

## AMENDMENT RECORD SHEET

Incorporation of an Amendment List in this publication is to be recorded by inserting the Leaflet Section Letter and number against the Amendment List number, signing in the appropriate column and inserting the date of making the amendment. The necessary entries must also be made on the relevant Section Contents Lists.

Note to user :—Insert relevant A.P. No. at top of page.

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† An Amendment Record Continuation Sheet (R.A.F. Form 2096C), will be required when this page is full. Demand it now.



# AEROPLANES

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# Section

# A

## Contents List

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

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(R.A.F. Form 3850 A)

(Continued Overleaf)

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§ A Section Contents List Continuation Sheet (R.A.F. Form 2096 D) will be required when this page is full.  
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Wt.42600/BJ/151 24m. 5/56 W.H.&S. 719 36

A.L. No. 38  
(Anchor cap nuts. Intro.)

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

Vampire F.B. Mk. 9 Aircraft—Two Anchor Nuts on Rib No. 1, Port Wing, replaced by Two Anchor Cap Nuts, Part No. A.G.S.2023/B1, to Support Cables on Engine Side of Bulkhead—Introduction

(MOD. No. VAMPIRE/3052.)

(Class B/2.)

(7/Mods/15,627.—23.5.56.)

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.

**R**

**RESTRICTED**

(45243/520) 129949 8245 125 6/56 (H.P.W.) (Gp. 19/1)





Vampire F.B. Mk. 9 Aircraft—Spoiler Strip at Elevator Trailing Edge—  
Introduction

(MOD. NO. VAMPIRE/3115.)

(Class B/2.)

(7/Mods/16,509.—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. 161, 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 E S T R I C T E D**



A.L. No. 68  
(Elevator trimmer)

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

Vampire F.B. Mk. 9 Aircraft—Bolts in place of Rivets at Elevator Trim  
Tab Hinge—Introduction

(MOD. NO. VAMPIRE/3034, ISSUE 2.)

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

(7/Mods/16,137.—22.11.56.)

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. 123, 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**

(46225/453) 12955 8245 125 12/56 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Two Bolt Plates in place of two Anchor Cap Nuts, Part No. A.G.S.2023/B1, to support Cables on Engine side of Bulkhead—Introduction

(MOD. NO. VAMPIRE/3263.)

(Class C/3, on removal of No. 1 fuel tank (port).)

(7/Mods/20,155.—31.8.53.)

1. This modification is introduced to eliminate damage to the No. 1 port wing tank. The bolts securing the cable clips on the engine side of the rib have frequently been excessively tightened and the consequent shearing of the nylon cap has resulted in the chafing of the bolts on the tank. It makes provision for the replacement of the two anchor cap nuts by two bolt plates.

This modification, which will take approximately one man-hour, supersedes and cancels Mod. No. Vampire/3052.

2. This modification is to be embodied on removal of No. 1 port fuel tank.

3. The following is the sequence of operations:—

*Note:*—The No. 1 port wing tank is, considered as having been removed, and the upper and lower engine inspection panels opened.

(1) Working from either above or below the port mainplane, locate the cable run along the inboard side of wing rib No. 1. The cables are covered in asbestos for part of the run and are clipped just aft of the flame switches with two 'P' clips. Unscrew the two round headed bolts securing these clips in position and carefully pull the cables to one side to clear the clearance hole in the rib. The bolts are not required for future use.

*Note:*—The following operation is applicable only to aircraft with Mod. No. Vampire/3045 embodied.

(2) Locate the positions of the countersunk head rivets retaining the anchor cap nuts to the outboard face of the rib. Drill these rivets out, using a No. 44 (0.086 in. dia.) drill, and continue drilling into the Hycar packing in the tank bay. Cut away sufficient packing to permit the removal and replacement of these cap nuts.

*Note:*—The following operation is applicable only to aircraft not embodying Mod No. Vampire/3045.

(3) Locate the positions of the countersunk head rivets retaining the anchor cap nuts to the outboard face of the rib. Drill these rivets out, using a No. 44 (0.086 in. dia.) drill, and remove the anchor cap nuts from the aircraft.

*Note:*—The remaining operations (4) and (5) are applicable to all aircraft.

(4) Offer up the new captive bolts, Part No. D.H.S.141, Mk. 1, from the tank bay side, and enlarge the existing rivet holes in the rib, using the holes in the bolt plates as guides. Countersink these holes 90 deg. x 0.22 in. dia. Coat the mating surfaces of the bolt plates and the rib with pigmented varnish jointing compound (Stores Ref. 33C/885) and rivet them in position with four rivets, Part No. AS.2229/404.

(5) Replace the cables and their clips in position and secure them with two stiffnuts and washers, Part Nos. A.G.S.2001/B1 and SP.13/B.

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/103263). Demands for

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P.T.O.

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:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26EW/2846	DHS.141	Mk. 1 Bolt, captive	2	C
28M/10287	A.G.S.2001/B1	Stiffnut	2	C
28Q/6640	AS.2229/404	Rivet	4	C
28W/12305	SP.13/B	Washer	2	C

5. The undermentioned item is also required and is to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
33C/885	Compound, jointing, varnish, pigmented	As reqd.	C

**RESTRICTED**

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off.</i>	<i>Class of Store</i>
28D/12528	A25/1B	Bolt	3	C
28D/12511	A25/2B	Bolt	16	C
28D/12622	A25/3B	Bolt	20	C
28Q/16664	AS.2227/304	Rivet	15	C
28W/12306	SP.15/B	Washer	45	C

5. The undermentioned parts are also 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>
28D/12519	A25/3E	Bolt	4	C
28M/756	A16Y/EP	Nut	4	C
28Q/6725	A.G.S.2047/508	Pin, sealing	6	C
28Q/6887	A.G.S.2045/508	Rivet, Chobert	6	C
28W/12306	SP.15/B	Washer	14	C
30A/3055	—	Wire, locking, nickel alloy,	As reqd.	C
		22 s.w.g.		
33C/885	—	Compound, pig- mented varnish jointing	As reqd.	C

(Rib No. 1. Rear portion)  
(A.L. No. 63 cancelled)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. A.6  
(Leaflet No. A.4 cancelled)

# Vampire F.B. Mk. 9 Aircraft—To blank off Holes in rear portion of Rib No. 1

(MOD. NO. VAMPIRE/3162.)

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

(7/Mods/16,914.—22.9.53.)

*Note:—This leaflet supersedes and is the authority for cancelling A.P. 4099G, Vol. 2, Part 1, Leaflet No. A.4 (A.L. No. 63).*

1. This modification has been introduced because, in the event of a fire at the rear of root rib No. 1, considerable damage can be caused to various electrical gear in the flap shroud. It seals off the holes in the root ribs to obviate this danger.

The work will take approximately 17 man-hours.

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

*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 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/A.6/53, Sheets 1 & 2.)

(1) Remove all the engine cowlings and the rear cone fairing, and disconnect the aircraft accumulators.

(2) Lower the flaps to the fully "down" position. Locate and remove the fire extinguisher, mounted on the outboard face of the port rear cone support rib, together with the extinguisher mounting cradle. Disconnect the voltage regulator and suppressor and remove the complete mounting assembly from its location under the starboard, inboard, flap shroud. Retain all items for reassembly.

(3) Refer to Sheet 1 of the drawing; temporarily position the top half of the blanking plate, Part No. 13 W 225ND, on the outboard face of the port cone fairing support rib, as shown. With a No. 41 (0.0960 in. dia.) drill, and using the existing holes in the blanking plate as guides, drill five holes through the support rib. Retaining the plate in this position, offer up the bottom blanking plate half, Part No. 13 W 227ND, in its correct position. Using a No. 26 (0.147 in. dia.) drill, and utilizing the holes in the plate as guides, drill three holes through the rib.

(4) Remove the two plates from their temporary attachment. Deburr all of the newly drilled holes and remove all traces of metal dust. Now treat the faying surfaces of the blanking plate halves and the support rib with pigmented varnish jointing compound (Stores Ref. 33C/885), and assemble each half in its correct position, using five rivets, Part No. AS.2227/304, for the top half, and three bolts, washers and nuts, Part Nos. A25/1B, SP.15/B and A.G.S.2001/B1, respectively, for the bottom half, as shown in Sheet 1 of the drawing.

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(5) Refer to Sheet 2 of the drawing, and offer up the blanking plate, Part No. 13 W 235ND, in its correct position on the outboard face of the starboard support rib, as detailed, and using a No. 41 drill (as in operation (3)), drill ten holes right through the rib. Remove the plate, deburr the newly drilled holes, and clean away all traces of metal dust. Apply a coat of pigmented varnish jointing compound to the mating surfaces of the plate and rib, and then rivet the plate firmly in position, using ten rivets, Part No. AS.2227/304.

*Note:*—The following operations (6)–(13) are common to both port and starboard mainplanes.

(6) Break all the control cables, including the two elevator trim cables on the port side, by disconnecting them at their individual turnbuckles, which lie on the inboard face of the root rib No. 1, and also dismantle the lower pulley assembly from its mounting brackets. Remove the two  $\frac{1}{4}$  in. dia. bolts and nuts, and the four washers located in the extreme top and bottom attachment plates (see Sheets 1 and 2 of the drawing). Retain the four washers for re-assembly.

(7) Using a No. 30 (0.1285 in. dia.) drill, carefully drill out the two existing rivets from the top attachment plate, and the three from the bottom plate, as shown in the drawing. Thread the control cables through their correct holes in the new sealing plate, Part No. 13 W 231, port, Part No. DOO 7791, starboard, as detailed in the drawing, and position the plate correctly, together with the packing piece, Part No. 13 W 229ND. Note that, on the starboard side, the sealing plate may foul the voltage regulator mounting bracket. If that should occur, the bracket should be cut to clear. Referring to the drawing, and with a No. 26 (0.147 in. dia.) drill, drill eight holes through the support rib (three of which go through the packing piece), using the existing holes in the sealing plate as pilots.

(8) Still using the existing holes in the sealing plate as guides, drill off three holes through the false spar and the rear attachment plate of rib No. 1 with a No. 21 (0.159 in. dia.) drill.

*Note:*—It is essential that a stop tube be fitted to the drill to restrict it to a maximum movement of 0.25 in., to ensure that the drill can not enter the fuel tank bay sufficiently to cause any damage.

(9) Open out the pilot hole at the top and bottom of the sealing plate to suit the existing  $\frac{1}{4}$  in. dia. hole through the rib and its attachment plate.

*Note:*—Take care to avoid enlarging the existing  $\frac{1}{4}$  in. dia. reamed hole through the rib and plate.

(10) Remove the sealing plate, together with the packing piece, from its present position, and deburr all the holes. Coat the mating surface of the fairleads with pigmented varnish jointing compound and assemble the fairleads, Part Nos. 12 CF 599, 13 CF 551 and 13 CF 553, to the port sealing plate with 12 bolts and nuts, and 24 washers, as detailed in Sheet 1 of the drawing. Refer to Sheet 2 of the drawing, and attach the fairleads, Part Nos. 12 CF 599 and 13 CF 549, to the starboard sealing plate with eight bolts and nuts, and 16 washers, Part Nos. A25/3B, A.G.S.2001/B1 and SP.15/B, respectively.

**RESTRICTED**

(11) Apply a coat of pigmented varnish jointing compound to the mating surfaces of the sealing plate and packing piece, thread the sealing plate onto the control cables and so into their correct position, then secure it to the support rib, together with the packing piece, with eight bolts, washers and nuts, Part Nos. A25/2B, SP.15/B and A.G.S.2001/B1, respectively. Attach the sealing plate to the false spar and the rear attachment plate of rib No. 1 with three  $\frac{5}{8}$  in. dia. Chobert rivets and sealing pins, Part Nos. A.G.S.2045/508 and A.G.S.2047/508, respectively.

(12) Secure the top and the bottom of the sealing plate with two new  $\frac{1}{4}$  in. B.S.F. bolts and nuts, Part Nos. A25/3E and A16Y/EP, respectively, and the four original washers retained in operation (6). Cut the thread of the new bolt protruding through the nut back to 0.05 in. and then lock the nut by peening the bolt end whilst holding a riveting dolly against the head of the bolt.

(13) Re-assemble the control cable pulleys to their original positions, and then re-connect and retension the control cables, as detailed in Air Publication 4099A, C, E, G, Vol. 1, Section 4, Chapter 3. Re-lock the turnbuckles with 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055). Note that this includes the trim cables on the port mainplane.

(14) On the port side only, replace the fire extinguisher cradle and the fire bottle which were removed in operation (2), using the original attachment items, and re-connect the fire extinguisher pipe and cable to the fire bottle.

(15) On the starboard side only, re-attach the suppressor and voltage regulator mounting, removed in operation (2), in its correct position. Unsweat the two terminal lugs and remove the inner sleeve, outer sleeve and gland nut on the generator to suppressor cable assembly. Remove the inner and outer sleeves of cable loom C11. Pass the cables through the elongated hole provided in the starboard sealing plate, re-assemble the gland nut, outer sleeve and inner sleeve to their respective cables, and sweat the two terminal lugs to their original leads coded "GA5" and "GA7" (ref. only). Secure the cables with the two 'P' clips retained in operation (2), and connect up to the suppressor and voltage regulator.

(16) Re-connect the aircraft accumulators; return the flaps to the "UP" position; replace the rear cone fairing and the engine cowlings.

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/103162). 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:—

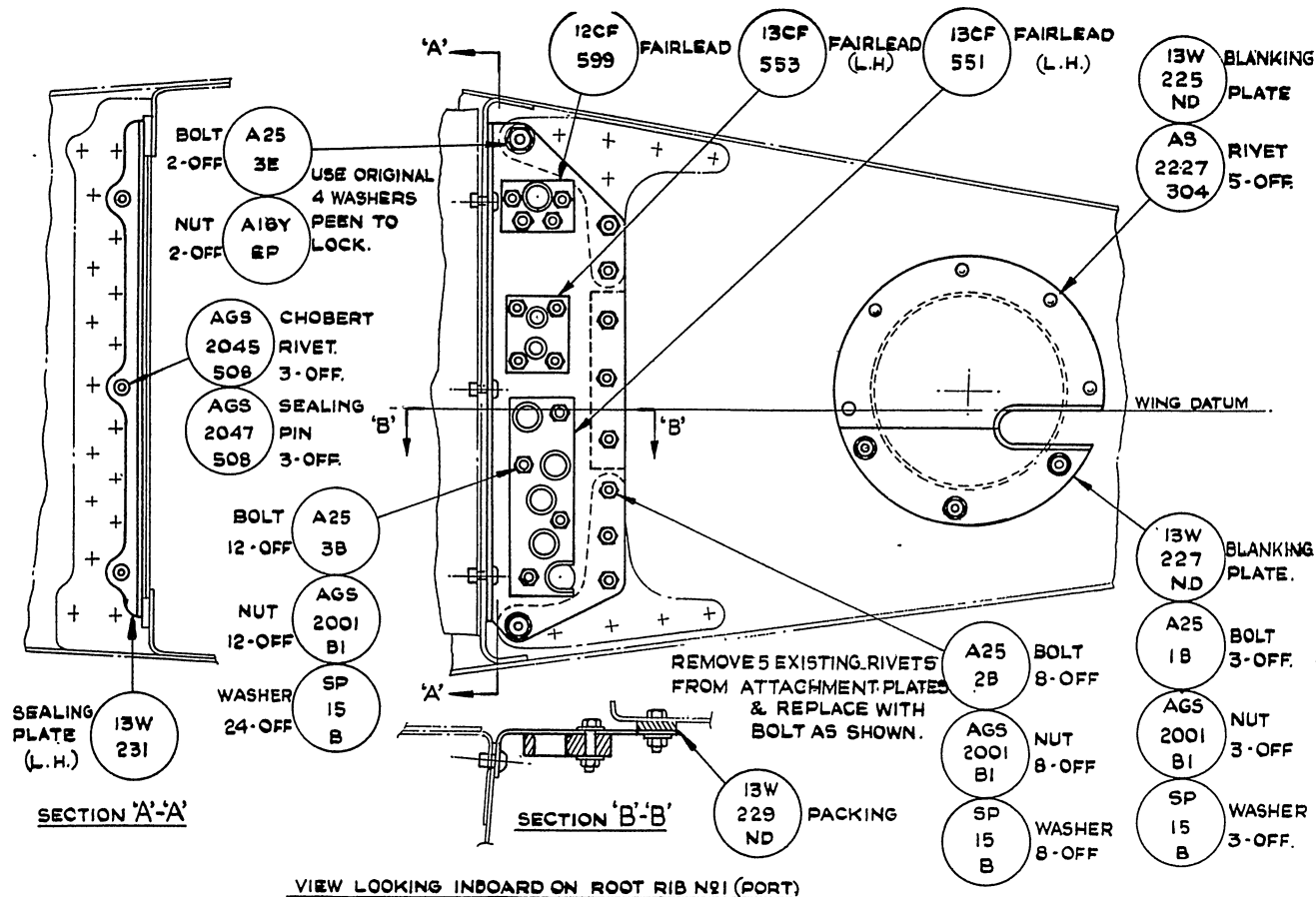
Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/-	12 CF 599	Fairlead	2	C
26FC/-	13 CF 549	Fairlead	1	C
26FC/-	13 CF 551	Fairlead	1	C
26FC/-	13 CF 553	Fairlead	1	C
26FC/-	13 W 225ND	Plate, blanking	1	C
26FC/-	13 W 227ND	Plate, blanking	1	C
26FC/-	13 W 229ND	Strip, packing	2	C
26FC/-	13 W 231	Plate, sealing	1	C
26FC/-	13 W 235ND	Plate, blanking	1	C
26FC/-	DOO 7791	Plate, sealing	1	C
28M/10287	A.G.S.2001/B1	Nut	39	C

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DRG. NO. ARA4099 G/A.6 / 53

SHEET 1

LP26933 9/53 350 C & P Gp. 959 (4)



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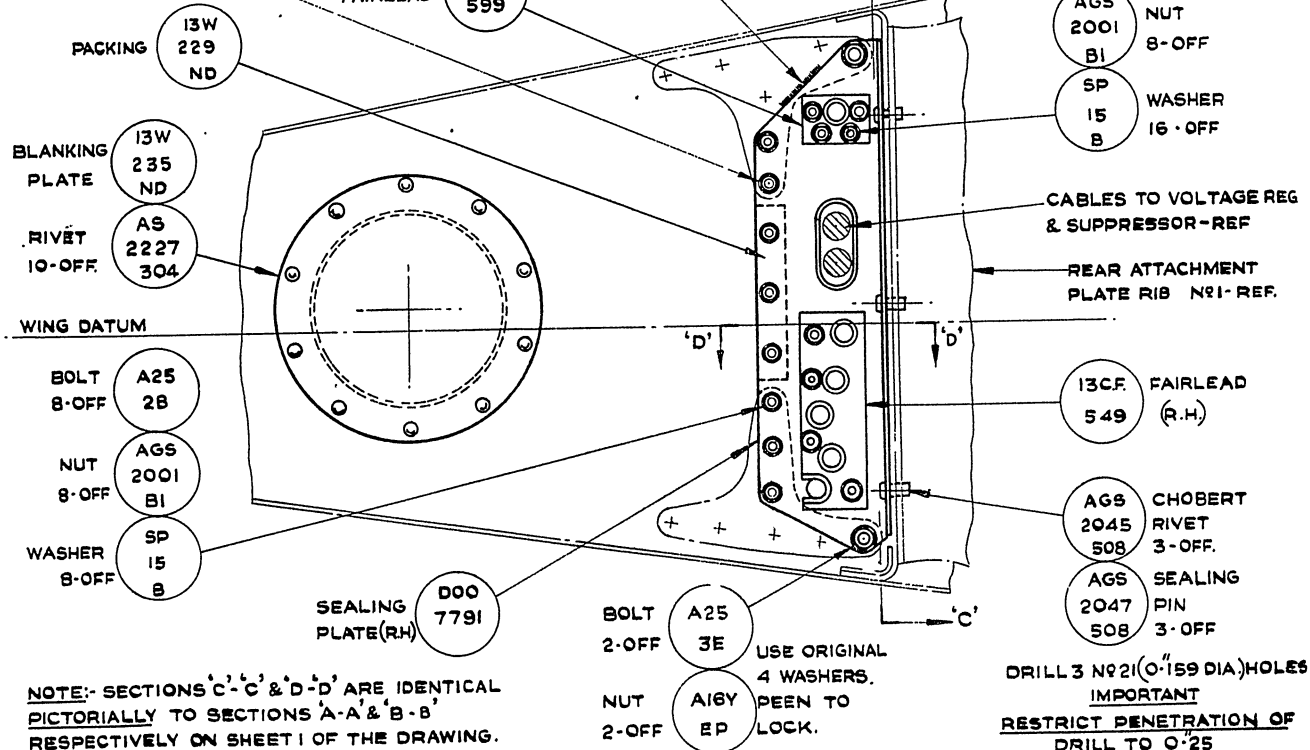
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SHEET 2

LP26953 9/53 350 C & P Cp. 959 (4)

REMOVE EXISTING RIVETS FROM ATTACHMENT PLATES & REPLACE WITH FIVE BOLTS AS SHOWN.

CUT BACK VOLTAGE REG. MTG. BRACKET (OMITTED FOR CLARITY) TO CLEAR SEALING PLATE.



VIEW LOOKING INBOARD ON ROOT RIB NO. 1 (STARBOARD)

.....  
(Mainplanes, stiffeners on Rib 2)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. A.7  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Mainplanes—To introduce Stiffeners on Rib No. 2 and U/C Diaphragm**

(AB/A/4599.—15.7.57.)

A.P.4099G, Vol. 2, Part 1, Leaflet No. A.7 (Mod. No. Vampire/3494) is amended as follows:—

(1) Para. 8 *After* operation (14) *insert*:

*Note*: In cases of difficulty the existing four rivets through the 'Z' member may have their heads and tails removed and their stems left in situ to be sandwiched between the new upper and lower stiffeners.

To facilitate the fitment of the upper stiffener the gusset plate attached to the 'Z' member may be relieved by 0.125 in. where a foul occurs, the relief to be blended out."



1267 W. J.T.D.

RESTRICTED



.....  
(Mainplanes, stiffeners on Rib 2)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. A.7

**Vampire F.B. Mk. 9 Aircraft—Mainplanes—To Introduce Stiffeners on Rib No. 2 and U/C Diaphragm**

(MOD. NO. VAMPIRE/3494.)

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

(AB/A/4599.—11.9.56.)

**1. INTRODUCTION**

Reports indicate that Rib No. 2 may crack and buckle in the vicinity of the undercarriage aperture. This modification introduces additional steel reinforcing plates and stiffeners on both sides of Rib No. 2 and on the back face of the rear undercarriage diaphragm and on the forward face of the front undercarriage diaphragm. Fixing holes through Rib 2 and the diaphragms found oversize during the embodiment of this modification are to be dealt with in accordance with Repair Instruction Sheet No. 152, Issue 2.

(1) This modification plus Mod. No. Vampire/3495 satisfies the work called for by Mod. No. Vampire/3306 (Main Undercarriage—To Improve Locking of Attachment Bolts to Facilitate Replacement) and supersedes S.T.I./Vam/101. This modification supersedes the work called for by R.I.S. Nos. 1 and 137.

(2) This modification is essentially connected with Mod. No. Vampire/3495 (Main Undercarriage—To Introduce Strengthened Radius Rod Assembly and Attachment Fittings); if that work is not already embodied it must be effected concurrently.

**2. EMBODIMENT**

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

*2nd Line Servicing Units:* At the first opportunity (not later than 3 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 80 man-hours (15 to strip; 45 to embody; 20 to re-assemble).

**4. DRAWINGS REQUIRED**

(1) Drawing No. A.P.4099G/A.7/56, Sheets 1-7, is incorporated in this leaflet.

(2) The following drawing is also required and is to be demanded in accordance with A.P.3158, Vol. 2, Leaflet D.7:

The de Havilland Aircraft Co., Ltd., R.I.S. No. 152; Issue No. 3, Drawing No. R.O.O.D.465—Assembly of reinforcing plates to Rib 2.

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## 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. No. 26FC/103494:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/-	DOO.7919ND	Strip, lower, U/C diaphragm packing	2	—
26FC/-	DOO.7945ND	Plate, Rib 2 reinforcing L.H.	1	—
26FC/-	DOO.7946ND	Plate, Rib 2 reinforcing R.H.	1	—
26FC/-	DOO.7947ND	Plate, Rib 2 reinforcing L.H.	1	—
26FC/-	DOO.7948ND	Plate, Rib 2 reinforcing R.H.	1	—
26FC/-	DOO.7949	Plate, Rib 2 reinforcing	2	—
26FC/-	DOO.7955	Stiffener, upper, front U/C diaphragm, L.H.	1	—
26FC/-	DOO.7956	Stiffener, upper, front U/C diaphragm, R.H.	1	—
26FC/-	DOO.7957	Stiffener, lower, front U/C diaphragm, L.H.	1	—
26FC/-	DOO.7958	Stiffener, lower, front U/C diaphragm, R.H.	1	—
26FC/-	DOO.7959	Stiffener, upper, rear U/C diaphragm, L.H.	1	—
26FC/-	DOO.7960	Stiffener, upper, rear U/C diaphragm, R.H.	1	—
26FC/-	DOO.7961	Stiffener, lower, rear U/C diaphragm, L.H.	1	—
26FC/-	DOO.7962	Stiffener, lower, rear U/C diaphragm, R.H.	1	—
26FC/-	DOO.7963ND	Strip, rear U/C diaphragm packing	2	—
26FC/-	DOO.7965ND	Strip, front U/C diaphragm packing	2	—
26FC/-	DOO.8019ND	Strip, upper, U/C diaphragm packing	4	—
26FC/-	QOO.2620	Strip, clamp block packing	4	—
26FC/-	QOO.3783	Strip, clamp block packing	4	—
28D/12513	A.25/2C	Bolt, hex./hd., 2 B.A. × 0.65 in.	38	C
28D/12531	A.25/3C	Bolt, hex./hd., 2 B.A. × 0.75 in.	22	C
28D/12532	A.25/4C	Bolt, hex./hd., 2 B.A. × 0.85 in.	12	C
28D/12566	A.25/6C	Bolt, hex./hd., 2 B.A. × 1.05 in.	66	C
28D/12516	A.25/11C	Bolt, hex./hd., 2 B.A. × 1.55 in.	2	C
28D/12535	A.25/12C	Bolt, hex./hd., 2 B.A. × 1.65 in.	2	C

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Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
28D/13105	A.25/26C	Bolt, hex./hd., 2 B.A. × 3.05 in.	3	C
28D/12934	A.25/28C	Bolt, hex./hd., 2 B.A. × 3.25 in.	1	C
28D/12714	A.25/29C	Bolt, hex./hd., 2 B.A. × 3.35 in.	3	C
28D/12715	A.25/31C	Bolt, hex./hd., 2 B.A. × 3.55 in.	1	C
28D/12519	A.25/3E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 0.8 in.	18	C
28D/12520	A.25/4E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 0.9 in.	10	C
28D/12542	A.25/5E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 1.0 in.	24	C
28D/12543	A.25/6E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 1.1 in.	14	C
28D/12633	A.25/7E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 1.2 in.	12	C
28D/12674	A.25/9E	Bolt, hex./hd., $\frac{1}{4}$ in. B.S.F. × 1.4 in.	10	C
28D/12553	A.25/6J	Bolt, hex./hd., $\frac{3}{8}$ in. B.S.F. × 1.25 in.	12	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	76	C
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	32	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	62	C
28M/10290	AGS.2001/E1	Nut, stiff, $\frac{1}{4}$ in. B.S.F.	10	C
28M/11957	AGS.2007/C1	Nut, stiff, double anchor, 2 B.A.	8	C
28D/8308	AS.1242/3C	Bolt, 90 deg. csk./hd., 2 B.A. × 0.7 in.	4	C
28D/10904	AS.1242/15J	Bolt, 90 deg. csk./hd., $\frac{3}{8}$ in. B.S.F. × 2.1 in.	20	C
28D/12183	AS.1246/5E	Bolt, rd./hd., $\frac{1}{4}$ in. B.S.F. × 0.95 in.	2	C
28Q/6672	AS.2227/506	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{8}$ in.	36	C
28Q/10406	AS.2227/507	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{7}{16}$ in.	28	C
28Q/6673	AS.2227/508	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{1}{2}$ in.	8	C
28Q/12358	AS.2227/509	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{9}{16}$ in.	30	C
28Q/6830	AS.2227/512	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{4}$ in.	8	C
28Q/6827	AS.2227/608	Rivet, sp/hd., $\frac{3}{16}$ in. dia. × $\frac{1}{2}$ in.	12	C
28Q/10905	AS.2229/307	Rivet, 90 deg. csk./hd., $\frac{3}{32}$ in. dia. × $\frac{7}{16}$ in.	16	C
28Q/11162	AS.2229/505	Rivet, 90 deg. csk./hd., $\frac{5}{32}$ in. dia. × $\frac{5}{16}$ in.	20	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk./hd., $\frac{3}{16}$ in. dia. × $\frac{3}{8}$ in.	12	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. × 1 in.	32	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	62	C
28W/12253	SP.13/E	Washer, M.S., $\frac{1}{4}$ in. B.S.F.	10	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	64	C
28W/12296	SP.15/C	Washer, L.A., 2 B.A.	46	C

The kit comprising all the above items 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 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>
30A/3055	—	Wire, nickel alloy, 22 s.w.g.	As reqd.	C
30B/1730	—	Alum. alloy sheet, B.S.L72, 18 s.w.g. 0.6 x 3.5 in.	As reqd.	C
33B/1021	—	Primer, etch, base	As reqd.	C
33B/1023	—	Primer, etch, accelerator	As reqd.	C
33B/1060 (Home)	}	Finish, cellulose, aluminium, D.T.D.772	As reqd.	C
33B/865 (Overseas)				
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:

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/3880	DOO.5159A	Diaphragm, u/c, front, port		
26FC/3881	DOO.5160A	Diaphragm, u/c, front, stbd.		

The method for modifying either of the above spares is detailed in para. 8, operation (23), and on sheet 6 of the drawing.

Parts required for each spare:—

28Q/11162	AS.2229/505	Rivet, 90 deg. csk./hd., $\frac{5}{32}$ in. dia. x $\frac{1}{16}$ in.	6	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk./hd., $\frac{3}{16}$ in. dia. x $\frac{3}{8}$ in.	2	C

Spare affected:

26FC/3878	DOO.5161A	Diaphragm, u/c, rear, port
26FC/3879	DOO.5162A	Diaphragm, u/c, rear, stbd.

The method for modifying either of the above spares is detailed in para. 8, operations (13) and (14), and on sheet 4 of the drawing.

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Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
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Parts required for each spare:

28Q/11162	AS.2229/505	Rivet, 90 deg. csk./hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{5}{16}$ in.	4	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk./hd., $\frac{3}{16}$ in. dia. $\times$ $\frac{3}{8}$ in.	4	C

Spare affected:

26FC/4605	DOO.5197A/2	Rib No. 2, port		
26FC/5738	DOO.7673A/ND	Rib No. 2 and joint fittings, port		

The method for modifying either of the above spares is detailed in para. 8, operations (4) and (12), and on sheets 1 and 2 of the drawing.

Parts required for each spare:

26FC/-	DOO.7945ND	Plate, Rib 2 reinforcing, L.H.	1	—
26FC/-	DOO.7947ND	Plate, Rib 2 reinforcing, L.H.	1	—
26FC/-	DOO.7949	Plate, Rib 2 reinforcing	1	—

Attaching parts for DOO.7945ND, DOO.7947ND and DOO.7949 plates.

28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. $\times$ 0.75 in.	5	C
28D/12566	A.25/6C	Bolt, hex/hd., 2 B.A. $\times$ 1.05 in.	33	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	38	C
28Q/6672	AS.2227/506	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{3}{8}$ in.	18	C
28Q/10406	AS.2227/507	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{7}{16}$ in.	14	C
28Q/6673	AS.2227/508	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{1}{2}$ in.	4	C
28Q/12358	AS.2227/509	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{3}{16}$ in.	15	C
28Q/6827	AS.2227/608	Rivet, sp/hd., $\frac{3}{16}$ in. dia. $\times$ $\frac{1}{2}$ in.	6	C
28M/11957	AGS.2007/C1	Nut, stiff, double anchor, 2 B.A.	4	C

Attaching parts for AGS.2007/C1 nuts.

28Q/10905	AS.2229/307	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia. $\times$ $\frac{7}{16}$ in.	8	C
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Spare affected:

26FC/4606	DOO.5198A/2	Rib No. 2, stbd.		
26FC/5739	DOO.7674A/ND	Rib No. 2 and joint fittings, stbd.		

The method for modifying either of the above spares is detailed in para. 8, operations (4) to (12), and on sheets 1 and 2 of the drawing.

Parts required for each spare:

26FC/-	DOO.7946ND	Plate, rib 2 reinforcing, R.H.	1	—
26FC/-	DOO.7948ND	Plate, rib 2 reinforcing, R.H.	1	—
26FC/-	DOO.7949	Plate, rib 2 reinforcing	1	—

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Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
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Attaching parts for DOO.7946ND, DOO.7948ND and DOO.7949 plates.

28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. × 0.75 in.	5	C
28D/12566	A.25/6C	Bolt, hex/hd., 2 B.A. × 1.05 in.	33	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	38	C
28Q/6672	AS.2227/506	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{8}$ in.	18	C
28Q/10406	AS.2227/507	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{7}{16}$ in.	14	C
28Q/6673	AS.2227/508	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{1}{2}$ in.	4	C
28Q/12358	AS.2227/509	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{9}{16}$ in.	15	C
28Q/6827	AS.2227/608	Rivet, sp/hd., $\frac{3}{16}$ in. dia. × $\frac{1}{2}$ in.	6	C
and 28M/11957	AGS.2007/C1	Nut, stiff, double anchor, 2 B.A.	4	C

Attaching parts for AGS.2007/C1 nuts.

28Q/10905	AS.2229/307	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia. × $\frac{7}{16}$ in.	8	C
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Spare affected:

26FC/-	DOO.6715A/9	Wing complete, port		
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The method for modifying the above spare is detailed in para. 8, operations (1) to (30) and on sheets 1 to 7 of the drawing.

Parts required:

26FC/-	DOO.7919ND	Strip, lower, U/C diaphragm packing	1	—
26FC/-	DOO.7945ND	Plate, rib 2, reinforcing, L.H.	1	—
26FC/-	DOO.7947ND	Plate, rib 2, reinforcing, L.H.	1	—
26FC/-	DOO.7949	Plate, rib 2 reinforcing	1	—

Attaching parts for DOO.7945ND, DOO.7947ND and DOO.7949 plates.

28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. × 0.75 in.	7	C
28D/12566	A.25/6C	Bolt, hex/hd., 2 B.A. × 1.05 in.	33	C
28D/12519	A.25/3E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 0.8 in.	9	C
28D/12520	A.25/4E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 0.9 in.	5	C
28D/12542	A.25/5E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.0 in.	4	C
28D/12543	A.25/6E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.1 in.	1	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	38	C
28M/10290	AGS.2001/E1	Nut, stiff, $\frac{1}{4}$ in. B.S.F.	5	C
28D/12183	AS.1246/5E	Bolt, rd/hd., $\frac{1}{4}$ in. B.S.F. × 0.95 in.	1	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28Q/6672	AS.2227/506	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times \frac{3}{8}$ in.	18	C
28Q/10406	AS.2227/507	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times \frac{7}{16}$ in.	14	C
28Q/6673	AS.2227/508	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times \frac{1}{2}$ in.	4	C
28Q/12358	AS.2227/509	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times \frac{3}{8}$ in.	15	C
28Q/6827	AS.2227/608	Rivet, sp/hd., $\frac{3}{16}$ in. dia. $\times \frac{1}{2}$ in.	6	C
28W/12253 and	SP.13/E	Washer, M.S., $\frac{1}{4}$ in. B.S.F.	5	C
28M/11957	AGS.2007/C1	Nut, stiff, double anchor, 2 B.A.	4	C
Attaching parts for AGS.2007/C1 nuts.				
28Q/10905	AS.2229/307	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia. $\times \frac{7}{16}$ in.	8	C
and				
28Q/11162	AS.2229/505	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. $\times \frac{1}{8}$ in.	10	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia. $\times \frac{3}{8}$ in.	6	C
and				
26FC/-	DOO.8019ND	Strip, upper, U/C dia- phragm packing	1	—
26FC/-	DOO.7955	Stiffener, upper, front U/C diaphragm L.H.	1	—
Attaching parts for DOO.7955 stiffener				
28D/12513	A.25/2C	Bolt, hex/hd., 2 B.A. $\times$ 0.65 in.	10	C
28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. $\times$ 0.75 in.	2	C
28D/12542	A.25/5E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times 1.0$ in.	8	C
28D/12633	A.25/7E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times 1.2$ in.	3	C
28D/12674	A.25/9E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times 1.4$ in.	2	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	12	C
28Q/6830	AS.2227/512	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times \frac{3}{4}$ in.	2	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	12	C
28W/12296	SP.15/C	Washer, L.A., 2 B.A.	12	C
and				
26FC/-	DOO.7965ND	Strip, front U/C dia- phragm packing	1	—
26FC/-	DOO.7957	Stiffener, lower, front U/C diaphragm, L.H.	1	—
Attaching parts for DOO.7957 stiffener				
28D/12532	A.25/4C	Bolt, hex/hd., 2 B.A. $\times$ 0.85 in.	3	C
28D/12553	A.25/6J	Bolt, hex/hd., $\frac{3}{8}$ in. B.S.F. $\times 1.25$ in.	3	C
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	4	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28D/8308	AS.1242/3C	Bolt, 90 deg. csk/hd., 2 B.A. × 0.7 in.	1	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. × 1 in.	3	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	4	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C
and 26FC/-	DOO.8019ND	Strip, upper, U/C dia- phragm packing	1	—
26FC/-	DOO.7959	Stiffener, upper, rear U/C diaphragm L.H.	1	—
Attaching parts for DOO.7959 stiffener				
28D/12513	A.25/2C	Bolt, hex/hd., 2 B.A. × 0.65 in.	9	C
28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. × 0.75 in.	2	C
28D/12543	A.25/6E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.1 in.	6	C
28D/12633	A.25/7E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.2 in.	3	C
28D/12674	A.25/9E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.4 in.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	11	C
28Q/6830	AS.2227/512	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{4}$ in.	2	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	11	C
28W/12296	SP.15/C	Washer, L.A., 2 B.A.	11	C
and 26FC/-	DOO.7963ND	Strip, rear U/C dia- phragm packing	1	—
26FC/-	DOO.7961	Stiffener, lower, rear U/C diaphragm L.H.	1	—
Attaching parts for DOO.7961 stiffener				
28D/12532	A.25/4C	Bolt, hex/hd., 2 B.A. × 0.85 in.	3	C
28D/12553	A.25/6J	Bolt, hex/hd., $\frac{3}{8}$ in. B.S.F. × 1.25 in.	3	C
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	4	C
28D/8308	AS.1242/3C	Bolt, 90 deg. csk/hd., 2 B.A. × 0.7 in.	1	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. × 1 in.	3	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	4	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C
and 26FC/-	QOO.2620	Strip, clamp block packing	2	—
Attaching parts for QOO.2620 strip				
28D/12714	A.25/29C	Bolt, hex/hd., 2 B.A. × 3.35 in.	3	C
28D/12715	A.25/31C	Bolt, hex/hd., 2 B.A. × 3.55 in.	1	C
and 26FC/-	QOO.3783	Strip, clamp block packing	2	—

**RESTRICTED**

Stores Ref.	Part No.	Nomenclature	Qty.	Class. of Store
Attaching parts for QOO.3783 strip				
28D/12516	A.25/11C	Bolt, hex/hd., 2 B.A. × 1.55 in.	1	C
28D/12535	A.25/12C	Bolt, hex/hd., 2 B.A. × 1.65 in.	1	C
and				
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	10	C
28D/10904	AS.1242/15J	Bolt, 90 deg. csk/hd., $\frac{3}{8}$ in. B.S.F. × 2.1 in.	10	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. × 1 in.	10	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	20	C

Spare affected:

26FC/- DOO.7611A/4 Wing complete, stbd.

The method for modifying the above spare is detailed in para. 8, operations (1) to (30) and on Sheets 1 to 7 of the drawing.

Parts required:

26FC/-	DOO.7919ND	Strip, lower, U/C dia-phragm packing	1	—
26FC/-	DOO.7946ND	Plate, rib 2 reinforcing, R.H.	1	—
26FC/-	DOO.7948ND	Plate, rib 2 reinforcing, R.H.	1	—
26FC/-	DOO.7949	Plate, rib 2 reinforcing	1	—

Attaching parts for DOO.7946ND, DOO.7948ND and DOO.7949 plates

28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. × 0.75 in.	7	C
28D/12566	A.25/6C	Bolt, hex/hd., 2 B.A. × 1.05 in.	33	C
28D/12519	A.25/3E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 0.8 in.	9	C
28D/12520	A.25/4E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 0.9 in.	5	C
28D/12542	A.25/5E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.0 in.	4	C
28D/12543	A.25/6E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.1 in.	1	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	38	C
28M/10290	AGS.2001/E1	Nut, stiff, $\frac{1}{4}$ in. B.S.F.	5	C
28D/12183	AS.1246/5E	Bolt, rd/hd., $\frac{1}{4}$ in. B.S.F. × 0.95 in.	1	C
28Q/6672	AS.2227/506	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{8}$ in.	18	C
28Q/10406	AS.2227/507	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{7}{16}$ in.	14	C
28Q/6673	AS.2227/508	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{1}{2}$ in.	4	C
28Q/12358	AS.2227/509	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{9}{16}$ in.	15	C
28Q/6827	AS.2227/608	Rivet, sp/hd., $\frac{3}{16}$ in. dia. × $\frac{1}{2}$ in.	6	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28W/12253	SP.13/E	Washer, M.S., $\frac{1}{4}$ in. B.S.F.	5	C
and				
28M/11957	AGS.2007/C1	Nut, stiff, double anchor, 2 B.A.	4	C
Attaching parts for AGS.2007/C1 nuts				
28Q/10905	AS.2229/307	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia. $\times$ $\frac{7}{16}$ in.	8	C
and				
28Q/11162	AS.2229/505	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{5}{16}$ in.	10	C
28Q/10411	AS.2229/606	Rivet, 90 deg. csk/hd., $\frac{3}{16}$ in. dia. $\times$ $\frac{3}{8}$ in.	6	C
and				
26FC/-	DOO.8019ND	Strip, upper, U/C diaphragm packing.	1	—
26FC/-	DOO.7956	Stiffener, upper, front U/C diaphragm R.H.	1	—
Attaching parts for DOO.7956 stiffener				
28D/12513	A.25/2C	Bolt, hex/hd., 2 B.A. $\times$ 0.65 in.	10	C
28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. $\times$ 0.75 in.	2	C
28D/12542	A.25/5E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times$ 1.0 in.	8	C
28D/12633	A.25/7E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times$ 1.2 in.	3	C
28D/12674	A.25/9E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. $\times$ 1.4 in.	2	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	12	C
28Q/6830	AS.2227/512	Rivet, sp/hd., $\frac{5}{32}$ in. dia. $\times$ $\frac{3}{4}$ in.	2	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	12	C
28W/12296	SP.15/C	Washer, L.A., 2 B.A.	12	C
and				
26FC/-	DOO.7965ND	Strip, front U/C diaphragm packing	1	—
26FC/-	DOO.7958	Stiffener, lower, front U/C diaphragm, R.H.	1	—
Attaching parts for DOO.7958 stiffener				
28D/12532	A.25/4C	Bolt, hex/hd., 2 B.A. $\times$ 0.85 in.	3	C
28D/12553	A.25/6J	Bolt, hex/hd., $\frac{3}{8}$ in. B.S.F. $\times$ 1.25 in.	3	C
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	4	C
28D/8308	AS.1242/3C	Bolt, 90 deg. csk/hd., 2 B.A. $\times$ 0.7 in.	1	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. $\times$ 1 in.	3	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	4	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C
and				
26FC/-	DOO.8019ND	Strip, upper, U/C diaphragm packing	1	—

**RESTRICTED**



Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	DOO.7960	Stiffener, upper, rear U/C diaphragm, R.H.	1	—
Attaching parts for DOO.7960 stiffener				
28D/12513	A.25/2C	Bolt, hex/hd., 2 B.A. × 0.65 in.	9	C
28D/12531	A.25/3C	Bolt, hex/hd., 2 B.A. × 0.75 in.	2	C
28D/12543	A.25/6E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.1 in.	6	C
28D/12633	A.25/7E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.2 in.	3	C
28D/12674	A.25/9E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F. × 1.4 in.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	11	C
28Q/6830	AS.2227/512	Rivet, sp/hd., $\frac{5}{32}$ in. dia. × $\frac{3}{4}$ in.	2	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	11	C
28W/12296	SP.15/C	Washer, L.A., 2 B.A.	11	C
and				
26FC/-	DOO.7963ND	Strip, rear U/C diaphragm packing	1	—
26FC/-	DOO.7962	Stiffener, lower, rear U/C diaphragm, R.H.	1	—
Attaching parts for DOO.7962 stiffener				
28D/12532	A.25/4C	Bolt, hex/hd., 2 B.A. × 0.85 in.	3	C
28D/12553	A.25/6J	Bolt, hex/hd., $\frac{3}{8}$ in. B.S.F. × 1.25 in.	3	C
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	3	C
28M/10288	AGS.2001/C1	Nut, stiff, 2 B.A.	4	C
28D/8308	AS.1242/3C	Bolt, 90 deg. csk/hd., 2 B.A. × 0.7 in.	1	C
28E/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. × 1 in.	3	C
28W/12252	SP.13/C	Washer, M.S., 2 B.A.	4	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C
and				
26FC/-	QOO.2620	Strip, clamp block packing	2	—
Attaching parts for QOO.2620 strip				
28D/13105	A.25/26C	Bolt, hex/hd., 2 B.A. × 3.05 in.	3	C
28D/12934	A.25/28C	Bolt, hex/hd., 2 B.A. × 3.25 in.	1	C
and				
26FC/-	QOO.3783	Strip, clamp block packing	2	—
Attaching parts for QOO.3783 strip				
28D/12516	A.25/11C	Bolt, hex/hd., 2 B.A. × 1.55 in.	1	C
28D/12535	A.25/12C	Bolt, hex/hd., 2 B.A. × 1.65 in.	1	C
and				
28M/13123	A.27/JS	Nut, slotted, $\frac{3}{8}$ in. B.S.F.	10	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28D/10904	AS.1242/15J	Bolt, 90 deg. csk/hd., $\frac{3}{8}$ in. B.S.F. $\times$ 2.1 in.	10	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia. $\times$ 1 in.	10	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	20	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>Old</i>		<i>New</i>		<i>Stores</i>
<i>Stores Ref.</i>	<i>Pt./Assy. No.</i>	<i>Nomenclature</i>	<i>Pt./Assy. No.</i>	<i>Ref.</i>
26FC/ 3880	DOO.5159A	Diaphragm, U/C, front, port	DOO.5159A/1	26FC/ 11909
26FC/ 3881	DOO.5160A	Diaphragm, U/C, front, stbd.	DOO.5160A/1	26FC/ 11910
26FC/ 3878	DOO.5161A	Diaphragm, U/C, rear, port	DOO.5161A/1	26FC/ 11907
26FC/ 3879	DOO.5162A	Diaphragm, U/C, rear, stbd.	DOO.5162A/1	26FC/ 11908
26FC/ 4605	DOO.5197A/2	Rib No. 2, port	DOO.5197A/3	26FC/ 11903
26FC/ 4606	DOO.5198A/2	Rib No. 2, stbd.	DOO.5198A/3	26FC/ 11904
26FC/ 5738	DOO.7673A/ND	Rib No. 2 and joint fittings, port	DOO.8013A/ND	26FC/ 11905
26FC/ 5739	DOO.7674A/ND	Rib No. 2 and joint fittings, stbd.	DOO.8014A/ND	26FC/ 11906
26FC/-	DOO.6527A/10	G.A. of wing, port	DOO.6527A/11	26FC/-
26FC/-	DOO.6715A/9	Wing complete (spares) port	DOO.6715A/10	26FC/-
26FC/-	DOO.7539A/5	G.A. of wing, stbd.	DOO.7539A/6	26FC/-
26FC/-	DOO.7611A/4	Wing complete (spares) stbd.	DOO.7611A/5	26FC/-

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

*Note:*—The following operations (1) to (30) apply to both port and starboard mainplanes.

(Refer to sheets 1 to 7 of the drawing)

(1) Remove the main undercarriage as detailed in A.P.4099G, Vol. 1, Sect. 5, and the No. 1 wing fuel tank as detailed in A.P.4099G, Vol. 1, Sect. 5. Remove and retain the No. 1 fuel tank strap structure and its attachment bolts. Remove and retain the fuel balance pipe access panel and the bolts securing it to the undersurface of the wing, forward of the front undercarriage diaphragm.

(2) In No. 1 fuel tank bay, release the clips securing the electric cables, disconnect and remove the pipes, routed over Rib No. 2 in the vicinity of the reinforcing shown on sheet 1 of the drawing. Blank off the disconnected pipe ends. Remove the blanking plate and the bolts securing it to Rib No. 2 aft of the rear undercarriage diaphragm. Retain all items for re-assembly.

**RESTRICTED**

*Note:*—On mainplanes repaired to Repair Instruction Sheet No. 1 remove the redundant upper stiffener, Part No. R.OOD.351ND, from the front diaphragm and, Part No. R.OOD.352ND, from the rear diaphragm. Remove the lower stiffener, Part No. R.OOD.354ND (port); R.OOD.355ND (starboard), from the front diaphragm and, Part No. R.OOD.356ND (port); R.OOD.357ND (starboard), from the rear diaphragm and, if in good condition, retain and re-assemble in place of the new lower stiffeners introduced on this modification.

(3) *Refer* to sheets 1, 2 and 3 of the drawing and remove the forty-seven bolts securing the undercarriage diaphragms to Rib No. 2, retaining the packing strip, stiffnuts and washers for re-assembly. Using a No. 21 (0.159 in. dia.) drill, carefully remove the four  $\frac{5}{32}$  in. dia. rivets securing the top of the diaphragms to the rib.

*Note:*—Repair Instruction Sheet No. 137, Issue 3 introduced a reinforcing plate, Part No. R.OOD.424 (port); R.OOD.425 (starboard) on the inboard side of Rib No. 2 similar to that shown on sheet 1 of the drawing and two reinforcing plates, Part Nos. R.OOD.378 and R.OOD.380 (port); R.OOD.379 and R.OOD.381 (starboard) on the outboard side of Rib No. 2 similar to those shown on sheet 2 of the drawing. Examine the latter two outboard plates and ensure that their flanges do not exceed 0.125 in. Reduce the flanges to this dimension and remove all sharp edges where necessary. The following operations (4) to (12) do not apply to mainplanes with the aforementioned reinforcing plates already installed.

(4) Using the No. 21 drill, carefully remove the  $\frac{5}{32}$  in. dia. rivets securing the existing reinforcing channels to Rib No. 2. If the  $\frac{3}{32}$  in. dia. rivets for the small clamp block anchor nut pass through the reinforcing channel carefully drill out these rivets with a No. 41 (0.096 in. dia.) drill. Remove the peened bolts and nuts securing the reinforcing channels to Rib No. 2. Retain the reinforcing channels, packing and washers for re-assembly.

*Note:*—On mainplanes with Mod. No. Vampire/698 embodied retrospectively, dispose of the redundant reinforcing plate, Part No. R.OOD.287 (port); R.OOD.288 (starboard).

(5) *Refer* to sheet 1 of the drawing. Using the No. 41 drill, remove the existing anchor nuts that lie within the periphery of the new reinforcing plate, Part No. DOO.7949. Remove the six  $\frac{3}{16}$  in. dia. rivets securing the 'T' section stiffener to Rib No. 2 above the undercarriage cutaway using a No. 11 (0.191 in. dia.) drill. Offer up the new reinforcing plate, trim and radius its edge locally to suit the flange of the undercarriage cutaway.

(6) Drill the new reinforcing plate with the No. 11 drill, thirty-eight holes to suit the 2 B.A. bolt holes through Rib No. 2 and the existing reinforcing channels, four holes to suit the 2 B.A. anchor nut bolt holes through Rib No. 2 and six holes to suit the  $\frac{3}{16}$  in. dia. rivet holes through Rib No. 2 and the 'T' section stiffener. Drill eight holes with the No. 41 drill to suit the  $\frac{3}{32}$  in. dia. rivet holes for the anchor nuts. Countersink the inboard face of the new reinforcing plate at these eight holes 90 deg.  $\times$  0.16 in. dia.

(7) Drill two holes with a No. 14 (0.182 in. dia.) drill through the new reinforcing plate and ream to 2 B.A. to suit the 2 B.A. bolt holes through Rib No. 2 and the rear diaphragm below the existing reinforcing channels.

(8) Drill thirty-six holes with a  $\frac{11}{16}$  (0-234) in. dia. drill through the new reinforcing plate to suit the  $\frac{1}{4}$  in. B.S.F. bolt holes through Rib No. 2 and the undercarriage diaphragms, opening up the existing smaller diameter holes, except the two dealt with in operation (7), plus the rear hole through the front diaphragm below the new reinforcing plate as shown on sheet 1 of the drawing. Ream all thirty-seven holes to  $\frac{1}{4}$  in. dia.

(9) Offer up the two new undercarriage cutaway reinforcing plates, Part Nos. DOO.7945ND and DOO.7947ND (port); DOO.7946ND and DOO.7948ND (starboard); to the outboard side of Rib No. 2 as shown on sheet 2 of the drawing. Drill off seven holes in each plate with the No. 11 drill to suit the 2 B.A. bolt holes through Rib No. 2 and the reinforcing channels. Temporarily bolt the plates in position. Cut a  $\frac{11}{16}$  (0-703) in. dia. hole through the reinforcing plates just forward of the rear diaphragm to suit Rib No. 2 and the existing reinforcing channel.

(10) Drill twenty-seven holes with the No. 21 drill through the new reinforcing plates to suit the  $\frac{5}{32}$  in. dia. rivet holes through Rib No. 2 and the existing reinforcing channels as shown on sheet 1 of the drawing. Mark off and drill twenty-four additional holes with the No. 21 drill as shown on sheet 2 of the drawing. Remove the plates and channels and thoroughly deburr all holes.

(11) Secure the reinforcing plates and original channels to Rib No. 2 as shown on sheets 1 and 2 of the drawing, coating all the mating surfaces with pigmented varnish jointing compound (Stores Ref. 33C/1264). Bolt up with five 2 B.A. bolts, Part No. A.25/3C, thirty-three 2 B.A. bolts, Part No. A.25/6C, and thirty-eight 2 B.A. plain nuts, Part No. A.27/CP, using the original washers. Lock the bolts by peening. Rivet up with  $\frac{5}{32}$  in. dia. snap-head rivets, eighteen off, Part No. AS.2227/506, fourteen off, Part No. AS.2227/507, four off, Part No. AS.2227/508, and fifteen off, Part No. AS.2227/509.

*Note:*—In cases where the items called for in operation (11) are unsuitable due to the holes being oversize,  $\frac{1}{4}$  in. B.S.F. items may be used in place of the 2 B.A. items and  $\frac{11}{16}$  in. dia. rivets may be used in place of the  $\frac{5}{32}$  in. dia. rivets.

(12) Rivet up the existing 'T' stiffener to Rib No. 2 and the new reinforcing plate with six  $\frac{3}{16}$  in. dia. snap-head rivets, Part No. AS.2227/608. Secure four new 2 B.A. anchor nuts, Part No. AGS.2007/C1, to the original positions with eight  $\frac{3}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/307. Coat all mating surfaces with pigmented varnish jointing compound.

*Note:*—The following operations (13) to (30) apply to all mainplanes.

(13) Refer to Sheet 4 of the drawing. Remove the eight redundant  $\frac{3}{8}$  in. B.S.F. bolts, nuts and washers securing the undercarriage hinge pick-up to the rear diaphragm. Remove the upper two 2 B.A. bolts, nuts and washers and, using the No. 11 drill, remove the existing three  $\frac{3}{16}$  in. dia. rivets to permit the new lower stiffener, Part No. DOO.7961 (port); DOO.7962 (starboard), to fit flush against the diaphragm. Countersink the rear face of the diaphragm at the two 2 B.A. bolt holes and the lower two rivet holes 90 deg.  $\times$  0-33 in. dia. Flush up these holes with four  $\frac{3}{16}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/606, cut to suit.

**RESTRICTED**

*Note*.—Care must be taken to ensure that the undercarriage pick-up and its shims are retained for re-assembly at their original position. On mainplanes repaired to Repair Instruction Sheet No. 1 the rivets dealt with in operations (13) and (14) will have already been flushed up.

(14) Using the No. 21 drill, carefully drill out the existing four  $\frac{5}{16}$  in. dia. snap-head rivets through the diaphragm 'Z' member to permit the new upper stiffener, Part No. DOO.7959 (port); DOO.7960 (starboard), to fit flush on the 'Z' member. Countersink the diaphragm and its 'Z' member at both sides of these four rivet holes 90 deg.  $\times$  0.27 in. dia. Flush up the holes with four  $\frac{5}{16}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/505.

(15) Refer to Sheet 3 of the drawing. Fit two 2 B.A. bolts, Part No. A.25/3C, through the rear undercarriage diaphragm and Rib No. 2, adjacent to the 'Z' member, and secure with the original 2 B.A. stiffnuts and washers. Coat all mating surfaces with pigmented varnish jointing compound.

(16) At the forward row of holes below the 'Z' member, replace the original packing strip, Part No. DOO.7919ND retained in operation (3) and fit four  $\frac{1}{4}$  in. B.S.F. hexagon-head bolts, Part No. A.25/5E, with one  $\frac{1}{4}$  in. B.S.F. round-head bolt, Part No. AS.1246/5E, at the top hole. At the rear row of holes fit five  $\frac{1}{4}$  in. B.S.F. hexagon-head bolts, Part No. A.25/3E. Secure with the original stiffnuts and washers. Coat all mating surfaces with pigmented varnish jointing compound.

*Note*.—On mainplanes without an existing packing strip, make up one from aluminium-alloy, 18 s.w.g., Spec. B.S.L.72 (Stores Ref. 30B/1730) 0.6 in.  $\times$  3.5 in., radius one edge and drill to suit the rear diaphragm. In cases where the original stiffnuts and washers are unsuitable fit new  $\frac{1}{4}$  in. B.S.F. stiffnuts and washers, Part Nos. AGS.2001/E1 and SP.13/E. Fit additional washers where necessary to prevent nuts bottoming. In cases of oversize holes refer to Repair Instruction Sheet No. 152.

(17) Refer to Sheet 4 of the drawing. Offer up the new packing strip, Part No. DOO.8019ND, with a radius on one edge to suit the diaphragm above the 'Z' member. Position the new upper stiffener on the 'Z' member and against the new packing strip. Drill two holes at the top with the No. 21 drill and twelve holes with the  $\frac{11}{16}$  in. dia. drill reamed to  $\frac{1}{4}$  in. dia. to suit the existing holes through Rib No. 2 and the diaphragm flange.

*Note*.—On mainplanes repaired to Repair Instruction Sheet No. 1 the following operations (18) and (19) do not apply. The new upper stiffener is to be drilled to suit the existing No. 11 holes in the diaphragm and 'Z' member. The existing lower stiffener, if in good condition, can be re-assembled in place of the new lower stiffener.

(18) Mark off and drill eleven holes through the new upper stiffener and diaphragm with the No. 11 drill to the dimensions detailed on Sheets 4 and 5 of the drawing. Position the new packing strip, Part No. DOO.7963ND, and the new lower stiffener under the 'Z' member and drill off three holes with the No. 11 drill to the dimensions detailed on Sheet 5 of the drawing. Drill one hole with the No. 11 drill through the lower stiffener to suit the existing hole in the diaphragm.

(19) Drill three holes with a  $\frac{3}{8}$  (0.359) in. dia. drill through the lower stiffener to suit the upper three holes through the diaphragm and the undercarriage hinge pick-up, Part No. GOO.1010. Ream out the three holes to  $\frac{3}{8}$  in. dia.  $\pm 0.0004$ .

*Note:*—In cases of oversize holes refer to Repair Instruction Sheet, No. 152.

(20) Remove all burrs. Refer to Sheets 3 and 4 of the drawing and secure the upper stiffener and packing to the diaphragm flange and Rib No. 2 with  $\frac{1}{4}$  in. B.S.F. bolts, six off Part No. A.25/6E, three off, Part No. A.25/7E, and three off, Part No. A.25/9E, using the original stiffnuts and washers. Fit two  $\frac{3}{32}$  in. dia. snap-head rivets, Part No. AS.2227/512, to the two top holes. Coat all mating surfaces with pigmented varnish jointing compound.

*Note:*—In cases where the original stiffnuts and washers are unsuitable, fit new  $\frac{1}{4}$  in. B.S.F. stiffnuts and washers, Part No. AGS.2001/E1 and SP.13/E. Fit additional washers where necessary to prevent nuts bottoming. In cases of oversize holes refer to Repair Instruction Sheet, No. 152.

(21) Secure the upper stiffener to the diaphragm with nine 2 B.A. bolts, Part No. A.25/2C, two 2 B.A. bolts, Part No. A.25/3C, and eleven 2 B.A. stiffnuts, Part No. AGS.2001/C1, positioning a L.A. washer, Part No. SP.15/C, under the head of each bolt, and a M.S. washer, Part No. SP.13/C, under each nut. Position the lower stiffener and packing, secure them to the 'Z' member and upper stiffener with three 2 B.A. bolts, stiffnuts and washers, Part Nos. A.25/4C, AGS.2001/C1 and SP.13/C respectively. Secure the lower stiffener to the diaphragm with one 2 B.A. 90 deg. countersunk-head bolt, stiffnut and washer, Part Nos. AS.1242/3C, AGS.2001/C1 and SP.13/C respectively. Coat all mating surfaces with pigmented varnish jointing compound.

(22) Resecure the undercarriage hinge pick-up and its shims to the diaphragm with three  $\frac{3}{8}$  in. B.S.F. hexagon-head bolts, Part No. A.25/6J, five  $\frac{3}{8}$  in. B.S.F. 90 deg. countersunk-head bolts, Part Nos. AS.1242/15J, and eight  $\frac{3}{8}$  in. B.S.F. slotted nuts, Part No. A.27/JS, with two washers, Part No. SP.14/J, under each nut, as shown on Sheets 4 and 5 of the drawing. Drill off the bolts with a No. 51 (0.067 in. dia.) drill and fit eight  $\frac{1}{16}$  in. dia. split pins, Part No. SP.9/C8. Coat all mating surfaces with pigmented varnish jointing compound.

*Note:*—Fit additional washers where necessary to prevent nuts bottoming.

(23) Refer to Sheet 6 of the drawing and reinforce the front undercarriage diaphragm, adopting a procedure similar to that detailed for the rear diaphragm in operations (13) to (22). Flush up the existing rivets through the 'Z' member with six  $\frac{1}{2}$  in. dia. rivets and through the diaphragm with two  $\frac{3}{16}$  in. dia. rivets, Part Nos. AS.2229/505 and AS.2229/606 respectively.

(24) At the rear row of holes below the 'Z' member fit a new packing strip, five  $\frac{1}{4}$  in. B.S.F. bolts, stiffnuts and washers, Part Nos. DOO.7919ND, A.25/4E, AGS.2001/E1 and SP.13/E respectively, as shown on Sheet 3 of the drawing. At the forward row of holes fit four bolts, Part No. A.25/3E. Fit one bolt, Part No. A.25/6E, above the 'Z' member and trim the new packing, Part No. DOO.8019ND, to clear this bolt. Trim the new upper and lower stiffeners, Part Nos. DOO.7955 and DOO.7957 (port); DOO.7956 and DOO.7958 (starboard), as necessary to suit the diaphragm.

**RESTRICTED**

(25) Secure the upper stiffener and packing to the diaphragm flange and Rib No. 2 with  $\frac{1}{4}$  in. B.S.F. bolts, eight off, Part No. A.25/5E, three off, Part No. A.25/7E, and two off, Part No. A.25/9E. Fit two  $\frac{5}{32}$  in. dia. snap-head rivets, Part No. AS.2227/512, to the two top holes.

(26) Secure both stiffeners to the diaphragm and the new packing strip, Part No. DOO.7965ND, under the 'Z' member, with 2 B.A. hexagon-head bolts, ten off, Part No. A.25/2C, two off, Part No. A.25/3C, three off, Part No. A.25/4C, and one off 2 B.A. 90 deg. countersunk-head bolt, Part No. AS.1242/3C, using sixteen 2 B.A. stiffnuts and M.S. washers, Part Nos. AGS.2001/C1 and SP.13C respectively, positioning twelve L.A. washers; Part No. SP.15/C, under the heads of the bolts through the diaphragm.

(27) Resecure the undercarriage hinge pick-up and its shims to the diaphragm with three  $\frac{3}{8}$  in. B.S.F. hexagon-head bolts, Part No. A.25/6J, five  $\frac{3}{8}$  in. B.S.F. 90 deg. countersunk-head bolts, Part No. AS.1242/15J, and eight  $\frac{3}{8}$  in. B.S.F. slotted nuts, Part No. A.27/JJ, with two washers, Part No. SP.14/J, under each nut, as shown on Sheets 5 and 6 of the drawing. Drill off the bolts with a No. 51 drill and fit eight  $\frac{1}{8}$  in. dia. split pins, Part No. SP.9/C8.

(28) Remove all foreign matter from the mainplane and repair the finish of the undercarriage diaphragms and Rib No. 2 with etch primer, base and accelerator, and aluminium cellulose finish, Spec. D.T.D.772 (Stores Refs. 33B/1021, 33B/1023 and 33B/1060 or 865 respectively).

(29) Resecure the blanking plate to Rib No. 2 with its original bolts retained in operation (2). Reconnect the pipes disconnected in operation (2). Refer to Sheet 7 of the drawing. Fit an additional packing strip, Part No. QOO.2620, under the two large clamp blocks and secure the blocks and pipes to Rib No. 2 using three new 2 B.A. bolts, Part No. A.25/29C (port); A.25/26C (starboard), and also secure the cable 'P' clips with one new 2 B.A. bolt, Part No. A.25/31C (port); A.25/28C (starboard). Fit a new packing strip, Part No. QOO.3783, in place of the redundant strip, Part No. QOO.2621 under the two small clamp blocks and secure the blocks and the pipes to Rib No. 2, with one 2 B.A. bolt at the rear position and one at the forward position, Part Nos. A.25/11C and A.25/12C respectively. Lock the pipe couplings with 22 s.w.g. nickel alloy wire (Stores Ref. 30A/3055).

(30) Replace the No. 1 fuel tank strap structure. Replace the No. 1 wing fuel tank and the main undercarriage in accordance with the procedure detailed in the appropriate Aircraft Handbook.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected in accordance with current procedure, the following tests are to be carried out:—

- (1) Leak, pressure and fuel flow test the wing fuel tanks in accordance with current authorized procedure.
- (2) Carry out a retraction test of the main undercarriage in accordance with current authorized procedure.

#### 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 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/-	QOO.2621	Strip, clamp block packing	4	—

The following items are also redundant on aircraft with Mod. No. Vampire/698 embodied retrospectively.

26FC/7817	R.OOD.287	Plate, Rib 2 reinforcing L.H.	1	C
26FC/7818	R.OOD.288	Plate, Rib 2 reinforcing R.H.	1	C

The following items are also redundant on aircraft repaired to Repair Instruction Sheet No. 1:

26FC/-	R.OOD.351ND	Stiffener, upper, front U/C diaphragm	2	—
26FC/-	R.OOD.352ND	Stiffener, upper, rear U/C diaphragm	2	—

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

This modification causes a weight change of +5.82 lb., and a change of moment of +12.0 lb. ft.

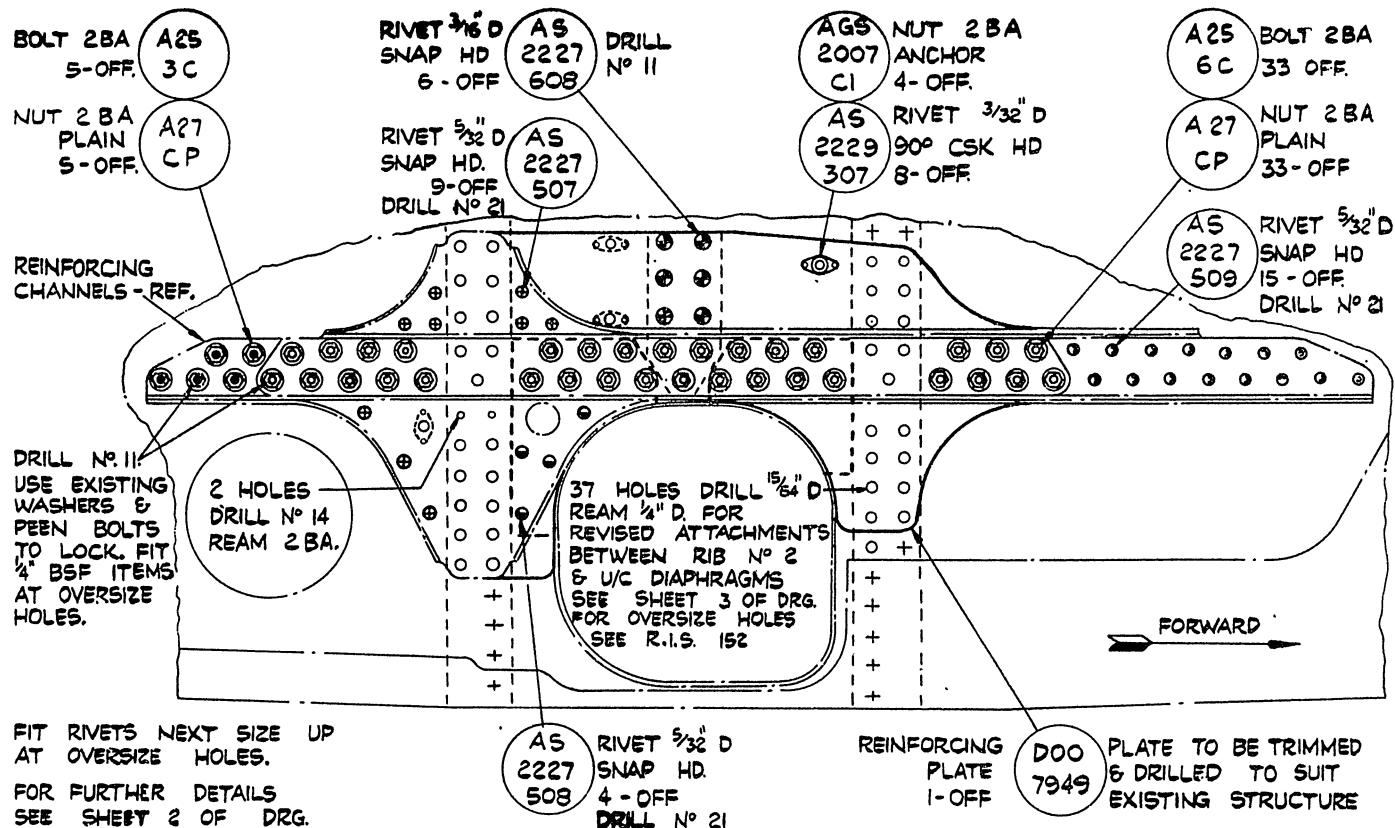


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LP31457 9/56 625 C & P Gp. 959 (4)

SHEET 1

DRG. NO. A.R. 4099 G / A. 7 / 56

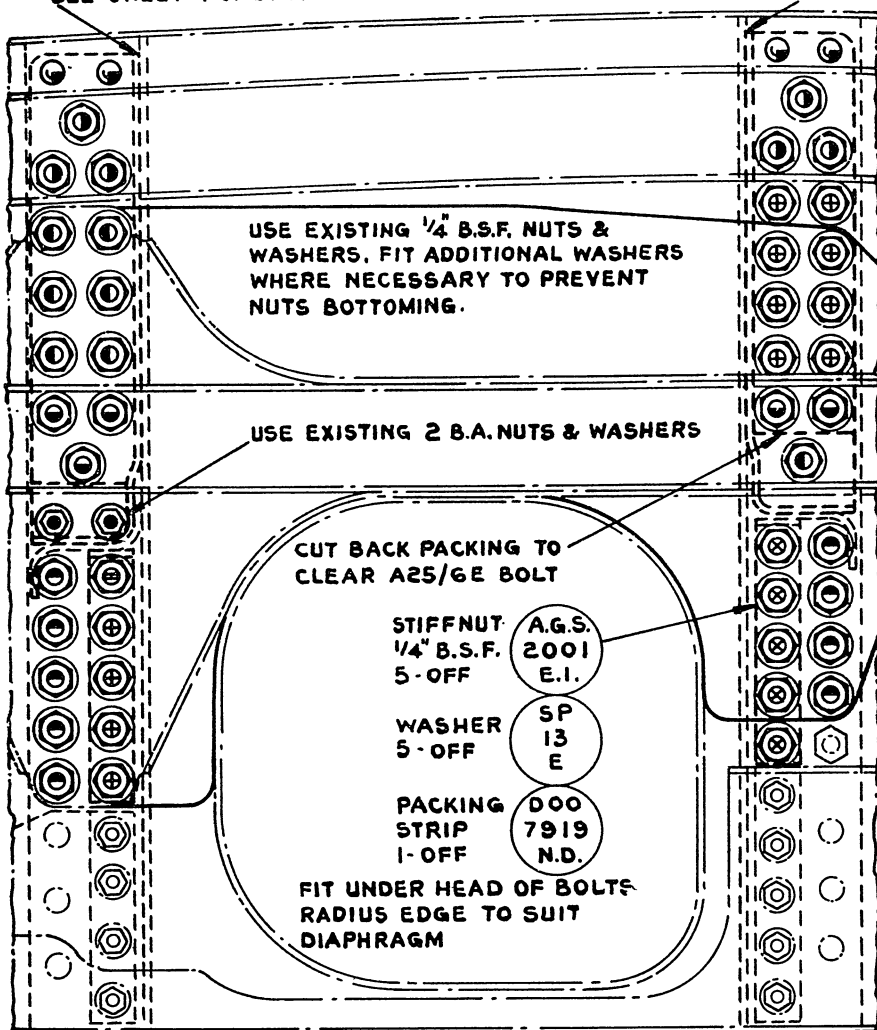


ADDITIONAL REINFORCING PLATE ON INBOARD FACE OF RIB NO 2 (PORT DRAWN)



REAR U/C DIAPHRAGM  
SEE SHEET 4 OF DRG.

FRONT U/C DIA?HRAGM  
SEE SHEET 6 OF DRG.



AS 2227/512	RIVET	4-OFF
A25 /3C	BOLT	2-OFF
A25/3E	BOLT	9-OFF
A25/4E	BOLT	5-OFF
A25/5E	BOLT	12-OFF

A5 1246/5E	BOLT	1-OFF
A25/6E	BOLT	7-OFF
A25/7E	BOLT	6-OFF
A25/9E	BOLT	5-OFF

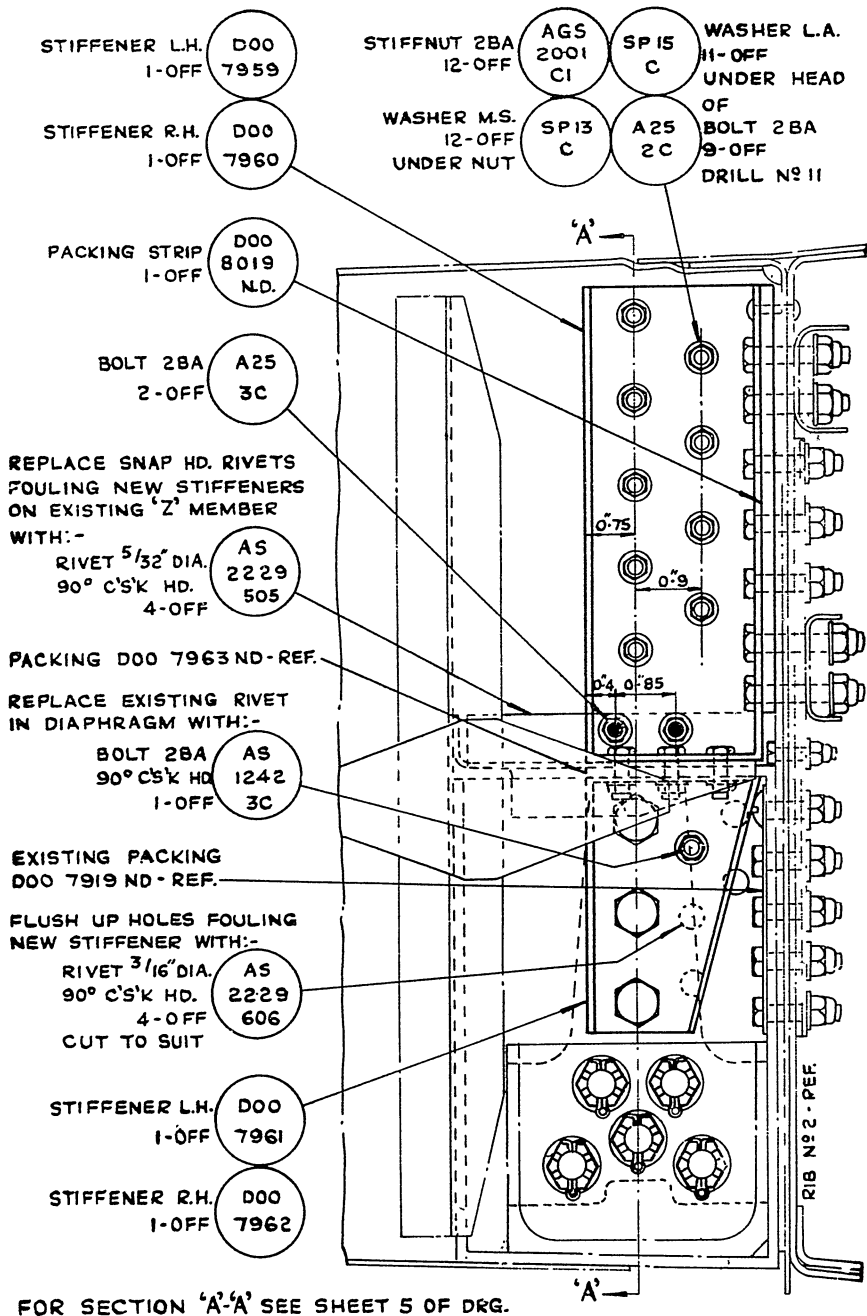
ATTACHMENTS BETWEEN RIB N°2 & U/C DIAPHRAGMS ( PORT DRAWN )

DRG. N° A.P. 4099 G / A. 7 / 56

SHEET 3

RESTRICTED

LP31457 9/56 625 C & P Gp. 959 (4)



FOR SECTION 'A-A' SEE SHEET 5 OF DRG.

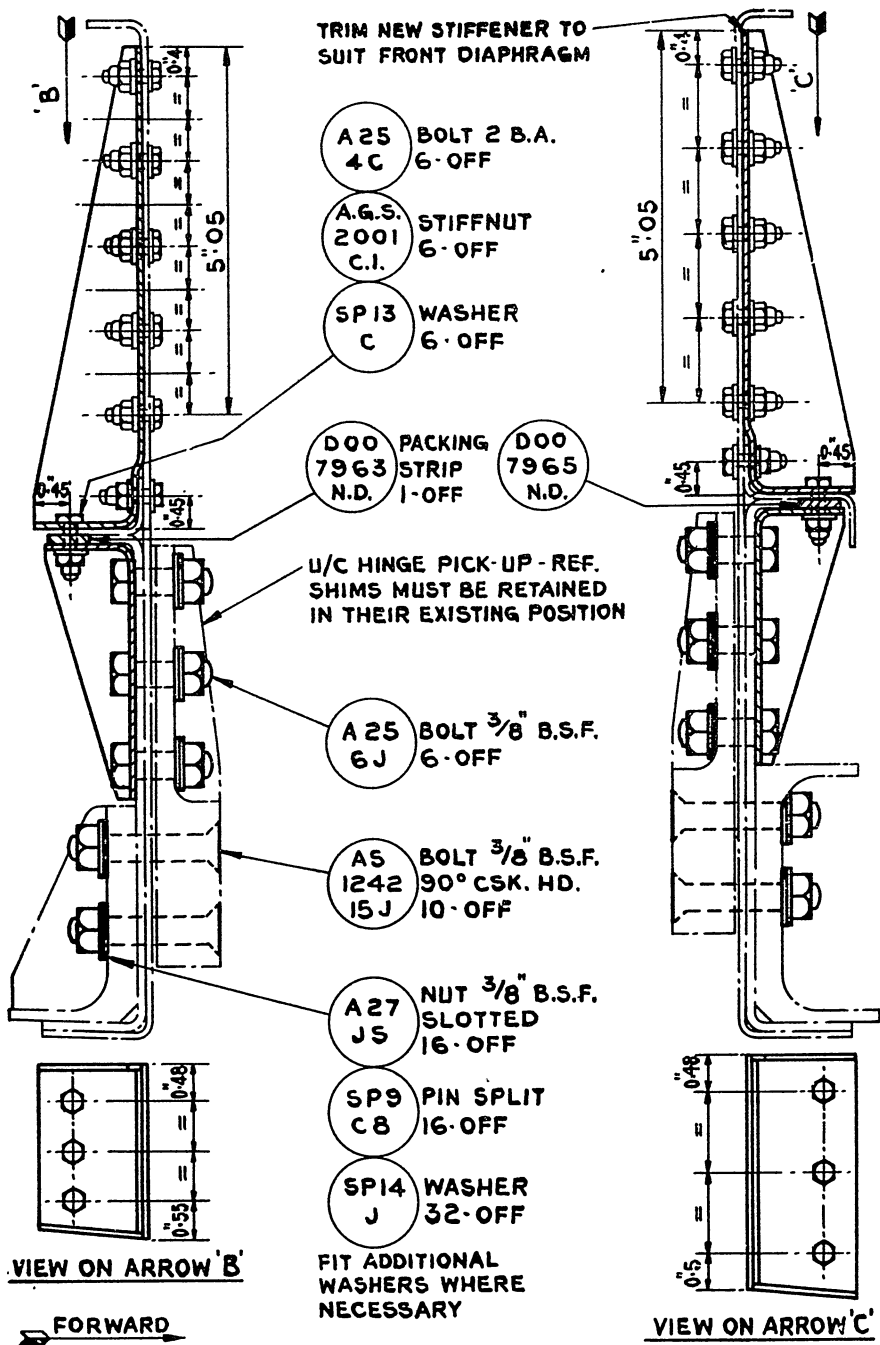
# REINFORCEMENT OF REAR U/C DIAPHRAGM (PORT DRAWN)

DRG. N° A.P. 4099 G / A. 7 / 56

SHEET 4

**RESTRICTED**

LP31457 9/56 625 C & P Gp. 959 (4)



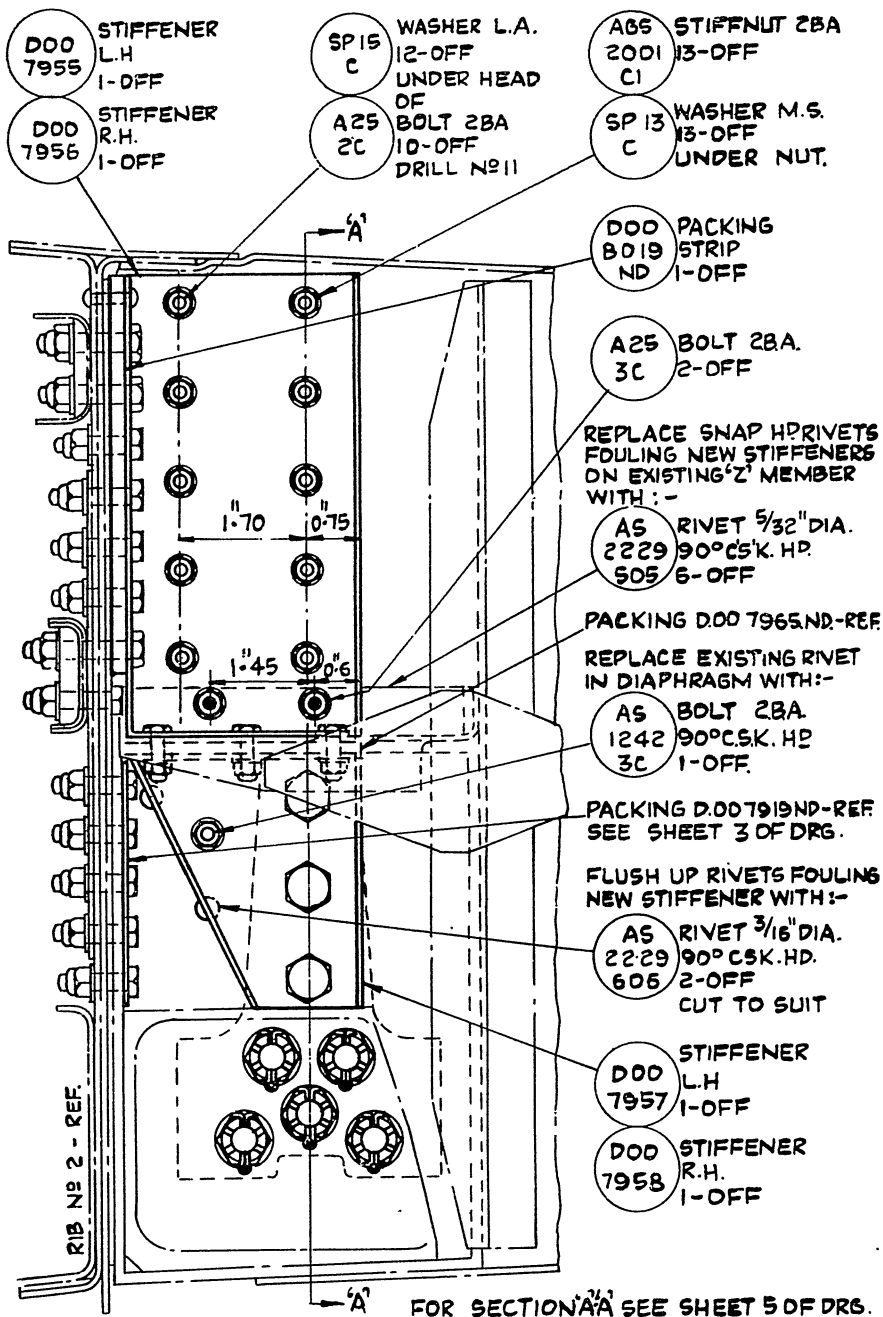
SECTION 'A-A' THROUGH U/C DIAPHRAGMS (PORT DRAWN) SEE SHEETS 4 & 6

DRG. NO A.P. 4099 G / A. 7 / 56

SHEET 5

RESTRICTED

LP31457 9/56 625 C & P Gp. 959 (4)



**REINFORCEMENT OF FRONT 1/2 DIAPHRAGM (PORT DRAWN)**

DRG. NO. A.P. 4099 G / A. 7 / 56

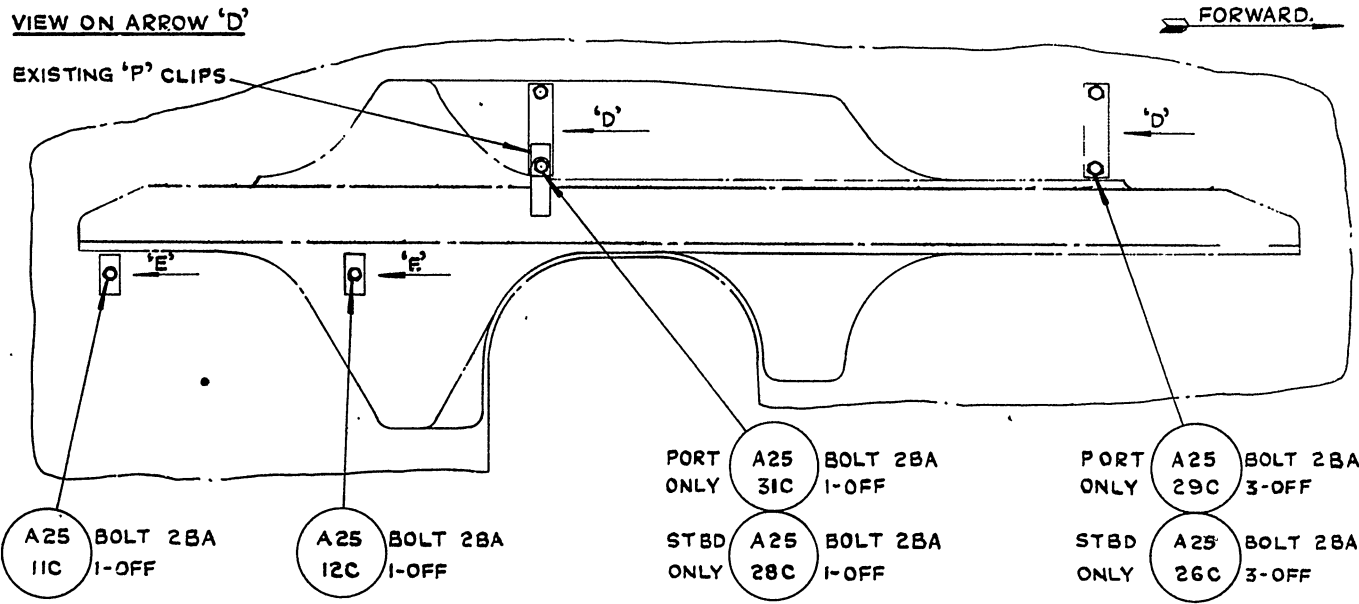
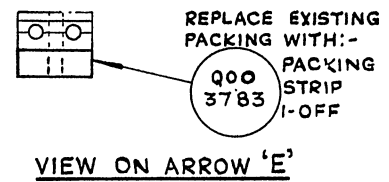
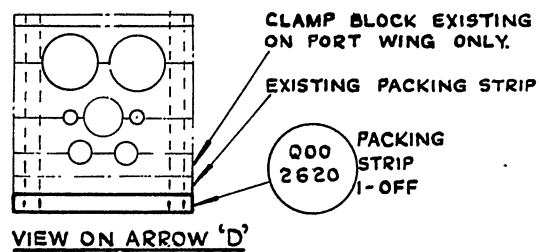
SHEET 6

**RESTRICTED**

LP31457 9/56 625 C & P Gp. 959 (4)

RESTRICTED

DRG. N2 A/R 4099 G / A. 7 / 56  
SHEET 7  
LP31457 9/56 625 C & P Gp. 959 (4)



REVISED PACKING UNDER EXISTING CLAMP BLOCKS ON RIB N2 (PORT DRAWN)





**A.L.N. 222**

.....  
(Mainplanes, stiffeners on Rib 2)

**A.P.4099G, Vol. 2, Part 1**  
**Leaflet No. A.7**  
**(Alteration 2)**

**Vampire F.B. Mk. 9 Aircraft—Mainplanes—To Introduce Stiffeners on  
Rib. No. 2 and U/C Diaphragm**

(AB/A/4599.—17.9.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. A.7 (Mod. No. Vampire/  
3494) is amended as follows:—

(1) Para. 3, *Delete in entirety and substitute:—*

**“3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**  
**The work will take approximately 180 man-hours.”**

**RESTRICTED**

[illegible]

125-100-1-1

— 225 —

RECEIVED AT: 10:00 AM, 10/10/1964  
FROM: SAC, NEW YORK (100-100000)

A.L.N. 211

(Intro. improved elevator)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. A.8Vampire F.B. Mk. 9 Aircraft—Elevator—To Introduce Improved  
Elevator, Part No. JOO.2017A in Place of Part No. JOO.601A/7

(Mod. No. VAMPIRE/3588.)

(Class B/3, on replacement.)

(AB/A/7834.—10.2.58.)

## 1. INTRODUCTION

Changes of trim may occur on certain aircraft with the onset of compressibility. Investigations have shown that this characteristic may occur at lower than normal speed when the external contour of the tail unit is unsatisfactory, due to deterioration of the paint finish, or for any other reason. A marked nose down trim change may occur when slackness of the existing elevator skin allows the contour to distort at high speed. This modification introduces an elevator with improved stiffness and profile.

(1) This modification supersedes the work called for by Mod. No. Vampire/3587 (Elevator—To Introduce Stiffened Elevator).

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

## 2. EMBODIMENT

This modification is to be embodied on replacement of elevator.

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 8 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 items are required but are not assembled as a kit:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/12919	JOO.2017A	Elevator assembly	1	A
28P/9429528	SP.9/C8	Pin, split, $\frac{1}{8}$ in. dia.	23	C

R.A.F. Units at home are to demand separately their requirements of Elevators and additional item, as listed above, in accordance with current regulations.

## (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 REFERENCE, PART AND ASSEMBLY NUMBERS

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

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## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Remove the elevator assembly, Part No. JOO.601A/6 or JOO.601A/7, and fit the new elevator assembly, Part No. JOO.2017A, into position as detailed in A.P.4099G, Vol. 1, Sect. 5, Figs. 12 and 13, using the original retained attaching items and new  $\frac{1}{8}$  in. dia. split pins, Part No. SP.9/C8.

(2) After re-connecting the rudder controls and connecting the new elevator controls, re-rig them as detailed in A.P.4099G, Vol. 1, Sect. 4, Chap. 3.

## 9. TESTING AFTER EMBODIMENT

When this modification has been embodied carry out a full setting and functional check on the elevator and rudder controls.

## 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
*26FC/6497	JOO.601A/6	Elevator assembly	1	A
	or			
†26FC/12853	JOO.601A/7	Elevator assembly	1	A

Note:—\* Item pre. Mod. No. Vampire/3587

Note:—† Item post Mod. No. Vampire/3587

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

This modification causes a weight change of +1.21 lb. and a change of moment of +24.0 lb. ft.

**RESTRICTED**

# Section B Contents List

B

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.						
B 1										
B 2										
B 3										
B 4										
B 5										
B 6										
B 7										
B 8										
B 9										
B 10										
B 11										
B 12										
B 13										
B 14										
B 15										
B 16										
B 17										
B 18										
B 19										
B 20										
B 21										
B 22										
B 23										
B 24										
B 25										
B 26										

(R.A.F. Form 3850 B)

(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.						
B 27										
B 28										
B 29										
B 30										
B 31										
B 32										
B 33										
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B 48										
B 49										
B 50										
B 51										
B 52										
B 53										
B 54										
B 55										
B 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.48984/BJ/742 16m. 10/54 W.H.&S. 670/60

A.L. No. 3  
(Radius rod stopbolts. Wire-locked)

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

**Vampire F.B. Mk. 9 Aircraft—Wire Locking of Radius Rod Stop Bolt—  
Introduction**

(MOD. NO. VAMPIRE/960.)

(Class B/2.)

(7/Mods/13,018.—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.



**RESTRICTED**

(44254/670) 529727 8245 125 1/56 (H.P.W.) (Gp. 19/1)





Vampire F.B. Mk. 9 Aircraft—Diameter of Hole for Brake Cable in Control Column increased from  $\frac{7}{16}$  in. to  $\frac{1}{2}$  in.

(Mod. No. VAMPIRE/945.)

(Class C/4.)

7/Mods/12,520.—22.8.51.)

1. This modification enlarges the entry hole for the wheel brake cable in the control column, and thus eliminates the possibility of damage occurring to the cable, due to the difficulty encountered when inserting the nipple end. The work detailed in the sequence of operations is to be done only when it becomes necessary to fit a new brake cable under normal replacement procedure. The work will take approximately  $\frac{1}{2}$  man-hour per aircraft.

2. Subject to the availability of parts, this modification is to be embodied on replacement of the wheel brake cable.

3. The following is the sequence of operations:—

(1) After removing damaged brake cable, open out existing  $\frac{7}{16}$  in. dia. entry hole in control column (spade grip mounting) extension) piece to  $\frac{1}{2}$  in. dia.

(2) Remove all sharp edges from the hole and then repair finish locally, using matt black (night) cellulose.

(3) Fit replacement cable.

**RESTRICTED**

P.T.O.

4. The following item is required for the embodiment of this modification and is to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
33B/883	Cellulose, matt black (Night) and primer to Spec. D.T.D.751-4	As reqd.	C
or 33B/669			

**RESTRICTED**

(34472/144) M.20185 R665 250 8/51 H.P.W. (Gp.19/I)

A.L. No. 14 (Alighting gear)  
(A.L. No. 9 cancelled)

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

**Vampire F.B. Mk. 9 Aircraft—Re-designed Bolts and Lower Half Fittings  
at Attachment of Undercarriage Bearing Tube—Introduction**

(MOD. NO. VAMPIRE/806.)

(Class C/4.)

(7/Mods/13,864.—17.1.56.)

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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**RESTRICTED**

(44445/23) 529728 8245 125 2/56 (H.P.W.) (Op. 19/1)



A.L. No. 21  
(U/c jacks modified)

A.P.4099G, Vol. 2, Part 1  
(Leaflet No. B.6  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Larger diameter Undercarriage Jack  
Part No. Air.41192, instead of Part No. Air.40010—Introduction

(MOD. NO. VAMPIRE/676.)

(Class B/2.)

(7/Mods/15,195.—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**

(44445/838) 529726 8245 125 2/56 (H.P.W.) (Gp. 19/1)



A.L. No. 36  
(Nosewheel)  
(A.L. No. 10 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. B.7  
(Leaflet No. B.4 cancelled)  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Extended Grease Nipple at Nosewheel  
Jack Fork End—Introduction

(MOD. NO. VAMPIRE/961.)

(Class C/3.)

(7/Mods/13,185.—15.10.55.)

*Note:—This leaflet supersedes and is the authority for cancelling A.P.4099G, Vol. 2, Part 1, Leaflet No. B.4 (A.L. No. 10).*

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**

(44139/431) 529726 8245 125 12/55 (H.P.W.) (Gp. 19/1)





**Vampire F.B. Mk. 9 Aircraft—Improved Method of Swaging Cable in  
Brake Cable Assembly—Introduction**

(MOD. NO. VAMPIRE/944.)

(Class C/3.)

(7/Mods/16,136.—8.4.52.)

1. This modification has been necessitated by reports of the continual failure of the brake cable and makes provision for the fitment of a new cable with improved swaging of the nipples. The work will take approximately 3 man-hours.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Minor 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/B.8/52.)

(1) Locate brake lever on control column and unscrew bolt holding lever in position. Remove nipple on end of redundant brake cable from its recess in the lever; then remove Bowden stop from its attachment on control column. Cut waxed cord binding cable to control column.

(2) Follow run of cable to where it passes through a rubber grommet in small bottom centre instrument panel, behind control column. Unscrew the four round-head panel attachment screws and carefully pull the whole panel assembly to one side. Now withdraw free end of cable through the rubber grommet in the instrument panel. Free access to the differential brake control unit is now obtained.

(3) Remove knurled screw located on top of brake control unit. This discloses a very small grub screw, which should be carefully slackened off two turns. Do *not* unscrew it completely, otherwise difficulty will be experienced in replacing it.

(4) The swaged end fitting on the cable is now free and may be unscrewed and removed from the differential brake control unit by turning the whole cable assembly.

(5) Offer up new brake cable assembly, Part No: K.001533A, and re-assemble, adopting reverse procedure as laid down in operations (1)–(4). Bind cable to control column with waxed coreless twine.

(6) When re-assembly is complete, the differential brake control unit should be adjusted and brake system tested in accordance with current authorized procedure.

4. The undermentioned part number alteration becomes necessary upon embodiment of this modification:—

<i>Old Part No.</i>	<i>Nomenclature</i>	<i>New Part No.</i>
K.003A/3	Assy. of control column	K.003A/4

5. 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:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/4880	K.001533A	Brake cable assembly.	1	C

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

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

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
32A/94	Cord, stringing braided	As reqd.	C
33C/10	Beeswax	As reqd.	C

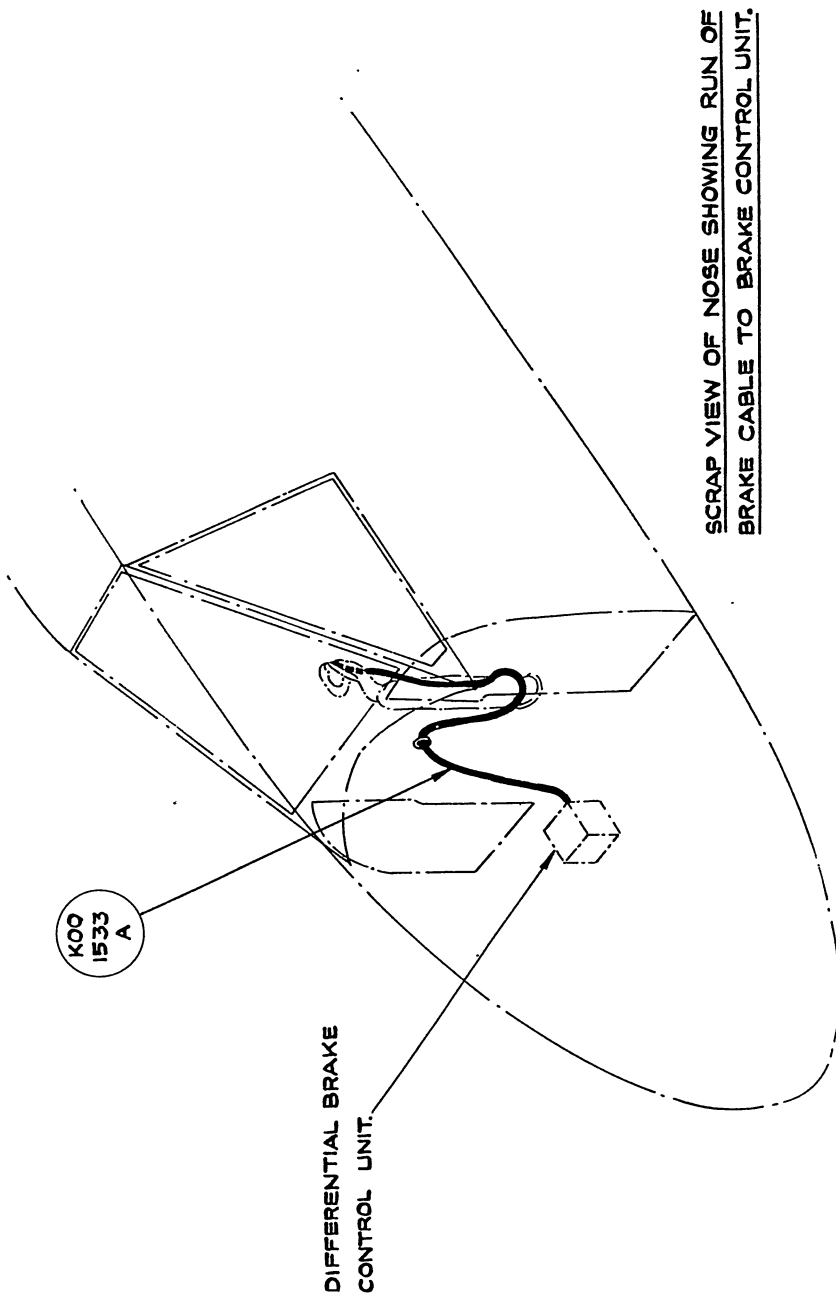
7. The following item, rendered redundant by the embodiment of this modification, is to be disposed of in accordance with Air Publication 3045:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/3493	K.00483A	Brake cable assembly	1	C

**RESTRICTED**

**DRG. № A.P.4099 G /B.8 / 52**

LP24873 4/52 250 C & P Gp. 959 (4)





A.L. No. 40  
(Nose wheel modified)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. B.9  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Improvements to Nosewheel Self-centring  
Mechanism—Introduction

(Mod. No. VAMPIRE/947.)

(Class C/4.)

(7/Mods/12,378.—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. 44, 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**

(43222/116) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



A.L. No. 80  
(Undercarriage jack)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. B.10  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Stronger Main Undercarriage Jack Top  
Pin—Introduction

(MOD. NO. VAMPIRE/3153.)

(Class C/3.)

(7/Mods/17,854.—22.12.55.)

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. 92, 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.

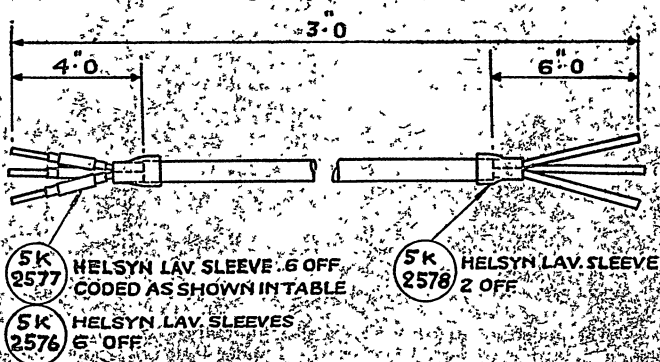
**R**

**RESTRICTED**

(44445/864) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)

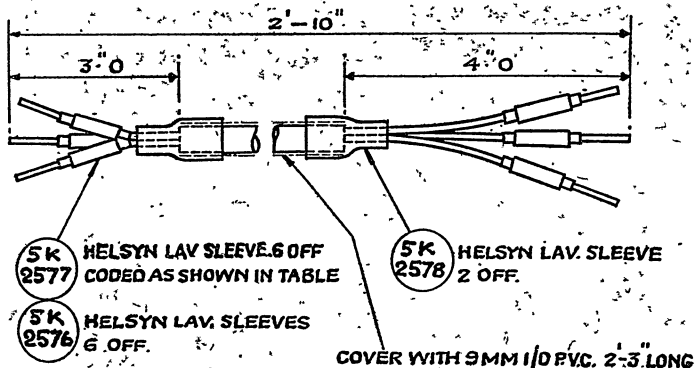






COLOUR	RED	BLUE	YELLOW
CODE	U14	U9	U10

CABLE PART NO02673. 1 OFF  
TRIPREN 6 SPEC. E. L1470.



PART NO	RED	BLUE	YELLOW
NO02659	U13	U7	U5
NO02660	U15	U3	U6

CABLE PART NO NO02659 L.H. 1 OFF  
CABLE PART NO NO02660 R.H. 1 OFF  
TRIPREN 6 SPEC. EL. 1470

**RESTRICTED**

Drg. No. A.P.4099G/B.11/53. Sheet 1

(Alighting gear)  
(A.L. No. 13 cancelled)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. B.11  
(Leaflet No. B.5 cancelled)

**Vampire F.B. Mk. 9 Aircraft—Wiring revised for Undercarriage Warning Lights with the addition of three Micro-Switches (Stores Ref. 5C/4098) to prevent Green Lights being shown without Undercarriage being Locked Down.**

(MOD. No. VAMPIRE/908.)

(Class C/3.)

(7/Mods/12,376.—26.10.53.)

*Note: This leaflet supersedes and is the authority for cancelling A.P. 4099G, Vol. 2, Part 1, Leaflet No. B.5 (A.L. No. 13).*

1. This modification introduces an additional down lock micro-switch at each undercarriage leg (port and starboard main legs and nose wheel) and revises the wiring. This is necessary owing to reports that micro-switches have sometimes failed to operate correctly in the existing circuit, so that a green, in place of red indication light, may show before the undercarriage is fully locked down. Concurrent embodiment of Mod. No. Vampire/809 and 810 is advisable.

The work will take approximately 20 man-hours per aircraft.

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:—

(Refer to Dwg. No. A.P. 4099G/B.11/53, Sheets 1-5.)

(1) Trestle the aircraft in order to raise the undercarriage clear of the ground. Remove the nose panels to gain access to the top of the nosewheel leg.

(2) Refer to Sheet 2 of the drawing, and unlock and remove the two  $\frac{1}{4}$  in. B.S.F. bolts indicated. Position the new striker plate, Part No. GOO 1837, replace the bolts and lock with 22 s.w.d. soft iron locking wire.

(3) Secure the bracket, Part No. GOO 1847, to the two bolts securing the camera mounting to its support struts. Drill a No. 11 (0.1910 in. dia.) hole through the camera support plate to pick up the remaining hole in the new bracket, and secure with a nut, bolt and washer, as shown in Sheet 2 of the drawing.

(4) Refer to Sheet 1 of the drawing, and make up the three cable assemblies.

(5) Connect up the new cable, Part No. NOO 2673, to the micro-switch (Stores Ref. 5C/4098) with the coding U 10, U 14 and U 9 going to terminals A, B and C respectively. Bolt the micro-switch to the bracket, as shown in Sheet 2 of the drawing.

*Note:—*The cable must leave the micro-switch on starboard side when assembled.

(6) Adjust the micro-switch position so that, when the leg is fully down, the switch plunger is compressed 0.05 in. min. to 0.08 in. max.

R

RESTRICTED

(7) Route the cable, Part No. NOO 2673 (ref. only), to follow the existing cable from the "UP" switches, to the 3-way terminal blocks on the armour plate.

(8) Refer to Sheet 2 of the drawing, and disconnect all leads from the two "UP" switches situated under the camera mounting, the leg lock switch at the top of the leg structure and the two 3-way terminal blocks on the armour plate. Re-code and re-connect these cables to the switches and the terminal blocks as shown in the wiring diagram.

*Note:*—On aircraft without Mod. No. Vampire/809 embodied, the micro-switch markings will be found to differ from those shown in the wiring diagrams. In these cases, read the markings as given in the example in Sheet 3 of the drawing. At the "UP" switch and "LEG LOCK" switch, it will be found that there is a redundant lead which must be taped back and insulated.

(9) Refer to Sheet 4 of the drawing, and locate the position for the new micro-switch assembly in the port wheel well. Remove the three rivets indicated on the drawing and replace with new countersunk rivets, Part No. AS.2229/606, the heads of which are to be flush on the rear face of the stiffener. To facilitate this work and the fitting of the switch assembly, first remove the small inspection panel on the under surface of the wing, just forward of the diaphragm.

(10) Mark off 3.6 in. up from the bottom edge of the diaphragm on the centre line of the stiffener, and drill a No. 26 (0.1470 in. dia.) hole through the stiffener and diaphragm.

(11) Refer to Sheet 4 of the drawing, and scribe a line parallel to the centre line of the stiffener and 9.75 in. from the outboard edge of the diaphragm.

(12) Temporarily secure the new bracket, Part No. GOO 1829, to the diaphragm by its top locating bolt, and then drill the remaining two No. 26 holes in the diaphragm from the bracket.

(13) Remove the bracket and fit the new micro-switch (Stores Ref. 5C/4098) to it with bolts, nuts and washers as shown in Sheet 4 of the drawing. Connect up the cable, Part No. NOO 2659, to the micro-switch with the coding U.13, U.5. and U.7 going to terminals A, B, and U.7 going to terminals A, B and C respectively.

(14) Offer up and bolt the assembly to the diaphragm, using the nuts, bolts and washers shown in Sheet 4 of the drawing. Run the cable and clip as shown in Sheet 5 of the drawing. Bind under the clips with one in. wide polyvinyl tape.

(15) Locate the two terminal blocks in the wheel well, disconnect all switch leads from the terminal blocks, re-code and re-connect as shown in Sheet 2 of the drawing.

(16) Disconnect the existing wiring from the door switch, "LEG LOCK" switch and "UP" switch, and then re-connect as per wiring diagram, re-coding the cables, where necessary.

*Note:*—On aircraft without Mod. No. Vampire/810 embodied, refer to the note at the end of operation (8).

(17) Repeat operations (9) to (16) inclusive, in a similar manner for the starboard installation, with Part No. NOO 2659, and coding U.13, U.5 and U.7 referred to in operation (13) replaced by Part No. NOO 2660, and coding U.15, U.6 and U.3 respectively.

(18) Ring all wiring through for correct connections.

(19) Replace all inspection panels.

(20) Carry out functional tests on the undercarriage for correct operation of the circuits.

**RESTRICTED**

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:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/5370	GOO 1829	Bracket, L.H.	1	C
26FC/5371	GOO 1830	Bracket, R.H.	1	C
26FC/5613	GOO 1837	Plate, striker	1	C
26FC/5372	GOO 1847A	Bracket	1	C
26FC/-	DHS.30/Mk. 40	Clip (Make from (Stores Ref. 30B/1451))	4	C
28D/6998	6A1/1C	Bolt	1	C
28D/7030	6A1/2C	Bolt	2	C
28D/7013	6A1/1B	Bolt	6	C
28D/7172	6A1/8B	Bolt	6	C
28M/10287	A.G.S.2001/B1	Nut	12	C
28M/10288	A.G.S.2001/C1	Nut	3	C
28Q/10411	AS.2229/606	Rivet	6	C
28W/12305	SP.13/B	Washer	12	C
28W/12252	SP.13/C	Washer	3	C

5. The undermentioned items are also required for the embodiment of this modification, and are to be provided under Unit arrangements:—

Stores Ref.	Nomenclature	No. off	Class of Store
5C/4098	Switch, micro	3	B
5K/2577	Sleeve, Helsyn Lavender	18	C
5K/2576	Sleeve, Helsyn Lavender	18	C
5K/2578	Sleeve, Helsyn Lavender	6	C
5F/2027	Tubing, 9 mm. i/d. P.V.C., 28 in. long	1	C
5E/3074	Cable, Tripren 6, Spec. EL.1470, 9 ft. long	1	C
5F/463	Tape, 1 in. wide, polyvinyl	As reqd.	C
32B/498	Thread, waxed coreless	As reqd.	C
30A/1039	Wire, 22 s.w.g., M.S., locking	As reqd.	C

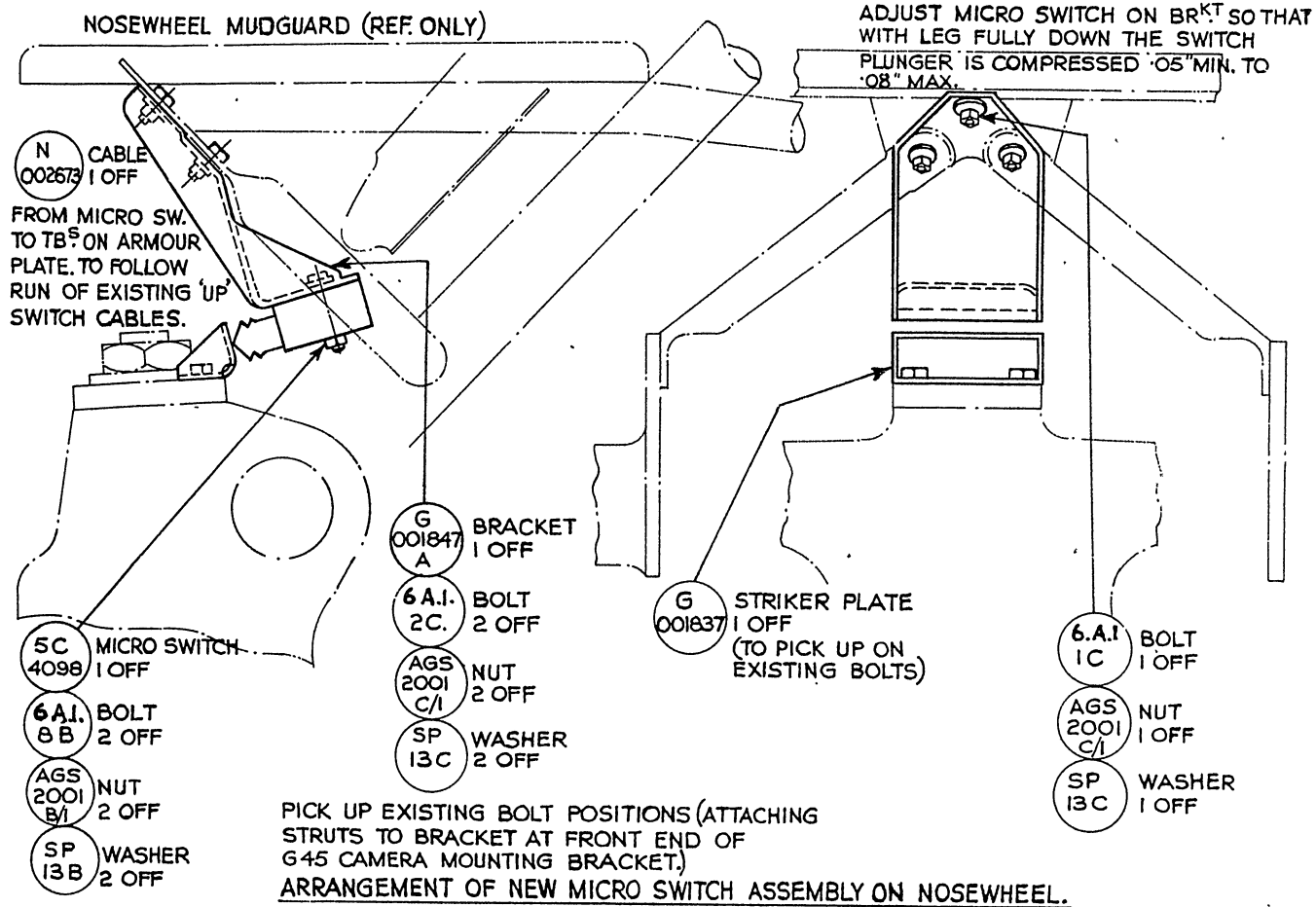
P.T.O.

RESTRICTED

DRG. No A.P. 4099 G / B. 11 / 53

SHEET 2

LP27135 10/53 400 C & P Gp. 959 (4)



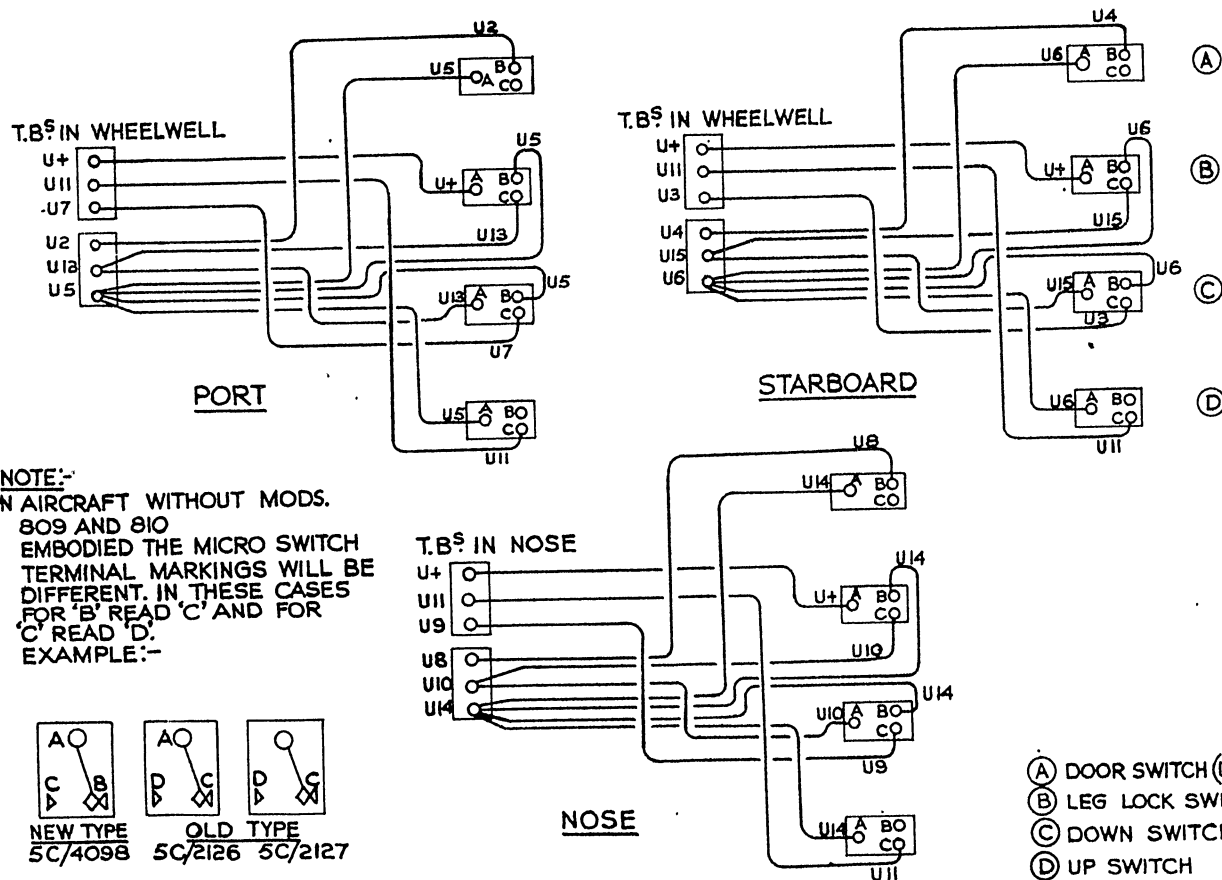
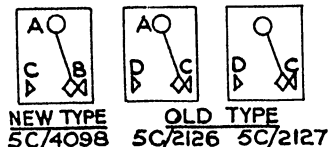
RESTRICTED

DRG. NO. A.P. 4099 G/B. 11 / 53

SHEET 3

LP7135 10/53 400 C & P Gp. 959 (4)

NOTE:-  
ON AIRCRAFT WITHOUT MODS.  
809 AND 810  
EMBODIED THE MICRO SWITCH  
TERMINAL MARKINGS WILL BE  
DIFFERENT. IN THESE CASES  
FOR 'B' READ 'C' AND FOR  
'C' READ 'D'.  
EXAMPLE:-



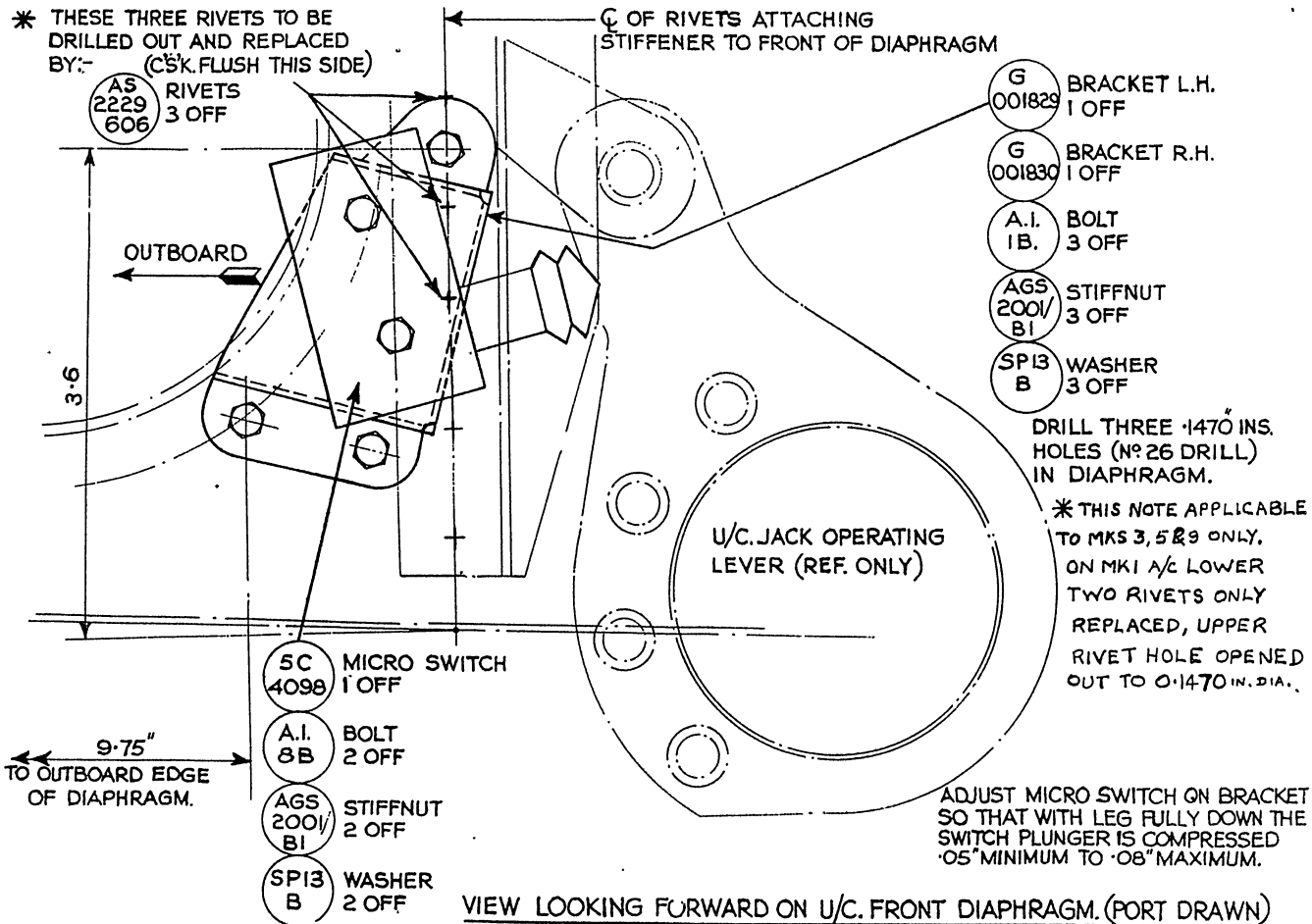
WIRING DIAGRAM OF U/C. BETWEEN T.B.S. AND SWITCHES.

RESTRICTED

DRG. No A.P. 4099 G/B. 11 / 53

SHEET 4

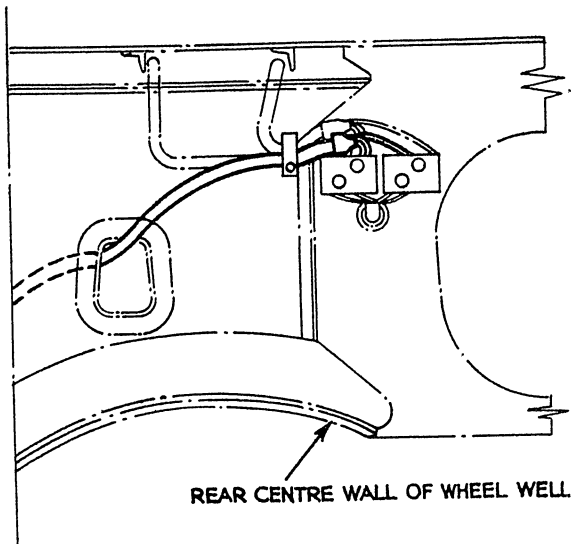
LP27135 10/53 400 C & P Cp. 959 (4)



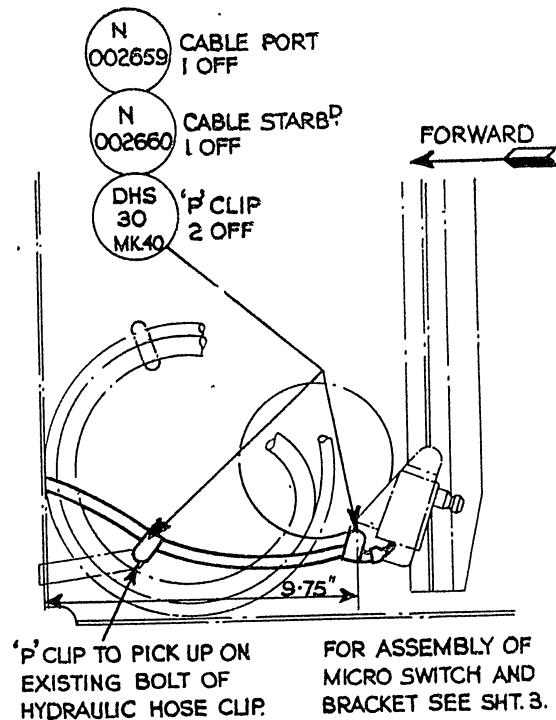
RESTRICTED

DRG. No A.P. 4099 G/B.11 / 53  
SHEET 5

LP27135, 10/53 400 C & P Gp. 959 (4)



VIEW INBOARD IN WHEELWELL.



VIEW LOOKING FORWARD ON PORT U/C.  
FRONT DIAPHRAGM.

INSTALLATION OF CABLE ASSEMBLY TO 'DOWN' SWITCH IN PORT U/C. (SIMILAR FOR STARB<sup>D</sup>)



**A.L.N. 154**

(Teleflex clamp blocks and connector locking plate)

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

**Leaflet No. B.12**

**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce Modified Teleflex Clamp Blocks and Connector Locking Plate**

(Mod. No. VAMPIRE/3336.)

(Class C/3.)

(AB/A/1956.—7.7.55.)

**1. INTRODUCTION**

The teleflex clamp blocks, securing the conduit of the undercarriage door locks to the airframe, have been found to crack across their narrowed section, resulting in the conduit being released, restricting the movement of the door plungers. To overcome this defect redesigned clamp blocks, together with locking plates, are introduced by this modification.

(1) This modification supersedes and is satisfied by the work called for by S.T.I. No. Vampire/94.

(2) This modification is essentially connected with Mod. No. Vampire/818 (To introduce Teleflex Connectors B.29140/1 in place of B.532); 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 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:* In accordance with the standard of Preparation.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 3 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 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/103336). 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.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/10451	GOO.1949	Teleflex Conduit Clamp	4	C
26FC/10461	GOO.1951	Teleflex Connector Clamp	8	C
26FC/10462	GOO.1953	Teleflex Connector Locking Plate	4	C
27K/504	DS.47/2	Teleflex Lock Spring	4	C
28D/12533	A.25/5C	Bolt, H.T.S., 2 B.A. X 0.95 in.	8	C

**RESTRICTED**

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28D/12535	A.25/12C	Bolt, H.T.S., 2 B.A. × 1.65 in.	4	C
28D/12537	A.25/14C	Bolt, H.T.S., 2 B.A. × 1.85 in.	2	C
28D/12538	A.25/15C	Bolt, H.T.S., 2 B.A. × 1.95 in.	2	C
28M/12929	A.27/CP	Nut, plain, 2 B.A.	8	C
28W/3071	A.G.S.160/C	Washer, 2 B.A.	8	C

(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>
30A/3055	—	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C
33B/261	—	Primer, universal	As reqd.	C
33B/865	—	Finish, high gloss aluminium	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

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 and is applicable to both port and starboard wheel wells:—

(1) Remove the inboard inspection panels from both the front and rear wheel well walls and dismantle both the undercarriage door lock plungers.

*Note:*—Reference to A.P.4099G, Vol. 1, in which a sectional view of the door lock plunger is shown, may assist with dismantling.

(2) Trace the teleflex conduits, from the lock plunger end, into the mainplane and remove the now redundant teleflex conduit clamps, Part No. GOO.1779 (ref. only), attached to the top surface of the bottom skin through which the conduits are routed.

(3) Follow the conduits on to their now redundant teleflex connector clamps, Part No. GOO.1781 (ref. only), attached to the outboard face of Rib No. 3. Release the clamps, unscrew the connectors and carefully withdraw the conduits just sufficient to allow the redundant clamps to be sprung clear of the teleflex cables. Slide the conduits back to their original position and re-assemble the connectors.

(4) Slide on to each conduit the new clamps, Part No. GOO.1949, and attach them to the vacated anchor nut positions inside the mainplane using new bolts, Part No. A.25/5C, having coated their mating faces with pigmented varnish jointing compound (Stores Ref. 33C/1264) and having ensured that the existing packing is correctly positioned underneath each of them.

**RESTRICTED**

(5) Temporarily position the new teleflex connector clamps, Part No. GOO.1951, over each of the connectors at Rib No. 3, and ensure that the flats of the connector run parallel with the attachment holes of each clamp so that no foul will occur when fitting the securing bolts.

(6) Each of the new locking plates, Part No. GOO.1953, are now to be drilled to suit individual clamp blocks on Rib No. 3 to comply with the variations in the position of the teleflex connectors. Position each plate over a clamp block and mark the position of their two attachment holes from the inboard side of the rib. Drill the attachment holes using a No. 11 (0.191 in. dia.) drill.

(7) Wire lock each of the connectors using 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055), then attach each of the clamps, together with their locking plates, to Rib No. 3, having coated all mating faces with pigmented varnish jointing compound, using new bolts, nuts and washers, Part Nos. A.25/12C, A.25/14C, A.25/15C, A.27/CP, and, A.G.S.160/C, respectively, the longer bolts being used for the attachment of the forward clamp. Ensure that the existing packings are correctly positioned under each of the clamps.

(8) Reassemble both the door lock plungers, using a new lock spring, Part No. DS.47/2, in each with reference to A.P.4099G, Vol. 1, S.I./Vampire/32, and S.I./Vampire/41. Renew the finish in the wheel well using primer universal and aluminium high gloss finish (Stores Refs. 33B/261 and 33B/865) respectively.

#### 9. TESTING AFTER EMBODIMENT

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

Carry out a full retraction test using the hydraulic ground test rig, paying particular attention to the correct functioning of the undercarriage door locks.

#### 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 authorized procedure:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of	
				Store	
26FC/4476	GOO.1779	Teleflex Conduit Clamp	4	C	
26FC/4475	GOO.1781	Teleflex Conduit Clamp	4	C	

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

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



.....  
(Main undercarriage—Rubbing  
strip on door mechanism)

**A.P.4099G, Vol. 2, Part 1**  
**Leaflet No. B.13**  
**(Alteration 1)**

**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce Improved  
Rubbing Strip on Main Undercarriage Door Mechanism—Introduction**

(AB/A/1172.—18.1.56.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. B.13 (Mod. No. Vampire/  
3320) is amended as follows:—

(1) Para. 7, under "New, Stores Ref."

*Amend* item 2: "26FC/10278" to read "26FC/10378".



L36061 2/56 625 C & P Gp. 1

**RESTRICTED**



.....  
(Main undercarriage—Rubbing strip  
on door mechanism)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. B.13

**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce  
Improved Rubbing Strip on Main Undercarriage Door Mechanism—  
Introduction**

(MOD. NO. VAMPIRE/3320.)

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

(AB/A/1172.—18.8.55.)

**1. INTRODUCTION**

Cases have occurred where the undercarriage has been held in a retracted position and it has been established that with a completely deflated tyre it is possible for the main undercarriage rubbing strip to catch up under the rim of the wheel. This modification overcomes the defect by introducing a wider rubbing strip.

- (1) This modification is satisfied by embodiment of M.E.A.F. Command modification 13.
- (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 six 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 7 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/B.—13./55, is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

- (1) Parts and Materials

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

R

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
30A/538	—	Steel sheet, 10 s.w.g., Spec. S.3 12.5 in. x 2.0 in.	2	C
34B/222	—	Grease, XG-275	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:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/4082	GOO.1595A	Frame wheel door, operating (port)	—	—

## Part required:

26FC/—	GOO.1947	Rubbing strip (port) (Make from 10 s.w.g., Spec. S.3 mild steel (Stores Ref. 30A/538))	1	—
26FC/4083	GOO.1596A	Frame wheel door, operating (starboard)	—	—

## Part required:

26FC/—	GOO.1948	Rubbing strip (starboard) (Make from 10 s.w.g., Spec. S.3 mild steel (Stores Ref. 30A/538))	1	—
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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>Old</i>			<i>New</i>	
<i>Stores Ref.</i>	<i>Pt./Assy. No.</i>	<i>Nomenclature</i>	<i>Pt./Assy. No.</i>	<i>Stores Ref.</i>
26FC/4082	GOO.1595A	Frame for wheel door mechanism (Main U/C), L.H.	GOO.1595A/1	26FC/10377
26FC/4083	GOO.1596A	Frame for wheel door mechanism (Main U/C), R.H.	GOO.1596A/1	26FC/10278

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations, and is applicable to both Port and Starboard mainplanes.

(Refer to the Drawing.)

- (1) Make up two new rubbing strips from 10 s.w.g. material, Spec. S.3 mild steel (Stores Ref. 30A/538) to the dimensions detailed on the drawing. Stamp the plates with Part Nos. GOO.1947 (Port) and GOO.1948 (Starboard) (ref. only).



- (2) Locate the main undercarriage door frame and remove and retain the five 2 B.A. bolts securing the now redundant rubbing strips, Part Nos. GOO.396 (Starboard), and GOO.397 (Port) (ref. only). Remove and dispose of the strips.
- (3) Apply pigmented varnish jointing compound (Stores Ref. 33C/1264) to the mating face of the new rubbing strips, Part Nos. GOO.1947 (Port), and GOO.1948 (Starboard) (ref. only) and offer up and secure into position with the five retained bolts, nuts and washers.

*Note:*—On assembly ensure that the screws in the rubbing strip are not proud and that there are no burrs or sharp edges. The rubbing strip must be kept smooth and well greased with Grease XG-275 (Stores Ref. 34B/222).

## 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 as scrap in accordance with Air Ministry Salvage Leaflets:

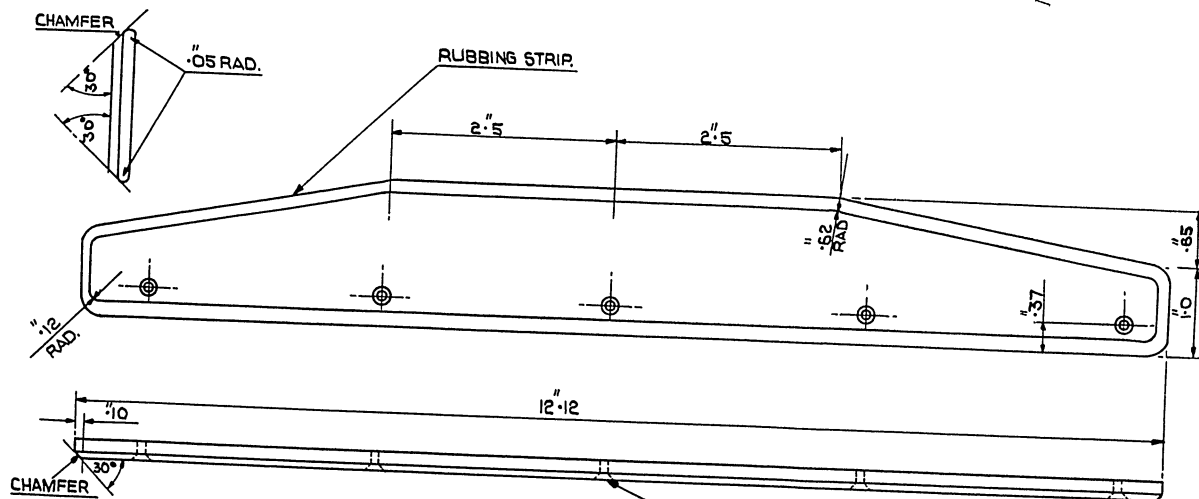
<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/739	GOO.396	Rubbing strip, R.H.	1	C
26FC/737	GOO.397	Rubbing strip, L.H.	1	C

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

This modification causes a weight change of +0.46 lb. and a change of moment of +1.0 lb.ft.

RESTRICTED

DRG. NO. A.P. 4099 G / B.13 / 55  
SHEET



MAKE FROM MILD STEEL  
SPEC. S.3. (STORES REF  
30A/588) (O.S.W.G.)

DRILL 5 HOLES No. 11 (0.191 INS. DIAM.)  
FROM REDUNDANT STRIP AND C'SK  
(90° X 0.191 INS. DIAM.)  
IN CHAMFERED FACE.

PART NUMBER STRIPS  
G OQ. 1947. (PORT) AND  
G OQ. 1948. (STARBOARD)

L.H. DRAWN. R.H. SIMILAR.

DETAIL OF MANUFACTURE OF NEW RUBBING STRIPS

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12  
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A.L. No 158

(Main undercarriage)

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

Leaflet No. B.14.

Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To introduce  
Tab Washer for Locking Fork End to Jack Ram

(MOD. No. VAMPIRE/3453.)

(Class C/3.)

(AB/A/3295.—21.9.55.)

1. INTRODUCTION

To prevent possible lengthening of the main undercarriage jack ram, due to the loosening, in service, of the rams fork end locknut, this modification introduces a tab washer between the locknut and the fork end to provide positive locking.

- (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 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:* In accordance with the Standard of Preparation.

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

The Modification Kit consists of the following items, supplied by the Contractor:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	GOO.1969	Special tab washer	2	—
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	2	C

The complete Kit is to be demanded from No. 35 Maintenance Unit, under Stores Ref. 26FC/103453.

- (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

The following is the sequence of operations, and is applicable to both port and starboard undercarriage:—

- (1) Jack the aircraft. Release all hydraulic pressure and remove and retain the nut and bolt from the fork end of the main undercarriage jack ram, following the procedure detailed in Air Publication 4099E and G, Vol. 1, Section 4, Chapter 3.
- (2) Release the locknut and unscrew the adjustable fork end from the jack ram. Fit the new tab washer, Part No. GOO.1969, over the threaded portion of the fork end and screw the fork end back into the jack ram. The tab washer should now be positioned between the locknut and the jack ram.
- (3) Reconnect the jack ram to its operating lever and carry out the necessary adjustments and undercarriage retraction tests, as detailed in Section 4, Chapter 3 of Vol. 1 of Air Publication 4099E and G.
- (4) Upon satisfactory completion of all tests and adjustments, tighten the locknut on the fork end of the jack ram, and lock it to the ram with the newly fitted tab washer. Lock the nut and bolt attachment of the jack with a new split pin, Part No. SP.9/C8. Remove the aircraft from jacks.

## 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 has no effect on weight or C. of G.

(Strengthened radius rod assembly)  
(A.L. No. 180 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. B.16  
(Leaflet No. B.15 cancelled)

**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce  
Strengthened Radius Rod Assembly and Attachment Fittings**

(MOD. NO. VAMPIRE/3495.)

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

(AB/A/4600.—1.10.57.)

*Note:—This leaflet supersedes, and is the authority for cancelling  
A.P.4099G, Vol. 2, Part 1, Leaflet No. B.15 (A.L. No. 180).*

**1. INTRODUCTION**

A number of heavy or drift landings may cause failure of the radius rod upper link, jack operating sleeve and the special bolts at the front and rear end fittings. This modification introduces a stronger upper link and jack operating sleeve and also special bolts of increased diameter.

The micro-switch operating spigot on the latch plate is replaced by a bracket to accommodate the stronger upper link and to improve the operation of the micro-switch. The end fittings on the radius rod and on the undercarriage diaphragms are changed to accommodate the increased diameter of the special bolts.

Fixing holes through the undercarriage diaphragms found oversize during the embodiment of this modification are to be dealt with in accordance with Repair Instruction Sheet No. 60.

(1) This modification plus Mod. No. Vampire/3494 satisfies the work called for by Mod. No. Vampire/3306 (Main Undercarriage—To Improve Locking of Attachment Bolts to Facilitate Replacement) and supersedes S.T.I./Vampire/101.

(2) This modification is essentially connected with Mod. No. Vampire/3494 (Mainplanes—To Introduce Stiffeners on Rib No. 2 and U/C Diaphragm); if that work is not already embodied it must be effected concurrently.

**2. EMBODIMENT**

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

*2nd Line Servicing Units:* At the first opportunity (not later than 3 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 45 man-hours (15 to Strip; 15 to Embody; 15 to Reassemble).

**4. DRAWINGS REQUIRED**

(1) Drawing No. A.P.4099G/B.16/57, is incorporated in this leaflet.

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(2) The following drawings if also required are to be demanded in accordance with A.P.3158; Vol. 2; Leaflet No. D.7:—

<i>Drawing No.</i>	<i>Title</i>
R.OOD. 403	R.I.S.60, Bushing of elongated holes in U/C diaphragms

## 5. PARTS AND SPECIAL TOOLS REQUIRED

### (1) Parts and Materials

(a) The Modification Kit consists of the following items supplied by the contractor and will be assembled by No. 35 Maintenance Unit under Ref. No. 26FC/103495:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/690	GOO.51	Bolt, special, $\frac{3}{8}$ in. B.S.F.	2	C
26FC/682	GOO.91	Screw, special, ch/hd.	2	C
26FC/10062	GOO.1014	Nut, special	4	C
26FC/11889	GOO.1971	Fitting, radius rod end, rear	2	B
26FC/11887	GOO.1973	Fitting, radius rod end, front, port	1	B
26FC/11888	GOO.1974	Fitting, radius rod end, front, stbd.	1	B
26FC/11895	GOO.1975	Bracket, radius rod hinge pick-up	4	C
26FC/11886	GOO.1977	Bolt, special, hinge pick-up	8	C
26FC/11915	GOO.1979A	Sleeve, jack operating	2	C
26FC/11890	GOO.1983A	Link, upper, radius rod, port	1	B
26FC/11891	GOO.1984A	Link, upper, radius rod, stbd.	1	B
26FC/—	GOO.1997	Bracket, switch contact, port	1	—
26FC/—	GOO.1998	Bracket, switch contact, stbd.	1	—
26FC/11894	GOO.1999	Screw, special, switch contact	2	C
26FC/—	GOO.2015A	Plate assy., nut	2	—
26FC/—	GOO.2017	Bolt, special, $\frac{5}{16}$ in. B.S.F.	4	—
28D/12543	A.25/6E	Bolt, $\frac{1}{4}$ in. B.S.F. $\times$ 1.1 in.	4	C
28D/12774	A.25/4G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 0.95 in.	8	C
28D/12787	A.25/5G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 1.05 in.	8	C
28D/12819	A.25/12G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 1.75 in.	4	C
28M/13122	A.27/GS	Nut, slotted, $\frac{5}{16}$ in. B.S.F.	20	C
28Q/1991	AS.455/512	Rivet, M.S., sp/hd., $\frac{3}{32}$ in. dia.	4	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	30	C
28W/12666	SP.14/G	Washer, S.S., $\frac{5}{16}$ in. B.S.F.	44	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	12	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.

**RESTRICTED**

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

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
30A/3055	—	Wire, nickel alloy, 22 s.w.g.	As reqd.	C
33C/547	—	Trichlorethylene	As reqd.	C
33C/1264	—	Compound, pigmented varnish jointing	As reqd.	C
34B/9100512 (4 oz. tube)		Grease XG-275	As reqd.	C
34B/9100513 (1 lb. tube)				
34B/9429867		Molybdenum, disulphide powder	As reqd.	C
34B/9428473		Molycote "G" compound D.T.D.900/4384	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:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/10223	DOO.6715A/7	Wing Complete, Port		
26FC/10442	DOO.6715A/8	Wing Complete, Port		

The method for modifying any of the above spares is detailed in para. 8, operations (1) to (11) and on the drawing.

Parts required for each spare:—

26FC/11895	GOO.1975	Bracket, radius rod hinge pick-up	2	C
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Attaching parts for GOO.1975 brackets

26FC/—	GOO.2015A	Plate assy., nut	1	—
26FC/—	GOO.2017	Bolt, special, $\frac{5}{16}$ in. B.S.F.	2	—
28D/12774	A.25/4G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times 0.95$ in.	4	C
28D/12787	A.25/5G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times 1.05$ in.	4	C
28D/12819	A.25/12G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times 1.75$ in.	2	C
28M/13122	A.27/GS	Nut, slotted, $\frac{5}{16}$ in. B.S.F.	10	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	10	C
28W/12666 and	SP.14/G	Washer, S.S., $\frac{5}{16}$ in. B.S.F.	22	C

26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
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Renewed attaching parts for GOO.1979A sleeve

28Q/1991	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
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and

26FC/—	GOO.1997	Bracket, switch contact, port	1	—
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Attaching parts for GOO.1997 bracket

26FC/682 and	GOO.91	Screw, special, ch/hd.	1	C
26FC/11890	GOO.1983A	Link, upper, radius rod, port	1	B

**RESTRICTED**



<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
Renewed attaching parts for GOO.1983A link				
26FC/690	GOO.51	Bolt, special, $\frac{3}{8}$ in. B.S.F.	1	C
28P/12462	SP9/C8	Pin, split, $\frac{1}{16}$ in. dia.	1	C
and				
26FC/11889	GOO.1971	Fitting, radius rod end, rear	1	B
26FC/11887	GOO.1973	Fitting, radius rod end, front, port	1	B
Renewed attached parts for GOO.1971 and GOO.1973 fittings.				
26FC/10062	GOO.1014	Nut, special	2	C
28D/12543	A25/6E	Bolt, $\frac{1}{4}$ in. B.S.F. $\times$ 1.1 in.	2	C
and				
26FC/11894	GOO.1999	Screw, special, switch contact	1	C
26FC/11886	GOO.1977	Bolt, special, hinge pick-up	4	C
28P/12462	SP9/C8	Pin, split, $\frac{1}{16}$ in. dia.	4	C
28W/12500	SP14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C
Spares affected:—				
26FC/10217	DOO.7611A/2	Wing Complete, Stbd.		
26FC/10444	DOO.7611A/3	Wing Complete, Stbd.		
The method for modifying any of the above spares is detailed in para. 8, operations (1) to (11) and on the drawing.				
Parts required for each spare:—				
26FC/11895	GOO.1975	Bracket, radius rod hinge pick-up	2	C
Attaching parts for GOO.1975 brackets				
26FC/—	GOO.2015A	Plate assy., nut	1	—
26FC/—	GOO.2017	Bolt, special, $\frac{5}{16}$ in. B.S.F.	2	—
28D/12774	A.25/4G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 0.95 in.	4	C
28D/12787	A.25/5G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 1.05 in.	4	C
28D/12819	A.25/12G	Bolt, $\frac{5}{16}$ in. B.S.F. $\times$ 1.75 in.	2	C
28M/13122	A27/GS	Nut, slotted, $\frac{5}{16}$ in. B.S.F.	10	C
28P/12462	SP9/C8	Pin, split, $\frac{1}{16}$ in. dia.	10	C
28W/12666	SP14/G	Washer, S.S., $\frac{5}{16}$ in. B.S.F.	22	C
and				
26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
Renewed attaching parts for GOO.1979A sleeve				
28Q/1991	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
and				
26FC/—	GOO.1998	Bracket, switch contact, stbd.	1	—
Attaching part for GOO.1998 bracket				
26FC/682	GOO.91	Screw, special, ch/hd.	1	C
and				
26FC/11891	GOO.1984A	Link, upper, radius rod, stbd.	1	B
Renewed attaching parts for GOO.1984A link				
26FC/690	GOO.51	Bolt, special, $\frac{3}{8}$ in. B.S.F.	1	C

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28P/12462 and	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	1	C
26FC/11889	GOO.1971	Fitting, radius rod end, rear	1	B
26FC/11888	GOO.1974	Fitting, radius rod end, front, stbd.	1	B

Renewed attaching parts for GOO.1971 and GOO.1974 fittings

26FC/10062	GOO.1014	Nut, special	2	C
28D/12543 and	A.25/6E	Bolt, $\frac{1}{4}$ in. B.S.F. $\times 1\frac{1}{2}$ in.	2	C
26FC/11894	GOO.1999	Screw, special, switch contact	1	C
26FC/11886	GOO.1977	Bolt, special, hinge pick-up	4	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	4	C
28W/12500	SP.14/J	Washer, S.S., $\frac{3}{8}$ in. B.S.F.	6	C

Spares affected:—

26FC/3856	GOO.1085A	Plate, Latch, Radius Rod, Port		
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The method for modifying the above spare is detailed in para. 8, operations (6) and (7).

Parts required:—

26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
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Renewed attaching parts for GOO.1979A sleeve

28Q/1991 and	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
26FC/—	GOO.1997	Bracket, switch contact, port	1	—

Attaching part for GOO.1997 bracket

26FC/682	GOO.91	Screw, special, ch/hd.	1	C
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Spares affected:—

26FC/3857	GOO.1086A	Plate, Latch, Radius Rod, Stbd.		
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The method for modifying the above spare is detailed in para. 8, operations (6) and (7).

Parts required:—

26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
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Renewed attaching parts for GOO.1979A sleeve

28Q/1991 and	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
26FC/—	GOO.1998	Bracket, switch contact, stbd.	1	—

Attaching part for GOO.1998 bracket

26FC/682	GOO.91	Screw, special ch/hd.	1	C
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Spare affected:—

26FC/4575	GOO.1094A/1	Rod, Radius, Main U/C, Port		
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**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/10391	GOO.1094A/2	Rod, Radius, Main U/C, Port		

The method for modifying, any of the above spares is detailed in para. 8, operations (5) to (10).

Parts required for each spare:—

26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
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Renewed attaching parts for GOO.1979A sleeve

28Q/1991	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
and 26FC/—	GOO.1997	Bracket, switch contact, port	1	—

Attaching part for GOO.1997 bracket

26FC/682	GOO.91	Screw, special, ch/hd.	1	C
and 26FC/11890	GOO.1983A	Link, upper, radius rod, port	1	B

Renewed attaching parts for GOO.1983A link

26FC/690	GOO.51	Bolt, special, $\frac{3}{8}$ in. B.S.F.	1	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	1	C
and 26FC/11889	GOO.1971	Fitting, radius rod end, rear	1	B
26FC/11887	GOO.1973	Fitting, radius rod end, front, port	1	B

Renewed attaching parts for GOO.1971 and GOO.1973 fittings

26FC/10062	GOO.1014	Nut, special	2	C
28D/12543	A.25/6E	Bolt, $\frac{1}{4}$ in. B.S.F. $\times 1.1$ in.	2	C
and 26FC/11894	GOO.1999	Screw, special, switch contact	1	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	1	C

Spare affected:—

26FC/4576	GOO.1095A/1	Rod, Radius, Main U/C, Stbd.		
26FC/10392	GOO.1095A/2	Rod, Radius, Main U/C, Stbd.		

The method for modifying any of the above spares is detailed in para. 8, operations (5) to (10).

26FC/11915	GOO.1979A	Sleeve, jack operating	1	C
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Renewed attaching parts for GOO.1979A sleeve

28Q/1991	AS.455/512	Rivet, M.S., sp/hd., $\frac{5}{32}$ in. dia.	2	C
and 26FC/—	GOO.1998	Bracket, switch contact, stbd.	1	—

Attaching part for GOO.1998 bracket

26FC/682	GOO.91	Screw, special, ch/hd.	1	C
and 26FC/11891	GOO.1984A	Link, upper, radius rod, stbd.	1	B

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
Renewed attaching parts for GOO.1984A link				
26FC/690	GOO.51	Bolt, special, $\frac{3}{8}$ in. B.S.F.	1	C
28P/12462	SP9/C8	Pin, split, $\frac{1}{8}$ in. dia.	1	C
and				
26FC/11889	GOO.1971	Fitting, radius rod end, rear	1	B
26FC/11888	GOO.1974	Fitting, radius rod end, front, stbd.	1	B

Renewed attaching parts for GOO.1971 and GOO.1974 fittings				
26FC/10062	GOO.1014	Nut, special	2	C
28D/12543	A25/6E	Bolt, $\frac{1}{4}$ in. B.S.F. $\times$ 1.1 in.	2	C
and				
26FC/11894	GOO.1999	Screw, special, switch contact	1	C
28P/12462	SP9/C8	Pin, split, $\frac{1}{8}$ in. dia.	1	C

Spare affected:—  
26FC/5655 GOO.1503 Shim, Radius Rod Hinge

The method for modifying the above spare is detailed in para. 8, operation (3). There are no parts required to modify the above spare.

Spare affected:—  
26FC/577 QOO.164 Bracket, Brake Hose

The method for modifying the above spare is detailed in para. 8, operation (4). There are no parts required to modify the above spare.

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/3856	GOO.1085A	Plate, latch, radius rod, port	GOO.1987A	26FC/11892
26FC/3857	GOO.1086A	Plate, latch, radius rod, stbd.	GOO.1988A	26FC/11893
*26FC/4575	GOO.1094A/1	Rod, radius, main U/C, port	GOO.1094A/3	26FC/11884
†26FC/10391	GOO.1094A/2			
*26FC/4576	GOO.1095A/1	Rod, radius, main U/C, stbd.	GOO.1095A/3	26FC/11885
†26FC/10392	GOO.1095A/2			
26FC/5655	GOO.1503	Shim, radius rod hinge	GOO.2009	26FC/12607
*26FC/—	GOO.1823A/ND	Jack and radius rod assy. port	GOO.1991A/ND	26FC/—
†26FC/—	GOO.1931A/ND			
*26FC/—	GOO.1824A/ND	Jack and radius rod assy. stbd.	GOO.1992A/ND	26FC/—
†26FC/—	GOO.1932A/ND			
26FC/577	QOO.164	Bracket, brake hose	QOO.3789	26FC/12606

RESTRICTED

Ref. No.	Old Part/Assy. No.	Nomenclature	New Part/Assy. No.	Ref. No.
†26FC/-	GOO.1101A/1	Retracting mechanism main U/C port	GOO.1101A/3	26FC/-
†26FC/-	GOO.1101A/2			
*26FC/-	GOO.1102A/1	Retracting mechanism, main U/C stbd.	GOO.1102A/3	26FC/-
†26FC/-	GOO.1102A/2			
*26FC/-	DOO.6527A/7	G.A. of wing, port	DOO.6527A/10	26FC/-
†26FC/-	DOO.6527A/8			
*26FC/ 10223	DOO.6715A/7	Wing complete (Spares) port	DOO.6715A/9	26FC/-
†26FC/ 10442	DOO.6715A/8			
*26FC/-	DOO.7539A/2	G.A. of wing, stbd.	DOO.7539A/5	26FC/-
†26FC/-	DOO.7539A/3			
*26FC/ 10217	DOO.7611A/2	Wing complete (Spares) stbd.	DOO.7611A/4	26FC/-
†26FC/ 10444	DOO.7611A/3			

Note:—\*Items Pre. Mod. No. Vampire/3306.

Note:—†Items Post Mod. No. Vampire/3306.

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations, and is applicable to both port and starboard mainplanes:—

(1) Remove the main undercarriage compression leg and the radius rod assembly as detailed in A.P.4099G, Vol. 1, Sect. 5. Retain all attachment items for reassembly except split pins and the four redundant radius rod special attachment bolts, Part No. GOO.726ND or GOO.1929 (Pre or Post Mod. No. Vampire 3306 respectively). Remove and retain the fuel balance pipe access panel and the bolts securing it to the undersurface of the wing, forward of the front undercarriage diaphragm.

(2) Remove the two redundant radius rod hinge pick-up brackets, Part No. GOO.79, from the undercarriage diaphragms and replace with two new hinge pick-up brackets, Part No. GOO.1975, coating all mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264). At the front diaphragm fit six  $\frac{5}{16}$  in. B.S.F. hexagon-head bolts, Part Nos. A.25/4G (four off) and A.25/12G (two off). At the rear diaphragm offer up the new nut plate assembly, Part No. GOO.2015A, on the rear face and fit four bolts, Part No. A.25/5G. All these bolts are to be positioned as shown on the drawing, secured with ten  $\frac{5}{16}$  in. B.S.F. slotted nuts and twenty washers, Part Nos. A.27/GS and SP.14/G respectively, drilled No. 51 (0.067 in. dia.) and locked with ten  $\frac{5}{16}$  in. dia. split pins, Part No. SP.9/C8. Fit two special  $\frac{5}{16}$  in. B.S.F. bolts and washers, Part Nos. GOO.2017 and SP.14/G respectively, to the centre holes of the hinge pick-up on the rear diaphragm and lock the bolts together through their heads with 22 s.w.g. nickel alloy wire (Ref. No. 30A/3055).

Note:—It is important that only one Part No. SP.14/G washer is fitted under each special bolt head to maintain clearance for the radius rod in its retracted position.

It is recommended all bolts are fitted prior to locking.

(3) Enlarge the holes in the existing radius rod hinge pick-up shims, Part No. GOO.1503 with a  $\frac{3}{4}$  (0.391 in.) dia. drill and deburr. The shims become Part No. GOO.2009.

**RESTRICTED**

(4) Enlarge the bolt hole in the existing brake hose mounting bracket, Part No. QOO.164, detached from the radius rod rear hinge special bolt in operation (1), again using the  $\frac{3}{8}$  in. dia. drill. Countersink the lower face of the bracket at this hole 90 deg.  $\times$  0.03 in. deep and deburr. The mounting bracket becomes Part No. QOO.3789.

(5) Refer to the drawing of the radius rod assembly in the aircraft handbook. Remove from the radius rod assembly, Part No. GOO.1094A/1 or GOO.1094A/2 (port); GOO.1095A/1 or GOO.1095A/2 (starboard) (Pre or Post Mod. No. Vampire 3306 respectively), the redundant rear end fitting attachment block, Part No. GOO.1055 or GOO.1937 (Pre or Post Mod. No. Vampire/3306) respectively, and the front end fitting attachment block, Part No. GOO.1057 or GOO.1939 (port); GOO.1056 or GOO.1940 (starboard) (Pre or Post Mod. No. Vampire/3306) respectively. Discard the burred over bolts and special nuts from the end fittings. Remove the latch plate assembly, disconnecting the lock roller and lock plate spring. Retain all items except the split pin for reassembly.

(6) From the latch plate assembly, Part No. GOO.1085A (port); GOO.1086A (starboard), remove and retain the Teleflex wrapped wheel and box and the three special attachment screws, disposing of the redundant micro-switch operating spigot, Part No. GOO.90. Using a  $\frac{5}{16}$  (0.156) in. dia. drill, carefully remove the two  $\frac{5}{16}$  in. dia. snaphead mild steel rivets. Replace the now redundant jack operating sleeve, Part No. GOO.43A, with a new sleeve, Part No. GOO.1979A. With the new sleeve lug set 12 deg. inboard from the latch plate centre line, drill off two rivet holes with the  $\frac{5}{16}$  in. dia. drill and four screw holes with a No. 11 (0.191 in. dia.) drill to suit the existing holes in the latch plate. Remove all burrs.

(7) Secure the new sleeve between the latch side plates with two  $\frac{5}{16}$  in. dia. snaphead mild steel rivets, Part No. AS.455/512. Resecure the Teleflex wrapped box and wheel with the three special screws retained in operation (6). Secure a new switch contact bracket, Part No. GOO.1997 (Port); GOO.1998 (starboard), at the position vacated by the spigot, with a new special screw, Part No. GOO.91. Lock all four special screws through their heads with 22 s.w.g. nickel alloy wire. The latch plate assembly becomes Part No. GOO.1987A (port); GOO.1988A (starboard).

(8) Thoroughly degrease the upper and the lower bearings of the existing lower link assembly, the new special upper pivot bolt, Part No. GOO.51, and the existing lower pivot bolt, Part No. GOO.53, using Trichlorethylene (Ref. No. 33C/547); and treat the bearing surfaces of the pivots and the bolts, by rubbing on Molybdenum, disulphide powder (Ref. No. 34B/9429867) with a felt pad, finally brushing on Molycote G compound (Ref. No. 34B/9428473) overall, leaving the threads of the bolts untreated. Lightly work the paired components together prior to assembly.

(9) Transfer all the radius rod components and equipment from the redundant upper link assembly, Part No. GOO.1002A (port); GOO.1001A (starboard), to the new upper link assembly, Part No. GOO.1983A (port); GOO.1984A (starboard), coating the components fed by grease nipples with grease XG-275 (Ref. No. 34B/9100512 and 34B/9100513). Renew the special bolt and split pin, Part Nos. GOO.51 and SP.9/C8, respectively on assembly of the existing lower link. Replace the redundant switch contact screw, Part No. GOO.357, with a new screw, Part No. GOO.1999. Renew all wire locking with 22 s.w.g. nickel alloy wire.

**RESTRICTED**

(10) Install the modified latch plate assembly, reconnect the lock spring and the lock roller, using a new split pin, Part No. SP9/C8, to lock the roller nut and bolt. Ensure that the existing washers are reassembled in their original positions on the bearer tube. Secure the new rear end fitting, Part No. GOO.1971, and the front end fitting, Part No. GOO.1973 (port); GOO.1974 (starboard) to the bearer tube with two renewed special nuts and  $\frac{1}{4}$  in. B.S.F. bolts, Part No. GOO.1014 and A25/6E respectively. Cut the bolts to leave two threads protruding through the special nuts. Do not peen until final assembly to mainplane. The radius rod assembly is to be adjusted in accordance with the aircraft handbook and becomes Part No. GOO.1094A/3 (port); GOO.1095A/3 (starboard).

(11) Reassemble the main undercarriage compression leg and the modified radius rod assembly as detailed in the aircraft handbook, using the attachment items retained in operation (1) and three new  $\frac{1}{16}$  in. dia. split pins, Part No. SP9/C8. Attach the modified radius rod assembly to the hinge pick-up on the diaphragms with four new special  $\frac{3}{8}$  in. B.S.F. bolts, Part No. GOO.1977, positioning the modified brake hose mounting bracket under the head of the rear inboard bolt and two washers, Part No. SP14/J, under the head of each of the other three bolts. Lock each pair of bolts with 22 s.w.g. nickel-alloy wire. Resecure the access panel with its bolts retained in operation (1).

*Note:*—To correct cases where the bottom eye end of the radius rod assembly fails to centralise with the pick-up casting on the compression leg, fit modified shims as required between the hinge pick-up on the diaphragm and the radius rod end fitting on one side only.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected in accordance with current procedure, the following tests are to be carried out:—

Carry out a retraction test of the main undercarriage in accordance with current authorized 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 as scrap in accordance with Air Ministry Salvage Leaflets:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/—	GOO.43A	Sleeve, jack operating	2	—
26FC/228	GOO.79	Bracket, radius rod hinge pick-up	4	C
26FC/683	GOO.90	Spigot, switch contact	2	C
26FC/694	GOO.357	Screw, switch contact	2	C
*26FC/—	GOO.726ND	Bolt, special, hinge pick-up	8	—
26FC/3854	GOO.1001A	Link, upper, radius rod, stbd.	1	B
26FC/3855	GOO.1002A	Link, upper, radius rod, port	1	B

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
*26FC/3860	GOO.1055	Fitting, radius rod end, rear	2	B
*26FC/3858	GOO.1056	Fitting, radius rod end, front, stbd.	1	B
*26FC/3859	GOO.1057	Fitting, radius rod end, front, port	1	B
†26FC/11131	GOO.1929	Bolt, special, hinge pick-up	8	C
†26FC/11132	GOO.1937	Fitting, radius rod end, rear	2	B
†26FC/11133	GOO.1939	Fitting, radius rod end, front, port	1	B
†26FC/11134	GOO.1940	Fitting, radius rod end, front, stbd.	1	B

Note:—\*Items Pre Mod. No. Vampire/3306.

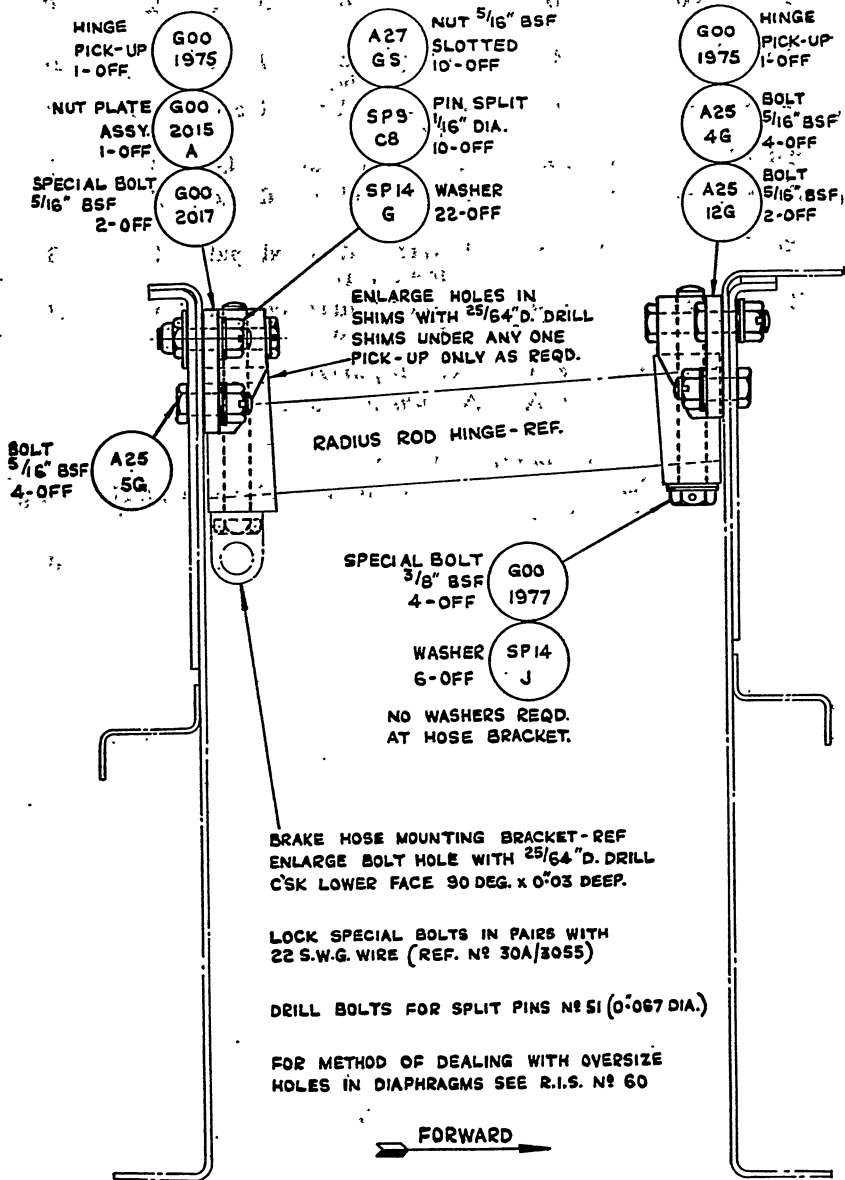
Note:—†Items Post Mod. No. Vampire/3306.

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

This modification causes a weight change of +0.34 lb., and a change of moment of +1.0 lb. ft.

P.T.O.





**STRENGTHENED ATTACHMENT FITTINGS AT U/C DIAPHRAGMS (PORT DRAWN)**

**RESTRICTED**

**Drg. No. A.P.4099G/B.16/57**

# Section C 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.						
C 1										
C 2										
C 3										
C 4										
C 5										
C 6										
C 7										
C 8										
C 9										
C 10										
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C 22										
C 23										
C 24										
C 25										
C 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.						
C 27										
C 28										
C 29										
C 30										
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C 48										
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C 50										
C 51										
C 52										
C 53										
C 54										
C 55										
C 56										

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

A.L. No. 2 (Wing bomb fairings improved)

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

**Vampire F.B. Mk. 9 Aircraft—Wing Bomb Fairings—(Stores Ref. 11A/3539 & 3540)—Improvements**

(MOD. NO. VAMPIRE/949.)

(Class B/2 to Wing Bomb Fairings Mod. No. 387 & 811.)

(7/Mods/13,017.—22.8.51.)

1. This modification makes various minor alterations to the wing bomb fairing assemblies to improve the fit of the fairings on assembly to the wings and to improve the interchangeability between carriers (Stores Ref. 11A/3206) and fairings.

2. The work will take approximately 5 man-hours per fairing.

3. The items are in column 9 of the Airframe Appendix "A".

4. This modification, *which is only to be embodied when found necessary*, is to be carried out by user units employing Vampire F.B. Mk. 9 aircraft in the ground attack role.

5. The following is the sequence of operations, which apply to both inbound and outboard sides of both wing bomb carrier assemblies:—

(Refer to Drg. No. A.P.4099G/C.1/51.)

(1) Remove wing bomb carrier and fairing assembly from wing (if fitted).

(2) Refer to the drawing at "Section B-B", carefully drill out the rivets securing rubber beading retaining strips, using No. 32 (0.1160 in. dia.) drill along top edge of both access doors. Discard existing rubber beading and replace by similar lengths of  $\frac{1}{4}$  in. thick  $\times 0.9$  in. wide sorbo rubber, as shown in the drawing. Put back existing retaining strips and secure, using new rivets, Part No. AS.2230/403, which are to pick up on existing rivet holes and must lie flush on the top surface. Fit oversize rivets if existing holes are elongated.

(3) Refer to "Section A-A" in the drawing and modify the two Dzus fastener housings on each of these access doors as follows:—

(a) Carefully drill out the six rivets which secure existing packing plate, using No. 44 (0.0860 in. dia.) drill, and temporarily remove plate.

(b) File back dimpled flange around hole in packing plate to ensure a flush surface on re-assembly.

(c) Re-secure packing, using six new rivets, Part No. AS.2229/305, which must be flush on both surfaces.

(4) Unbolt and remove front portion of fairing from main assembly and modify as follows:—

(a) Refer to detail "D" in the drawing and make up reinforcing plate from 20 s.w.g. Alclad plate, to Specification D.T.D.610, to the details quoted, to pick up on existing rivet holes indicated.

(b) Drill out these existing rivets and secure new plate in position, using new rivets, Part No. AS.2229/405. The rivet heads must be flush on both surfaces.

(c) Carefully produce the slotted hole (which *must* be equi-distant about the same centre as the existing  $\frac{1}{4}$  in. clearance hole) to dimensions quoted.

(d) Protect modified area with one coat of primer and one coat of cellulose enamel to Specification D.T.D.63.

**RESTRICTED**

(e) Re-assemble front portion to main assembly, using two new mushroom-headed bolts, Part No. AS.1885/2E, at these positions to replace existing countersunk-headed bolts.

(5) Unbolt and remove rear portion of fairing from main assembly and modify in a similar manner to that described in operation (4), making reference to detail "E" in the drawing.

(6) Offer up modified assembly to wing and check the following points:—

(a) Ensure that top edge of both access doors does not make contact with the wing profile. If necessary, file back top edge of the doors to provide clearance, thus leaving the *sorbo rubber* only in contact with the wing skin.

(b) Check that the rubber beading on rear portion of fairing is not putting undue pressure on the fairing, due to its being too tight a fit to the wing profile. If necessary, refer to "Section C-C" in the drawing, and carefully drill out rivets securing rubber beading retaining strip on rear portion of fairing only, using No. 32 (0.1160 in. dia.) drill. Remove and discard existing rubber beading and replace by similar lengths of new rubber beading, Section J.308, which are to be mitred at their junction at rear end of fairing. Put back existing retaining strips and secure; using new rivets, Part No. TK3/CNA, which pick up existing holes. Fit oversize rivets if existing holes are elongated.

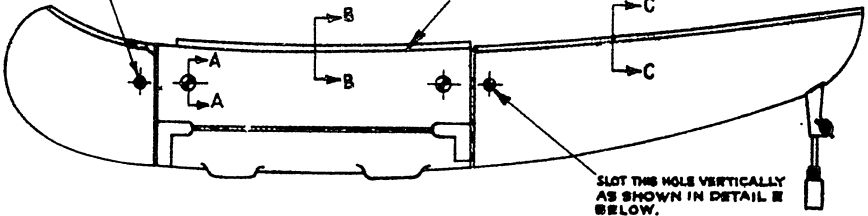
6. The following items comprise the modification set (Stores Ref. 11A/3697—Sets, modification, for 11A/3539–3540). These sets are being issued under arrangements between concerned Commands and Air Ministry (E.6):—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>
<i>Contractors Supply Items</i>			
11A/3695	J.308	Rubber beading, Section 'P', 10 ft. long	1
11A/3696	—	Rubber, sorbo, $\frac{1}{8}$ in. thick $\times$ 0.9 in. wide $\times$ 5 ft. long	1
28Q/6676	AS.2229/305	Rivet	24
28Q/6679	AS.2229/405	Rivet	30
28Q/6651	TK3/CNA	Rivet, Chobert	80
28D/5979	AS.1885/2E	Bolt, mrm/hd.	8
28Q/10680	AS.2230/403	Rivet	30
<i>Material to be found on Site</i>			
—	—	Sheet, Alclad, Spec. D.T.D.610, 6.0 in. $\times$ 6.0 in.	1
—	—	Primer and cellulose enamel to Spec. D.T.D.63	As reqd.

**RESTRICTED**

SLOT THIS HOLE VERTICALLY AS SHOWN IN DETAIL D BELOW

ON ASSEMBLY TO WING FILE BACK THE TOP EDGE OF DOOR AS NECESSARY TO CLEAR WING PROFILE THUS LEAVING SOROS ONLY IN CONTACT WITH WING SURFACE AS SHOWN.

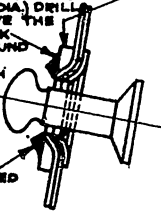


### SIDE VIEW ON BOMB CARRIER FAIRINGS SHOWING LOCATION OF MODIFICATION.

AS  
2229  
305

RIVET. FLUSH ON BOTH SURFACES. PICK UP ON EXISTING HOLES

CAREFULLY DRILL OUT THE RIVETS USING A #44 (.0860 INCH DIA) DRILL AND TEMPORARILY REMOVE THE PACKING PLATE. FILE BACK THE DIMPLED FLANGE AROUND THE HOLE IN THE PACKING PLATE TO ENSURE A FLUSH SURFACE ON RE-ASSEMBLY. RE-SECURE USING NEW RIVETS AS QUOTED ABOVE.

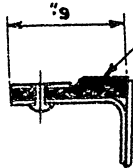
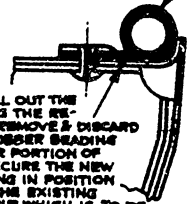


J  
308

TK 3  
CNA

AS REQUIRED FLUSH ON TOP.

RUBBER SEADING LENGTH TO SUIT.



FILE AWAY HATCHED AREA.

### SECTION A-A.

### SECTION B-B.

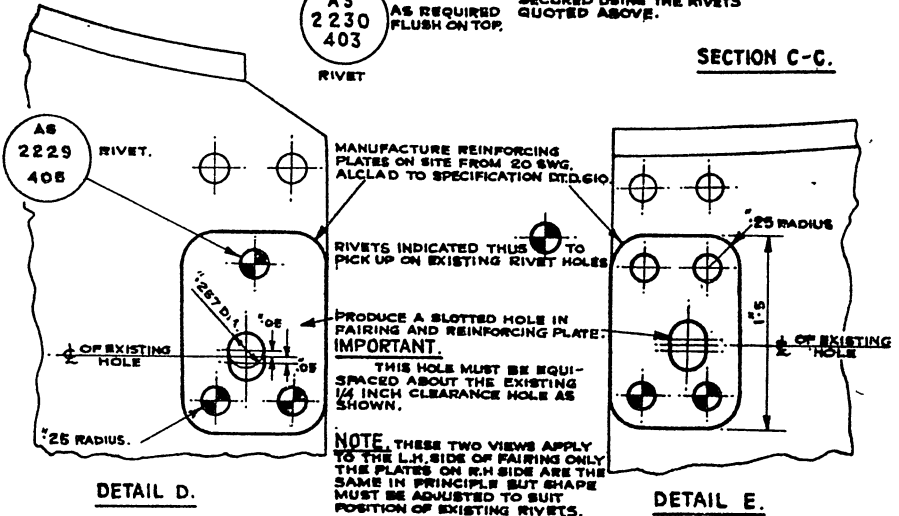
CAREFULLY DRILL OUT THE RIVETS SECURING THE RETAINING STRIP. REMOVE & DISCARD THE EXISTING RUBBER SEADING FROM ALONG THE TOP EDGE OF THE DOOR. REPLACE BY A SIMILAR LENGTH OF 1/8 INCH THICK 3080 RUBBER RE-SECURE THE EXISTING RETAINING STRIP USING -

AS  
2230  
403

AS REQUIRED FLUSH ON TOP.

RIVET

### SECTION C-C.



AS  
2229  
405

### DETAIL D.

MANUFACTURE REINFORCING PLATES ON SITE FROM 20 SWG. ALCLAD TO SPECIFICATION STD. 610.

RIVETS INDICATED THUS TO PICK UP ON EXISTING RIVET HOLES

PRODUCE A SLOTTED HOLE IN FAIRING AND REINFORCING PLATE. IMPORTANT.

THIS HOLE MUST BE EQUI-SPACED ABOUT THE EXISTING 1/4 INCH CLEARANCE HOLE AS SHOWN.

NOTE. THESE TWO VIEWS APPLY TO THE L.H. SIDE OF FAIRING ONLY. THE PLATES ON R.H. SIDE ARE THE SAME IN PRINCIPLE BUT SHAPE MUST BE ADJUSTED TO SUIT POSITION OF EXISTING RIVETS.

### DETAIL E.

RESTRICTED

DRG. NO A.P.4099 C / C.1 / 51

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Handwritten mark on the right side.



A.L. No. 6  
(Bomb/drop tank release)

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

Vampire F.B. Mk. 9 Aircraft—Guard to Jettison Bomb/Drop Tank  
Release Mechanism and Re-rig Controls in Wing to prevent inadvertent  
Release of Stores—Introduction

(MOD. NO. VAMPIRE/973.)

(Class B/2.)

(7/Mods/13,206.—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. 47, 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**

(43222/114) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)





A.L. No. 23

(Ammunition door lock)

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

Leaflet No. C.3

(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—Improved Spring for Ammunition Door  
Lock—Introduction (Introduced by Mod. No. Vampire/926)**

(MOD. NO. VAMPIRE/3085.)

(Class B/2.)

(7/Mods/15,200.—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 124) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



ALN<sup>c</sup>203  
(Cannon heater pipe)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. C.4  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Re-designed Cannon Heater Pipe—  
Introduction

(7/Mods/17,517.—20.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. C.4 (Mod. No. Vampire/3187), is amended as follows:—

(1) Heading, Class. *Delete* "(Class C/3.)" and *substitute* "(Class C/3 when old type spares are consumed)".

(2) Para. 2. *Delete* in toto and *substitute*:

"2. EMBODIMENT

This modification is to be embodied when the new type spares are issued as replacements."

**R**

**RESTRICTED**

(48614/348) 229727 8245 625 2/58 (H.P.W.) (Gp. 19/1)



**Vampire F.B. Mk. 9 Aircraft—Re-designed Cannon Heater Pipe—  
Introduction**

(MOD. NO. VAMPIRE/3187.)

(Class C/3.)

(7/Mods/17,517.—20.1.53.)

1. This modification results from the requirement for a cannon heater pipe that will clear the pacitor unit on the fuselage fuel tank, whilst maintaining, at the same time, the necessary clearance with the belt feed mechanism during re-arming operations. This modification is applicable only on aircraft embodying Mod. No. Vampire/568. The work will take approximately 5 man-hours.

2. *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/C.4/53.)

(1) Remove gun bay doors and starboard, outboard, cannon.

(2) Locate existing starboard cannon heater pipe, Part No. R00240A (ref. only), which runs between bulkhead No. 2 and the fireproof bulkhead. Disconnect the bonding clip and flex from the pipe, and, after loosening off the two jubilee clips and unscrewing the two attachment brackets, remove heater pipe from the aircraft. Retain the two jubilee clips, together with attachment bracket, Part No. R00246 (ref. only), for future re-assembly.

(3) Unscrew the jubilee clip holding the filter to the now redundant bracket assembly, Part No. R001431A (ref. only), and then remove bracket from its mounting. Now offer up new pipe clamp assembly, Part No. R002571A, and fix it firmly in position, with the filter 'seating' uppermost, using two bolts and nuts, Part No. 6A1/7C and A.G.S.2001/C1, respectively, as detailed in the drawing. Finally, re-seat the filter on the bracket and tighten up the jubilee clip.

(4) Offer up new heater pipe, Part No. R002577A, to its correct location, as shown in the drawing, and secure it firmly in position, using attachment bracket and two jubilee clips removed in operation (2), and new pipe clamp assembled in operation (3). Re-attach bonding clip, together with the bonding flex, to the pipe, and bind the pipe with asbestos twine at the points where it is likely to come in contact with the electrical cables.

(5) Re-assemble starboard cannon and the gun bay doors, removed in operation (1).

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/103187). 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/6562	R002571A	Pipe clamp assy.	1	C
26FC/6561	R002577A	Pipe, cannon heater	1	C
28D/7014	6A1/7C	Bolt	2	C
28M/10288	A.G.S.2001/C	Nut	2	C

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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>
32B/862	Twine, asbestos	As reqd.	C

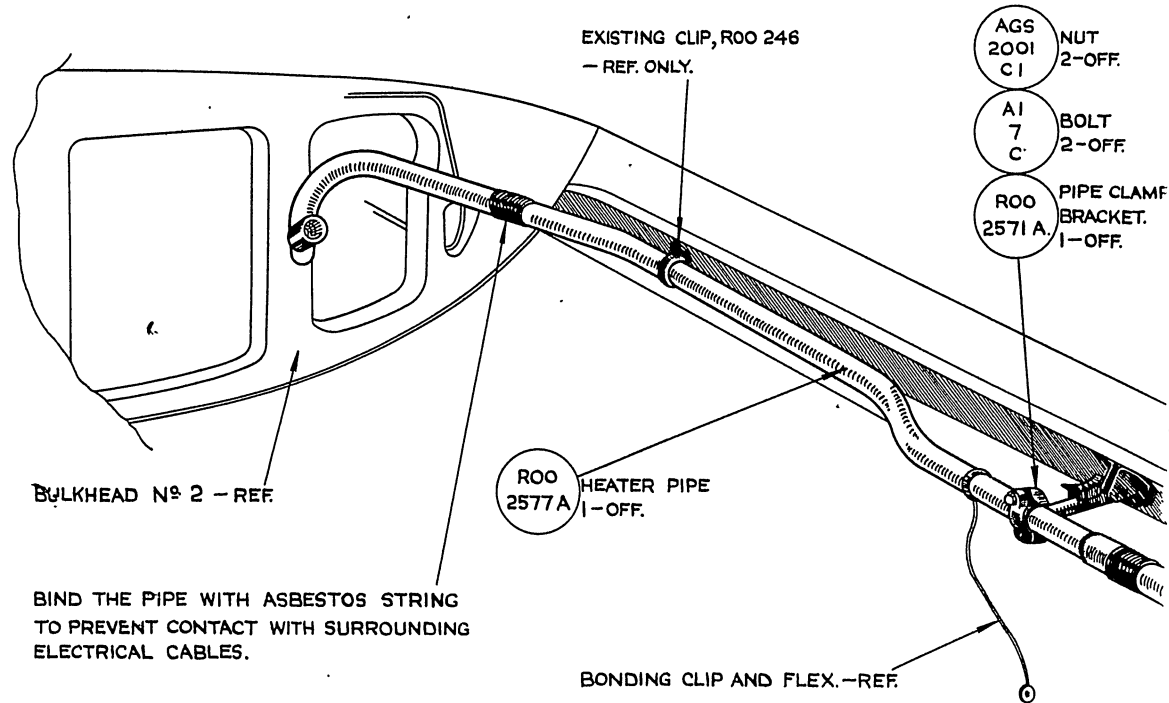
6. The following items are rendered redundant and are to be disposed of in accordance with Air Publication 3045:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/1699	R00240A	Pipe, cannon heater	1	C
26FC/-	R001431A	Bracket assy.	1	C

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DRG. NO. A.P.4099G/C.4/53

LP25998 1/53 300 C&P Gp. 959 (4)







A.L. No. 101  
(Cannon mounting)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. C.5  
(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—Anchor Nuts on Forward Flange of  
Cannon Front Inner Mounting Casting—Introduction**

(MOD. NO. VAMPIRE/3283.)

(Class C/3.)

(7/Mods/20,723.—4.7.56.)

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.



**RESTRICTED**

(45540/766) 129951 8245 125 8/56 (H.P.W.) (Gp. 19/1)



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

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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-44966/BJ639 6m. 9/54 W.H.&S. 670/63

**Vampire F.B. Mk. 9 Aircraft—Rudder Pedal Tension Spring—Improved  
method of Attachment—Introduction**

(Mod. No. VAMPIRE/983.)

(Class C/3.)

(7/Mods/13,865.—28.11.51.)

1. As at present secured, the tang ends of the rudder pedal tension springs protrude through to the inboard faces of the sliding links. As cases have been reported of these tangs fouling the pilot's feet, this modification introduces a new anchorage on the outer face of each link.

2. This modification is to be embodied by:—

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

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

*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/D.1/51.)

(1) Remove blind flying instrument panel in accordance with current authorized procedure.

(2) Remove upper tang of the spring from R.H. outer link plate shown in the drawing.

(3) Insert new splitpin, Part No. SP.9/E8, into the plate, bend its legs over as shown in the drawing, and then secure spring tang in the pin eyelet. If the pin cannot be inserted, the upper link retaining bolt may be removed to facilitate this. Ensure that on replacement, the nut is locked with a new splitpin.

(4) Modify R.H. inner and two L.H. spring anchorages similarly.

(5) Check sliding links for correct operation.

(6) Replace blind flying panel in accordance with current authorized procedure.

4. The following part is required for the embodiment of this modification, and is 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>
28P/12351	SP.9/E8	Pin, split	4	C

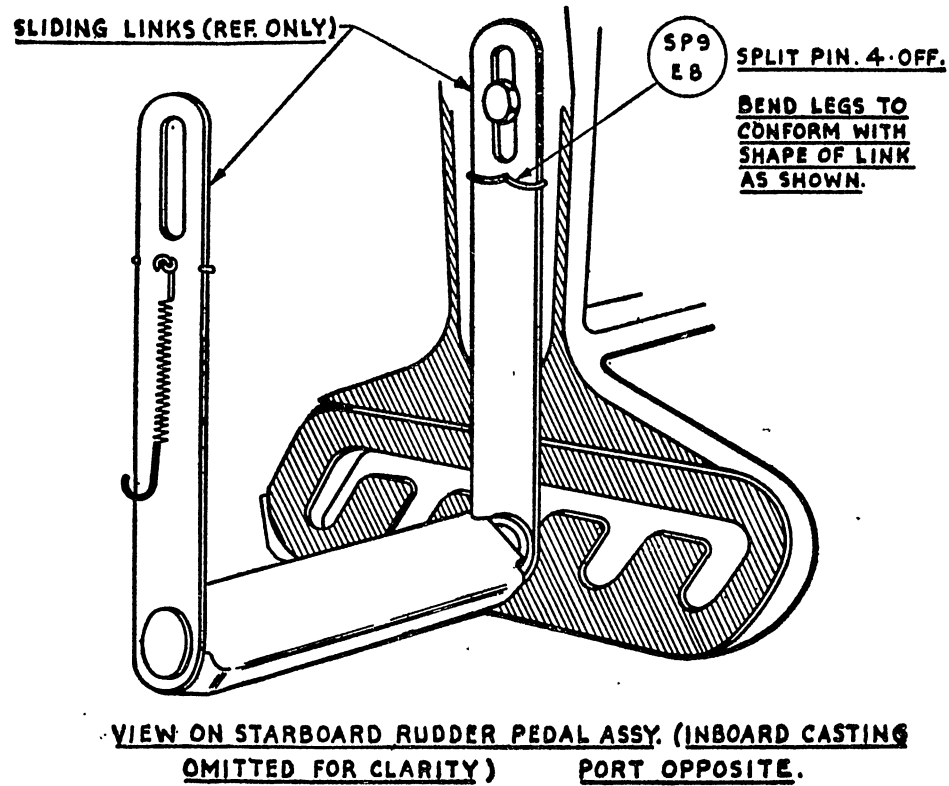
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DRG. NO A.F.4099 G / D.1 / 51



A.L. No. 28 (Rudder controls)

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

**Vampire F.B. Mk. 9 Aircraft—Rudder Pedal Tension Spring—Improved  
method of Attachment—Introduction**

(7/Mods/13,865.—29.2.52.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. D.1 (Mod. No. Vampire/983), is amended as follows:—

(1) Para. 1. *Add* to end of paragraph

“This modification supersedes S.T.I./Vampire/43A. The work will take approximately 3 man-hours.”

(2) DRG. NO. A.P.4099G/D.1/51. *Delete and substitute* “DRG. NO. A.P.4099G/D.1/52. DATED 29.2.52”.

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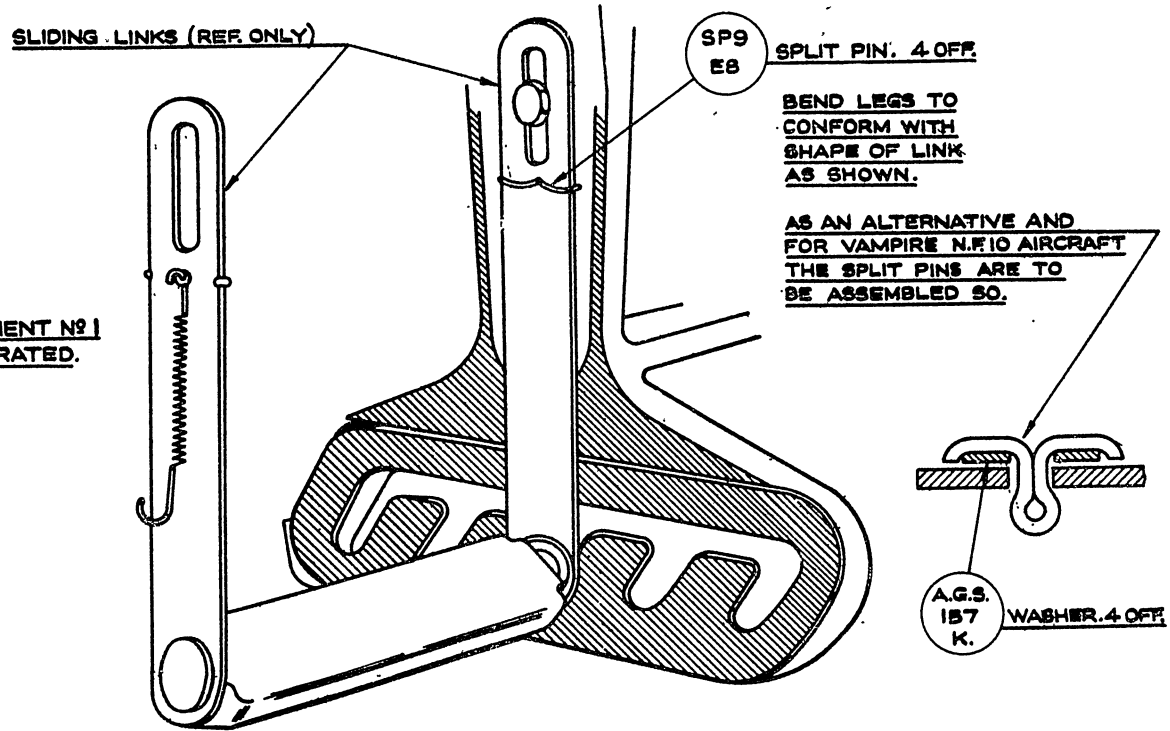




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DRG. NO. A.P. 4099C / D.1 / 52  
DATED. 29.2.52.

AMENDMENT NO. 1  
INCORPORATED.



VIEW ON STARBOARD RUDDER PEDAL ASSY. (INBOARD CASTING  
OMITTED FOR CLARITY) PORT OPPOSITE.

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

(Elevator control rod)

Leaflet No. D.2

# Vampire F.B. Mk. 9 Aircraft—Flying Controls—Re-designed Fork End on Elevator Control Rod—Introduction

(Mod. No. VAMPIRE/3343.)

(Class B/2.)

(AB/A/1181.—17.11.54.)

## 1. INTRODUCTION

It has been found that, with the elevator in the extreme 'up' position, fouls have been experienced between the fork end and lever, resulting in bending of the fork end. This modification introduces a redesigned fork end giving additional clearance.

## 2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity (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:* Before issue of aircraft

## 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 7 man-hours (2 to strip; 4 to embody; 1 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 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/103343). 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
26DV/7654	12.2CF.225	Fork end	2	C
28P/12462	SP.9/C.8	Pin, split	2	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
30A/3055	—	Wire, locking, nickel alloy 22 s.w.g.	As reqd.	C
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:—

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Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/—	JOO.1007A/2	Fin and boom, port	1	A
26FC/3130	JOO.1008A	Fin and boom, stbd.	1	A
26FC/3271	KOO.379A	Rod elevator control strut	1	C
26DV/7654	12.2CF.225	Fork end	2	C

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry (E2).

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

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

Stores Ref.	Part No.	Nomenclature	NEW	Stores Ref.
26FC/—	JOO.1007A/2	Fin and tail boom assy., port	JOO.1007A/3	26FC/10401
26FC/3130	JOO.1008A	Fin and tail boom assy., stbd.	JOO.1008A/1	26FC/10402
26FC/3271	KOO.379A	Elevator control strut	KOO.379A/1	26FC/10403

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Locate the two rear access panels on the outboard side of the tail booms, and remove them from both the port and starboard sides of the aircraft. Retain the panels and attachment screws for re-assembly.

(2) Withdraw the split pin, nut and bolt, at the bottom connection of the elevator control strut assemblies, Part No. KOO.379A (ref. only). Break and remove the locking wire securing the lock nut and release the lock nut, unscrew and remove the now redundant fork end, Part No. KOO.384 (ref. only) from the control struts. Retain the lock nuts.

(3) Insert the new fork ends, Part No. 12.2CF.225, into the control struts using the retained lock nuts. The elevator control struts now become, Part No. KOO.379A/1 (ref. only).

(4) Set the elevator control and when the fork ends have been correctly positioned by rotation replace the bolts and nuts. Fit two new split pins, Part No. SP.9/C8. Tighten the lock nuts and wire lock, using 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055).

(5) Apply pigmented varnish jointing compound (Stores Ref. 33C/1264) to the access panels and replace and secure them by means of the retained attachment screws.

## 9. TESTING AFTER EMBODIMENT

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

Check the setting of the elevator control, as performed in operation (4), 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 in accordance with current authorised procedure.

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/3272	KOO.384	Fork end	2	C

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

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

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Vampire F.B. Mk. 9 Aircraft—Flying Controls—Re-designed Fork End  
on Elevator Control Rod—Introduction

(AB/A/1181.—24.3.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. D.2 (Mod. No. Vampire/3343), is amended as follows:—

(1) Para. 5, sub-para. (1), section (b). "Items to be provided under Unit arrangements". Add in sequence:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
"28D/13360	A30/7E	Bolt, $\frac{1}{4}$ in. dia., B.S.F.	2	C"

(2) Para. 6. Under Parts required for JOO 1007A/2 immediately following "12.2CF225 Fork end 2". Add in sequence:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
"28D/13360	A30/7E	Bolt, $\frac{1}{4}$ in. dia., B.S.F.	2	C"

(3) Para. 8, operation (4). Delete and substitute new operation (4):

"(4) Set the elevator control in accordance with current authorised procedure, and when the fork ends have been correctly positioned by rotation, insert new bolts, Part No. A.30/7E, and fit the retained nuts. Mark the position for drilling the split pin holes. Drill the split pin holes using a No. 52 (0.063 in. dia.) drill. On final assembly fit two new split pins, Part No. SP9/C8. Tighten the locknuts and wire lock using 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055)."

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A.L.N. 105  
.....  
(Improved u/c door lock control)  
(A.L. No. 179 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. D.4  
(Leaflet No. D.3 cancelled)

**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce Improved Undercarriage Door Lock Control**

(MOD. NO. VAMPIRE/3437.)

(Class B/2.)

(AB/A/3749.—11.2.57.)

*Note:—The substance of this leaflet supersedes, and is the authority for cancelling A.P.4099G, Vol. 2, Part 1, Leaflet No. D.3 (A.L. No. 179).*

**1. INTRODUCTION**

This modification introduces an improved undercarriage door lock control to obviate mal-adjustment and prevent the seizure and breaking of the Teleflex control. At the same time improved adjustments and ground servicing are also incorporated.

(1) This modification supersedes the work called for by Mod. No. Vampire/3336 (Main undercarriage—to introduce modified Teleflex clamp block and connector locking slates).

(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 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 25 man-hours (4 to Strip; 15 to Embody; 6 to Re-assemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/D.4/57, Sheets 1–4, is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

**(1) Parts and Materials**

(a) The Modification Kit, consists of the following items supplied by the contractor, will be assembled by No. 35 Maintenance Unit under Ref. No. 26FC/103437:

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/—	15-U.13	Barrel forward	2	—
26FC/—	15-U.15	Barrel aft	2	—
26FC/—	15-Z.1805ND	Plate adaptor	4	—
27K/1368	E.43281	Control unit Teleflex	1	C
27K/1369	E.43282	Control unit Teleflex	1	C
27K/1370	E.43321	Control unit Teleflex	1	C
27K/1371	E.43322	Control unit Teleflex	1	C
28D/12533	A.25/5C	Bolt 2 B.A. hex/hd.	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>
28D/12566	A.25/6C	Bolt 2 B.A. hex/hd.	2	C
28D/12514	A.25/7C	Bolt 2 B.A. hex/hd.	2	C
28M/10287	AGS.2001/B1	Nut stiff 4 B.A.	32	C
28M/10288	AGS.2001/C1	Nut stiff 2 B.A.	14	C
28D/8300	AS.1242/1B	Bolt 4 B.A.	32	C
28D/11255	AS.1246/2C	Bolt 2 B.A. rd./hd.	36	C
28D/11210	AS.1246/3C	Bolt 2 B.A. rd./hd.	4	C
28Q/7556	AS.2227/604	Rivet $\frac{3}{16}$ in. dia.	4	C
28E/14053	AS.3180/6C	Clip 'P'	4	C
28P/12462	SP.9/C8	Pin split $\frac{1}{16}$ in. dia.	4	C
28W/12306	SP.15/B	Washer 4 B.A.	32	C
28W/12296	SP.15/C	Washer 2 B.A.	14	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) 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>
28D/8509	AS.1242/14C	Bolt, steel, csk. 90 deg. 2 B.A.	8	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	4	C
28Q/6826	AS.460/210	Rivet, steel, csk., 90 deg., $\frac{1}{16}$ in. dia. (cut to suit)	4	C
30A/3055	—	Wire, locking, nickel alloy, 22 s.w.g.	As reqd.	C
30B/462	—	Brass foil hard, 0.005 in. thick	As reqd.	C
33B/534	—	Stopper, oil base	As reqd.	C
33B/1021	—	Primer etch base	As reqd.	C
33B/1023	—	Primer etch accelerator	As reqd.	C
33B/1060 (Home)	}	Finish high gloss aluminium	As reqd.	C
33B/865 (Overseas)		D.T.D.772		
33B/1074 (Home)	}	Finish high gloss yellow	As reqd.	C
33B/985 (Overseas)		D.T.D.772		
33C/1264	—	Compound pigmented varnish jointing	As reqd.	C
34B/100513	—	Grease XG.-275, Spec. D.T.D.825A	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**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/11985	DOO.6715A/11	Wing complete port		

The method for modifying the above spare is detailed in Para. 8, operations (1) to (26) and Sheets 1 to 4 of the drawing.

Parts required for each spare:

26FC/-	15-U.13	Barrel forward	1	—
26FC/-	15-U.15	Barrel aft	1	—

Attaching parts for 15-U.13 barrel forward, 15-U.15 barrel aft:

28D/11255	AS.1246/2C	Bolt 2 B.A. rd./hd.	18	C
28D/11210	AS.1246/3C	Bolt 2 B.A. rd./hd.	2	C
and				
26FC/-	15-Z.1805ND	Plate adaptor	2	—

Attaching parts for 15-Z.1805ND plate adaptors

28M/10287	AGS.2001/B1	Nut 4 B.A.	16	C
28D/8300	AS.1242/1B	Bolt 4 B.A. countersunk	16	C
28W/12306	SP.15/B	Washer 4 B.A.	16	C
and				
27K/1370	E.43321	Control unit Teleflex aft	1	C

Attaching parts for E.43321, Control Unit Teleflex aft

28D/12514	A.25/7C	Bolt 2 B.A. hex./hd.	1	C
28D/8509	AS.1242/14C	Bolt 2 B.A. csk./hd.	2	C
28E/14053	AS.3180/6C	Clip 'P'	1	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	3	C
28W/12296	SP.15/C	Washer 2 B.A.	3	C
and				
27K/1371	E.43322	Control unit Teleflex forward	1	C

Attaching parts for E.43322 Control unit Teleflex forward.

28D/12566	A.25/6C	Bolt 2 B.A. hex./hd.	1	C
28D/8509	AS.1242/14C	Bolt 2 B.A. csk./hd.	2	C
28E/14053	AS.3180/6C	Clip 'P'	1	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	3	C
28W/12296	SP.15/C	Washer 2 B.A.	3	C
and				
28D/12533	A.25/5C	Bolt 2 B.A. hex./hd.	1	C
28Q/6826	AS.460/210	Rivet, $\frac{1}{16}$ in. dia., 90 deg. csk./hd. (cut to suit)	2	C
28Q/7556	AS.2227/604	Rivet $\frac{3}{16}$ in. dia.	2	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	1	C
28P/12462	SP.9/C8	Pin split $\frac{1}{16}$ in. dia.	4	C
28W/12296	SP.15/C	Washer 2 B.A.	1	C

Spare affected:

26FC/11984	DOO.7611A/6	Wing complete stbd.		
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The method for modifying the above spare is detailed in Para. 8, operations (1) to (26) and Sheets 1 to 4 of the drawing.

Parts required for each spare:

26FC/-	15-U.13	Barrel forward	1	—
26FC/-	15-U.15	Barrel aft	1	—

Attaching parts for 15-U.13 barrel forward, and 15-U.15 barrel aft.

28D/11255	AS.1246/2C	Bolt 2 B.A. rd./hd.	18	C
28D/11210	AS.1246/3C	Bolt 2 B.A. rd./hd.	2	C
and				
26FC/-	15-Z.1805ND	Plate adaptor	2	—

**RESTRICTED**

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
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Attaching parts for 15-Z.1805ND Plate Adaptors:—

28M/10287	AGS.2001/B1	Nut 4 B.A.	16	C
28D/8300	AS.1242/1B	Bolt 4 B.A. countersunk	16	C
28W/12306	SP.15/B	Washer 4 B.A.	16	C
and				
27K/1368	E.43281	Control unit, Teleflex aft	1	C

Attaching parts for E.43281, Control unit, Teleflex aft:

28D/12514	A.25/7C	Bolt 2 B.A. hex./hd.	1	C
28D/8509	AS.1242/14C	Bolt 2 B.A. csk./hd.	2	C
28E/14053	AS.3180/6C	Clip 'P'	1	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	3	C
28W/12296	SP.15/C	Washer 2 B.A.	3	C
and				
27K/1369	E.43282	Control unit Teleflex forward	1	C

Attaching parts for E.43282 Control unit, Teleflex forward:

28D/12566	A.25/6C	Bolt 2 B.A. hex./hd.	1	C
28D/8509	AS.1242/14C	Bolt 2 B.A. csk./hd.	2	C
28E/14053	AS.3180/6C	Clip 'P'	1	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	3	C
28W/12296	SP.15/C	Washer 2 B.A.	3	C
and				
28D/12533	A.25/5C	Bolt 2 B.A. hex./hd.	1	C
28Q/6826	AS.460/210	Rivet $\frac{1}{16}$ in. dia. 90 deg. csk./hd. (cut to suit)	2	C
28Q/7556	AS.2227/604	Rivet $\frac{3}{16}$ in. dia.	2	C
28M/10288	AGS.2001/C1	Nut 2 B.A.	1	C
28P/12462	SP.9/C8	Pin split $\frac{1}{16}$ in. dia.	4	C
28W/12296	SP.15/C	Washer 2 B.A.	1	C

Spares affected:

26FC/11884	GOO.1094A/3	Radius rod assembly port
26FC/11885	GOO.1095A/3	Radius rod assembly stbd.
26FC/11892	GOO.1987A	Latch plate assembly port
26FC/11893	GOO.1988A	Latch plate assembly stbd.

The method for modifying any of the above spares is detailed in Para. 8, operation (4).

There are no parts required for the modification of the above spares.

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 Nos., as follows:

Ref. No.	Old Pt./Assy. No.	Nomenclature	New Pt./Assy. No.	Ref. No.
26FC/-	DOO.1807ND	Plate reinforcing	15-U.29ND	26FC/-
26FC/-	DOO.3731A/2	Rib wing centre No. 3 port	DOO.3731A/3	26FC/-
26FC/-	DOO.3732A/2	Rib wing centre No. 3 stbd.	DOO.3732A/3	26FC/-
26FC/11884	GOO.1094A/3	Rod radius assembly port	GOO.1094A/4	26FC/-

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Old Ref. No.	Pt./Assy. No.	Nomenclature	New Pt./Assy. No.	Ref. No.
26FC/11885	GOO.1095A/3	Rod radius assembly stbd.	GOO.1095A/4	26FC/-
26FC/11892	GOO.1987A	Plate latch assembly port	GOO.1987A/1	26FC/-
26FC/11893	GOO.1988A	Plate latch assembly stbd.	GOO.1988A/1	26FC/-
26FC/-	GOO.1991A/ND	Jack and radius rod assy. port	GOO.2001A/ND	26FC/-
26FC/-	GOO.1992A/ND	Jack and radius rod assy. stbd.	GOO.2002A/ND	26FC/-
26FC/-	GOO.1101A/3	Retracting mechanism main U/C port	GOO.1101A/4	26FC/-
26FC/-	GOO.1102A/3	Retracting mechanism main U/C stbd.	GOO.1102A/4	26FC/-
26FC/-	DOO.6527A/12	G.A. of Mainplane, port	DOO.6527A/13	26FC/-
26FC/11885	DOO.6715A/11	Mainplane complete (Spares) port	DOO.6715A/12	26FC/-
26FC/-	DOO.7539A/7	G.A. of Mainplane stbd.	DOO.7539A/8	26FC/-
26FC/11884	DOO.7611A/6	Mainplane complete (Spares) stbd.	DOO.7611A/7	26FC/-

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations and is applicable to both port and starboard mainplanes:

(1) Trestle the aircraft until the wheels are clear of the ground. Operate the hydraulic pressure release valve until the pressure in the accumulator is exhausted. Release the pneumatic pressure by applying the brakes and operating the rudder pedals until the reservoir is exhausted. Disconnect the hose connections to the brakes and fit blanks to the hose and adaptor ends to prevent the ingress of foreign matter. Release the clips retaining the electric cable to the micro-switch on the port undercarriage torque link and, slackening the attachment items, remove the undercarriage leg fairing. Retain all the parts and attaching items for re-fitment.

(2) Remove the forward and aft inboard wheelwell wall handhole covers and retain all the items. Remove the small square handhole cover from the top skin of the mainplane above the undercarriage radius rod attachment and retain the cover and attaching items. Disconnect the undercarriage door from its operating linkage by removing the pivot pins. Retain all items for re-fitment. Remove the split pins and bottom attachments of the radius rod and undercarriage jack, without altering the adjustments and retain all items less the split pins.

(3) Working through the handholes in the forward and aft wheelwell walls, slacken the attachments of the now redundant Teleflex clamp and packing, Part Nos. GOO.1949 and GOO.103 respectively, which secure the undercarriage door lock control cable to the bottom skin of the mainplane. From the inboard side of the wheelwell, slacken the attachments of the redundant Teleflex clamps and locking plates, Part Nos. GOO.1951 and GOO.1953 respectively. The packing, Part No. GOO.1783 fitted under the forward clamp assembly is also redundant, together with all of the attaching items.

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(4) Slacken and retain the 2 B.A. and 4 B.A. locking and clamping bolts securing the Teleflex conduit at the latch plate wrapped box and remove the lock control complete from the mainplane. The controls comprising four conduits, Part Nos. GOO.92, GOO.96, GOO.98 and GOO.100 (port); GOO.93, GOO.97, GOO.99 and GOO.101 (starboard), Teleflex inner cables, Part No. GOO.94ND and Part No. GOO.95ND, two slide tubes, Part No. C.1871, two plungers, Part No. GOO.429, two connectors, Part No. B.29140 and two lock springs, Part No. DS.47/2 are redundant.

(5) From the forward and aft wheelwell walls, remove the undercarriage door lock barrels, Part Nos. GOO.427A (forward), GOO.428A (aft). These barrels and attachment items are redundant. Working through the handholes in the forward and aft wheelwell walls, very carefully remove the rivets securing the redundant Teleflex clamp mounting brackets, Part No. GOO.433A from the bottom skin of the mainplane, by chipping off the heads and punching out the shanks and remove the mounting brackets from the aircraft.

(6) On the inboard side of the wheelwell wall and referring to Sheet 2 of the drawing, carefully mark out and file away the shaded portion of the reinforced hole, as shown. Remove all burrs and file marks, and polish the filed area.

(7) Referring to Sheet 2 of the drawing, fill in the two redundant holes which were previously used for attaching the forward Teleflex clamp to the inboard wheelwell wall, with two  $\frac{3}{16}$  in. dia. rivets, Part No. AS.2227/604. Fill in the aft redundant hole which was previously used for attaching the rear Teleflex clamp to the wheelwell wall, with one new 2 B.A. bolt, washer and nut, Part Nos. A.25/5C, SP.15/C and AGS.2001/C1 respectively. This is also shown on Sheet 2 of the drawing. The remaining forward attachment hole of the rear Teleflex clamp is to be used for attaching a new cable clip, as detailed in a later operation.

(8) From the new port forward Teleflex lock control unit, Part No. E.43322, remove the bottom half of the anchor block, Part No. A.42276. Position this half block on a new adaptor plate, Part No. 15-Z.1805ND, to the dimensions shown on Sheet 3 of the drawing. From the two pre-drilled holes in the Teleflex block and using a No. 11 (0.1910 in. dia.) drill, drill the two attachment holes in the adaptor plate and countersink these holes 90 deg. to 0.32 in. dia. in the opposite side of the adaptor plate to the Teleflex block. Separate the block and plate, and deburr the holes in the adaptor plate. Countersink the block attachment holes 90 deg. to 0.030 in. deep, in the bottom of the Teleflex block.

(9) Referring to Sheet 3 of the drawing, carefully mark off and drill the two No. 26 (0.147 in. dia.) holes in the adaptor plate, and deburr the holes. Repeat the work detailed in this operation and operation (8), on the new aft port lock Teleflex control unit, Part No. E.43321, and adaptor plate, and the new forward and aft starboard lock Teleflex control units, Part Nos. E.43282 and E.43281, respectively, and adaptor plates.

(10) Referring to Sheet 4 of the drawing, temporarily assemble the new forward and aft plunger barrels, Part Nos. 15-U.13, and 15-U.15 in place of the redundant barrels, and slave bolt into position. Temporarily slave bolt the two halves of each Teleflex clamp block to the holes already drilled in the adaptor plate, and secure a suitable mandrel in the large hole in the Teleflex anchor block, so that the mandrel protrudes from the centre of the block, outboard for a distance of 10.50 in. This dimension is important.

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*Note*.—Any straight length of bar or tube,  $\frac{1}{2}$  in. diameter and approximately twelve inches long may be used, with suitable packing on the top of the mandrel to prevent there being any slack at the clamp block hole.

(11) The forward adaptor plate, complete with the block and mandrel clamped as detailed in operation (10), is to be placed inside the mainplane in the position of the redundant Teleflex clamp bracket, and the outboard end of the mandrel inserted into the plunger barrel, until the end of the mandrel is flush with the outboard end of the plunger barrel. It may be found necessary to trim the aft adaptor plate to prevent the plate fouling an existing stringer on the bottom skin of the mainplane. This location of the mandrel and block will ensure correct alignment of the Teleflex anchor block and barrel, and also that the block is the correct distance inboard from the barrel. To obtain good vertical alignment of the block and mandrel, it may be necessary to insert several thicknesses of 0.005 in. thick brass foil (Ref. No. 30B/462) between the mainplane skin and the adaptor plate, or where the block is too high it is to be removed and replaced on the adaptor plate, after filing the bottom of the block until good alignment is achieved. Repeat this operation on the aft control.

(12) Holding the adaptor plate, and foil if fitted, secure on the bottom skin of the mainplane, and using the No. 26 drill, open up the six inboard rivet holes of the redundant Teleflex clamp bracket attachment in the undersurface of the mainplane and continue right through into the adaptor plate. Using the same drill, and with the adaptor plate and foil still in the same position, drill the two outboard holes in the mainplane bottom skin from the holes in the adaptor plate which were drilled during operation (9). Countersink these eight holes 90 deg. to 0.27 in. dia. in the underside of the mainplane bottom skin. Remove the adaptor plate, Teleflex block and mandrel from the mainplane, and deburr all holes. Remove the mandrel and block from the adaptor plate, and remove the plunger barrels from the wheelwell wall. Care should be taken to note the thickness and location of any foil packing which was fitted between the adaptor plate and the wing skin for refitment between the block and adaptor plate as detailed in operation (15). Separate the mandrel and Teleflex block and refit the Teleflex block at its original position on the control. Repeat this operation on the aft door lock control.

*Note*.—The two outboard holes in the mainplane bottom skin which previously secured the redundant Teleflex clamp bracket, are to be left blank in the mainplane skin.

(13) With the Teleflex controls removed from the mainplane, withdraw the Teleflex inner cables from the flexible outer covers by pulling on the plungers. The inner cables are to be shortened to the following dimensions, by cutting the inboard end of the cable. The port and starboard forward inner cables for control units, Part Nos. E.43282 and E.43322 are to be shortened to an overall length from the outboard end of the plunger to the inboard end of the cable of 34.40 in. The port and starboard rear inner cables for control units, Part Nos. E.43281 and E.43321 are to be shortened to an overall length from the outboard end of the lock plunger to the inboard end of the cable of 38.50 in. When the inner cables have been shortened to the correct length the ends of the cables are to be ground or filed to a smooth radius, and no small ends of wire are to be left protruding.

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(14) Very carefully remove the  $\frac{1}{16}$  in. dia. countersunk, steel locking rivet securing the lock plunger of each cable, to the inner screwed rod on the outboard end of the Teleflex inner cable, without enlarging the hole in the rod or plunger. This rivet will be found 0.125 in. inboard from the outboard end of the lock plunger. Holding the inner screwed rod at the Teleflex cable (not the inner cable itself) unscrew the lock plunger from the screwed rod, and clean off any burrs from the thread. Make sure that the lock plunger will freely screw onto the screwed rod to its original position. Again remove the lock plunger from the screwed rod.

(15) Trim each piece of foil which was fitted between the adaptor plate and mainplane skin during operation (11) to the shape of the bottom of the Teleflex block, and using the No. 11 drill, drill the two holes in the foil. Apply pigmented varnish jointing compound (Ref. No. 33C/1264) to the faying surfaces of each adaptor plate, foil, and Teleflex block and secure together with two new countersunk 2 B.A. bolts, washers and nuts, Part Nos. AS.1242/14C, SP.15/C and AGS.2001/C1 respectively, to each block. Where excess packing has been fitted or the block has been filed to obtain good alignment, the bolt length must be altered to suit.

(16) With the lock plunger still removed from each control, replace the Teleflex inner cable into its respective outer flexible cover, push the screwed rod on the end of the inner cable inside the rigid conduit portion of the control, and gently withdraw the inner cable from the inboard end of the flexible outer cover to a distance of about eighteen inches.

*Note:*—These inner cables must not be pulled out to the fullest extent otherwise the rigid screwed rod will foul on the bent end of the outer cover, causing damage to the inner cable at the swaged connection when the inner cable is screwed into the wrapped box during a later operation. Feed each complete control (less the lock plunger) into the mainplane through the handhole in the wheelwell wall and, along the route of the redundant control, through the rib to the wrapped box.

(17) Raise the radius rod of the undercarriage to its "undercarriage retracted position" and screw the forward and aft Teleflex inner cables (left-hand thread) into the wrapped box by hand. It is most important that this is achieved quite freely, and under no circumstances may any force or tool be used. Lower the radius rod slightly and screw the Teleflex inner cable in sufficiently to give 0.10 in. projection on the inboard side of the box when sprung into the locking hole.

*Note:*—The cable must not be wound in.

(18) Lubricate the Teleflex inner cables with grease, XG-275 (Ref. No. 34B/100513) and slide each outer flexible cover inboard along the inner cable to the wrapped box. After entering and aligning the end of the outer-cover in a downward direction, secure to the wrapped box with the existing 4 B.A. lock bolt. This bolt hole must be cleaned with a No. 27 (0.1440 in. dia.) drill, after the outer casing is in position. Finally secure the outer casings with the existing 2 B.A. clamp bolt.

(19) Screw the respective lock plungers onto their inner screwed rods in their original positions, and lock with a new  $\frac{1}{16}$  in. dia. steel countersunk rivet, Part No. AS.460/209. Care must be taken that the rivet head or tail does not protrude above the outside diameter of the lock plunger, or in anyway prevent the free sliding of the plunger and barrel.

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(20) Apply pigmented varnish jointing compound to the faying surfaces of each adaptor plate, and mainplane bottom skin, and secure into position as shown on Sheet 3 of the drawing with eight new countersunk bolts, washers and nuts, Part Nos. AS.1242/1B, SP.15/B and AGS.2001/B1 respectively.

(21) Apply pigmented varnish jointing compound to the faying surfaces of each forward and aft new lock barrel and adjacent wheelwell wall, and, sliding the barrels over the lock plungers, secure the barrels into position with eighteen new bolts, Part No. AS.1246/2C and two new bolts, Part No. AS.1246/3C, as shown on Sheets 1 and 4 of the drawing.

(22) Remove one existing countersunk bolt from the inboard side of the wheelwell and secure the forward lock control cable at this point with one new 'P' clip, 2 B.A. bolt, washer and nut, Part Nos. AS.3180/6C, A.25/6C, SP.15/C and AGS.2001/C1 respectively, as shown on Sheet 2 of the drawing. Secure the rear lock cables to the existing hole in the inboard wheelwell wall, with one new 'P' clip, 2 B.A. bolt, washer and nut, Part No. AS.3180/6C, A.25/7C, SP.15/C and AGS.2001/C1 respectively, which is also shown on Sheet 2 of the drawing.

(23) Adjust the forward and aft door lock controls at the adjuster at the clamp block, so that when the undercarriage radius rod is in the fully retracted position, the plunger protrudes 0.35 in. from the outboard end of the barrel, as shown on Sheet 4 of the drawing. After adjustments have been carried out, the locknuts must be fully tightened, and locked with 22 s.w.g. nickel alloy locking wire (Ref. No. 30A/3055).

(24) Operate the undercarriage radius rod by hand to ensure free travel of the Teleflex door lock cables. The load, applied to the lower attachment of the radius rod, to overcome the friction of the controls, should not exceed 10 lb. Re-connect the undercarriage radius rod and jack, using the existing items and two new split pins, Part No. SP.9/C8. Ensure that the undercarriage jack adjustment has not been altered during this modification.

(25) Reconnect the undercarriage door and secure using the existing items and two new split pins, Part No. SP.9/C8. Refit the undercarriage leg fairing and secure using the existing items and new 22 s.w.g. nickel-alloy locking wire. Reconnect the clips of the micro-switch lead on the port undercarriage leg. Remove the blanks and reconnect the brake hose, re-locking with 22 s.w.g. nickel-alloy wire. Re-charge the pneumatic and hydraulic systems in accordance with current procedure.

(26) Refit the forward and aft handhole covers in the wheelwell walls and the small square cover in the top skin of the mainplane, over the radius rod. Secure with the existing items.

(27) Repair the finish locally at the undersurface of the mainplane with primer etch base and accelerator (Ref. No. 33B/1021 and 33B/1023) respectively. The two redundant holes in the mainplane skin are to be filled with stopper, oil base (Ref. No. 33B/534) and the area finished in Cellulose, yellow (Ref. No. 33B/1074 or 985). Apply primer etch base and accelerator to the filed area of the reinforced hole on the inboard side of the wheelwell wall, and finish in finish aluminium (Ref. No. 33B/1060 or 865).

(28) Lubricate the complete installation with Grease, XG-275 and on completion of tests, check that the undercarriage is locked down and lower the aircraft from the trestles.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied carry out a full retraction test on the undercarriage.

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# 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
26FC/-	GOO.92	Conduit Teleflex No. 2 R.H.	1	—
26FC/-	GOO.93	Conduit Teleflex No. 2 L.H.	1	—
26FC/-	GOO.94ND	Teleflex inner cable No. 2	2	—
26FC/-	GOO.95ND	Teleflex inner cable No. 2	2	—
26FC/-	GOO.96	Conduit Teleflex No. 2 R.H.	1	—
26FC/-	GOO.97	Conduit Teleflex No. 2 L.H.	1	—
26FC/-	GOO.98	Conduit Teleflex No. 2 R.H.	1	—
26FC/-	GOO.99	Conduit Teleflex No. 2 L.H.	1	—
26FC/-	GOO.100	Conduit Teleflex No. 2 R.H.	1	—
26FC/-	GOO.101	Conduit Teleflex No. 2 L.H.	1	—
26FC/4477	GOO.103	Packing	4	C
26FC/14	GOO.427A	Barrel forward	2	C
26FC/15	GOO.428A	Barrel aft	2	C
26FC/676	GOO.429	Plunger	4	C
26FC/196	GOO.433	Bracket	4	C
26FC/-	GOO.1783	Packing	2	—
26FC/10451	GOO.1949	Block clamp	4	C
26FC/10461	GOO.1951	Clamp	8	C
26FC/10462	GOO.1953	Plate connector locking	4	C
27K/568	B.29140	Connector Teleflex	4	C
27K/-	C.1871	Tube Teleflex slide	4	—
27K/504	DS.47/2	Spring Teleflex locking	4	C

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

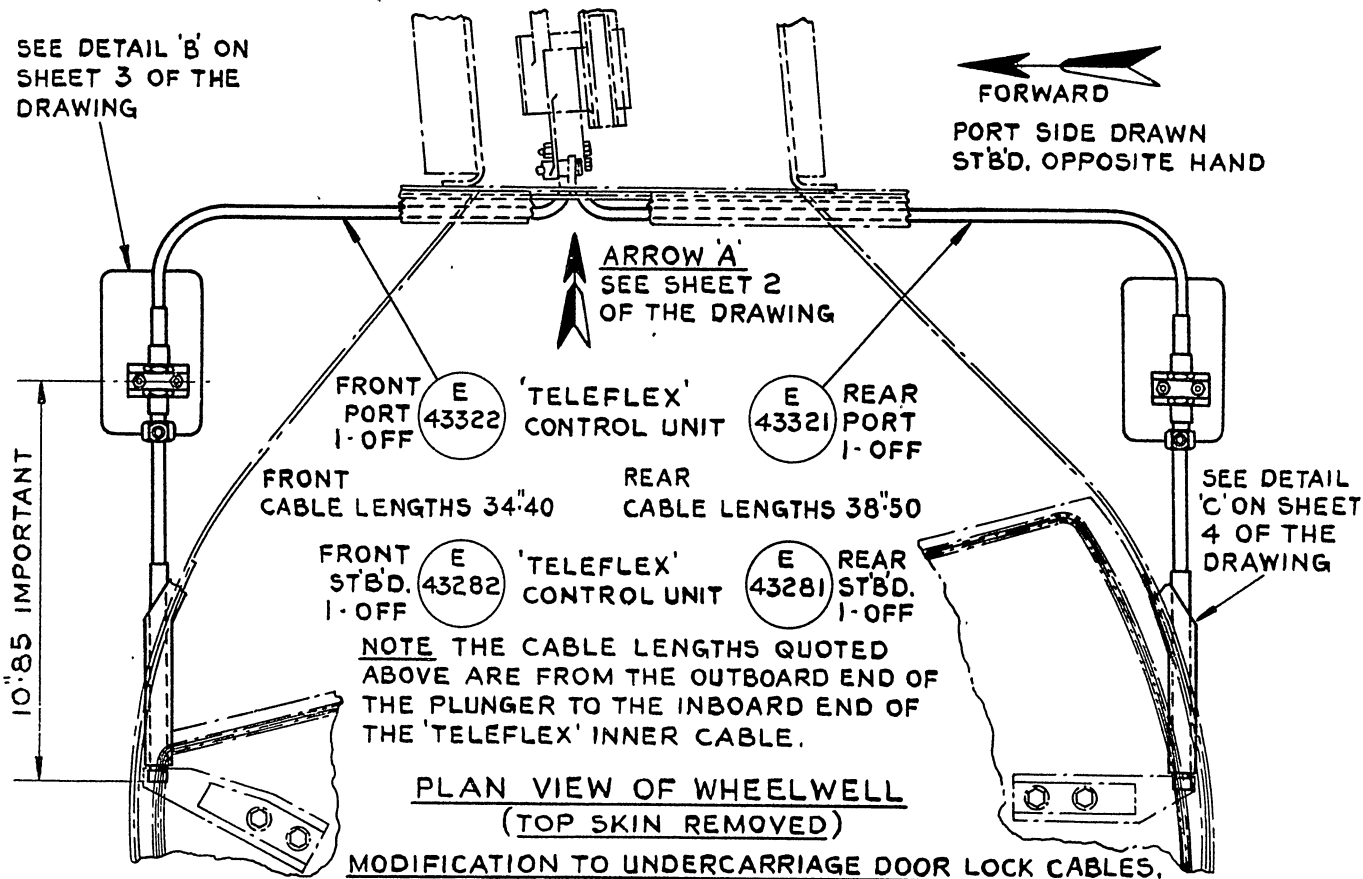
This modification causes a weight change of +0.31 lb., and a change of moment +1.0 lb. ft.

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LP31889 2,57 625 C & P Gp. 959 (4)

SHEET 1

DRG. NO. A.R. 4099 G / D. 4 / 57

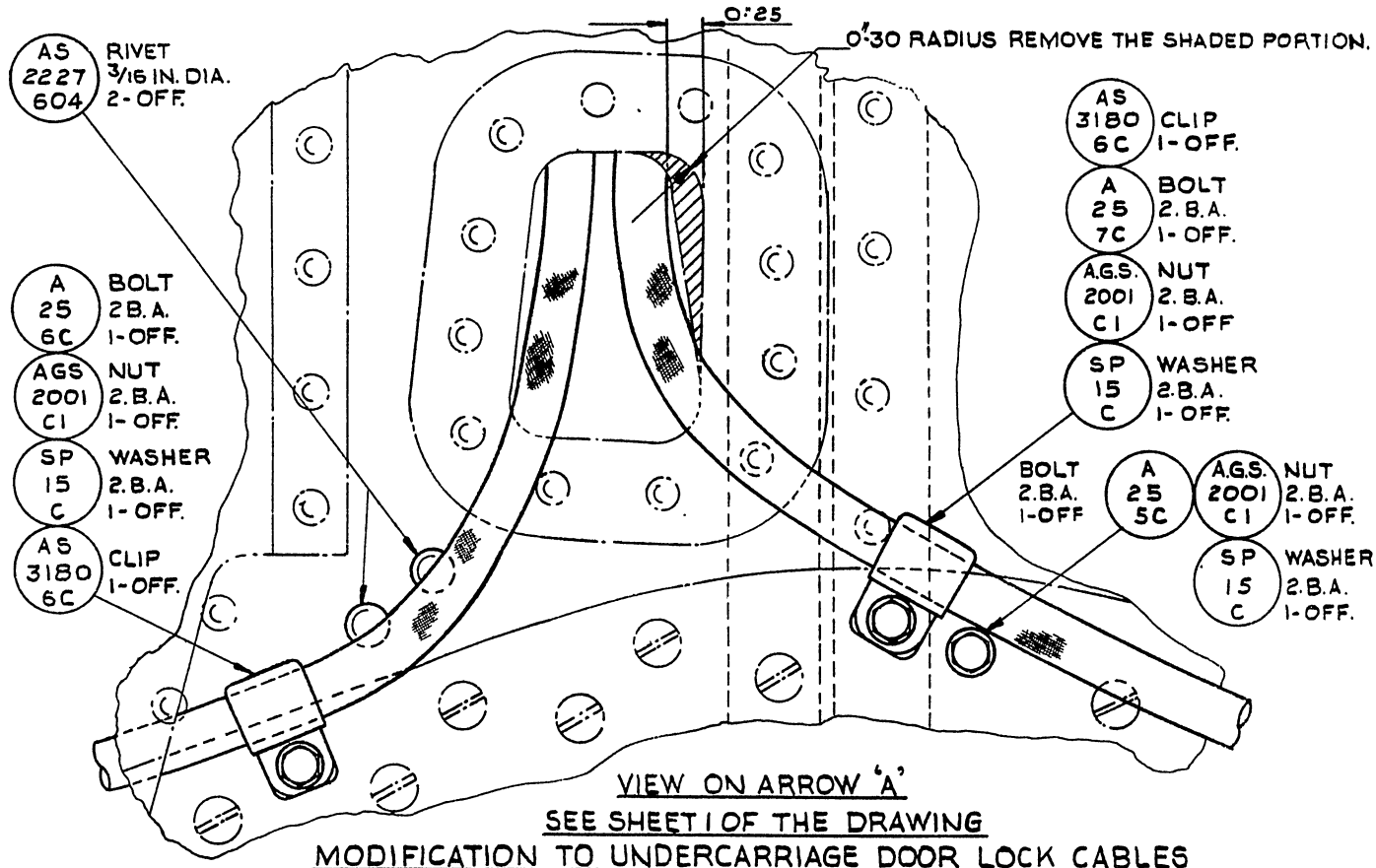


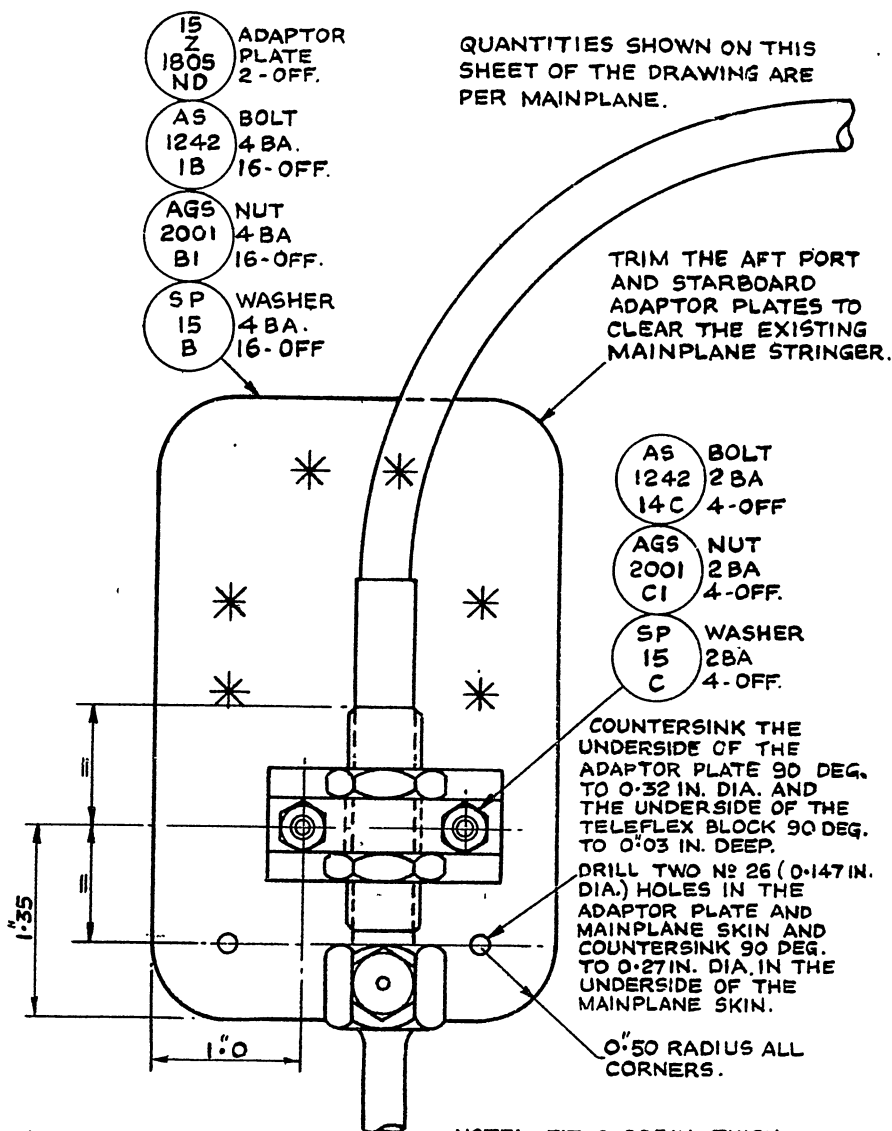
RESTRICTED

LP31889 2/57 625 C & P Gp. 959 (4)

SHEET 2

DRG. NO. A.R. 4099 G / D. 4 / 57





**DETAIL 'B' TYPICAL OF ALL ADAPTOR PLATE ASSEMBLIES.**  
**SEE SHEET 1 OF THE DRAWING.**

**MODIFICATION TO UNDERCARRIAGE DOOR LOCK CABLES.**

DRG. № A.P. 4099 G / D. 4 / 57

SHEET 3

**RESTRICTED**

LP31889 2/57 625 C & P Gp. 959 (4)

QUANTITIES SHOWN ON THIS  
SHEET OF THE DRAWING  
ARE PER MAINPLANE.

THIS DRAWING IS TYPICAL  
OF ALL BARREL ASSEMBLIES

0.35" IMPORTANT, WHEN  
UNDERCARRIAGE IS  
RETRACTED

15 FORWARD  
U BARREL  
13 1-OFF

15 REAR  
U BARREL  
15 1-OFF

AS BOLT  
1246 2.BA  
2C 18-OFF

AS BOLT  
1246 2.BA  
3C 2-OFF

AS RIVET  $\frac{1}{16}$  IN. DIA.  
460 90 DEG. C'S'K.  
209 STEEL  
2-OFF.

DETAIL C

SEE SHEET 1  
OF THE DRAWING

MODIFICATION TO UNDERCARRIAGE DOOR LOCKS.

RESTRICTED

DRG. NO A.P. 4099 G / D. 4 / 57

SHEET 4

LP31889 2/57 625 C & P Gp. 959 (4)

(Improved U/C door lock control)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. D.4  
(Alteration 1)**Vampire F.B. Mk. 9 Aircraft—Main Undercarriage—To Introduce Improved Undercarriage Door Lock Control**

(AB/A/3749.—23.5.57.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. D.4 (Mod. No. Vampire/3437) is amended as follows:—

- (1) Para. 5, sub-para. (1) (a), *After* the items of the kit, *delete* para. "The above items—current regulations" and *substitute*:  
"The complete Kit is to be demanded from No. 35 Maintenance Unit under Ref. No. 26FC/103437."

- (2) Para. 5, sub-para. (1) (b), *Add* in sequence:

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
"28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. 1/8 in. dia.	As reqd.	C"

- (3) Para. 6, Spares affected

"26FC/11985	DOO.6715A/11	Wing complete port
26FC/11984	DOO.7611A/6	Wing complete stbd."

To the last group of items appertaining to *each* of the above spares  
*Add* in sequence:—

"28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. 1/8 in. dia.	As reqd.	C"
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- (4) Para. 8, operation (10). *Delete* and *substitute* the new operation:—

"(10) Referring to Sheet 4 of the drawing, temporarily assemble the new forward and aft plunger barrels, Part Nos. 15-U.13, forward; 15-U.15, aft, in place of the redundant barrels, and slave bolt into position. It may be found necessary to carefully file the hole in the forward and aft wheelwell walls to accommodate the new barrels. The rear wheelwell wall is also to be filed as shown in the inset on Sheet 4 of the drawing to give a clearance of 0.15 in. between the barrel and the wall at the inboard end of the barrel, and the plate which carries the barrel anchor nuts is also to be filed back parallel to the lock plunger. This filing is essential to prevent the plunger fouling on the plate. Temporarily slave bolt the two halves of each Teleflex clamp block to the holes already drilled in the adaptor plate, and secure a suitable mandrel in the large hole in the Teleflex anchor block, so that the mandrel protrudes from the Centre of the block, Outboard for a distance of 10.50 in. This dimension is important.

*Note*:—Any straight length of bar or tube, 1/2 in. diameter and approximately twelve inches long may be used, with suitable packing on the top of the mandrel to prevent there being any slack at the clamp block hole."

- (5) Para. 8, operation (12), *Delete* and *substitute* the new operation:—

"(12) Holding the adaptor plate, and foil if fitted, secure on the bottom skin of the mainplane, and using the No. 26 drill, open up the six Inboard rivet holes of the redundant Teleflex clamp bracket attachment in the undersurface of the mainplane and continue right through into the adaptor plate. Using the same drill, and with the adaptor plate and foil still in the same position, drill the two outboard holes in the mainplane bottom skin, from the holes in the adaptor plate, which were drilled during operation (9). Countersink these eight holes 90 deg. to 0.27 in. dia. in the underside of the mainplane bottom skin. Remove the adaptor plate, Teleflex block and mandrel from the main-



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plane, and deburr all holes. Remove the mandrel and block from the adaptor plate, and remove the plunger barrels from the wheelwell wall. Care should be taken to note the thickness and location of any foil packing which was fitted between the adaptor plate and the wing skin for fitment between the block and the adaptor plate as detailed in operation (15). Separate the mandrel and Teleflex block and refit the Teleflex block at its original position on the control. Where it is found that two holes which have been drilled in the adaptor plate from the existing holes in the mainplane skin have insufficient landing, these holes are to be trimmed out of the plate, and the holes in the mainplane skin flushed off with two  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2229/404. These rivets are indicated on Sheet 3 of the drawing. Replace the adaptor plate in the mainplane, and after aligning the holes, and using the No. 26 drill, drill two new bolt holes in the adaptor plate and wing skin, and countersink these holes 90 deg. to 0.27 in. dia. in the outside of the wing. Remove the plate and deburr the holes. Repeat this operation on the aft door lock control.

*Note:*—The two outboard holes in the mainplane bottom skin which previously secured the redundant Teleflex clamp bracket, are to be left blank in the mainplane skin.”

- (6) Drg. No. A.P.4099G/D.4/57, Sheets 3 and 4. *Delete and substitute* “Drg. No. A.P.4099G/D.4/57, Sheets 3 and 4, dated 23.5.57.”

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DRG. No. A.P. 4099G/D.4/57  
SHEET 3 DATED 23-5-57

WHERE THESE TWO HOLES ARE FOUND TO HAVE INSUFFICIENT LANDING, TRIM THE HOLES OUT OF THE PLATE AND FILL THE HOLES IN THE WING SKIN WITH  $\frac{1}{8}$  IN. DIA RIVETS PART No. AS.2229/404. TWO NEW BOLT HOLES MUST THEN BE DRILLED IN THE ADAPTOR PLATE AND WING SKIN USING A No. 26 DRILL AND COUNTERSINK THE HOLES 90 DEG. TO 0.27 IN. DIA. IN THE OUTSIDE OF THE WING SKIN.

\* EXISTING HOLES IN THE MAINPLANE BOTTOM SKIN. DRILL THE NEW ADAPTOR FROM THESE SIX HOLES USING THE No. 26 DRILL.

ADAPTOR  
PLATE  
2-OFF.

BOLT 4 B.A.  
CSK. HEAD  
16-OFF.

NUT 4 B.A.  
16-OFF

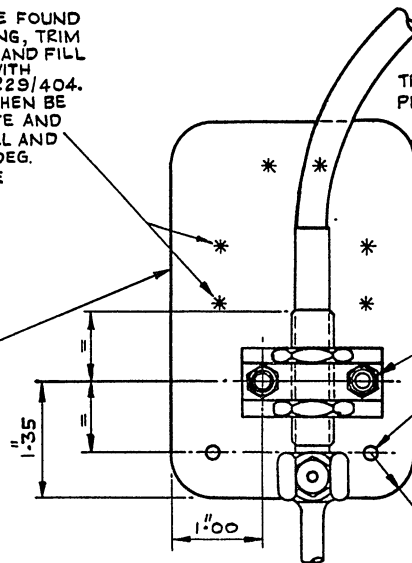
WASHER  
4 B.A.  
16-OFF.

15.2.  
1805  
ND

AS  
1242  
1B

AG5  
2001  
B1

SP  
15  
B



DETAIL 'B'

TYPICAL OF ALL ADAPTOR PLATE ASSEMBLIES

(SEE SHEET 1 OF THE DRAWING)

MODIFICATION TO UNDERCARRIAGE DOOR LOCK CABLES.

QUANTITIES SHOWN ON THIS SHEET OF THE DRAWING ARE PER MAINPLANE.

TRIM THE AFT. PORT, AND STBD. ADAPTOR PLATES TO CLEAR THE EXISTING STRINGER.

AS  
1242  
14C

BOLT  
2 B.A.  
4-OFF.

AG5  
2001  
C1

NUT  
2 B.A.  
4-OFF.

SP  
15  
C

WASHER  
2 B.A.  
4-OFF.

DRILL TWO No. 11 (0.191 IN. DIA.) HOLES IN THE ADAPTOR PLATE, AND COUNTERSINK 90 DEG. TO 0.32 IN. DIA. IN THE UNDERSIDE OF THE ADAPTOR PLATE, AND COUNTERSINK THE BOTTOM OF THE TELEFLEX BLOCK 90 DEG. TO 0.03 INS. DEEP.

DRILL TWO No. 26 (0.147 IN. DIA.) HOLES IN THE ADAPTOR PLATE AND MAINPLANE SKIN AND COUNTERSINK 90 DEG. TO 0.27 IN. DIA. IN THE UNDERSIDE OF THE MAINPLANE SKIN.

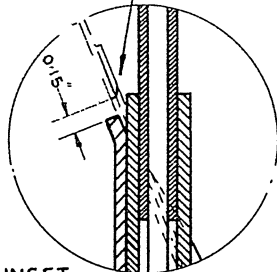
0.50 RADIUS ALL CORNERS.

NOTE: FIT 0.005 IN. THICK BRASS FOIL (STORES REF 308/462) BETWEEN THE ADAPTOR PLATE AND TELEFLEX BLOCK FOR CORRECT ALIGNMENT.



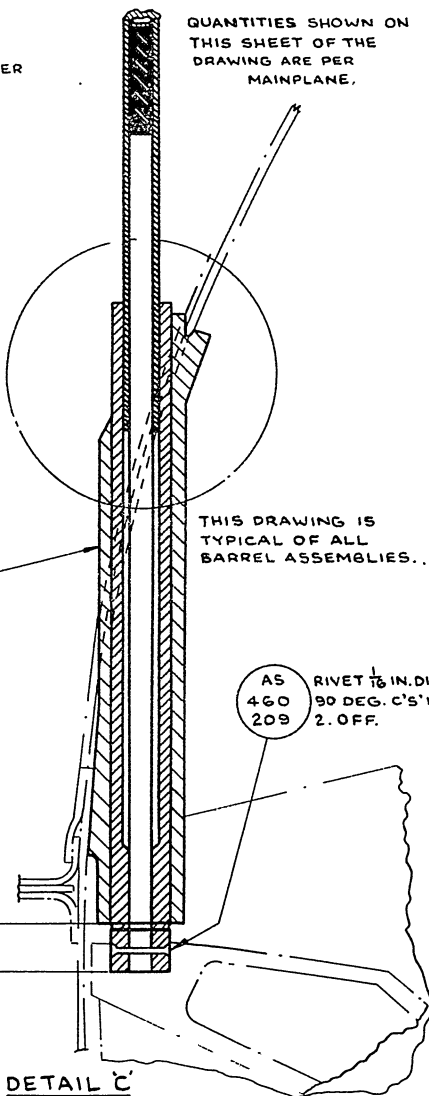
# **NOTE**

IT IS ESSENTIAL THAT THE ANCHOR NUT PLATE IS FILED BACK PARALLEL TO THE PLUNGER FOR CLEARANCE, ON THE REAR WHEELWELL ONLY



**INSET**  
**REAR LOCK ONLY**

QUANTITIES SHOWN ON THIS SHEET OF THE DRAWING ARE PER MAINPLANE.



THIS DRAWING IS TYPICAL OF ALL BARREL ASSEMBLIES..

BARREL  
FORWARD  
1. OFF.

15  
U  
13

BARREL  
REAR  
1. OFF.

15  
U  
15

BOLT  
2.8A  
18. OFF.

AS  
1246  
2C

BOLT  
2.8A  
2. OFF.

AS  
1246  
3C

AS RIVET 1/8 IN. DIA  
460 90 DEG. C'S'K  
209 2. OFF.

**IMPORTANT**  
**WHEN**  
**UNDERCARRIAGE**  
**IS RETRACTED.**

0.35"

**DETAIL C'**

SEE SHEET 1 OF THE DRAWING.

**MODIFICATION TO UNDERCARRIAGE DOOR LOCKS.**

DRG. No. A.P. 4099G/D.4/57

**RESTRICTED**

SHEET 4

DATED 23-5-57

.....  
(Elevator control pulleys)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. D.5

**Vampire F.B. Mk. 9 Aircraft—Flying Controls—To Blank Off Holes in Elevator Control Quadrant Pulleys in Cockpit. Part (A): Production and Part (B): Retrospective**

(MOD. NO. VAMPIRE/3547.)

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

(AB/A/6441.—2.7.57.)

## 1. INTRODUCTION

It has been reported that controls have jammed due to loose articles fouling the elevator quadrant pulleys. This modification blanks off the holes in the elevator quadrant pulleys, thus obviating any possible entry of loose articles which could cause the loss of elevator control.

Part (A)—Production version of this modification introduces new quadrant pulleys, without any holes, Part No. KOO.1581.

Part (B)—Retrospective version of this modification blanks off the holes in the existing pulleys with blanking plates, as detailed in Para. 8, of this leaflet.

- (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 3 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 20 man-hours (6 to strip; 5 to embody; 9 to re-assemble).

## 4. DRAWINGS REQUIRED

Drawing No. A.P.4099G/D.5/57 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
28D/12545	A.25/13E	Bolt, hex/hd., $\frac{1}{4}$ in. B.S.F.	8	C
28M/12928	A.27/EP	Nut, plain, $\frac{1}{4}$ in. B.S.F.	8	C
28P/12462	SP.9/C8	Pin, split, $\frac{1}{16}$ in. dia.	16	C
28P/12465	SP.9/G12	Pin, split, $\frac{1}{8}$ in. dia.	2	C
28Q/6667	AS.2227/406	Rivet, $\frac{1}{8}$ in. dia., sp/hd.	20	C
30A/3055	—	Wire, nickel alloy, 22 s.w.g., Spec. D.T.D.189	As reqd.	C



RESTRICTED

30B/1734	—	Aluminium alloy sheet, 22 s.w.g., Spec. B.S.L.72 (9 in. x 10 in.)	1	C
33B/1021	—	Primer, etch, base	As reqd.	C
33B/1023	—	Primer, etch, accelerator	As reqd.	C
33B/1108 (Home)	}	Finish, synthetic, matt, night, Spec. D.T.D.314	As reqd.	C
or				
33B/205 (Overseas)				
33C/1139	--	Compound, sealing, Bostik primer 1751, D.T.D.900/4058	As reqd.	C
33C/1264	--	Compound, pigmented varnish jointing, Spec. 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.

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>
Spares affected:				
26FC/1638	KOO.62	Pulley, quadrant, elevator controls	—	—
26FC/3467	KOO.89A/1	Pulley assy., elevator controls, L.H.	—	—
26FC/3468	KOO.90A/1	Pulley assy., elevator controls, R.H.	—	—

The work involved in modifying these spares is detailed in para. 8, operations (3), (4) and (5) and on the drawing.

Parts required for each spare:

30B/1734	—	Alum. alloy sheet, 22 s.w.g., Spec. B.S.L.72, 4½ in. x 5 in.	1	C
28Q/6667	AS.2227/406	Rivet, ⅛ in. dia., sp/hd.	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:—

<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/1638	KOO.62	Pulley, quadrant, elevator controls	KOO.1581	26FC/12543
26FC/3467	KOO.89A/1	Pulley assy., elevator controls, L.H.	KOO.1583A	26FC/-
26FC/3468	KOO.90A/1	Pulley assy., elevator controls, R.H.	KOO.1584A	26FC/-

8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Remove the pilot's seat in accordance with current authorised procedure, retaining its attaching items for subsequent reassembly. Remove the port and starboard gun blast fairings and the cannon bay doors. Disconnect the aircraft batteries in accordance with current authorized procedure. Locate the turn - buckles in the elevator control cables, cut the locking wire and release the tension of these cables, in accordance with current authorized procedure.

RESTRICTED

- (2) Working in the cockpit locate the R.P.'s auto selector switch, attached to the aft end of junction box No. 1 on the starboard cockpit wall; temporarily remove this selector switch from the junction box, retaining its attaching items for subsequent reassembly. Unscrew all the electrical sockets from the plugs on the underside of junction box No. 1. The starboard elevator quadrant pulley and pulley bracket, situated adjacent to junction box No. 1, is now accessible. The port elevator quadrant pulley and pulley bracket is situated on the cockpit floor on the port side of the cockpit aft of the throttle control box.
- (3) From both the port and starboard elevator quadrant pulleys remove the nuts, bolts and cable guards securing the control cables to the pulley, retaining them all, with the exception of the split pins, for subsequent reassembly. Also disconnect from the pulleys the control connecting rods from the control column and from the quadrant brackets the stay tubes which are attached to bulkhead No. 2; retain all the attaching items, with the exception of the split pins, for subsequent reassembly. Remove and retain the nuts securing the pulleys to their respective brackets. To permit the removal of these pulleys remove their mounting brackets from the cockpit floor; dispose of the bracket securing bolts and nuts, retain the washers.
- (4) Refer to the drawing. From 22 s.w.g. aluminium alloy sheet, Spec. B.S.L.72 (Ref. No. 30B/1734) make the three blanking plates for each pulley, to the dimensions shown. Place the blanking plates on the inboard side of the port pulley and on the outboard side, on the starboard pulley and mark out the positions for the rivet attachment holes. Using a No. 30 drill (0.1285 in. dia.), drill through the plates and the pulleys; deburr the holes and remove any sharp edges from the newly-made plates. Finish the new plates with base and accelerator etch primers (Ref. Nos. 33B/1021 and 33B/1023 respectively) and synthetic matt night finish, Spec. D.T.D.314 (Ref. No. 33B/1108 or 205), and number them with their respective part numbers as shown on the drawing. Rivet the plates to the pulleys after coating the mating surfaces with pigmented varnish jointing compound (Ref. No. 33C/1264), using twenty  $\frac{1}{8}$  in. dia. snap/head rivets, Part No. AS.2227/406. The modified quadrant pulleys now become Part No. KOO.1581.
- (5) Reassemble the modified pulleys to their respective brackets using the retained attaching items and two new split pins, Part No. SP.9/C8; these assemblies now become Part Nos. KOO.1583A (port) and KOO.1584A (starboard). Refit the two assemblies into their correct positions in the cockpit, using eight new bolts and nuts, Part Nos. A.25/13E and A.27/EP respectively, and the retained washers; before fitting the bolts dip them in Bostik primer cabin sealant 1751 (Ref. No. 33C/1139) and when they are finally fitted peen them to lock. Reconnect the control cables to their respective pulleys, reattach the cable guards, reconnect the control rods to the pulleys, also the stay tubes to the pulley brackets, using the retained attaching items and twelve new split pins, Part No. SP.9/C8.
- (6) Reconnect the electrical sockets into their correct plugs in junction box No. 1 on the starboard side of the cockpit and refix the R.P.'s selector switch on to junction box No. 1, using the retained attaching items.
- (7) Tension the elevator control cables as detailed in A.P.4099G, Vol. 1, Section 7, Chap. 4, lock the turnbuckles with 22 s.w.g. locking wire (Ref. No. 30A/3055) and refit the pilot's seat in accordance with current authorized procedure, using two new  $\frac{1}{8}$  in. dia. split pins, Part No. SP.9/C8, and two new  $\frac{1}{8}$  in. dia. split pins, Part No. SP.9/G12. Reconnect the aircraft batteries, raise and secure the cannon bay doors; refit and secure the gun blast fairings.

## 9. TESTING AFTER EMBODIMENT

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

- (1) A functional test of all the electrical circuits disturbed by the embodiment of this modification.

RESTRICTED

- (2) Check the elevator controls for correct and free full range of movement.

10. RECORDING ACTION

Record on Aircraft Form 700.

11. DISPOSAL OF REDUNDANT PARTS

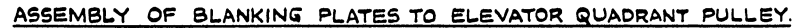
No parts are rendered redundant by the embodiment of this modification.

12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of + 0.26 lb. and a change of moment of - 2.0 lb. ft.

**RESTRICTED**

DRG. No. A.P. 4099G/D.5/57



11



(Rudder primary stops)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. D.6**Vampire F.B. Mk. 9 Aircraft—Flying Controls—To Introduce Existing Rear Override Stops as Primary Stops for Rudder and Introduce Class 1 Locking**

(MOD. NO. VAMPIRE/3482.)

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

(AB/A/5305.—26.7.57.)

**1. INTRODUCTION**

The existing method of using the elevator quadrant pulley and bracket, and the rudder pedals and bulkhead as primary stops has proved unsatisfactory. This is due to the existing rear override stops, which are set with a clearance of 0.030 in., preventing excessive control surface travel from being correctly adjusted. To facilitate correct adjustment, this modification introduces the existing override stops as primary stops and introduces Class 1 locking.

(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 six 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 4 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/D.6/57 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
28M/13375	A27/G.P	Nut, plain, $\frac{5}{16}$ in. B.S.F.	8	C
30A/3055	—	Wire, locking, nickel alloy	As reqd.	C
33B/1060 (Home) or	—	Finish, high gloss cellulose, aluminium	As reqd.	C
33B/865 (Overseas)	—	Primer, etch, base	As reqd.	C
33B/1021	—	Primer, etch, accelerator	As reqd.	C
33B/1023	—			

R

**RESTRICTED**



## (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/10401	JOO.1007A/3	Fin and tail boom assembly, L.H.	—	—
26FC/10402	JOO.1008A/1	Fin and tail boom assembly, R.H.	—	—
26FC/—	JOO.1951A/ND	Sub-assy. fin and tail boom, L.H.	—	—
26FC/—	JOO.1952A/ND	Sub-assy. fin and tail boom, R.H.	—	—

The method for modifying each of the above spares is detailed in para. 8, operations (2) to (7).

Parts required for each spare:

28M/13375	A.27/GP	Nut, plain, $\frac{5}{16}$ in. B.S.F.	4	C
30A/3055	—	Wire, locking, nickel alloy	As reqd.	C

Spares affected:

26FC/4013	JOO.1659	Pin, stop	—	—
26FC/4625	JOO.1899	Pin, stop	—	—

The method for modifying these spares is detailed in para. 8, operation (4). There are no parts required to modify the spares.

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:—

<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/10401	JOO.1007A/3	Fin and tail boom assy., L.H.	JOO.1007A/4	26FC/—
26FC/10402	JOO.1008A/1	Fin and tail boom assy., R.H.	JOO.1008A/2	26FC/—
26FC/4013	JOO.1659	Pin, stop	JOO.1963	26FC/12447
26FC/4625	JOO.1899	Pin, stop	JOO.1961	26FC/12446
26FC/—	JOO.1951A/ND	Sub-assy. fin and tail boom, L.H.	JOO.1957A/ND	26FC/—
26FC/—	JOO.1952A/ND	Sub-assy. fin and tail boom, R.H.	JOO.1959A/ND	26FC/—
26FC/—	KOO.349A	Assy. of rudder and elevator levers	KOO.349A/1	26FC/—

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations and is applicable to both port and starboard tail booms:—

- (1) Place the aircraft in rigging position as detailed in A.P.4099G, Vol. 1, Sect. 4, Chap. 3.

**RESTRICTED**

(2) At the rear end of the tail boom, remove the tail boom rear end fairing and the outboard rear inspection panel, together with all attaching items; retain all parts for subsequent reassembly.

(3) Locate the two rudder override stops and the two elevator override stops, Part Nos. JOO.1899 (one off) and JOO.1659 (three off), which extend through the rear diaphragm in the tail boom. Remove the split pins, then remove these stops from the aircraft; dispose of the redundant stiffnuts and split pins but retain the stop pins for further use.

(4) Refer to the drawing. On the stop pins measure 0.25 in. from the end with the screwdriver slot and drill a No. 58 hole (0.042 in. dia.) perpendicularly through each pin; remove the burrs. Drill two No. 58 holes in each new  $\frac{1}{8}$  in. B.S.F. plain nut, Part No. A.27/GP; remove the burrs.

(5) Reassemble the stop pins in their original positions together with their newly-drilled plain nuts and set the stops so that they now act as the primary stops, ensuring that the rudder and elevator have the correct range of movement detailed in A.P.4099G, Vol. 1, Sect. 4, Chap. 3. Wire-lock the stop pins and their locking nuts as detailed on the drawing, using 22 s.w.g. nickel alloy locking wire (Ref. No. 30A/3055).

(6) Revert to the cockpit and ensure that the original rudder and elevator stops have a minimum gap of 0.030 in. These stops may be relieved locally to obtain this requirement, and, if relieved, must be finished with base and accelerator etch primers (Ref. Nos. 33B/1021 and 33B/1023) and cellulose aluminium finish (Ref. No. 33B/1060 or 865).

(7) On completion of special tests replace the rear end fairing and tail boom inspection panel, using the original attaching items, then lower the aircraft from the rigging position.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied, functionally test the rudder and elevator, ensuring a full, free and correct range of movement.

#### 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 has no effect on weight or C. of G.

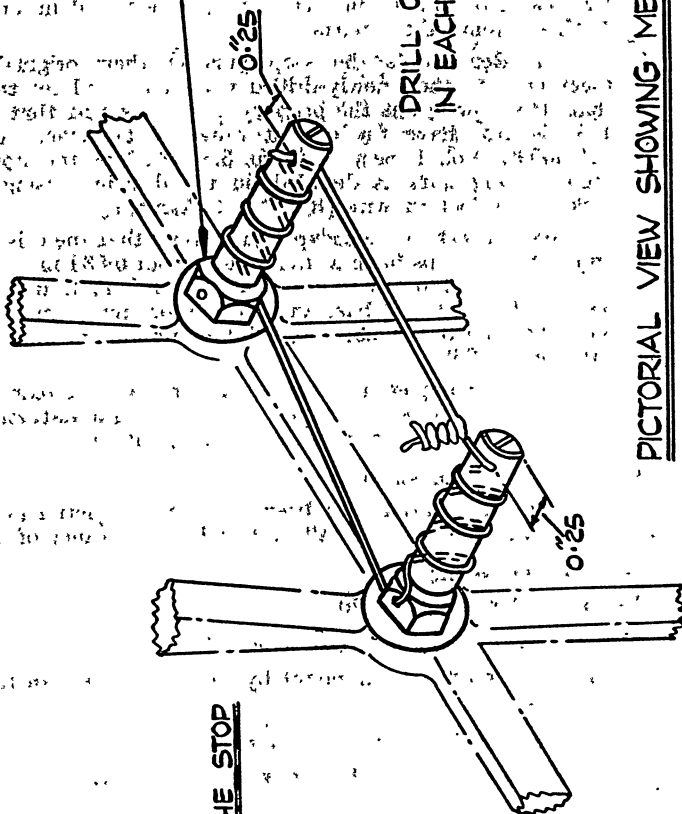
P.T.O.

DRILL TWO N° 58 (0.042 DIA.) HOLES AND THOROUGHLY DEBURR.



DETAIL FOR DRILLING THE STOP  
PIN'S RETAINING NUTS.

USE 22 SWG NICKEL ALLOY LOCKING WIRE (REF. N° 30A/3055)



DRILL ONE N° 58 (0.042 DIA.) HOLE IN EACH STOP PIN.

PICTORIAL VIEW SHOWING METHOD OF WIRE LOCKING  
RUDDER AND ELEVATOR STOPS IN REAR BOOM.

RESTRICTED

Drg. No. A.P.4099G/D.6/57

## Section

## E

## 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.
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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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§ 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

# F

## 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.
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				Introduced by A.L. No.						
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F 26										

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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§ 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. 34 (Relay, type Q)

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

Leaflet No. F.2

Vampire F.B. Mk. 9 Aircraft—To Bond Telephone Negative Lead at  
Terminal Blocks on Pilot's Seat

(Mod. No. VAMPIRE/967.)

(Class B/2.)

(7/Mods/13,585.—7.3.52.)

1. This modification has been necessitated by the possibility that the pilot may receive electrical shocks from the telephone while using the V.H.F., and makes provision for earthing to obviate this. This modification supersedes S.T.I. Vampire/42. 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 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:—

(1) Locate relay, type Q (Stores Ref. 5C/2007) (Ref. only), on port side of cockpit, just under canopy rail. Unscrew terminal block cover retaining screw and remove terminal block cover.

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P.T.O.



(2) Bare ends of Unipren 4 cable, connect between terminals 2 and 6 of the relay, and then replace terminal block cover and retaining screw.

4. The undermentioned part is required and is to be provided under Unit arrangements:—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
5E/3037	Cable, Unipren 4	2.5 in. length	C

**RESTRICTED**

Z.9077.R.

A.L. No. 42  
(G.G.S. control unit)

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

Vampire F.B. Mk. 9 Aircraft—G.G.S. Unit, type P, Mk. 4 (Stores Ref. 8B/2964) in place of type P, Mk. 2 (Stores Ref. 8B/2672)—Introduction

(MOD. NO. VAMPIRE/986.)

(Class D/4.)

(7/Mods/14,023.—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**

(43222/120) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



(Replacement fuse)

Leaflet No. F.4

Vampire F.B. Mk. 9 Aircraft—Fuse, 5 amp. (Stores Ref. 5C/880) instead of Fuse, 10 amp. (Stores Ref. 5C/881) in G.G.S. Circuit—Introduction

(MOD. No. VAMPIRE/3091.)

(Class B/2.)

(7/Mods/15,454.—27.6.52.)

1. This modification makes provision for the introduction of a 5 amp. fuse instead of the 10 amp. fuse in the G.G.S. circuit. The work will take approximately one man-hour.

2. This modification is to be embodied by:—

*2nd Line Servicing Units:* At first available opportunity and not later than next Intermediate Inspection

*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:—

(1) Disconnect aircraft accumulators. Locate junction box No. 1 on starboard side of cockpit wall and remove junction box cover.

(2) Locate and remove No. 24 10 amp. fuse (Stores Ref. 5C/881) and replace it with a 5 amp. fuse (Stores Ref. 5C/880).

(3) Carefully erase existing "10" amp. marking, located between the "24" and "GYRO GUNSIGHT" markings, and print in its place a figure "5", using suitable white paint.

**RESTRICTED****P.T.O.**

(4) Replace junction box cover, using original fastenings, re-connect aircraft accumulators and test the G.G.S. circuit for correct functioning in accordance with current authorized procedure.

4. The undermentioned item is required and is to be provided under Unit arrangements :—

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
5C/880	Fuse, 5 amp.	1	C
—	Paint, white	As reqd.	

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

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
5C/881	Fuse, 10 amp.	1	C

## RESTRICTED

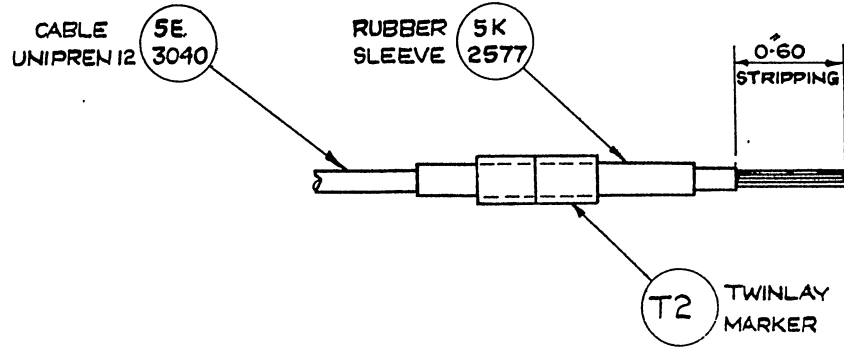
(36551/125) M.46412 R665 250 7/52 H.P.W. (Gp.19/1)

RESTRICTED

LP28688 10/54 500 C & P Gp. 959 (4)

SHEET 4

DRG. No. A.P. 4099 G / F. 10 / 54



1. CUT CABLE TO THE REQUIRED LENGTH
2. STRIP ENDS OF CABLE TO 0.60 INS.
3. SECURE RUBBER SLEEVES IN POSITION.
4. FIT TWINLAY MARKERS BEARING THE APPROPRIATE CODE TO CABLE ENDS.
5. INSTALL CABLE IN ACCORDANCE WITH APPROPRIATE OPERATION IN THE SCRIPT.

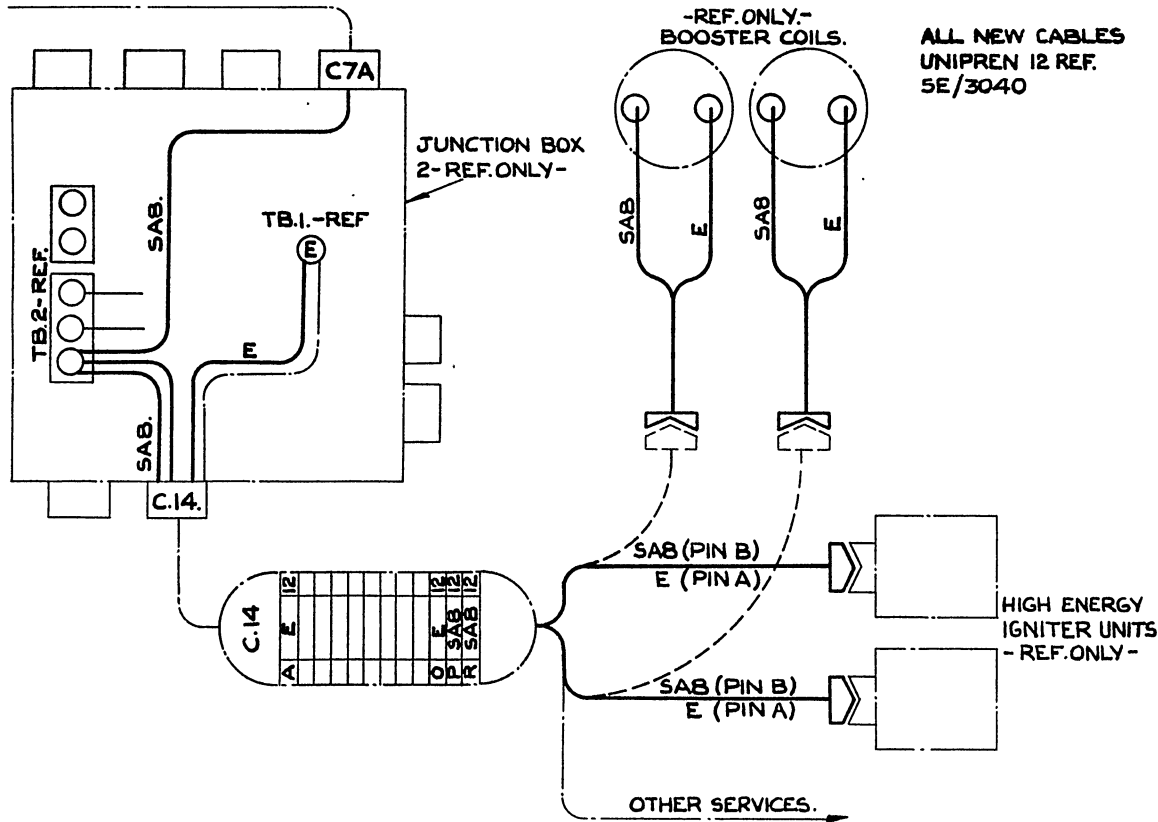
METHOD OF MAKING UP ENDS OF NEW LENGTHS OF UNIPREN CABLE.

**RESTRICTED**

DRG. No. A.P. 4099 G / F. 10 / 54

SHEET 3

LP28688 10/54 500 C & P Gp. 959 (4)



WIRING OF J.B.2. AND ADDITIONS TO CABLE LOOM C.14.

RESTRICTED

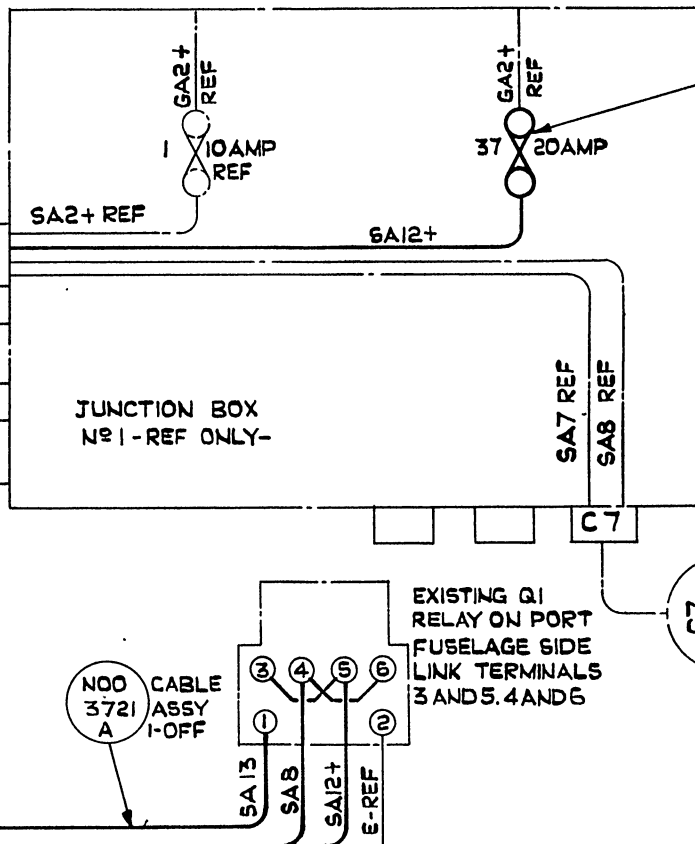
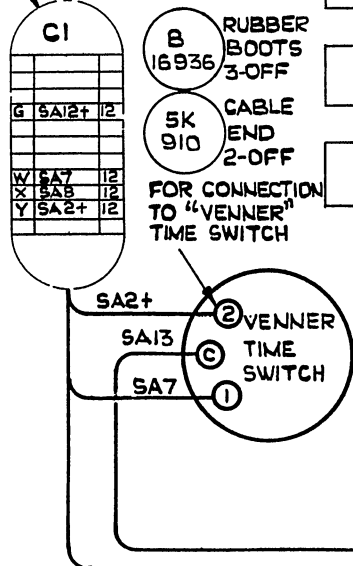
DRG. No. A.P. 4099 G / F. 10 / 54

SHEET 2

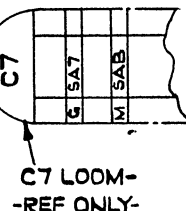
LP28688 10/54 500 C & P Gp. 959 (4)

ALL NEW CABLES UNIPREN 12.  
STORES REF 5E/3040  
ONE NEW CABLE INSIDE BOX  
ONE NEW CABLE IN LOOM C1  
TO PING. THREE REPLACEMENT  
CABLES TO PINS W.X.Y.

C1 LOOM-REF  
ONLY-

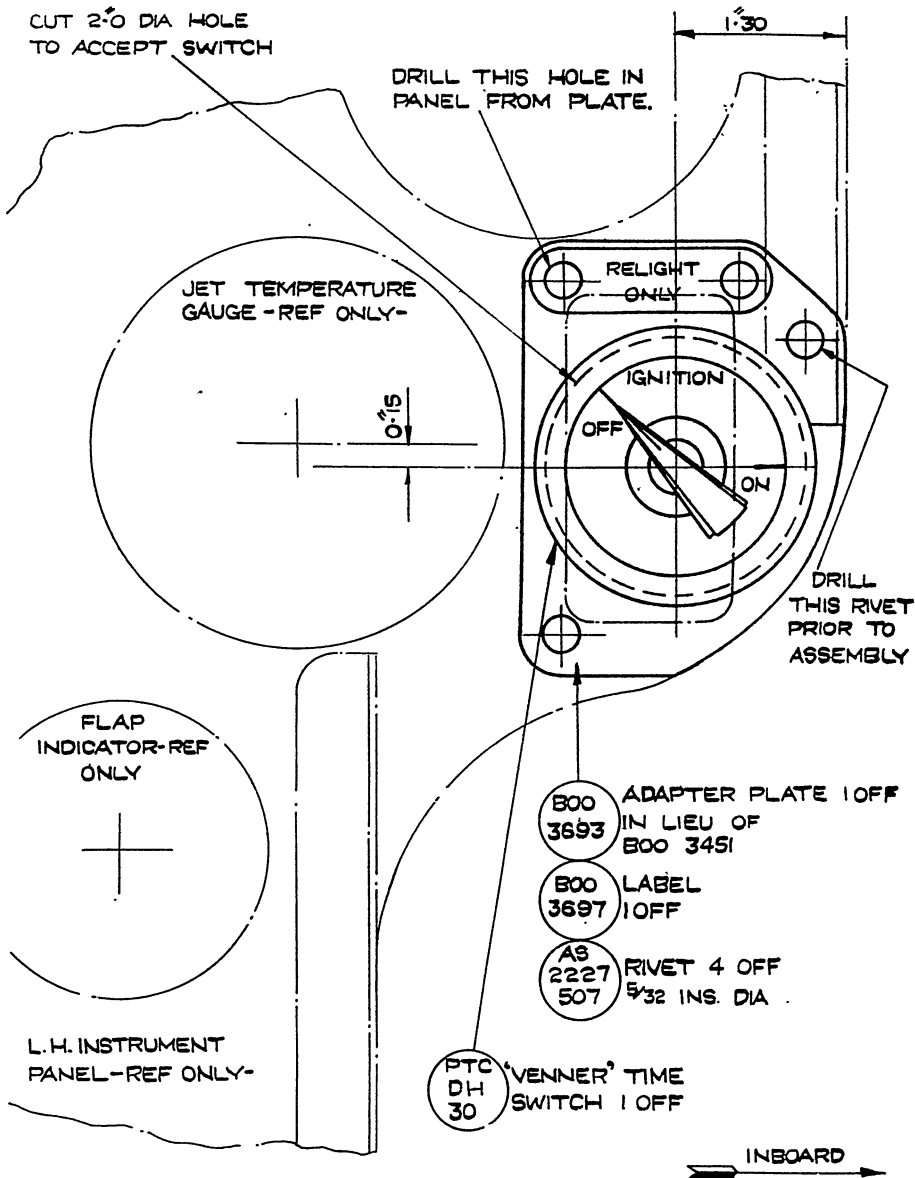


SC 1255  
FUSE 2-OFF. 1 IN HOUSING AND 1 IN LID STOWAGE  
5X 3237 SOCKET PINS 4-OFF  
5X 3149 THIMBLE 4-OFF  
THESE ITEMS REQ<sup>d</sup> AT LOOM C1 SOCKET ONLY IF SERIES 6000 SOCKET IS USED.



WIRING OF J.B.1. AND LOOM C1 TO VENNER SWITCH AND TO EXISTING Q1 RELAY ON FUSE<sup>3</sup> SIDE.





# INSTALLATION OF 'VENNER' TIME SWITCH TO INSTRUMENT PANEL

**RESTRICTED**

DRG. No. A.P.4099 G / F.10 / 54

SHEET 1

LP28688 10/54 500 C&P Gp. 959 (4)

(ii) The undermentioned parts rendered redundant by the embodiment of this modification are to be disposed of in accordance with current procedure:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/-	BOO.3451	Blanking plate	1	—
26FC/-	NOO.566	Label	1	—
26FC/2814	NOO.229A	Switch cover	1	C
26FC/-	NOO.1795ND	Distance piece	2	—

12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.71 lb., and a change of moment  $\pm$  Nil lb. ft.

*Note:*—This affects A.D.4551, Issue 3, which will be modified accordingly.

(9) Locate loom C14 which runs from junction box 2 and disconnect and remove the two cables to the booster coils 'SA.8' (Ref. only) and E (Ref. only); which are connected to pins P. and O. respectively. Secure the four new cables assembled in the previous operation, to plug C.14, connecting the one cable core 'E' to pin A, and its fellow cable core 'SA.8' to pin R. Connect the other cable core 'E' to pin O and its fellow cable core 'SA.8' to pin P. It is essential to pair off the cables correctly as above.

(10) Refer to Sheet 6 of the drawing and ascertain the position for fitting the new mounting bracket, Part No. 13 N.821A. Apply pigmented varnish jointing compound (Stores Ref. 33C/1264) to the bracket and secure in position by means of two jubilee clips, Part No. A.G.S.605/1, passed through the slots.

(11) Route the new cables, added to loom C.14 in operation (9), as shown, and bind where necessary to the loom and to the aircraft structure using beeswax coated braided stringing cord, leaving the surplus cable in the vicinity of the bracket for connection in a later operation.

(12) Referring to the same sheet of the drawing fit the two new cable assemblies, Part No. 15 N.1281A, binding where necessary with beeswax coated braided stringing cord, and securing the breeze plugs as shown into the mounting bracket fitted in operation (10). Utilise the existing 'P' clips and pass the cables through the boost coil glands, and fit four new cable ends (Stores Ref. 5K/911). Connect cores 'SA.8' to terminals S, and cores 'E' to terminals M.2. Over the redundant gland, left on removal of the cables from the loom C14, fit a new blank disc, Part No. NOO.619ND, and a new gland nut (Stores 5K/1498).

*Note:*—When high energy igniter units are *not* fitted connect the sockets to the booster coil plugs as shown. When high energy igniter units are fitted connect the sockets to them, and position two plug screening caps (Stores Ref. 5X/1963) over the ends of the booster coil plugs.

(13) Clean out all dirt and metal particles from inside the junction boxes and replace the covers. Replace the engine inspection doors and reconnect the aircraft batteries.

## 9. TESTING AFTER EMBODIMENT

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

Test the new wiring circuit for electrical continuity in accordance with current authorized procedure.

## 10. RECORDING ACTION

Record on Form 700.

## 11. DISPOSAL OF REDUNDANT PARTS

(i) The undermentioned parts rendered redundant by the embodiment of this modification are to be returned to 61 Maintenance Unit.

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
5CW/2081	Pye 83467	Micro switch	1	B

**RESTRICTED**

(5) Locate the Pye micro switch, Part No. 83467 (Ref. only), on the port side of the fuselage. Disconnect and remove the cables coded 'SA.10' (Ref. only) and 'SA.2+' (Ref. only) linking the micro switch to the Q.1 relay. Remove the micro switch from the aircraft and also the switch cover, Part No. NOO.229A (Ref. only); the label, Part No. NOO.566 (Ref. only); two distance pieces, Part No. NOO.1795ND (Ref. only); the woodscrew, Part No. A.G.S.253/37 (Ref. only); two woodscrews, Part No. A.G.S.253/44 (Ref. only).

(6) Connect the other end of the new cables fitted in operation (4) to loom C1 as follows: Connect the cable 'SA.2+' to the Venner time switch terminal 2. Connect the cable 'SA.7' to the time switch terminal 1, using two cable ends (Stores Ref. 5K/910) and two rubber boots, Part No. B.16936. Connect the cable 'SA.8' to the Q.1 relay terminal 4. Connect the cable 'SA.12+' to the Q.1 relay terminal 5. Prepare two lengths of Unipren 12 cable as necessary and link Q.1 relay terminal 3 with terminal 5; and terminal 4 with terminal 6. Run the new cable assembly, Part No. NOO.3721A, from Q.1 relay terminal 1 to the time switch terminal C, ensuring that the end of this cable bearing the cable lug goes to the time switch terminal, using a new rubber boot, Part No. B.16936. All these cables are to be bound where necessary using beeswax coated braided stringing cord (Stores Ref. 33C/10 and 32A/94).

(7) Refer to Sheet 3 of the drawing. Locate junction box 2, situated on bulkhead 4 and remove the cover. Disconnect the existing cable 'SA.8' from plug C.14, pin P only and re-route it to the spare terminal on terminal block 2. Make up three new lengths of cable Unipren 12 as shown on Sheet 4 of the drawing using six rubber sleeves (Stores Ref. 5K/2577) and six twinlay markers, Part No. T.2, four coded 'SA.8' and two coded 'E'. Connect the two cables coded 'SA.8' to the spare terminal on terminal block 2 and one of them to plug C.14, pin P, and the other to plug C.14, pin R. Connect the cable coded 'E' from plug C.14, pin A, to the earth terminal on terminal block 1.

(8) Refer to Sheet 5 of the drawing and make up four lengths of cable Unipren 12 as shown on Sheet 4 of the drawing each 4 ft. 8 in. long, using eight rubber sleeves (Stores Ref. 5K/2577) and eight twinlay markers, Part No. T.2, four coded 'SA.8' and four coded 'E'. Group the cables together in opposite pairs and pass over them the two rubber tubings, Part No. D.H.S.373/4. Connect the two new breeze sockets (Stores Ref. 5X/6004) to the two pairs of cables connecting core 'SA.8' to pin B and core 'E' to pin A. Seal the breeze sockets where the cables enter in the following manner.

(a) Pack Bostik Compound 1790 (Stores Ref. 33C/1138) into the end of the rubber tubing, filling all spaces between the cables and the wall of the tubes.

(b) Tightly bind the cables to the breeze socket in the normal manner, and also bind the rubber tubing to the cables just adjacent to, and at the rear of the breeze socket, using beeswax coated braided stringing cord.

(c) Pass the two new cut ferrules (Stores Ref. 5X/1383) over the rubber tubes and position them over the binding.

(d) Fill all spaces between the tubes and the ferrules with Bostik Compound 1790 and allow 48 hours to set.

(e) Apply two coats of Bostik Primer 1751 (Stores Ref. 33C/1139) overall, allowing the first coat to dry before applying the second.

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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:—

*(Refer to Drg. No. A.P.4099G/F.10/54.)*

(1) Disconnect the aircraft batteries. Remove the top and bottom engine inspection doors.

(2) *Refer to Sheet 1 of the drawing, locate the left-hand instrument panel in the cockpit. On the instrument panel immediately inboard of the jet temperature gauge, will be found the blanking plate, Part No. BOO 3451 (Ref. only), fitted on removal of the oil pressure gauge. Remove this plate by disconnecting the two 4 B.A. screws and nuts. Open out the two holes in the panel using a No. 22 (0.157 in. dia.) drill. Drill out the rivet at the edge of the panel adjacent to the top existing hole using the No. 22 drill. Offer up the new adaptor plate, Part No. BOO.3693, in position on the panel, aligning the three holes in the plate with those in the panel. Mark off the 2.0 in. dia. hole to be cut in the panel and also the fourth rivet hole. Cut and trim the 2.0 in. dia. hole using a half-round file and drill the rivet hole using the No. 22 drill. De-burr the rivet holes and the 2.0 in. dia. hole. Apply pigmented varnish jointing compound (Stores Ref. 33C/1264) and fit the adapter plate and new label, Part No. BOO.3697, in position and secure by means of four  $\frac{5}{16}$  in. dia. rivets, Part No. AS.2227/507. Now fit the new "Venner" time switch, Part No. P.T.C./DH/30, into the adapter plate.*

(3) *Refer to Sheet 2 of the drawing and locate junction box 1 on the starboard side of the cockpit. Remove the cover. Make up a length of cable, Unipren 12 (Stores Ref. 5E/3040) making the ends as shown on Sheet 4 of the drawing, using two rubber sleeves (Stores Ref. 5K/2577) and two twinlay markers, Part No. T.2, coded 'SA.12+'. Connect the cable to run from fuse 37 to plug C.1, pin G. Locate the fuse box cover transfer against fuse 37 and alter the inscription to read "20-ignition". Fit a new 20 amp. fuse (Stores Ref. 5CZ/1255) into the housing and fit a spare fuse (Stores Ref. 5CZ/1255) into the lid stowage.*

(4) *Locate the cable loom C.1 which runs from junction box 1 and disconnect and remove the three cables 'SA.7' (Ref. only) from pin W, 'SA.8' (Ref. only) from pin X and 'SA.2+' (Ref. only) from pin Y. Make up three new cables, Unipren 12 (Stores Ref. 5E/3040) as shown on Sheet 4 of the drawing using six rubber sleeves (Stores Ref. 5K/2577) and six twinlay markers, Part No. T.2, two coded 'SA.7', two coded 'SA.8', and two coded 'SA2+'. Make up another cable, Unipren 12, using two rubber sleeves (Stores Ref. 5K/2577) and two twinlay markers, Part No. T.2, coded 'SA.12+'. Connect the one end of the cable coded 'SA.7' to plug C.1, pin W; 'SA.8' to pin X; 'SA.2+' to pin Y; 'SA.12+' to pin G, using four socket pins (Stores Ref. 5X/3237) and four thimbles (Stores Ref. 5X/3149) only where the 6000 series socket is used.*

**RESTRICTED**

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	B 16936	Rubber boot	3	—
26FC/-	13 N 821A	Mounting bracket	1	—
26FC/-	15 N 1281A	Cable assemblies	2	—
26FC/-	DHS.373/4	Rubber tubing, each 4 ft. 6 ins. long (make from Section Ref. No. 32C/407)	2	—
5CW/5275	P.T.C./DH/30	Venner time switch	1	A
28E/8183	A.G.S.605/1	Clip hose	2	C
28Q/10406	AS.2227/507	Rivet $\frac{5}{16}$ ins. dia.	4	C
5K/-	T.2	Twinlay marker coded 'E'	6	C
5K/-	T.2	Twinlay marker coded 'SA.2+	2	C
5K/-	T.2	Twinlay marker coded 'SA.7'	2	C
5K/-	T.2	Twinlay marker coded 'SA.8'	10	C
5K/-	T.2	Twinlay marker coded 'SA.12+	4	C

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
5CZ/1255		Fuse, 20 amp.	2	C
5K/910		Cable end	2	C
5K/911		Cable end	4	C
5K/1498		Gland nut	1	C
5K/2577		Rubber sleeve	24	C
5X/1383		Cut ferrule	2	C
†5X/1963		Cap plug screening	2	C
*5X/3149		Thimble	4	C
*5X/3237		Pin socket	4	C
5X/6004		Breeze socket	2	B

†These items are only required where the 6000 series socket is used. At other times they are to be returned to stores and retained as spares.

\*This item will be required only when an engine with high energy ignition equipment is fitted. At other times, these parts are to be retained in stores pending requirement.

The complete Kit is to be demanded from No. 25 Maintenance Unit under Stores Ref. No. 26FC/100963.

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
5E/3040		Cable Unipren 12	As reqd.	C
32A/94		Cord braided stringing	As reqd.	C
33C/10		Beeswax	As reqd.	C
33C/1264		Compound, pigmented varnish jointing	As reqd.	C
33C/1138		Bostik Compound, pressure cabin sealing 1790	As reqd.	C
33C/1139		Bostik Primer 1751	As reqd.	C

(2) Special Tools and Test Equipment

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

Vampire F.B. Mk. 9 Aircraft—Electrical—Provision for High Energy  
Ignition Equipment—Introduction

(MOD. NO. VAMPIRE/963.)

(Class B/2, concurrently with Mod. No. Goblin/984, C.W.P.)

(AB/A/1173.—5.10.54.)

1. INTRODUCTION

This modification is necessitated by the fitment of engines with high energy ignition equipment. It makes the necessary changes to the electrical installation, and provides for the fitting of a re-light switch, in the cockpit. Provision is also made for contact to the booster coils for use when engines are fitted without high energy equipment.

This modification is essentially connected with Mod. No. Vampire 3076 (to delete Oil Pressure Gauge, Stores Ref. 6A/1563) if that work is not already embodied it must be effected concurrently.

2. EMBODIMENT

(1) This modification is to be embodied by Contractor's Working Party (Command arrangements Overseas) concurrently with the embodiment of Mod. No. GOBLIN/984 or when an engine with Mod. No. GOBLIN/984 is received as a replacement.

(2) Where an engine which has Mod. No. GOBLIN/984 embodied (not rendered temporarily inoperative) is already installed, this modification is to be embodied by Contractor's Working Party (Command arrangements Overseas) in:—

*2nd Line Servicing Units:* At the first opportunity (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:* Before issue of aircraft.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 10 man-hours ( $\frac{1}{2}$  hour strip; 8 $\frac{1}{2}$  hours to embody; 1 hour re-assembly.) This does not include the drying time of the Bostik compound.

4. DRAWINGS REQUIRED

Drawing No. A.P.4099G/F.10/54, Sheets 1-6, 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/-	BOO 3693	Adapter plate	1	—
26FC/-	BOO 3697	Label	1	—
26FC/-	NOO 619ND	Blank disc	1	—
26FC/-	NOO 3721A	Cable.assy.	1	—

RESTRICTED





**Vampire F.B. Mk. 9 Aircraft—Electrical—Provision for High Energy Ignition  
Equipment—Introduction**

(AB/A/1173.—8.3.56.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.10 (Mod. No. Vampire/963) is amended as follows:—

- (1) Heading, Class *delete* "(Class B/2, concurrently with Mod. No. Goblin/984 C.W.P.)" and *substitute*:

"(Class B/2, essential on fitment of engines embodying Goblin Mod. 786 Concurrently with Mod. 3076 if not already embodied. The prior embodiment of Mod. 954 is essential on aircraft embodying Mod. 668—C.W.P)".



1267 W. LTD.

of 10 mm. i.d. P.V.C. tubing (Stores Ref. 32C/604) and feed one end of the cables and the P.V.C. through the flap cut in the loom covering. Connect the four cables 'SA2+' to pin 'Y', 'SA7' to pin 'W', 'SA8' to pin 'X' and 'SA12+' to pin 'G', using four socket pins (Stores Ref. 5X/3237) and four thimbles (Stores Ref. 5X/3149) only where a type 6000 series socket is fitted. Close the flap in the main loom P.V.C., re-assemble the socket and lash the new cables securely to the loom. Seal the P.V.C. flap and cut-out with Bostik 1790 sealing compound (Stores Ref. 33C/1138) packed into the gap around the cable and finishing with Bostik 1751 sealing compound (Stores Ref. 33C/1139) around the joint."

(4) Para. 8, *After operation* (6) *insert*:

"*Note*:—In some cases the switch may be fitted with a back cover which does not allow the rubber boots to be correctly fitted. In these cases the boots should be ignored and instead the rear of the switch must be sealed with P.I.C. No. 2 (Stores Ref. 33C/887) before fitting the cover."

(5) DRG. NO. A.P.4099G/F.10/54, SHEET 1. *Delete* the balloon reference "AS.2227/507 and Rivet  $\frac{3}{8}$  in. dia. 4-off" and *insert* two new balloon references "A44/B16, Screw, brass, roundhead 4-off" and "A.G.S.2001/B4, stiffnut, brass, 4-off" and *add*:

"*Note*:—Open up the plate attachment holes using a No. 26 (0.147 in. dia.) drill."

RESTRICTED

# Vampire F.B. Mk. 9 Aircraft—Electrical—Provision for High Energy Ignition Equipment—Introduction

(AB/A/1173.—1.9.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.10 (Mod. No. Vampire/963), is amended as follows:—

(1) Para. 5, sub-para. (1), section (b), "Materials to be provided under Unit arrangements". *Add in sequence*

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
"28S/2413	A.44/B16	Screw, brass, roundhead, 4 B.A.	4	C
28M/10274	A.G.S.2001/B4	Stiffnut, brass, 4 B.A.	4	C
32C/604	—	Tubing P.V.C., 10 mm. i.d.	As reqd.	C
33C/887	—	Compound, Protective insulating No. 2	As reqd.	C"

(2) Para. 8, operation (2). *Delete and substitute* new operation:

"(2) Referring to Sheet 1 of the drawing, locate the L.H. instrument panel in the cockpit. On the instrument panel immediately inboard of the jet pipe temperature gauge, will be found the blanking plate, Part No. BOO.3451 (ref. only), fitted on removal of the oil pressure gauge. Remove this plate by disconnecting the two 4 B.A. screws and nuts. Open out the two attachment holes in the panel, using a No. 26 (0.147 in. dia.) drill. Drill out the rivet at the edge of the panel adjacent to the top existing hole also using the No. 26 drill. Offer up the new adaptor plate, Part No. BOO.3693, in position on the panel, aligning the three holes already drilled and mark off the 2.0 in. dia. hole to be cut in the panel. Also, use the No. 26 drill and drill through the fourth attachment hole. Remove the plate and cut and trim the 2.0 in. dia. hole in the panel; deburr this hole and the attachment holes. Apply pigmented varnish jointing compound (Stores Ref. 33C/1264) and fit the adaptor plate and a new label, Part No. BOO.3697, in position, securing them to the panel with four brass roundhead screws and stiffnuts, Part Nos. A44/B16 and A.G.S.2001/B4 respectively. Fit the new 'Venner' time switch, Part No. P.T.C./D.H./30, into the adaptor plate."

(3) Para. 8, operation (4). *Delete and substitute* new operation:

"(4) Locate cable loom C1 and disconnect it from junction box No. 1. Dismantle the socket and disconnect the cables coded 'SA7', 'SA8' and 'SA2+' from pins 'W', 'X' and 'Y' respectively. Cut these cables back, insulate them and leave them redundant in the loom. Trace these three cables back to their connections at their other ends ('SA7' at terminal 1 of the type 'Q' relay mounted just forward of the throttle box, 'SA8' at terminal 'A' on the boost coil cut-out switch and 'SA2+' at terminal 'B' on the same switch) and disconnect, insulate and tape back. Cut a flap in the loom P.V.C. about 2 in. or 3 in. back from the socket. Make up four new cables of unipren 12 Spec. B.S. E21 (Stores Ref. 5E/3040) to run with loom C1 to the destinations shown on Sheet 2 of the drawing and prepare the ends as shown on Sheet 4 of the drawing, using eight rubber sleeves (Stores Ref. 5K/2577). Code the cables 'SA2+', 'SA7', 'SA8' and 'SA12', using appropriately coded twinlay markers, Part No. T.2. Thread these new cables through a length



A.L. No. 122  
(Camera gun circuit)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.9  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Provision for Testing Camera Gun Circuit  
without interference with Gun Firing Safety Circuit—Introduction

(Mod. No. VAMPIRE/3146.)

(Class B/2.)

(7/Mods/17,623.—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**

**RESTRICTED**

(46881/475) 229717 8245 125 4/57 (H.P.W.) (Gp. 19/1)

1954 - 1955  
0.1 1000 1000  
10000000

1956 - 1957  
0.1 1000 1000  
10000000

1958 - 1959  
0.1 1000 1000  
10000000

1960 - 1961  
0.1 1000 1000  
10000000

1962 - 1963  
0.1 1000 1000  
10000000

1964 - 1965  
0.1 1000 1000  
10000000

1966 - 1967  
0.1 1000 1000  
10000000

1968 - 1969  
0.1 1000 1000  
10000000

1970 - 1971  
0.1 1000 1000  
10000000

1972 - 1973  
0.1 1000 1000  
10000000

1974 - 1975  
0.1 1000 1000  
10000000

1976 - 1977  
0.1 1000 1000  
10000000

1978 - 1979  
0.1 1000 1000  
10000000

1980 - 1981  
0.1 1000 1000  
10000000

ALA<sup>205</sup>

(Camera gun circuit)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.9  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Provision for Testing Camera Gun  
Circuit without interference with Gun Firing Safety Circuit—  
Introduction**

(7/Mods/17,623.—16.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.9 (Mod. No. Vampire/3146), is amended as follows:—

(1) Heading, Class. *Delete* “(Class B/2)” and *substitute* “(Class B/4)”.

(2) Para. 2. *Delete* in toto and *substitute*:

**“2. EMBODIMENT**

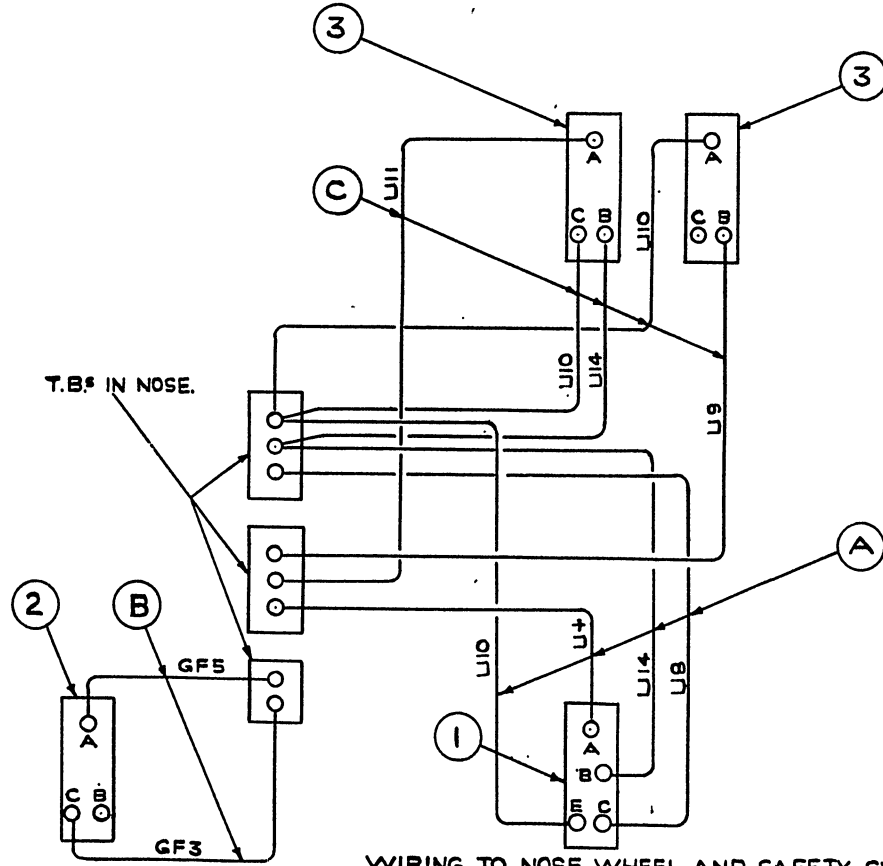
No further retrospective action is required on this modification.”

*Note:—Holders of A.P.4099G, Vol. 2, Part 1, may not be in possession of Leaflet No. F.9, but the Token Leaflet (A.L. No. 122), dated 22.3.57 only. In which case the Token Leaflet is to be amended as indicated above.*

**R**

**RESTRICTED**

DRG. № A.P.4099G/F.8 / 53  
SHEET 6

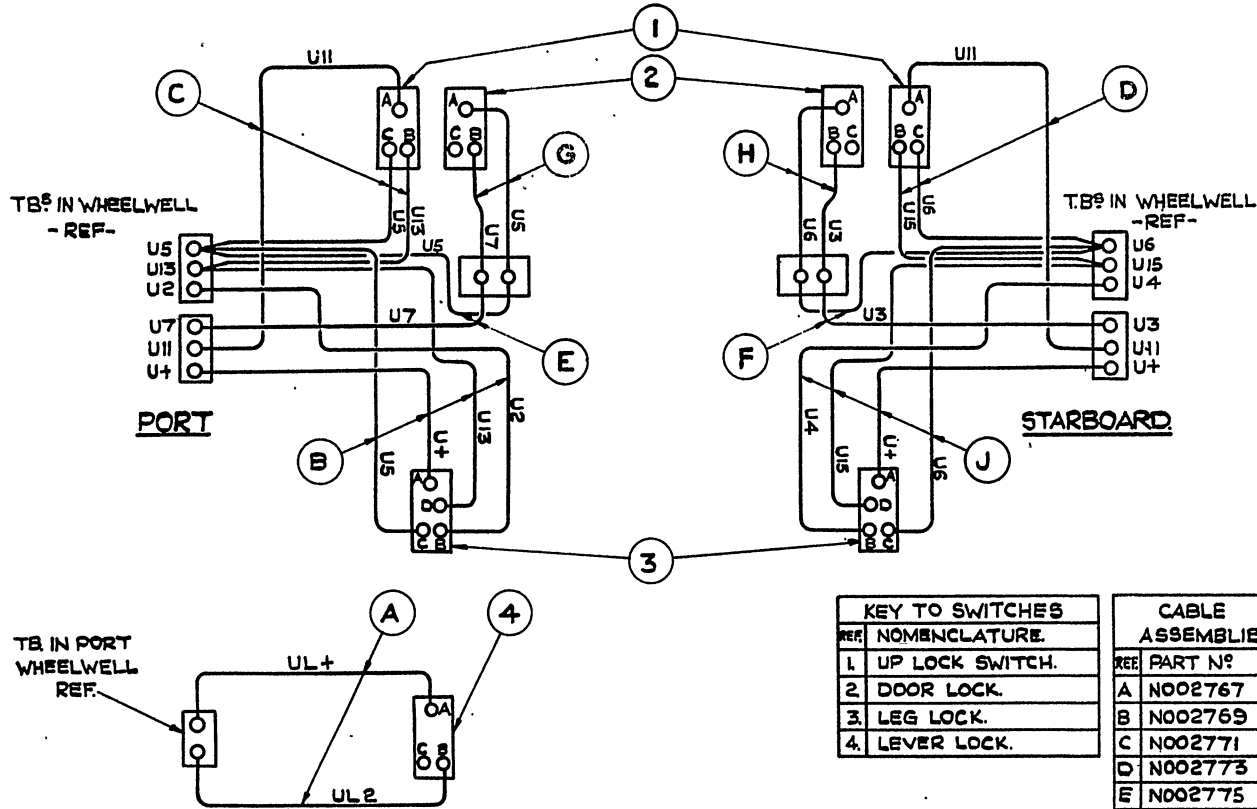


KEY TO SWITCHES	
KEY	NOMENCLATURE
1	LEG LOCK SWITCH
2	SAFETY SWITCH
3	UP LIMIT SWITCH



RESTRICTED

DRG. NO. A.P.4099 G/F.8 / 53  
SHEETS

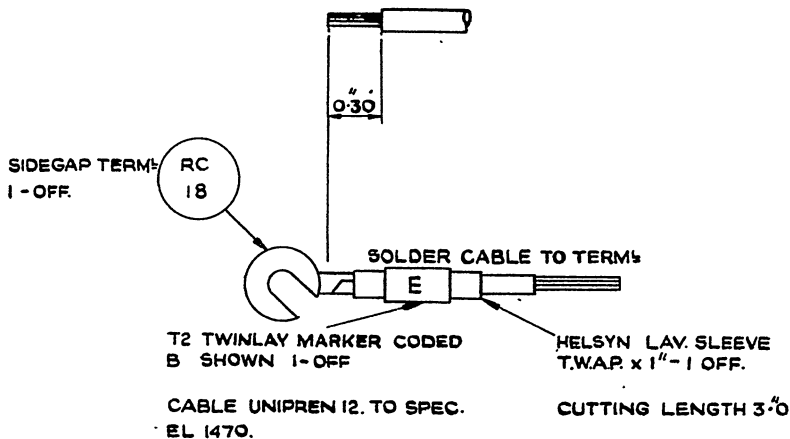


WIRING OF MAIN U/C. BETWEEN T.B.s AND SWITCHES.



1





STARTER PANEL EARTH AS SHOWN ON SHEET 1.

CABLES TO BE COVERED WITH POLYVINAL.					
PART N°	DIA	LENGTH	PART N°	DIA	LENGTH
N002707	3/8	7'-0	N002765	3/8	2'-6"-0
N002711	1/2	17'-5	N002775	3/8	6'-3"-0
* N002719	3/8	2'-10"-0	N002777	3/8	6'-3"-0
N002723	3/8	2'-0	N002779	3/8	2'-2"-0
N002741	5/8	1'-8"-0	N002791	3/8	1'-7"-0
N002759	3/8	3'-10"-0	N003445MC	3/8	7'-4"-0 *
N002761	5/8	1'-10"-0	N003447ND	3/8	7'-11"-0 *

\* APPLICABLE ONLY TO A/C WITH VAM.393 NOT EMBODIED.

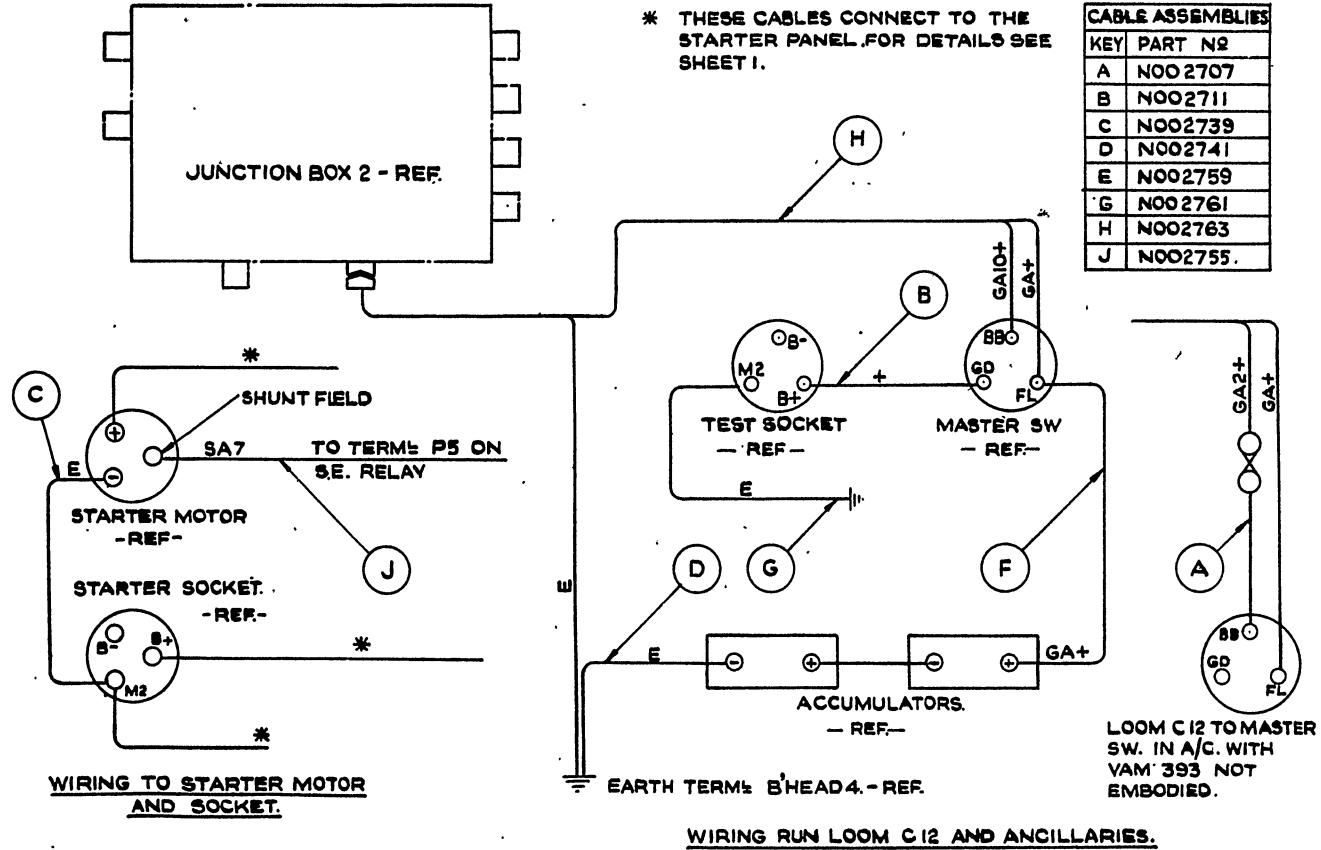
**RESTRICTED**

DRG. N° A.P.4099G / F. 8 / 53  
SHEET 7

RESTRICTED

DRG. NO. A.P.40996/F.8 / 53

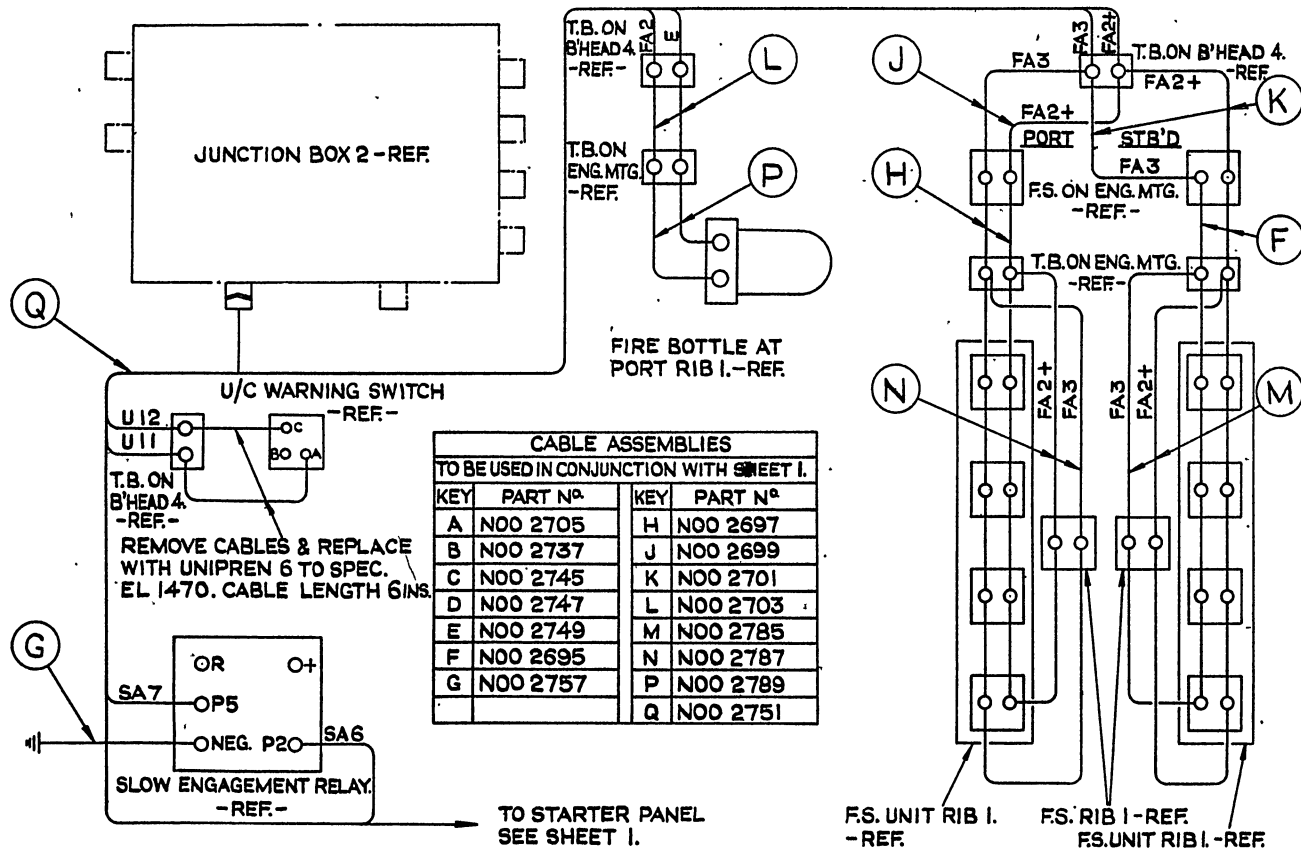
SHEET 4



RESTRICTED

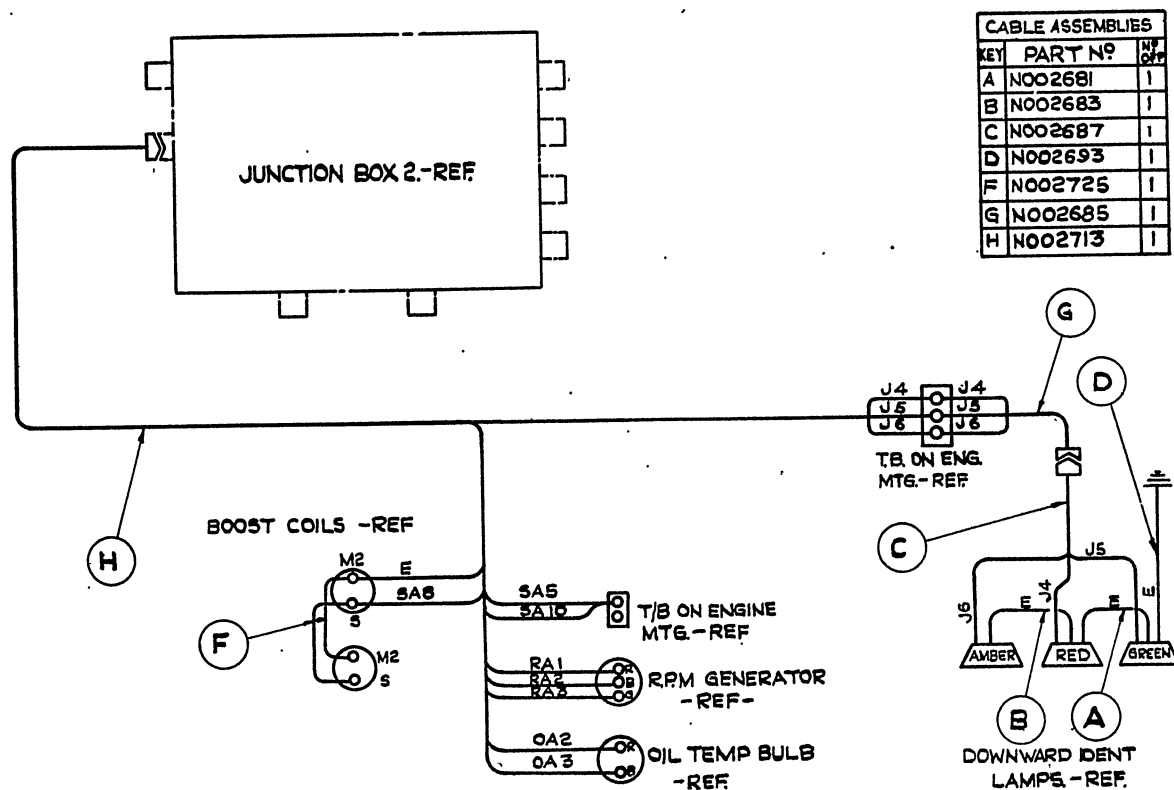
DRG. N° AR4099G/F.8/53

SHEET 3



RESTRICTED

DRG. N° AR4099G / F. 8 / 53  
SHEET 2



CABLE ASSEMBLIES		
KEY	PART N°	WP OFF
A	N002681	1
B	N002683	1
C	N002687	1
D	N002693	1
F	N002725	1
G	N002685	1
H	N002713	1

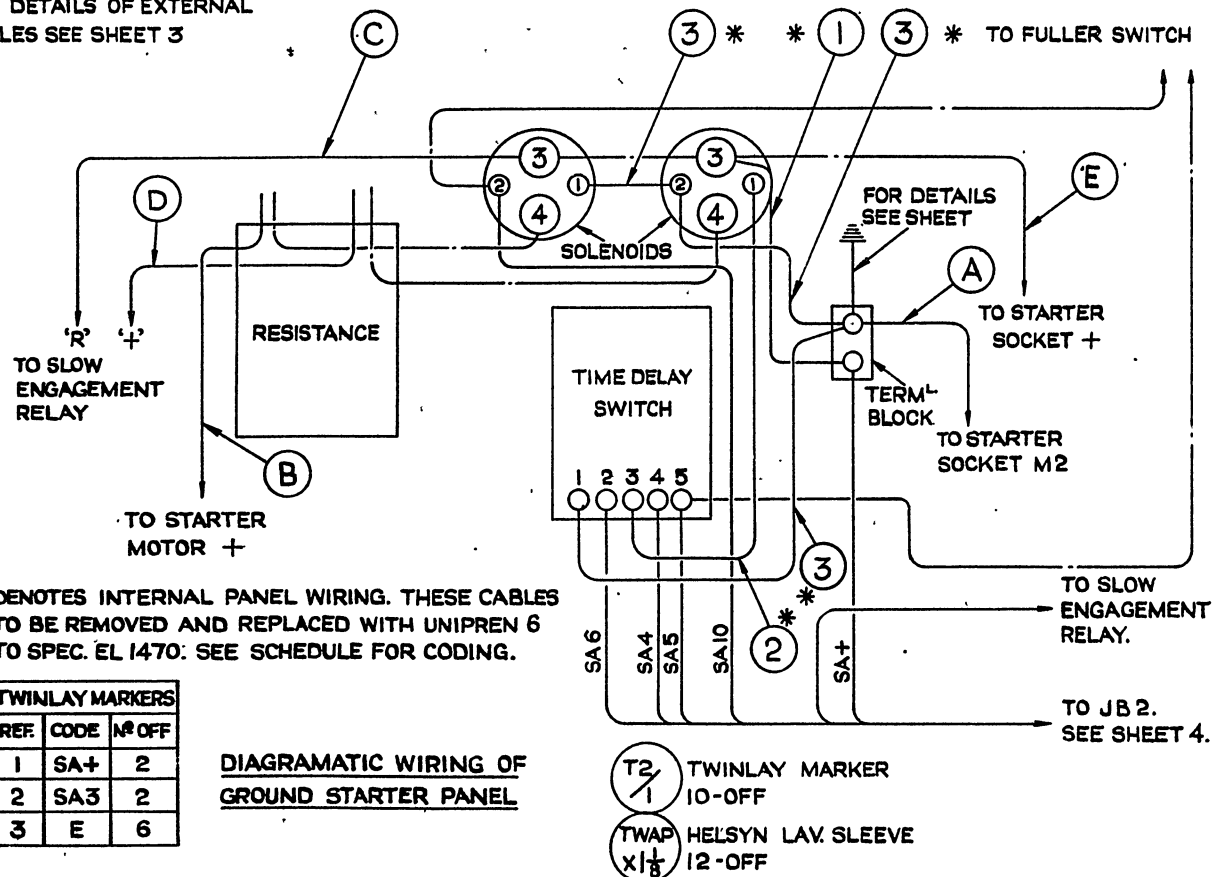
WIRING RUN LOOM C14 AND ANCILLARIES.

DRG. № А.Р.40996/Ф.8/53  
SHEET 1

\* DENOTES INTERNAL PANEL WIRING. THESE CABLES TO BE REMOVED AND REPLACED WITH UNIPREN 6 TO SPEC. EL 1470: SEE SCHEDULE FOR CODING.

TWINLAY MARKERS		
REF.	CODE	Nº OFF
1	SA+	2
2	SA3	2
3	E	6

### DIAGRAMATIC WIRING OF GROUND STARTER PANEL



(5) Remove the cable connected from the starter panel 2-way terminal block to the starter panel earth terminal. Make up the new earth cable as detailed in Sheet 7 of the drawing, and fit it to the starter panel in exactly the same position as the redundant cable.

(6) Refer to Sheet 1 of the drawing, remove the existing starter panel wiring and replace with Unipren 6 to Specification EL.1470, as indicated.

*Note:*—The following operations (7) and (8) refer only to aircraft with Mod. No. Vampire/921 embodied retrospectively.

(7) Remove and dispose of the engine starter safety switch and terminal block No. 17 located on the port top aft face of the fireproof bulkhead.

(8) Remove the cover of junction box 2. Disconnect the link from pins K, L and M in plug C.13 and insert A link between K and L. Re-route the internal cable SA6 from plug C.7 (pin F), at present going to C.13 (pin F), to C.13 (pin L). Replace the cover of junction box 2.

(9) Disconnect and remove the undercarriage warning switch, Part No. NOO 60 (ref. only), located on the port top aft face of the fireproof bulkhead, and retain it with the attachment items for re-assembly.

(10) Remove and dispose of the existing switch wiring and replace with Unipren 6 to Specification EL 1470. The ends of the new cables are to be bared 0.5 in.

(11) Re-connect and secure the switch to the bulkhead, using the original attachment items.

*Note:*—In the following operations (12) to (14), it is recommended that each lead be modified individually to eliminate incorrect coding and re-connection.

(12) Locate the leads from loom C.9A, which are routed through the wall of the port wheel well, to the two terminal blocks positioned in the wheel well, and disconnect them.

(13) Remove the Twinlay markers coded U+, U2, U7, U11, and the Helsyn lavender sleeves under the markers. Cover each lead to well under the large Helsyn end with a suitable length of 3 mm P.V.C. tube. Fit to each lead a new Helsyn lavender sleeve and a new Twinlay marker coded the same as the one removed.

(14) Re-connect the leads to the terminal blocks and repeat operations (12) to (14) for the leads from loom C.10 coded U+, U3, U4, U11, to the terminal blocks in the starboard wheel well.

(15) Replace the engine and refit the engine cowlings.

(16) Re-connect the aircraft accumulators and carry out a functional test of all electrical circuits affected by this modification.

(17) Replace all cover and access panel removed to facilitate embodiment of this modification and repair the finish, using primers and cellulose matching to Specification D.T.D.754.

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/2773	NOO 60A	Micro switch assy.	NOO 60A/1	26FC/4698
26FC/—	NOO 78A	Assy. and wiring ground starter panel	NOO 78A/1	26FC/—

5. The undermentioned parts comprise a Set, and are to be demanded as Sets 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.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/—	NOO 2681	Cable	1	C
26FC/—	NOO 2683	Cable	1	C

**RESTRICTED**



<i>Part No.</i>	<i>Run of Cable</i>	<i>Replaced by</i>
<i>Wiring Run Loom C.12 and Ancillaries. (See Sheet 4 of the drawing).</i>		
NOO 615 or 1745	From master switch terminal B.B. to fusebox	NOO 2707
NOO 277 or 1239	From master switch terminal GD. to test socket terminal B+	NOO 2711
NOO 85	From starter motor — terminal to starter socket terminal M2	NOO 2739
<i>Starboard</i>		
NOO 213	From — terminal to stbd. earth terminal on bulkhead 4	NOO 2741
NOO 1743	From battery + terminal to master switch FL terminal	NOO 2759
NOO 1741	From test socket terminal M2 to earth terminal on fireproof bulkhead	NOO 2761
NOO 1751	From starter motor shunt field terminal to slow engagement relay terminal P5	NOO 2755
NOO 1801	Loom assy. C.12 from junction box 2, to:— Master switch (GA10 GA+). Earth terminal bulkhead 4 (E)	NOO 2763
*NOO 94	Loom assy. C.12 from junction box 2, to:— Master switch fuse box (GA2+) master switch (GA+) earth terminal bulkhead 4 (E)	NOO 2719

*Wiring of Main Undercarriage between T BS and Switches. (See Sheet 5 of the drawing).*

<i>Port</i>		
NOO 290	From u/c lever lock switch to T.B. in wheel well	NOO 2767
NOO 292	From leg lock switch to T.B. in wheel well	NOO 2769
NOO 1007	From up lock switch to T.B. in wheel well	NOO 2771
NOO 1005	From T.B. on rib 5 to T.B. in wheel well	NOO 2775
NOO 1003	From micro switch on wheel door to T.B. on rib 5	NOO 2781 (LH)

<i>Starboard</i>		
NOO 310	From leg lock switch to T.B. in wheel well	NOO 2791
NOO 1008	From up lock switch to T.B. in wheel well	NOO 2773
NOO 1006	From T.B. on rib 5 to T.B. in wheel well	NOO 2777
NOO 1004	From micro switch on wheel door to T.B. on rib 5	NOO 2783 (RH)

*Wiring of Nosewheel and Gun Safety Switches. (See Sheet 6 of the drawing).*

NOO 286	From leg lock switch to T.B. in nose	NOO 2723
NOO 665	From gun safety to T.B. in nose	NOO 2765
NOO 287	From up limit switches to T.B. in nose	NOO 2779

The following cable is not shown in the drawing:—

NOO 1281A	From T.B. in main tank bay to fuel pressure switch unit	NOO 3403A
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\* These cables are for aircraft with Mod. No. Vampire/393 not embodied. Where loom C.12 assy., Part No. NOO 94, is replaced by Part No. NOO 2719, this loom is to be made from the loom C.12, Part No. NOO 2763, as follows:—

(a) Remove the braided stringing cord binding the cut ferrule to the loom. Unscrew the coupling nut, open up and remove the socket and remove the cable coded GA+ and GA10+ from pins A and 2, respectively.

(b) Cover with P.V.C. tube, as specified in Sheet 7 of the drawing, the remaining cable and the two cable assemblies, Part Nos. NOO 3445 AND and NOO 3447 AND, and connect them to pins 1 and 2 of the socket, respectively.

(c) Re-assemble the socket, bind the ferrule with braided stringing cord in the way of the slot and re-number the loom NOO 2719.

**RESTRICTED**

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
5F/2031	Tubing, insulating	$\frac{1}{2}$ in. $\times$ 6 ft.	C
5F/2045	Tubing, insulating	approx. $\frac{3}{8}$ in. $\times$ 3 ft.	C
5K/1604	Cable end, fork, type 2Ba	6 in. approx. 1	C

7. (1) 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/-	NOO 1749	Cable	1	C
26FC/-	NOO 1755	Cable	1	C
26FC/-	NOO 1757	Cable	1	C
26FC/-	NOO 1747	Cable	1	C
26FC/2801	NOO 86	Cable	1	C
26FC/2794	NOO 213	Cable	1	C
26FC/-	NOO 1801 or 94A	Loom assy.	1	C
26FC/-	NOO 1735	Loom assy.	1	C
26FC/-	NOO 1741	Cable	1	C
26FC/-	NOO 1743	Cable	1	C
26FC/-	NOO 1751	Cable	1	C
26FC/-	NOO 1281A	Cable	1	C
26FC/2799	NOO 84	Cable	1	C
26FC/2800	NOO 85	Cable	1	C
26FC/-	NOO 1008	Cable	1	C
26FC/-	NOO 310	Cable	1	C
26FC/-	NOO 1006	Cable	1	C
26FC/-	NOO 546	Cable	1	C
26FC/2791	NOO 277 or 1239	Cable	1	C
26FC/-	NOO 615 or 1745	Cable	1	C
26FC/-	NOO 533 or 1733	Loom assy.	1	C
26FC/2788	NOO 312	Cable	1	C
26FC/2785	NOO 313	Cable	1	C
26FC/2786	NOO 314	Cable	1	C
26FC/2787	NOO 315	Cable	1	C
26FC/2789	NOO 264	Cable	1	C
26FC/2782	NOO 316	Cable	1	C
26FC/-	NOO 35	Cable	1	C
26FC/-	NOO 256	Cable	1	C
26FC/-	NOO 617 ND	Cable	1	C
26FC/-	NOO 618 ND	Cable	1	C
26FC/-	NOO 1007	Cable	1	C
26FC/-	NOO 292	Cable	1	C
26FC/-	NOO 1005	Cable	1	C
26FC/-	NOO 290	Cable	1	C
26FC/-	NOO 545	Cable	1	C
26FC/-	NOO 547	Cable	1	C
26FC/-	NOO 544	Cable	1	C
26FC/-	NOO 287	Cable	1	C
26FC/-	NOO 286	Cable	1	C
26FC/-	NOO 665	Cable	1	C
26FC/-	NOO 1003	Cable	1	C
26FC/-	NOO 1004	Cable	1	C

(2) In aircraft with Mod. No. Vampire/921 embodied retrospectively and modified to para. 3, the following items are also redundant:—

26FC/2773	NOO 60A	Switch, engine starter safety	1	A
5C/430	—	Block, terminal	1	B

*Note*:—This affects A.D.4551 which will be modified accordingly.

**RESTRICTED**

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/-	NOO 2685	Cable	1	C
26FC/-	NOO 2687	Cable	1	C
26FC/-	NOO 2693	Cable	1	C
26FC/-	NOO 2695	Cable	1	C
26FC/-	NOO 2697	Cable	1	C
26FC/-	NOO 2699	Cable	1	C
26FC/-	NOO 2701	Cable	1	C
26FC/-	NOO 2703	Cable	1	C
26FC/-	NOO 2705	Cable	1	C
26FC/-	NOO 2707	Cable	1	C
26FC/-	NOO 2711	Cable	1	C
26FC/-	NOO 2713	Loom assy.	1	C
26FC/-	NOO 2723	Cable	1	C
26FC/-	NOO 2725	Cable	1	C
26FC/-	NOO 2737	Cable	1	C
26FC/-	NOO 2739	Cable	1	C
26FC/-	NOO 2741	Cable	1	C
26FC/-	NOO 2745	Cable	1	C
26FC/-	NOO 2747	Cable	1	C
26FC/-	NOO 2749	Cable	1	C
26FC/-	NOO 2751	Loom assy.	1	C
26FC/-	NOO 2755	Cable	1	C
26FC/-	NOO 2757	Cable	1	C
26FC/-	NOO 2759	Cable	1	C
26FC/-	NOO 2761	Cable	1	C
26FC/-	NOO 2763	Loom assy.	1	C
26FC/-	NOO 2765	Cable	1	C
26FC/-	NOO 2767	Cable	1	C
26FC/-	NOO 2769	Cable	1	C
26FC/-	NOO 2771	Cable	1	C
26FC/-	NOO 2773	Cable	1	C
26FC/-	NOO 2775	Cable	1	C
26FC/-	NOO 2777	Cable	1	C
26FC/-	NOO 2779	Cable	1	C
26FC/-	NOO 2781	Cable	1	C
26FC/-	NOO 2783	Cable	1	C
26FC/-	NOO 2785	Cable	1	C
26FC/-	NOO 2787	Cable	1	C
26FC/-	NOO 2789	Cable	1	C
26FC/-	NOO 2791	Cable	1	C
26FC/-	NOO 3403A	Cable assy.	1	C
26FC/-	NOO 3445 AND	Cable assy.	1	C
26FC/-	NOO 3447 AND	Cable assy.	1	C
5E/3038	—	Cable, Unipren 6, Spec. EL.1470, 10 ft. long	1	C
5K/2576	—	Sleeve, Helsyn lavender twap × 1½	20	C
5K/2577	—	Marker, Twinlay, T.2/1	20	C
5F/1795	—	Tubing, insulating, 3 mm. dia.	3 ft.	C

6. The following items are also 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>
32A/94	Cord, stringing braided	As reqd.	C
33C/10	Beeswax	As reqd.	C
33B/208, 261, 672, 674 or 692	Primers and cellulose matching to Spec. D.T.D.754	As reqd.	C
5F/2028	Tubing, insulating	½ in. × 40 ft. approx.	C

**RESTRICTED**

<i>Part No.</i>	<i>Run of Cable</i>	<i>Replaced by</i>
<i>Diagrammatic Wiring of Ground Starter Panel. (See Sheet 1 of the drawing).</i>		
NOO 1747	From earth terminal on starter panel 2-way T.B. to starter socket terminal M2	NOO 2705
NOO 84	From inboard terminal on starter panel resistance to starter motor + terminal	NOO 2737
NOO 1757	From outboard terminal on starter panel resistance to slow engagement relay + terminal	NOO 2747
NOO 1755	From starter panel inboard solenoid terminal 3 to slow engagement relay terminal R	NOO 2745
NOO 86	From starter panel outboard solenoid terminal 3 to starter socket + terminal	NOO 2749
<i>Wiring Loom C14 and Ancillaries. (See Sheet 2 of the drawing).</i>		
NOO 545	From T.B. on port engine mtg. to socket on tail cone frame 1	NOO 2685
NOO 35	From the socket on tail cone frame 1 to the 3 downward ident. lamps	NOO 2687
NOO 617ND	From red to green ident. lamps	NOO 2681
NOO 618ND	From red to amber ident. lamps	NOO 2683
NOO 256	From green ident. lamp to earth terminal	NOO 2693
NOO 264	Link cable between booster coils on starboard engine mtg.	NOO 2725
NOO 533 or 1733	Loom assy. C.14 from junction box 2 to:— Top boost (coil (E.SA8) spare T.B. on engine mtg. SA5.SA10) r.p.m. generator (RA1. RA2. RA3) oil temp bulb (OA2. OA3) T.B. on stbd. engine mtg. (J4. J5. J6)	NOO 2713
<i>Wiring Run Loom C13 and Ancillaries. (See Sheet 3 of the drawing).</i>		
<i>Port</i>		
NOO 314	From flame switch on engine mtg. to T.B. on engine mtg.	NOO 2697
NOO 547	From T.B. on engine mtg. to flame switch at rib 1	NOO 2787
NOO 315	From outboard T.B. on bulkhead 4 to flame switch on engine mtg.	NOO 2699
NOO 312	From inboard T.B. on bulkhead 4 to T.B. on engine mtg.	NOO 2703
NOO 544	From T.B. on engine mtg. to fire bottle at rib 1	NOO 2789
<i>Starboard</i>		
NOO 313	From flame switch on engine mtg. to T.B. on engine mtg.	NOO 2695
NOO 546	From T.B. on engine mtg. to flame switch at rib 1	NOO 2785
NOO 316	From outboard T.B. on bulkhead 4 to flame switch on engine mtg.	NOO 2701
NOO 1749	From slow engagement relay 'neg' terminal, to earth terminal on rib 1	NOO 2757
NOO 1743	Loom assy. 0-13 from junction box 2, to:— Inboard T.B. on bulkhead 4 (FA2.E) outboard T.B. on bulkhead 4 (FA3.FA2+) T.B. on top aft face bulkhead 4 (U11.U12) slow engagement relay terminals P2, P5 (SA6, SA7) terminal 2, 4, 5 on starter panel 5-way T.B. (SA4, SA5, SA6) terminal 2 on starter panel inboard solenoid (SA10) starter panel 2-way T.B. (SA+)	NOO 2751

**RESTRICTED**

**Vampire F.B. Mk. 9 Aircraft—To replace Cables used for Fire Warning and Extinguisher Circuits by Prenmet and replace Cel and Vin Cables ending in Undercarriage and Engine Bays and Tail Cone by Pren**

(MOD. NO. VAMPIRE/934.)

(Class B/2.)

(7/Mods/12,377.—27.6.53.)

*Note:—This leaflet supersedes and is the authority for cancelling A.P.4099G, Vol. 2, Part 1, Leaflet No. F.5 (A.L. No. 55).*

1. This modification introduces Prenmet type cable in fire warning and fire extinguisher circuits running *aft* from the firewall, in conjunction with Mod. No. Vampire/965 (which introduces a fire resisting type of cable in place of unirubber from inside the engine bay forwards) and ensures the proper functioning of the fire warning and extinguisher systems, since the unsuitable Dumet cable has been fitted on some aircraft. The modification also introduces pren type cables in the undercarriage and engine bays and tail cone, to replace vin or cel type cables which have their ends exposed in these locations. It has been found that these cable ends deteriorate rapidly when subjected to heat, weather and kerosene soakage. Mod. No. Vampire/934 supersedes and cancels S.T.I./Vampire/35A and SFI No. TF.540. The fuse covering the downward identification lights removed under the latter instruction must be replaced. Mod. Nos. 934 and 965 supersede and cancel S.T.I./Vampire/36C. Mod. No. Vampire/921 must be embodied prior to or concurrently with this modification.

The work will take approximately 50 man-hours.

*Note:—Where Mod. No. Vampire/921 has been embodied retrospectively, reference must be made to operations (7) and (8).*

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

*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:—

(Refer to Drg. No. A.P.4099G/F.8/53, Sheets 1-7.)

(1) Drain the fuel system and disconnect the aircraft accumulators.

(2) Remove the engine cowlings and remove the engine.

(3) Refer to the schedule of Sheet 7 of the drawing, and fit P.V.C. tubing, as detailed. If, on some of the cables, the tubing is not a snug fit, secure it at each end with braided stringing cord, previously waxed with beeswax.

(4) Locate the undermentioned cables, remove them from the aircraft and replace with the new type cables, as detailed. The new cables are to be routed and secured in exactly the same positions as the redundant ones:—



**RESTRICTED**



.....  
(Pren and Prenmet cables)

**A.P.4099G, Vol. 2, Part 1**  
**Leaflet No. F.8**  
**(Alteration 2)**

**Vampire F.B. Mk. 9 Aircraft—To replace Cables used for Fire Warning and Extinguisher Circuits by Prenmet, and replace Cel and Vin Cables ending in Undercarriage and Engine Bays and Tail Cone by Pren**

(7/Mods/12,377.—5.5.56.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.8 (Mod. No. Vampire/934), is amended as follows:—

(1) Para. 3, operation (4). Under heading "Run of Cable", against item 3, Part No. NOO.1757. *Amend* wording to read:

"From outboard terminal on starter panel resistance to slow engagement relay terminal 'R'".

**R**

L36706 5/56 625 C & P Gp. 1

**RESTRICTED**





(Pren and Prenmet cables)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. F.8  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—To replace Cables used for Fire Warning and Extinguisher Circuits by Prenmet, and replace Cel and Vin Cables ending in Undercarriage and Engine Bays and Tail Cone by Pren

(7/Mods/12,377—8.7.55)

(1) A.P. 4099G, Vol. 2, Part 1, Leaflet No. F.8 (Mod. No. Vampire/934) is amended as follows:—

(1) Para. 13, operation (4).

(a) Under heading "Run of Cable" against item 3, Part No. NOO 1757. *Amend* wording to read:

"From starter panel inboard solenoid terminal 3 to slow engagement relay terminal 'R'."

(b) Under heading "Run of Cable" against item 4, Part No. NOO 1755. *Amend* wording to read:

"From starter panel inboard solenoid terminal 3 to slow engagement relay terminal '+'."

(2) Drg. No. A.P. 4099G/F.8/53, Sheet 1. In left hand bottom corner *reverse* the symbol 'R' and '+' at the cables running to slow engagement relay. Cable 'C' will run to terminal '+', cable 'D' to terminal 'R'.



**RESTRICTED**

(43518/676) 529723 8245 500 9/55 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Rotax Time Delay Switch, type D.8403  
(Stores Ref. 5C/4434) in place of Rotax, type D.4903 (Stores Ref.  
5C/3183)—Introduction

(MOD. No. VAMPIRE/3078.)

(Class C/3.)

(7/Mods/17,104.—21.8.57.)

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**

**RESTRICTED**

(47701/568) 229722 8245 125 9/57 (H.P.W.) (Gp. 19/1)



A.L. No. 56  
(Fire Warning & extinguisher cables)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.6  
(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—To Re-route and Replace Unirubber  
Wiring in Looms for Fire Warning and Extinguisher Services by Flame-  
proof Cables in Engine Bay**

(MOD. NO. VAMPIRE/965.)

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

(7/Mods/13,283.—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**

**RESTRICTED**

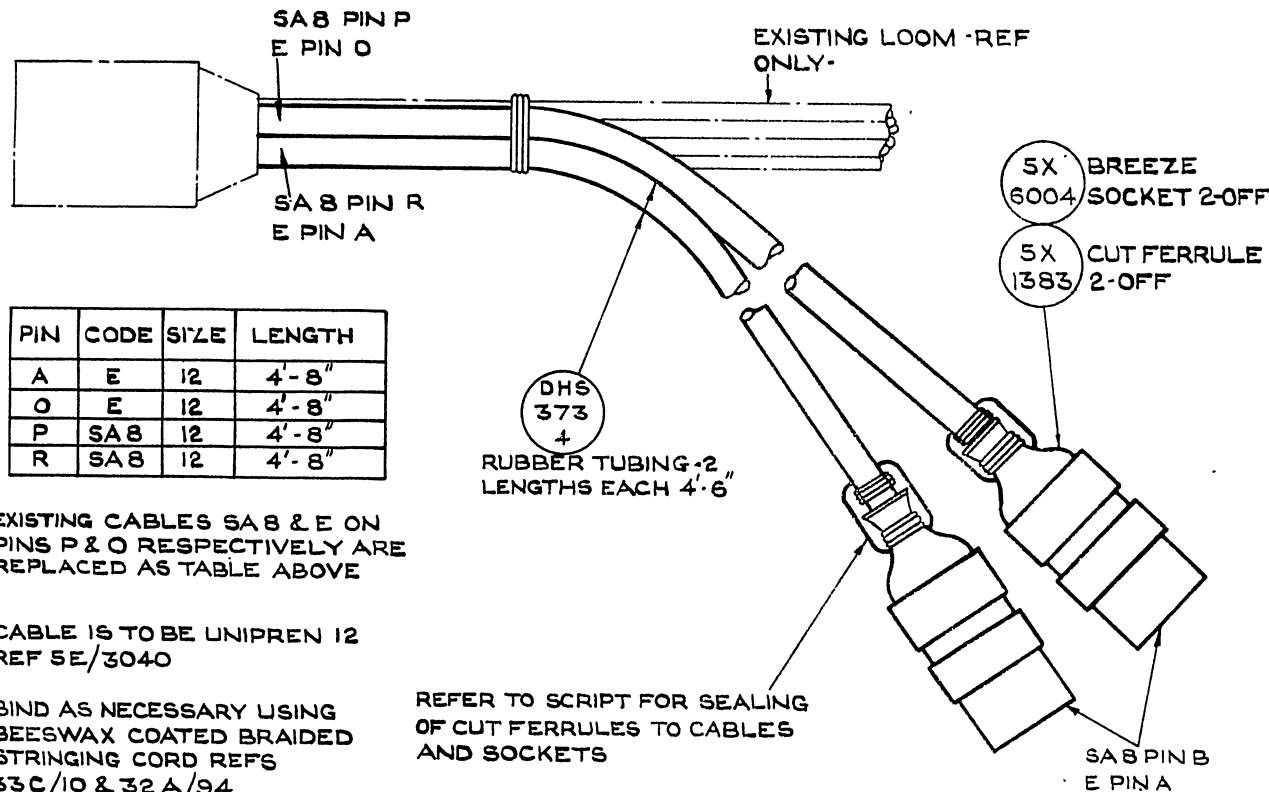
(46881/477) 229717 8245 125 4/57 (H.P.W.) (Gp.19/1)

RESTRICTED

DRG. No. A.P. 4099 G / F. 10 / 54

SHEET 5

LP28688 10/54 500 C & P Gp. 959 (4)



ADDITIONS TO CABLE LOOM C 14.

VIEW ON STARBOARD ENGINE  
MNTG. LOOKING FORWARD.

15N  
1281  
A CABLE ASSY.  
2-OFF.

5K  
1498 GLAND NUT 1-OFF  
UTILISE ONE EXISTING  
NUT.

N00  
619ND BLANK DISC 1-OFF  
UTILISE ONE EXISTING  
DISC.

5K  
911 ROSS COURTNEY END  
4-OFF. TO BE FITTED  
AFTER PASSING CABLE  
THROUGH GLAND.

UTILISE EXISTING  
'P' CLIP 2-OFF.  
REF ONLY.

SAB & E.

PART OF LOOM  
C14.

CONNECT SAB TO TERMINAL 'S'  
" E " " 'M2'  
ON BOOSTER COILS.

13N  
821A MOUNTING  
BRACKET  
1-OFF

AGS  
605 JUBILEE  
CLIP 2-OFF.

5X  
1963 PLUG SEALING  
CAP 2-OFF ONLY  
REQD. WHEN  
HIGH ENERGY  
IGNITER UNITS  
ARE FITTED.

TO HIGH ENERGY IGNITER UNITS WHEN  
FITTED. WHEN NOT FITTED CONNECT  
SOCKETS TO BOOSTER COIL PLUGS  
AS SHOWN.

CONNECTION OF LOOM C14 TO BOOSTER COIL CABLES.

**RESTRICTED**

DRG. No. A.P.4099 G / F. 10 / 54

SHEET 6

LP28688 10/54 500 C&P Gp.959 (4)

A.L.N! 146

(Electrical wiring revised)

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

Leaflet No. F.11

~~Vampire F.B. Mk. 9 Aircraft—Electrical—To Revise Wiring to Cover~~  
~~Deletion of Fuller Pressure Switch—Introduction~~

(Mod. No. VAMPIRE/3303.)

(Class C/3 (N.C.P.). Concurrently with Mod. No. Goblin/960.)

(AB/A/940—27,455.)

1. INTRODUCTION

This modification makes the necessary wiring revisions to the engine starter circuit, due to the deletion of the Fuller pressure switch which is removed by Mod. No. Goblin/960.

(1) This modification supersedes ST1/Gob/7A.

(2) This modification is essentially connected with Mod. No. Goblin/960 (Deletion of Fuller Fuel Pressure Switch); 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 six 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:* Before issue of aircraft.

3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 2 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 and materials are required and are to be provided under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
32A/94	—	Cord, stringing, braided	As reqd.	C
33C/10	—	Beeswax	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.

**R**

**RESTRICTED**

**P.T.O.**



## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Disconnect the aircraft batteries and open the upper and lower hinged access doors on the starboard side of the engine fairing.

(2) Locate the Dupren 7 amp. cable assembly, Part No. NOO.2601ND, which runs from the Fuller pressure switch, over the generator, along the starboard engine bearer strut, through the two cable clamps on bulkhead No. 4 to the starter relay panel, terminating at terminal No. 5 on the time switch and terminal No. 2 on the inboard relay. Remove this cable from the aircraft and renew any whippings removed, using beeswax treated braided stringing cord (Stores Ref. 33C/10 and 32A/94 respectively).

(3) Locate the auxiliary starting switch mounted on the forward end of junction box No. 1 in the cockpit. Disconnect the cable coded 'SA5' and connect it to the same terminal as the cable coded 'SA10', this will short the switch out of the starter circuit.

(4) Close the upper and lower hinged access doors and reconnect the batteries.

## 9. TESTING AFTER EMBODIMENT

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

Carry out a functional test on the engine starter circuit in accordance with current authorised 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 disposed of in accordance with current authorised procedure:—

Stores Ref.	Part No.	Nomenclature	Qty.
26FC/—	NOO.2601ND	Cable assembly	1

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

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

**RESTRICTED**

**(Suppressor for fuel booster pump)**

**Vampire F.B. Mk. 9 Aircraft—Electrical—To introduce Suppressor, Type B, No. 5 (Stores Ref. 5CY/4317), in place of Type P, No. 1 (Stores Ref. 5CY/1002), for Fuel Booster Pump—Introduction**

(MOD. NO. VAMPIRE/3423.)

((Class B/2 (N.C.P.) concurrently with Mod. No. Vampire/3278 where not already embodied.)

(AB/A/2806.—20.5.55.)

### 1. INTRODUCTION

With the introduction of an uprated fuel booster pump, it is necessary to fit an uprated suppressor, in the booster pump circuit. This modification introduces the new suppressor, which is physically interchangeable with the existing component.

(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 applicable only if Mod. No. Vampire/3278 (Fuel System—to introduce Booster Pump, Type SPE, 403, Mk. 1, in place of Type B.P.1, Mk. 4 (Stores Ref. 5U/4828)), and Mod. No. Goblin/724 (Introduction of Dowty Fuel Pump, Type Eng. 300, to enable Engines to Run on either Petrol or Wide-Cut Fuels) or Mod. No. Goblin/904 (To replace Fuel Pump, Type Eng. 300, Mk. 1, by Type Eng. 300, Mk. 2), are already embodied or are being embodied and should be embodied concurrently where possible.

### 2. EMBODIMENT

This modification is to be embodied by:

*2nd Line Servicing Units:* At the first opportunity (Not later than three 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 3 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 following parts and materials are required, and are to be provided under Unit arrangements:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
5CY/4317	—	Suppressor, Type B, No. 5	1	A

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

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



**RESTRICTED**

**P.T.O.**

## 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) Remove the gun bay doors and disconnect the aircraft batteries. Remove the starboard outboard cannon as detailed in A.P.4099G, Vol. 1, Section 12, Chapter 1, para. 22, ensuring that all the necessary safety precautions have been observed.

(2) Locate the fuel booster pump suppressor (Stores Ref. 5CY/1002) (ref. only) mounted on the underside of the cannon floor, just aft and to starboard of the floodlight. Disconnect the four electrical cables and remove and retain the four B.A. attachment screws and shakeproof washers. The suppressor can now be removed from the aircraft.

(3) Offer up the new suppressor (Stores Ref. 5CY/4317) and secure in position, using the retained attachment items. Connect up the four cables to their respective terminals as shown in A.P.4099G, Vol. 1, Section 6, Chapter 1, Fig. 5, Chart B.P.

(4) Refit the starboard outer cannon, using the reverse of the removal procedure. Reconnect the aircraft batteries and replace the gun bay doors.

## 9. TESTING AFTER EMBODIMENT

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

Check the fuel booster pump circuit as detailed in A.P.4099G, Vol. 1, Section 6, Chapter 1, para. 30.

## 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. 61 Maintenance Unit:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
5CY/1002	—	Suppressor, Type P, No. 1.	1	A

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

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

**RESTRICTED**

(Power failure warning light)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.13**Vampire F.B. Mk. 9 Aircraft—Electrical—Power Failure Warning Light  
for Flying Instrument Panel—Introduction**

(Mod. No. VAMPIRE/3322.)

(Class B/2 to Aircraft embodying Mod. Nos. Vampire/568, 668 and 897.)

(AB/A/1954.-2.6.55.)

**1. INTRODUCTION**

With the present system, no warning is given should the G4F compass indicator and artificial horizon cease functioning due to a power supply failure. To warn of such a failure, this modification introduces a power failure warning light mounted on the blind flying panel, together with a new compass junction box, which incorporates the necessary torque switch, circuit breaker and relays, and revised wiring to operate it. The torque switch is also wired to cut out the inverter and so minimise damage.

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

(2) This modification is applicable only if Mod. No. Vampire/568 (To replace the five existing fuel contents gauges by a single integrating type of Pacitor gauge), Mod. No. Vampire/897 (To Introduce Electrical Artificial Horizon (Stores Ref. 6A/2717) in place of Suction Operated Instrument (Stores Ref. 6A/1519) and Mod. No. Vampire/668 (To Introduce G4F Compass) are already embodied.

**2. EMBODIMENT**

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity (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 24 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/F.13/55, Sheets 1 & 2, is incorporated in this leaflet.

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

(a) The undermentioned items comprise the modification set and will be delivered into No. 25 Maintenance Unit as such, by the contractor:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	NOO.3713A	Cable assembly, loom C6	1	—
26FC/-	NOO.3719A/ND	Cable assembly, earth	1	—
26FC/-	12-N.1641A	Compass junction box	1	—

R

**RESTRICTED**

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
26FC/-	12-2F.331	Label, "Horizon-G4 Power Failure"	1	—
28Q/6665	AS.2227/305	Rivets, snaphead, $\frac{3}{32}$ in. dia.	2	C
5K/2576	T.1A	Twinlay marker, coded "GC3"	2	C

(b) The undermentioned items are to be added to the modification set by No. 25 Maintenance Unit to form the Modification Kit (Stores Ref. No. 26FC/103322). Demands for Modification Kits, which must quote the Stores Reference Number, 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.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
5CX/1069	—	Lamp, warning, red	1	A
5LX/951273	—	Filament, 28v., 3.5 w.	1	B
5X/3148	—	Sleeve, cable, 4 amp. wire to 7 amp. pin	2	C

(c) 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>
5E/3038	—	Cable, unipren, 6 amp., Spec. B.S.E.21	As reqd.	C
30B/572	—	Wire, locking, 22 s.w.g., copper	As reqd.	C
32A/94	—	Cord, stringing, braided	As reqd.	C
33B/208	—	Primer, universal, dark grey	As reqd.	C
33B/692	—	Finish, cellulose night, D.T.D.751-4	As reqd.	C
33C/10	—	Beeswax	As reqd.	C
33B/1007	—	Colour, ident. high gloss, blue, bright, D.T.D.827/B	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, and Assembly Nos., as a result of this modification.

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(Refer to sheets 1 and 2 of the drawing.)

(1) Disconnect the aircraft batteries, and release the cable looms from their respective plug connections at junction box No. 1. Remove the screws, packing and shakeproof washers securing the box to the starboard cockpit wall, remove it from the aircraft and retain it, together with the attachment items, for re-assembly.

**RESTRICTED**

(2) Locate the redundant compass junction box, Part No. NOO.2191A (ref. only), mounted on the upper forward face of bulkhead No. 2, and release the cable assemblies. Remove the screws, shakeproof washers and packing pieces securing the box to the bulkhead, remove it from the aircraft and retain the attaching items for re-assembly.

(3) Remove the blind flying panel from the aircraft by releasing the G4F plug, pressure and static pipe lines and the bonding connection, release the panel from its three anti-vibration mountings and retain for re-assembly.

(4) Mark out and cut the hole in the blind flying panel for the red warning lamp as shown on Sheet 2 of drawing. Position the "Horizon-G4 Power Failure" label, Part No. 12-2F.331, as shown, and using the holes in the label as guides, drill two holes in the panel to suit, using a No. 41 (0.0960 in. dia.) drill. Remove the label, deburr the holes and clear the panel of swarf.

(5) Secure the label to the panel using two  $\frac{3}{32}$  in. dia. snaphead rivets, Part No. AS.2227/305, assemble the red warning lamp (Stores Ref. 5CX/1069) and filament (Stores Ref. 5LX/951273) and secure to the panel as shown on Sheet 2 of drawing.

(6) Release the coupling nut at the loom C2 socket assembly and cut a suitable length of Unipren 6 amp. cable (Stores Ref. 5E/3038) to connect from the socket assembly, pin G, to the warning lamp on the blind flying panel. Strip the cable, at both ends, 0.5 in. and identify with two Twinlay Markers, Part No. T.1A coded "GC3". Using the vacant pin G and one sleeve (Stores Ref. 5X/3148) crimp the pin on, run the cable under the first length of P.V.C., re-assemble plug C2, route the new cable with the existing looms, whipping at intervals with beeswax coated stringing braided cord (Stores Refs. 33C/10 and 32A/94 respectively), until the blind flying panel is reached, and leave it in readiness for connecting to the warning lamp.

*Note*.—Sufficient cable is to be left to allow for the efficient working of the anti-vibration mountings, and for easy removal.

(7) Remove the lid of junction box No. 1 and disconnect and remove the cable assembly, Part No. NOO.2241A (ref. only). Offer up the new cable assembly, Part No. NOO.3713A, through the existing grommet and into the box and connect up the cables coded "GA2+", "E" and "GC2" as before. Remove the cable coded "GG+" from Fuse No. 2 and Switch 3, and connect the tail coded "GC+" from the new cable assembly to the same side of Switch 3. Connect the tail coded "GC3" from the new cable assembly to pin "G" at plug "C2" using one sleeve (Stores Ref. 5X/3148). Lash these new cables into the box with beeswax coated stringing braided cord, replace the lid.

(8) Offer up the junction box No. 1 to the starboard fuselage and, using its retained attaching items, resecure it into the cockpit and connect up all looms and socket removed. Run the new loom C6 with existing cable runs to the compass J.B., lashing at intervals with beeswax coated stringing braided cord.

(9) Offer up the new compass J.B., Part No. 12-N.1641A, and using the retained attaching items, secure it in the position occupied by the redundant unit and reconnect the cable assemblies from the artificial horizon, compass and inverter, together with the new C6 loom from J.B. No. 1.

**RESTRICTED**

(10) Locate the earth terminal on the forward face of the upper instrument panel and connect to it the cable lug end of the new cable assembly, Part No. NOO.3719A/ND. Offer up the blind flying instrument panel and connect up the red warning lamp, fitted to the panel in operation (5) as detailed on Sheet 1 of drawing. Reconnect the G4F plug, pressure and static pipe lines, wirelocking with 22 s.w.g. copper wire (Stores Ref. 30B/572), and reconnect the bonding tag, finally secure the panel to its anti-vibration mountings using the retained attaching items.

(11) Repair the finish of the instrument panel using, dark grey universal primer (Stores Ref. 33B/208) and finish, night cellulose (Stores Ref. 33B/692). Re-paint broken down 'E' terminals and bonding connections, using colour ident. blue bright, high gloss, D.T.D.827/B.

(12) 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 the aircraft batteries connected, check that the power failure warning light is "on". Start the inverter running by operating the contact breaker mounted on the compass J.B. with the "G4F compass" switch "on". Check that the power failure warning light goes "off" when the inverter reaches working speed.

(2) Remove the covers of the compass junction box and its fuse box. With the inverter running and using a suitable means of insulation (WARNING 115 VOLTS), remove fuse No. 3 from the fuse box. Check that:—

- (a) Inverter ceases to run.
- (b) Warning light is "on".

(3) Replace fuse No. 3 and the covers of the fuse box and the compass junction box. Check that:—

- (a) Inverter does not restart.
- (b) Warning light remains "on".

(4) Operate the "G4F compass" switch to "off", thus returning the circuit to normal. Operate the "G4F compass" switch to "on" and check that the inverter and warning light function as in test operation (1), thus completing the test cycle. Return the "G4F compass" switch to "off".

(5) Test the synchroniser for correct functioning 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 in accordance with current authorised procedure.

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>
26FC/-	NOO.2191A	Compass junction box	1
26FC/-	NOO.2241A	Cable assembly	1

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

This modification causes a weight change of +2.84 lb. and a change of moment of -20.0 lb. ft.

L34593 7/55 500 C & P Gp. 1

**RESTRICTED**

UPPER INSTRUMENT PANEL-REF.

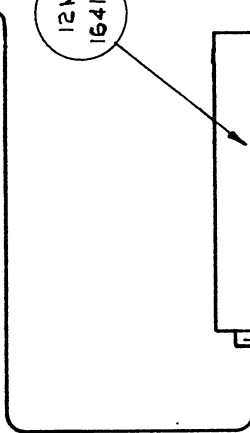
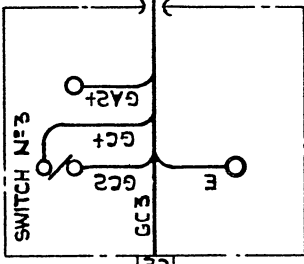


BLIND  
FLYING  
PANEL-REF

WARNING LIGHT  
SEE SHEET 2

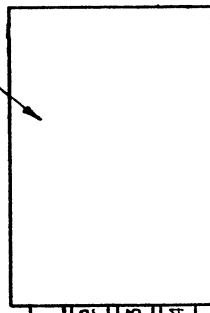
GC 3 (PIN G)  
OTHER  
SERVICES

JUNCTION BOX N°1-REF



CABLE ASSY.  
LOOM C.5  
1-OFF

N00 EARTH CABLE  
3719  
1-OFF  
AND



ARTIFICIAL  
HORIZON  
COMPASS  
INVERTER

WIRING DIAGRAM FOR POWER FAILURE WARNING LIGHT.

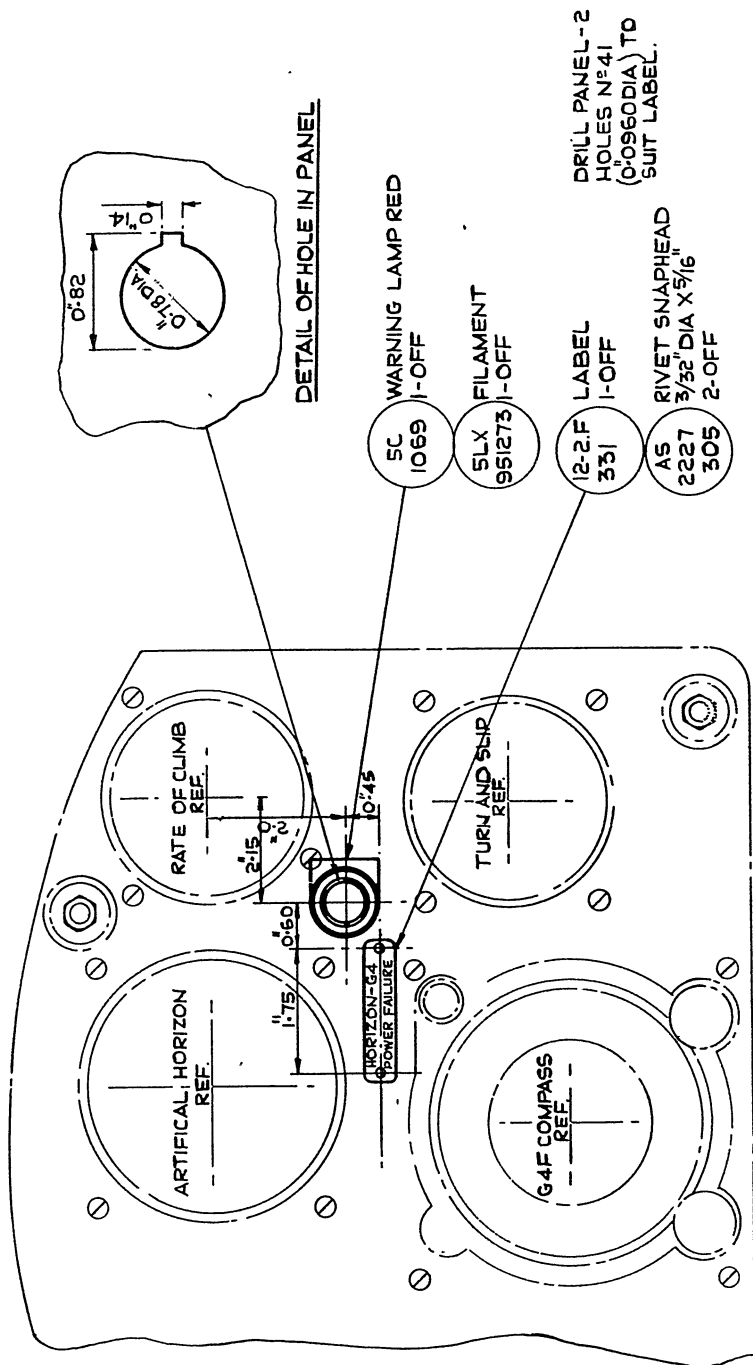
RESTRICTED

DRG. N° A.P. 4099 G / F. 13 / 55

SHEET 1

LP30179 6/55 500 C & P Gp. 959 (4)





**INSTALLATION OF POWER FAILURE WARNING LAMP ON BLIND FLYING PANEL.**

**RESTRICTED**

DRG. N° A.P. 4099 G / F. 13 / 55

SHEET 2

LP30179 6/55 500 C & P Gp. 959 (4)

**Vampire F.B. Mk. 9 Aircraft—Electrical—Power Failure Warning Light for Flying Instrument Panel—Introduction**

(AB/A/1954.—3.2.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.13 (Mod. No. Vampire/3322), is amended as follows:

- (1) Para. 5, sub-para. (1) (a), "Items to be supplied by the Contractor," *Delete* from the nomenclature of item 1, Part No. NOO.3713A, "loom C6".
- (2) Para. 7, *Delete*: "There are no changes of Stores Ref., Part and Assembly Nos., as a result of this modification" and *insert*:  
"The embodiment of this modification changes Reference, Part and Assembly Numbers as follows:

<i>Old</i>		<i>New</i>	
<i>Stores Ref.</i>	<i>Pt./Assy. No.</i>	<i>Nomenclature</i>	<i>Stores Ref.</i>
26FC/-	BOO.3261A	Panel, blind flying	BOO.3261A/1 26FC/-
26FC/-	BOO.3263A/2	Assy. instrument panel	BOO.3263A/3 26FC/-
26FC/-	BOO.3267ND	Panel, bare	BOO.3685ND 26FC/-
26FC/-	NOO.3671A/3	Cable assembly "C2"	NOO.4037A 26FC/-
26FC/-	NOO.3927A/ND	J.B.1 wiring and assy.	NOO.4003A/ND 26FC/-."

*The following alterations are only applicable to aircraft with Mod. No. Vampire/951 embodied:*

26FC/-	NOO.3399A/3	Assy. J.B.1 and equipment	NOO.3399A/4 26FC/-
26FC/-	NOO.3401A/3	Assy. wiring of J.B.1	NOO.3401A/4 26FC/-."

- (3) Para. 8, operation (9), line 5, *Delete* "C6 loom" and *insert* "cable assembly".
- (4) Drg. No. A.P.4099G/F.13/55, Sheet 1, *Delete* "LOOM C6" from the description at the balloon reference "NOO.3713A".



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

(Power failure warning light)

Leaflet No. F.13

(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Electrical—Power Failure Warning Light for  
Flying Instrument Panel—Introduction**

(AB/A/1954.—1.6.56.)

1. A.P.4099G, Vol. 2, Leaflet No. F.13 (Mod. No. Vampire/3322) is amended as follows:—

- (1) Para. 1, sub-para. (2) *Delete* "Mod. No. Vampire/568 (To replace the five existing fuel contents gauges by a single integrating type of Pacitor gauge)".



1267 W. LTD.

RESTRICTED



(Electrical—gun firing cables)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.14  
(Alteration 3)

Vampire F.B. Mk. 9 Aircraft—Electrical—Duprensheath Gun Firing  
Cables Incorporating Electrical Break and Plug (Stores Ref. 5D/1810)  
—Introduction

(AB/A/2110.—17.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.14 (Mod. No. Vampire/3333), is amended as follows:—

- (1) Heading, class. *Amend* "(Class B/2)" to read "(Class B/4)".
- (2) Para. 2. *Delete* in toto and *substitute*:

"2. EMBODIMENT

No further retrospective action is required on this modification."

**R**

**RESTRICTED**

(48614/342) 229727 8245 625 2/58 (H.P.W.) (Gp. 19/1)



(Electrical—gun firing cables)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.14  
(Alteration 2)

Vampire F.B. Mk. 9 Aircraft—Electrical—Duprensheath Gun Firing  
Cables Incorporating Electrical Break and Plug (Stores Ref. 5D/1810)

(AB/A/2110.—30.4.57.)

A.P.4099G, Vol. 2, Part 1, Leaflet No. F.14 (Mod. No. Vampire/3333) is amended as follows:—

(1) Para. 5, Sub-para. (1) section (a) (i), *delete* item 4:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
" 28S/2864	A.32/A.16	Screw, rd./hd., 6 B.A.	16	C "

Sub-para. (1) section (b), *add* in sequence:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
" 28S/2876	A.32/A.24	Screw, rd./hd., 6 B.A.	16	C "

(2) Para. 6, *add* in sequence:

" 26FC/5651	SOO.615A/ND	Assy. of Cannon Stirrup tube and brackets, port inner		
26FC/5652	SOO.616A/ND	Assy. of Cannon Stirrup tube and brackets, starboard inner		
26FC/5653	SOO.619A/ND	Assy. of Cannon Stirrup and brackets, port outer		
26FC/5654	SOO.620A/ND	Assy. of Cannon Stirrup and brackets, starboard outer "		

(3) Para. 7, *delete* the existing information and insert:

" Old		Nomenclature	New	
Stores Ref.	Part/Assy. No.		Part/Assy. No.	Stores Ref.
26FC/1695	SOO.56	Canon stirrup casting, rear mounting, L.H.	12.A.625	26FC/11489
26FC/1695	SOO.56	Cannon stirrup casting, rear mounting, R.H.	12.A.626	26FC/11490
26FC/5651	SOO.615A/ND	Assy. of cannon stirrup tube and brackets, port inner	12.A.649A/ND	26DV/9591
26FC/5652	SOO.616A/ND	Assy. of cannon stirrup tube and brackets, starboard inner	12.A.650A/ND	26DV/9592
26FC/5653	SOO.619A/ND	Assy. of cannon stirrup tube and brackets, port outer	SOO.1263A/ND	26FC/—
26FC/5654	SOO.620A/ND	Assy. of cannon stirrup tube and brackets, starboard outer	SOO.1264A/ND	26FC/—

Note.—This modification " hands " the stirrup."

R



(4) Para. 8, operation (3), *delete* and *substitute* the new operation:

" (3) Locate the upper clip attachment hole in the gun stirrup and using a No. 32 (0.1160 in dia.) drill, drill the outer stirrups on the inboard side and also the inner stirrups on the inboard side to the dimensions shown on Sheet 2 of the drawing to suit the new bracket. Spot face these four holes on the inside of the web  $\frac{5}{16}$  (0.3125) in. dia. to the minimum depth to ensure adequate seating for the attachment items. Gun stirrups with the holes drilled in the left-hand side become Part No. 12.A.625 and stirrups drilled in the right-hand side become Part No. 12.A.626. Great care must be taken to see that no swarf can enter the breech blocks of the guns."

(5) Para. 8, operation (4), line 4, *amend* " A.32/A.16 " to read " A.32/A.24 ".

(6) Drg. A.P.4099G/F.14/55, Sheet 2, *amend* balloon reference " A.32/A.16 Screw 16 off " to read " A.32/A.24 Screw 16 off."

**Vampire F.B. Mk. 9 Aircraft—Electrical—Duprensheath Gun Firing  
Cables Incorporating Electrical Break and Plug (Stores Ref. 5D/1810)—  
Introduction**

(MOD. NO. VAMPIRE/3333.)

(Class B/2.)

(AB/A/2110.—29.7.55.)

**1. INTRODUCTION**

Cases have been found of the gun firing cable assembly being broken at the Maxiflux plug, due to insufficient cable anchorage. This modification introduces cable of a greater flexibility and adds an extra break on the gun stirrup.

(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 three 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 8 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/F.14/55, Sheets 1 & 2 is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

(1) Parts and/or 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/—	12-N.2183	Cable assembly, break to gun	4	—
26FC/—	12-20.N.1531	Bracket	4	—
26FC/—	12-20.N.1533	Packing	4	—
28S/2864	A.32/A16	Screw, rd/hd., 6 B.A.	16	C
28M/10286	A.G.S.2001/A1	Nut, stiff, 6 B.A.	16	C
28W/12429	SP.10/A	Washer, standard, 6 B.A.	16	C

**RESTRICTED**

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

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
5K/2576	Sleeve, binding, Type A, 1.5 mm.	16	C
5K/2577	Sleeve, binding, Type A, 3 mm.	4	C
5K/3096	Sleeve, marking, Type B, coded 'A'	4	C
5K3097	Sleeve, marking, Type B, coded 'B'	4	C
5K/3101	Sleeve, marking, Type B, coded 'F'	16	C
5K/3102	Sleeve, marking, Type B, coded 'G'	16	C
5K/3126	Sleeve, marking, Type B, coded '4'	4	C
5K/3128	Sleeve, marking, Type B, coded '6'	8	C
5K/3129	Sleeve, marking, Type B, coded '7'	4	C
5X/1351	Ferrule	4	C
5X/6001	Plug	4	C

The complete Kit is to be demanded from No. 25 Maintenance Unit under Stores Ref. 26FC/103333.

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

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
5E/3113	Cable, Duprensheath 6, Spec. B.S.E.21	As reqd.	C
32A/94	Cord, stringing, braided	As reqd.	C
33C/10	Beeswax	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:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>
26FC/1695	SOO.56	Stirrup, bare

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:—

<i>Old</i>		
<i>Stores Ref.</i>	<i>Part/Assy. No.</i>	<i>Nomenclature</i>
26FC/1695	SOO.56	Stirrup, bare
26FC/1695	SOO.56	Stirrup, bare

<i>New</i>		
<i>Stores Ref.</i>	<i>Part/Assy. No.</i>	<i>Nomenclature</i>
26FC/11489	12-A.625	Cannon stirrup casting, rear mounting, L.H.
26FC/11490	12-A.626	Cannon stirrup casting, rear mounting, R.H.

*Note.*—This modification 'hands' the stirrup castings.

**RESTRICTED**

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(Refer to Sheets 1 and 2 of the drawing.

(1) Remove the cannon bay doors, and disconnect the aircraft batteries.

(2) Locate the gun stirrup castings and remove the cable clips from them. Locate the four 2-way terminal blocks on the gun bay roofing, and disconnect the four leads, Part Nos. NOO.2565.ND (two off) and NOO.2679.ND (two off) (ref. only), which run to the Maxiflux units. Remove the leads complete from the aircraft by removing their gun clips and disconnecting the plugs from the Maxiflux units on the guns. Retain the gun clips and the other attachment items for reassembly.

(3) Locate the upper clip attachment hole in the gun stirrup. Using a No. 32 drill (0.1160 in. dia.), drill the outer stirrups on the outboard side and the inner stirrups on the inboard side, to the dimensions shown on Sheet 2 of the drawing. Care must be taken to ensure that no swarf can enter the breech blocks of the guns.

(4) Fit the new bracket, Part No. 12-20.N.1531, together with the new packing, Part No. 12-20-N.1533, which fits between the bracket and stirrup, using 6 B.A. nuts, screws and washers, Part Nos. A.G.S.2001/A1, A.32/A16 and SP.10/A respectively.

(5) Make up four new cable assemblies, all to measure 12 in. long, using Duprensheath 6 cable, Spec. B.S.E.21 (Stores Ref. 5E/3113). At one end of each cable measure 1.50 in. and cut back the outside rubber covering. Strip back the insulation 0.50 in. on both the red and the blue cables, slide on Type A binding sleeves (Stores Ref. 5K/2576), and code with Type B marking sleeves in accordance with Sheet 1 of the drawing. On the other end of the cable fit a new cut ferrule (Stores Ref. 5X/1351) whipping it with waxed coreless cordage (Stores Refs. 32A/94 and 33C/10), then assemble a new plug (Stores Ref. 5X/6001), first fitting Type A binding sleeves and Type B marking sleeves, coded to suit. Finally, part number all four cable assemblies (two of which will be Part No. 12-N.2185.A, and two will be Part No. 12-N.2187.A) according to the coding, as shown on Sheet 1 of the drawing.

(6) Connect the newly made cables, Part No. 12-N.2185.A (ref. only), to the port and starboard inboard 2-way terminal blocks, and the cables, Part No. 12-N.2187.A (ref. only) to the port and starboard outboard 2-way terminal blocks on the gun bay roofing. Assemble the cable sockets to the brackets previously fitted to the gun stirrups as shown on Sheet 2 of the drawing.

(7) Connect the plugs of the new cables, Part No. 12-N.2183A, to the sockets mounted in the bracket on the gun stirrups. Attach the cables to the stirrups using the remainder of the cable clips retained in operation (2). Assemble the cables to guns using the retained gun clips and connect the plugs at the free end of the cables to the Maxiflux units on the guns.

(8) Reconnect the aircraft batteries, and replace and raise the cannon bay doors.

## 9. TESTING AFTER EMBODIMENT

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

Function the gun firing circuits up to the Maxiflux plugs.

## 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 as scrap in accordance with Air Ministry salvage leaflets:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>
26FC/—	NOO.2565.ND	Cable assembly	2
26FC/—	NOO.2679.ND	Cable assembly	2

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

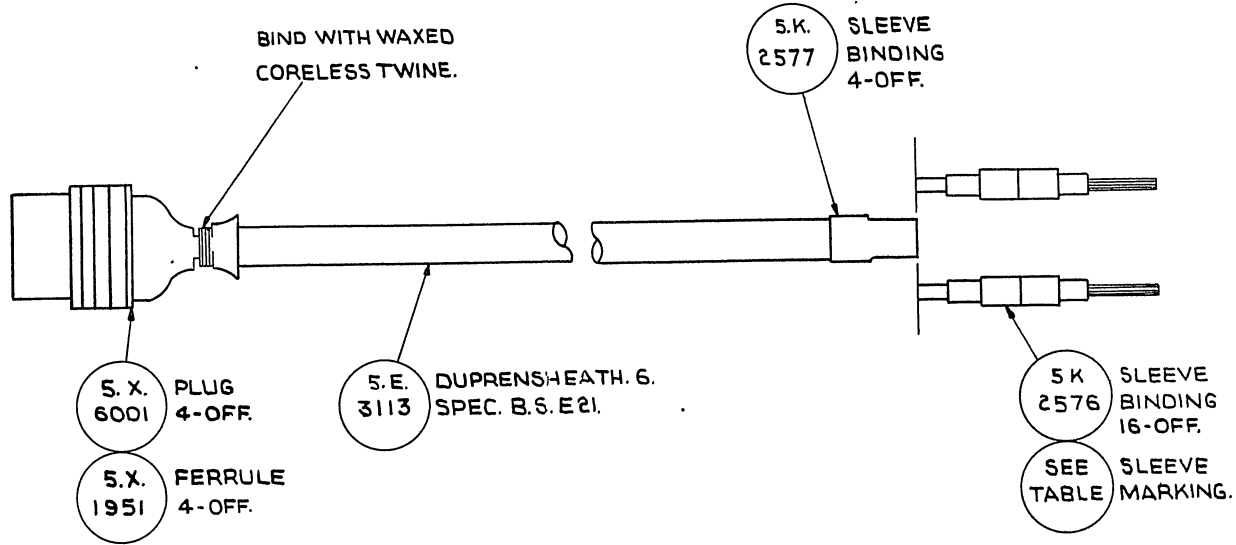
This modification causes a weight change of  $+0.92$  lb., and a change of moment of  $-2$  lb. ft.

*Note.*—This affects A.D.4551, Issue 3 which will be modified accordingly.

**RESTRICTED**

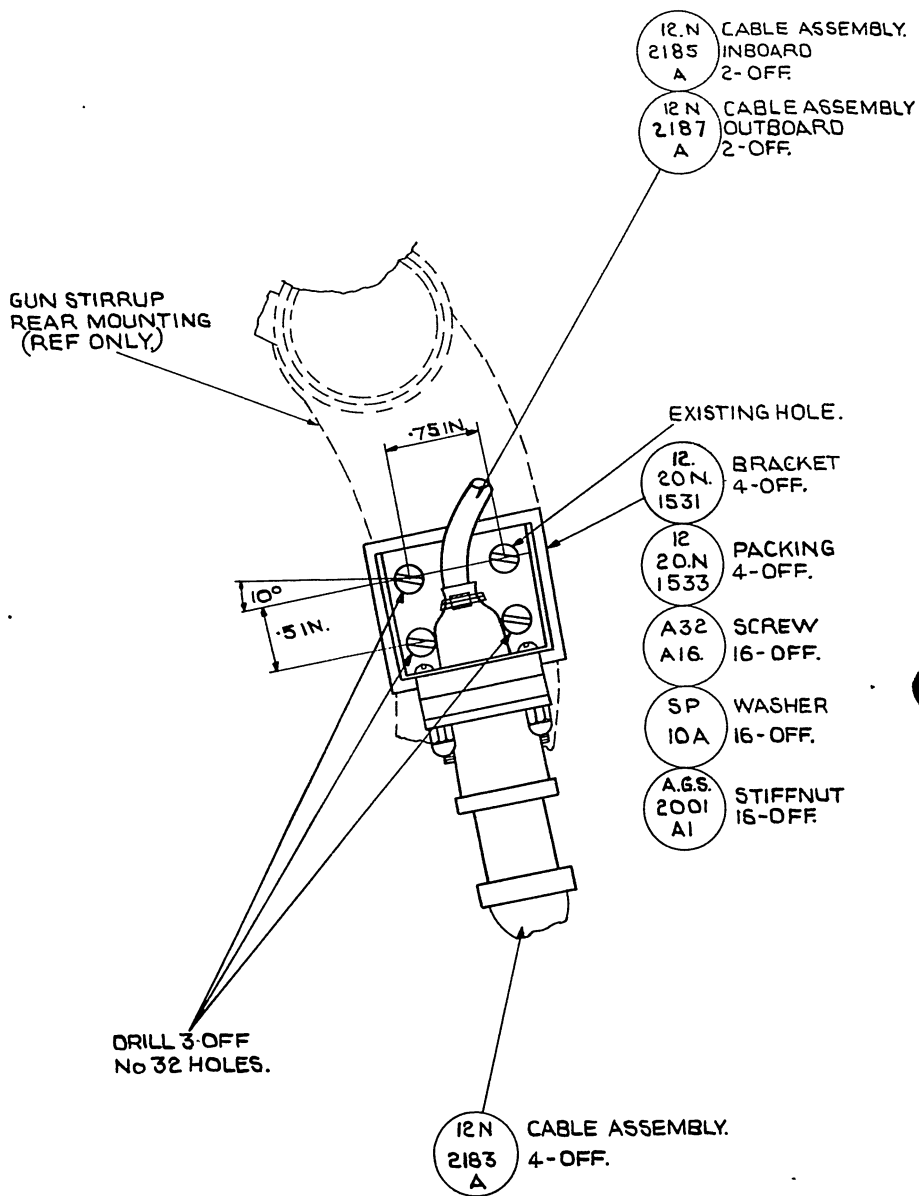
LP30398 8/55 500 C & P Gp. 959 (4)

DRG. No. A.P. 4099 G / F. 14 / 55  
SHEET 1



PART. No.	CUTTING LENGTH.	PIN	CODE	CORE COLOUR
12.N.2185.A.	1'-0"	A	GF 4	RED
		B	GF 6	BLUE
12.N.2187.A.	1'-0"	A	GF 7	RED
		B	GF 6	BLUE

CODE	STORES REF.	No. OFF
A	5K/3096	4
B	5K/3097	4
F	5K/3101	16
G	5K/3102	16
4	5K/3126	4
6	5K/3128	8
7	5K/3129	4



TYPICAL ATTACHMENT OF BRACKET TO REAR GUN STIRRUP.

**RESTRICTED**

DRG. No. A.P.4099 G / F. 14 / 55  
SHEET 2

LP30398 8/55 500 C & P Gp. 959 (4)

Vampire F.B. Mk. 9 Aircraft—Electrical—Duprensheath Gun Firing  
Cables Incorporating Electrical Break and Plug (Stores Ref. 5D/1810)—  
Introduction

(AB/A/2110.—21.8.56.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. F.14 (Mod. No. Vampire/3333),  
is amended as follows:—

(1) Para. 5, sub-para. (1), section (a). *After* "The complete Kit is  
to be demanded from No. 25 Maintenance Unit under Stores Ref.  
26FC/103333" *insert*:

"*Note*: Demands should clearly state for which mark of aircraft  
the Kit is required."



**RESTRICTED**

(45663/1,010) 129952 8245 625 9/56 (H.P.W.) (Gp. 19/1)





(Auxiliary starter switch)

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

Leaflet No. F.15

## Vampire F.B. Mk. 9 Aircraft—Electrical—To Revise Wiring on Auxiliary Starter Switch

(MOD. NO. VAMPIRE/3486.)

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

(AB/A/5306.—25.7.56.)

## 1. INTRODUCTION

The embodiment of Mod. No. Vampire/3303 rendered the auxiliary starter switch inoperative. The non-operation of this switch under hot atmospheric conditions can result in engine starting difficulties. This modification reconnects the wiring to the switch.

(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 applicable only if Mod. No. Vampire/3303 (Electrical—To revise wiring to cover deletion of Fuller pressure switch) is already embodied.

## 2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity and 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  $\frac{1}{2}$  man-hour.

## 4. DRAWINGS REQUIRED

No drawings are required for the embodiment of this modification.

## 5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

No parts or materials are required for the embodiment of this modification.

(2) Special Tools and Test Equipment

There are no special tools or test equipment 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.

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RESTRICTED

P.T.O.

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Disconnect the aircraft batteries.

(2) Locate the auxiliary starting switch mounted on the forward end of Junction Box No. 1 in the cockpit. Disconnect the cable coded "SA10" and connect it to the unoccupied terminal.

(3) Reconnect the aircraft batteries.

## 9. TESTING AFTER EMBODIMENT

Carry out a functional test on the engine starter circuit in accordance with current authorized procedure.

## 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 has no effect on weight or C. of G.

**RESTRICTED**

A.L. No. 223  
(Fire extinguisher and warning circuits)  
(A.L. Nos. 195 and 219 cancelled)

A.P.4099G, Vol. 2, Part 1.  
Leaflet No. F.16  
(Alteration 2 incorporated)

**Vampire F.B. Mk. 9 Aircraft—Electrical—To Revise Connections of Fire Extinguisher and Fire Warning Circuits to Give Direct Operation From Battery**

(Mod. No. Vampire/3522.)

(Class C/3 on removal of Engine.)

(AB/A/6437.—26.11.58.)

*Note:— This Leaflet supersedes A.P.4099G, Vol.2, Part 1, Leaflet No. F.16 and Alteration 1 and is the authority for cancelling A.L. No. 195 and 219.*

**1. INTRODUCTION**

In the event of a forced landing, the pilot, to observe fire warning or to operate the fire extinguisher, must keep his 'GROUND/FLIGHT' master switch in the 'FLIGHT' position; this renders the aircraft electrically 'alive' and on impact greatly increases the risk of fire from electrical sources. To obviate this, this modification takes the fire services electrical supply direct from the batteries, thus, being entirely independent of the master switch, it will enable the pilot, in the event of an emergency, to switch to 'GROUND' and still have the fire warning and the fire extinguisher services at his disposal.

(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 removal of engine.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 9 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/F.16/58, Sheets 1 and 2, 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
26FC/-	DHS.181/5	Tubing, P.V.C., 5 mm. i/dia., length 14 ft. 0 in. (cut from 5F/2303)	1	—
26FC/-	DHS.181/8	Tubing, P.V.C., 8 mm. i/dia., length 8 ft. 0 in. (cut from 5F/2143)	1	—
26FC/-	DHS.373/3	Tubing, rubber, $\frac{3}{8}$ in. i/dia., length 8 ft. 0 in. (cut from 32C/56)	1	—
5K/9107207	T2A	Sleeve, marking, 4 mm., coded 'A' (3 mm.)	4	C
5K/9107285	T2A	Sleeve, marking, 4 mm., coded 'G' (3 mm.)	4	C
5K/9107545	T2A	Sleeve, marking, 4 mm., coded '+' (3 mm.)	4	C
5K/9109123	T2A	Sleeve, marking, 4 mm., coded '2' (3 mm.)	4	C
5K/9107209	T3A	Sleeve, marking, 6 mm., coded 'A' (5 mm.)	13	C

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5K/9107287	T3A	Sleeve, marking, 6 mm., coded 'G' (5 mm.)	13	C
5K/9107547	T3A	Sleeve, marking, 6 mm., coded '+' (5 mm.)	13	C
5E/3042	—	Cable, electric, Unipren 24, Spec. B.S.E.21, length 24 ft.	1	C
5F/2279	—	Strapping Helvin, $\frac{1}{8}$ in. wide	As reqd.	C
5F/2307	—	Stud, Helvin	As reqd.	C
5X/9400391	Z.77865	Lug, terminal, No. 11A	1	C
28P/12462	SP9/C8	Pin, split $\frac{1}{8}$ in. dia.	2	C
28P/12465	SP9/G12	Pin, split, $\frac{1}{8}$ in. dia.	2	C
30B/1601	—	Solder, electricians', resin-cored, Spec. B.S.441	As reqd.	C
32A/94	—	Cord, stringing, braided, Spec. 4F 35	As reqd.	C
33C/10	—	Beeswax, Spec. C.S.2177(1)	As reqd.	C
33C/1138	—	Compound, sealing, Bostik 1790, Spec. D.T.D.900/4058	As reqd.	C
33C/1139	—	Compound, sealing, Bostik primer 1751, Spec. D.T.D.900/4058	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

No spares are affected by this modification.

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

(a) The undermentioned Part No. alterations are applicable to all aircraft.

<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/-	NOO.89A	Cable assy. 'C7A'	NOO.4105A	26FC/-
26FC/-	NOO.120A	Conduit assy. 'C7'	NOO.120A/1	26FC/-
26FC/-	NOO.2763	Cable loom assy. 'C12'	NOO.2763A/1	26FC/-

The following alteration is only applicable to aircraft with Mod. No. Campire 568 embodied:

26FC/-	NOO.2521A/2	Junction box 2—complete	NOO.2521A/3	26FC/-
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The following alteration is only applicable to aircraft with Mod. No. Vampire 668 embodied:

26FC/-	NOO.2237A	Assy. of conduits in sealing plate	NOO.2237A/1	26FC/-
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The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568 and Vampire 668 embodied:

26FC/-	NOO.4003A/ND	Junction Box No. 1 complete	NOO.4067A/ND	26FC/-
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The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568 and Vampire 3244 embodied:

26FC/-	NOO.4057A/ND	Junction box No. 2 complete	NOO.4099A/ND	26FC/-
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**RESTRICTED**

The following alteration is only applicable to aircraft with Mod. Nos. Vampire 668 and Vampire 3244 embodied:

Ref. No.	Old	Nomenclature	New	Ref. No.
	Part/Assy. No.		Part/Assy. No.	
26FC/-	NOO.4061A/ND	Assy. of conduits in sealing plate	NOO.4095A/ND	26FC/-

The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568, Vampire 668 and Vampire 3244 embodied:

26FC/-	NOO.4041A/ND	Junction box No. 1 complete	NOO.4087A/ND	26FC/-
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The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568, Vampire 668 and Vampire 951 embodied:

26FC/-	NOO.3401A/4	Junction Box No. 1 complete	NOO.3401A/5	26FC/-
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The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568, Vampire 668 and Vampire 3299 embodied:

26FC/-	NOO.4001A	Junction Box No. 1 complete	NOO.4001A/1	26FC/-
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The following alteration is only applicable to aircraft with Mod. Nos. Vampire 568, Vampire 668, Vampire 3299 and Vampire 3244 embodied:

26FC/-	NOO.4043A/ND	Junction Box No. 1 complete	NOO.4089A/ND	26FC/-
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## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations. The engine having been removed:—

- (1) Remove the Starboard inner and outer guns and the pilot's seat.
- (2) In the cockpit, disconnect and remove junction box No. 1, from the starboard fuselage wall and cable loom 'C7', Part No. NOO.120A, which is routed between junction box No. 1 and bulkhead No. 2.
- (3) Refer to Sheet 1 of the drawing. Working on the removed junction box No. 1, remove the two fuse block end links (Ref. No. 5CZ/884) linking fuses 7-8 and 15-16 respectively, and the Unipren 24 cable, coded 'GA2+', linking fuses 8-16-24. Refer to fig. 3 on Sheet 2 of the drawing; make up a new link cable as detailed, using a 2 ft. 6 in. length of Unipren 24 cable (Ref. No. 5E/3042). Strip the cable insulation as shown, ensuring that no break occurs in the cable conductor to fuse 16, then cover each section of the unstripped insulation with 5 mm. P.V.C. tubing, Part No. DHS.181/5, which is to fit tightly against the insulated moulding of the plug in one instance and the fuse block terminals in the other. Code the cable ends 'GA+' at each point of termination, using nine 6 mm. marking sleeves, Part No. T3A, which are to be fitted over the P.V.C. tubing. Connect the link cable to its appropriate fuse block terminals 8 and 16 and to pin 6 of plug 'C7', soldering it to the plug pin with electricians' resin-cored solder (Ref. No. 30B/1601). Connect to junction box No. 1 two new link cables, which do not require added insulation, as detailed in the following table:

From	To	Circuit Code	Marking Sleeve	Approx. Cable Length	Cable Size
Fuse 1	Fuse 9	GA2+	T2A	9 in.	Unipren 24
Fuse 15	Fuse 24	GA2+	T2A	1 ft. 0 in.	Unipren 24

Refit all fuse block and junction box covers.

- (4) Refer to fig. 1 on Sheet 2 of the drawing. Working on the removed cable loom 'C7', cover a 1 ft. 9 in. length of Unipren 24 cable with 5 mm. P.V.C. tubing, Part No. DHS.181/5, the tubing being of sufficient length to fit tightly against the insulated moulding of each socket. Dismantle each of the sockets, then pass the P.V.C.-covered cable through the 25 mm. P.V.C. tubing with the existing cables. Code each

RESTRICTED

cable end 'GA+' with six 6.0 mm. marking sleeves, Part No. T3A, which are to fit over the 5 mm. tubing. Solder the cable ends to the respective pin '6' of each socket and reassemble the sockets.

- (5) Refit and reconnect the modified No. 1 junction box and cable loom 'C7' to the aircraft in exactly the same manner as before.
- (6) In the gun bay under the ammunition bay floor, disconnect the cable loom socket 'C7A' from the bulkhead No. 2 electrical panel. Cover an 8 ft. 0 in. length of Unipren 24 cable with identical lengths of 5 mm. and 8 mm. P.V.C. tubing, Part Nos. DHS.181/5 and D.H.S.:181/8 respectively, then, with reference to fig. 2 on Sheet 2 of the drawing, dismantle the disconnected socket and insert the new P.V.C.-covered cable through a pierced hole in the cable loom tubing, the pierced hole being approximately 2.0 in. from the end of the tubing and just large enough to take the new cable. Prepare the cable end as shown on the drawing, coding it 'GA+' with three 6 mm. marking sleeves, Part No. T3A, fitted over the 5 mm. P.V.C. tubing; solder the cable end to pin 6 of the socket. Reassemble the socket, ensuring that the 5m. tubing fits tightly against the insulated moulding of the socket, then reconnect the socket to the bulkhead panel.
- (7) Route the new P.V.C.-covered cable with cable loom 'C7A' to its point of termination at junction box No. 2 on the starboard upper aft face of the fireproof bulkhead, the new cable being attached to the outside of cable loom 'C7A' at frequent intervals with  $\frac{3}{8}$  in. wide strapping and studs (Ref. Nos. 5F/2279 and F5/2280 respectively). Disconnect and dismantle socket 'C7A' from junction box No. 2 then connect the new P.V.C.-covered cable to pin '6' in exactly the same manner as detailed for the socket 'C7A' bulkhead No. 2, again coding the cable 'GA+' with three 6 mm. marking sleeves, Part No. T3A. Reassemble the socket. Seal the cable loom P.V.C. tubing where the new cable enters at the two pierced holes by first building a fillet of Bostik 1790 sealing compound (Ref No. 33C/1138) around the pierced hole and new P.V.C. tubing, allowing this to dry and then applying a coat of Bostik 1751 primer sealing compound (Ref. No. 33C/1139).
- (8) Refer to the wiring diagram and to the cable alterations on Sheet 1 of the drawing then disconnect the cable loom socket 'C12' from junction box No. 2. Dismantle the socket and remove the now redundant Unipren 12 cable, coded 'GA+', routed from pin 'A' of the socket to terminal 'FL' of the 'GROUND/FLIGHT' switch, which is located on the port wing, rib No. 1. Cover an 8 ft. 0 in. length of Unipren 24 cable with a similar length of  $\frac{3}{8}$  in. rubber tubing, Part No. DHS.373/3, and code each end 'GA+' with six 6 mm. marking sleeves, Part No. T3A, fitted over the rubber tubing. Solder one end of the cable to pin '1' of the socket, ensure that the tubing is tight against the insulated moulding of the socket, then reassemble the socket, securing the cables to the cut ferrule with beeswax-coated braided stringing cord (Ref. Nos. 33C/10 and 32A/94). Route the other end of the newly-made cable to terminal 'FL' of the 'GROUND/FLIGHT' switch, following the cable run previously used for the redundant Unipren 12 cable, securing it to the existing cable run with beeswax-coated braided stringing cord. Cut the cable to the length required and crimp on a terminal lug (Ref. No. 5X/6677), ensuring that the rubber tubing completely covers the crimped joint. Connect the terminal lug to terminal 'FL'.
- (9) Remove the cover from junction box No. 2. Refer to Sheet 1 of the drawing; disconnect and remove the now redundant Unipren 12 cable, coded 'GA+', routed from plug 'C12' pin 'A' to fuse 33. Connect two new link cables to the junction box, as detailed in the following table, the cables being covered with 5 mm. P.V.C. tubing, Part No. DHS.181/5. and soldered to their respective plug pins.

From	To	Circuit Code	Marking Sleeves	Approx. Cable Length	Cable Size
Plug C12-1	Fuse 33	GA+	T3A	9 in.	Unipren 24
Plug C7A-6	Fuse 33	GA+	T3A	1 ft. 0 in.	Unipren 24

Replace the junction box cover and remake all electrical connections junction box No. 2.

**RESTRICTED**

- (10) Refit the pilot's seat, using four new split pins, Part Nos. SP.9/C8 (2 off) and SP.9/G12 (2 off). Refit the Starboard inner and outer guns.

9. TESTING AFTER EMBODIMENT

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

- (1) A continuity check of all cables introduced or altered during the embodiment of this modification in conjunction with the wiring diagram on Sheet 1 of the drawing.
- (2) A functional check of the fire warning and fire extinguisher circuits, ensuring that the fire services operate irrespective of the position of the 'GROUND/FLIGHT' master switch.

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 the Air Ministry Salvage Leaflets:—

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5CZ/884	—	Link end, fuse block	2	B

12. EFFECT ON WEIGHT AND C. OF G.

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



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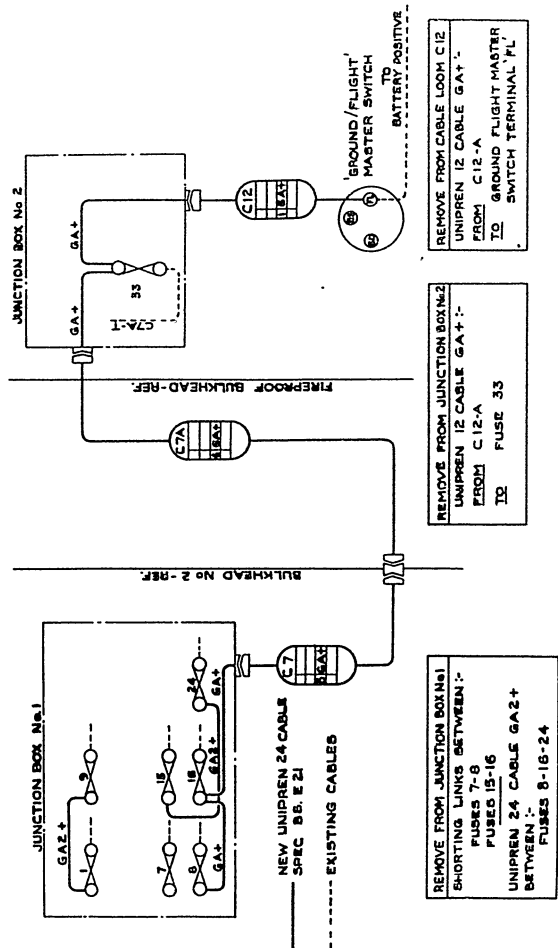
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DRG. No. A.P. 4099G/F16/58.

SHEET 1.



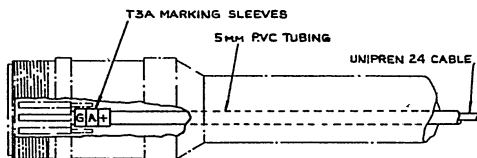
WIRING DIAGRAM AND CABLE ALTERATIONS.

**NOTE**

5MM PVC TUBING TO FIT  
TIGHT UP AGAINST INSULATED  
MOULDING OF SOCKET

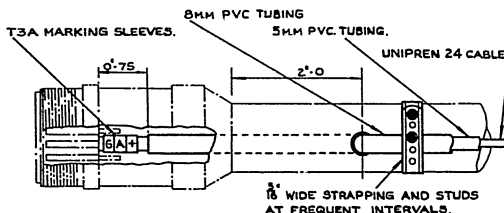
**NOTE**

CONNECT UNIPREN 24 CABLE AND  
PVC TUBING TO OTHER SOCKET  
IN AN IDENTICAL MANNER.

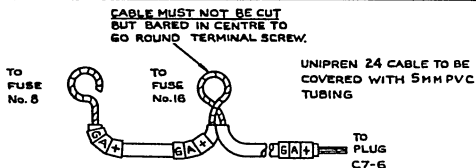


**FIG 1 METHOD OF CONNECTING PROTECTED CABLE TO LOOM C7 SOCKETS**

THE NOTES IN FIG 1 ALSO APPLY TO FIG 2.



**FIG 2. METHOD OF CONNECTING PROTECTED CABLE TO LOOM C7A SOCKETS**



**FIG 3 CABLE LINK - JUNCTION BOX No. 1**

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DRG. No. A.P. 4099G/F16/58.

SHEET 2.

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A.L. No. 228  
(Switch 5CW/5823—intro.)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. F.17

Vampire F.B. Mk. 9 Aircraft—Electrical—To introduce Switch (Ref. No. 5CW/5823) in place of Ref. No. 5CW/2497 and increase Cable Rating to 24 amps. in Booster Pump Circuit

(MOD. NO. VAMPIRE 3610.)

(Class B/2, N.C.P. to aircraft embodying Mod. No. 3278.)

(AB/A/10324.—16.9.59.)

## 1. INTRODUCTION

On the introduction of the fuel booster pump, Type SPE.403/Mk. 1, the increased electrical requirement was not catered for. This modification rectifies this by replacing, and repositioning the pump switch on junction box No. 1, and introduces electrical cable, and fuse, of a higher rating, in the pump 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 applicable only if Mod. No. Vampire/3278 (Fuel System—Booster Pump Type SPE.403, Mk. 1 in place of Type B.P.1., Mk. 4 (Ref. No. 5U/4828)) is already embodied.

## 2. EMBODIMENT

This modification is to be embodied by:—

*2nd Line Servicing Units:* At the first opportunity (not later than 3 months after receipt of 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 8 man-hours.

## 4. DRAWINGS REQUIRED

Drawing No. A.P.4099G/F.17/59 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
5CW/5823	—	Switch, tumbler, S.P.	1	B
5CZ/1255	—	Fuse, 20 amp.	1	C
5E/3042	—	Cable, Unipren, 24 amp.	As reqd.	C
5K/9107220	T2A	Sleeve, marking, 4 mm. coded 'B' (3 mm.)	4	C
5K/9107259	T2A	Sleeve, marking, 4 mm. coded 'E' (3 mm.)	2	C
5K/9107402	T2A	Sleeve, marking, 4 mm. coded 'P' (3 mm.)	4	C
5K/9109123	T2A	Sleeve, marking, 4 mm. coded '2' (3 mm.)	2	C
5K/9107129	T2A	Sleeve, marking, 4 mm. coded '4' (3 mm.)	2	C

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
5K/9107545	T2A	Sleeve, marking, 4 mm. coded '+' (3 mm.)	2	C
5K/9107066	TWBP × ¾ in.	Sleeve, binding	1	C
5X/3150	Z.28010	Thimble	1	C
5X/3242	Z.28147	Pin, plug, 19 amp.	1	C
5X/7331	2CZ.109945	Insert, socket, 19 amp.	1	C
28W/9419448	AGS.2035/B	Washer, shakeproof, 4 B.A.	2	C
28S/13887	A.32/B10	Screw, rd. hd., 4 B.A.	2	C
28W/9419474	SP.15/B	Washer, thick, 4 B.A.	2	C
30B/1734	—	Aluminium alloy, Spec. B.S.L.72, 22 s.w.g.	As reqd.	C
30B/1736	—	Aluminium alloy, Spec. B.S.L.72, 24 s.w.g.	As reqd.	C
32A/94	—	Cord, stringing braided Spec. 4F-35 Sect. 2	As reqd.	C
33B/1108 (Home)	—	} Finish, synthetic, matt, night, Spec. D.T.D.314	As reqd.	C
33B/9428837 (Overseas)	—			
33B/1111 (Home)	—	} Finish, synthetic, matt, white, Spec. D.T.D.314	As reqd.	C
33B/9428840 (Overseas)	—			
33B/9429195	—	Primer, etch, accelerator	As reqd.	C
33B/9429196	—	Primer, etch, base	As reqd.	C
33C/10	—	Beeswax, Spec. CS.2177(1)	As reqd.	C

## (2) Special Tools and Test Equipment

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

## 6. MODIFICATION OF SPARES, ETC. 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/11819	NOO.2459A	Assy. junction box, No. 1 shell	—	C
26FC/4502	NOO.2611	Top panel junction box, No. 1	—	C

The method of modifying the above spares is detailed in Paragraph 8, operations (1), (5) and (6), and on the drawing.

Parts required:—

26FC/-	DHS.717	Plate, blanking	1	—
(Make from 22 s.w.g. aluminium alloy (Ref. No. 30B/1734))				
28S/2864	A.32/A16	Screw, roundhead, 6 B.A.	2	C
28M/10286	AGS.2001/A1	Nut, stiff, 6 B.A.	2	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:—

<i>Ref. No.</i>	<i>Old Part/Assy. No.</i>	<i>Nomenclature</i>	<i>New Part/Assy. No.</i>	<i>Ref. No.</i>
26FC/4502	NOO.2611	Top panel, junction box, No. 1	NOO.4119	26FC/-
26FC/-	NOO.3349A	Fuse box and transfer assy.	NOO.4123A	26FC/-

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Old			New	
Ref. No.	Part/Assy. No.	Nomenclature	Part/Assy. No.	Ref. No.
26FC/-	NOO.2529A	Cable loom C6A	NOO.4115A	26FC/-
<i>With Mod. No. Vampire 3299 embodied :</i>				
26FC/-	NOO.4001/A/1	Junction box, No. 1 complete	NOO.4133A	26FC/-
26FC/-	NOO.4011A	Assy. junction No. 1 and equipment	NOO.4129A	26FC/-
26FC/-	NOO.4067A/ND	Junction box, No. 1 complete	NOO.4135A/ND	26FC/-
<i>With Mod. No. Vampire 3244 embodied :</i>				
26FC/-	NOO.4087A/ND	Junction box, No. 1 complete	NOO.4139A/ND	26FC/-
<i>With Mod. No. Vampire 951 embodied :</i>				
26FC/-	NOO.3397A	Assy. of junction box, No. 1 shell	NOO.3397A/1	26FC/-
26FC/-	NOO.3399A/4	Assy. junction box, No. 1 and equipment	NOO.3399A/5	26FC/-
26FC/-	NOO.3401A/5	Junction box, No. 1 complete	NOO.3401A/6	26FC/-
<i>With Mod. Nos. Vampire 3244 and 3299 embodied :</i>				
26FC/-	NOO.4089A/ND	Junction box, No. 1 complete	NOO.4141A/ND	26FC/-
<i>Without Mod. No. Vampire 951 embodied :</i>				
26FC/11819	NOO.2459A	Assy. junction box, No. 1 shell	NOO.4125A	26FC/-

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Refer to the drawing and, as detailed, make up a new blanking plate, and label, Part Nos. DHS.717, and NOO.4113ND, respectively. Deburr the drilled holes and sharp edges, apply one coat of a 50-50 mixture of etch primer, base and accelerator (Ref. Nos. 33B/9429196 and 33B/9429195 respectively) and allow to dry; then apply one coat of matt night synthetic finish (Ref. No. 33B/1108 or 33B/9428837). Apply the three and four mm. lettering on the label, using matt white synthetic finish (Ref. No. 33B/1111 or 33B/9428840).
- (2) Lower the gun bay doors and disconnect the aircraft batteries.
- (3) From the cockpit, disconnect and remove the junction box, No. 1, located on the Starboard fuselage wall, and retain with its attachment items, for subsequent reassembly.
- (4) Working on the top switch panel of the junction box, disconnect and remove the now redundant booster pump switch (Ref. No. 5CW/2497) and label, Part No. DHS.90/Mk. 14, retaining the switch attachment items for subsequent reassembly.
- (5) Refer to the drawing, then blank off the redundant switch cut-out in the panel, using the manufactured blanking plate, Part No. DHS.171, and the retained attachment items.
- (6) Drill the two No. 26 holes, as detailed, and cut away the aperture in the panel to mount the new switch. Deburr the drilled holes and the sharp edges on the cut-out, and remove any swarf.
- (7) Still working on the junction box, dismantle plug C6 and remove the now redundant pin 4 and cable, routed to the redundant switch position. Route a new length of Unipren 24 amp. cable (Ref. No. 5E/3042) from pin '4' to the new switch cut-out in the panel, slide on a 4 mm. marking sleeve, Part No. T2A, coded '4', crimp the cable to a new plug pin (Ref. No. 5X3242) and reassemble the plug. Code the switch end of this cable 'BP2' with a set of 4 mm. marking sleeves, Part No. T2A.

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- (8) Remove the now redundant link cable, coded 'BP+', routed from the blanked switch position to fuse position 13. Route a new length of Unipren 24 amp. cable from fuse position 13 to the new switch cut-out in the panel, slide on each end of the cable a set of 4 mm. marking sleeves, Part No. T2A, coded 'BP+', and connect the cable to fuse position 13.
- (9) Remove the terminal cover on the new switch (Ref. No. 5CW/5823) then connect the new cable coded 'BP+', to terminal 1 and the other new cable coded 'BP2' to terminal 2. Replace the terminal cover then, referring again to the drawing, assemble the switch and the manufactured label, Part No. NOO.4113ND, to the cut-out in the panel, securing them in position with their new attachment items. Remove the now redundant 10 amp. fuse (Ref. No. 5CZ/881) from fuse position 13, fit the new fuse of 20 amp. rating (Ref. No. 5CZ/1255) and amend the fuse ident to read '20 amp.'
- (10) Working in the gun bay, remove the suppressor cover, then disconnect and temporarily dismantle the cable loom C6A socket from the rear face of bulkhead No. 2. Disconnect the now redundant cable routed between the socket pin '4', and the suppressor, coded 'BP2', having removed the lashing on the sleeve securing the cable at the suppressor end and released the gland nut. Replace this cable with a new Unipren 24 amp. cable, using the redundant cable as a draw wire. Cut the new cable to suit.
- (11) Slide on the new cable, at the socket end, a 4 mm. marking sleeve, Part No. T2A, coded '4' and a new binding sleeve, Part No. TWBP, then, using a new thimble (Ref. No. 5X/3150) crimp the cable to a new socket insert (Ref. No. 5X/7331). Remake the socket and reconnect it to the bulkhead. Code the cable 'BP2', at the suppressor end, with a set of 4 mm. marking sleeves, Part No. T2A, and connect to the suppressor.
- (12) Disconnect the now redundant earth cable, routed between the suppressor and the terminal block in the gun bay, and replace it with a new Unipren 24 amp. cable, using the redundant cable as a draw wire. Slide on each end of the cable a 4 mm. marking sleeve, Part No. T2A, coded 'E', then connect the cable to the suppressor and the terminal block.
- (13) Reconnect the gland nut to the suppressor, renew the lashing with beeswax coated braided stringing cord (Ref. Nos. 33C/10 and 32A/94) respectively and replace the suppressor cover. Refit the junction box No. 1 in the aircraft, with its retained attachment items, and reconnect all disturbed electrical connections to the box.
- (14) Reconnect the aircraft batteries. Raise and secure the gun bay doors.

## 9. TESTING AFTER EMBODIMENT

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

Check all disturbed electrical circuits, particularly the fuel booster pump, circuit, for correct functioning.

## 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
26FC/-	DHS.90/Mk. 14	Label	1	—
5CW/2497	—	Switch, tumbler, type 'B'	1	B
5CZ/881	—	Fuse, 10 amp.	1	C

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

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

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Diagram of the control panel showing the layout of switches and labels. The panel includes a STARTER switch (0-1), a MASTER switch (ON), a G4F switch (ON), a SPARE switch, a FUEL PUMP EMERGENCY switch, and a SW ON FOR TAKE OFF switch. Dimensions are provided: 0.75 inches for the width of the switch area, 0.85 inches for the height of the top section, 1.53 inches for the height of the middle section, and 1.95 inches for the height of the bottom section.

ENGINE FIRE EXTINGUISHER

1'26"

1'58 CRS

MINIMUM

(6)

3 M/M LETTERING → BOOST PUMP

DRILL A 0" 65 DIA. HOLE IN THE LABEL

4 M/M LETTERING → ON

DRILL TWO No.20 HOLES.

0" 67

1.58 CRS

1.96

0" 65

0" 65

N00  
4113  
ND

3 M/M LETTERING—  
DRILL A 0" GS DIA. HOLE IN THE LABEL

PANEL OF JUNCT

MODIFICATION TO THE TOP SWITCH PANEL OF JUNCTION BOX No. 1

5CW  
5823

SWITCH S.P.  
1-OFF  
MOUNT WITH No. 1  
TERMINAL OUTBOARD

A32  
B10

SCREW ROUND HEAD  
4 BA 2-OFF

SP  
15  
B

WASHER 4 BA.  
2-OFF INSERT  
BETWEEN SWITCH  
AND PANEL

AGS  
2035  
B

AND PANEL  
WASHER SHAKEPROOF  
4 BA. 2-OFF



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# Section G Contents List

Leaflet No.	Short Title	Mod. No.	A.L. No.	Leaflet Alteration No.						Cancelled by A.L. No.
				1	2	3	4	5	6	
				Introduced by A.L. No.						
G 1										
G 2										
G 3										
G 4										
G 5										
G 6										
G 7										
G 8										
G 9										
G 10										
G 11										
G 12										
G 13										
G 14										
G 15										
G 16										
G 17										
G 18										
G 19										
G 20										
G 21										
G 22										
G 23										
G 24										
G 25										
G 26										

**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.						
G 27										
G 28										
G 29										
G 30										
G 31										
G 32										
G 33										
G 34										
G 35										
G 36										
G 37										
G 38										
G 39										
G 40										
G 41										
G 42										
G 43										
G 44										
G 45										
G 46										
G 47										
G 48										
G 49										
G 50										
G 51										
G 52										
G 53										
G 54										
G 55										
G 56										

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

**Vampire F.B. Mk. 9 Aircraft—Mainplanes—To Introduce Reinforced Outer  
Flap Shrouds and Dive Brake Shrouds**

(AB/A/5788.—3.7.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. G.1 (Mod. No. Vampire/3493)  
is amended as follows:—

(1) Drg. No. A.P.4099G/G.1/57, Sheet 1, *under* reference:—

(a) "False Spar Rear Face—Ref." *Add* the note:—

"Note:—Pick up existing rivet position if possible."

(b) *Insert* an arrow from this note to the bottom outboard rivet  
which attaches the top hat stiffener to the false spar web.

(2) Drg. No. A.P.4099G/G.1/57, Sheet 5 *adjacent* to balloon 'P' *Add* the  
note:—

"Note:—Ends of the Top Hat Stiffener Angles may be trimmed  
to clear rivet heads in Rib 3 Web."

(3) Drg. No. A.P.4099G/G.1/57, Sheet 8, *under* the wording:—

"For key see Sheet 10" *Add* the note:—

"Note:—Ends of Angle Cleats 'AF' 'AG' may be trimmed to  
clear rivet heads in Rib 3 Web."

(4) Drg. No. A.P.4099G/G.1/57, Sheet 9, *adjacent* to balloon 'AF' *Add*  
the note:—

"Note:—If Pre-drilled holes in Items 'AF' and 'AG' do not  
line up on Rib 4, make up new Angle Cleats and drill  
holes on Assembly."

**RESTRICTED**



~~ALN 208~~  
(Flap and brake shrouds)

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

**Vampire F.B. Mk. 9 Aircraft—Mainplanes—To Introduce Reinforced  
Outer Flap Shrouds and Dive Brake Shrouds**

(AB/A/5788.—15.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. G.1 (Mod. No. Vampire/3493), is amended as follows:—

(1) Heading, class. *Delete* "Class C/3" and *substitute* "Class C/4".

(2) Para. 2. *Delete* para. 2 and *substitute*:

**"2. EMBODIMENT**

This modification calls for no retrospective action."

**R**

**RESTRICTED**

(48614/316) 229727 8245 625 2/58 (H.P.W.) (Gp. 19/1)



**Vampire F.B. Mk. 9 Aircraft— Mainplanes— To Introduce Reinforced Outer  
Flap Shrouds and Dive Brake Shrouds**

(MOD. No. VAMPIRE/3493.)

(Class C/3.)

(AB/A/5788.—9.5.57.)

**1. INTRODUCTION**

Rivets have become loose on the outer flap shroud and dive brake shroud stiffener-rib attachments and several cracks have occurred in these shroud skins. To obviate this defect this modification introduces reinforcing to strengthen these areas.

(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 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 30 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/G.1/57, Sheets 1-10, 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/103493:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26FC/-	DOO.7967	Angle cleat, 90 deg.	4	—
26FC/-	DOO.7969	Angle cleat, 97 deg.	6	—
26FC/-	DOO.7971	Angle cleat, 83 deg.	6	—
26FC/-	DOO.7975	Angle cleat (port) 97 deg.	2	—
26FC/-	DOO.7976	Angle cleat (starboard) 97 deg.	2	—
26FC/-	DOO.7977	Angle cleat (port) 83 deg.	2	—
26FC/-	DOO.7978	Angle cleat (starboard) 83 deg.	2	—
26FC/-	DOO.7979	Stiffener, top hat, dive brake shroud (port)	1	—
26FC/-	DOO.7980	Stiffener, top hat, dive brake shroud (stbd.)	1	—

**R**



<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/-	DOO.7981	Stiffener, top hat, dive brake shroud (port)	1	—
26FC/-	DOO.7982	Stiffener, top hat, dive brake shroud (stbd.)	1	—
26FC/-	DOO.7983	Stiffener, top hat, dive brake shroud (port)	1	—
26FC/-	DOO.7984	Stiffener, top hat, dive brake shroud (stbd.)	1	—
26FC/-	DOO.7985	Gusset plate	2	—
26FC/-	DOO.7987	Gusset plate (port)	1	—
26FC/-	DOO.7988	Gusset plate (stbd.)	1	—
26FC/-	DOO.7989	Stiffener, top hat, outer flap shroud (port)	1	—
26FC/-	DOO.7990	Stiffener, top hat, outer flap shroud (stbd.)	1	—
26FC/-	DOO.7991	Stiffener, top hat, outer flap shroud (port)	1	—
26FC/-	DOO.7992	Stiffener, top hat, outer flap shroud (stbd.)	1	—
26FC/-	DOO.7993	Stiffener, No. 2 flap shroud (port)	1	—
26FC/-	DOO.7994	Stiffener, No. 2 flap shroud (stbd.)	1	—
26FC/-	DOO.7995	Stiffener, outer flap shroud (port)	1	—
26FC/-	DOO.7996	Stiffener, outer flap shroud (stbd.)	1	—
26FC/-	DOO.7997	Stiffener, outer flap shroud (port)	1	—
26FC/-	DOO.7998	Stiffener, outer flap shroud (stbd.)	1	—
26FC/-	DOO.7999	Angle cleat, 80 deg.	2	—
26FC/-	DOO.8001	Angle cleat, 80 deg.	10	—
26FC/-	DOO.8003	Angle cleat, 100 deg.	2	—
26FC/-	DOO.8005	Angle cleat, 100 deg.	10	—
28D/12846	A.25/15B	Bolt, hex/hd. 4 B.A.	4	C
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	82	C
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{16}$ in. dia.	6	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	32	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	48	C
28Q/6799	AS.2227/505	Rivet, sp/hd., $\frac{5}{16}$ in. dia.	4	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	198	C
28Q/6679	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	36	C
28Q/6797	AS.2229/504	Rivet, 90 deg. csk/hd., $\frac{5}{16}$ in. dia.	66	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.

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

Ref. No.	Nomenclature	Qty.	Class of Equipment
30A/3055	Wire, nickel alloy, 22 s.w.g.	As reqd.	C
33B/534	Stopper, oil base	As reqd.	C
33B/1021	Primer, etch base	As reqd.	C
33B/1023	Primer, etch accelerator	As reqd.	C
33B/1060 (Home)	Finish, cellulose, aluminium, Spec. D.T.D.772	As reqd.	C
33B/865 (Overseas)			
33C/647	Paper, abrasive, waterproof silicon carbide grade 280C	As reqd.	C
33C/1264	Compound, pigmented varnish jointing, Spec. D.T.D.369A	As reqd.	C
33B/1068 (Home)	Finish, cellulose, light slate grey, Spec. D.T.D.772	As reqd.	C
33B/942 (Overseas)			
33B/1070 (Home)	Finish, cellulose, medium sea grey, Spec. D.T.D.772	As reqd.	C
33B/939 (Overseas)			

## (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/357	DOO.1951A	Assy. of outer flap shroud (port)		

The method for modifying the above spare is detailed in para. 8, operations (2) to (10) inclusive and on sheets 1 to 7 inclusive, of the drawing.

## Parts required:—

26FC/—	DOO.7985	Gusset plate	1	—
		Attaching parts for DOO.7985, gusset plate		
28Q/6638 and	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	6	C
26FC/—	DOO.7987	Gusset plate	1	—
		Attaching parts for DOO.7987, gusset plate		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	4	C
28Q/6640 and	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	2	C
26FC/—	DOO.7989	Stiffener, top hat, outer flap shroud	1	—
		Attaching parts for DOO.7989, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
26FC/—	DOO.7991	Stiffener, top hat, outer flap shroud	1	—
		Attaching parts for DOO.7991, stiffener		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	30	C

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
28Q/6679 and 26FC/-	AS.2229/405 DOO.7993	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia. Stiffener No. 2 flap shroud	4 1	C —
		Attaching parts for DOO.7993, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	1	C
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{32}$ in. dia.	3	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	19	C
28Q/6797 and 26FC/-	AS.2229/504 DOO.7995	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. Stiffener, outer flap shroud	19 1	C —
26FC/-	DOO.7997	Stiffener, outer flap shroud	1	—
		Attaching parts for DOO.7995 and DOO.7997, stiffeners		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6799	AS.2227/505	Rivet, sp/hd., $\frac{5}{32}$ in. dia.	2	C
28Q/6797 and 26FC/-	AS.2229/504 DOO.7999	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. Angle cleat, 80 deg.	28 1	C —
26FC/-	DOO.8001	Angle cleat, 80 deg.	5	—
26FC/-	DOO.8003	Angle cleat, 100 deg.	1	—
26FC/-	DOO.8005	Angle cleat, 100 deg.	5	—
		Attaching parts for DOO.7999, DOO 8001, DOO.8003, DOO.8005, angle cleats		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	10	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	18	C
Spare affected:—				
26FC/531	DOO.1952	Assy. of outer flap shroud (stbd.)		
The method for modifying the above spare is detailed in para. 8. operations (2) to (10) inclusive and on sheets 1 to 7 inclusive of the drawing,				
Parts required:—				
26FC/-	DOO.7985	Gusset plate	1	—
		Attaching parts for DOO.7985, gusset plate		
28Q/6638 and 26FC/-	AS.2227/404 DOO.7988	Rivet, sp/hd., $\frac{1}{8}$ in. dia. Gusset plate	6 1	C —
		Attaching parts for DOO.7988, gusset plate		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	4	C
28Q/6640 and 26FC/-	AS.2229/404 DOO.7990	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia. Stiffener, top hat, outer flap shroud	2 1	C —
		Attaching parts for DOO.7990, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and 26FC/-	AS.2229/405 DOO.7992	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia. Stiffener, top hat, outer flap shroud	4 1	C —

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Class of Qty. Equipment</i>	
Attaching parts for DOO.7992, stiffener				
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	30	C
28Q/6679 and	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
26FC/-	DOO.7994	Stiffener, No. 2 flap shroud	1	—
Attaching parts for DOO.7994, stiffener				
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	1	C
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{32}$ in. dia.	3	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	19	C
28Q/6797 and	AS.2229/504	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia.	19	C
26FC/-	DOO.7996	Stiffener, outer flap shroud	1	—
26FC/-	DOO.7998	Stiffener, outer flap shroud	1	—
Attaching parts for DOO.7996 and DOO.7998, stiffeners				
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6799	AS.2227/505	Rivet, sp/hd., $\frac{5}{32}$ in. dia.	2	C
28Q/6797 and	AS.2229/504	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia.	28	C
26FC/-	DOO.7999	Angle cleat, 80 deg.	1	—
26FC/-	DOO.8001	Angle cleat, 80 deg.	5	—
26FC/-	DOO.8003	Angle cleat, 100 deg.	1	—
26FC/-	DOO.8005	Angle cleat, 100 deg.	5	—
Attaching parts for DOO.7999, DOO.8001, DOO.8003, DOO.8005 angle cleats				
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	10	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	18	C

## Spares affected:—

26FC/-	DOO.6715A/10	Arrangement of wing, port (spares)
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The method for modifying any of the above spares is detailed in para. 8, operations (2) to (13) and on sheets 1 to 10 of the drawing.

## Parts required for each spare:—

## Items required for dive brake shroud (ref. only)

26FC/-	DOO.7967	Angle cleat, 90 deg.	2	—
26FC/-	DOO.7969	Angle cleat, 97 deg.	3	—
26FC/-	DOO.7971	Angle cleat, 83 deg.	3	—

## Attaching parts for DOO.7967, DOO.7969, DOO.7971, angle cleats

28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	18	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6639 and	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
26FC/-	DOO.7975	Angle cleat, 97 deg.	2	—
26FC/-	DOO.7977	Angle cleat, 83 deg.	2	—

**RESTRICTED**

<i>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
		Attaching parts for DOO.7975, DOO.7977, angle cleats		
28D/12846	A25/15B	Bolt, hex/hd., 4 B.A.	2	C
28Q/6646 and 26FC/-	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	8	C
	DOO.7979	Stiffener, top hat, dive brake shroud	1	—
		Attaching parts for DOO.7979, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and 26FC/-	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	2	C
	DOO.7981	Stiffener, top hat, dive brake shroud	1	—
		Attaching parts for DOO.7981, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	12	C
28Q/6679 and 26FC/-	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
	DOO.7983	Stiffener, top hat, dive brake shroud	1	—
		Attaching parts for DOO.7983, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
Items required for outer flap shroud (ref. only)				
Parts required:—				
26FC/-	DOO.7985	Gusset plate	1	—
		Attaching parts for DOO.7985, gusset plate		
28Q/6638 and 26FC/-	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	6	C
	DOO.7987	Gusset plate	1	—
		Attaching parts for DOO.7987, gusset plate		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	4	C
28Q/6640 and 26FC/-	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	2	C
	DOO.7989	Stiffener, top hat, outer flap shroud	1	—
		Attaching parts for DOO.7989, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and 26FC/-	AS.2229/405	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
	DOO.7991	Stiffener, top hat, outer flap shroud	1	—
		Attaching parts for DOO.7991, stiffener		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	30	C

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

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28Q/6679 and 26FC/-	AS.2229/405 DOO.7993	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia. Stiffener No. 2 flap shroud	4 1	C —
		Attaching parts for DOO.7993, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	1	C
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{32}$ in. dia.	3	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	19	C
28Q/6797 and 26FC/-	AS.2229/504 DOO.7995	Rivet, 90 deg. csk./hd., $\frac{5}{32}$ in. dia. Stiffener, outer flap shroud	19 1	C —
26FC/-	DOO.7997	Stiffener, outer flap shroud	1	—
		Attaching parts for DOO.7995 and DOO.7997, stiffeners		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6799	AS.2227/505	Rivet, sp/hd., $\frac{1}{32}$ in. dia.	2	C
28Q/6797 and 26FC/-	AS.2229/504 DOO.7999	Rivet, 90 deg. csk/hd., $\frac{5}{32}$ in. dia. Angle cleat, 80 deg.	28 1	C —
26FC/-	DOO.8001	Angle cleat, 80 deg.	5	—
26FC/-	DOO.8003	Angle cleat, 100 deg.	1	—
26FC/-	DOO.8005	Angle cleat, 100 deg.	5	—
		Attaching parts for DOO.7999, DOO.8001, DOO.8003, DOO.8005, angle cleats		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	10	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	18	C

Spare affected:—

26FC/-	DOO.7611A/5	Arrangement of wing, stbd. (spares)
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The method for modifying any of the above spares is detailed in para. 8, operations (2) to (13) and on Sheets 1 to 10 of the drawing.

Parts required for each spare:—

Items required for dive brake shroud (ref. only)

26FC/-	DOO.7967	Angle cleat, 90 deg.	2	—
26FC/-	DOO.7969	Angle cleat, 97 deg.	3	—
26FC/-	DOO.7971	Angle cleat, 83 deg.	3	—
		Attaching parts for DOO.7967, DOO.7969, DOO.7971, angle cleats		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	18	C
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6639 and 26FC/-	AS.2227/405 DOO.7976	Rivet, sp/hd., $\frac{1}{8}$ in. dia. Angle cleat, 97 deg.	2 2	C —
26FC/-	DOO.7978	Angle cleat, 83 deg.	2	—
		Attaching parts for DOO.7976, DOO.7978, angle cleats		
28D/12846	A.25/15B	Bolt, hex/hd., 4 B.A.	2	C
28Q/6646 and 26FC/-	AGS.2045/406 DOO.7980	Rivet, Chobert, $\frac{1}{8}$ in. dia. Stiffener, top hat, dive brake shroud	8 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>
		Attaching parts for DOO.7980, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and 26FC/-	AS.2229/405 DOO.7982	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia. Stiffener, top hat, dive brake shroud	2 1	C —
		Attaching parts for DOO.7982, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	12	C
28Q/6679 and 26FC/-	AS.2229/405 DOO.7984	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia. Stiffener, top hat, dive brake shroud	4 1	C —
		Attaching parts for DOO.7984, stiffener		
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and	AS.2229/405	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	4	C

Items required for outer flap shroud (ref. only)

Parts required:—

26FC/-	DOO.7985	Gusset plate	1	—
		Attaching parts for DOO.7985, gusset plate		
28Q/6638 and 26FC/-	AS.2227/404 DOO.7988	Rivet, sp/hd. $\frac{1}{8}$ in. dia. Gusset plate	6 1	C —
		Attaching parts for DOO.7988, gusset plate		
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	4	C
28Q/6640 and 26FC/-	AS.2229/404 DOO.7990	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia. Stiffener, top hat, outer flap shroud	2 1	C —
		Attaching parts for DOO.7990, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6639*	AS.2227/405	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	14	C
28Q/6679 and 26FC/-	AS.2229/405 DOO.7992	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia. Stiffener, top hat, outer flap shroud	4 1	C —
		Attaching parts for DOO.7992, stiffener		
28Q/6638	AS.2227/404	Rivet, sp/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	30	C
28Q/6679 and 26FC/-	AS.2229/405 DOO.7994	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia. Stiffener, No. 2 flap shroud	4 1	C —
		Attaching parts for DOO.7994, stiffener		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	1	C
28Q/6886	AGS.2045/506	Rivet, Chobert, $\frac{5}{32}$ in. dia.	3	C

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Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
28Q/6640	AS.2229/404	Rivet, 90 deg. csk/hd. $\frac{1}{8}$ in. dia.	19	C
28Q/6797 and	AS.2229/504	Rivet, 90 deg. csk/hd. $\frac{5}{32}$ in. dia.	19	C
26FC/-	DOO.7996	Stiffener, outer flap shroud	1	—
26FC/-	DOO.7998	Stiffener, outer flap shroud	1	—
		Attaching parts for DOO.7996 and DOO.7998, stiffeners		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	2	C
28Q/6799	AS.2227/505	Rivet, sp/hd. $\frac{5}{32}$ in. dia.	2	C
28Q/6797 and	AS.2229/504	Rivet, 90 deg. csk/hd. $\frac{5}{32}$ in. dia.	28	C
26FC/-	DOO.7999	Angle cleat, 80 deg.	1	—
26FC/-	DOO.8001	Angle cleat, 80 deg.	5	—
26FC/-	DOO.8003	Angle cleat, 100 deg.	1	—
26FC/-	DOO.8005	Angle cleat, 100 deg.	5	—
		Attaching parts for DOO.7999, DOO.8001, DOO.8003, DOO.8005, angle cleats		
28Q/6646	AGS.2045/406	Rivet, Chobert, $\frac{1}{8}$ in. dia.	10	C
28Q/6638	AS.2227/404	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	2	C
28Q/6639	AS.2227/405	Rivet, sp/hd. $\frac{1}{8}$ in. dia.	18	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 Nos., as follows:—

Ref. No.	Old Part/Assy. No.	Nomenclature	New Part/Assy. No.	Ref. No.
26FC/357	DOO.1951A	Assy. of outer flap shroud (port)	DOO.8009A	26FC/12448
26FC/531	DOO.1952A	Assy. of outer flap shroud (stbd.)	DOO.8010A	26FC/12449
26FC/-	DOO.3933A	Assy. dive brake shroud on wing (port)	DOO.8007A	26FC/-
26FC/-	DOO.3934A	Assy. dive brake shroud on wing (stbd.)	DOO.8008A	26FC/-
26FC/-	DOO.6527A/11	G.A. of wing, port	DOO.6527A/12	26FC/-
26FC/-	DOO.6715A/10	Arrangement of wing, spares, port	DOO.6715A/11	26FC/11985
26FC/-	DOO.7539A/6	G.A. of wing, stbd.	DOO.7539A/7	26FC/-
26FC/-	DOO.7611A/5	Arrangement of wing, spares, stbd.	DOO.7611A/6	26FC/11986

#### 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations and is applicable to both port and starboard mainplanes:—

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(1) Lower the flaps and place the dive brakes in the "out" position. Release the hydraulic pressure and drain the fluid from the system in accordance with current authorized procedure. Remove the lower detachable panel from the dive brake shroud, retaining its attaching items for subsequent reassembly. Disconnect the hydraulic pipes in the flap bay, which run to the dive brake jack, and remove and retain the pipe clamps which secure these pipes together with their attaching items.

*Note:*—Extreme care must be taken to ensure that all pipe lines are blanked off to prevent the ingress of foreign matter.

(2) Working in the outer flap bay, locate the inboard longitudinal stiffeners, Part No. DOO.1719 (port); DOO.1720 (starboard) (ref. only) and its two attaching outboard transverse stiffeners, Part Nos. DOO.2843 (port aft); DOO.2844 (starboard aft); DOO.2845 (port forward); DOO.2846 (starboard forward) (ref. only), remove these redundant stiffeners from the aircraft by drilling out their attaching rivets using a No. 30 (0.1285 in. dia.) drill. Increase the dia. of the 90 deg. dimple countersinks on the top surface of the flap shroud to 0.27 in. dia. and increase the size of the rivet holes using a No. 21 (0.1590 in. dia.) drill.

(3) *Refer* to sheets 1, 2 and 6 of the drawing. Using the inboard longitudinal row of existing rivet holes as guides, position the new top hat stiffener, Part No. DOO.7993 (port); DOO.7994 (starboard) on the underside of the flap shroud, ensuring that the inboard flange of the stiffener fits under the ends of the two existing transverse stiffeners, Part Nos. DOO.1843 (port forward); DOO.1845 (port aft); DOO.1844 (starboard forward); DOO.1846 (starboard aft) (ref. only) and that the double joggled end of the new top hat stiffener is seated on the false spar. Working from the top of the shroud and using the existing rivet holes as guides, drill through the inboard flange of the top hat stiffener using a No. 28 (0.1405 in. dia.) drill. Thoroughly deburr the stiffener. Working from the underside of the flap shroud enlarge the existing hole in the trailing edge member using a No. 20 (0.160 in. dia.) drill and drill a hole in the rear end of the inboard flange on the new stiffener using the No. 20 drill to mate up with the hole just drilled, and remove all burrs.

(4) Mark off and drill the outboard flange of the stiffener and shroud skin using a No. 35 (0.110 in. dia.) drill as shown on sheets 1 and 2 of the drawing. Drill one hole at the rear end of the stiffener and trailing edge member using the No. 30 drill. Remove the stiffener and thoroughly deburr all the holes. Dimple countersink the No. 35 holes in the flap shroud 90 deg.  $\times$  0.22 in. dia. and the No. 28 holes in the stiffener flange to suit the dimpling in the shroud skin.

(5) Coat the mating surfaces of the stiffener and the shroud with pigmented varnish jointing compound (Ref. No. 33C/1264) and rivet the stiffener to the flap shroud using approximately nineteen  $\frac{5}{32}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/504, for the inboard row and approximately nineteen  $\frac{1}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/404 for the outboard row. At the trailing edge member secure the inboard flange with a  $\frac{5}{32}$  in. dia. Chobert rivet, Part No. AGS.2045/506, and the outboard flange with a  $\frac{1}{8}$  in. dia. Chobert rivet, Part No. AGS.2045/406. Secure the ends of the two existing transverse stiffeners to the new top hat stiffener, using two  $\frac{5}{32}$  in. dia. Chobert rivets, Part No. AGS.2045/506 having first drilled two holes, using the No. 20 drill, in the top hat stiffener to mate with the existing hole in the transverse stiffeners.

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(6) *Refer* to fig. 1 on sheet 7 of the drawing and drill the angle attachments on the two new transverse stiffeners, Part No. DOO.7995 (port aft); DOO.7997 (port forward); DOO.7996 (starboard aft); DOO.7998 (starboard forward) using the No. 30 drill for the inboard ends and the No. 21 drill for the outboard ends. *Refer* to sheets 1, 2 and 3 of the drawing and position these two new stiffeners to the underside of the flap shroud taking up the same positions as those of the redundant stiffeners removed in operation (2) Using the existing holes in the flap shroud as guides and using the No. 28 drill, drill through the stiffeners. Remove the stiffeners and thoroughly deburr them. Dimple countersink the No. 28 holes in the stiffeners to suit the dimpling in the shroud skin. Coat the mating surfaces of the stiffeners and the shroud with pigmented varnish jointing compound, and, using approximately fourteen  $\frac{5}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/504, rivet the stiffeners to the shroud skin. The outboard angle attachments of the new stiffeners are to be secured to the existing trailing edge rib No. 2 and stiffeners with two  $\frac{5}{8}$  in. dia. snaphead rivets, Part No. AS.2227/505, first enlarging the existing rivet holes using a No. 21 drill. The inboard angle attachments are to be secured to the new top hat stiffener using two  $\frac{1}{2}$  in. dia. Chobert snaphead rivets, Part No. AGS.2045/406, having first drilled two No. 30 holes in the top hat stiffener to mate up with the holes in the angle attachments.

(7) Mark a centre line for the new top hat stiffener, Part No. DOO.7989 (port), DOO.7990 (starboard) the whole length of the outer flap bay, measuring on its underside 8-07 in. to the rear of the false spar and along the centre line of the new top hat stiffener which was fitted in operation (3) and 7-51 in. to the rear of the false spar along the outboard edge of rib 3, as shown on sheet 1 of the drawing. *Refer* to fig. 2 on sheet 7 of the drawing and drill the angle attachments at each end of the stiffener using the No. 30 drill, as shown. Referring to sheets 2 and 3 of the drawing, mark out and centre punch the rivet pitches on the new top hat stiffener as detailed. Offer up the stiffener to the centre line just marked on the undersurface of the flap shroud, adjacent to the new top hat stiffener fitted in operation (3) and using the No. 35 drill, drill through the stiffener and flap shroud. Dimple countersink these holes on the top surface of the flap shroud 90 deg.  $\times$  0-22 in. dia. and the holes in the stiffener to suit the dimpling in the shroud. Coat the mating surfaces of the stiffener and shroud with pigmented varnish jointing compound and using approximately fourteen  $\frac{1}{2}$  in. dia. 90 deg. countersunk-head rivets, Part Nos. AS.2229/404 (ten off) and AS.2229/405 (four off) using the longer rivets at the ribs and the shorter rivets between the ribs, rivet the stiffener to the flap shroud.

(8) *Refer* to fig. 3 on sheet 7 of the drawing and working with the new top hat stiffeners, Part No. DOO.7991 (port); DOO.7992 (starboard) drill off the end angle attachments using the No. 30 drill at each end of the stiffener. Working to the centre line marked in the previous operation, offer up this new top hat stiffener to the flap shroud so that its centre line corresponds with that on the shroud and that it is positioned as shown on sheets 1, 3, 4 and 5 of the drawing. Mark out and centre punch the rivet pitches on the flanges of this new stiffener as detailed and then drill through the stiffener and flap shroud using the No. 35 drill. Remove the stiffener and thoroughly deburr both the stiffener and flap shroud. Dimple countersink these holes on the top surface of the shroud 90 deg.  $\times$  0-22 in. dia. and the holes in the stiffener to suit the dimpling in the shroud. Coat the mating surfaces of the stiffeners and shroud with

**RESTRICTED**

pigmented varnish jointing compound and using approximately thirty-two  $\frac{1}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/404 (twenty eight off) and AS.2229/405 (four off) using the longer rivets at the ribs and the shorter rivets between the ribs, rivet the stiffener to the flap shroud.

(9) *Refer* to sheet 4 of the drawing and locate the existing longitudinal stiffener, Part No. DOO.1721 (port); DOO.1722 (starboard) (ref. only) and at its intersections where its transverse stiffeners are attached, offer up the two new gusset plates, Part Nos. DOO.7985 (port aft) and DOO.7987 (port forward); DOO.7985 (starboard aft) and DOO.7988 (starboard forward) and position them as detailed. With the No. 30 drill and using the holes in the gusset plates as guides drill through the stiffeners. Thoroughly deburr the stiffeners and then, coating the mating surfaces with pigmented varnish jointing compound, rivet these plates into position using six  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/404, for the aft gusset plate and four  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/404, and two  $\frac{1}{8}$  in. dia. 90 deg. countersunk-head rivets, Part No. AS.2229/404, for the forward gusset plate.

(10) *Refer* to sheets 1, 2, 3, 4 and 5 of the drawing and establish the positions of the twelve new angle attachment cleats, Part Nos. DOO.7999 (one off); DOO.8001 (five off); DOO.8003 (one off); DOO.8005 (five off). Offer up these new angle cleats to their respective positions, as detailed, then using the No. 30 drill, drill the stiffeners, using the holes in the angle cleats as guides, also drill the rivet holes for attaching the new transverse top hat stiffeners using the holes in the angle attachments as guides. Remove the cleats and thoroughly deburr all holes. Coat the mating surfaces of all these cleats with pigmented varnish jointing compound and rivet them to their respective stiffeners using twenty-two  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/405, for the stiffeners with the No. 30 holes drilled in them and twelve  $\frac{1}{8}$  in. dia. Chobert rivets, Part No. AGS.2045/406, for the No. 30 holes drilled in the top hat stiffeners and four  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/404, for securing the outboard angle attachments to the trailing edge rib No. 3. Reference to sheets 1, 2, 3, 4 and 5 of the drawing will clarify these rivet positions.

(11) *Refer* to sheets 8, 9 and 10 of the drawing. Working in the dive brake compartment mark off two centre lines along the undersurface of the dive brake shroud, the line between trailing edge rib No. 3 and the main hinge bracket on the inboard portion of the shroud is to measure 5.82 in. to the rear of, and parallel to, the false spar. The line between the main hinge bracket and trailing edge rib No. 5 in the outboard portion of the dive brake shroud is to measure 5.98 in. to the rear of, and parallel to, the false spar as shown on sheet 8 of the drawing. *Refer* to sheet 8 of the drawing and mark out and centre punch the rivet pitches on the three new top hat stiffeners Part Nos. DOO.7979 (port outboard); DOO.7981 (port centre) and DOO.7983 (port inboard); DOO.7980 (starboard outboard); DOO.7982 (starboard centre) and DOO.7984 (starboard inboard) as detailed. Offer up the stiffeners to the centre lines on the undersurface of the dive brake shroud, and position them as detailed. Using the No. 35 drill, drill through the stiffeners and dive brake shroud. Remove the stiffeners and deburr the newly drilled holes in them and the shroud skin. Dimple countersink these holes on the top surface of the dive brake shroud, 90 deg.  $\times$  0.22 in. dia. and the holes in the stiffeners to suit the dimpling in the shroud. Coat the mating surfaces of the stiffeners and the shroud with pigmented varnish jointing compound and rivet the stiffeners to the

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undersurface of the shroud using approximately fifty  $\frac{1}{8}$  in. dia. 90 deg. countersunk-head rivets, Part Nos. AS.2229/404 (forty off) and AS.2229/405 (ten off), the shorter rivets are to be used for riveting two thicknesses of metal together and the longer rivets for riveting three thicknesses at the intersections, as detailed on sheet 9 of the drawing.

(12) Refer to sheets 8 and 9 of the drawing and establish the position of the twelve new angle cleats, Part Nos. DOO.7967 (two off) DOO.7969 (three off), DOO.7971 (three off), DOO.7975 (port); DOO.7976 (starboard) (two off), DOO.7977 (port); DOO.7978 (starboard) (two off). Offer up these cleats to their respective positions, then using a No. 30 drill and using the holes in the cleats as guides, drill through the respective top hat stiffeners and the respective trailing edge ribs. Remove the cleats and thoroughly deburr all holes. Coat the mating surfaces of the cleats, stiffeners and ribs with pigmented varnish jointing compound and rivet the cleats in their respective positions using twenty-six  $\frac{1}{8}$  in. dia. Chobert rivets, Part No. AGS.2045/406, for the top hat stiffeners and trailing edge rib No. 5, two  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/405, for trailing edge rib No. 4 and two  $\frac{1}{8}$  in. dia. snaphead rivets, Part No. AS.2227/404, for trailing edge rib No. 3.

(13) Refer to sheets 8 and 9 of the drawing and remove the two existing bolts which secure the angles to the main hinge bracket, adjacent to where the new top hat stiffener has been secured and replace them with two new longer 2 B.A. bolts, Part No. A.25/15B, at the same time securing the four new cleats, refit the original nuts and washers.

(14) Remove the blanks from the disconnected hydraulic pipes, reconnect and secure them in their correct positions using the retained pipe clamp and attaching items. Replenish the hydraulic system and check all disturbed unions for leaks, wire lock with 22 s.w.g. nickel alloy locking wire (Ref. No. 30A/3055).

(15) Repair the finish to the top surface of the flap and dive brake shrouds by first applying an equal mixture of etch primer base and accelerator, Spec. D.T.D.868 (Ref. No. 33B/1021 and 33B/1023) respectively, fill any local indentations with oil base stopper (Ref. No. 33B/534), rub down the stopped area, using fine abrasive paper (Ref. No. 33C/647). Again apply a further coat of primer, and finally apply a coat of finish, cellulose, light slate grey or medium sea grey (Ref. No. 33B/1068 or 942 or 33B/1070 or 939) as applicable.

(16) Repair the finish to the undersurface of the flap and dive brake shrouds by applying an equal mixture of etch primer, base and accelerator and finally apply a coat of aluminium cellulose finish, Spec. D.T.D.772 (Ref. No. 33B/1060 or 865). Replace the lower detachable panel to the dive brake shroud using the original retained attaching items.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected in accordance with current procedure, the following tests are to be carried out:—

Function and check the flaps and dive brakes to ensure there are no fouls in the housed position.

#### 10. RECORDING ACTION

Record on Aircraft Form 700.

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# 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>Ref. No.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Equipment</i>
26FC/368	DOO.1719	Stiffener No. 2 flap shroud, port	1	C
26FC/541	DOO.1720	Stiffener No. 2 flap shroud, stbd.	1	C
26FC/-	DOO.2843	Stiffener (port, aft)	1	—
26FC/-	DOO.2844	Stiffener (stbd. aft)	1	—
26FC/-	DOO.2845	Stiffener (port, forward)	1	—
26FC/-	DOO.2846	Stiffener (stbd. forward)	1	—

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

This modification causes a weight change of +0.46 lb., and a change of moment of -3.0 lb. ft.

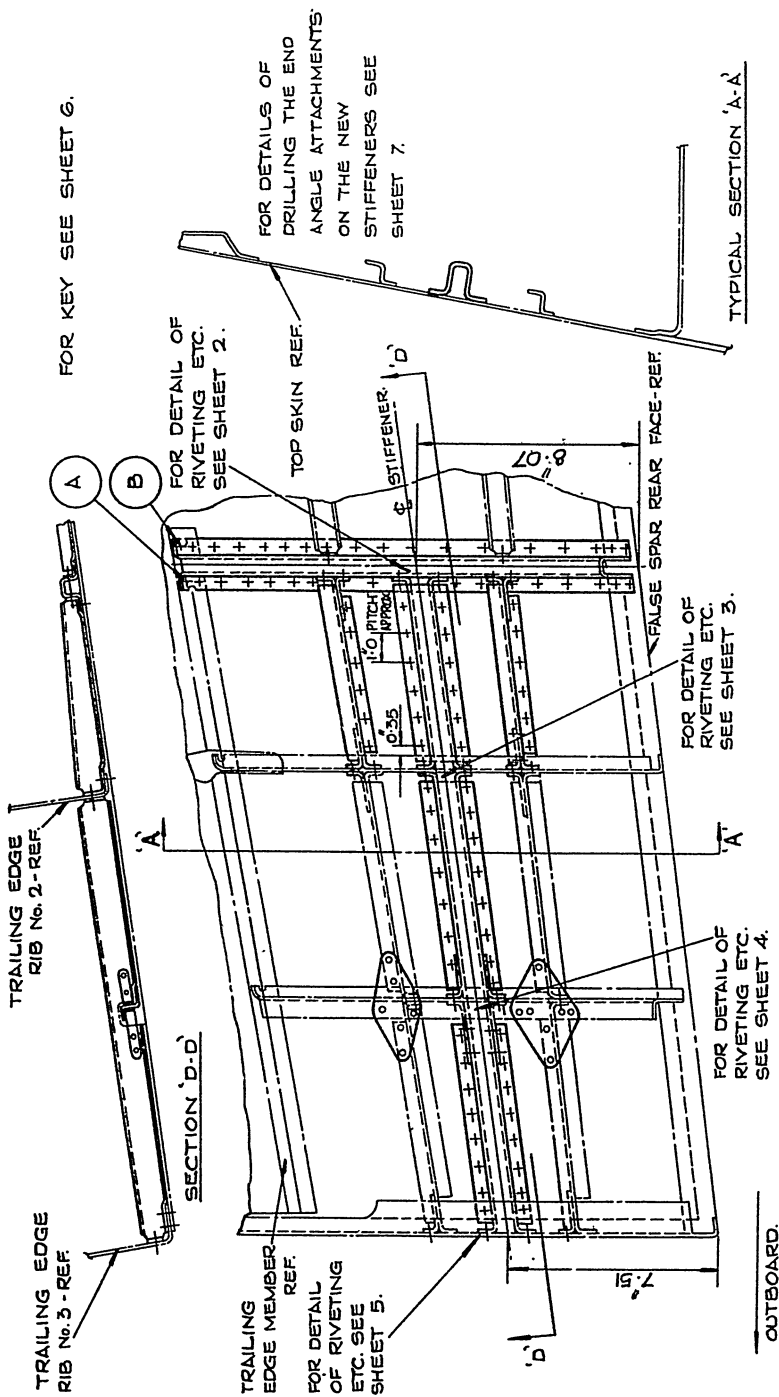
DRG. Nº A.P. 4099 G/G I/57

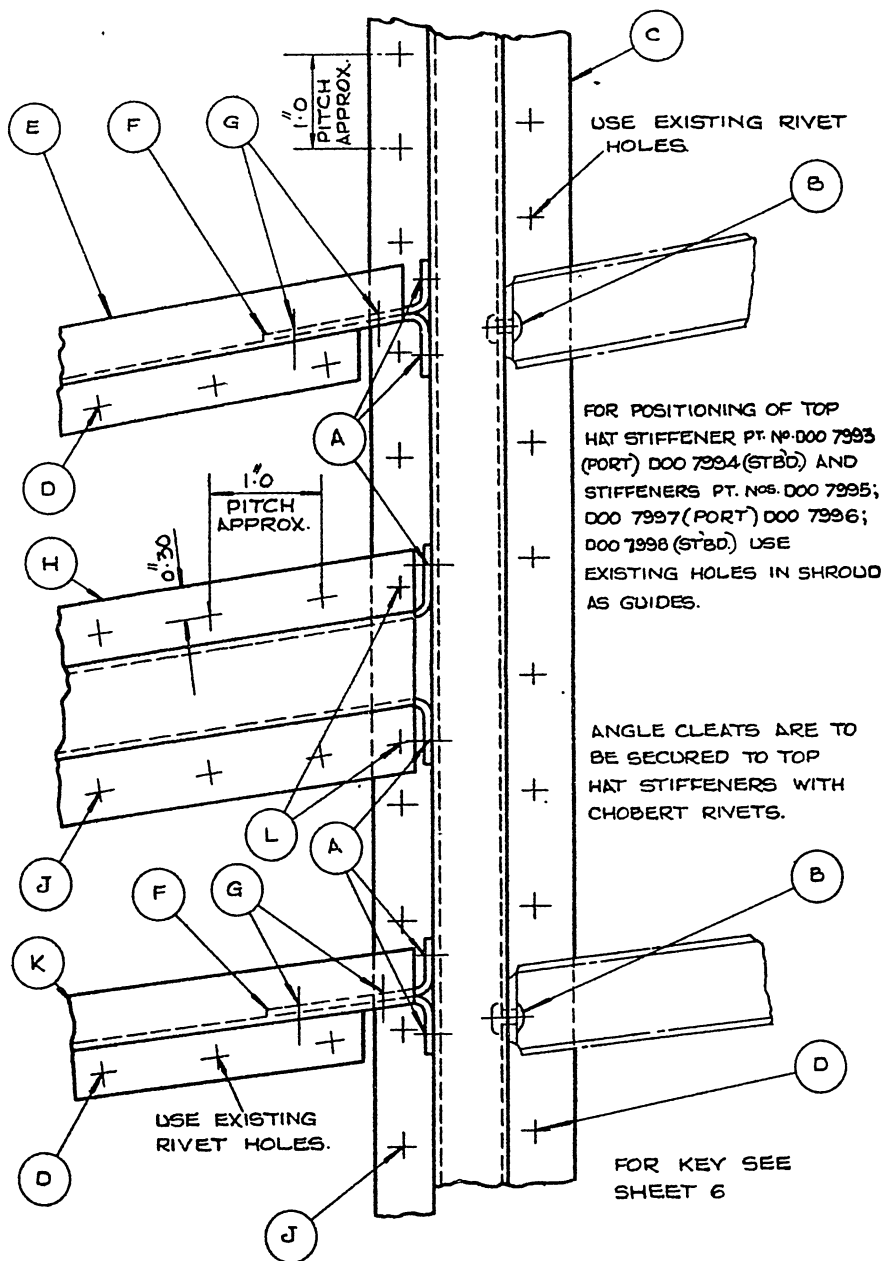
SHEET 1

PORT DRAWN.

OUTER FLAP SHROUD.

PORT DRAWN.





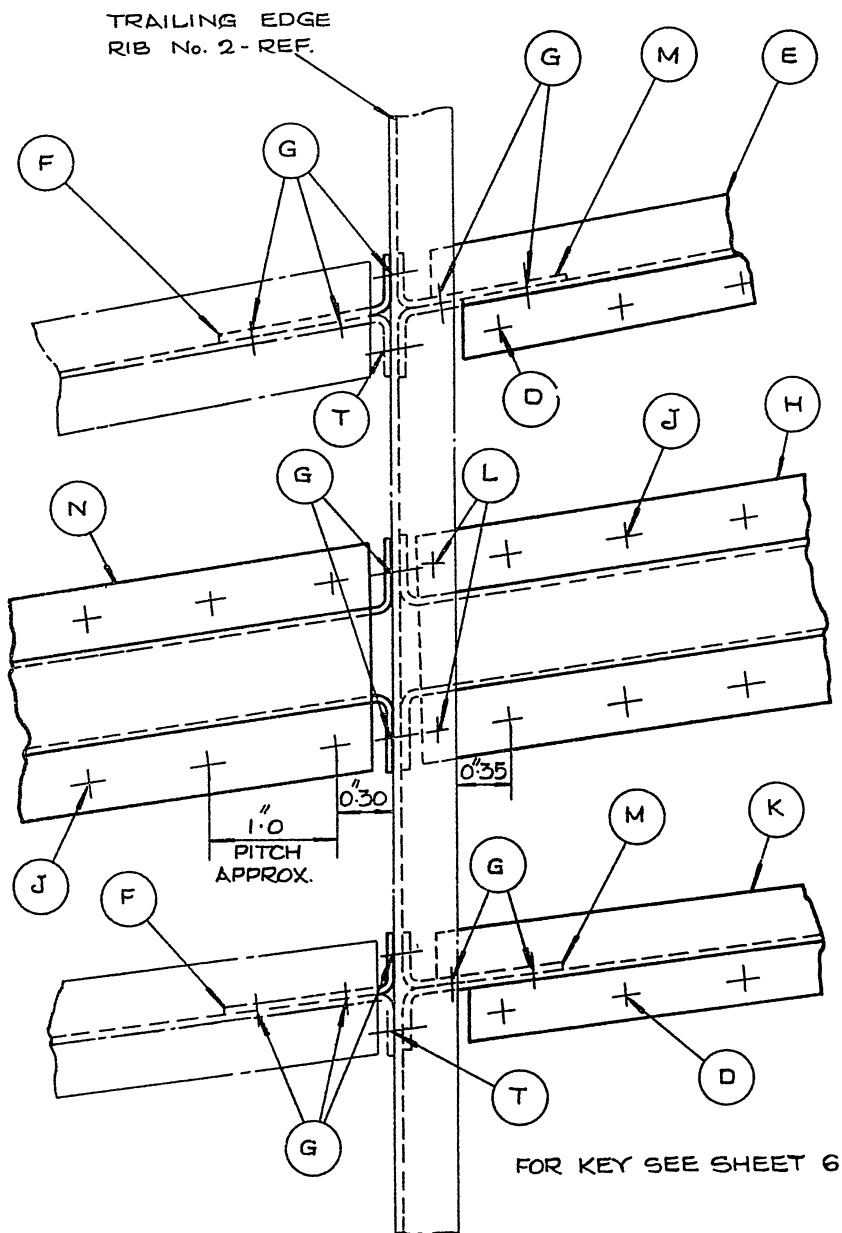
DETAIL OF RIVETING ETC. FROM SHEET 1.

DRG. NO. A.P. 4099 G/G 1/57

SHEET 2

**RESTRICTED**

LP32099 5/57 625 C & P Gp. 959 (4)



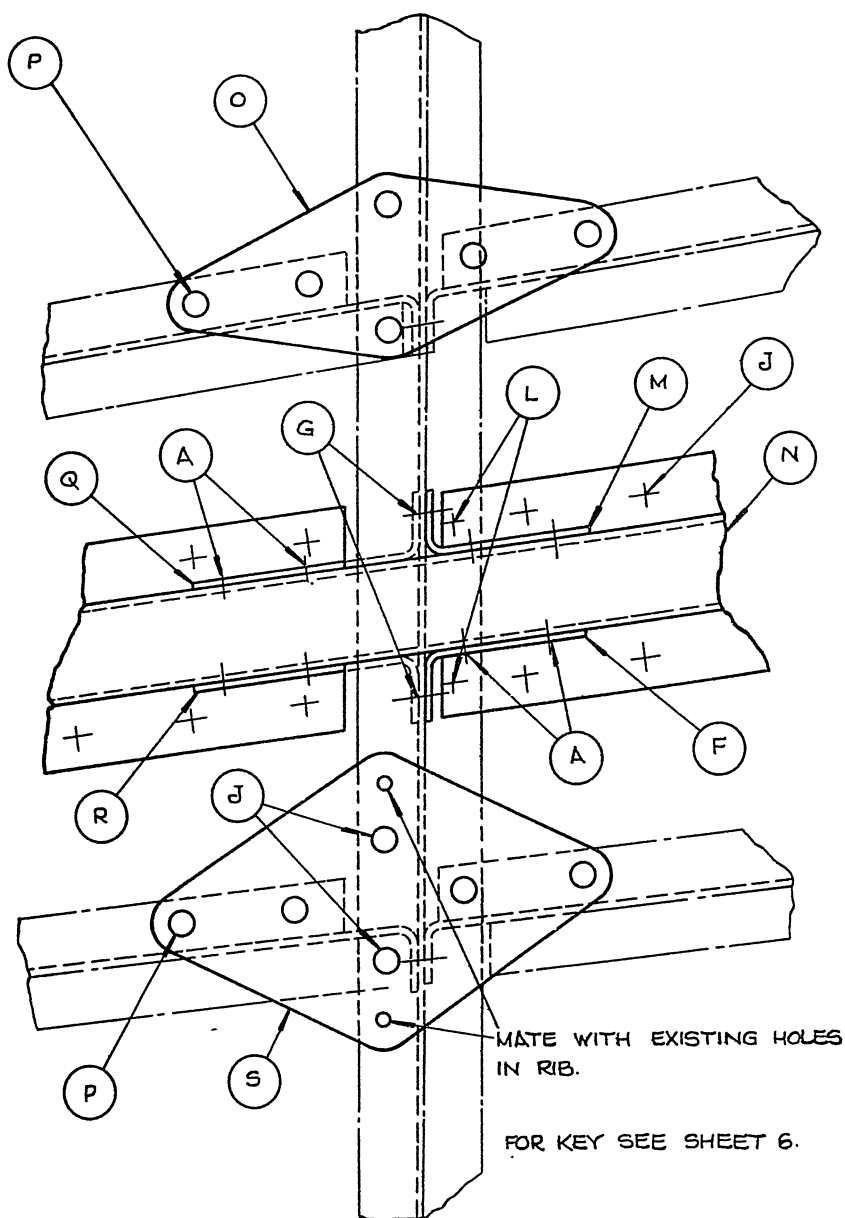
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DRG. NO A.P. 4099 G/G 1/57

SHEET 3

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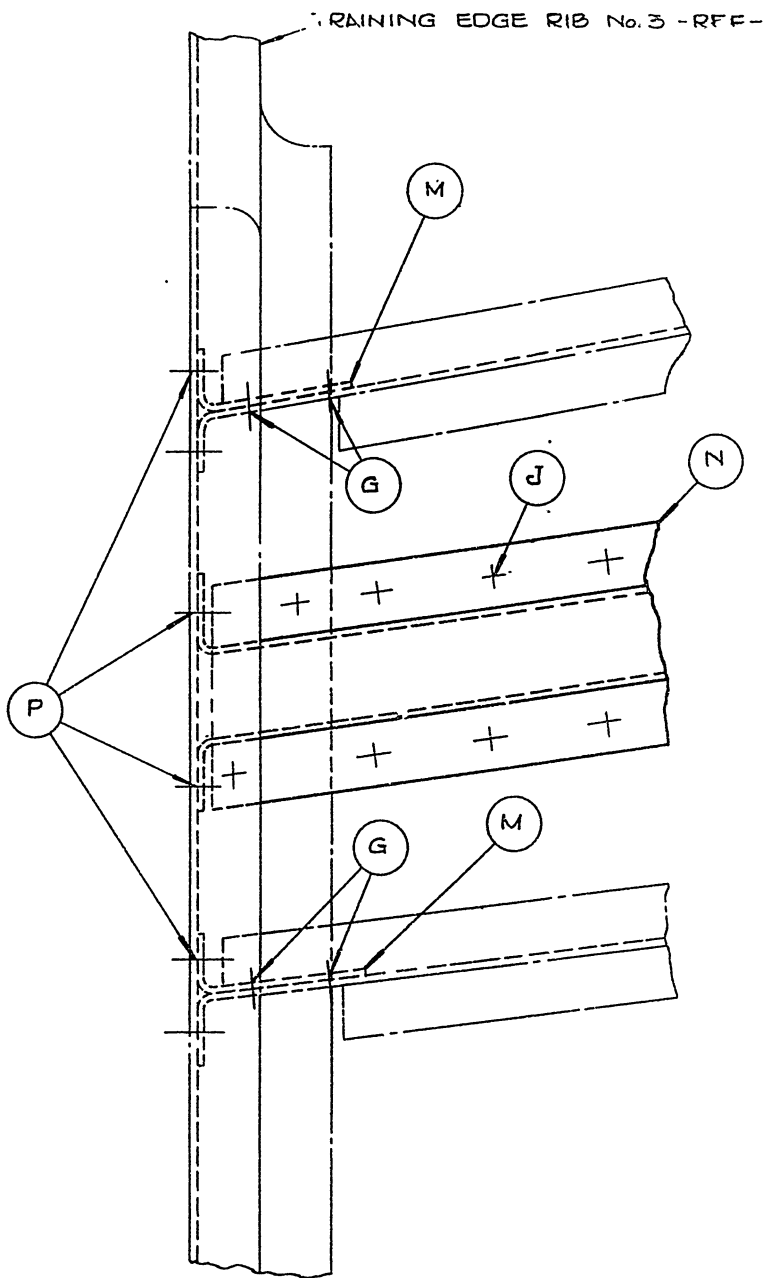
DETAIL OF RIVETING ETC. FROM SHEET 1.

DRG. NO A.R. 4099 G/G 1/57

SHEET 4

**RESTRICTED**

LP32099 5/57 625 C & P Gp. 959 (4)



DETAIL OF RIVETING ETC. FROM SHEET 1.

DRG. NO A.P. 4099 G/G 1/57

SHEET 5

**RESTRICTED**

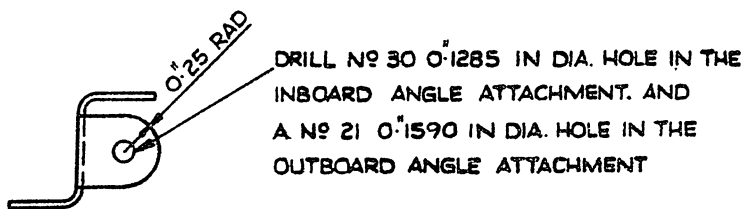
KEY TO SHEETS 1,2,3,4 AND 5			
CODE	PART No.	NOMENCLATURE	QTY.
A	AGS 2045/406	RIVET CHOBERT $\frac{1}{8}$ IN. DIA.	15
B	AGS 2045/506	RIVET CHOBERT $\frac{5}{32}$ IN. DIA.	3
C	DOO 7993	TOP HAT STIFFENER PORT	1
	DOO 7994	TOP HAT STIFFENER STARBOARD	1
D	AS 2229/504	RIVET 90 DEG. CSK. HEAD $\frac{5}{32}$ IN. DIA.	33
E	DOO 7995	STIFFENER PORT	1
	DOO 7996	STIFFENER STARBOARD	1
F	DOO 8005	ANGLE CLEAT	5
G	AS. 2227/405	RIVET SNAP HEAD $\frac{1}{8}$ IN. DIA.	22
H	DOO 7989	TOP HAT STIFFENER PORT	1
	DOO 7990	TOP HAT STIFFENER STARBOARD	1
J	AS 2229/404	RIVET 90 DEG. CSK. HEAD $\frac{1}{8}$ IN. DIA.	59
K	DOO 7997	STIFFENER PORT	1
	DOO 7998	STIFFENER STARBOARD	1
L	AS 2229/405	RIVET 90 DEG. CSK. HEAD $\frac{1}{8}$ IN. DIA.	8
M	DOO 8001	ANGLE CLEAT	5
N	DOO 7991	TOP HAT STIFFENER PORT	1
	DOO 7992	TOP HAT STIFFENER STARBOARD	1
O	DOO 7985	GUSSET PLATE	1
P	AS 2227/404	RIVET SNAP HEAD $\frac{1}{8}$ IN. DIA.	14
Q	DOO 8003	ANGLE CLEAT	1
R	DOO 7999	ANGLE CLEAT	1
S	DOO 7987	GUSSET PLATE PORT	1
	DOO 7988	GUSSET PLATE STARBOARD	1
T	AS 2227/505	RIVET SNAP HEAD $\frac{5}{32}$ IN. DIA.	2

KEY FOR DRAWING SHEETS Nos 1, 2, 3, 4 AND 5  
SHOWING ITEMS REQUIRED FOR FLAP SHROUDS.

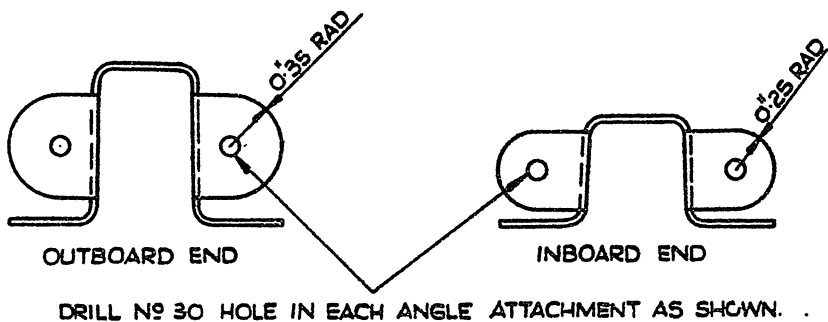
DRG. NO A.R 4099 G/G 1/57

SHEET 6

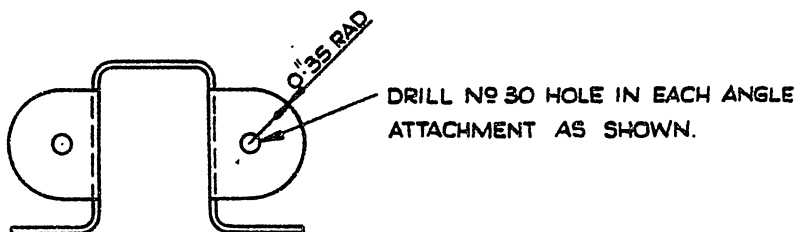
**RESTRICTED**



**FIG.1. TYPICAL VIEW OF THE ENDS OF STIFFENERS PART NOS**  
**DOO 7995, DOO 7996, DOO 7997 AND DOO 7998**



**FIG.2 TYPICAL VIEW OF THE ENDS OF TOP HAT STIFFENERS PART**  
**NOS DOO 7989 AND DOO 7990**



**FIG.3 TYPICAL VIEW OF THE ENDS OF TOP HAT STIFFENERS**  
**PART NOS DOO 7991 AND DOO 7992**

POSITIONS OF RIVET ATTACHMENT HOLES IN THE ANGLE  
ATTACHMENTS ON THE ENDS OF THE NEW STIFFENERS  
ON THE OUTER FLAP SHROUDS.

DRG. NO A.P. 4099 G/G 1/57

SHEET 7

**RESTRICTED**

DRG. NO A.P. 4099 G/G 1/57

SHEET 8

TRAILING EDGE No. 5 REF.

MAIN HINGE BRACKET - REF.

TRAILING EDGE RIB No. 4 - REF.

'A'

SEE SHEET 9 FOR 'D-D'  $\phi .35$

SEE SHEET 9 FOR 'C-C'  $\phi .35$

PITCH APPROX.

PITCH APPROX.

PITCH APPROX.

FALSE SPAR - REF.

SCRAP VIEW IN DIRECTION OF ARROW 'B'

SECTION 'A-A'

FOR KEY SEE SHEET 10

FOR KEY SEE SHEET 10

PORT DRAWN.

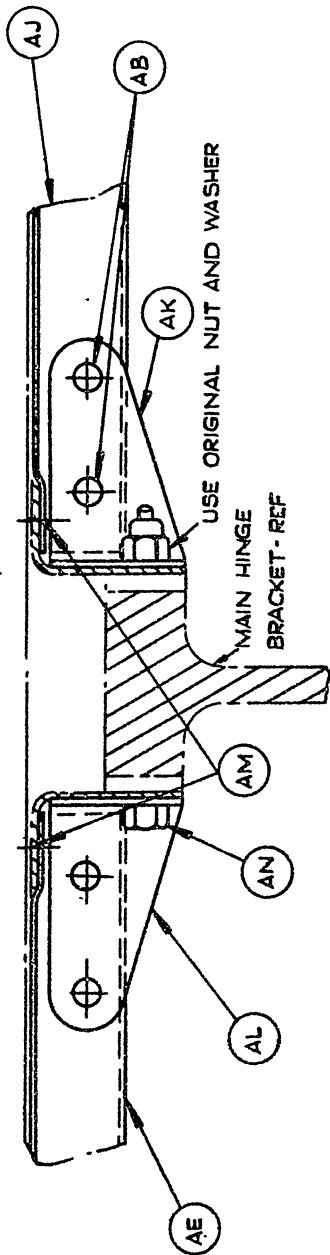
DIVE BRAKE SHROUD.

**OUTBOARD**

DRG. NO A.P. 4099 G/G 1/57

**SHEET 8**

RESTRICTED

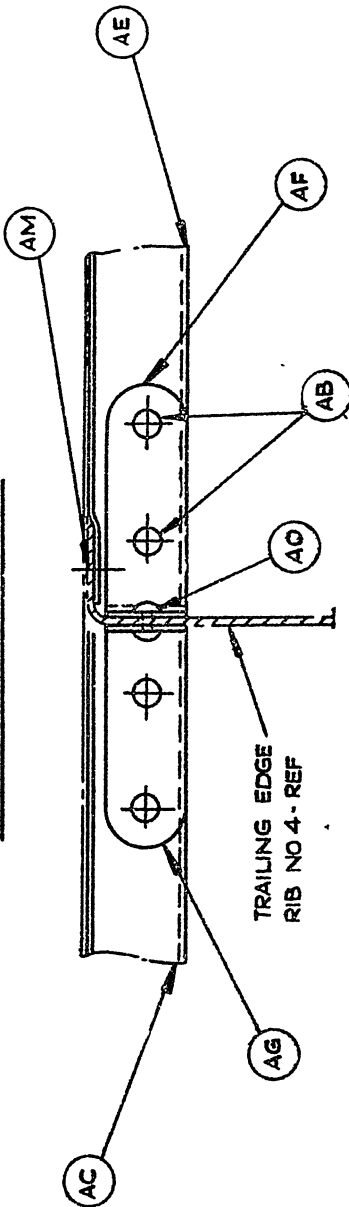


SECTION 'C-C' FROM SHEET 8

DRG. NO A.P. 4099 G/G 1/57

SHEET 9

LP32099 5/57 625 C & P Gp. 959 (4)



SECTION 'D-D' FROM SHEET 8

FOR KEY SEE SHEET 10

KEY TO SHEETS 8 AND 9			
CODE	PART NO	NOMENCLATURE	Q.T.Y
AA	DOO 7967	ANGLE CLEAT	2
AB	AGS 2045/406	RIVET CHOBERT $\frac{1}{8}$ IN DIA.	26
AC	DOO 7979	TOP HAT STIFFENER PORT	1
	DOO 7980	TOP HAT STIFFENER STARBOARD	1
AD	AS 2229/404	RIVET 90 DEG C'S'K HEAD $\frac{1}{8}$ IN DIA	40
AE	DOO 7981	TOP HAT STIFFENER PORT	1
	DOO 7982	TOP HAT STIFFENER STARBOARD	1
AF	DOO 7971	ANGLE CLEAT	3
AG	DOO 7969	ANGLE CLEAT	3
AH	AS 2227/404	RIVET SNAPHEAD $\frac{1}{8}$ IN DIA	2
AJ	DOO 7983	TOP HAT STIFFENER PORT	1
	DOO 7984	TOP HAT STIFFENER STARBOARD	1
AK	DOO 7977	ANGLE CLEAT PORT	2
	DOO 7978	ANGLE CLEAT STARBOARD	2
AL	DOO 7975	ANGLE CLEAT PORT	2
	DOO 7976	ANGLE CLEAT STARBOARD	2
AM	AS 2229/405	RIVET 90 DEG C'S'K HEAD $\frac{1}{8}$ IN DIA	10
AN	A25/15B	BOLT HEX HEAD 4BA	2
AO	AS 2227/405	RIVET SNAPHEAD $\frac{1}{8}$ IN DIA	2

KEY FOR DRAWING SHEETS NOS. 8 AND 9 SHOWING  
ITEMS REQUIRED FOR DIVE BRAKE SHROUDS.

DRG. NO A.P. 4099 G/G 1/57

SHEET 10

**RESTRICTED**

LP32099 5/57 625 C & P Gp. 959 (4)

# Section

# H

## 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.						
H 1										
H 2										
H 3										
H 4										
H 5										
H 6										
H 7										
H 8										
H 9										
H 10										
H 11										
H 12										
H 13										
H 14										
H 15										
H 16										
H 17										
H 18										
H 19										
H 20										
H 21										
H 22										
H 23										
H 24										
H 25										
H 26										

(R.A.F. Form 3850 H)

(Continued Overleaf)

# H



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.						
H 27										
H 28										
H 29										
H 30										
H 31										
H 32										
H 33										
H 34										
H 35										
H 36										
H 37										
H 38										
H 39										
H 40										
H 41										
H 42										
H 43										
H 44										
H 45										
H 46										
§ H 47										
H 48										
H 49										
H 50										
H 51										
H 52										
H 53										
H 54										
H 55										
H 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. 51951/BJ/828 5,500 11/54 W.H. & S. 670 60

Vampire F.B. Mk. 9 Aircraft—Element, type VAF.3, instead of type  
VAF.2 in Fuel Filter, Vokes type E.147—Introduction

(MOD. No. VAMPIRE/987.)

(Class C/4.)

(7/Mods/14,024.—15.12.55.)

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. 84, 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**

(44445/839) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)



(Drop tank jettison handle)

Leaflet No. H.2

(TOKEN)

# Vampire F.B. Mk. 9 Aircraft—Safety Catch for Drop Tank Jettison Handle—Introduction

(Mod. No. VAMPIRE/946.)

(Class B/2.)

(7/Mods/14,021.—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**

(43223/122) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



A.L. No. 25  
(Fuel system)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. H3  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Inhibitor Cartridge, Part No. P003671, in  
Main Fuel Tank Sump in place of Part No. P003131—Introduction

(Mod. No. VAMPIRE/3060.)

(Class G/3.)

(7/Mods/14,657.—22.10.55.)

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**

(44254/495) 529727 8245 125 1/56 (H.P.W.) (Gp. 19/1)



Vampire F.B. Mk. 9 Aircraft—Insulating Packing Ring at Filler Cap on  
No. 1 Fuel Tank—Introduction

(Mod. No. VAMPIRE/3041.)

(Class B/2.)

(This modification is suspended when Mod. Nos. /3204 and /3248 are embodied.)

(7/Mods/14,327.—17.1.56.)

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. 86

2

A.L. No. 150

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**

(44445/24) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)





(3) Carefully unfasten safety clip on base of filter, release bayonet fitting, and remove filter bowl. A suitably clean receptacle should be placed under the filter to collect the small amount of fuel contained therein.

(4) Remove existing filter element, Part No. FG 2322 (Tecalemit), and replace it with new type element, Part No. FG 2413 (Tecalemit). Replace filter bowl and locate it in its original position with the safety clip.

(5) Turn low pressure fuel cock control lever into the "FUEL ON" position and check low pressure filter for leakages. Replace lower front engine cowling.

4. The undermentioned part is required and is 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>
26FC/5841	FG 2413	Element, filter (Tecalemit)	1	C

5. The undermentioned part is rendered redundant by this modification and is 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/4105	FG 2322	Element, filter (Tecalemit)	1	C

**RESTRICTED**

Z.9078.R.

**Vampire F.B. Mk. 9 Aircraft—New Element, type FG 2413 (Tecalemit),  
incorporating improved Method of Sealing—Introduction**

(MOD. No. VAMPIRE/3092.)

(Class D/4.)

(7/Mods/15,873.—7.3.52.)

1. This modification has been necessitated by reports that foreign bodies have been entering the engine fuel system accessories, due to the unsatisfactory sealing of the ends of the filter element against the mating surfaces of the filter body, and makes provision for the introduction of a new filter element, type FG 2413 (Tecalemit), in place of the existing element, type FG 2322. The work will take approximately one man-hour per aircraft.

2. This modification is to be embodied on replacement of the filter element on aircraft incorporating Mod. No. Vampire/441.

3: The following is the sequence of operations:—

(1) Ensure that the low pressure fuel cock control lever on the engine control box, on port side of cockpit, is in the "FUEL OFF" position.

(2) Remove lower front engine cowling and locate low pressure filter on main fuel feed line to the engine, just aft of the firewall on port side of the aircraft.

**RESTRICTED**

P.T.O.

(Fuel filter equipment)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.5  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—New Element, type FG.2413 (Tecalemit),  
incorporating improved Method of Sealing—Introduction

(7/Mods/15,873.—16.9.53.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.5 (A.L. No. 32) (Mod. No. Vampire/3092), is amended as follows:—

(1) Immediately above para. 1 *insert*

*Note:—*This modification is superseded by Mod. No. Vampire/955."

**R**

**RESTRICTED**

Z. 8052.R.



(No. 1 Fuel Tank Reinforcing)

Leaflet No. H.6

(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—No. 1 Fuel Tank having Metal Reinforcing Plate at Filler Cap—Introduction**

(Mod. No. VAMPIRE/3042.)

(Class C/4.)

(7/Mods/14,328.—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**

(43222/126) 529721 8245 125 7/55 (H.P.W.) (Gp. 19/1)



A.L. No. 49  
(Wing tank door)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.7  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Shorter Bolt and Guard for Wing Tank  
Door—Introduction

(MOD. NO. VAMPIRE/3053.)

(Class C/3.)

(7/Mods/14.656—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**

(43222/125) 529721-8245-125 7.55 (H.P.W.) (Gp. 19/1)





(Fusing units)

Leaflet No. H.8

(TOKEN)

Vampire F.B. Mk. 9 Aircraft—To make provision for Fusing Units in  
Wing for 100 gall. Drop Tanks

(Mod. No. VAMPIRE/3077.)

(Class S.O.O.)

(7/Mods/16,508.—24.6.55.)

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**

(48518/550) 529723 8245 125 9/55 (H.P.W.) (Cp. 19/1)



A.L. No. 58  
(Low pressure fuel filter)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.9  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Re-designed Low Pressure Filter in Fuel  
System—Introduction

(MOD. No. VAMPIRE/955.)

(Class B/2.)

(7/Mods/17,356.—15.10.55.)

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. 93

2

A.L. No. 125

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**

(44139/428) 529726 8245 125 12/55 (H.P.W.) (Gp. 19/1)



**Vampire F.B. Mk. 9 Aircraft—Light Weight Packing in Wing Tank  
Bays between Tanks and Wing Structure—Introduction**

(7/Mods/16,908.—13.2.54.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.10 (Mod. No. Vampire/3045),  
is amended as follows:—

(1) Para. 5, list of items required.	Item 3. <i>Delete and substitute</i>	
<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>No off Class of</i>
		<i>Store</i>
"32D/347	Cement, Bostik No. 1774	As reqd. "C"

**R****RESTRICTED****Z.10929.R.**



**Vampire F.B. Mk. 9 Aircraft—Light Weight Packing in Wing Tank Bays  
between Tanks and Wing Structure—Introduction**

(MOD. NO. VAMPIRE/3045.)

(Class C/3.)

(7/Mods/16,908.—18.12.52.)

1. This modification results from the report that the excessive space between the tank walls and the wing structure allows the tanks to move, and thus imposes undue strain upon the various fuel pipe connections, with a detrimental effect, and makes provision for the introduction of a light weight packing to fill these unnecessary spaces, and hence obviate any tendency for the tanks to move. The work will take approximately 3 man-hours for No. 1 tank bay, 3 man-hours for No. 2 tank bay, and 15 man-hours for No. 3 and 4 tank bays, per mainplane. This modification must be fully embodied prior to the incorporation of Mod. No. Vampire/3044.

**2. Embodiment.**

This modification is to be embodied when individual tanks are removed. Tank bays 3 and 4 are to be modified concurrently, as they are supported by the same tank door.

3. The following is the sequence of operations (assuming that the individual fuel tanks have been removed), and is common to both port and starboard mainplanes:—

*(Refer to Drg. No. A.P.4099G/H.10/52, Sheet 1 & 2.)*

(1) Refer to Sheet 1 and 2 of the drawing; offer up, in turn, each individual packing piece as required for the specific tank bay in question, and inspect to ensure that each piece fits snugly against the ribs and spars, and tightly against the stringers on the top skin. If necessary, to obtain this fit, the packings may be cut and trimmed by hand.

(2) When the best possible fits have been obtained, clean the faying surfaces of the packing pieces and aircraft structure with white spirit and naphtha 50/50 mixture. Now apply a liberal coating of the kerosene resisting Bostik cement, Specification 1775, to the cleansed surfaces, and then firmly press each piece of packing into its correct position. *Re-assembly of the wing tanks should be delayed for a period of about 15 minutes to ensure that the Bostik cement has completely dried.*

*Note:—*On the removal of tank 2, the existing rubber hose leading to tank 3 should be removed and replaced with a new length, Part No. D.H.S.160/N25. In the case when tanks 3 and 4 are removed, with or without tank 2, a new length of hose, as above, should still be introduced, and also two new lengths, Part No. D.H.S.160/N35, in place of the two existing hose joints at the balance connections between tanks 3 and 4.

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/103045). 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. Demands are to quote the part/parts required.

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
<i>Tank Bay No. 1, Port. Part A</i>				
26FC/—	D00 7719ND	Packing	1	C
26FC/—	D00 7721ND	Packing	1	C
26FC/—	D00 7723ND	Packing	1	C
26FC/—	D00 7725ND	Packing	1	C

**RESTRICTED**



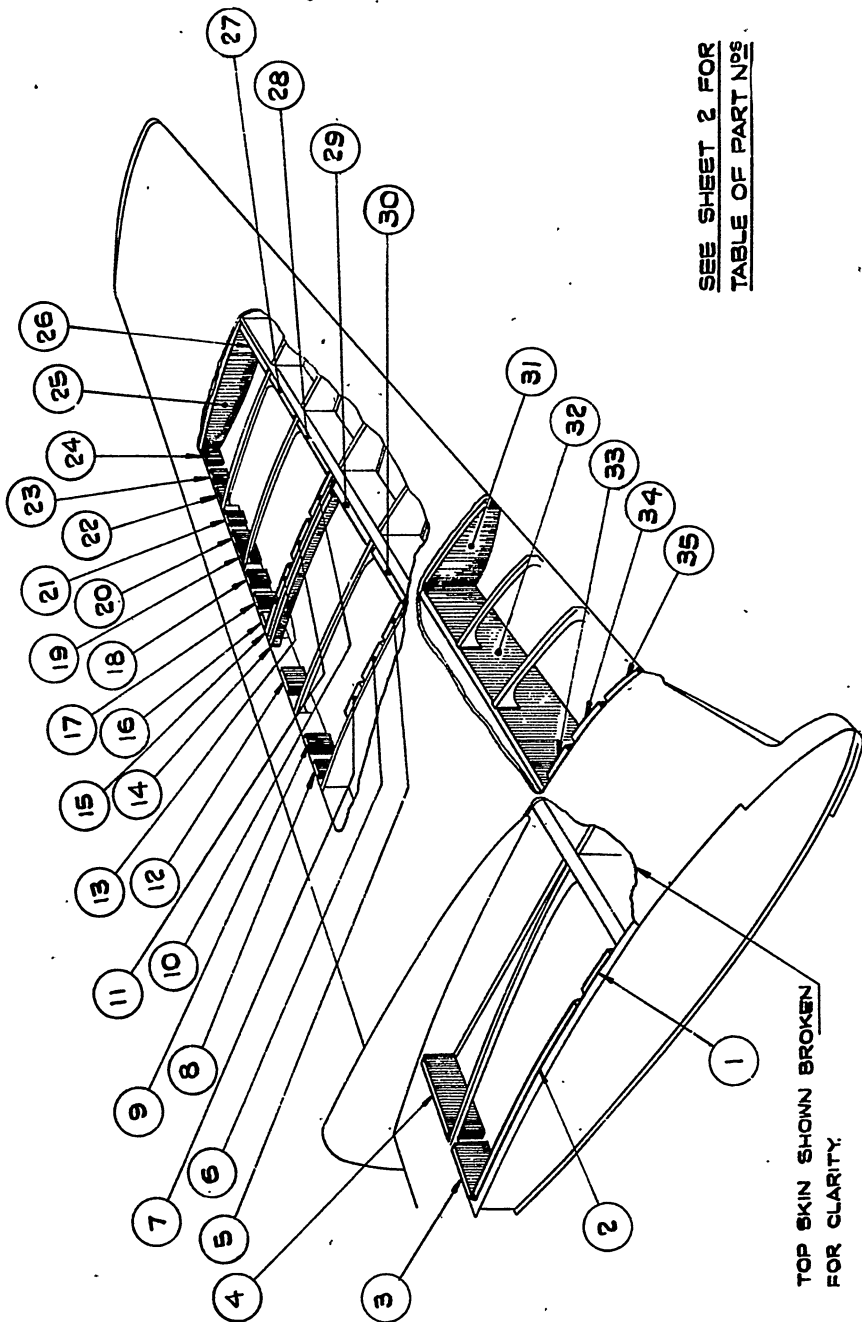
<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
<i>Tank Bay No. 1, Starboard. Part B</i>				
26FC/-	D00 7720ND	Packing	1	C
26FC/-	D00 7722ND	Packing	1	C
26FC/-	D00 7724ND	Packing	1	C
26FC/-	D00 7726ND	Packing	1	C
<i>Tank Bay No. 2, Port. Part C</i>				
26FC/-	D00 7757ND	Packing	1	C
26FC/-	D00 7759ND	Packing	1	C
26FC/-	D00 7805ND	Packing	1	C
26FC/-	D00 7807ND	Packing	1	C
26FC/-	D00 7815ND	Packing	1	C
26FC/-	DHS.160/N25	Hose joint	1	C
<i>Tank Bay No. 2, Starboard. Part D</i>				
26FC/-	D00 7758ND	Packing	1	C
26FC/-	D00 7760ND	Packing	1	C
26FC/-	D00 7762ND	Packing	1	C
26FC/-	D00 7764ND	Packing	1	C
26FC/-	D00 7772ND	Packing	1	C
26FC/-	DHS.160/N25	Hose joint	1	C
<i>Tank Bays No. 3 and 4, Port. Part E</i>				
26FC/-	D00 7727ND	Packing	1	C
26FC/-	D00 7729ND	Packing	1	C
26FC/-	D00 7731ND	Packing	1	C
26FC/-	D00 7733ND	Packing	1	C
26FC/-	D00 7735ND	Packing	1	C
26FC/-	D00 7737ND	Packing	1	C
26FC/-	D00 7739ND	Packing	1	C
26FC/-	D00 7741ND	Packing	1	C
26FC/-	D00 7743ND	Packing	1	C
26FC/-	D00 7745ND	Packing	1	C
26FC/-	D00 7747ND	Packing	1	C
26FC/-	D00 7749ND	Packing	1	C
26FC/-	D00 7751ND	Packing	1	C
26FC/-	D00 7753ND	Packing	1	C
26FC/-	D00 7755ND	Packing	1	C
26FC/-	D00 7809ND	Packing	1	C
26FC/-	D00 7811ND	Packing	1	C
26FC/-	D00 7813ND	Packing	1	C
26FC/-	D00 7817ND	Packing	1	C
26FC/-	D00 7819ND	Packing	1	C
26FC/-	D00 7821ND	Packing	1	C
26FC/-	D00 7823ND	Packing	1	C
26FC/-	D00 7825ND	Packing	1	C
26FC/-	D00 7827ND	Packing	1	C
26FC/-	D00 7829ND	Packing	1	C
26FC/-	D00 7831ND	Packing	1	C
26FC/-	DHS.160/N25	Hose joint	1	C
26FC/-	DHS.160/N35	Hose joint	2	C
<i>Tank Bays No. 3 and 4, Starboard. Part F</i>				
26FC/-	D00 7728ND	Packing	1	C
26FC/-	D00 7730ND	Packing	1	C
26FC/-	D00 7732ND	Packing	1	C
26FC/-	D00 7734ND	Packing	1	C
26FC/-	D00 7736ND	Packing	1	C
26FC/-	D00 7738ND	Packing	1	C

RESTRICTED

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/-	D00 7740ND	Packing	1	C
26FC/-	D00 7742ND	Packing	1	C
26FC/-	D00 7744ND	Packing	1	C
26FC/-	D00 7746ND	Packing	1	C
26FC/-	D00 7748ND	Packing	1	C
26FC/-	D00 7750ND	Packing	1	C
26FC/-	D00 7752ND	Packing	1	C
26FC/-	D00 7754ND	Packing	1	C
26FC/-	D00 7756ND	Packing	1	C
26FC/-	D00 7770ND	Packing	1	C
26FC/-	D00 7774ND	Packing	1	C
26FC/-	D00 7782ND	Packing	1	C
26FC/-	D00 7784ND	Packing	1	C
26FC/-	D00 7788ND	Packing	1	C
26FC/-	D00 7810ND	Packing	1	C
26FC/-	D00 7812ND	Packing	1	C
26FC/-	D00 7820ND	Packing	1	C
26FC/-	D00 7822ND	Packing	1	C
26FC/-	D00 7824ND	Packing	1	C
26FC/-	D00 7830ND	Packing	1	C
26FC/-	DHS.160/N25	Hose joint	1	C
26FC/-	DHS.160/N35	Hose joint	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>
34D/246	White spirit	As reqd.	C
33C/1216	Solvent naphtha coal tar (Spec. BS479)	As reqd.	C
33C/1283	Adhesive, Bostik No. 1775	As reqd.	C



SEE SHEET 2 FOR  
TABLE OF PART NOS.

ASSEMBLY OF PACKING IN TANK BAYS

TOP SKIN SHOWN BROKEN  
FOR CLARITY.

RESTRICTED

DRG. № AP4099 G /H.10/ 52  
SHEET-1

TANK BAY №1			
№	PART №	PORT. PART №	STBD
1	D007725 ND.	D007726 ND.	
2	D007723 ND.	D007724 ND.	
3	D007721 ND.	D007722 ND.	
4	D007719 ND.	D007720 ND.	
TANK BAYS №5, 3 AND 4.			
5	D007755 ND.	D007756 ND.	
6	D007753 ND.	D007754 ND.	
7	D007751 ND.	D007752 ND.	
8	D007727 ND.	D007728 ND.	
9	D007729 ND.	D007730 ND.	
10	D007829 ND.	D007830 ND.	
11	D007827 ND.	D007784 ND.	
12	D007731 ND.	D007732 ND.	
13	D007825 ND.	D007782 ND.	
14	D007811 ND.	D007812 ND.	
15	D007823 ND.	D007824 ND.	
16	D007733 ND.	D007734 ND.	

17	D007735 ND.	D007736 ND.
18	D007737 ND.	D007738 ND.
19	D007739 ND.	D007740 ND.
20	D007741 ND.	D007742 ND.
21	D007743 ND.	D007744 ND.
22	D007745 ND.	D007746 ND.
23	D007747 ND.	D007748 ND.
24	D007749 ND.	D007750 ND.
25	D007831 ND.	D007788 ND.
26	D007821 ND.	D007822 ND.
27	D007817 ND.	D007774 ND.
28	D007819 ND.	D007820 ND.
29	D007813 ND.	D007770 ND.
30	D007809 ND.	D007810 ND.
TANK BAY №2.		
31	D007815 ND.	D007772 ND.
32	D007757 ND.	D007758 ND.
33	D007759 ND.	D007760 ND.
34	D007805 ND.	D007762 ND.
35	D007807 ND.	D007764 ND.

LIST OF PARTS REFERRED TO ON SHT. I OF THE DRG.

**RESTRICTED**

DRG. № A.P.4099 G /H.10/52  
SHEET 2

Vampire F.B. Mk. 9 Aircraft—Pipe Run between Wing Tanks and  
Bulkhead Re-designed

(Mod. No. VAMPIRE/3059.)

(Class C/4.)

(7/Mods/17,511.—28.153.)

1. This modification results from reports of difficulty in fitting the fuel pipes between No. 1 wing tanks and No. 4 fireproof bulkhead, and makes provision for the fitment of a re-designed pipe run. Retrospective action is not contemplated, except during Major Repair.



RESTRICTED

Z.6027.R.



....A.L. No 66.....  
(Pressure reducing valve)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.12

**Vampire F.B. Mk. 9 Aircraft—New Pressure Reducing Valve, Part No. ACM.16314, incorporating Re-designed Blow-off Valve in place of existing Reducing Valve, Part No. ACO.4798, in Air Supply Line to Drop Tanks**

(MOD. NO. VAMPIRE/3068.)

(Class C/3.)

(7/Mods/16,507.—20.2.53.)

1. This modification has been made necessary because the existing blow-off valve was unsatisfactory since it could not be set correctly, resulting in excessive blow-off pressure, with possible damage to the drop tanks. The work will take approximately 3 man-hours.

2. This modification is by a pool of modified valves and 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/H.12/53.)

(1) Remove top front engine cowlings. Refer to the drawing and locate existing Dunlop pressure reducing valves, Part No. ACO.4798 (2-off) (ref. only), mounted on brackets attached to port and starboard vertical engine bearer tubes.

(2) Remove locking wire and disconnect the pipe assemblies, Part No. P003045 A ND and P003041 A ND port (ref. only), and pipe assemblies, Part No. P003043 A ND and P003047 A ND, starboard (ref. only), from existing reducing valves.

(3) Detach valves from their supporting brackets by removing the four 2 B.A. attachment bolts on either side. Retain attachment items for future use. The valves may now be removed from the aircraft.

(4) Locate the two new valves, Part No. ACM.16314, in position on the existing supports, with the  $\frac{1}{2}$  in. B.S.P. connection uppermost. Using the items retained in operation (3), secure valves to their supporting brackets.

(5) Re-connect pipe assemblies disconnected in operation (2) and wire-lock.

4. The undermentioned parts are required:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
27VA/3400	ACM.16314	Valve, reducing	2	A
30A/1039	—	Wire, locking, 20 s.w.g.	As reqd.	C

5. The following items are rendered redundant by this modification and are to be returned to No. 25 Maintenance Unit for modification and re-use in the pool of valves:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
27G/2153	ACO.4798	Valve, reducing	2	A

P.T.O.

R

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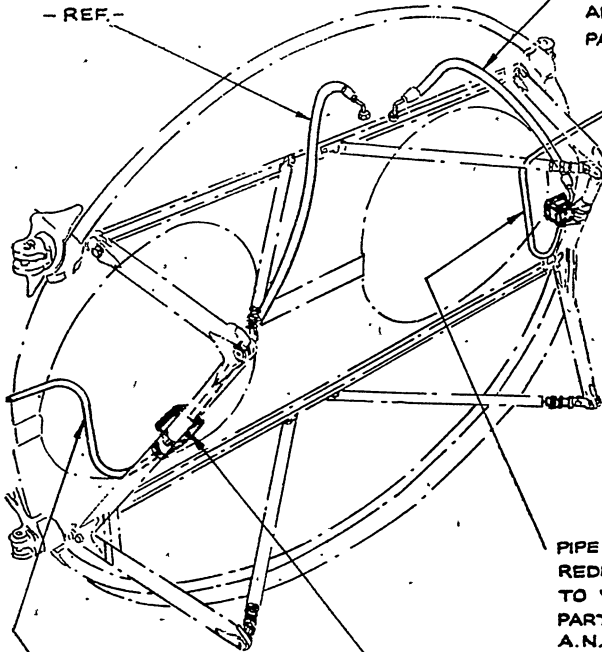
HOSE ASSEMBLY FUEL TRANSFER  
AIR FEED. PART Nº 13.P.41

- REF. -

HOSE ASSEMBLY  
FUEL TRANSFER  
AIR FEED.

PART Nº 13.P.11.

- REF. -



PIPE ASSEMBLY,  
REDUCING VALVE  
TO WING ROOT R.H.  
PART Nº 13.P.23.  
A.N.D. - REF. -

PIPE ASSEMBLY, REDUCING  
VALVE, WING ROOT L.H.  
PART Nº 13.P.17. A.N.D.  
- REF. -

A.C.N. DUNLOP REDUCING  
16314 VALVE - 2 OFF.

MOUNT VALVE ON BRACKET  
SO THAT 1/4" B.S.P.  
CONNECTION IS UPPERMOST.

VIEW ON REAR OF FIREPROOF BULKHEAD,

ENGINE OMITTED FOR CLARITY.

RESTRICTED

Drg. No. A.P.4099G/H.12/53



.....  
(Pressure reducing valve)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.12  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—New Pressure Reducing Valve, Part No. ACM 16314, incorporating Re-designed Blow-Off Valve in place of existing Reducing Valve, Part No. ACO.4798, in Air Supply Line to Drop Tanks**

(7/Mods/16,507.—12.10.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.12 (Mod. No. Vampire/3068) is amended as follows:

(1) Heading. Classification. *After "C/3" insert:* "on replacement of valve".

(2) Para. 2. *Delete* in toto and *substitute:* "This modification is by a pool of modified valves and is to be embodied on replacement of valve."



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

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A.L. No 82

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

(No. 1 wing tank filler cap)

Leaflet No. H.13

Vampire F.B. Mk. 9 Aircraft—Steel Adapter in place of existing  
Aluminium Alloy Adapter at No. 1 Wing Tank Filler Cap—Introduction

(Mod. No. VAMPIRE/3204.)

(Class C/3.)

(7/Mods/18,002.—25.3.53.)

1. This modification has been necessitated by cases where the existing aluminium alloy adapter has loosened two or three turns, and, due to the similarity of materials, has seized on the filler neck. It makes provision for the introduction of a steel adapter in place of the existing type.

The work will take approximately 4 man-hours.

*Note:*—This modification is only to be embodied when the existing adapter is found to be loose.

## 2. *Embodiment.*

This modification is to be embodied on replacement of adapter for aircraft embodying Mod. No. Vampire/3041.

3. The following is the sequence of operations, which is common to both port and starboard No. 1 wing fuel tanks:—

(1) Unscrew No. 1 wing tank filler cap. Disconnect the retaining chain at the filler cap and withdraw the now redundant adapter, Part No. P00 3669 (ref.), from the filler neck.

**RESTRICTED**

P.T.O.

(2) Check the washer, Part No. P00 3427 ND or BM 1593/9 (ref. only), between the filler adapter and the filler neck for serviceability. and replace, if necessary. If no ready made washer is available, a washer may be made from cork jointing or NEO-K-TEX, grade H2/30,  $\frac{1}{8}$  in. thick sheet, with o/d. 3.10 in. and i/d. 2.37 in.

(3) Using compound to form a seal, screw the new filler adapter, Part No. P00 3915, into the neck ring of the tank. Re-connect the retaining chain to the filler cap and screw the cap into the new adapter.

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/103204). 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/6752	P00 3915	Adapter, filler	2	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>
34B/523	Compound, gasket sealing	As reqd.	C
32B/773	Cork, jointing or NEO-K-TEX, grade H/230, $\frac{1}{8}$ in. thick 3.1 x 3.1 in.	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/5871	P00 3669	Adapter, filler	2	C

**RESTRICTED**

SEE/11407/125/4/54.

.....  
(No. 1 wing tank filler cap)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.13  
(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Steel Adapter in place of existing Aluminium Alloy Adapter at No. 1 Wing Tank Filler Cap—Introduction**

(7/Mods/18,002.—29.7.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.13. (Mod. No. Vampire/3204) is amended as follows:—

(1) Title. *Amend* Title to read “Vampire F.B. Mk. 9 Aircraft—Fuel System—To Introduce Steel or Brass Adapter in place of existing Aluminium Alloy Adapter at No. 1 Wing Tank Filler Cap.”

(2) Heading, classification *Amend* “Class C/3” to read “Class C/3 partially superseding Mod. 3041”).

**R**

L35021 9/55 500 C & P Gp. 1

**RESTRICTED**



(No. 1 Fuel tank filler)

Leaflet No. H.14

(Alteration 1)

**Vampire F.B. Mk. 9 Aircraft—Re-designed Insulating Packing Ring at Filler Neck on No. 1 Fuel Tank—Introduction**

(7/Mods/20,153.—1.7.54.)

A.P.4099G, Vol. 2, Part 1, Leaflet No. H.14 (Mod. No. Vampire/3248), is amended as follows:—

(1) Para. 3. After operation (4) *insert*

*Note:—*Before proceeding with operation (5) the undersurface of the skin adjacent to the filler hole should be checked for flatness. If the skin underside is found to be buckled around the  $\frac{1}{4}$  in. dia. holes, it must be dressed flat. Failure to observe this may result in the skin riding up on the distance pieces, thus preventing the insulating ring from forming an effective seal."

**R****RESTRICTED**

(41008/104) 428518 8245 400 8/54 (H.P.W.) (Gp.19/1)





**Vampire F.B. Mk. 9 Aircraft—Re-designed Insulating Packing Ring at Filler Neck on No. 1 Fuel Tank—Introduction**

(MOD. NO. VAMPIRE/3248.)

(Class B/2.)

(7/Mods/20,153.—31.7.53.)

1. Cases have occurred where, due to overfilling of the No. 1 fuel tank, fuel has seeped through the existing split insulating ring at the filler neck. To prevent this leakage, and to avoid consequent tank cover deterioration, this modification introduces a one-piece rubber insulating ring in place of the existing two-piece L.F.S. ring. This modification is applicable only to aircraft embodying Mod. No. Vampire/3041, and partially supersedes that modification.

The work will take approximately  $1\frac{1}{2}$  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, 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 is applicable to both port and starboard mainplanes:—

(Refer to Drg. No. A.P.4099G/H.14/53.)

(1) Locate the No. 1 fuel tank filler cap and unscrew and remove it from the tank by releasing the circlip holding the safety chain. It is advisable to insert a wad of soft material into the filling orifice to ensure that no foreign matter is allowed to enter the fuel tank.

(2) Unscrew the four tank attachment screws holding the tank filler neck ring and insulating rings to the mainplanes top skin and retain them for future use.

(3) Depress the top of the tank and remove the two existing L.F.S. half insulating rings, Part No. POO.3667 (ref. only).

(4) Position the four distance pieces, Part No. POO.3931, in the new rubber insulating ring, Part No. POO.3929.

(5) Squeeze the ring sufficiently to allow it to be inserted through the filler orifice in the mainplane skin and position it between the tank neck ring and the top skin. Align the distance tubes with the tank attachment screw holes.

(6) Replace the tank attachment screws removed in operation (2) and tighten until the distance tubes ground. Remove the soft material from the orifice.

(7) Replace the filler cap chain circlip and replace and tighten the filler cap.

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/103248). 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/6981	POO.3929	Ring, insulating	2	C
26FC/—	POO.3931	Distance piece	8	C

**RESTRICTED**

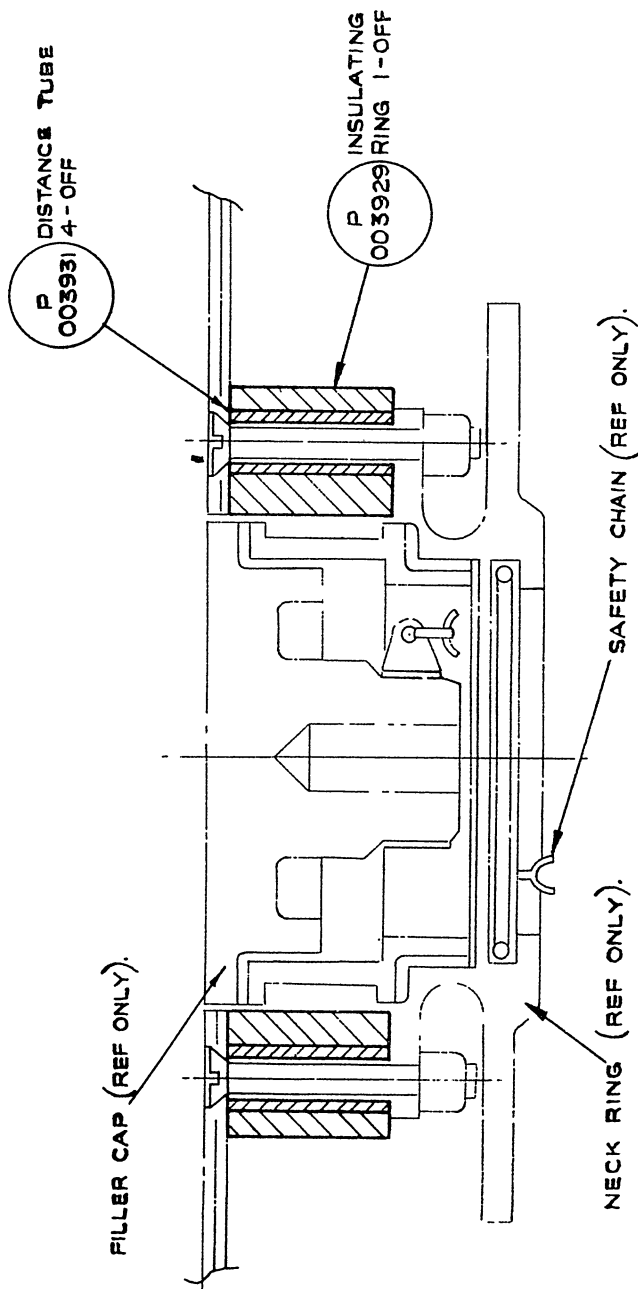
5. The undermentioned parts, rendered redundant by the embodiment of this modification, are to be handed over or reported to the Unit Salvage Officer, for disposal as salvage in accordance with A.M.O. A.91/51 or Air Publication 3045:—

<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>No. off</i>	<i>Class of Store</i>
26FC/5870	POO.3667	Ring, insulating	4	C

**RESTRICTED**

**DRG. N° A.P4099 G /H.14/53**

LP26772 7'53 350 C & P Gp. 959 (4)



**SECTION THROUGH FILLER CAP AND ORIFICE**  
**AT N°1 WING FUEL TANK.**



Vampire F.B. Mk. 9 Aircraft—Fuel Booster Pump, type FB.6 (Stores Ref. 5U/4986), replaced by type BP.1 (Stores Ref. 5U/4828)—

### Introduction

(7/Mods/18,240, 21,954)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.15 (Mod. No. Vampire/3216), is amended as follows:—

- (1) Para. 1, Notes (a) (1), line 1. *Delete* "3 and"
- (2) Para. 1, Notes (b), line 2. *Delete* "3."
- (3) Para. 4, list of parts required, Items 3 and 4. *Amend:*

Stores Ref.	Nomenclature	No. off	Class of Store
"34B/523	Compound, engine, jointing, as in rubber bonded cork	As reqd.	C
32B/1014	Sealing material, D.T.D.762	As reqd.	C
to read:			

Stores Ref.	Nomenclature	No. off	Class of Store
"34B/523	Compound, engine, jointing	As reqd.	C
32B/1014	Sealing material, as in rubber bonded cork D.T.D.762	As reqd.	C



**RESTRICTED**



**ALN-79**  
**(Fuel booster pumps)**

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H-15

Vampire F.B. Mk. 9 Aircraft—Fuel Booster Pump, type FB.6 (Stores Ref. 5U/4986), replaced by type BP.1 (Stores Ref. 5UE/4828)

**Introduction**

(Mod. No. VAMPIRE/3216)

(Class B/2)

(I/Mods 18,240—29,753)

1. This modification results from the fuel booster pump, type FB.6, introduced as an alternative under Mod. No. Vampire/228, being found unsatisfactory on the introduction of Mod. No. Goblin/724, resulting in low pressure in the pipe and the consequent operation of the fuel pressure light, and makes provision for the fitting of fuel booster pump, type BP.1.

The work will take approximately 6 man-hours per aircraft.

**Notes:**—(a) The modification applies only to:—

(1) Vampire Mk. 3 and 5 aircraft embodying Mod. No. Vampire/228.

(2) Vampire Mk. 10 and 11 aircraft on change-over to A.V.T.A.G.

(b) The modification is to be embodied concurrently with Mod. No. Goblin/724 on Vampire Mk. 3, 5 and 9 aircraft.

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:—

(1) Remove the detachable gun bay doors and locate the fuel booster pump at the base of the fuselage fuel tank, check the type and reference number of pump fitted, which can be seen on the Serial number plate secured to the outer side of the pump. If type BP.1 (Stores Ref. 5UE/4828) is not fitted, carry out operations (2) to (6) inclusive.

(2) Drain the fuel tanks and disconnect the aircraft accumulator.

(3) Disconnect the 'U' pipe, Part No. P00 1951A (ref. only), connected to the tank and pump. Disconnect the drain pipe from the banjo on the pump and unscrew and withdraw the electrical cable socket. Unscrew and remove the screws attaching the redundant fuel booster pump, type FB.6, Mk. 3 (Stores Ref. 5U/4986) (ref. only), to the tank and withdraw the pump complete from the tank. Retain the attachment screws and washers for re-assembly. Remove the joint washer, Part No. P00 1947 (ref. only), which fits between the pump and tank and clean off the mating surface of the tank.

(4) Make up a new joint washer from 3/8 in. thick rubber bonded cork sealing material, Specification D.L.D.762. Transfer the drain pipe banjo union from the old pump to the new pump, then, after applying an approved sealing compound to the joint washer, which is to be placed between the pump and the tank, offer up the new pump and secure it to the tank with the existing bolts and washers, the latter to be treated with sealing compound before fitting. Check the heads of the bolts with 22 S.W.G. nickel alloy locking wire (Stores Ref. 30A/3055).



**RESTRICTED**

P.T.O.



(5) Inspect the 'U' pipe to ensure that the special gasket, Part No. P00 3355 (ref. only), is inserted in the pump end of the pipe. If the gasket is missing from the pipe, it will be found in the old pump, and must be withdrawn and inserted into the pipe. Take care not to deface it. Offer up the 'U' pipe to the pump and tank and tighten the union nuts. Connect and tighten the drain pipe union to the banjo, then fit the electrical socket into the plug and screw up the socket housing. Lock all union nuts with 22 S.W.G. nickel alloy locking wire.

(6) Re-fuel the aircraft and check for fuel leaks. Replace the detachable gun-bay doors and re-connect the aircraft accumulator.

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

Stores Ref.	Nomenclature	No. off.	Class of Store
5UE/4828	Pump, fuel booster, type BP-1-Mk. 4	1	A
30A/3055	Wire, locking, 22 S.W.G. nickel alloy	As reqd.	C
34B/523	Compound, engine, jointing, 4 in. rubber bonded cork	As reqd.	C
32B/4014	Sealing material, D-T-D-762	As reqd.	C

5. The undermentioned part is rendered redundant by the embodiment of this modification and is to be returned to No. 61 Maintenance Unit.

Stores Ref.	Nomenclature	No. off.	Class of Store
5U/4986	Pump, fuel booster, type EB-6, Mk. 3	1	A

**RESTRICTED**



Vampire F.B. Mk. 9 Aircraft—Sealing Gasket at No. 4 Tank Filler  
Neck—Introduction

(MOD. NO. VAMPIRE/3247.)

(Class C/3.)

(7/Mods/19,668.—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**

(44445/840) 529728 8245 125 2/56 (H.P.W.) (Gp. 19/1)



A.L. No. 103  
(Dowty seals)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.17  
(TOKEN)

Vampire F.B. Mk. 9 Aircraft—Dowty Seals at Fuel Tank Vent and Fuel  
Transfer Connections—Introduction

(MOD. NO. VAMPIRE/3259.)

(Class C/4 on replacement.)

(7/Mods/20,154.—22.11.56.)

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.



RESTRICTED

(46225/448) 129955 8245 125 12/56 (H.P.W.) (Op.19/1)



Vampire F.B. Mk. 9 Aircraft—Sealing Gasket at No. 1 Tank Filler Neck  
—Introduction

(Mod. No. VAMPIRE/3246.)

(Class C/3.)

(7/Mods/19,669.—17.1.56.)

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.



**RESTRICTED**

(44606/25) 529729 8245 125 -3/56 (H.P.W.) (Gp. 19/1)



A.L. No. 119  
(Fuel vent system)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.19  
(TOKEN)

**Vampire F.B. Mk. 9 Aircraft—Fireproofed Rubber Elbows in Fuel Venting System at Engine Bay—Introduction**

(MOD. NO. VAMPIRE/3275.)

(Class B/2.)

(7/Mods/21,035.—2.1.57.)

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. 120, 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**

(46386/714) 129956 8245 125 1/57 (H.P.W.) (Gp. 19/1)





Vampire F.B. Mk. 9 Aircraft—Rubber Moulded Sleeves on Moulded  
Outlets of Wing Fuel Tanks No. 1 and 3—Introduction

(Mod. No. VAMPIRE/3257.)

(Class G/3.)

(7/Mods/20,412.—22.11.56.)

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.

**R**

**RESTRICTED**

(46225/449) 129955 8245 125' 12/56 (H.P.W.) (Gp. 19/1)



**Vampire F.B. Mk. 9 Aircraft—Improved Sealing at Fuselage Fuel Tank  
Filler Neck—Introduction**

(MOD. NO. VAMPIRE/3249.)

(Class C/3 on removal of fuselage fuel tank.)

(7/Mods/19,954.—10.3.54.)

1. This modification introduces a new sealing between the filler neck of the main fuselage fuel tank and the structure, with improved resistance to Avtag fuel, to prevent possible seepage of fuel into the tank bay when the tank is overfilled.

The work will take approximately 3 man-hours.

**2. Embodiment**

This modification is to be embodied when the fuselage fuel tank is next removed after receipt of parts.

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

(Refer to Drg. No. A.P.4099G/H.22/54.)

(1) Remove the ten visible nuts on the main fuselage tank filler assembly, allowing the earth socket and eight cup washers to be removed. Remove existing sealing ring.

(2) Refer to the drawing, and apply an even film of Bostik 1410 to the mating surfaces of the existing metal sealing ring and the new rubber sealing ring, Part No. 12 PT 1429. After 15–20 minutes, position the rubber ring centrally on the metal ring and apply pressure until the joint has set.

*Note:*—It will be necessary to distort the rubber sealing ring to clear the earthing socket.

(3) Replace the assembly of metal and rubber sealing rings and secure in position, using the original cup washers and ten new nuts, Part No. A.G.S.2001/C1. Note that the sealing ring must be positioned so that the  $\frac{1}{4}$  in. hole in it coincides with the vent hole in the base ring. Attach the earth socket to the two appropriate bolts.

*Note:*—Treat all gaskets, washers, etc., with plastic Hermetite or any other approved sealing compound before assembly.

(4) Remove the sealing ring, Part No. POO.222 (ref. only), from the filler neck locating block, taking great care not to damage the wood. Remove all traces of adhesive and thoroughly clean the surface.

(5) Before refitting the tank, apply an even film of Bostik 1410 adhesive to the bearing surfaces of the fuel filler locating block and the sealing ring, as shown in the drawing. The coated surfaces must be joined 15–20 minutes after applying the adhesive, and replacement of the tank should be so timed.

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

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
		<i>Vampire F. Mk. 1 Aircraft only</i>		
26FC/—	POO.2663A/4	G.A. main fuel tank	POO.2663A/5	26FC/6885

**RESTRICTED**

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
<i>Vampire F. Mk. 3 Aircraft only</i>				
26FC/4249	POO.2665A/1	G.A. main fuel tank	POO.2665A/2	26FC/6886
26FC/4416	POO.3437A/ND	Main fuel tank, less fuel contents gauge and booster pump	POO.3939A/ND	26FC/6887

Stores Ref.	Old Part No.	Nomenclature	New Part No.	Stores Ref.
<i>Vampire F.B. Mk. 5 &amp; 9, N.F. Mk. 10 &amp; T. Mk. 11 only</i>				
26FC/4261	POO.3279A	G.A. main fuel tank	POO.3279A/1	26FC/6888
26FC/4420	POO.3425A/ND	Main fuel tank, less fuel contents gauge and booster pump	POO.3937A/ND	26FC/6889

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/103249). 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 or 7, and are to quote the relevant Stores reference number:—

Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/6890	12 PT 1429	Ring, sealing	1	C
28M/10288	A.G.S.2001/C1	Nut	10	C

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

Stores Ref.	Nomenclature	No. off	Class of Store
33C/1327	Adhesive, Bostik 1410	As reqd.	C
34B/523	Plastic Hermetite (or any other approved sealing compound)	As reqd.	C

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

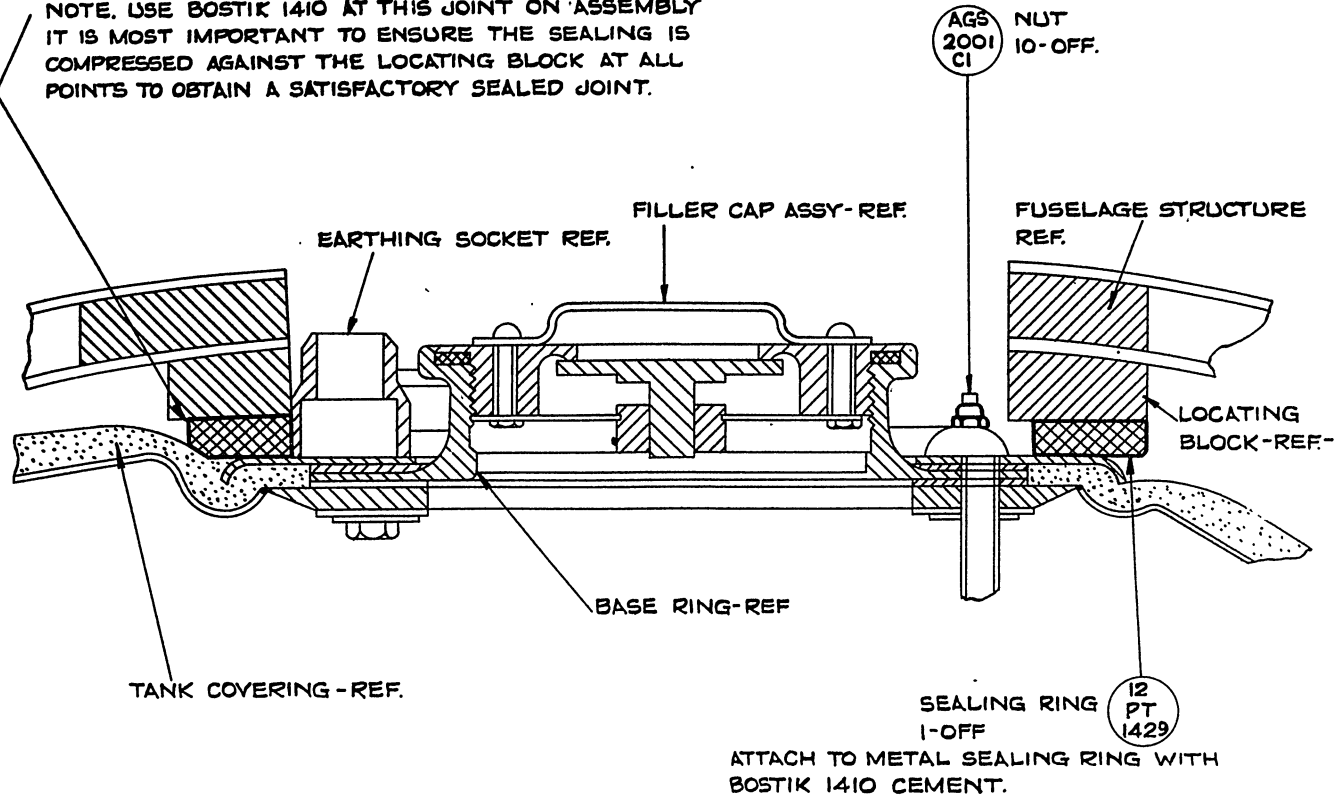
Stores Ref.	Part No.	Nomenclature	No. off	Class of Store
26FC/1972	POO.222	Ring, sealing	1	C

**RESTRICTED**

RESTRICTED

DRG. No A.P. 4099 G/H. 22/54

NOTE, USE BOSTIK 1410 AT THIS JOINT ON ASSEMBLY  
IT IS MOST IMPORTANT TO ENSURE THE SEALING IS  
COMPRESSED AGAINST THE LOCATING BLOCK AT ALL  
POINTS TO OBTAIN A SATISFACTORY SEALED JOINT.



ARRANGEMENT OF MAIN FUEL TANK FILLER.



(Fuel system)

**Vampire F.B. Mk. 9 Aircraft—Fuel System—Booster Pump, Type SPE.403, Mk. 1, in place of Type BP.1, Mk. 4 (Stores Ref. 5U/4828).—Introduction**

(MOD. NO. VAMPIRE/3278.)

(Class B/2 on fitment of Engines embodying Goblin Mod. No. 724.)

(AB/A/139.—16.11.54.)

**1. INTRODUCTION**

On aircraft embodying Mod. No. Goblin 724, it has been found that the fuel pressure warning light in the cockpit has operated due to the existing type of fuel booster pump failing to maintain a sufficient fuel pressure. This modification introduces an uprated booster pump to overcome this fault.

(1) This modification cancels the work called for by Mod. No. Vampire 3216.

(2) This modification is applicable only if Mod. No. Goblin 724 (Eng. 300 type Dowty Fuel Pump of 25 per cent increased capacity, improved design and suitable for operation on petrol or wide-cut fuels at full engine output.—Introduction) and Mod. No. Vampire 228 (To introduce immersed S.P.E. booster pump in main fuel tank) are already embodied.

**2. EMBODIMENT**

This modification is to be embodied on fitment of an engine embodying Mod. No. Goblin 724.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 6 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 items comprise the Modification Kit (Stores Ref. No. 26FC/103278) and are to be assembled into a Kit by No. 25 Maintenance Unit. Demands for Modification Kits are to be submitted to P.S.C.O. No. 25 Maintenance Unit, through Command Headquarters vide A.M.G. 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
5UE/6200	—	Booster pump, type SPE 403, Mk. 1	1	A
26FC/3313	POO 1947	Washer, jointing	1	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
30A/3055	—	Wire locking, nickel alloy	As reqd.	C
34B/270	—	Compound, gasket sealing engine 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**

P.T.O.

Stores Ref.	Part No.	Nomenclature
26FC/-	POO.3279A/1	Fuselage tank

Class of Store
A

Parts required

Stores Ref.	Part No.	Nomenclature
5UE/6200	—	Booster pump, type SPE 403 Mk 1-1
26FC/3313	POO.1947	Washer, jointing

Qty	Class of Store
1	A
1	C

## 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.	Pl/Assy. No.	Nomenclature	Pl/Assy. No.	Stores Ref.	
26FC/-	POO.2276A	Booster pump valve and tank base plate assembly	POO.3973A	26FC/-	
26FC/-	POO.3279A/1	Fuselage tank	POO.3971A	26FC/-	

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations—

- (1) Remove the gun bay doors, disconnect the aircraft batteries and drain the fuel system.
- (2) Locate the booster pump type BP 1 Mk 4 (Stores Ref. 5UE/4828) (Ref. only) at the base of the fuselage tank. Disconnect and remove the elbow assembly, Part No. POO.1951A (Ref. only) and retain it with the special tailed gasket, Part No. POO.3355 (Ref. only) for re-assembly.
- (3) Unscrew and withdraw the electrical socket connection, release the drain pipe assembly, Part No. POO.2017A/ND (Ref. only) from its connections on the pump, at the base of the fuselage tank and at the fire-proof bulkhead, and retain it for re-assembly.
- (4) Remove the booster pump, and retain the twelve special bolts and washers, securing the pump in position, for re-assembly. Clear away any traces of gasket or sealing compound that remain attached to the tank base plate after removal of the pump.
- (5) Coat the mating surfaces of the new booster pump, type SPE 403 Mk 1 (Stores Ref. 5UE/6200) and the tank base plate with compound gasket sealing engine jointing (Stores Ref. 34B/270), place the new joint washer (Stores Ref. 26FC/3313) in position, offer up the pump, and secure it in position using the attachment items retained in the previous operation. Lock the bolts with wire locking nickel alloy 22 s.w.g. (Stores Ref. 30A/3055).
- (6) Replace and secure the elbow assembly, the special tailed gasket and the vent pipe assembly. Reconnect the electrical socket wire locking the respective connections as necessary.
- (7) Reconnect the batteries, replace the gun bay doors, and refuel the aircraft.

## 9. TESTING AFTER EMBODIMENT

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

Leak test the main fuel tank in the fuselage.

Carry out an engine running test to ensure correct functioning of the new booster pump.

## 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. 61 Maintenance Unit—

Store Ref.	Part No.	Nomenclature
5UE/4828	—	Booster pump, type BP 1 Mk 4

Qty	Class of Store
1	A

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

This modification causes a weight change of +1.5 lb. and a change of moment of -2.0 lb. ft.

**RESTRICTED**



ALLAN 11/44  
(Fuel system)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. H.23  
(Alteration 1)

Vampire F.B. Mk. 9 Aircraft—Fuel System—Booster Pump, Type SPE.403,  
Mk. 1, in place of Type BP.1, Mk. 4 (Stores Ref. 5U/4828)—Introduction

(AB/A/139.—6.4.55.)

1. A.P. 4099G, Vol. 2, Part 1, Leaflet No. H.23 (Mod. No. Vampire/  
3278) is amended as follows:—

(1) Heading classification *Amend* to read:

(Class B/2 on fitment of Engines embodying Goblin  
Mod. Nos. 724 or 904)

(2) Para. 1, line 1 *Amend* to read:

On aircraft embodying Mod. Nos. Goblin 724 or 904 it  
has been found



134083 5/55 500 C & P Gp. 1

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Vampire F.B. Mk. 9 Aircraft—Fuel System—Booster Pump, Type  
SPE.403, Mk. 1, in place of Type BP.1, Mk. 4 (Stores Ref. 5U4828)  
—Introduction

(AB/A/139.—23.11.55.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.23 (Mod. No. Vampire/3278),  
is amended as follows:—

(1) Heading, classification. *Amend* to read:—

“(Class B/2 concurrently with Mod. 3423 on fitment of engines  
embodying Goblin Mod. 724 or 904.)”

(2) Para. 1, sub-para. (2), line 1. *After* “Mod. No. Goblin 724”  
*insert* “or 904”.

(3) Para. 1. *Insert* new sub-para.:

“(3) This modification is essentially connected with Mod. No.  
3423—Electrical—(To introduce suppressor, Type 5CY/4317 in  
place of 5CY/1002 for fuel booster pump); if that work is not  
already embodied it must be effected concurrently.”

(4) Para. 2. *After* “Mod. No. Goblin 724” *insert* “or 904”.



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(Fuel pipes—protection)

A.P. 4099G, Vol. 2, Part 1  
Leaflet No. H.24**Vampire F.B. Mk. 9 Aircraft—Fuel System—To Introduce Protection for Fuel Pipes at Rib No. 2**

(Mod. No. VAMPIRE/3412.)

(Class C/3 (N.C.P.) on removal of No. 1 tank doors.)

(AB/A/4595—5.5.56.)

**1. INTRODUCTION**

Chafing of the fuel feed pipes where they pass through rib No. 2, in the mainplanes, has occurred. This modification protects the pipes at rib No. 2 to obviate this chafing.

(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 removal of No. 1 tank doors.

**3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT**

The work will take approximately 3 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 and materials are required, and are to be provided under Unit arrangements:

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
32C/376	—	Rubber Tubing, 1 in. I.D.	4	C
	—	D.T.D.625-1, 3 in. long		
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**

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, and is applicable to both port and starboard mainplanes.

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(1) Working in the tank bay, outboard of rib No. 2, locate the 1 in. o.d. fuel balance pipe running between tank No. 3 and tank No. 1. This pipe passes through rib No. 2 approximately two-thirds of the way aft from the forward end of rib No. 2 and connects into fuel tank No. 1 at its aft outboard connection. Also locate the 1 in. o.d. balance pipe running between tank No. 2 and tank No. 1. This pipe passes through rib No. 2 approximately one-third of the way along the rib from its forward end and connects into fuel tank No. 1 at its forward, outboard connection.

(2) Working with two new 3 in. lengths of 1 in. i.d. rubber tubing (Stores Ref. 32C/376), cut them lengthwise and coat the inside of the tubing with Bostik 1410 adhesive (Stores Ref. 33C/1327). Open the split rubber tubing and ease one piece over each pipe where it passes through rib No. 2. Position the two new split pieces of rubber tubing so that 1.5 in. of tubing is showing each side of rib No. 2. These fuel pipes, with the split rubber tubing attached, become Part No. POO.3985A/ND, left-hand, POO.3986A/ND right-hand, for the pipe between fuel tank No. 3 and No. 1, and the pipe between fuel tank No. 2 and No. 1 becomes Part No. POO.3987A/ND.

#### 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 +0.31 lb., and a change of moment of +1.0 lb. ft.

(N.R.V. fuel tank)

Leaflet No. H.25  
(Alteration 2)

Vampire F.B. Mk. 9 Aircraft—To Introduce Improved Sealing of  
Non-Return Valves in Base of Main Fuel Tank

(7/Mods/20.414.—17.1.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.25 (Mod. No. Vampire/  
3277), is amended as follows:—

(1) Class. *Delete* "(Class C/3)" and *substitute* "(Class D/4)"

(2) Para. 2. *Delete* in toto and *substitute*:

"2. EMBODIMENT

No further retrospective action is required on this  
modification."



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(46614/336) 229727 8245 625 2/58 (H.P.W.) (Gp. 19/1)





ALN 176

1

A.P.4099G, Vol. 2, Part 1  
(N.R.V. fuel tank) Leaflet No. H.25  
(A.L. Nos. 126 and 157 cancelled) (Leaflet No. H.20 cancelled)

## Vampire F.B. Mk. 9 Aircraft—To Introduce Improved Sealing of Non-Return Valves in Base of Main Fuel Tank

(Mod. No. VAMPIRE/3277.)

(Class C/3 on removal of tank.)

(7/Mods/20,414—12.9.56.)

*Note: The substance of this leaflet supersedes and is the authority for  
cancelling A.P.4099G Vol. 2, Part 1, Leaflet No. H.20 and Alteration 1*

### 1. INTRODUCTION

Cases have occurred of fuel seeping back past the non-return valves in the fuselage tank, thus causing over-filling of the wing fuel tanks and vents. To prevent this leakage, this modification introduces AVTAG resisting sealing rings to the non-return valves.

(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 modifications.

### 2. EMBODIMENT

This modification is to be embodied on removal of tank.

### 3. APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 9 man-hours (3 to strip; 2 to embody; 4 to re-assemble).

### 4. DRAWINGS REQUIRED

Drawing No. A.P.4099G/H.25/56 is incorporated in this leaflet.

### 5. PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and Materials

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

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/3658	POO.190	Pin	6	C
26FC/3298	POO.2291	Joint gasket	1	C
26FC/-	POO.3953	Washer	3	C
26FC/-	POO.3955	Washer	3	C
26FC/10224	POO.3957	Valve seating	3	C
28M/5315	A.16Y/BP	Nut	3	C
28S/2809	A.33/B12	Screw	3	C



The complete kit is to be demanded from No. 35 Maintenance Unit under Stores Ref. 26FC/103277.

(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	—	Locking wire, nickel alloy, 22 s.w.g.	As reqd.	C
34B/270	—	Compound gasket sealing engine 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:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/2275	POO.56	Valve plate	1	—

The method for modifying the above spare is detailed in Para. 8, Operations (5) and (6) and Sheet 1 of the drawing.

### Parts required:

26FC/-	POO.3953	Washer	1	—
26FC/-	POO.3955	Washer	1	—
26FC/10224	POO.3957	Valve seating	1	C

Attaching parts for POO.3953 washer, POO.3955 washer and POO.3957 valve seating.

28M/5315	A.16Y/BP	Nut, 4 B.A.	1	C
28S/2809	A.33/B12	Screw, 4 B.A.	1	C

### Spare affected:

26FC/3949	POO.1986A	Valve assembly	1	—
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The method for modifying the above spare is detailed in Para. 8, Operations (4), (5), (6) and (7) and Sheet 1 of the drawing.

### Parts required:

26FC/3658	POO.190	Pin	2	C
26FC/-	POO.3953	Washer	1	—
26FC/-	POO.3955	Washer	1	—
26FC/10224	POO.3957	Valve seating	1	C

Attaching parts for POO.3953 washer, POO.3955 washer and POO.3957 valve seating.

28M/5315	A.16Y/BP	Nut, 4 B.A.	1	C
28S/2809	A.33/B12	Screw, 4 B.A.	1	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 Reference, Part and Assembly Numbers as follows:—

Old		New	
Stores Ref.	Pt./Assy. No.	Nomenclature	Pt./Assy. No. Stores Ref.
26FC/2275	POO.56	Valve plate	POO.3961A 26FC/10206
26FC/3949	POO.1986A	Valve assembly	POO.3963A 26FC/6987

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Disconnect the aircraft batteries and defuel the aircraft, with the exception of the drop tanks, in accordance with the procedure detailed in A.P.4099G, Vol. 1, Sect. 2, Chap. 2. Open the gun bay doors and drain the collector box of the main fuselage tank by removing each of the drain plugs from the four elbow unions and the flange of the base plate.
- (2) Disconnect each of the fuel pipes from their unions on the main fuselage tank base plate, removing the "main tank to sump" and the "booster pump delivery" pipe lines in their entirety. Disconnect the electrical connections from the fuel booster pump.
- (3) Remove the nuts and special bolt surrounding the base plate and ease off the base plate and adjoining gasket only, ensuring that the collector box is left in position. Strip the gasket from the base plate. Absolute cleanliness is essential throughout all these operations, therefore the tank orifice should be protected from the entry of any dirt or other foreign matter, and all parts should be placed on a clean surface. Unscrew the three valve housing assemblies, Part No. POO.1986A, from the top of the base plate by inserting a screwdriver or similar instrument into the slot provided.
- (4) Punch out the two pins from each valve housing and remove the non-return valves from inside.
- (5) Refer to the drawing. Mark off and drill a hole in the centre of each valve, using a No. 27 (0.144 in. dia.) drill. Care must be taken to ensure that the valve is kept flat and in no way warped or buckled. Countersink this hole 90 deg. x 0.25 in. dia. on the recessed face, as shown, and remove all sharp corners and burrs.
- (6) Make up the new non-return valve assembly by assembling the items in the order indicated, using a screw, Part No. A.33/B12; valve seating, Part No. POO.3957; washer, Part No. POO.3955; washer, Part No. POO.3953, and nut, Part No. A.16Y/BP, having coated the screw head and nut with engine jointing, gasket sealing compound (Stores Ref. 34B/270) ensuring that no compound gets on to the rubber valve seating. Lock the nut by lightly centre punching, taking care not to distort the valve assembly while doing so.
- (7) Position each of the valve assemblies into their respective housings with the screw head uppermost, the rubber seating in contact with the housing, and secure them with two pins, Part No. POO.190. File the pins flush with the outside of the housing and spread the ends into the countersink by lightly centre punching the pins just inside the circumference.
- (8) Screw the valve housing assemblies into the base plate and tighten by means of the slot provided, and lock in position using nickel alloy locking wire, 22 s.w.g. (Stores Ref. 30A/3055).

(9) Clean the tank orifice and inner face of the base plate of all traces of jointing compound and remove all traces of dirt from the valve housing assemblies and the inside of the collector box in preparation for re-assembly. Coat the perimeter of the tank orifice, the bolt shanks, and the base plate with sealing compound. Place a new joint gasket, Part No. POO.2291, over the bolt shanks so that the one larger hole is positioned correctly to accept the 1/2 in. dia. special bolt, and replace the base plate.

(10) Push the base plate well home and replace and tighten the special bolt and nuts, tightening down evenly all round to ensure even contact.

(11) Coat all threads with sealing compound then reconnect each of the disturbed fuel pipes and replace the five drain plugs. Remake the electrical connections to the fuel booster pump.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied and inspected in accordance with current procedure, the following tests are to be carried out:—

Refuel the aircraft and carry out both fuel flow and tank pressure tests on the main fuselage tank in accordance with current authorised procedure. On the satisfactory completion of tests, wire lock all pipe connections and drain plugs. Reconnect the aircraft batteries.

#### 10. RECORDING ACTION

Record on Aircraft Form 700.

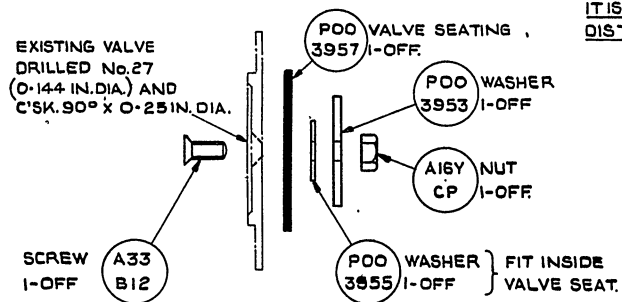
#### 11. DISPOSAL OF REDUNDANT PARTS

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

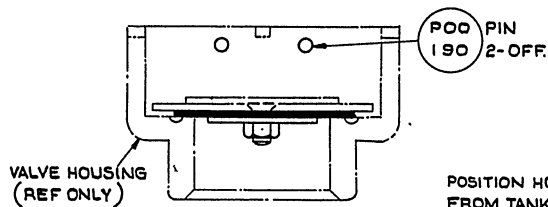
#### 12. EFFECT ON WEIGHT AND C. OF G.

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

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1241 K.L. (58)



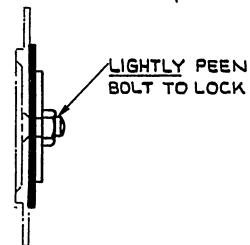
EXPLODED VIEW



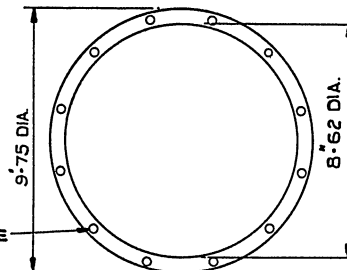
ASSY OF VALVE TO HOUSING

TYPICAL REDESIGNED NON RETURN VALVE ASSY.

IT IS ESSENTIAL THAT THE VALVE IS NOT  
DISTORTED.



ASSEMBLED VIEW



DETAIL OF GASKET FOR F.M.K.3  
AIRCRAFT PRE.VAM. 228 ONLY.

DRG. No. A.P. 4099 G/H.25/56



LEN 184  
(N.R.V: fuel tank)

A.P.4099G, Vol. 2 Part 1  
Leaflet No. H.25  
(Alteration 1.)

**Vampire F.B. Mk. 9 Aircraft — To Introduce Improved Sealing of Non-Return Valves in Base of Main Fuel Tank**

(7/Mods/20,414.—7.1.57.)

1. A.P.4099G, Vol. 2, Part 1 Leaflet No. H.25 (Mod. No. Vampire/3277) is amended as follows:—

(1) Heading, class. *Amend* "(Class C/3 on removal of tank)" to read "(Class C/3)"

(2) Para. 2, *Delete* "This modification is to be embodied on removal of tank" and *substitute*:

"This modification is to be embodied by:—

*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."



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(5933) Wt. 8214/9005 625 1/57 W.B.&Co.Ltd. Gp. 1267/2





ALR 194

(Fuel system—extension of vent)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.26  
(Alteration, 1)

Vampire F.B. Mk. 9 Aircraft—Fuel System—To extend Fuselage Fuel Tank Vent and introduce Improved Sealing between Vent and Cowling

(AB/A/5792.—11.7.57.)

A.P.4099G, Vol. 2, Part 1, Leaflet No. H.26 (Mod. No. Vampire/3534) is amended as follows:—

(1) Para. 6, list of spares and parts.

(a) After item 1, Part No. LOO.51A/1, insert:—

Stores Ref.	Part No.	Nomenclature
"26FC/6758	LOO.3757A/ND	Door, inspection, lower, star-board"

(b) Add in sequence:

"Spare affected:

26FC/1875	AOO.698A/ND	Cowling support channel
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The method of modifying this spare is detailed in Para. 8, operation (4); there are no parts required to modify this spare.

Spares affected:

26FC/10220	AOO.7253A/3	Fireproof bulkhead
26FC/6988	AOO.7341A/ND	Bulkhead No. 4, bottom half, sub-assembly

The method of modifying these spares is detailed in Para. 8, operations (4), (5), (6) and (11) and on Sheets 2, 3 and 4 of the drawing.

Parts required:

28M/12153 AGS.2007/B1	Nut, stiff, double anchor	2	C
28Q/6619 AS.2229/303	Rivet, 90 deg. csk/hd., $\frac{3}{32}$ in. dia.	4	C
28Q/10872 AS.2230/505	Rivet, 120 deg. csk/hd. $\frac{5}{32}$ in. dia.	5	C"

(2) Para. 7, list of changes.

Item 1. Amend new Part No. "LOO.51A/2" to read "15.EC.151A" and new Stores Ref. "26FC/-" to read "26FC/12625".

Delete the wording: "Note: This information is not complete" and add in sequence:—

"26FC/6758	LOO.3757A/ND	Door, inspection, lower, starboard	15.EC.153A/ND	26FC/12545
26FC/1875	AOO.698ND	Cowling support channel	AOO.7473ND	26FC/-
26FC/10220	AOO.7253A/3	Fireproof bulkhead	AOO.7467A	26FC/12548
26FC/6988	AOO.7341A/ND	Bulkhead No. 4, bottom half sub-assembly	AOO.7471A/ND	26FC/12547
26FC/-	AOO.7351	Fireproof bulkhead, bottom half	AOO.7469	26FC/-"

(3) Para. 8, operation (10), last line. Amend "LOO.51A/2" to read "15.EC.151A"

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**Vampire F.B. Mk. 9 Aircraft—Fuel System—To extend Fuselage Fuel Tank Vent and introduce Improved Sealing between Vent and Cowling**

(MOD. NO. VAMPIRE/3534.)

(Class B/2.)

(AB/A/5792.—6.12.56.)

**1. INTRODUCTION**

The existing main fuel tank vent allows fuel to be carried back into the cowl under negative 'G' flight conditions. This modification introduces an extended vent to clear the boundary layer and improved sealing at the cowl vent aperture.

(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 applicable only if Mod. Nos. Vampire/3044 (To introduce relief valve in fuel system vent line) and Vampire/3045 (To introduce lightweight packing in wing tank bays between tanks and wing structure) are already embodied.

**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 9 man-hours, not including drying time (2 to strip, 6 to embody, 1 to reassemble).

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/H.26/56, Sheets 1-5, 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/103534:—

Stores Ref.	Part No.	Nomenclature	Qty.	Class of Store
26FC/-	15EC.81	Blanking plate	1	—
26FC/-	15EC.83	Insert plate	1	—
26FC/-	15FS.3669	Packing	1	—
26FC/-	15FS.3671ND	Ferobestos tape	1	—
26FC/-	15FS.3679	Packing block	1	—
26FC/-	15FS.3681ND	Ferobestos tape	1	—
26FC/-	15S.1355A	Vent pipe and bracket sub-assembly	1	—
26FC/-	15S.1357A/ND	Pipe	1	—
26FC/-	15S.1359A/ND	Pipe	1	—
26FC/-	15S.1375	Clamp block	2	—
28D/12528	A.25/1B	Bolt, hex/hd., 4 B.A. × 0.5 in.	6	C

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<i>Stores Ref.</i>	<i>Part No.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
28D/12624	A.25/7B	Bolt, hex/hd., 4 B.A. × 1.1 in.	2	C
28D/12512	A.25/1C	Bolt, hex/hd., 2 B.A. × 0.55 in.	2	C
28M/10287	AGS.2001/B1	Nut, stiff, 4 B.A.	14	C
28M/10288	AGS.2001/CI	Nut, stiff, 2 B.A.	2	C
28M/12153	AGS.2007/B1	Nut, stiff, double anchor, 4 B.A.	2	C
28D/8300	AS.1242/1B	Bolt, 90 deg. csk/hd., 4 B.A. × 0.45 in.	8	C
28Q/6619	AS.2229/303	Rivet, 90 deg. csk/hd., $\frac{3}{8}$ in. dia.	4	C
28Q/6870	AS.2229/406	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C
28Q/6680	AS.2229/408	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	2	C
28Q/10432	AS.2230/304	Rivet, 120 deg. csk/hd., $\frac{3}{8}$ in. dia.	16	C
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd., $\frac{1}{8}$ in. dia.	12	C
28Q/10413	AS.2230/405	Rivet, 120 deg. csk/hd., $\frac{1}{8}$ in. dia.	6	C
28Q/10872	AS.2230/505	Rivet, 120 deg. csk/hd., $\frac{3}{8}$ in. dia.	5	C
28W/12305	SP.13/B	Washer, 4 B.A.	14	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 in accordance with current regulations.

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

<i>Stores Ref.</i>	<i>Nomenclature</i>	<i>Qty.</i>	<i>Class of Store</i>
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
33B/1060 (Home) or 33B/865 (Overseas)	Finish, cellulose, aluminium, Spec. D.T.D.772	As reqd.	C
33B/1072 (Home) or 33B/945 (Overseas)			
33C/1264	Compound, pigmented varnish jointing, Spec. D.T.D.369A	As reqd.	C

## (2) Special Tools and Test Equipment

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

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## 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/6814	LOO.51A/1	Door, inspection, lower, complete with hinge rail	—	—

The method of modifying this spare is detailed in Para. 8, operations (8), (9) and (10).

Parts required:

26FC/—	15EC.81	Plate, blanking	1	—
26FC/—	15EC.83	Plate, insert	1	—
Attaching parts for 15EC.81 and 15EC.83 plates:				
28Q/10432	AS.2230/304	Rivet, 120 deg. csk/hd., $\frac{3}{8}$ in. dia.	8	C
28Q/10412	AS.2230/404	Rivet, 120 deg. csk/hd., $\frac{1}{8}$ in. dia.	12	C
and				
28Q/6870	AS.2229/406	Rivet, 90 deg. csk/hd., $\frac{1}{8}$ in. dia.	4	C

Spare affected:

26FC/1039	LOO.66	Rail, hinge, lower	—	—
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The method for modifying this spare is detailed in para. 8, operation (8); 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:—

<i>Old</i>			<i>New</i>	
<i>Stores Ref.</i>	<i>Part/Assy. No.</i>	<i>Nomenclature</i>	<i>Part/Assy. No.</i>	<i>Stores</i>
26FC/6814	LOO.51A/1	Door, inspection, lower	LOO.51A/2	26FC/—
26FC/1039	LOO.66	Rail, hinge, lower	15EC.97	26FC/—
26FC/—	LOO.82ND	Hinge, lower (spares)	15EC.103ND	26FC/—
26FC/—	LOO.4016	Hinge, lower, L.H.	15EC.101	26FC/—
26FC/—	LOO.4016	Hinge, lower, R.H.	15EC.102	26FC/—
26FC/—	LOO.364	Strip, hinge packing	15EC.99	26FC/—

*Note:* This information is not complete.

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

- (1) Lower and remove the cannon bay doors. Release the hydraulic accumulator pressure and drain the hydraulic fluid from the aircraft in accordance with current authorized procedure. Release and remove the lower engine cowl; retain the screws supporting the hinge to the cowl support channel.

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(2) Refer to Sheet 1 of the drawing. On the lower aft face of the fireproof bulkhead, remove the two now redundant hydraulic pipes, Part Nos. QOO.3697A/ND and QOO.3701A/ND, from the ground test connection on the port side to the coupling support bracket starboard of the bulkhead centre-line; blank off the adaptors. Retain all clips and attaching items.

(3) Disconnect and retain the lower hose clip connecting the vent pipe assembly to the vent pipe and remove the now redundant vent relief valve assembly and packing, Part Nos. POO.3727A/1 or F.M.B.A/1 and POO.3897 respectively, discarding its attaching items. Remove the now redundant cowling support bracket, Part No. AOO.1298A, which is situated about the centre-line of the lower bulkhead, and also the clamp block, Part No. QOO.108A, which is mounted on the port side of the redundant cowling support bracket. Retain the clip securing the main tank vent pipe to the forward face of the fireproof bulkhead.

(4) Refer to Sheet 3 of the drawing. Working on the cowl support channel, cut away the section from the port side of the centre-line 2.5 in.  $\times$  0.15 in. and a 0.53 in. radius cut-out about the centre-line. Offer a packing, Part No. 15FS.3669 to the existing cut-out starboard of the centre-line (vacated by the redundant relief valve assembly); trim this packing to suit the contour of the cut-out and remove it. Temporarily offer up to the support channel the new vent pipe and drain assembly, Part No. 15S.1355A, ascertain the landing for this assembly on the port side of the vent pipe on the support channel and drill out the mushroom-head rivets necessary to allow the vent pipe assembly to seat flush. Again temporarily offer up the vent pipe assembly, ensuring that the assembly is centrally mounted about the bulkhead centre-line. (The centre-line can be ascertained by marking a vertical line in the centre of the two vertical rows of three holes which secured the redundant cowling support bracket removed in operation (3)).

(5) Using a No. 26 drill (0.1470 in. dia.), drill back from the bulkhead two holes at positions "DE" and two No. 11 holes (0.1910 in. dia.) at positions "BC"; Sheet 3 of the drawing refers. Temporarily secure the assembly at these positions. Working to starboard of the centre-line and using the No. 26 drill, drill three holes back from the bulkhead and four holes from the support channel. Working to port of the centre-line, drill the bulkhead one No. 26 hole to suit the vent pipe assembly and drill the support channel four holes No. 26 to suit the vent pipe assembly; countersink these four holes 90 deg.  $\times$  0.25 in. on the undersurface. Temporarily secure the vent pipe assembly at all its attaching points.

(6) To the cut-out to starboard of the centre-line, in the support channel, offer up the packing which was trimmed to fit in operation (4). Drill this packing eight No. 41 holes (0.0960 in. dia.) to suit the vent pipe assembly and remove the packing. Countersink the eight holes in the packing on the undersurface 120 deg.  $\times$  0.193 in. dia. Remove the vent pipe assembly from the support channel. Deburr all holes and edges on the packing and rivet it to the vent pipe assembly with eight 120 deg. countersunk-head  $\frac{3}{32}$  in. dia. rivets, Part No. AS.2230/304, having first coated the mating surfaces with pigmented varnish jointing compound (Stores Ref. 33C/1264). Ascertain which holes on the bulkhead and support channel were being used for attachment, fill up the remainder of the holes with 120 deg. countersunk-head  $\frac{5}{32}$  in. dia. rivets, Part No. AS.2230/505, and countersink the inner surfaces of the support channel 120 deg.  $\times$  0.316 in. dia. Deburr all holes drilled and remove all swarf.

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(7) Offer up the vent pipe assembly to its position (*refer* to Sheets 3 and 4 of the drawing) and secure with two 2 B.A. bolts and stiffnuts, Part Nos. A.25/1C and AGS.2001/C1 respectively, six 4 B.A. bolts, Part No. A.25/1B, and eight 4 B.A. 90 deg. countersunk bolts, Part No. AS.1242/1B, using fourteen stiffnuts, Part No. AGS.2001/B1 and twelve washers, Part No. SP.13/B, reattaching the main fuel tank vent pipe clip at its original position on the forward face of the bulkhead. Reconnect the hose pipe to the existing vent pipe with the retained clip.

(8) *Refer* to Sheets 4 and 5 of the drawing. On the lower cowling, Part No. LOO.51A/1, trim back the lower hinge, hinge rail and packing 1.6 in. from the forward edge of the cowling, drill out the rivets securing the redundant part of the hinge and fill the redundant holes to port of the centre-line with two 90 deg. countersunk-head rivets, Part No. AS.2229/406, flush on the outer surface. *Refer* to Sheet 5 of the drawing. Drill out the two rivets on the hinge as indicated, countersink both surfaces 90 deg.  $\times$  0.22 in. dia. and rivet the hinge with two 90 deg. countersunk-head  $\frac{1}{8}$  in. dia. rivets, Part No. AS.2229/406; flush these two rivets both sides. *Refer* to section 'A-A' on Sheet 4 of the drawing. Trim off 0.52 in. from the centre flange of the lower hinge rail and reshape the forward end of the hinge rail as detailed. Deburr all edges.

(9) *Refer* to Sheet 5 of the drawing. Offer up and insert plate, Part No. 15EC.83, to the cut-out to starboard of the centre-line on the cowling. Trim the plate to the shape required; mark off as detailed on the drawing and drill eight No. 41 holes; deburr the holes. To the underside of the cowling offer up a blanking plate, Part No. 15EC.81, and trim it to suit, then with a No. 30 (0.1285 in. dia.) drill, drill twelve holes in the plate to suit the cowling. Remove the plate and countersink these twelve holes on the underside, 120 deg.  $\times$  0.25 in. dia. and deburr all holes. Coat the mating surfaces with pigmented varnish jointing compound and secure to the cowling with twelve 120 deg. countersunk-head  $\frac{1}{8}$  in. dia. rivets, Part No. AS.2230/404.

(10) To the cowling on the inside of the plate just fitted, offer the insert plate (trimmed to suit in the previous operation) and drill the blanking plate eight No. 41 holes to suit the insert plate. Remove the insert plate and countersink the undersurface of the blanking plate 120 deg.  $\times$  0.19 in. dia.; remove the burrs. Coat the mating surfaces of the blanking and insert plates with pigmented varnish jointing compound and secure the insert plate to the blanking plate with eight 120 deg. countersunk-head  $\frac{3}{32}$  in. dia. rivets, Part No. AS.2230/304. Refinish the cowling locally, using a mixture of equal parts of etch accelerator primer (Stores Ref. 33B/1023) and etch base primer (Stores Ref. 33B/1021), internally coat with aluminium cellulose finish, Spec. D.T.D.772 (Stores Ref. 33B/1060 or 865), and externally with P.R.U. blue cellulose finish, Spec. D.T.D.772 (Stores Ref. 33B/1072 or 945). Renumber the lower cowling "LOO.51A/2".

(11) *Refer* to Sheet 2 of the drawing. Ascertain the position of the new clamp block, top anchorage, and drill a No. 26 hole, drill the lower anchorage No. 26 to suit the clamp block. Slave bolt to each of these two holes an anchor nut, Part No. AGS.2007/B1, and drill in the bulkhead four No. 41 holes to suit the anchor nuts; countersink these four holes 90 deg.  $\times$  0.16 in. dia. on the aft face of the bulkhead. Deburr all holes drilled and secure the two anchor

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nuts with four 90 deg. countersunk-head  $\frac{3}{8}$  in. dia. rivets, Part No. AS.2229/303, on the forward face of the fireproof bulkhead, having first coated the mating surfaces with pigmented varnish jointing compound. Offer up the two new clamp blocks, Part No. 15S.1375, to this position and temporarily secure in position with two 4 B.A. bolts and washers, Part Nos. A.25/7B and SP.13/B respectively.

(12) Refer to Sheet 1 of the drawing. Offer up to the hydraulic test connection on the port side, two new pipes, Part Nos. 15S.1357A/ND (pump suction) and 15S.1359A/ND (pump pressure), route these pipes as detailed and connect to the coupling support bracket to starboard of the centre-line; wire-lock the pipe union nuts with 22 s.w.g. nickel alloy locking wire (Stores Ref. 30A/3055). Route the pump pressure pipe through the new clamp block, lower channel, and the pump suction pipe aft of the new vent drain; ensure a minimum clearance of 0.15 in. between this pipe and the vent assembly bracket. See Sheet 2 of the drawing.

(13) Refit the lower engine cowling at the aft anchorage with its retained attaching items and drill the hinge at its forward anchorage two No. 11 holes to suit the anchor nuts on the vent pipe assembly. Secure the cowling at this front anchorage with its retained attaching items.

(14) Refer to Sheet 3 of the drawing. To the cowling support channel outer face offer up two pieces of ferobestos tape, Part No. 15FS.3671ND, to fit port of the centre-line, and Part No. 15FS.3681ND, to fit starboard of the centre-line; each piece of the ferobestos tape is to finish 0.75 in. from the bulkhead centre-line. Secure this ferobestos tape to the landing channel with 120 deg. countersunk-head  $\frac{1}{8}$  in. dia. rivets, Part No. AS.2230/405; where necessary, drill  $\frac{1}{8}$  in. dia. holes through the ferobestos tape and landing channel in the centre. Ensure that these rivets do not foul any fittings.

(15) Refer to Sheet 3 of the drawing. Offer up a packing block, Part No. 15FS.3679, to the area aft of the vent pipe and forward of the cowling hinge; trim this packing on the edges indicated on the drawing, ensuring a maximum clearance of 0.020 in. and chamfer the bottom edge 0.030 in.  $\times$  45 deg. to clear the cowling. Drill the bracket support to suit this packing and rivet the packing to the support with two 90 deg. countersunk-head  $\frac{1}{8}$  in. dia. rivets, Part No. AS.2229/408, having first coated the mating surfaces with pigmented varnish jointing compound.

(16) Recharge the hydraulic system in accordance with current procedure and replace the cannon bay doors.

#### 9. TESTING AFTER EMBODIMENT

When this modification has been embodied, carry out a functional test of the hydraulic system as detailed in A.P.4099G, Vol. 1, Section 3, Chapter 6.

#### 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:—

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Stores Ref.	Part No.	Nomenclature	Qty.	Class. of Store
26FC/1987	AOO.1298A	Bracket, bottom centre	1	C
26FC/6980	POO.3727A/1	Valve, vent relief	1	B
27V/- or	F.M.B.A/1	Valve, vent relief	1	—
26FC/8091	POO.3897	Packing	1	C
26FC/2380	QOO.108A	Block, clamp	1	C
26FC/6861	QOO.3697A/ND	Pipe assembly, pump pressure	1	C
26FC/8342	QOO.3701A/ND	Pipe assembly, pump suction	1	C

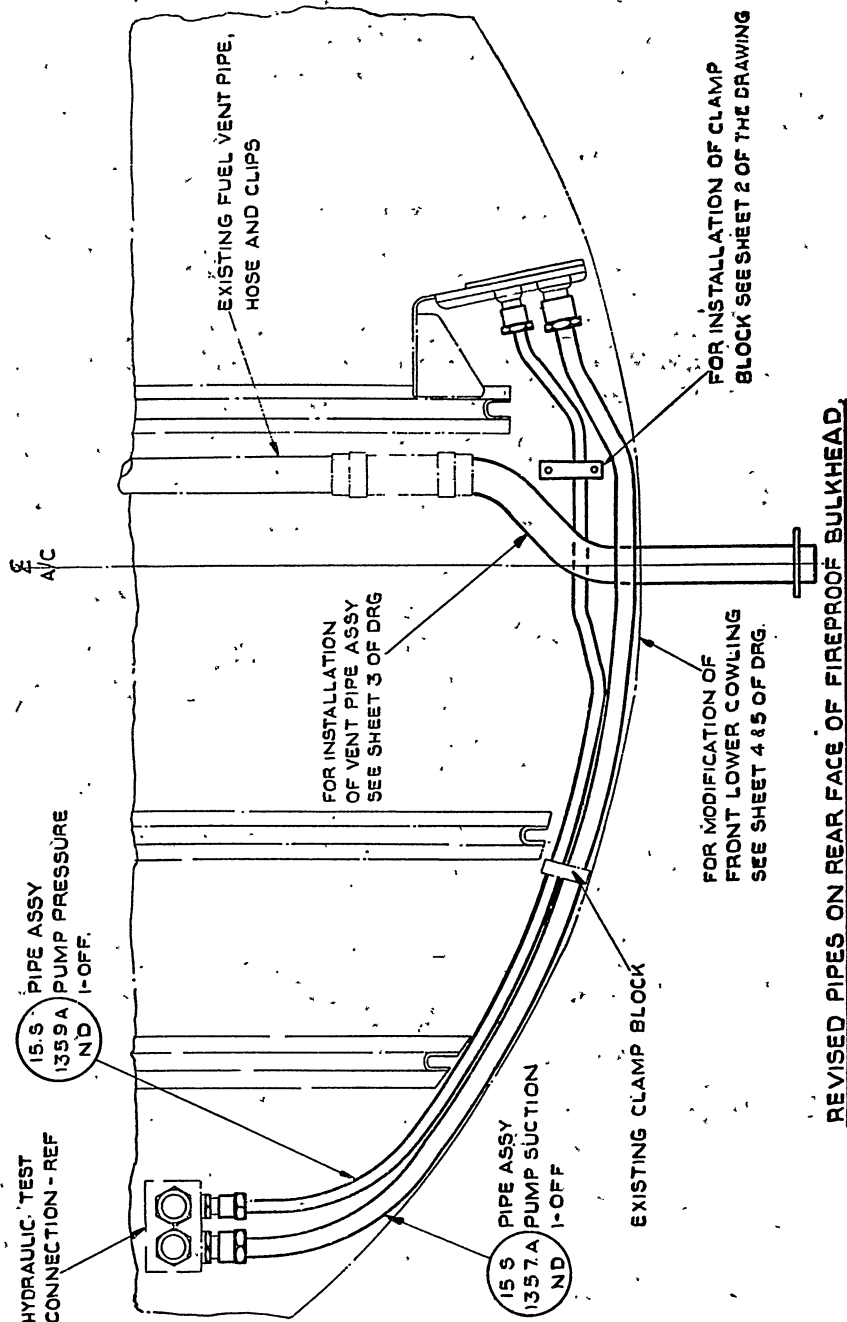
## 12. EFFECT ON WEIGHT AND C. OF G.

This modification causes a weight change of +0.67 lb. and no change of moment.

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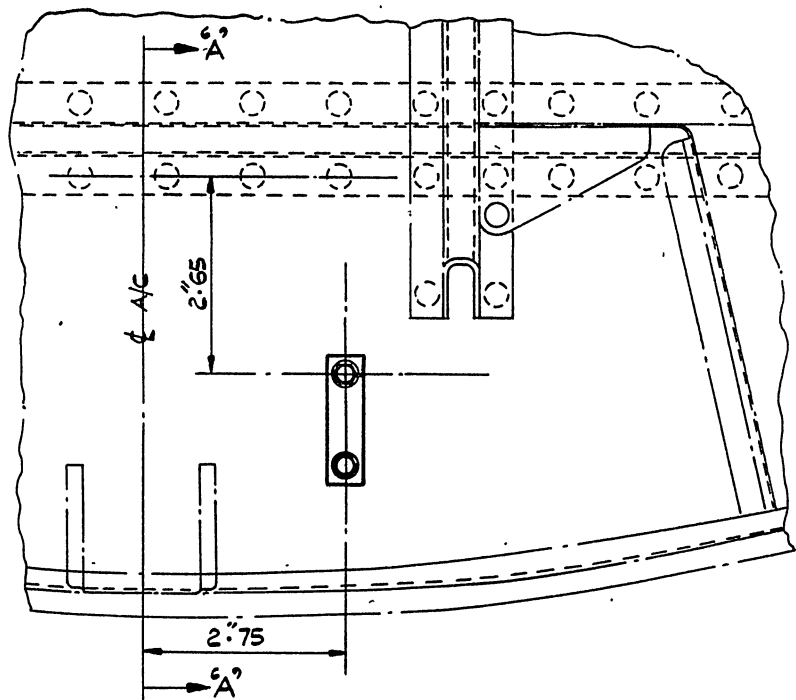
Drg. No. A.P.4099G/H.26/56  
Sheet I

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DRG. NO. A.R. 4099 G / H. 26 / 56

SHEET 2

LP31689 12/56 625 C & P Gp. 959 (4)

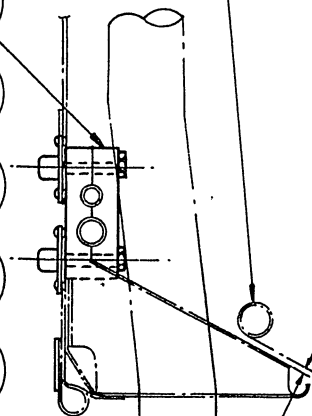


VIEW LOOKING ON AFT FACE OF FIREPROOF BULKHEAD.

INSTALLATION OF CLAMP BLOCK.

PIPE ASSEMBLY PUMP SUCTION REF

- CLAMP 15S
- BLOCK 1375
- 2-OFF
- BOLT A25
- 2-OFF 7B
- WASHER S.P.
- 2-OFF 13 B
- ANCHOR AGS
- NUT 2007
- 2-OFF B1
- RIVET AS
- 4-OFF. 2229
- 303



0" .15 MIN CLEARANCE

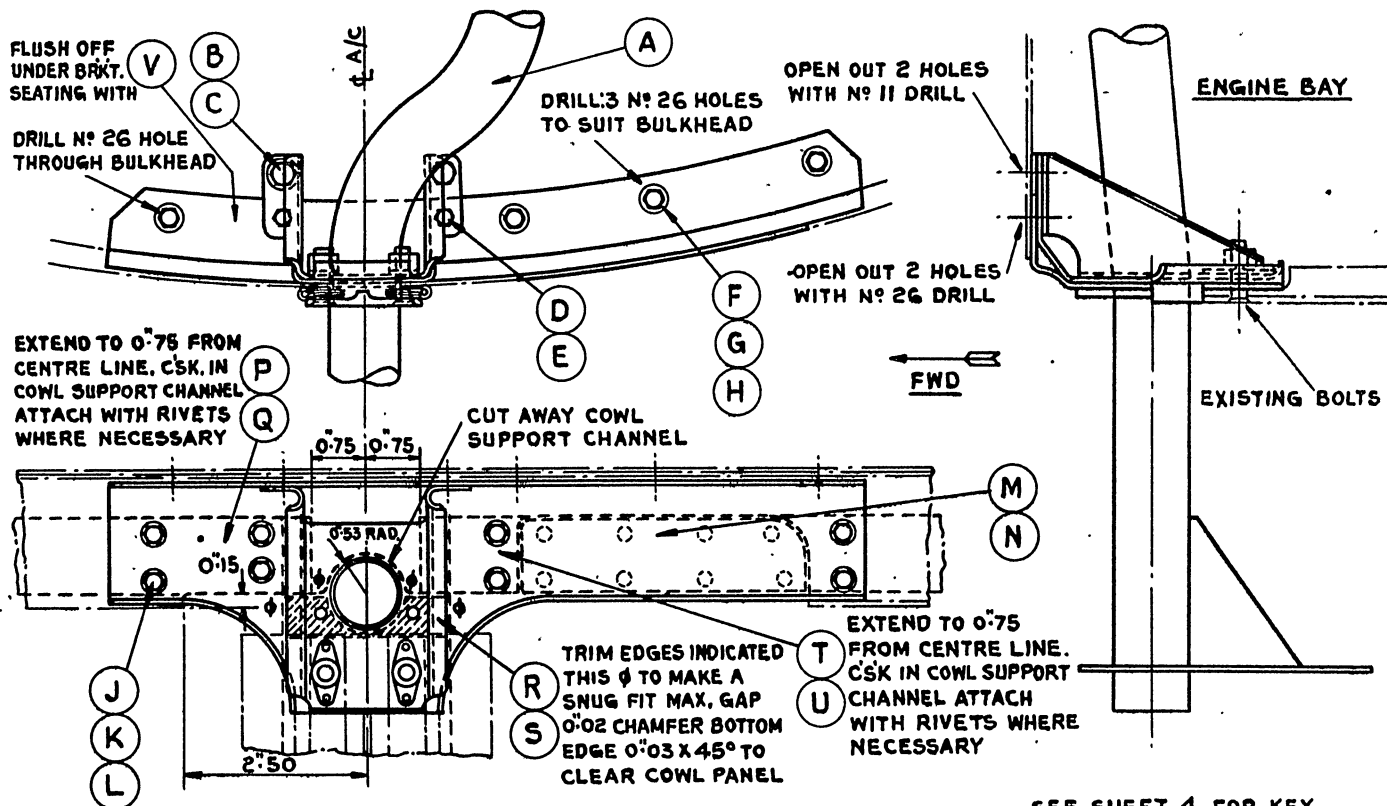
VIEW ON ARROWS 'A'-'A':

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LP31689 12/56 625 C & P Gp. 959 (4)

SHEET 3

DRG. NO. A.P. 4099 G / H. 26 / 56



SEE SHEET 4 FOR KEY

INSTALLATION OF VENT PIPE ASSY. ON REAR FACE OF FIREPROOF BULKHEAD

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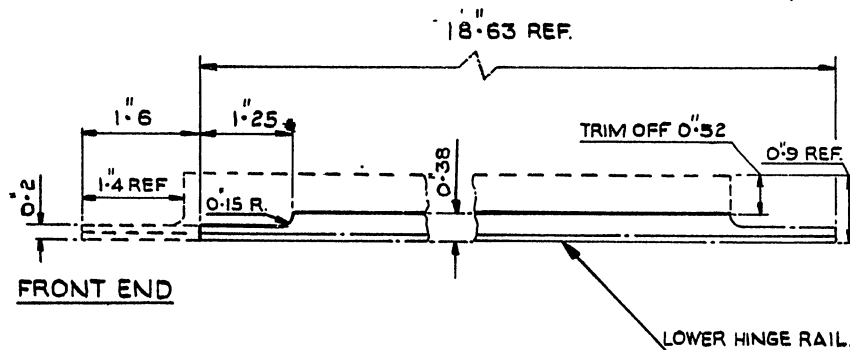
LP31689 12/56 625 C & P Gp. 959 (4)

DRG. NE A.P. 4099 G / H. 26 / 56

SHEET 4

# KEY

CODE	PART No.	NOMENCLATURE	QTY
A	IS.S.1355A	VENT PIPE AND BRKT ASSY.	1
B	A25/1C	BOLT 2 BA.	2
C	AGS.2001/C1	NUT 2 BA.	2
D	A25/1B	BOLT 4 BA.	2
E	AGS.2001/B1	NUT 4 BA	2
F	A25/1B	BOLT 4 BA	4
G	SP 13/8	WASHER 4 BA.	4
H	AGS.2001/B1	NUT 4 B.A.	4
J	AS1242/1B	BOLT 4 BA	8
K	SP 13/8	WASHER 4 BA	8
L	AGS.2001/B1	NUT 4 B. A.	8
M	IS.FS.3669	PACKING	1
N	AS.2230/304	RIVET $\frac{3}{32}$ " DIA.	8
P	IS.FS.3671ND	FEROBESTOS	1
Q	AS.2230/405	RIVET $\frac{1}{8}$ " DIA.	3
R	IS.FS.3679	PACKING BLOCK	1
S	AS.2229/408	RIVET $\frac{1}{8}$ " DIA	2
T	IS.FS.3681ND	FEROBESTOS.	1
U	AS.2230/405	RIVET $\frac{1}{8}$ " DIA	3
V	AS.2230/505	RIVET $\frac{5}{32}$ " DIA.	5



TRIM THE HINGE AND PACKING 1.6  
 TRIM THE HINGE RAIL TO THE NEW SHAPE DETAILED  
 FINISH THE HINGE RAIL WITH MATCHING CELLULOSE  
 TO SPEC. DTD. 772 ALUMINIUM.

SECTION 'A-A' SEE SHEET 5

EQUIPMENT FOR VENT PIPE INSTALLATION AND FURTHER DETAILS OF COWLING.

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LP31689 12/56 625 C & P Gp. 959 (4)

DRG. NO. A.R. 4099 G / H. 26 / 56

SHEET 5

SEE SHEET 4 FOR  
SECTION 'A-A'

LOWLING

RENUMBER. -

LOWER HINGE RAIL PART No. 15.EC.97. REF-1-OFF  
LOWER COWL RAIL PACKING PART No. 15.EC.99-REF-4-OFF  
LOWER DOOR HINGE L.H. PART No. 15.EC.101-REF-1-OFF  
LOWER DOOR HINGE R.H. PART No. 15.EC.102-REF-1-OFF

2-No. 11 DRILL HOLES TO BE DRILLED.  
ON ASSEMBLY TO SUIT SUPPORT  
BRACKET PART No. 15.FS3661-REF.  
CSK. UNDERSURFACE OF HINGE 90°x0.22 D.

AS  
2229  
406

RIVET 1/8" DIA.  
90° CSK. HD.  
2-OFF.

RIVET 3/32" DIA.  
120° CSK. HD.  
8-OFF.

AS  
2230  
304

DRILL No. 41. CSK 120° x 0.19 DIA.  
IN OUTER FACE OF BLANKING

ALL RIVETS FLUSH  
ON OUTER SURFACE

RIVET 1/8" DIA.  
90° CSK. HD.  
2-OFF.

AS  
2229  
406

DRILL OUT EXISTING RIVETS FROM THIS  
POSITION. CSK. HINGE 90°x0.22 DIA AND  
RE-RIVET HINGE-FLUSH RIVETS BOTH SIDE.

INSERT PLATE  
1-OFF.  
TRIM ON ASSY.

15.EC  
83

SECTION 'B-B'

15 EC  
81

BLANKING  
PLATE. 1-OFF.  
TRIM ON ASSY.

AS  
2230  
404

RIVET 1/8" DIA.  
120° CSK. HD.  
12-OFF.

DRILL No. 30 FROM EXISTING  
RIVET HOLES CSK. 120°x0.25 D.  
IN OUTER FACE OF BLANKING

VIEW 'INSIDE LOWER COWLING.'

.....  
(Fuel tank filler cap-seating)  
(A.L. No. 212 cancelled)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.27  
(Alteration 1 incorporated)

**Vampire F.B. Mk. 9 Aircraft—Fuel System—To Introduce Main Fuel Tank Filler  
Cap Incorporating Rubber Seating**

(MOD. NO. VAMPIRE/3573)

(Class B/2.)

(AB/A/7737—17.6.58.)

*Note:—This leaflet supersedes A.P.4099G, Vol. 1, Part 1, Leaflet No. H.27 and is the  
authority for cancelling A.L. No. 212.*

**1. INTRODUCTION**

This modification introduces a rubber seating to the venting valve in the main fuel tank filler cap, to prevent the escape of fuel, during inverted flying or under negative "G" conditions, on to the outside cowling panels thence into the engine bay, thus creating a fire hazard.

(1) This modification does not cancel, supersede or render unnecessary any work called for by approved modifications, Command Modifications, S.T.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 2 man-hours.

**4. DRAWINGS REQUIRED**

Drawing No. A.P.4099G/H.27/58 is incorporated in this leaflet.

**5. PARTS AND SPECIAL TOOLS REQUIRED**

(1) Parts and Materials

(2) The Modification Kit which consists of the following items will be assembled by No. 35 Maintenance Unit under Ref. No. 26FC/103573.

(i) Items supplied by the Contractor:

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26DV/2884	12PT.1511	Seating, rubber, valve	1	C
26FC/-	15PT.17A	Plate, backing complete with valve boss	1	—
28M/13086	A.27/BP	Nut, 4 B.A.	4	C
28D/8303	AS.1242/4B	Bolt, csk. 4 B.A.	4	C
28W/9419401	SP.10/B	Washer, 0-018 in. thick	4	C

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## (ii) Service Supply items:

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
30B/1989	—	Tubing, alum. alloy, Spec. B.S.L.63, 3/4 in. dia. x 10 s.w.G. 13 in. length	1	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
26BY/1021	691234	Washer, filler cap jointing	1	C
33C/1117	—	Cement, Boscoprene	As reqd.	C
		2413, parts 1 - 2, Spec. D.T.D.900/4130		
33C/1122	—	Cement, primer, As reqd.	As reqd.	C
		Boscocite 9247, Spec. D.T.D.900/4130		

## (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/2960	POO.1154	Valve	1	C

The work involved in modifying the above spare is detailed in Para. 8, operation (4), and on the drawing.

## Part required:

26DV/2884	12PT.1511	Seating, rubber	1	C
Spares affected:				
26FC/2958	POO.1152A	Cap, filler, complete	1	—
26FC/6889	POO.3937A/ND	Tank, fuel, fuselage, less fuel transmitter and booster pump.	1	—
26FC/-	POO.3971A	Tank, fuel, fuselage, complete	1	—

The work involved in modifying these spares is detailed in Para. 8, operations (3), (4), (5) and (7) and on the drawing.

## Parts required:

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
26DV/2884	12PT.1511	Seating, rubber	1	C
26FC/13033	15PT.17A	Plate, backing complete with valve boss	1	C
28M/13086	A.27/BP	Nut, plain, 4 B.A.	4	C
28D/8303	AS.1242/4B	Bolt, csk., 4 B.A.	4	C
28W/12346	SP.10/B	Washer, 0.018 in. thick	4	C

Record Mod. No. "3573" as having been embodied.

Spares will be modified by the Stock Holding Unit as directed by the Air Ministry, E.2.

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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.	Nomenclature	Part/Assy. No. Ref. No.
26FC/2958	POO.1152A	Cap, filler, complete	15PT.19A 26FC/13032
26FC/6889	POO.3937A/ND	Tank, fuel, fuselage less fuel transmitter and booster pump	POO.4103A/ND 26FC/12984
26FC/-	POO.3971A	Tank, fuel, fuselage, complete	POO.3971A/1 26FC/-

## 8. SEQUENCE OF OPERATIONS

The following is the sequence of operations:—

(1) Refer to Fig. 3 of the drawing and make up a fuel filler cap valve leak testing tube from 2.92 in. dia. bore round tubing as illustrated. Cut an internal thread at one end to suit the filler cap body. To give a testing pressure of  $\frac{1}{2}$  p.s.f., this tube must be long enough to provide a 12 in. head of fuel.

(2) Remove, from the main fuselage fuel tank, the existing fuel tank cap assembly, Part No. POO.1152A.

(3) Dismantle the fuel tank cap by removing the four 4 B.A. nuts and bolts. Remove, from the redundant backing plate, Part No. POO.1155A, the swivel plate with the chain and locking ring attached. Retain all items, with the exception of the backing plate and the four 4 B.A. nuts and bolts, for subsequent re-assembly.

(4) Before offering up the new rubber seating, Part No. 12PT.1511, to the existing valve, Part No. POO.1154, remove from it all stray strands of reinforcing Madapolam, and ensure that its mating face, and the mating face of the valve, are scrupulously clean. Refer to Fig. 1 of the drawing and, as illustrated, affix the rubber seating to the valve by first coating the mating surfaces with Boscolite Primer 9247 (Ref. No. 33C/1122), and finally with a mixture of Parts 1 and 2 of Boscoprene cement 2413 (Ref. No. 33C/1117), ensuring that a good adhesion is obtained between the valve and the rubber seating over the whole area, taking great care to avoid the formation of air pockets. This assembly now becomes Part No. 15PT.13A.

(5) Refer to Fig. 2 of the drawing, attach the retained swivel plate, with the chain and locking ring complete, to the new backing plate, Part No. 15PT.17A, and assemble to it the remaining fuel tank cap components retained in operation (3), placing the four new 0.018 in. thick washers, Part No. SP.10/B, between the filler cap body and the backing plate. Secure the assembly with the four new 4 B.A. nuts and countersunk bolts, Part Nos. A.27/BP and AS.1242/4B, respectively. The fuel tank cap complete now becomes Part No. 15PT.19A, and is to be numbered as such.

(6) Record Mod. No. "3573" as having been embodied.

(7) On satisfactory completion of the fuel leak test on the filler cap valve, the ends of the four bolts, securing the filler cap assembly, are to be peened over. Replace the filler cap into the main fuselage tank renewing the filler cap jointing washer, Part No. 691234, if necessary.

## 9. TESTING AFTER EMBODIMENT

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

Refer to Fig. 2 and 3 of the drawing, and using a filler cap jointing washer as a seal, screw the fuel tank filler cap into the threaded end of the testing

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tube. Fill the tube to a 12 in. head with paraffin, or aircraft fuel (refer to the appropriate aircraft hand-book for the correct specification) this being sufficient to give  $\frac{1}{2}$  p.s.i. Check that the leak rate is not more than 10 drops per minute.

# 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/-	POO.1155A	Plate, backing, complete, with valve boss.	1	

# 12. EFFECT ON WEIGHT AND C.O.F.G.

This modification has no effect on weight or C.O.F.G.

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(Fuel tank filler cap-seating)

A.P.4099G, Vol. 2, Part 1  
Leaflet No. H.27  
(Alteration 2)**Vampire F.B. Mk. 9 Aircraft—Fuel System—To Introduce Main Fuel Tank  
Filler Cap Incorporating Rubber Seating**

(AB/A/7737—59.58.)

1. A.P.4099G, Vol. 2, Part 1, Leaflet No. H.27 (Mod. No. Vampire/3573.)  
is amended as follows:—(1) Para. 5, sub-para. (1) (a) (ii), Service Supply Items, Delete "30B/1989  
Tubing, alum. alloy Spec. B.S.L.63 3/4 in. dia. x 10 s.w.g. 13 in.  
length Qty. 1" and substitute the following:—

Ref. No.	Part No.	Nomenclature	Qty.	Class of Equipment
30C/3367	—	Tubing, steel, plain 3/4 in. dia. x 8 s.w.g. Spec. B.S. 980/CDS10 13 in. length	1	C
		or		
30A/2267	—	Tubing, Steel, plain 3/4 in. dia. x 8 s.w.g. Spec. T.45 13 in. length	1	C"

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1. The first part of the report is a summary of the work done during the year.

2. The second part is a detailed account of the work done during the year.

3. The third part is a summary of the work done during the year.

4. The fourth part is a summary of the work done during the year.

5. The fifth part is a summary of the work done during the year.

6. The sixth part is a summary of the work done during the year.

7. The seventh part is a summary of the work done during the year.

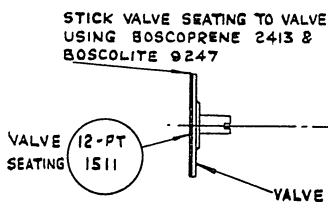
8. The eighth part is a summary of the work done during the year.

9. The ninth part is a summary of the work done during the year.

10. The tenth part is a summary of the work done during the year.

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1. The first part of the report is a summary of the work done during the year.

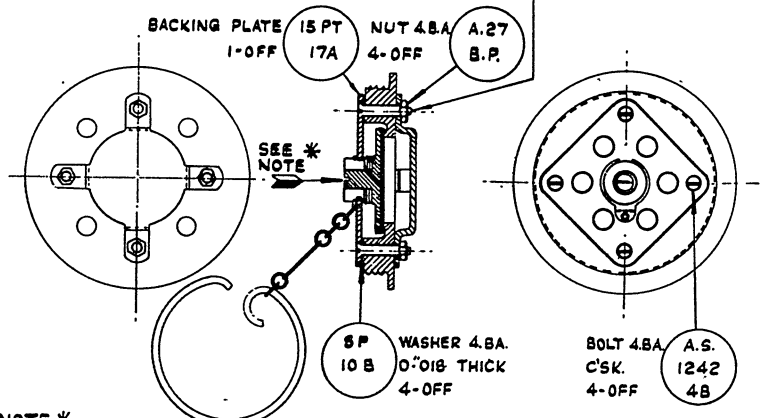


**IMPORTANT**  
A GOOD ADHESION MUST BE  
OBTAINED BETWEEN VALVE AND  
RUBBER SEATING OVER THE WHOLE  
AREA, AND CARE MUST BE TAKEN  
TO AVOID AIR POCKETS. THE FACE  
OF THE VALVE SEATING MUST BE  
QUITE SMOOTH AND FREE FROM  
BLEMISHES, SCRATCHES AND  
PROTRUSIONS.

**FIG.1.**

**FITMENT OF VALVE SEATING TO VALVE.**

**NOTE:** TO BE BURRED OVER  
AFTER PRESSURE TEST.

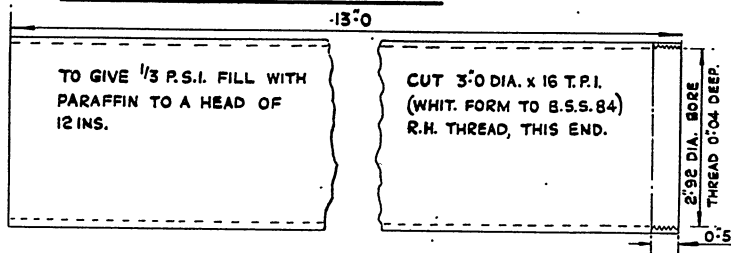


**NOTE \***

ENSURE THAT AT  $\frac{1}{3}$  P.S.I. OF PARAFFIN APPLIED IN DIRECTION OF ARROW,  
THE LEAK RATE IS NOT MORE THAN 10 DROPS PER MIN.

**FIG.2.**

**ASSEMBLY OF FUEL TANK FILLER CAP.**



**FIG.3.**

**TUBE FOR PRESSURE TESTING FUEL TANK FILLER CAP ASSEMBLY.**

DRG. No. A.P. 4099G/H.27/58

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