, cut-out reinforcing	1	—
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Attaching parts for 15.EC.211 Plate

28Q/6638	AS.2227/404	Rivet, $\frac{1}{8}$ in. dia. sp/hd.	13	C
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Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2).

#### 7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

Old Ref. No.	Old Part/Assy. No.	Old Nomenclature	New Part/Assy. No.	New Ref. No.
26FC/-	LOO.75A	Bulkhead, centre rear cone	15.EC.227	26FC/-
26FC/957	LOO.77A	Front fish plate, for centre bulkhead	15.EC.223	26FC/-
26FC/971	LOO.855	Front ring rear tail cone	15.EC.231	26FC/-
26FC/965	LOO.856	Bulkhead rear rear tail cone	15.EC.229	26FC/-
26FC/10411	LOO.853A/5	G.A. of rear cone	LOO.853A/6	26FC/-
26FC/-	LOO.3963A/ND	Sub. assy. of cone with wiring less flame switches and lamps	LOO.4033A/ND	26FC/-
26FC/-	LOO.3965A/ND	Sub. assy. of cone with wiring and flame switches less lamps	LOO.4035A/ND	26FC/-

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations, the tail cone having been removed:—

(1) Working inside the rear tail cone, locate the centre former or bulkhead, Part No. LOO.75A, reference to sheet 1 of the drawing will locate the position. At the top, mid-position of this bulkhead, Detail 'X', will be found two fish plates, one each side of the bulkhead, secured by eighteen  $\frac{1}{8}$  in. dia. snaphead rivets. Carefully

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drill out these securing rivets using a No. 30 (0.1285 in. dia.) drill then discard the rear fish plate, Part No. LOO.146, which is rendered redundant. Refer to sheet 2 of the drawing, mark off and cut the cut-out in the bulkhead to the measurements shown, blending in the redundant rivet hole. Remove any sharp edges from the newly cut edge.

(2) Trim the existing front fish plate, Part No. LOO.77A as shown on sheet 2 of the drawing rounding the corners with a 0.25 in. radius. Remove any sharp edges. Offer up the new cut-out reinforcing plate, Part No. 15.EC.213, to the rear face of the centre bulkhead in the position shown and drill off its eighteen rivet attachment holes in the bulkhead with the No. 30 drill, using the holes in the reinforcing plate as a guide. Drill off the remaining rivet attachment holes in the reinforcing plate from the existing holes in the bulkhead. Deburr all holes. Coat the mating surfaces of the new plate, the modified fish plate, and the bulkhead with pigmented varnish jointing compound (Ref. No. 33C/1264) and rivet these plates into position on the bulkhead using thirty-five  $\frac{1}{4}$  in. dia. snaphead rivets, Part No. AS.2227/405 (fourteen off) and Part No. AS.2227/404 (twenty-one off) the longer of these rivets being used for securing both the fish plate and the new reinforcing plate into position.

(3) Locate the rear bulkhead Part No. LOO.856, in the tail cone, reference to Detail Y, sheet 1 of the drawing will show where it is situated. Refer to sheet 3 of the drawing, mark off and cut the cut-out to the measurements shown, removing any sharp edges. Place the new cut-out reinforcing plate, Part No. 15.EC.211 on to the rear face of the bulkhead in the position shown and using the No. 30 drill, drill off the attachment rivet holes, using the holes in the reinforcing plate as a guide. Deburr all holes. Coat the mating surfaces of the new plate and the bulkhead with pigmented varnish jointing compound and rivet the plate to the bulkhead using thirteen  $\frac{1}{4}$  in. dia. snaphead rivets, Part No. AS.2227/404.

(4) Refer to sheet 1 of the drawing and locate the position of the forward ring, Part No. LOO.855. Refer to sheet 5 of the drawing, mark off and cut the cut-out to the measurements shown, removing any sharp edges. Refer to sheet 4 of the drawing and using the No. 30 drill, drill out the seven rivets securing the forward edge of the forward ring between the two longitudinal top hat stiffeners and the two rivets securing the end of the inboard flanges on each of the top hat stiffeners adjacent to the forward ring.

(5) Offer up the two new packing pieces, Part Nos. 15.EC.221ND and 15.EC.219ND and the new forward stiffener plate, Part No. 15.EC.215ND, into the positions shown, and trim the edges, as necessary, to maintain the dimensions given on the drawing. Remove any sharp edges. Mark and drill off the rivet attaching holes from the existing rivet holes in the tail cone, using a No. 35 (0.110 in. dia.) drill, and deburr and dimple countersink these holes to suit the existing dimpling. Mark off on the new stiffener plate the positions for the new rivet holes, to the dimensions shown in the drawing, and again offer up these items into position and drill off the holes just marked using the No. 35 drill. Deburr these holes and dimple countersink them 120 deg.  $\times$  0.25 in. dia. Coat the mating surfaces of the packings, stiffener plate and the inside of the cone skin with pigmented varnish jointing compound and rivet them together using twenty-three  $\frac{1}{4}$  in. dia. 120 deg. countersunk-head rivets, Part Nos. AS.2230/405 (sixteen off) and AS.2230/406 (seven off).

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(6) Working on the aft edge of the forward ring, Part No. LOO.855 and referring to sheet 4 of the drawing locate the securing rivet nearest the centre line of the newly made cut-out. Using the No. 30 drill, drill out this rivet and the three rivets each side of it. Offer up the new aft stiffener plate, Part No. 15.EC.217ND and mark off and drill both the vacated and new rivet attachment holes in the stiffener and cone skin using the No. 35 drill. Trim the edges of the stiffener, if necessary, deburr the holes and remove any sharp edges. Dimple, countersink the holes in the cone skin and the holes in the stiffener, 120 deg.  $\times$  0.25 in. dia., coat the mating surfaces of the cone and stiffener with pigmented varnish jointing compound, then rivet the stiffener into position using fifteen 1/4 in. dia.  $\times$  120 deg. countersunk-head rivets, Part Nos. AS.2230/405 (seven off) and AS.2230/404 (eight off).

(7) Repair the finish to the outer surface of the tail cone using primer, etch, base and accelerator (Ref. Nos. 33B/1021 and 33B/1023) and finish cellulose, medium sea grey D.T.D.772 (Ref. No. 33B/1070 or 939). Repair the finish on the inside of the cone where required using primer, etch, base and accelerator and finish cellulose, aluminium D.T.D.772 (Ref. No. 33B/1060).

#### 9. TESTING AFTER EMBODIMENT

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

#### 10. RECORDING ACTION

Record on Aircraft Form 700.

#### 11. DISPOSAL OF REDUNDANT PARTS

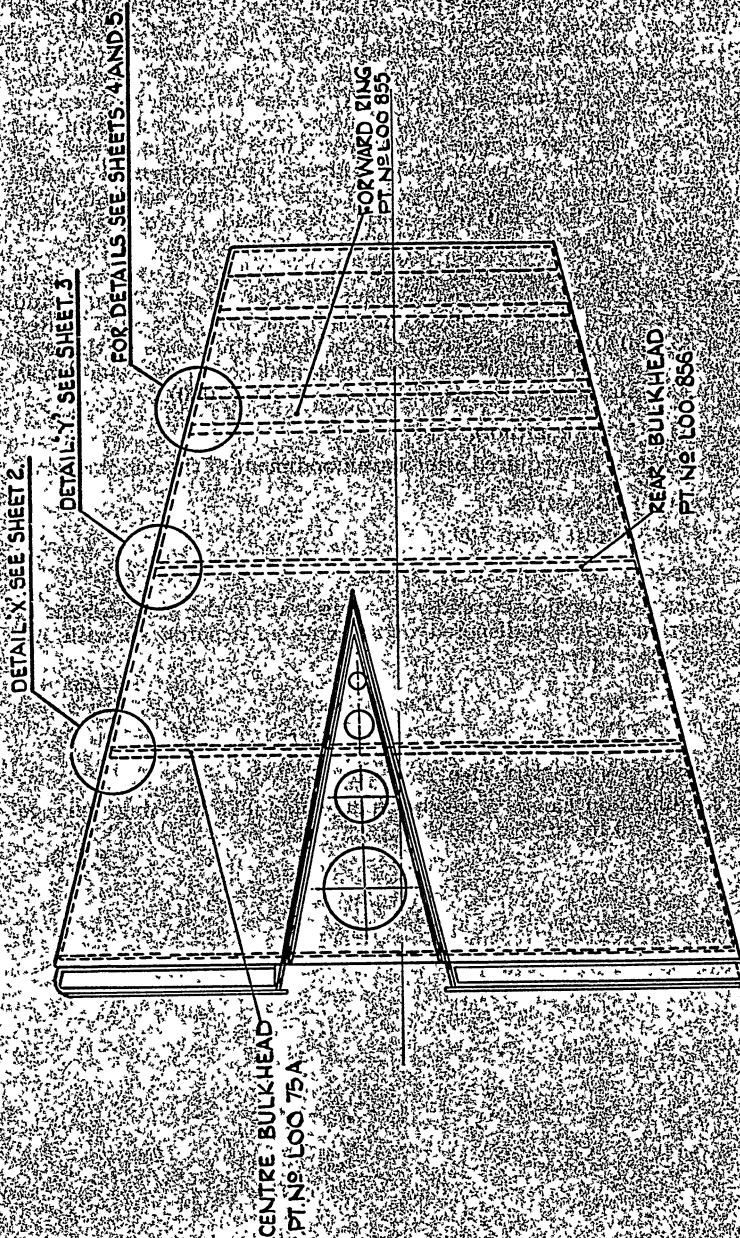
The undermentioned part rendered redundant by the embodiment of this modification is to be disposed of as scrap in accordance with Air Ministry Salvage Leaflets:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/958	LOO.146	Fishplate, rear	1	C

#### 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.26 lb. and a change of moment of +2.0 lb. ft.

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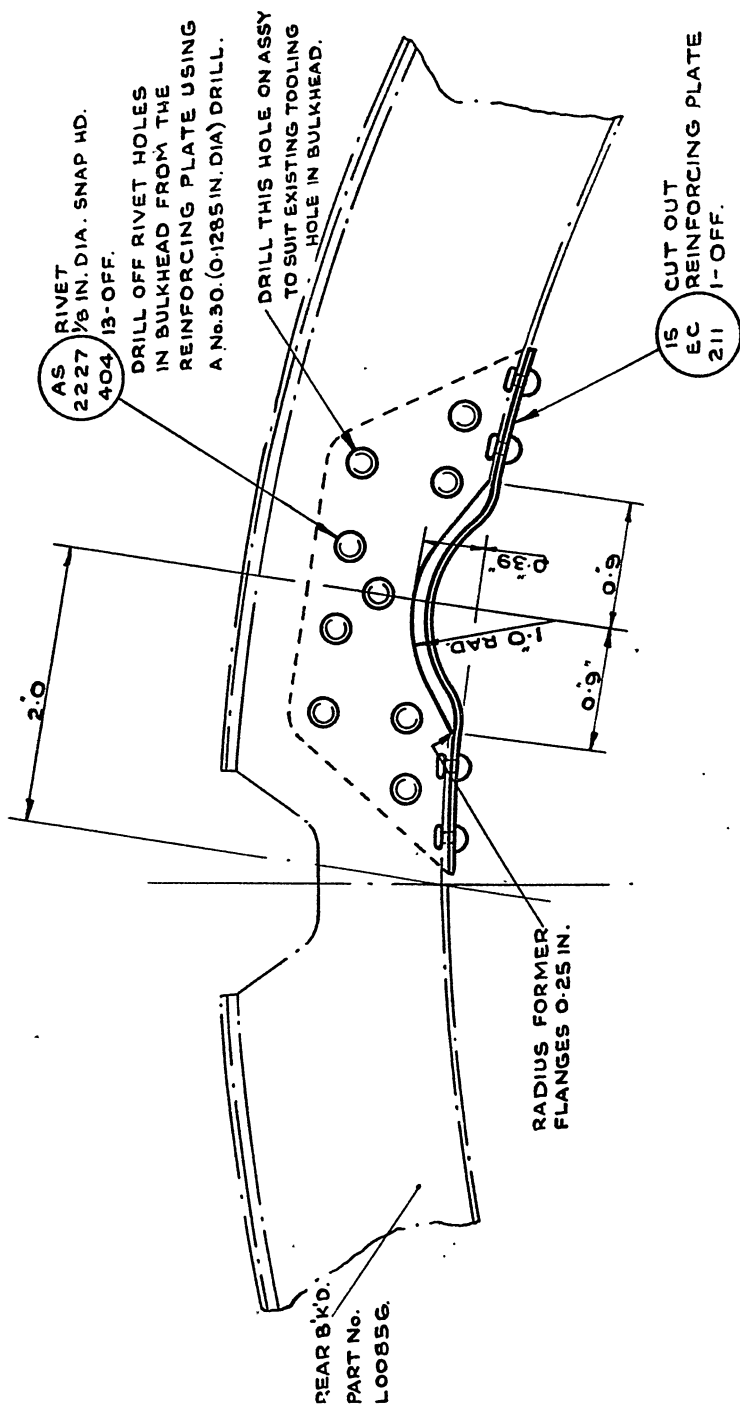


VIEW OF REAR CONE SHOWING THE THREE POINTS TO BE MODIFIED

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Drg. No. A.P.4099G/P.16/57  
Sheet 1

DETAIL 'X' FROM SHEET 1. VIEW LOOKING AFT. SHOWING CUT OUT IN CENTRE  
BULKHEAD OF TAIL CONE AND FITMENT OF REINFORCING PLATE.



DETAIL Y. FROM SHEET 1. VIEW LOOKING AFT. SHOWING CUT-OUT IN REAR  
BULKHEAD OF TAIL CONE AND FITMENT OF REINFORCING PLATE.

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DRG. NO A.P. 4099 G/P 16/57

SHEET 3

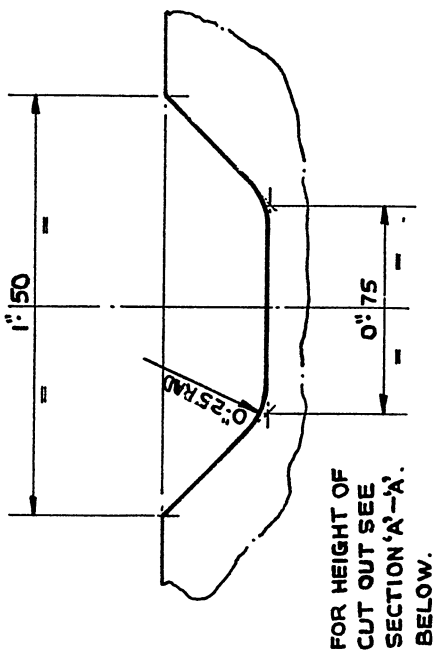
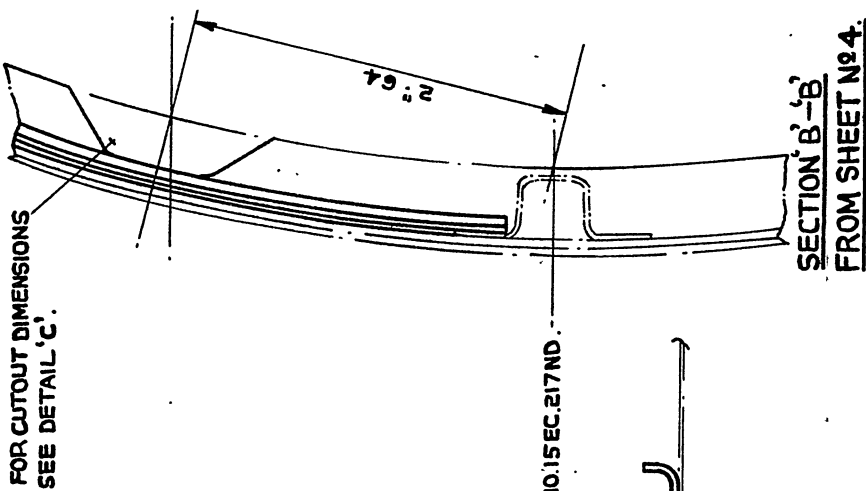


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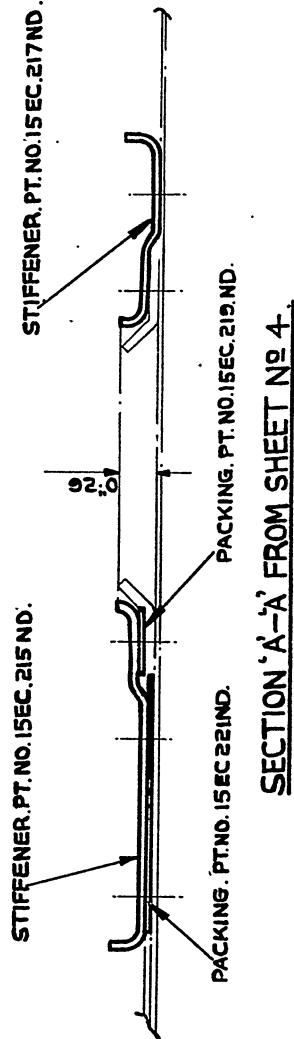
DRG. NO. A.P. 4099 G/P 16/57

SHEET 5

LP32322 9/57 625 C & P Gp. 959 (4)



DETAIL 'C'.



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LP32322 9/57 625 C & P Gp. 959 (4)

DRG. NO. A.R. 4099 G/P 16/57

SHEET 4

REAR BULKHEAD  
PT. NO. L00 856

DRILL ALL RIVET HOLES  
USING A NO. 35 (0.110 IN. DIA.)  
DRILL. DIMPLE C'SK THE  
OUTER CONE SKIN  
120 DEG. X 0.250 IN. DIA.  
AND THE PACKINGS AND  
STIFFENERS TO SUIT.  
TRIM THE PACKINGS  
AND STIFFENERS ON  
ASSY TO MAINTAIN  
THE DIMENSIONS QUOTED.

RIVET 1/8 IN. DIA.  
120 DEG. C'SK HD.  
16-OFF. AS 2230 405

RIVET 1/8 IN. DIA.  
120 DEG. C'SK HD.  
\* 7-OFF. AS 2230 406

THIS HOLE TO BE  
DRILLED ON ASSY.  
TO SUIT EXISTING  
TOOLING HOLE IN  
CONE SKIN.

15EC PACKING  
219 ND  
1-OFF.

AS 2230 405 RIVET 1/8 IN. DIA.  
120 DEG. C'SK HD.  
7-OFF.

AS 2230 404 RIVET 1/8 IN. DIA.  
120 DEG. C'SK HD.  
8-OFF. +

STIFFENER  
PLATE FWD.  
215 ND  
1-OFF.

PACKING  
15EC 221 ND  
1-OFF.

FOR SECTION 'A-A'  
SEE SHEET 5.

FORWARD RING - PT. NO. L00855

FOR SECTION 'B-B'  
SEE SHEET 5

15EC STIFFENER  
217 ND  
PLATE AFT.  
1-OFF.

⊙ SHOWS WHERE  
EXISTING RIVET  
HOLES ARE TO  
BE USED TO  
SECURE NEW  
STIFFENER PLATE

PORT  
FORWARD

VIEW ON TOP INNER SURFACE OF TAIL CONE.

(Charging valve 28Y/15486—Intro.)

Leaflet No. P.17

Vampire F.B. Mk. 9 Aircraft—Hydraulic/Pneumatic—To Introduce Air Charging Valve, Mk. 2 (Ref. No. 28Y/15486), in place of Part No. AGS.1200 (Ref. No. 28Y/10145) in Hydraulic and Pneumatic System.

(Mod. No. VAMPIRE/3539.)

(Class C/3 (N.C.P.) on replacement of individual valves.)

(AB/A/5966—2.1.58.)

## 1 INTRODUCTION

This modification introduces into the aircraft, Mk. 2 charging valves for the high pressure air and hydraulic charging points to replace the existing charging valves that have proved unsatisfactory.

(1) This modification does not cancel, 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 individual valves.

## 3 APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 2 man-hours.

## 4 DRAWINGS REQUIRED

No drawings are required for the embodiment of this modification.

## 5 PARTS AND SPECIAL TOOLS REQUIRED

### (1) Parts and Materials

The following parts and/or materials are required and are to be provided under Unit arrangements:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28F/8215	AGS.1138/B	Washer, jointing	5	C
28Y/15486	A.58	Valve, charging, Mk. 2	5	B
30A/3055	—	Wire, nickel alloy, 22 s.w.g., As reqd.	—	C
		Spec. D.T.D.189		

### (2) Special Tools and 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
26FC/4946	QOO.791A	Block assy.	—	—
26FC/10238	12UN 185A/ND	Nose wheel leg assy.	—	—

The method of modifying each of the above spares is detailed in para. 8, operations (1) and (2).

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Parts required to modify each of the above spares:—

28F/8215	AGS 1138/B	Washer, jointing	1	C
28Y/15486	A 58	Valve, charging, Mk 2	1	B

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2).

#### 7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) On removal of the existing charging valve, Part No. AGS 1200, from each of the undermentioned components a new Mk 2 charging valve, Part No. A 58, with a new jointing washer Part No. AGS 1138/B, is to be fitted as a replacement:—

Component affected	Location of the charging valve
Nose undercarriage compression leg	At the base of the leg
Main undercarriage compression leg (port and starboard)	At the base of each leg
Main accumulator	On the starboard lower, aft, face of Bulkhead No. 2
Air reservoir	On the pneumatic panel, situated in the gun bay, on the aft face of Bulkhead No. 2

(2) On the satisfactory completion of a leak test on each of the newly installed charging valves, lock the nose and main undercarriage charging valves with their respective locking plates, and all other charging valves with 22 s.w.g. nickel alloy wire Spec. D.T.D. 189 (Ref. No. 30A/3055). Refit to each charging valve its appropriate dust cover which also must be wire-locked with 22 s.w.g. nickel alloy wire.

(3) Record Mod. No. "3539" as having been embodied on the appropriate Mod. plates.

#### 9. TESTING AFTER EMBODIMENT

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

On replacement of individual charging valves, charge to its correct pressure, the component or system affected, and carry out a leak test on the newly installed charging valve.

#### 10. RECORDING ACTION

Record on 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 Air Ministry Salvage Leaflets:—

Ref. No.	Part No.	Nomenclature	Qty.	Glass of Equipment
28Y/10145	AGS 1200	Valve, charging	5	B

#### 12. EFFECT ON WEIGHT AND C. OF G.

This modification has no effect on weight or C. of G.

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A.L. No. 224  
(Fuel and oil drain)  
(A.L. No. 213 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.18  
(Alteration 1 incorporated)

**Vampire F.B. Mk. 9 Aircraft—Engine Installation—To Extend Outlet to  
Common Drain Box**

(MOD. NO. VAMPIRE/3567);

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

(AB/A/7735.—23.1.59.)

*Note:—This leaflet supersedes A.P.4099G, Vol. 2, Part 1, Leaflet No. P.18 and  
is the authority for cancelling A.L. No. 213.*

**1. INTRODUCTION**

The existing outlet from the drain box allows the residual fuel and oil to seep back into the engine bay. This modification increases the length of the outlet, which will allow the fuel and oil to be drained clear of the aircraft.

(1) This modification does not cancel, 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 (not later than 2 months after receipt of this leaflet)

*3rd Line Servicing Units (R.S.U.s):* 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 10 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.18/59 is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

(1) Parts and Materials:

The following parts and materials are required, and are to be provided under Unit arrangements:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{8}$ in. dia.	2	C
28Q/6755	AGS.2047/506	Pin, Chobert, sealing	2	C
28Q/11659	AS.2228/506	Rivet, mushroom head, $\frac{5}{8}$ in. dia.	14	C
30A/1828	—	Tube, mild steel, 1.0 in. o/dia. x 20 s.w.g. x 4.26 in. long, Spec. T.45	1	C
30A/3055	—	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C
33B/1021	—	Primer, etch, base	As reqd.	C
33B/1023	—	Primer, etch, accelerator	As reqd.	C

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
33B/1105 (Home)	---	Finish, synthetic, matt, grey-green	As reqd.	C
33B/501 (Overseas)	---	Compound, pigmented varnish jointing	As reqd.	C
33C/1264	---	---	---	---

## (2) Special Tools and 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
26FC/3410	LOO.1047A	Drain box assembly	1	---

The method for modifying the above spare is detailed in paragraph 8, operations (2) and (3), and on the drawing.

Parts required:—

26FC/-	15EC.93ND	Pipe, drain	1	---
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(Make from 1.0 in. o/dia. x 20 s.w.g. x 4.26 in. long mild steel tube (Ref. No. 30A/1828).)

Spare affected:—

26FC/3668	LOO.2340	Fuel drain pipe	1	---
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The method of modifying the above spare is detailed in paragraph 8, operation (5).

No parts are required to modify this spare.

Spare affected:—

26FC/12456	LOO.1060A/3	Lower cowl support ring assembly	1	---
------------	-------------	----------------------------------	---	-----

The method of modifying the above spare is detailed in paragraph 8, operations (1) to (4) inclusive, and on the drawing.

Parts required:—

26FC/-	15EC.93ND	Pipe, drain	1	---
--------	-----------	-------------	---	-----

(Make from 1.0 in. o/dia. x 20 s.w.g. x 4.26 in. long mild steel tube (Ref. No. 30A/1828).)

28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{8}$ in. dia.	2	C
28Q/6755	AGS.2047/506	Pin, Chobert, sealing	2	C
28Q/11659	AS.2228/506	Rivet, mushroom head, $\frac{5}{8}$ in. dia.	14	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2).

## 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	New Part/Assy. No.	Ref. No.
26FC/3110	LOO.1047A	Drain box assembly	15EC.189A	26FC/13005
26FC/3668	LOO.2340	Fuel drain pipe	LOO.4079	26FC/13177
26FC/12456	LOO.1060A/3	Assy. of lower cowl support ring	15EC.251A	26FC/13006

**RESTRICTED**

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations :—

- (1) Remove the lower engine cowlings and locate, on the lower cowl support ring, Part No. LOO.1060A/3, the existing drain box assembly, Part No. LOO.1047A, and disconnect its attached pipe assemblies. Using a  $\frac{1}{8}$  in. dia. drill, very carefully drill out the sixteen drain box attachment rivets, and remove the drain box from the aircraft.
- (2) Working on the bottom of the drain box, carefully cut off the existing external drain pipe, Part No. LOO.1050ND, and flush it up with the base of the box, taking great care not to damage the internal drain pipe.
- (3) Make up a new drain pipe from 1.0 in. o/dia.  $\times$  20 s.w.g. mild steel tube, Spec. T.45 (Ref. No. 30A/1828), to the dimensions given on the drawing, and number it, Part No. 15EC.93ND. Refer to the drawing, then Sif-Bronze Weld the new pipe to the base of the drain box, as detailed, taking care not to overheat the drain box, as the attached drain box adaptors are silver soldered in position. The drain box assembly becomes, Part No. 15EC.189A, and is to be re-part numbered thus.
- (4) Open up the existing rivet attachment holes in both the drain box assembly and the cowl support ring with a No. 21 (0.159 in. dia.) drill, then, after coating the mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264), resecure the modified drain box assembly in position with fourteen  $\frac{5}{16}$  in. dia. mushroom-head rivets and two  $\frac{5}{16}$  in. dia. Chobert rivets and sealing pins, Part Nos. AS.2228/506, AGS.2045/506 and AGS.2047/506 respectively. Reconnect the pipes which were disconnected in operation (1) and wire-lock them, one to another, with 22 s.w.g. nickel alloy locking wire (Ref. No. 30A/3055). The lower cowl support ring now becomes Part No. 15EC.251A, and is to be re-part numbered thus.
- (5) Locate the existing fuel drain pipe, Part No. LOO.2340, which is situated aft of newly modified drain box, and release its attaching jubilee clip, then remove the pipe. Reduce the overall length of this drain pipe to 2.25 in. by cutting back the  $\frac{3}{4}$  in. outside dia. end of the pipe, then thoroughly deburr. The pipe now becomes Part No. LOO.4079 and is to be re-part numbered thus. Resecure the pipe in its original position with the existing jubilee clip.
- (6) Repair the finish to the drain box assembly and its new pipe with etch primer, accelerator and base (Ref. Nos. 33B/1023 and 33B/1021) and finish synthetic matt grey-green (Ref. No. 33B/1105 or 501). Replace the lower engine cowlings.

## 9. TESTING AFTER EMBODIMENT

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

## 10. RECORDING ACTION

Record on Aircraft Form 700.

## 11. DISPOSAL OF REDUNDANT PARTS

No parts are rendered redundant by the embodiment of this modification.

## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.10 lb., and a change of moment of +2.0 lb. ft.

**RESTRICTED**





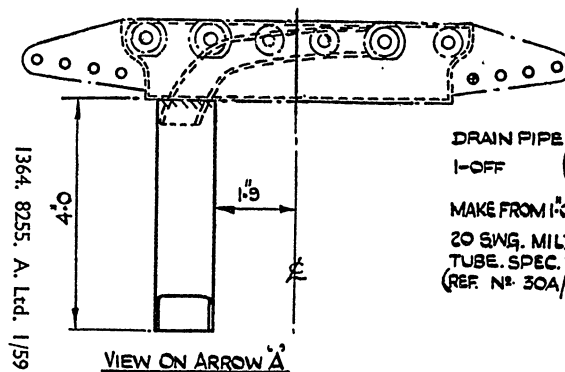
RESTRICTED

DRG. No. A.P. 4099G/P18/59.

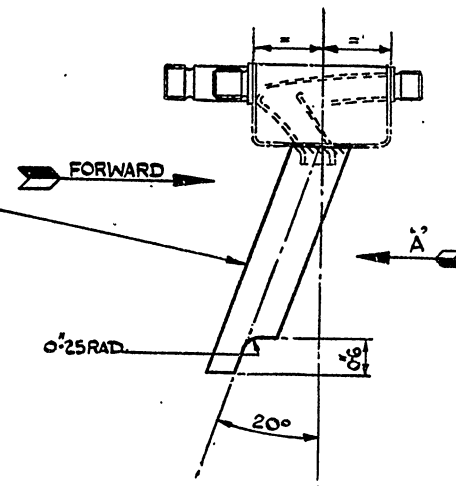
TAKE EXTREME CARE WHEN WELDING.  
NOT TO OVERHEAT THE ASSEMBLY AS  
ALL ADAPTORS ARE SILVER SOLDERED

CUT OFF REDUNDANT PIPE, PART N° L00.1050 N.D.,  
 FLUSH WITH DRAIN BOX SIF BRONZE WELD THE NEW  
 PIPE TO BOX OVER AREA MARKED THUS \\\\\\\

RE-NUMBER THE DRAIN BOX ASSEMBLY ISEC 189A



DRAIN PIPE ISEC 93 ND  
 1-OFF  
 MAKE FROM 1'-0" O/DIA.  
 20 SWG. MILD STEEL  
 TUBE. SPEC. T. 45  
 (REF. N° 30A/1828.)



OPEN UP THE SIXTEEN ATTACHMENT  
 HOLES TO N° 21 (0'-159 DIA)  
 ON REMOVAL FROM AIRCRAFT.

ON REASSEMBLY, DRAIN BOX TO BE RIVETTED  
 TO COWL RING WITH FOURTEEN MUSH. HEAD  
 RIVETS PART N° AS 2228/506, AND TWO CHOBERT  
 RIVETS AND SEALING PINS, PART N°S AGS 2045/506  
 AND AGS. 2047/506 IN HOLES MARKED THUS ⊕

C

1

C

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C

*Slater*

A.L. No. 226  
(Engine cowlings—drainage improved)  
(A.L. No. 220 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. P.19  
(Alteration 1 incorporated)

**Vampire F.B. Mk. 9 Aircraft—Engine Cowlings—To Improve Drainage of Lower Cowl Panels and Introduce Extractor Fairings over Drain Holes**

(MOD. NO. VAMPIRE/3526.)

(Class B/2.)

(AB/A/7734.—26.2.59.)

*Note :—This leaflet supersedes A.P.4099G, Vol. 2, Part 1, Leaflet No. P.19 and is the authority for cancelling A.L. No. 220.*

**1. INTRODUCTION**

Drainage of residual fuel and oil from inside of the engine cowlings is not efficient at present, thus presenting a considerable fire hazard. This modification introduces improvements to the cowlings drainage to permit complete drainage of residual fuel and oil and also introduces external extractor fairings which prevent oil and fuel being sucked into the engine bay through the drain holes.

- (1) This modification does not cancel, 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 (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 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 10 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/P.19/59, Sheets 1-6, is incorporated in this leaflet.

**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. 35 Maintenance Unit under Ref. No. 26FC/103526:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	15EC.105ND	Plate, inspection door blanking	2	—
26FC/-	15EC.107ND	Plate, inspection door blanking	2	—
26FC/-	15EC.271	Fairing, forward guide tube	1	—
26FC/-	15EC.273	Fairing, tail guide tube	1	—
26FC/-	15EC.313A	Fairing, assy., rear, inspection door	2	—
26FC/-	15EC.381A/ND	Fairing assy., rear, inspection door	2	—
26FC/-	15EC.317A	Fairing assy., front, inspection door	2	—
26FC/-	15EC.383A/ND	Fairing assy., front, inspection door	2	—
26FC/-	15EC.341ND	Packing, middle cowling	2	—

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/-	15EC.361A	Fairing assy., L.H., middle cowling	1	—
26FC/-	15EC.362A	Fairing assy., R.H., middle cowling	1	—
26FC/-	15EC.367A	Fairing assy.	4	—
26FC/-	15EC.371ND	Plate, rear cone blanking	1	—
26FC/-	15EC.373A/ND	Plate and fairing assy., hinge blanking	1	—
26FC/-	15EC.375ND	Fairing, undrilled with trim allowance	12	—
26FC/-	15EC.379ND	Plate, rear cone blanking	4	—
26FC/-	DHS.365/3C	Bolt, 120 deg., csk/hd., 2 B.A.	2	—
28Q/6651	AGS.2046/406	Rivet, Chobert, csk/hd., $\frac{1}{8}$ in. dia.	3	C
28Q/6247	AGS.2047/404	Pin, Chobert, sealing	3	C
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	1	C
28Q/10777	AS.2228/407	Rivet, mrm/hd. $\frac{1}{8}$ in. dia.	32	C
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	6	C
28Q/6676	AS.2229/305	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	10	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	74	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	14	C
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	10	C
28Q/10694	AS.2230/305	Rivet, 120 deg. csk/hd. $\frac{3}{32}$ in. dia.	2	C
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	3	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	8	C
28Q/10414	AS.2230/606	Rivet, 120 deg. csk/hd. $\frac{3}{16}$ in. dia.	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 at 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>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
33B/1021	—	Primer, etch, base	As reqd.	C
33B/1023	—	Primer, etch, accelerator	As reqd.	C
33B/	—	Finish, Cellulose, matching	As reqd.	C
33B/1105 (Home)	—	{ Finish, synthetic, matt, grey-green	As reqd.	C
33B/501 (Overseas)	—			
33C/1264	—	Compound, pigmented varnish jointing	As reqd.	C

## (2) Special Tools and 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:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/6760	L00.58A/1	Lower Middle Cowl Panel		

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd., $\frac{3}{8}$ in. dia.		
		Spare Door	7	C
		Spare Doors Complete	14	C
26FC/-	15EC.107ND	Plate, inspection door blanking		
		Spare Door	1	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.107ND blanking plate			
28Q/1077	AS.2228/407	Rivet, mrm/hd., $\frac{1}{8}$ in. dia.		
		Spare Door	4	C
		Spare Doors Complete	8	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd., $\frac{3}{8}$ in. dia.		
		Spare Door	9	C
		Spare Doors Complete	18	C
26FC/- or 26FC/-	15EC.313A	Fairing assy., rear, inspection door		
	15EC.381A/ND	Fairing assy., rear, inspection door		
		Spare Door	1	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.313A or 15EC.381A/ND fairing			
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	3	C
		Spare Doors Complete	6	C
28Q/10777	AS.2228/407	Rivet, mush/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
26FC/- or 26FC/-	15EC.317A	Fairing assy., front inspection door		
	15EC.383A/ND	Fairing assy., front inspection door		
		Spare Door	1	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.317A or 15EC.383A/ND fairing			
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
28Q/10777	AS.2228/407	Rivet, mush/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
26FC/-	15EC.373A/ND	Plate and fairing assy. hinge blanking		
		Spare Doors Complete	1	—
	Attaching parts for 15EC.373A/ND Plate and Fairing Assy.			
28Q/10777	AS.2228/407	Rivet, mrm/hd., $\frac{1}{8}$ in. dia.	12	C
	Spare affected :—			
26FC/12098	L00.853A/6	G.A. of Rear Cone		
The work involved in modifying this spare is detailed in Para. 8 operations (17) to (21) and on Sheets 5 and 6 of the drawing.				
	Parts required :—			
26FC/-	15EC.367A	Fairing assy.	1	—
	Attaching parts for 15EC.367A fairing assy.			
28Q/6651	AGS.2046/406	Rivet, Chobert, csk/hd. $\frac{1}{8}$ in. dia.	2	C
28Q/6247	AGS.2047/404	Pin, Chobert, sealing	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	2	C
26FC/-	15EC.371ND	Plate, rear cone blanking	1	—

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	L00.3761A/ND	Lower Middle Cowl Panel Sub. Assy.		

The work involved in modifying these spares is detailed in Para. 8, operations (8) to (16) and on sheets 2, 3, 4 and 6 of the drawing.

Parts required :—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	15EC.271	Fairing, fwd. guide tube	1	—
		Attaching parts for 15EC.271 fairing		
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	1	C
28Q/10694	AS.2230/305	Rivet, 120 deg. csk/hd. $\frac{3}{32}$ in. dia.	2	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	2	C
26FC/-	15EC.273	Fairing, tail guide tube	1	—
		Attaching parts for 15EC.273 fairing		
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	3	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
26FC/-	15EC.341ND	Packing, middle cowl	2	—
26FC/-	15EC.361A	Fairing assy., L.H. middle cowl	1	—
26FC/-	15EC.362A	Fairing assy., R.H. middle cowl	1	—
		Attaching parts for 15EC.341ND packing ; 15EC.361-2A Fairing Assys.		
28Q/6676	AS.2229/305	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia.	10	C
26FC/-	15EC.367A	Fairing assy.	3	—
		Attaching parts for 15EC.367A fairing Assy.		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	12	C
26FC/-	15EC.375ND	Fairing, undrilled with trim allowance	3	—
		Attaching parts for 15EC.375ND fairings		
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia.	9	C
28Q/10414	AS.2230/606	Rivet, 120 deg. csk/hd., $\frac{3}{16}$ in. dia.	4	C

Spares affected :—

26FC/1037	L00.431A/ND	Door Assy., Lower Inspection, Port
26FC/12625	15EC.151A	Doors Assy. Complete, Lower Inspection
26FC/12545	15EC.153A/ND	Door Assy., Lower Inspection, Stbd.

The work involved in modifying these spares is detailed in Para. 8 operations (2) to (7) and on sheet 1 of the drawing.

Parts required :—

\* Note :—Items not common to all spares are listed with their application adjacent to qty. required.

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	15EC.105ND	Plate, inspection door blanking		
		Spare Door	1	—
		Spare Doors Complete	2	—
		Attaching parts for 15EC.105ND Plate blanking		
28Q/10777	AS.2228/407	Rivet, mrm/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C

RESTRICTED

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
Attaching parts for 15EC.371ND blanking plate				
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	1	C
26FC/-	15EC.375ND	Fairing undrilled with trim allowance	8	—
Attaching parts for 15EC.375ND fairings				
28Q/6651	AGS.2046/406	Rivet, Chobert csk/hd., $\frac{1}{8}$ in. dia.	1	C
28Q/6247	AGS.2047/404	Pin, Chobert, sealing	1	C
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd.	2	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd.	21	C
26FC/-	15EC.379ND	Plate, rear cone blanking	4	—
Attaching parts for 15EC.379ND blanking plate				
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd.	12	C

Spare affected :—

26FC/8191 L00.3711A Guide Tube Assy., Fire Guard

The work involved in modifying this spare is detailed in Para. 8 operation (11) and on Sheet 3 of the drawing.

There are no parts required for modifying this spare.

Spare affected :—

26FC/8192 L00.3713A Guide Tube Assy., Tail pipe

The work involved in modifying this spare is detailed in Para. 8 operation (14) and on Sheet 4 of the drawing.

There are no parts required for modifying this spare.

Spares will be modified by the stockholding unit as directed by the Air Ministry (E.2).

## 7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

Old		New		
Ref. No.	Part/Assy. No.	Nomenclature	Part/Assy. No.	Ref. No.
26FC/6760	L00.58A/1	Cowl panel assy., Lower middle	15EC.343A	26FC/-
26FC/1037	L00.431A/ND	Door assy., lower inspection port	15EC.327A/ND	26FC/-
26FC/972	L00.862ND	Skin, lower front, R.H. rear cone	15EC.363ND	26FC/-
26FC/974	L00.864ND	Skin, lower centre, rear cone	15EC.299ND	26FC/-
26FC/976	L00.866ND	Skin, lower front, L.H. rear cone	15EC.365ND	26FC/-
26FC/8191	L00.3711A	Guide tube assy., fire guard	15EC.267A	26FC/-
26FC/8192	L00.3713A	Guide tube assy., tail pipe	15EC.269A	26FC/-
26FC/-	L00.3747ND	Plate reinforcing	15EC.347ND	26FC/-
26FC/-	L00.3761A/ND	Cowl sub-assy. lower middle	15EC.345A/ND	26FC/-
26FC/12613	15EC.97	Rail, lower hinge	15EC.321	26FC/-
26FC/12625	15EC.151A	Doors assy. lower inspection	L00.4061A	26FC/-
26FC/12545	15EC.153A/ND	Doors assy. lower inspection stbd.	L00.4065A/ND	26FC/-
26FC/12098	L00.853A/6	G.A. of rear cone	L00.3055A	26FC/-

**RESTRICTED**

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Remove the rear cone, lower middle engine cowling and the lower engine inspection doors in accordance with current authorised procedure.

*Note* :—Throughout the embodiment of this modification the following points must be observed:—

- (a) Check the position of the new blanking plates or fairings in relation to existing stiffeners.
  - (b) Adjust the position of new attachment rivets prior to drilling and restrict the penetration of the drill to avoid damaging existing stiffeners.
  - (c) Adjust the position and size of new attachment rivets to either pick up on, or avoid, existing rivet holes in the vicinity, whichever is more suitable.
  - (d) Remove all burrs after drilling or trimming.
  - (e) Coat the mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264).
- (2) *Refer* to Sheet 1 of the drawing. Working with the lower engine inspection doors, locate the hinge rail in the centre of the two doors. Mark off and drill out the existing twelve 90 deg. countersunk head rivets detailed for securing the new blanking plate and fairing assembly, Part No. 15EC.373A/ND; using a No. 30 (0.1285 in. dia.) drill. Enlarge the two existing countersinks at the aft end of the hinge rail 124 deg. to suit the dimples in the new blanking plate and fairing assembly. Offer up this assembly to the underside of the hinge rail, and drill off the twelve holes in the plate through, from the inside of the hinge rail using the No. 30 drill, and rivet the assembly to the hinge rail using twelve new  $\frac{1}{8}$  in. dia. mush. head-rivets, Part No. AS.2228/407, as detailed.

*Note* :—The following operations (3) to (7) are applicable to both port and starboard engine lower inspection doors.

- (3) Locate the forward and aft drain hole at the hinge end of the door, enlarge these two existing holes using a  $\frac{3}{8}$  (0.375) in. dia. drill. Offer up to the forward drain hole a new fairing, Part No. 15EC.317A, or 15EC.383A/ND, position this as shown ensuring that the aft edge of the fairing plate is square across the centre of the drain hole and that the hole is central under the mouth of the fairing.
- (4) Mark off and drill the four rivet attachment holes using the No. 30 drill. Attach the new fairing with two rivets, Part No. AS.2229/405, and two rivets, Part No. AS.2228/407, through the hinge.
- (5) Offer up the new rear fairing assembly, Part No. 15EC.313A or 15EC.381A/ND to the door, as shown ensuring that the forward rivet attachment hole is on the same centre line as the drain hole and that the hole in the fairing lines up with the  $\frac{3}{8}$  in. dia. drain hole. Mark off and drill the five rivet attachment holes using the No. 30 drill. Rivet the fairing in position using three rivets, Part No. AS.2229/405, and two rivets, Part No. AS.2228/407, through the hinge.
- (6) Position the new blanking plate, Part No. 15EC.105ND, over the existing forward drain holes as shown. Mark round this plate and remove it. Ascertain which of the existing rivets are to be drilled out from the hinge rail and mark off the positions for the new rivet holes on the door skin, approximately in the positions shown. Drill out the selected rivets from the hinge using the No. 30 drill and drill off the new holes in the door skin using a No. 41 (0.0960 in. dia.) drill. Place the blanking plate into position again and drill it off to suit from the inside of the door. Rivet this plate into position using two  $\frac{1}{8}$  in. dia. mush. head rivets, Part No. AS.2228/407, and approximately seven  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306 (cut length to suit) first countersinking the appropriate rivet holes to suit the heads of the rivets.

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- (7) To the remaining two drain holes not required offer up the larger blanking plate, Part No. 15EC.107ND, and carry out the procedure adopted for fitting the blanking plate in operation (6). When the plate is in the correct position and the rivet holes drilled, secure it using four  $\frac{1}{4}$  in. dia. mush. head rivets, Part No. AS.2228/407 and approximately nine  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306 (cut length to suit), countersinking the appropriate rivet holes to suit the heads of the rivets. Locate the stiffener ends on the inside of the door in the positions marked 'X' on the drawing and remove the end sections as shown.
- (8) Refer to Sheet 2 of the drawing. From the forward end of the lower middle cowling locate the four existing  $\frac{1}{4}$  in. dia. drain holes, one in the forward half, and one just aft of the first stiffening channel, one in the forward half, and one just aft of the second stiffening channel in the centre on the underside of the cowling. Enlarge these holes using the  $\frac{3}{8}$  in. dia. drill. Position the new blanking plate, fairing assemblies, Part No. 15EC.367A as shown. Mark off and drill the rivet holes using the No. 30 drill. Re-countersink the two forward countersunk holes in each blanking plate, fairing assembly to 90 deg. to suit the rivet heads. Rivet these three assemblies to the outside of the cowling using twelve 90 deg. countersunk head rivets, Part No. AS.2229/404.
- (9) Locate the remaining drain hole which has been enlarged and Refer to detail 'G' on Sheets 2 and 6 of the drawing and offer up the new fairing, Part No. 15EC.375ND, to the position shown, mark off and drill the holes in the most suitable position, approximately in the positions shown using the No. 41 drill, countersink the fairing to suit the rivet heads and rivet into position with three  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (10) Determine the position for the new drain hole and fairing, Part No. 15EC.375ND, just forward of the centre stiffening channel. Mark off and drill the  $\frac{3}{8}$  in. dia. drain hole to the dimensions shown. Offer up the new fairing, mark off and drill the three rivet holes, countersink the fairing to suit the rivet heads, and rivet the fairing to the cowling using three  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (11) Locate the fire guard fuel drain guide tube. Refer to detail 'A' on Sheet 3 of the drawing. Cut off the end of the guide tube which protrudes through the outer surface of the cowling to the dimension shown. Working on the inside of the cowling locate, mark off and remove the 0.5 in. cut-out from the forward side of the existing circular dish reinforcing plate.
- (12) Locate the four existing  $\frac{1}{8}$  in. dia. drain holes two forward and two aft of the fire guard fuel drain guide tube blank these off with four  $\frac{1}{8}$  in. dia. 120 deg. countersunk head rivets, Part No. AS.2230/606, first countersinking the outer skin 120 deg. to suit the rivet heads.
- (13) Working with the new fairing, Part No. 15EC.271, mark off on its flange the two new rivet holes to the dimensions shown. Offer up this fairing to the positions on the underside of the cowling as shown. Mark off and drill the rivet holes, countersinking the fairing where necessary to suit the rivet heads. Rivet this fairing in its correct position using the rivets detailed on the drawing.
- (14) Working on the aft end of the lower middle cowling and referring to detail 'D' on Sheets 2 and 4 of the drawing locate the tail pipe fuel drain guide tube assembly. Cut off the portion of the guide tube which protrudes through the outer surface of the cowling to the dimension shown. Offer up the new fairing, Part No. 15EC.273, to the exact position shown on the underside of the cowling. Mark off and drill the rivet holes using the No. 30 drill, taking great care when

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drilling out the two existing rivets. Rivet the fairing to the underside of the cowlings with the rivets detailed, first countersinking the fairing to suit the rivet heads.

- (15) Locate the two existing  $\frac{1}{4}$  in. dia. drain holes, one either side of the new fairing, open up these holes using the  $\frac{3}{8}$  in. dia. drill. Place the new packings, Part No. 15EC.341ND, in position together with the new fairing assemblies, Part Nos. 15EC.361A (Port) and 15EC.362A (Starboard), trim packings to suit. Mark off and drill the rivet holes using the No. 41 drill and rivet them to the cowlings with ten  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/305.
- (16) Position the new fairing, Part No. 15EC.375ND, over the existing drain hole as shown, mark off and drill the three rivet holes using the No. 41 drill and rivet to the cowlings using three  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304, first countersinking the holes in the fairing to suit the rivets.
- (17) Refer to Sheet 5 of the drawing. On the underside of the rear cone locate the four, now not required  $\frac{1}{4}$  in. dia. drain holes outboard of the intersections of the centre and rear bulkheads and the fore and aft top hat stiffeners. Offer up to these positions, as shown, the new blanking plates, Part No. 15EC.379ND. Mark off and drill the rivet holes in the approximate positions shown. Drill off the blanking plates to suit the holes in the cone; countersink the holes in the plates to suit the rivet heads. Rivet them in position with twelve  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (18) Refer to detail 'F' on Sheets 5 and 6 of the drawing and affix the new blanking plate, Part No. 15EC.371ND, as shown, using one  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304. Drill the new drain hole  $\frac{3}{8}$  in. dia. and fit the fairing, Part No. 15EC.375ND, to its correct position, using two  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304, and one  $\frac{1}{4}$  in. dia. 120 deg. countersunk head Chobert rivet with sealing pin, Part Nos. AGS.2046/406 and AGS.2047/404, respectively. Using a  $\frac{3}{16}$  (0.1875) in. dia. drill, drill the new drain hole adjacent to the fairing as shown.
- (19) Locate the seven existing drain holes in the cone, which are shown in the positions of detail 'G'. Enlarge these seven drain holes using the  $\frac{3}{8}$  in. dia. drill. Position the seven new fairing, Part No. 15EC.375ND, over the enlarged drain holes, mark off, drill and countersink the three rivet holes in each fairing. Rivet these fairings to the undersurface of the rear cone using twenty-one  $\frac{3}{32}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (20) Refer to Sheet 5 and section 'H'—'H' on Sheet 6 of the drawing, mark off and drill the four new  $\frac{3}{8}$  in. dia. drain holes in the cone skin which drain the top hat stiffeners, 0.90 in. aft of the forward edge of the cone.
- (21) Locate the aft ring of rivets securing the aft support ring of the tail cone, select and drill out the rivet nearest the centre line of the cone then enlarge this hole using the  $\frac{3}{8}$  in. dia. drill. Position the new fairing assembly, Part No. 15EC.367A, over this hole, mark off and drill the four rivet holes with the No. 30 drill and affix the fairing using two  $\frac{1}{4}$  in. dia. 120 deg. countersunk head Chobert rivets with sealing pins, Part Nos. AGS.2046/406 and AGS.2047/404, for the two forward attachments and two  $\frac{1}{4}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/404, for the two aft attachments.
- (22) Repair the finish to the inside of all the cowlings using primer etch base and accelerator and finish synthetic matt, grey-green (Ref. Nos. 33B/1021, 33B/1023 and 33B/1105 or 501) respectively. Repair the finish to the outer surfaces of the cowlings using primer etch base and accelerator and finish cellulose matching Spec. D.T.D. 772. Re-fit the cowlings to the aircraft in accordance with current authorised procedure using the retained attaching items with the exception of the two aft 2 B.A. countersunk head bolts for attaching the lower

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inspection doors which are replaced with two new 2 B.A. bolts, Part No. DHS.365/3C.

9. TESTING AFTER EMBODIMENT

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

10. RECORDING ACTION

Record on Aircraft Form 700.

11. DISPOSAL OF REDUNDANT PARTS

No parts are rendered redundant by the embodiment of this modification.

12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.66 lb., and a change of moment of +2.0 lb. ft.

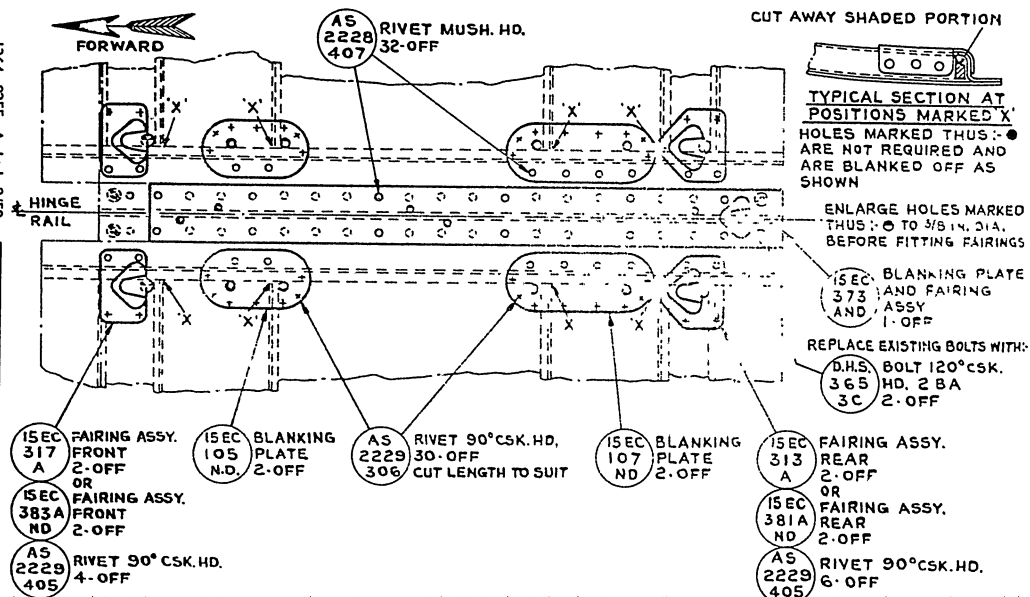
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DRG. No. A.P. 4099C/P19/59  
SHEET 1.

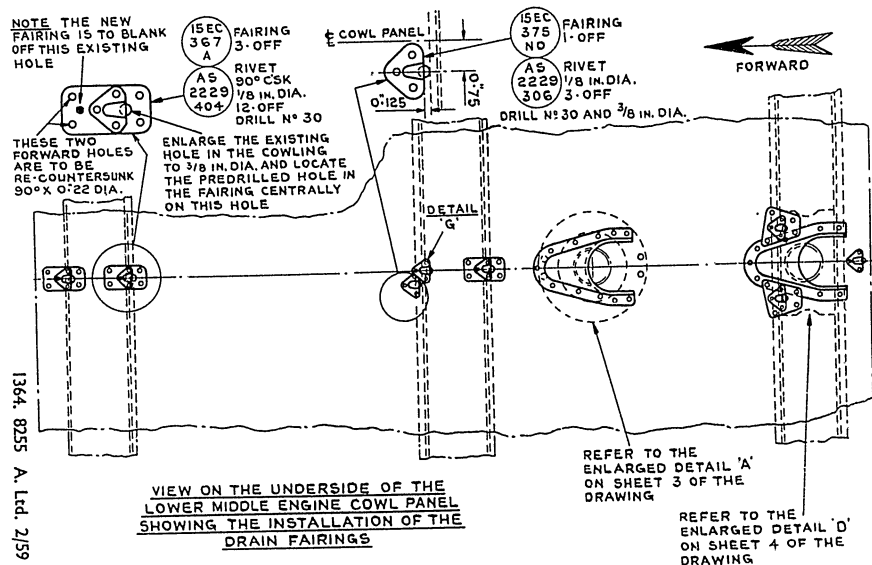


VIEW ON THE UNDERSIDE OF THE LOWER ENGINE INSPECTION DOORS SHOWING  
BLANKING OF REDUNDANT DRAIN HOLES AND FITMENT OF FAIRINGS TO THE REMAINING DRAIN HOLES

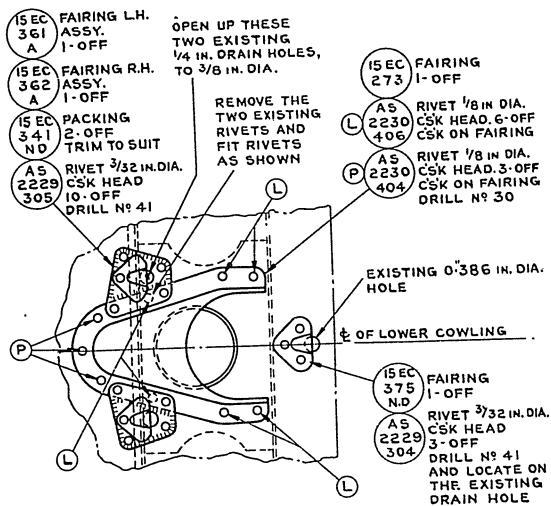
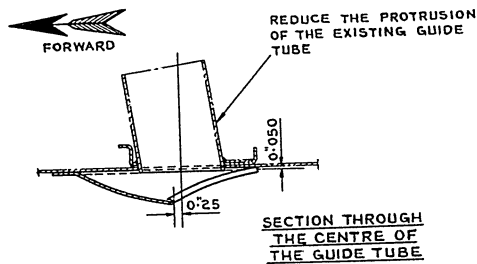
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SHEET 2.







SIDE AND INVERTED PLAN OF DETAIL 'D'

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SHEET 4.

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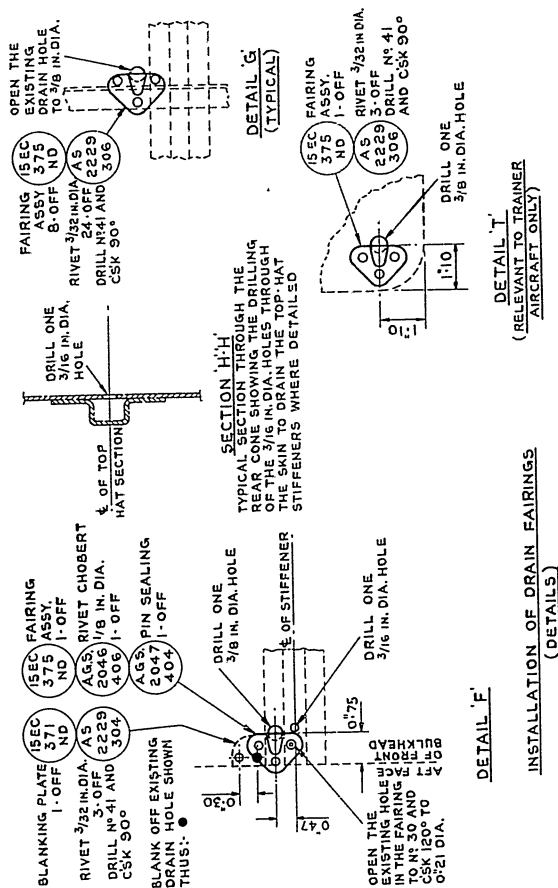
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SHEET 6.



INSTALLATION OF DRAIN FAIRINGS  
(DETAILS)

DETAIL 'I'  
(RELEVANT TO TRAINER  
AIRCRAFT ONLY)

**Vampire F.B. Mk. 9 Aircraft—Engine Cowlings—To improve Drainage of Lower Cowl Panels and Introduce Extractor Fairings over Drain Holes**

(Mod. No. Vampire/3526.)

(Class B/2.)

(AB/A/7734.—7.7.58.)

**1. INTRODUCTION**

Drainage of residual fuel and oil from inside of the engine cowlings is not efficient at present, thus presenting a considerable fire hazard. This modification introduces improvements to the cowlings drainage to permit complete drainage of the residual fuel and oil and also introduces external extractor fairings which prevent oil and fuel being sucked into the engine bay through the drain holes.

- (1) This modification does not cancel, 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 (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 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 10 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099/G/P.19/58, Sheets 1-6 is incorporated in this leaflet.

**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. 35 Maintenance Unit under Ref. No. 26FC/103526:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	15EC.105ND	Plate, inspection door blanking	2	—
26FC/-	15EC.107ND	Plate, inspection door blanking	2	—
26FC/-	15EC.271	Fairing, forward guide tube	1	—
26FC/-	15EC.273	Fairing, tail guide tube	1	—
26FC/-	15EC.313A	Fairing, assy., rear inspection door	2	—
26FC/-	15EC.317A	Fairing assy., front, inspection door	2	—
26FC/-	15EC.341ND	Packing, middle cowlings	2	—
26FC/-	15EC.361A	Fairing assy., L.H., middle cowlings	1	—
26FC/-	15EC.362A	Fairing assy., R.H., middle cowlings	1	—
26FC/-	15EC.367A	Fairing assy.	4	—
26FC/-	15EC.371ND	Plate, rear cone blanking	1	—
26FC/-	15EC.373A/ND	Plate and fairing assy., hinge blanking	1	—
26FC/-	15EC.375ND	Fairing, undrilled with trim allowance	12	—

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/-	15EC.379ND	Plate, rear cone blanking	4	—
26FC/-	DHS.365/3C	Bolt, 120 deg., csk/hd., 2 B.A.	2	—
28Q/6651	AGS.2046/406	Rivet, Chobert, csk/hd., $\frac{1}{8}$ in. dia.	3	C
28Q/6247	AGS.2047/404	Pin, Chobert, sealing	3	C
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	1	C
28Q/10777	AS.2228/407	Rivet, mrm/hd. $\frac{1}{8}$ in. dia.	24	C
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	6	C
28Q/6676	AS.2229/305	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	10	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd. $\frac{3}{32}$ in. dia.	74	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	14	C
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	10	C
28Q/10563	AS.2229/407	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	8	C
28Q/10694	AS.2230/305	Rivet, 120 deg. csk/hd. $\frac{3}{32}$ in. dia.	2	C
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	3	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	8	C
28Q/10414	AS.2230/606	Rivet, 120 deg. csk/hd. $\frac{3}{16}$ in. dia.	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 at 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>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
33B/1021		Primer, etch, base	As reqd.	C
33B/1023		Primer, etch, accelerator	As reqd.	C
33B/		Finish, Cellulose, matching	As reqd.	C
33B/1105 (Home)	{	Finish, synthetic, matt, grey-green	As reqd.	C
33B/501 (Overseas)		Compound, pigmented varnish jointing	As reqd.	C
33C/1264				

## (2) Special Tools and 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:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/6760	L00.58A/1	Lower Middle Cowl Panel		
26FC/-	L00.3761A/ND	Lower Middle Cowl Panel Sub. Assy.		

The work involved in modifying these spares is detailed in Para. 8, operations (8) to (16) and on sheets 2, 3, 4 and 6 of the drawing.

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equip- ment</i>
26FC/-	15EC.107ND	Plate, inspection door blanking	1	—
		Spare Door	2	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.107ND blanking plate			
28Q/1077	AS.2228/407	Rivet, mrm/hd., $\frac{1}{8}$ in. dia.		
		Spare Door	4	C
		Spare Doors Complete	8	C
28Q/6677	AS.2229/306	Rivet, 90 deg., csk/hd. $\frac{3}{8}$ in. dia.		
		Spare Door	9	C
		Spare Doors Complete	18	C
26FC/-	15EC.313A	Fairing assy., rear, inspection door		
		Spare Door	1	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.313A fairing assy.			
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	3	C
		Spare Doors Complete	6	C
28Q/10563	AS.2229/407	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
26FC/-	15EC.317A	Fairing assy., front inspection door		
		Spare Door	1	—
		Spare Doors Complete	2	—
	Attaching parts for 15EC.317A Fairing assy.			
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
28Q/10563	AS.2229/407	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
26FC/-	15EC.373A/ND	Plate and fairing assy. hinge blanking		
		Spare Doors Complete	1	—
	Attaching parts for 15EC.373A/ND Plate and Fairing Assy.			
28Q/10777	AS.2228/407	Rivet, mrm/hd., $\frac{1}{8}$ in. dia.	12	C
	Spare affected:—			
26FC/12098	L00.853A/6	G.A. of Rear Cone		
The work involved in modifying this spare is detailed in Para. 8 operations (17) to (21) and on sheets 5 and 6 of the drawing.				
	Parts required:—			
26FC/-	15EC.367A	Fairing assy.	1	—
	Attaching Parts for 15EC.367A fairing assy.			
28Q/6651	AGS.2046/406	Rivet, Chobert, csk/hd. $\frac{1}{8}$ in. dia.	2	C
28Q/6247	AGS.2047/404	Pin. Chobert, sealing	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	2	C
26FC/-	15EC.371ND	Plate, rear cone blanking	1	—
	Attaching parts for 15EC.371ND Blanking plate			
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd. $\frac{3}{8}$ in. dia.	1	C

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
Parts required:—				
26FC/—	15EC.271	Fairing, fwd. guide tube	1	—
		attaching parts for 15EC.271 fairing		
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	1	C
28Q/10694	AS.2230/305	Rivet, 120 deg. csk/hd. $\frac{3}{16}$ in. dia.	2	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	2	C
26FC/—	15EC.273	Fairing, tail guide tube	1	—
		Attaching parts for 15EC.273 fairing		
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	3	C
28Q/10681	AS.2230/406	Rivet, 120 deg. csk/hd. $\frac{1}{8}$ in. dia.	6	C
26FC/—	15EC.341ND	Packing, middle cowl	2	—
26FC/—	15EC.361A	Fairing assy., L.H. middle cowl	1	—
26FC/—	15EC.362A	Fairing assy., R.H. middle cowl	1	—
Attaching parts for 15EC.341ND packing; 15EC.361-2A Fairing Assys.				
28Q/6676	AS.2229/305	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia.	10	C
26FC/—	15EC.367A	Fairing assy.	3	—
		Attaching parts for 15EC.367A fairing Assy.		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	12	C
26FC/—	15EC.375ND	Fairing, undrilled with trim allowance	3	—
		Attaching parts for 15EC.375ND fairings		
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia.	9	C
28Q/10414	AS.2230/606	Rivet, 120 deg. csk/hd. $\frac{3}{16}$ in. dia.	4	C
Spares affected:—				
26FC/1037	L00.431A/ND	Door Assy., Lower Inspection, Port		
26FC/12625	15EC.151A	Doors Assy. Complete, Lower Inspection		
26FC/12545	15EC.153A/ND	Door Assy., Lower Inspection, Stbd.		
The work involved in modifying these spares is detailed in Para. 8 operations (2) to (7) and on sheet 1 of the drawing.				
Parts required:—				
<i>Note:—</i> Items not common to all spares are listed with their application adjacent to qty. required.				
26FC/—	15EC.105ND	Plate, inspection door blanking		
		Spare Door	1	—
		Spare Doors Complete	2	—
		Attaching parts for 15EC.105ND Plate blanking		
28Q/10777	AS.2228/407	Rivet, mrm/hd. $\frac{1}{8}$ in. dia.		
		Spare Door	2	C
		Spare Doors Complete	4	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia.		
		Spare Door	7	C
		Spare Doors Complete	14	C

RESTRICTED

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/-	15EC.375ND	Fairing undrilled with trim allowance	8	—
Attaching parts for 15EC.375ND fairings				
28Q/6651	AGS.2046/406	Rivet, Chobert csk/hd., $\frac{1}{8}$ in. dia.	1	C
28Q/6247	AGS.2047/404	Pin. Chobert, sealing	1	C
28Q/6675	AS.2229/304	Rivet, 90 deg. csk/hd.	2	C
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd.	21	C
26FC/-	15EC.379ND	Plate, rear cone blanking	4	—
Attaching parts for 15EC.379ND blanking plate				
28Q/6677	AS.2229/306	Rivet, 90 deg. csk/hd.	12	C

Spare affected:—

26FC/8191 L00.3711A Guide Tube Assy., Fire Guard

The work involved in modifying this spare is detailed in Para. 8 operation (11) and on sheet 3 of the drawing.

There are no parts required for modifying this spare.

Spare affected:—

26FC/8192 L00.3713A Guide Tube Assy., Tail Pipe

The work involved in modifying this spare is detailed in Para. 8 operation (14) and on sheet 4 of the drawing.

There are no parts required for modifying this spare.

Spares will be modified by the stockholding unit as directed by the Air Ministry (E.2.)

#### 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>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/6760	L00.58A/1	Cowl panel assy.,	15EC.343A	26FC/-
		Lower middle		
26FC/1037	L00.431A/ND	Door assy., lower inspection port	15EC.327A/ND	26FC/-
26FC/972	L00.862ND	Skin, lower front, R.H. rear cone	15EC.363ND	26FC/-
26FC/974	L00.864ND	Skin, lower centre, rear cone	15EC.299ND	26FC/-
26FC/976	L00.866ND	Skin, lower front, L.H. rear cone	15EC.365ND	26FC/-
26FC/8191	L00.3711A	Guide tube assy., fire guard	15EC.267A	26FC/-
26FC/8192	L00.3713A	Guide tube assy., tail pipe	15EC.269A	26FC/-
26FC/-	L00.3747ND	Plate reinforcing	15EC.347ND	26FC/-
26FC/-	L00.3761A/ND	Cowl sub-assy. lower middle	15EC.345A/ND	26FC/-
26FC/12613	15EC.97	Rail, lower hinge	15EC.321	26FC/-
26FC/12625	15EC.151A	Doors assy. lower inspection	L00.4061A	26FC/-
26FC/12545	15EC.153A/ND	Door assy. lower inspection stbd.	L00.4065A/ND	26FC/-
26FC/12098	L00.853A/6	G.A. of rear cone	L00.3055A	26FC/-

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Remove the rear cone, lower middle engine cowl and the lower engine inspection doors in accordance with current authorised procedure.

**RESTRICTED**

*Note*.—Throughout the embodiment of this modification the following points must be observed:—

- (a) Check the position of new blanking plates or fairings in relation to existing stiffeners.
  - (b) Adjust the position of new attachment rivets prior to drilling and restrict the penetration of the drill to avoid damaging existing stiffeners.
  - (c) Adjust the position and size of new attachment rivets to either pick up on, or avoid, existing rivet holes in the vicinity, whichever is more suitable.
  - (d) Remove all burrs after drilling or trimming.
  - (e) Coat the mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264).
- (2) *Refer* to sheet 1 of the drawing. Working with the lower engine inspection doors, locate the hinge rail in the centre of the two doors. Mark off and drill out the existing twelve 90 deg. countersunk head rivets detailed for securing the new blanking plate and fairing assembly, Part No. 15EC.373A/ND; using a No. 30 (0.1285 in. dia.) drill. Enlarge the two existing countersinks at the aft end of the hinge rail 124 deg. to suit the dimples in the new blanking plate and fairing assembly. Offer up this assembly to the underside of the hinge rail, and drill off the twelve holes in the plate through, from the inside of the hinge rail using the No. 30 drill, and rivet the assembly to the hinge rail using twelve new  $\frac{1}{8}$  in. dia. mush. head rivets, Part No. AS.2228/407, as detailed.

*Note*.—The following operations (3) to (7) are applicable to both port and starboard engine lower inspection doors.

- (3) Locate the forward and the aft drain hole at the hinge end of the door, enlarge these two existing holes using a  $\frac{3}{8}$  (0.375) in. dia. drill. Offer up to the forward drain hole a new fairing, Part No. 15EC.317A, position this as shown ensuring that the aft edge of the fairing plate is square across the centre of the drain hole and that the hole is central under the mouth of the fairing.
- (4) Mark off and drill the four rivet attachment holes using the No. 30 drill. Attach the new fairing with two rivets, Part No. AS.2229/405, and two rivets, Part No. AS.2229/407, through the hinge.
- (5) Offer up the new rear fairing assembly, Part No. 15EC.313A to the door, as shown ensuring that the forward rivet attachment hole is on the same centre line as the drain hole and that the hole in the fairing lines up with the  $\frac{3}{8}$  in. dia. drain hole. Mark off and drill the five rivet attachment holes using the No. 30 drill. Rivet the fairing in position using three rivets, Part No. AS.2229/405, and two rivets, Part No. AS.2229/407, through the hinge.
- (6) Position the new blanking plate, Part No. 15EC.105ND, over the existing forward drain holes as shown. Mark round this plate and remove it. Ascertain which of the existing rivets are to be drilled out from the hinge rail and mark off the positions for the new rivet holes on the door skin, approximately in the positions shown. Drill out the selected rivets from the hinge using the No. 30 drill and drill off the new holes in the door skin using a No. 41 (0.0960 in. dia.) drill. Place the blanking plate into position again and drill it off to suit from the inside of the door. Rivet this plate into position using two  $\frac{1}{8}$  in. dia. mush. head rivets, Part No. AS.2228/407, and approximately seven  $\frac{3}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306 (cut length to suit) first countersinking the appropriate rivet holes to suit the heads of the rivets.
- (7) To the remaining two drain holes, not required offer up the larger blanking plate, Part No. 15EC.107ND, and carry out the procedure adopted for fitting the blanking plate in operation (6). When the plate is in the correct position and the rivet holes drilled, secure it using four  $\frac{1}{8}$  in. dia. mush. head rivets, Part No. AS.2228/407 and approximately nine  $\frac{3}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306 (cut length to suit), countersinking the appro-

**RESTRICTED**



appropriate rivet holes to suit the heads of the rivets. Locate the stiffener ends on the inside of the door in the positions marked 'X' on the drawing and remove the end sections as shown.

- (8) Refer to sheet 2 of the drawing. From the forward end of the lower middle cowling locate the four existing  $\frac{1}{4}$  in. dia. drain holes, one in the forward half, and one just aft of the first stiffening channel, one in the forward half, and one just aft of the second stiffening channel in the centre on the underside of the cowling. Enlarge these holes using the  $\frac{3}{8}$  in. dia. drill. Position the new blanking plate, fairing assemblies, Part No. 15EC.367A as shown. Mark off and drill the rivet holes using the No. 30 drill. Re-countersink the two forward countersunk holes in each blanking plate, fairing assembly to 90 deg. to suit the rivet heads. Rivet these three assemblies to the outside of the cowling using twelve 90 deg. countersunk head rivets, Part No. AS.2229/404.
- (9) Locate the remaining drain hole which has been enlarged and Refer to detail 'G' on sheets 2 and 6 of the drawing and offer up the new fairing, Part No. 15EC.375ND, to the position shown, mark off and drill the holes in the most suitable position, approximately in the positions shown using the No. 41 drill, countersink the fairing to suit the rivet heads and rivet into position with three  $\frac{3}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (10) Determine the position for the new drain hole and fairing, Part No. 15EC.375ND, just forward of the centre stiffening channel. Mark off and drill the  $\frac{1}{4}$  in. dia. drain hole to the dimensions shown. Offer up the new fairing, mark off and drill the three rivet holes, countersink the fairing to suit the rivet heads, and rivet the fairing to the cowling using three  $\frac{3}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (11) Locate the fire guard fuel drain guide tube. Refer to detail 'A' on sheet 3 of the drawing. Cut off the end of the guide tube which protrudes through the outer surface of the cowling to the dimension shown. Working on the inside of the cowling locate, mark off and remove the 0.50 in. cut-out from the forward side of the existing circular dished reinforcing plate.
- (12) Locate the four existing  $\frac{3}{8}$  in. dia. drain holes two forward and two aft of the fire guard fuel drain guide tube blank these off with four  $\frac{3}{8}$  in. dia. 120 deg. countersunk head rivets, Part No. A.S.2230/606, first countersinking the outer skin 120 deg. to suit the rivet heads.
- (13) Working with the new fairing, Part No. 15EC.271, mark off on its flange the two new rivet holes to the dimensions shown. Offer up this fairing to the positions on the underside of the cowling as shown. Mark off and drill the rivet holes, countersinking the fairing where necessary to suit the rivet heads. Rivet this fairing in its correct position using the rivets detailed on the drawing.
- (14) Working on the aft end of the lower middle cowling and referring to detail 'D' on sheets 2 and 4 of the drawing locate the tail pipe fuel drain guide tube assembly. Cut off the portion of the guide tube which protrudes through the outer surface of the cowling, to the dimension shown. Offer up the new fairing, Part No. 15EC.273, to the exact position shown on the underside of the cowling. Mark off and drill the rivet holes using the No. 30 drill, taking great care when drilling out the two existing rivets. Rivet the fairing to the underside of the cowling with the rivets detailed, first countersinking the fairing to suit the rivet heads.
- (15) Locate the two existing  $\frac{1}{4}$  in. dia. drain holes, one either side of the new fairing, open up these holes using the  $\frac{3}{8}$  in. dia. drill. Place the new packings, Part No. 15EC.341ND, in position together with the new fairing assemblies, Part Nos. 15EC.361A (Port) and 15EC.362A (Starboard), trim packings to suit. Mark off and drill the rivet holes using the No. 41 drill and rivet them to the cowling with ten  $\frac{3}{8}$  in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/305.

RESTRICTED

- (16) Position the new fairing, Part No. 15EC.375ND, over the existing drain hole as shown, mark off and drill the three rivet holes using the No. 41 drill and rivet to the cowlings using three 3/32 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304, first countersinking the holes in the fairing to suit the rivets.
- (17) Refer to sheet 5 of the drawing. On the underside of the rear cone locate the four, now not required 1/4 in. dia. drain holes outboard of the intersections of the centre and rear bulkheads and the fore and aft top hat stiffeners. Offer up to these positions, as shown, the new blanking plates, Part No. 15EC.379ND. Mark off and drill the rivet holes in the approximate positions shown. Drill off the blanking plates to suit the holes in the cone, countersink the holes in the plates to suit the rivet heads. Rivet them in position with twelve 3/32 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (18) Refer to detail 'F' on sheets 5 and 6 of the drawing and affix the new blanking plate, Part No. 15EC.371ND, as shown, using one 3/32 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304. Drill the new drain hole 3/8 in. dia. and fit the fairing, Part No. 15EC.375ND, to its correct position, using two 3/32 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/304, and one 1/4 in. dia. 120 deg. countersunk head Chobert rivet with sealing pin, Part Nos. AGS.2046/406 and AGS.2047/404, respectively. Using a 3/8 (0.1875) in. dia. drill, drill the new drain hole adjacent to the fairing as shown.
- (19) Locate the seven existing drain holes in the cone, which are shown in the positions of detail 'G'. Enlarge these seven drain holes using the 3/8 in. dia. drill. Position the seven new fairings, Part No. 15EC.375ND, over the enlarged drain holes, mark off, drill and countersink the three rivet holes in each fairing. Rivet these fairings to the undersurface of the rear cone using twenty-one 3/32 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/306, cut length to suit.
- (20) Refer to sheet 5 and section 'H'—'H' on sheet 6 of the drawing, mark off and drill the four new 3/8 in. dia. drain holes in the cone skin which drain the top hat stiffeners, 0.90 in. aft of the forward edge of the cone.
- (21) Locate the aft ring of rivets securing the aft support ring of the tail cone, select and drill out the rivet nearest the centre line of the cone then enlarge this hole using the 3/8 in. dia. drill. Position the new fairing assembly, Part No. 15EC.367A, over this hole, mark off and drill the four rivet holes with the No. 30 drill and affix the fairing using two 1/4 in. dia. 120 deg. countersunk head Chobert rivets with sealing pins, Part Nos. AGS.2046/406 and AGS.2047/404, for the two forward attachments and two 1/4 in. dia. 90 deg. countersunk head rivets, Part No. AS.2229/404, for the two aft attachments.
- (22) Repair the finish to the inside of all the cowlings using primer etch base and accelerator and finish synthetic matt, grey-green (Ref. Nos. 33B/1021, 33B/1023 and 33B/1105 or 501) respectively. Repair the finish to the outer surfaces of the cowlings using primer etch base and accelerator and finish cellulose matching Spec. D.T.D. 772. Re-fit the cowlings to the aircraft in accordance with current authorised procedure using the retained attaching items with the exception of the two aft 2 B.A. countersunk head bolts for attaching the lower inspection doors which are replaced with two new 2 B.A. bolts, Part No. DHS.365/3C.

## 9. TESTING AFTER EMBODIMENT

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

## 10. RECORDING ACTION

Record on Aircraft Form 700.

**RESTRICTED**

11. DISPOSAL OF REDUNDANT PARTS

No parts are rendered redundant by the embodiment of this modification.

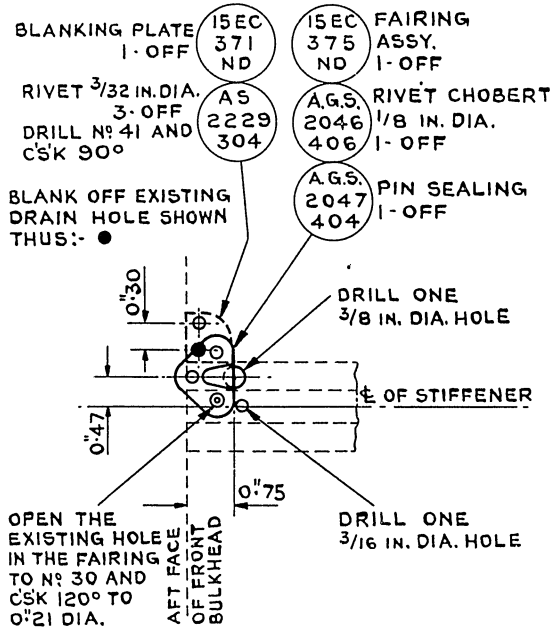
12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of + 0.66 lb., and a change of moment of + 2.0 lb. ft.



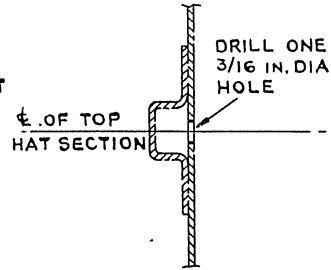
RESTRICTED

DRG. No A.P. 40996/P.19/58  
SHEET 6



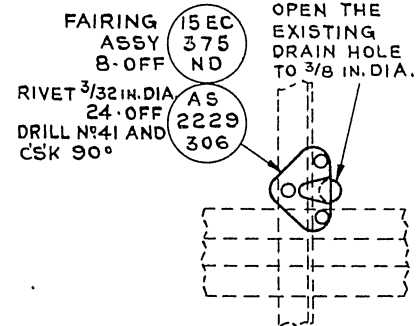
DETAIL 'F'

INSTALLATION OF DRAIN FAIRINGS  
(DETAILS)

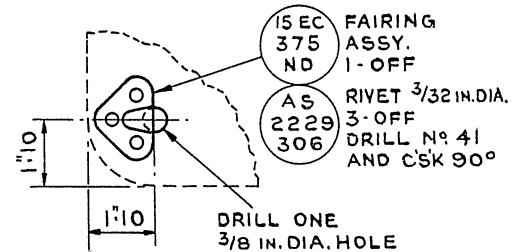


SECTION 'H-H'

TYPICAL SECTION THROUGH THE REAR CONE SHOWING THE DRILLING OF THE  $\frac{3}{16}$  IN. DIA. HOLES THROUGH THE SKIN TO DRAIN THE TOP HAT STIFFENERS WHERE DETAILED



DETAIL 'G'  
(TYPICAL)

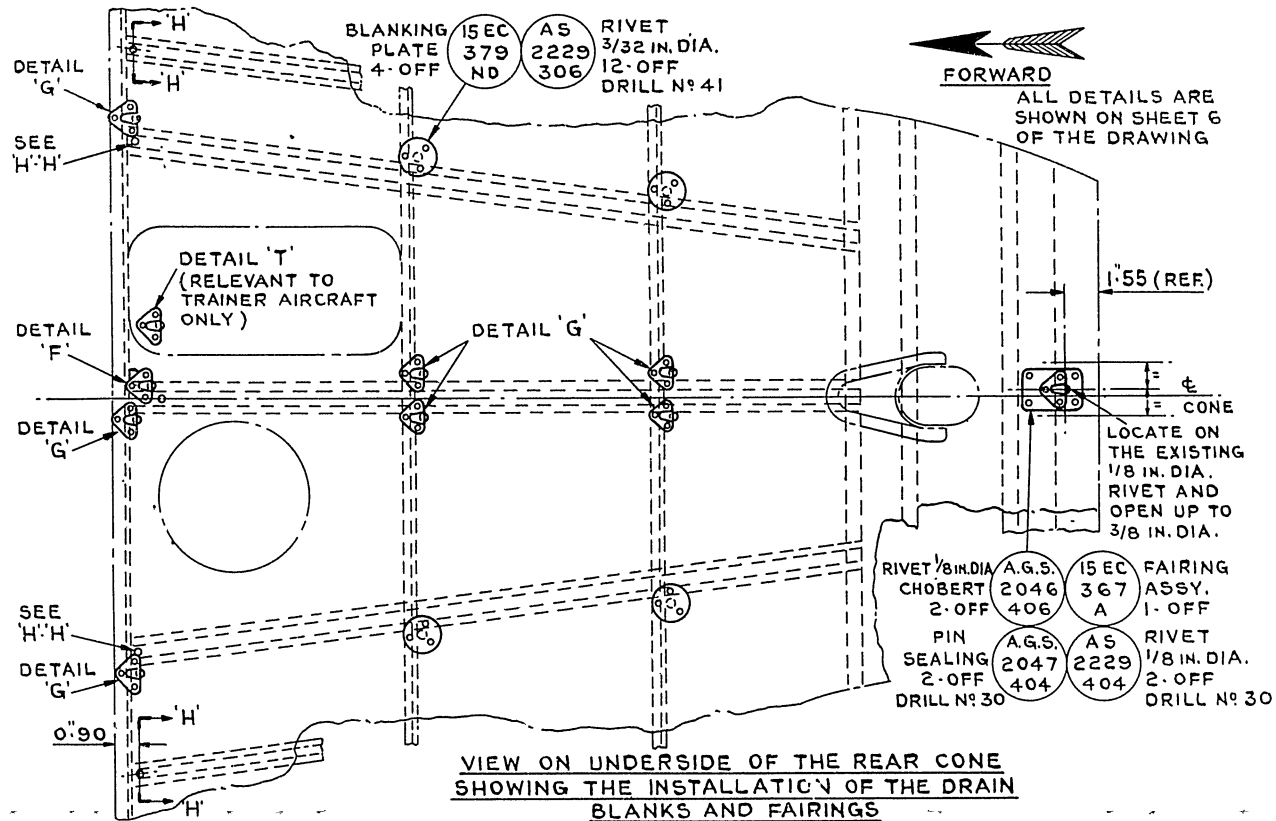


DETAIL 'T'

(RELEVANT TO TRAINER AIRCRAFT ONLY)



DRG. № А.Р. 40996 / Р.19 / 58.  
SHEET 5.

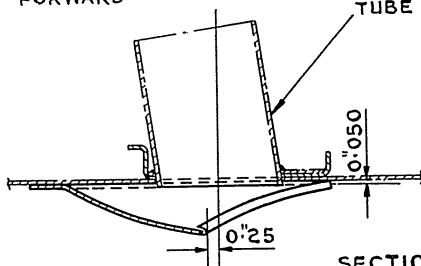




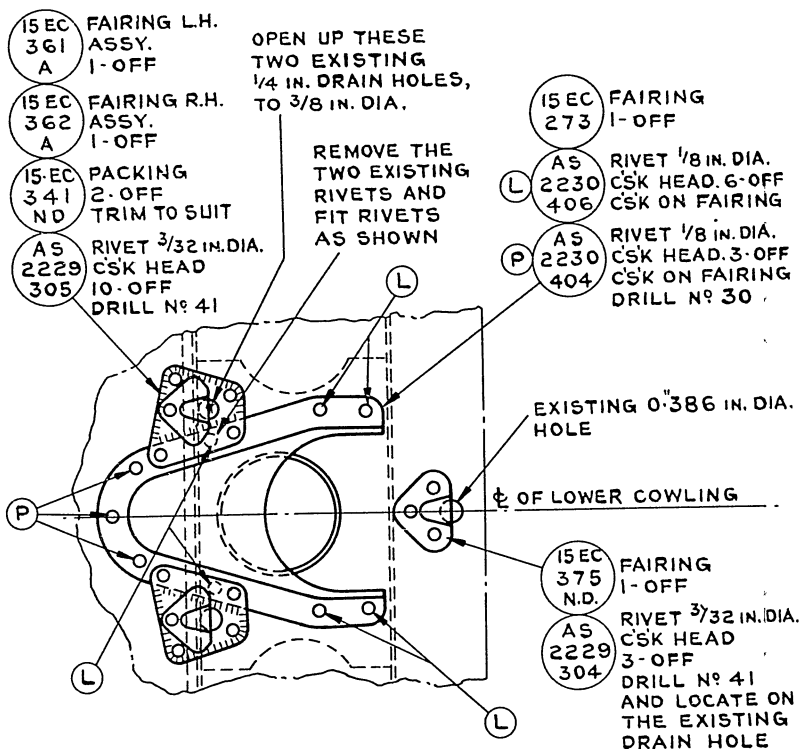




REDUCE THE PROTRUSION  
OF THE EXISTING GUIDE  
TUBE



SECTION THROUGH  
THE CENTRE OF  
THE GUIDE TUBE



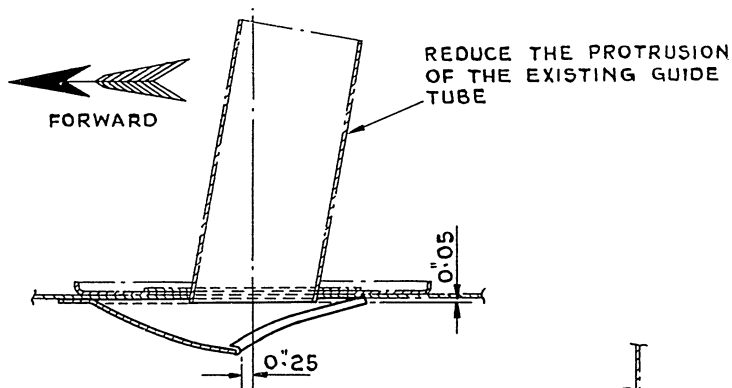
SIDE AND INVERTED PLAN OF DETAIL 'D'

DRG. N° A.P. 4099 G / P. 19 / 58.

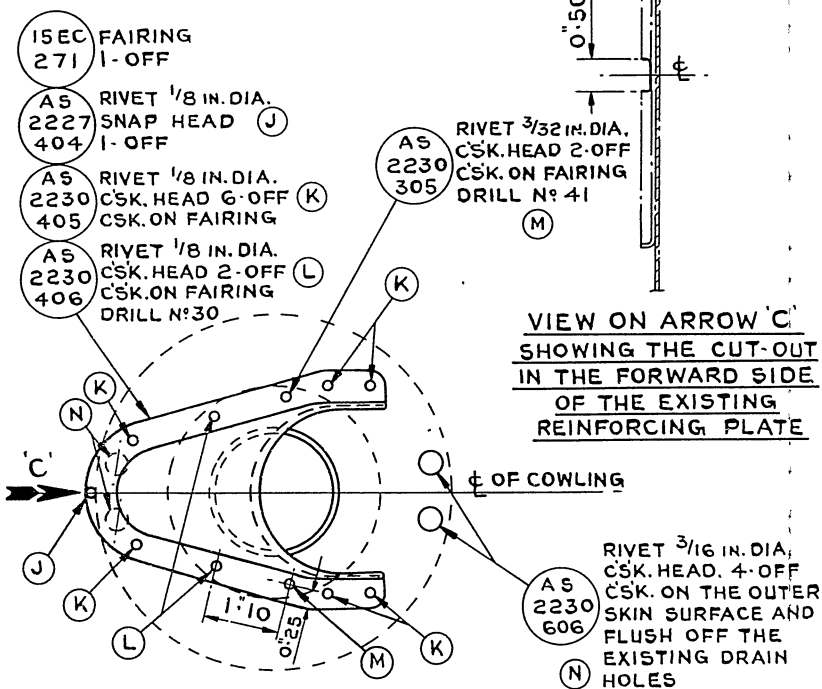
SHEET 4.

**RESTRICTED**





SECTION THROUGH  
THE CENTRE OF  
THE GUIDE TUBE



SIDE AND INVERTED PLAN OF DETAIL 'A'

**RESTRICTED**

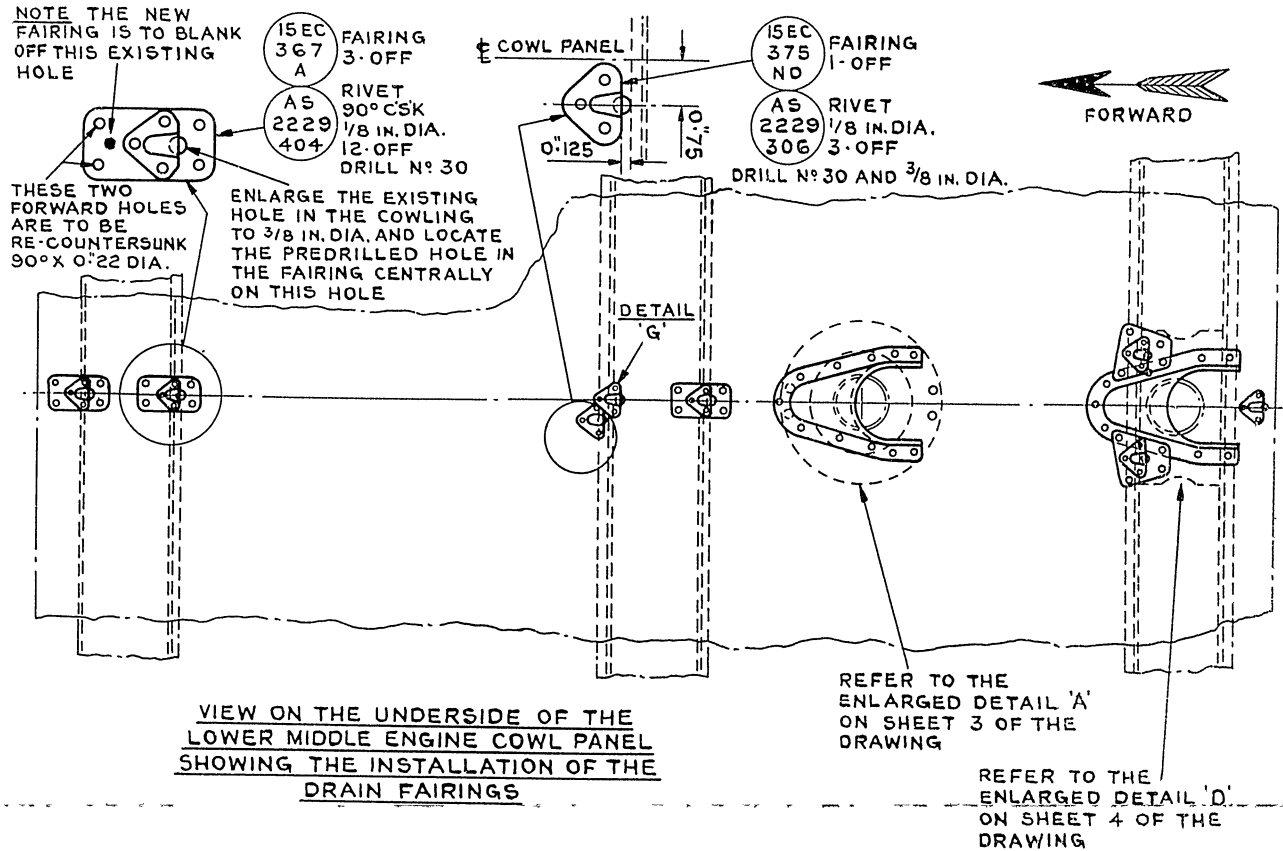
DRG. N° A.P. 4099G/P. 19/58.  
SHEET 3.



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DRG. NO. AP 40996/P.19/58

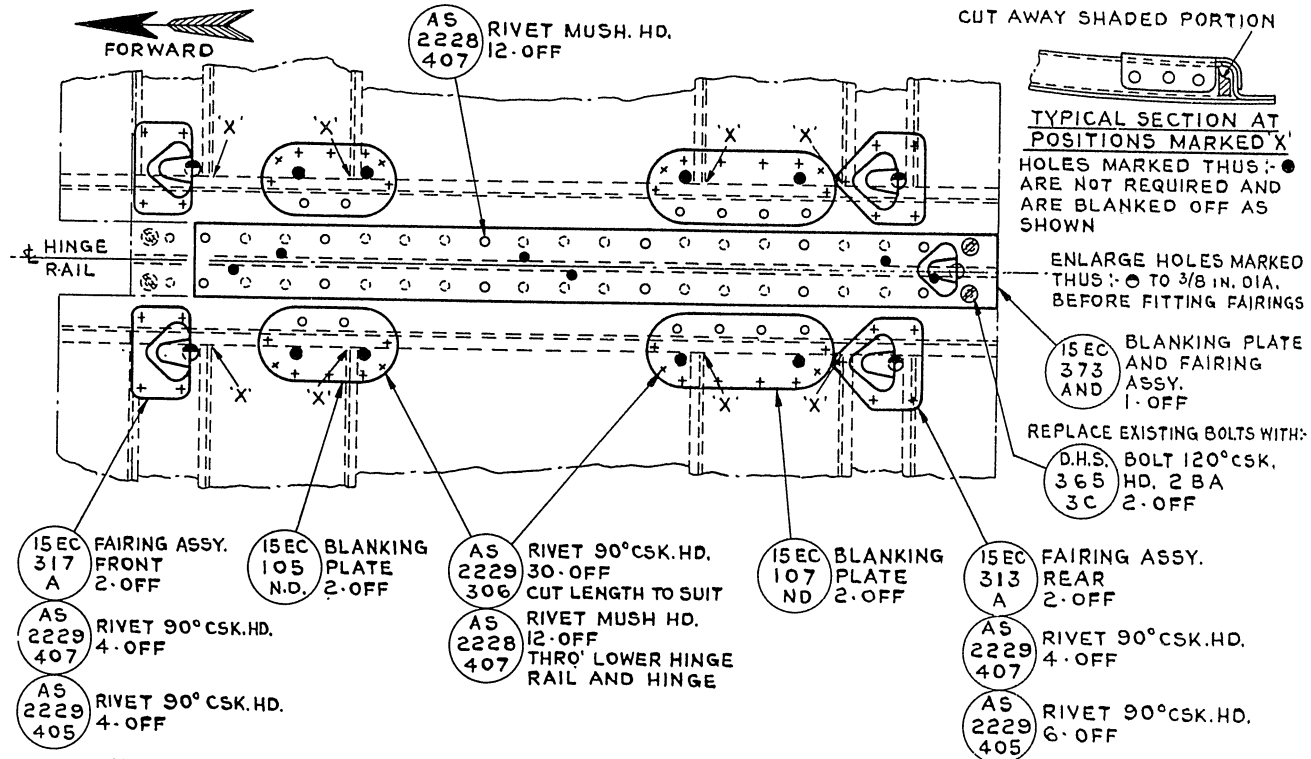
SHEET 2





RESTRICTED

DRG. NO. AR 40946/P.19/58.  
SHEET 1.



VIEW ON THE UNDERSIDE OF THE LOWER ENGINE INSPECTION DOORS SHOWING  
BLANKING OF REDUNDANT DRAIN HOLES AND FITMENT OF FAIRINGS TO THE REMAINING DRAIN HOLES





## Section

Volume 2.

Q

## Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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.						
Q 1										
Q 2										
Q 3										
Q 4										
Q 5										
Q 6										
Q 7										
Q 8										
Q 9										
Q 10										
Q 11										
Q 12										
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Q 18										
Q 19										
Q 20										
Q 21										
Q 22										
Q 23										
Q 24										
Q 25										
Q 26										

(R.A.F. Form 3850 Q)

(Continued Overleaf)

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.						
Q 27										
Q 28										
Q 29										
Q 30										
Q 31										
Q 32										
Q 33										
Q 34										
Q 35										
Q 36										
Q 37										
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§ Q 47										
Q 48										
Q 49										
Q 50										
Q 51										
Q 52										
Q 53										
Q 54										
Q 55										
Q 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.

Demand it now.

Wt.51688/BJ817 4m. 11/54 W.H.&S. 670/60

A.L. No. 12  
(V.H.F. controller)

A.P.4099G, Vol. 2, Part 1:

Leaflet No. Q.1  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—V.H.F. Controller for T.R.1934  
re-positioned

(MOD. NO. VAMPIRE/991.)

(Class B/2.)

(7/Mods/13,924.—6.5.55.)

1. Bulk embodiment action of this modification should now be completed and further copies of the modification leaflet together with Alteration 1, introduced by A.L. No. 37, will not be printed. Recipients of this token must complete the necessary recording action as detailed in Air Publication 113A, Appendix 'D', paras. 9-11.

2. If the equipment held on charge is not modified, action to obtain the modification leaflet is to be taken in accordance with Air Publication 113A, Chapter 2, para. 117.

**R**

**RESTRICTED**

(43222/127) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



**A.L. No. 225**  
(Rebecca Mk. 8—Intro.)

*Slater*  
**A.P.4099G, Vol. 2, Part 1**  
**Leaflet No. Q.2**  
**(Alteration 2)**

**Vampire F.B. Mk. 9 Aircraft—Radio—To Introduce Rebecca Mk. 8**

(AB/A/6290.—23.2.59.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. Q.2 (Mod. No. Vampire/3244) is amended as follows:—

(1) Para. 5, sub-para. (1) (a) (i), Items supplied by the Contractor, *Delete* :

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
" 26FC/-	15W.169A/ND	Nut, Plate assy.	4	C
26FC/-	15W.171ND	Plate, blanking	4	C
28D/8311	AS.1242/7C	Bolt, 90 deg. csk./hd., 2B.A. × 1.1 in.	16	C"

**RESTRICTED**

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A.I.N. 215

(Rebecca, Mk. 8—introduction

A.P.4099G, Vol. 2, Part 1  
Leaflet No. Q.2  
(Amendment 1)

**Vampire F.B. Mk. 9 Aircraft—Radio—To Introduce Rebecca Mk. 8**

(AB/A/6290.—29.4.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. Q.2 (Mod. No. Vampire/3244) is amended as follows:—

(1) Para. 5, sub-para. (1), (a) (i), Items supplied by the Contractor:—

(a) *Delete:*

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
" 26FC/-	12F.1199A	Bracket assy., Bulkhead 2	1	— "

(b) *Add in sequence:*

" 26/FC/-	AOO.7501A	Bracket assy., Bulkhead 2	1	—
26BY/4148	DHS.103/Mk.1	Ferrule, ply, 4 B.A.	2	C
28S/6287	A.32/B6	Screw, rd.hd., 4 B.A. x $\frac{1}{16}$ in.	2	C
28S/2324	AGS.252/41	Screw, wood, rd.hd., 6 s.w.g. x 1 in.	1	C "

(c) Item 40 (Part No. DHS.181/10). *Delete* " Tubing 2 ft. length " and *substitute* " Tubing 9 ft. 6 in. length ".

(d) Item 63 (Part No. A.32/A8). *Delete* Screw Qty. " 2 " and *substitute* " 4 ".

(2) Para. 5, sub-para. (1) (a) (ii). Service Supply items:—

(a) *Delete:*

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
" 5X/3238	Z.27323	Pin, plug, 7 amp.	18	C
10H/9540015	—	Adaptor, bulkhead	2	B "

(b) *Add in sequence:*

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
" 5X/3149	Z.27329	Thimble, 7 amp.	18	C
10H/19397	—	Socket, Type 684	2	B "

(c) Item (Part No. Z.49428). *Delete* Qty. " 3 " and *substitute* " 9 ".

(3) Para 6. Spares Affected, Parts required on D.H. Drawing No. NOO.4059 and NOO.4060:—

(a) *Delete:*

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
" 10H/9540015	—	Adaptor, bulkhead	1	B "

(b) *Substitute:*

" 10H/19397	—	Socket, Type 684	1	B "
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(4) Para. 11. Disposal of Redundant Parts, sub-para (2). *Add:*

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
" 26FC/4358	BOO.3039	Bracket, desert equipment	1	C "





(Rebecca Mk. 8—Intro.)

## Vampire F.B. Mk. 9 Aircraft—Radio—To Introduce Rebecca Mk. 8

(MOD. NO. VAMPIRE/3244.)

(Class S.O.O. (C.W.P.))

(AB/A/6290.—22.11.57.)

## 1. INTRODUCTION

This modification introduces the Rebecca Mk. 8 Installation.

(1) This modification does not cancel, 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 a Contractors Working Party to Special Order Only.

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take the Contractor's working party approximately 175/ man-hours.

## 4. DRAWINGS REQUIRED

The contractor's working party will supply own drawings.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

## (1) Parts and/or Materials

(a) The Modification Kit which consists of the following items will be assembled by No. 35 Maintenance Unit under Ref. No. 26FC 103244

## (i) Items supplied by the Contractor:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/11162	AOO.7379A	Plate Assy., clamp	2	C
26FC/11801	AOO.7385A	Ring Assy., nut	2	C
26FC/-	AOO.7391ND	Ring, spruce	2	—
26FC/-	AOO.7393ND	Patch, reinforcing	2	—
26FC/-	AOO.7395ND	Insert, spruce	4	—
26FC/-	AOO.7405ND	Insert, spruce	4	—
26FC/-	BOO.3649A/ND	Plate Assy., stud, camera nacelle	1	—
26FC/-	BOO.3653A/ND	Pairing Assy., camera nacelle	1	—
26FC/-	DOO.6823	Plate, blanking	1	—
26FC/-	NOO.3585A	Cable Assy., Camera to T.B.	1	—
26FC/-	12F.1129A/ND	Plate Assy., Type 78A switch mounting	1	—
26FC/-	12F.1199A	Bracket Assy., Bulkhead 2	1	—
26FC/-	12F.2113	Plate, blanking	1	—
26FC/-	12F.1317A/ND	Bracket Assy., indicator	1	—
26FC/-	12F.1327	Bracket, E2A Compass Mounting	1	—

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/-	12M.373A	Attachment casting	1	—
26FC/-	12M.389A/ND	Cable Assy., retaining	1	—
26FC/-	12N.1501ND	Plate, sealing	1	—
26FC/-	12N.1503ND	Gasket	1	—
261'C/-	12N.2369	Bracket, cockpit emergency light	1	—
26DV/8241	12R.145A	Crate Assy.	1	B
26FC/-	12R.209A	Plate Assy., T.B.	1	—
26DV/12149	12R.215ND	Block, rubbing	1	C
26FC/-	12R.279A	Bracket, Assy.	1	—
26FC/-	12Z.5593ND	Strip, retaining	1	—
26DV/4977	12-2M.151A	Nacelle Assy., camera	1	B
26FC/-	15R.421A/ND	Stiffening Assy., L.H.	1	—
26FC/-	15R.422A/ND	Stiffening Assy., R.H.	1	—
26FC/-	15R.425A/ND	Stiffening Assy., L.H.	1	—
26FC/-	15R.426A/ND	Stiffening Assy., R.H.	1	—
26FC/-	15R.437ND	Ring, clamping, aerial	4	—
26FC/-	15R.471A/ND	Stiffening Assy., L.H.	1	—
26FC/-	15R.472A/ND	Stiffening Assy., R.H.	1	—
26FC/-	15R.475A/ND	Stiffening Assy., L.H.	1	—
26FC/-	15R.476A/ND	Stiffening Assy., R.H.	1	—
26FC/11495	15R.479	Ring, packing, aerial	4	C
26FC/-	15R.929	Label, "Rebecca"	1	—
26FC/-	15W.169AND	Nut, Plate assy.	4	C
26FC/-	15W.171ND	Plate, blanking	4	C
26FC/-	DHS.181/10	Tubing, 2ft. length	1	—
26FC/-	DHS.181/16	Tubing, 8ft. length	1	—
5K/9107065	TWAP	Sleeve, binding	12	C
5K/9107066	TWBP	Sleeve, binding	12	C
5K/9107067	TWCP	Sleeve, binding	6	C
5K/9107205	T1A	Sleeve, marking, coded 'A'	4	C
5K/9107231	T1A	Sleeve, marking, coded 'C'	36	C
5K/9107257	T1A	Sleeve, marking, coded 'E'	16	C
5K/9107283	T1A	Sleeve, marking, coded 'G'	40	C
5K/9107413	T1A	Sleeve, marking, coded 'Q'	4	C
5K/9107439	T1A	Sleeve, marking, coded 'S'	4	C
5K/9107309	T1A	Sleeve, marking, coded 'I'	4	C
5K/9109116	T1A	Sleeve, marking, coded '2'	12	C
5K/9109117	T1A	Sleeve, marking, coded '3'	8	C
5K/9107127	T1A	Sleeve, marking, coded '4'	8	C
5K/9109119	T1A	Sleeve, marking, coded '6'	12	C
5K/9107543	T1A	Sleeve, marking, coded '+'	4	C
5H/9400053		Furrule	2	A
28D/12627	A.25/11B	Bolt, hex/hd., 4 B.A. x 1.5 in.	8	C
28D/12533	A.25/5C	Bolt, hex/hd., 2 B.A. x 0.95 in.	2	C
28D/12674	A.25/9E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. x 1.4 in	4	C
28D/12787	A.25/5G	Bolt, hex/hd., $\frac{5}{16}$ in. B.S.F. x 1.05 in.	2	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	2	C

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
28S/9419435	A.31/B12	Screw, ch/hd., 4 B.A. x $\frac{3}{8}$ in.	16	C
28S/3501	A.32/A8	Screw, rd/hd., 6 B.A. x $\frac{1}{4}$ in.	2	C
28S/2863	A.32/B16	Screw, rd/hd., 4 B.A. x $\frac{1}{2}$ in.	2	C
28S/13742	A.32/C14	Screw, rd/hd., 2 B.A. x $\frac{7}{16}$ in.	3	C
28S/14006	A.33/B14	Screw, countersunk, 4 B.A. x $\frac{7}{16}$ in.	1	C
28S/2833	A.33/B28	Screw, countersunk, 4 B.A. x $\frac{7}{8}$ in.	2	C
28S/13814	A.43/B14	Screw, brass, ch/hd., 4 B.A. x $\frac{7}{16}$ in.	4	C
28S/2424	A.44/C24	Screw, brass, rd/hd., 2 B.A. x $\frac{3}{4}$ in.	2	C
28S/2176	AGS.250/20	Screw, wood, csk. 4 S.W.G. x $\frac{1}{2}$ in.	12	C
28S/2302	AGS.252/21	Screw, wood, rd/hd. 4 S.W.G. x $\frac{3}{8}$ in.	16	C
28S/2642	AGS.253/19	Screw, wood, M.S. rd/hd., 4 S.W.G. x $\frac{3}{8}$ in.	10	C
28M/10287	AGS.2001/B1	Nut, stiff, 4 B.A.	26	C
28M/10275	AGS.2001/C4	Nut, stiff, brass, 2 B.A.	2	C
28M/10290	AGS.2001/E1	Nut, stiff, $\frac{1}{2}$ in. B.S.F.	4	C
28M/10291	AGS.2001/G1	Nut, stiff, $\frac{7}{16}$ in. B.S.F.	4	C
28L/11066	AGS.2035/A	Washer, shakeproof, 6 B.A.	2	C
28D/8306	AS.1242/1C	Bolt, 90 deg. csk/hd., 2 B.A. x 0.5 in.	82	C
28D/8311	AS.1242/7C	Bolt, 90 deg. csk/hd., 2 B.A. x 1.1 in.	16	C
28D/8312	AS.1242/8C	Bolt, 90 deg. csk/hd., 2 B.A. x 1.2 in.	16	C
28D/12189	AS.1242/18C	Bolt, 90 deg. csk/hd., 2 B.A. x 2.2 in.	1	C
28D/9353	AS.1248/ $\frac{1}{2}$ C	Bolt, mrm/hd., 2 B.A. x 0.45 in.	4	C
28Q/6665	AS.2227/305	Rivet, sp/hd., $\frac{3}{32}$ in. dia. x $\frac{5}{16}$ in.	2	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia. x $\frac{1}{4}$ in.	10	C
28Q/7017	AS.2229/506	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. x $\frac{3}{8}$ in.	6	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia. x $\frac{3}{8}$ in.	1	C
28Q/10564	AS.2229/608	Rivet 90 deg. csk/hd., $\frac{3}{16}$ in. dia. x $\frac{1}{2}$ in.	1	C
28E/14039	AS.3180/6B	Clip, 'P', 4 B.A. x $\frac{3}{8}$ in. dia.	6	C
28E/14042	AS.3180/9B	Clip, 'P', 4 B.A. x $\frac{3}{16}$ in. dia.	4	C
28D/16015	AS.4597/1B	Bolt, Phillip recess rd/hd., 4 B.A.	4	C
28W/9419401	SP.10/B	Washer, thin, 4 B.A. 26 s.w.g.	4	C
28W/12305	SP.13/B	Washer, thin, 4 B.A. 18 s.w.g.	12	C
28W/9419403	SP.13/G	Washer, thin, $\frac{5}{16}$ in. B.S.F. 18 s.w.g.	4	C
28W/12307	SP.18/B	Washer, large, 4 B.A.	8	C
28W/12298	SP.18/E	Washer, large, $\frac{1}{4}$ in. B.S.F.	8	C

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
28W/12676	SP.22/B	Washer, large, 4 B.A.	4	C
28W/15117	SP.25/C	Washer, small, 2 B.A.	2	C
28W/15347	SP.55/B	Washer, spring, $\frac{5}{32}$ i/d.	8	C
	(ii)	Service Supply items:—		
5CY/2560	—	Circuit breaker, Type A2	1	A
5CY/4520	—	Circuit breaker, protecting cap	1	C
5H/1	AS.2633	Block, connector, 2-way	1	C
5H/7	AS.2601	Cover, block connector	1	C
5H/124	AS.2605/2	Socket, terminal, single tier	1	C
5X/9400061	Z.19924	Tag, No. 1, 4 amp.	3	C
5X/9400063	Z.19925	Tag, No. 2, 7 amp.	2	C
5X/9400062	Z.19979	Thimble, No. 1, 4 amp.	3	C
5X/9400064	Z.19980	Thimble, No. 2, 7 amp.	2	C
5X/3148	Z.49428	Sleeve, cable	3	C
5X/3237	Z.27330	Insert, socket, 7 amp	18	C
5X/3238	Z.27323	Pin, plug, 7 amp.	18	C
5X/3268	CZ.50207	Block, terminal, 5-way	1	B
10AJ/143	—	Mounting, A/V, Type 952	4	B
10FB/366	—	Switch unit, type 78A	1	A
10H/628	—	Plug, Type 246	2	C
10H/3839	—	Plug, Type 547	2	B
5935-99-9116804	—	Plug, socket, Type 59	1	B
10H/9540015	—	Adaptor bulkhead	2	B
10HA/13565	—	Connector, "Junction Box—Cockpit Floor"	1	B
10HA/13567	—	Connector, "Junction Box—Power Supply"	1	B
10HA/13568	—	Connector, "Bulkhead Break—Junction Box"	1	B
10HA/13571	—	Connector, "Trans receiver—Aerial"	1	C
10HA/14044	—	Connector, "Wing Break (Port) T Junction"	1	B
10HA/14045	—	Connector, "Wing Break (Stbd.)—T Junction"	1	B
10HA/14046	—	Connector, "Aerial Type 90—Break	4	B
10HA/14260	—	Connector, "Junction Box—Aerial Switch"	1	B
10HA/14261	—	Connector, "Aerial Switch—Port Wing Break"	1	B
10HA/14262	—	Connector, "Aerial Switch—Stbd. Wing Break"	1	B
10HA/14263	—	Connector, "Aerial Switch—Aerial, Stbd. Gun Bay"	1	B
10HA/14264	—	Connector, "Aerial Switch—Junction Box"	1	C
10HA/14265	—	Connector, "Aerial Switch—Junction Box"	1	C
10HA/15888	—	Connector, "Plug—T Junction"	2	B
10HB/1206	—	Connector, "Cockpit Floor Break—Control Unit"	1	B
10HB/1207	—	Connector, "Bulkhead Break—Range/Heading Meter"	1	B

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(b) Additional Service Supply items forming part of the complete modification but not assembled in the kit:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
10AF/530	—	Meter, range and heading	1	A
10B/518	—	Aerial, Type 91	2	A
10BB/867	—	Aerial, Type 90	4	A
10D/19594	—	Transmitter receiver, Type TR. 8193	1	A
10D/20063	—	Junction box, Type 8355	1	A
10L/16264	—	Control Unit, Type 8197	1	A

R.A.F. units at home and abroad, and all other users, are to demand separately their requirements of kits as listed in sub-para. (a) above and the additional items listed at sub-para. (b) above, in accordance with current regulations; demands for additional items listed at sub-para. (b) are to be endorsed "Required for use in conjunction with Mod. No. Vampire Ref. No. 26FC/103244". Demands should not be submitted before December, 1957.

(c) The following materials are also required, and are to be provided under Unit arrangements:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5E/3038	—	Cable, electric, Unipren 6	As reqd.	C
5E/3040	—	Cable, electric, Unipren 12	As reqd.	C
5E/3041	—	Cable, electric, Unipren 18	As reqd.	C
29D/2136	—	Brad, brass, 21 s.w.g.	As reqd.	C
30A/3055	—	Wire, nickel alloy 22 s.w.g.	As reqd.	C
30B/2076	—	Aluminium, foil sheets, Spec. commercial 0.006—0.010 in. x 2ft. x 3ft.	2	C
32A/94	—	Cord, stringing, braided	As reqd.	C
32B/147	—	Fabric, linen	As reqd.	C
32B/556	—	Fabric, madapolam	As reqd.	C
32B/751	—	Fabric, linen, strip 2.25 in. wide	As reqd.	C
32B/752	—	Fabric, linen, strip 3.5 in. wide	As reqd.	C
32B/793	—	Tape, self adhesive, waterproof	As reqd.	C
32B/799	—	Paper, grease resisting	As reqd.	C
33B/208	—	Primer, universal	As reqd.	C
33B/853	—	Thinners, dope, Spec. D.T.D.843	As reqd.	C
33B/927	—	Remover, paint, Spec. D.T.D. 226	As reqd.	C
33B/1021	—	Primer, etch, base	As reqd.	C
33B/1023	—	Primer, etch, accelerator	As reqd.	C
33B/1027	—	Lacquer, Plyceal	As reqd.	C
33B/1057 (Home)	} (Overseas)	Colour, ident, bright blue	As reqd.	C
33B/914				

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
33B/1058	(Home)	Colour, ident, bright red	As	C
33B/912	(Overseas)		reqd.	
33B/1059	(Home)	Colour, ident, white	As	C
33B/913	(Overseas)		reqd.	
33B/1060	(Home)	Finish, cellulose,	As	C
33B/865	(Overseas)	aluminium	reqd.	
33B/1068	(Home)	Finish, cellulose, light	As	C
33B/942	(Overseas)	slate grey	reqd.	
33B/1070	(Home)	Finish, cellulose,	As	C
33B/939	(Overseas)	medium sea grey	reqd.	
33B/1072	(Home)	Finish, cellulose, PRU	As	C
33B/945	(Overseas)	blue	reqd.	
33B/1105	(Home)	Finish, synthetic matt,	As	C
33B/501	(Overseas)	grey green	reqd.	
33B/1108	(Home)	Finish, synthetic matt,	As	C
33B/205	(Overseas)	night	reqd.	
33C/10		Beeswax	As	C
			reqd.	
33C/31		Paper, glass, No. 1	As	C
			reqd.	
33C/547	(Home)	Trichlorethylene	As	C
33C/836	(Overseas)		reqd.	
33C/973		Adhesive, synthetic resin, hardener	As	C
			reqd.	
33C/1138		Compound, sealing, Bostik 1790	As	C
			reqd.	
33C/1139		Compound, sealing Bostik primer 1751	As	C
			reqd.	
33C/1188		Adhesive, synthetic resin Type B.70	As	C
			reqd.	
33C/1264		Compound, pigmented varnish, jointing	As	C
			reqd.	
33C/1335		Compound, sealing, Bostik S/23/95	As	C
			reqd.	
33C/1371		Adhesive, synthetic resin Araldite 103	As	C
			reqd.	
33C/1372		Adhesive, hardener, Araldite 951	As	C
			reqd.	
33C/1427		Adhesive, F.1, D.T.D. 900/4479	As	C
			reqd.	
33C/1428		Adhesive, catalyst, F.C.1	As	C
			reqd.	
33C/1429		Adhesive, thinners, F.T.1	As	C
			reqd.	

## (2) Special Tools and 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:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/—	DOO.7611A/8	Wing arrangement Stbd. (for spares)		
For method of modifying the above spares refer to D.H. Drawing Nos. NOO.4060; 15W.164 and 15W.165.				

*Note* :—Parts required are listed against their relevant installation drawing numbers.

Parts required on D.H. Drawing No. 15W 164:—

26FC/—	15R.422A/ND	Stiffening Assy. R.H.	1	—
26FC/—	15R.426A/ND	Stiffening Assy. R.H.	1	—
26FC/—	15R.472A/ND	Stiffening Assy. R.H.	1	—
26FC/—	15R.476A/ND	Stiffening Assy. R.H.	1	—

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Attaching parts for 15R.422A/ND, 15R.426A/ND, 15R.472A/ND  
and 15R.476A/ND stiffening assemblies:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
28D/8306	AS.1242/1C	Bolt, 90 deg. csk/hd. 2 B.A. x 0.5 in.	25	C
Parts required on D.H. Drawing No. NOO.4060:—				
10H/628	—	Plug, Type 246	1	C
10H/3839	—	Plug, Type 547	1	B
10H/9540015	—	Adaptor, bulkhead	1	B
10HA/14045	—	Connector, "Wing Break—T Junction"	1	B
10HA/14046	—	Connector, "Aerial Type 90 —Break"	2	B
10HA/15888	—	Connector, "Plug—T Junction"	1	B
Parts required on D.H. Drawing No. 15W 165:—				
26FC/—	15W 169A/ND	Nut plate assy.	2	—
26FC/—	15W 171ND	Plate, blanking	2	—
26FC/11495	15R 479	Ring, packing	2	C
Attaching parts for 15W.169A/ND nut plate assy., 15W.171ND blanking plate and 15R.479 packing ring.				
28D/8311	AS.1242/7C	Bolt, 90 deg. csk/hd. 2 B.A. x 1.1 in.	16	C

Spare affected:—

26FC/— DOO.6715/13 Wing arrangement, port (for spares)

For method of modifying the above spare refer to D.H. Drawing  
Nos. NOO.4059; ZOO.6593; ZOO.6595; 15W.163 and 15W.165.

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
Parts required on D.H. Drawing No. ZOO.6595:—				
26FC/—	BOO.3649A/ND	Plate, assy., stud, camera nacelle	1	—
Attaching parts for BOO.3649A/ND plate assy.:—				
28Q/7017	AS.2229/506	Rivet, 90 deg. csk/hd. $\frac{5}{32}$ in. dia. x $\frac{3}{8}$ in. and	6	C
26FC/—	12M.389A/ND	Cable assy., retaining	1	—
Attaching parts for 12M.389A/ND cable assy.:—				
28Q/10411	AS.2229/606	Rivet, 90 deg. csk/hd. $\frac{3}{16}$ in. dia. x $\frac{3}{8}$ in.	1	C
28Q/10564	AS.2229/608	Rivet, 90 deg. csk/hd. $\frac{3}{16}$ in. dia. x $\frac{1}{2}$ in. and	1	C
5X/3268	—	Block, terminal, 5-way	1	B
Attaching parts for 5X/3268 terminal block:—				
28S/2833	A33/B28	Screw, countersunk 4 B.A. x $\frac{7}{8}$ in.	2	C
28M/10287	AGS.2001/B1	Nut, stiff, 4 BA..	2	C
Parts required on D.H. Drawing No. ZOO.6593:—				
26FC/—	DHS.181/10	Tubing, 2ft. length	1	—
5K/9107065	TWAP	Sleeve, binding	5	C
5K/9107067	TWCP	Sleeve, binding	1	C
5K/9107231	T1A	Sleeve, marking coded 'C'	8	C
5K/9107257	T1A	Sleeve, marking coded 'E'	2	C
5K/9107283	T1A	Sleeve, marking coded 'G'	8	C
5K/9109116	T1A	Sleeve, marking coded '2'	2	C
5K/9109117	T1A	Sleeve, marking coded '3'	2	C
5K/9107127	T1A	Sleeve, marking coded '4'	2	C
5K/9109119	T1A	Sleeve, marking coded '6'	2	C
5E/3038	—	Cable, electric, Unipren 6, 16ft. length	1	C

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<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5E/3040	—	Cable, electric, Unipren 12, 10ft. 6 in. length	1	C
5X/9400061	—	Tag, No. 1, 4 amp.	3	C
5X/9400063	—	Tag, No. 2, 7 amp	2	C
5X/9400062	—	Thimble, No. 1, 4 amp.	3	C
5X/9400064	—	Thimble, No. 2, 7 amp	2	C
5X/3148	—	Sleeve, cable	3	C

Parts required on D.H. Drawing No. 15W 163:—

26FC/—	15R.421A/ND	Stiffening Assy., L.H.	1	—
26FC/—	15R.425A/ND	Stiffening Assy., L.H.	1	—
26FC/—	15R.471A/ND	Stiffening Assy., L.H.	1	—
26FC/—	15R/475A/ND	Stiffening Assy., L.H.	1	—

Attaching parts for 15R.421A/ND, 15R.425A/ND, 15R/471A/ND and 15R.475A/ND, stiffening assemblies:—

28D/8306	AS.1242/1C	Bolt, 90 deg. csk/hd 2 B.A. x 0.5 in.	25	C
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Parts required on D.H. Drawing No. NOO.4059:—

10H/628	—	Plug, Type 246	1	C
10H/3839	—	Plug, Type 547	1	B
10H/9540015	—	Adaptor bulkhead	1	B
10HA/14044	—	Connector, "Wing Break —T Junction"	1	B
10HA/14046	—	Connector, "Aerial Type 90—Break"	2	B
10HA/15888	—	Connector, "Plug—T Junction"	1	B

Parts required on D.H. Drawing No. 15W 165:—

26FC/—	15W 169A/ND	Nut plate assy.	2	—
26FC/—	15W 171ND	Plate, blanking	2	—
26FC/11495	15R 479	Ring, packing	2	C

Attaching parts for 15W.169A/ND nut plate assy., 15W.171ND blanking plate and 15R.479 packing ring:—

28D/8311	AS.1242/7C	Bolt, 90 deg. csk/hd. 2 B.A. x 1.1 in.	16	C
----------	------------	---	----	---

Spare affected:—

26DV/696	12UN 91A	Mudguard, nosewheel		
----------	----------	---------------------	--	--

For method of modifying the above spare refer to D.H. Drawing No. 12UN.209A.

There are not parts required to modify the above spare.

Spare affected:—

26FC/—	AOO.7307A/1	Fixed nosing		
--------	-------------	--------------	--	--

For method of modifying the above spare refer to D.H. Drawing No. 12Z 3973.

Parts required:—

26FC/—	12F 1129A/ND	Plate assy., Type 78A switch mounting	1	—
26FC/—	12R 209A	Plate assy., T.B.	1	—
28Q/6638	AS.2227/404	Rivet, snaphead, $\frac{1}{8}$ in dia. x $\frac{1}{4}$ in.	10	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E.2.)

## 7. CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

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

**RESTRICTED**



<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/10465	AOO.7307A/1	Fixed Nosing	AOO.7481A/ND	26FC/-
26FC/-	NOO.4001/A	Junction Box No. 1, Wired (Post Mod. No. Vampire 3299)	NOO.4043A/ND	26FC/-
26FC/-	AOO.1502A/5	Cockpit Floor, R.H.	AOO.7477A/ND	26FC/-
26FC/-	AOO.2590A/2	Fuselage Shell Half, Bare, R.H.	AOO.7485A/ND	26FC/-
26FC/-	AOO.2591A	Fuselage Shell Half, Bare, L.H.	AOO.7487A/ND	26FC/-
26FC/-	AOO.2592A/9	Fuselage, Shell Half Complete, R.H.	AOO.7489A/ND	26FC/-
26FC/-	AOO.2593A/5	Fuselage Shell Half, Complete, L.H.	AOO.7491A/ND	26FC/-
26FC/-	AOO.4006A	Fuselage Complete	AOO.7493A/ND	26FC/-
26FC/-	DOO.6527/14	G.A. of Wing L.H.	DOO.8093A/ND	26FC/-
26FC/-	DOO.6715/13	Arrangement of Wing, L.H. (for spares)	DOO.8099A/ND	26FC/-
26FC/-	DOO.7539/9	G.A. of Wing, R.H.	DOO.8097A/ND	26FC/-
26FC/-	DOO.7611A/8	Arrangement of Wing, R.H. (for spares)	DOO.8103A/ND	26FC/-
26FC/-	NOO.119A/1	Cable Loom C5	NOO.4053A/ND	26FC/-
26FC/-	NOO.502A	Cable Loom C9	NOO.4049A/ND	26FC/-
26FC/-	NOO.1705A	Cable Loom C4	NOO.3587A	26FC/-
26FC/-	NOO.2473A	Cable Loom C3 (Post Mod. No. Vampire 668)	NOO.4057A/ND	26FC/-
26FC/-	NOO.2521A/2	Junction Box No. 2 (Post Mod. No. Vampire 568)	NOO.4047A/ND	26FC/-
26FC/-	NOO.2527A	Cable Loom C9A	NOO.4051A/ND	26FC/-
26FC/-	NOO.2533A	Conduit Assy. C5A (Post Mod. No. Vampire 568)	NOO.4055A/ND	26FC/-
26FC/-	NOO.4003A/ ND	Junction Box No. 1, Wiring and Assy. (Post Mods. No. Vampire 568, 668)	NOO.4041A/ND	26FC/-
26DV/696	12UN 91A	Mudguard, nose wheel	12UN 209A	26DV/ 12503

#### 8. SEQUENCE OF OPERATIONS

The embodiment of this modification will be effected by a Contractor's Working Party.

#### 9. TESTING AFTER EMBODIMENT

Testing after the embodiment of this modification will be effected as necessary by the Contractor's Working Party.

#### 10. RECORDING ACTION

Record on Aircraft 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. 14 Maintenance Unit, Carlisle:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
10AB/3245	AS.509	Label ("off"), Type 45	1	C
10AB/3259	AS.510	Label ("on"), Type 46	1	C
10BB/867	—	Aerial, Type 90	1	A
10DB/570	—	Receiver, Type 3121	1	A

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
10LB/90	—	Control Unit, Type 89	1	A
10LB/91	—	Control Unit, Type 90	1	A
14A/1042	—	Mounting, camera, Type 27	1	A
14A/1420	—	Flange, front	1	A
14A/1423	—	Adaptor, Type 32	1	A
14A/2853	—	Cover, protective	1	A

(2) The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of as scrap in accordance with Air Ministry Salvage Leaflets:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5CZ/204	—	Fuse, Type A, 20 amp	2	C
26FC/10327	N.984154	Cover, switch	1	C
26FC/4033	AOO.4078	Piece, packing	1	C
26FC/4048	BOO.173	Washer, stop	4	C
26FC/—	BOO.255	Plate, support	1	—
26FC/4256	DOO.3716	Ring, clamping	1	C
26FC/3962	DOO.3717	Block, packing	1	C
26FC/—	NOO.174A	Cable assy.	1	—
26FC/—	NOO.175A	Cable assy.	1	—
26FC/—	NOO.334A/1	Cable assy.	1	—
26FC/—	NOO.335A	Switch and cable assy.	1	—
26FC/—	NOO.336A/1	Switch and cable assy.	1	—
26FC/—	NOO.338A	Cable assy.	1	—
26FC/—	NOO.343A	Bracket assy.	1	—
26FC/—	NOO.2563A/ND	Crate assy., I.F.F. Mounting	1	—
26FC/—	DHS.109/30	Label, 'Auto-Manual'	1	—
26FC/—	DHS.109/50	Label, 'G Switch'	1	—

## 12 EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +32.06 lb., and no change of moment.

**RESTRICTED**

# Section R Contents List

NOTE TO USER:—  
Insert relevant A.P. No. at top of page.

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.						
R 1										
R 2										
R 3										
R 4										
R 5										
R 6										
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R 25										
R 26										

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.						
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R 52										
R 53										
R 54										
R 55										
R 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
Demand it now.

# Section S Contents List

**NOTE TO USER:—**  
Insert relevant A.P. No. at top of page.

Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
				1	2	3	4	5	6	
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S 2										
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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				Introduced by A.L. No.						
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S 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
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# Section T Contents List

NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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.						
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Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
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				Introduced by A.L. No.						
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T 56										

§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
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**A.L. No. 77**

(Air conditioning system)  
(A.L. No. 52 cancelled)

**A.P. 4099G, Vol. 2, Part 1**  
**Leaflet No. T.2**  
(Leaflet No. T.1 cancelled)

**Vampire F.B. Mk. 9 Aircraft—Modified Control Cams in the Refrigeration System—Introduction**

(Mod. No. VAMPIRE/3107, Issue 2.)

(Class C/3.)

(7/Mods/16 269—27 353.)

*Note.—This leaflet supersedes and is the authority for cancelling A.P. 4099G, Vol. 2, Part 1 Leaflet No. T.1 (A.L. No. 52).*

1. Under the present arrangement difficulty has been experienced in shutting off the hot air supply, and this modification introduces modified control cams.

The work will take approximately 5 man-hours.

2. This modification is to be embodied when the old type spares are consumed.

3. The following is the sequence of operations.—

*(Refer to Dig. No. A.P. 4099G/T.2/53, Sheet 1 & 2.)*

(1) Locate the cockpit temperature control box assembly on the left-hand side of the cockpit, and ensure that it is in the "off" position. Unscrew the three 2 B.A. roundhead bolts attaching the temperature control wheel, Part No. R002095 (ref. only), to the box assembly, Part No. R002431A (ref. only), and remove the wheel from the aircraft.

(2) Modify the wheel as follows.

Carefully strip all engraving of the white paint filling (repairing any damage caused to the chromate film), and apply one coat of primer. Completely fill in the engraving with oil base stopper (Stores Ref. 33B/534). Thoroughly rub down the two affected surfaces and obtain a smooth and level finish. Apply one coat of primer and one coat of cellulose finish (night) to D.T.D. 751 to 4.

(3) Stencil the lettering, as shown in Sheet 1 of the drawing, in 3 in. high white letters on the front face of the wheel and 1 in. high white letters in the corresponding positions on the rim.

(4) Re-attach the wheel to the control box assembly, as shown in Sheet 1 of the drawing, using the original fastenings, so that the "mix" mark is adjacent to the stop. The "off" position should then be situated as before. Keep the wheel in the "off" position.

(5) Remove the front engine cowlings and locate the cockpit temperature control valves, positioned low down on the starboard side of the aircraft.

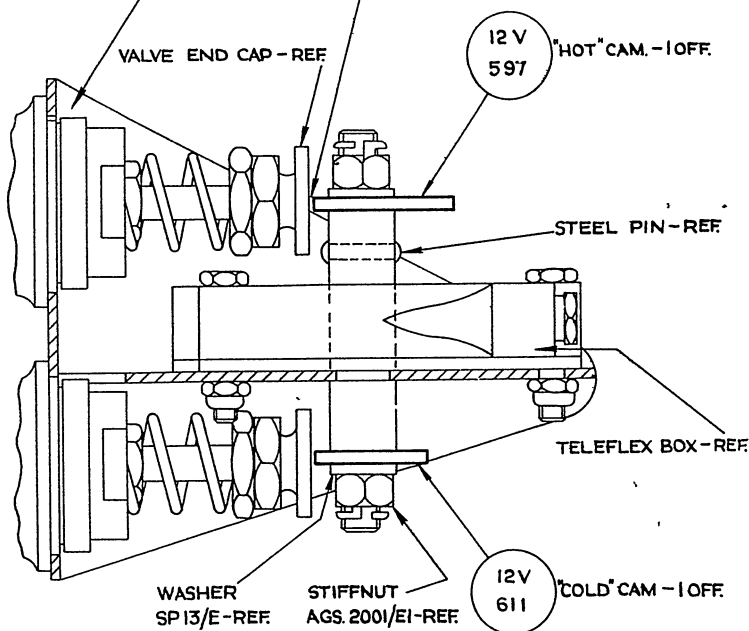
(6) Remove the stiffnut and washer, Part No. A.G.S. 2001/E1 and SP 13/E (ref. only), at the cold cam end of the shaft (i.e. the end opposite to the shaft fitted with the steel pin), and then remove the existing cold cam, Part No. P002133 (ref. only), and replace it by the new one, Part No. 12.V.611. Ensure that the scribed line on the face of the cam faces inboard and also is parallel to the centre line of the valve, as shown in Sheet 2 of the drawing, and then adjust the clearance between the cam and the valve end cap to 0.005 in. in this position. See the "IMPORTANT NOTE" in Sheet 2 of the drawing. Replace the original stiffnut and washer.

(7) Remove the stiffnut and washer at the other end of the cam shaft, Part No. R001953 (ref. only), and replace it by the new hot cam with shut off, Part No. 12.V.597. Ensure that the scribed line on the cam is aligned relative to the cold cam, as shown in Sheet 2 of the drawing, and set the clearance between the cam

**RESTRICTED**

VAMPIRE MK. 9 BRACKET DRAWN

CAM CLEARANCE :- SEE NOTE BELOW.



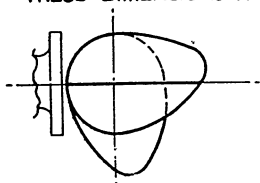
#### CAM CLEARANCE

"COLD" CAM : 12-V-611 - SET CLEARANCE BETWEEN CAM AND VALVE CAP TO 0.005 INCH. WITH CAM IN POSITION AS SHOWN.

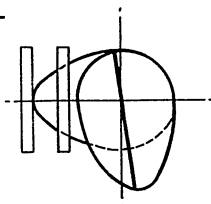
"HOT" CAM : 12-V-597 - SET CLEARANCE BETWEEN CAM AND VALVE CAP TO 0.01 INCH. WITH CAM IN POSITION AS SHOWN.

#### \* IMPORTANT NOTE.

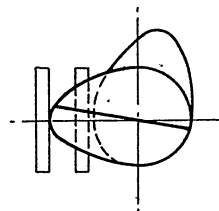
THESE DIMENSIONS ARE VITAL



COCKPIT POSITIONS - "OFF"



"COLD", FULL ON



"HOT", FULL ON

#### CAM. SETTINGS

SECTION THROUGH TEMP. CONTROL VALVE BRACKET SHOWING POSITION OF CAMS.

**RESTRICTED**

DRG. Nº A.P.4099G / T.2 / 53  
SHEET 2

LP26233 3/53 350 C & P Gp. 959 (4)

(Cold air unit)

**Vampire F.B. Mk. 9 Aircraft—Miscellaneous improvements to prevent entry of Sand and Grit into Oil Supply for Cold Air Unit—Introduction**

(MOD. NO. VAMPIRE/3265.)

(Class B/3.)

(7/Mods/20,722.—15.10.53.)

1. This modification is introduced because damage to the cold air unit bearings is being caused by the entry of sand and grit into the unit oil supply, and by grit thrown up during formation take off. A filter is introduced into the oil tank inlet neck and the air vent hole diameters are reduced.

The work will take approximately 2 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first available opportunity and not later than the next Minor (or equivalent) Servicing

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

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

3. The following is the sequence of operations:—

(1) Remove the cold air unit access panel and oil reservoir, retaining the parts removed for future use.

*Note:*—When releasing the Jubilee clip which secures the hose to the reservoir, allow the oil from the hose and reservoir to drain into a suitable receptacle.

(2) Located at approximately  $1\frac{1}{4}$  in. from the face of the mounting flange of the reservoir is a  $\frac{1}{8}$  in. dia. drilled hole. Seal this hole by brazing or silver solder and drill a  $\frac{3}{4}$  in. dia hole opposite. Ensure no swarf enters the reservoir, and that scrupulous cleanliness is observed throughout this operation. The reservoir will then become Part No. ROO 2621A (ref. only).

(3) Insert the filter, Part No. 12 V 667A, with the rivet uppermost, and temporarily enclose it by lightly screwing the new dipstick assembly, Part No. ROO 2619A, into position.

(4) Replace the reservoir and access panel, using the reverse of the removal procedure and utilizing the original attachment items.

(5) Refill the reservoir, to the level indicated on the dipstick, with oil OEP-71 (Stores Ref. 34A/206).

4. Upon embodiment of this modification the undermentioned part number alteration becomes necessary:—

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
26FC/4524	ROO 2047A	Cold air unit oil tank assembly	ROO 2621A	26FC/10183

5. The undermentioned items will be delivered to No. 25 M.U. as a Set. No additional items are required to be added by the M.U. The set is to be issued as a Modification Kit (Stores Ref. 26FC/103265). Demands for

**RESTRICTED**

P.T.O.

Modification Kits, which must quote the Stores reference number, are to be submitted in accordance with A.M.O. A.692/51, para. 6 or 7, as appropriate, to P.S.C.O., No. 25 M.U.:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/10184	ROO 2619A	Dipstick assembly	1	C
26FC/—	12 V 667A	Filter	1	C

6. The undermentioned item is required to embody this modification and is to be supplied under Unit arrangements:—

Stores Ref.	Nomenclature	No. off	Class of Store
34A/206	Oil, OEP-71	As reqd.	C

7. The undermentioned item, rendered redundant by the embodiment of this modification, is to be disposed of in accordance with current authorized procedure:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/4525	ROO 1893A	Dipstick assembly	1	C

**RESTRICTED**

**Vampire F.B. Mk. 9 Aircraft—Introduction of Coarse Mesh Intake Guard on Introduction of Cabin Pressure Control Valve Mk. 11 (Ref. 27KD/19) embodying Normalair Mods. 41 and 42**

(MOD. NO. VAMPIRE/3212.)

(Class C/3.)

(AB/A/562.—20.7.54.)

**1. INTRODUCTION**

Cabin over-pressurisation may result, should the pressure control valve be prevented from functioning correctly by small particles of foreign matter choking the close gauze mesh of the intake guard. This modification introduces a new intake guard of  $\frac{1}{4}$  in. perforated grid plate which permits small particles to be discharged through the valve.

This modification is essentially connected with Mod. No. Normalair/41 ("To introduce (a) Additional guard to orifice body (b) Filter guard over shraeder outlet and differential pack vent") and Mod. No. Normalair/42 ("To reduce risk of over-pressurisation"); if that work is not already embodied it must be effected concurrently.

**2. EMBODIMENT**

This modification is to be embodied on fitment of cabin pressure control valve embodying Mod. No. Normalair/41 and 42.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 5 man-hours (excluding drying time for the cabin sealant and time taken for pressure tests).

**4. DRAWINGS REQUIRED**

There are no drawings required for the embodiment of this modification.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

(1) Parts and/or Materials

(a) The undermentioned items will be delivered to No. 25 Maintenance Unit as a Set. No additional items are required to be added by the Maintenance Unit. The Set is to be issued as a Modification Kit (Stores Ref. No. 26FC/103212). Demands for Modification Kits are to be submitted to P.S.C.O., No. 25 Maintenance Unit, through Command Headquarters *vide* A.M.O. A.692/51, para. 6 and 7, and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/10319	ROO.2709A	Plate assembly, grid, intake guard	1	C
28D/12538	A25/15C	Bolt, 2, B.A.	5	C

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
*26FC/4954	ROO.2445	Ring, distance	1	C
30A/3055	—	Wire, nickel alloy, 22 S.W.G.	As reqd.	C
33C/1138	—	Compound, pressure cabin sealing, Bostik 1790	As reqd.	C
33C/1139	—	Compound, pressure cabin sealing, Bostik, primer 1751	As reqd.	C

\*Note:—This part will only be required for aircraft without Mod. No. Vampire/871 already embodied.

**RESTRICTED**



**Vampire F.B. Mk. 9 Aircraft—Introduction of Coarse Mesh Intake Guard  
on Introduction of Cabin Pressure Control Valve Mk. 11 (Ref. 27KD/19)  
embodying Normalair Mods. 41 and 42**

(AB/A/562.—15.4.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. T.4 (Mod. No. Vampire/3212)  
is amended as follows:—

(1) Para. 5, sub-para. (1). *Delete* "Sections (a) and (b)" and  
*substitute:*

"The undermentioned items are required to embody this  
modification and are to be supplied under Unit arrangements:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
*26FC/4954	ROO.2445	Ring, distance	1	C
26FC/10319	ROO.2709A	Plate assembly, grid, intake guard	1	C
28D/12538	A.25/15C	Bolt, 2 B.A.	.5	C
30A/3055	—	Wire, nickel alloy, 22 s.w.g.	As reqd.	C
33C/1138	—	Compound, pressure cabin sealing Bostik 1790	As reqd.	C
33C/1139	—	Compound pressure cabin sealing, Bostik primer 1751	As reqd.	C

*\*Note:—This part will only be required for aircraft without Mod. No.  
Vampire/871 already embodied."*

R

L34178 5/55 500 C &amp; P Gp. 1

**RESTRICTED**





A.L.N. 166

.....  
(Cabin pressure control)

A.P.4099G, Vol. 2, Part 1

Leaflet No. T.4

(Alteration 3)

**Vampire F.B. Mk. 9 Aircraft—Introduction of Coarse Mesh Intake Guard on Introduction of Cabin Pressure Control Valve Mk. 11 (Ref. 27KD/597) Embodiment Normalair Mods. 41 and 42 in place of unmodified Mk. 11 or Mk. 9 (29KD/41) valves**

(AB/A/562.—8.3.56.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. T.4 (Mod. No. Vampire/3212) is amended as follows:—

- (1) Para. 5 (b) Items to be supplied under Unit arrangements.  
*Amend* “\*26FC/4954” to read “26FC/4945”.





Vampire F.B. Mk. 9 Aircraft—Introduction of Coarse Mesh Intake Guard  
on Introduction of Cabin Pressure Control Valve Mk. 11 (Ref.  
27KD/19) embodying Normalair Mods. 41 and 42

(AB/A/562.—24.11.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. T.4 (Mod. No. Vampire/3212),  
is amended as follows:—

(1) Title. *Amend* "(Ref. 27KD/19)" to read "(27KD/597)" and  
after "Normalair Mods. 41 and 42" *add* "in place of unmodified Mk. 11  
or Mk. 9 (27KD/41) valves"

(2) Heading, class. *Delete* "(Class C/3)" and *substitute* "(Class B/2  
concurrently with fitting valves embodying Normalair Mods. 41 and 42)".

(3) Para. 2. *Delete in toto* and *substitute*:

"2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units*: At the first opportunity (not  
later than 2 months after receipt of parts)

*3rd Line Servicing Units (R.S.U.s)*: 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."



**RESTRICTED**



.....  
(Cabin pressure control valve)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. T.5  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Pressurisation—To Introduce Normalair Cabin Pressure Control Valve, Mk. 13 (Stores Ref. 27KD/597) in place of Mk. 11 (Stores Ref. 27KD/19)**

(AB/A/4915.—23.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. T.5 (Mod. No. Vampire/3505). is amended as follows :

(1) Heading, Class, *Delete* "(C/3 (partially superseding Mod. No. 3212))" and *substitute* "(C/4 (partially superseding Mod. No. 3212))".

(2) Para. 2, *Delete in toto* and *substitute*

"2. EMBODIMENT

No further retrospective action is required on this modification."

(E1027) 625 2/58 V.B. Gp 1257



**RESTRICTED**



( .....  
(Cabin pressure control valve)

Vampire F.B. Mk. 9 Aircraft—Pressurisation—To Introduce Normalair Cabin Pressure Control Valve, Mk. 13 (Stores Ref. 27KD/597) in place of Mk. 11, (Stores Ref. 27KD/19).

(MOD. NO. VAMPIRE/3505.)

(Complementary Mods. Normalair 81 and 82.)

(Class C/3 (partially superseding Mod. No. 3212).)

(AB/A/4915.—9.11.56.)

## 1. INTRODUCTION

At low cabin input flows, the cockpit pressure has been found to fluctuate, owing to the instability of the discharge valve. This modification introduces a new discharge valve to overcome this discrepancy.

(1) This modification partially supersedes the work called for by Mod. No. Vampire/3212.

(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 (not later than 6 months after receipt of this leaflet.)

*3rd Line Servicing Units (R.S.U.s):* 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 5 man-hours, excluding drying time ( $\frac{1}{2}$  to Strip; 4 to Embody;  $\frac{1}{2}$  to re-assemble).

## 4. DRAWINGS REQUIRED

There are no drawings required for the embodiment of this modification.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

(a) The following item is required:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
27KD/597	510870/	Valve, Discharge, Normalair	1	A

R.A.F. Units are to forward their demands for the individual referenced item (quoting Mod. No. Vampire/3505 as authority) direct to the appropriate Maintenance Unit at home or abroad. Other users are to demand their requirements similarly in accordance with current regulations.



RESTRICTED

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

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
33C/887	—	Compound, Insulating and filling B.1 C.C. No. 391	As reqd.	C
33C/1138	—	Compound, Pressure Cabin Sealing Bostik 1790, Spec. D.T.D.900/4058	As reqd.	C
33C/1139	—	Compound, Pressure Cabin Sealing, Bostik primer 1751, Spec. D.T.D.900/4058	As reqd.	C

(2) Special Tools and Test Equipment

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

6. SPARES AFFECTED

There are no spares affected by this modification.

7. CHANGE OF STORES REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Stores Ref., Part or Assembly Nos., as a result of this modification.

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations :—

(1) Open the detachable nose cap, by depressing the spring loaded lock on the forward end and pulling the nose cap forward. Remove the access panel on the starboard side of the fuselage, immediately forward of bulkhead No. 1, retaining the panel and attachment items. Open the cockpit canopy and to obtain working room in the cockpit, remove the pilot's seat. Retain all items. Open the gun bay doors and disconnect the aircraft batteries.

(2) Above the floor, on the forward starboard side of bulkhead No. 1 adjacent to the access panel which was removed in operation (1), will be found the redundant Normalair Mk. 11 discharge valve (Stores Ref. 27KD/19). Note the locations of the connections of the electric cables and disconnect the cables from the valve. Working from the forward and aft sides of bulkhead No. 1 carefully remove the six bolts securing the valve to the bulkhead and remove the valve from the aircraft. Do not disturb the gasket or filter plate.

(3) Apply compound, pressure cabin sealing, Bostik primer 1751, Spec. D.T.D.900/4058 (Stores Ref. 33C/1139) to the mating surfaces and also to the securing bolts and replace the redundant discharge valve with the new Mk. 13 valve (Stores Ref. 27KD/597), and allow the sealant to dry for one hour. Fill around the interior joints, and the bolt heads with a fillet of compound, pressure cabin sealing, Bostik 1790, Spec. D.T.D.900/4058 (Stores Ref. 33C/1138) and allow to dry for 24 hours. Finally, brush coat again with Bostik primer 1751 and again allow to dry. Connect the existing electric cables to the new discharge valve in their original positions, and seal the cable entries with compound, insulating and filling B.1.C.C. No. 391 (Store Ref. 33C/109209).



(4) Replace the pilot's seat in accordance with current procedure and close the canopy. Replace the starboard fuselage access panel and secure with the existing items. Refit the aircraft nose cap and re-connect the aircraft batteries. Close the gun bay doors.

9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected the following tests are to be carried out. Carry out a proof, leakage and operational check on the aircraft pressurisation system in accordance with current procedure.

10. RECORDING ACTION

Record on Aircraft Form 700.

11. DISPOSAL OF REDUNDANT PARTS

The undermentioned part rendered redundant by the embodiment of this modification is to be returned to No. 25 Maintenance Unit:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
27KD/19	501820	Valve, Discharge, Normalair	1	A

12. EFFECT ON WEIGHT AND C. OF G.

This modification has no effect on weight or C. of G.



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NOTE TO USER :—  
Insert relevant A.P. No. at top of page.

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Wt.42597/BJ/151 3m. 5/56 W.H.&S. 719/86

# Section

# V

## Contents List

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Wt. 3537 J/BJ74 4m. 4/56 W.J.L.&S. 850,36

(Hydraulic pipe changed)

**Vampire F.B. Mk. 9 Aircraft—Hydraulics Pipe Routed Between Cut Out Valve and Thermal Relief Valve in D.T.D.323 in place of D.T.D.310—Introduction**

(MOD. NO. VAMPIRE/3370.)

(Class C/3)

(AB/A/1796—8.2.55.)

**1. INTRODUCTION**

Cases have occurred of the failure of the pipe between the hydraulic automatic cut out valve and the thermal relief valve, due to stresses in the metal caused by its complicated shape and difficulty of manufacture. This modification introduces a new pipe, which is made of a more suitable and stronger material, to give a greater reserve factor.

**2. EMBODIMENT**

This modification is to be embodied by—

*2nd Line Servicing Units:* At the first opportunity (not later than six months after receipt of parts)

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

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

*Aircraft Storage Units:* Before issue of aircraft

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 5 man-hours.

**4. DRAWINGS REQUIRED**

There are no drawings required for the embodiment of this modification.

**5. PARTS AND SPECIAL TOOLS REQUIRED****(1) Parts and Materials**

(a) The undermentioned item will be delivered to No. 25 Maintenance Unit as a set. No additional items are required to be added by the Maintenance Unit. The set is to be issued as a Modification Kit (Stores Ref. No. 26EC/103370). Demands for Modification Kits are to be submitted to P.S.C.O. No. 25 Maintenance Unit through Command Headquarters vide A.M.O. A.692/51 paras 6 and 7, and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC	QOO3759A/ND	Pipe assembly	1	—

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
30A/3055	—	Wire locking, nickel alloy, 22 S.W.G. (D.T.D.189)	As reqd.	C
34B/159	—	Oil Hydraulic, OM-15	As reqd.	C

**(2) Special Tools and Test Equipment**

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

**RESTRICTED**



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# Section

# W

## Contents List

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