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TP 5

Australian Air Publication 721.79

Volume 2, Part 2  
Book 5

## ROYAL AUSTRALIAN AIR FORCE



# VAMPIRE MODIFICATIONS

(Nos 401 to 500)

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ISSUED FOR THE INFORMATION AND GUIDANCE OF ALL CONCERNED,

BY COMMAND OF THE AIR BOARD,

A handwritten signature in black ink, appearing to read 'D. J. ...', is written over a horizontal line.

Secretary,

DEPARTMENT OF AIR  
CANBERRA A C T

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## VAMPIRE MODIFICATIONS.

AAP. No 7212-002-100-5

I Gordon Jarvis RANK 1st Sgt

Certify that I have carried out a check of effective pages contained in this publication. It is complete with the exceptions of the following pages. ~~IN ACCORDANCE WITH THE NUMERICAL INDEX.~~

[illegible]

SIGNED

~~PHONE~~

DATE 18 MAY 88.

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A.A.P. 721.79, Vol. 2, Pt. 2.  
(Books 1, 2, 3, 4 and 5)

**VAMPIRE MODIFICATIONS**

**INTRODUCTION**

1. Vampire Modifications are now contained in 5 Books as follows:-  
Book 1 - Modifications Nos. 1 to 100 inclusive.  
Book 2 - Modifications Nos. 101 to 200 inclusive.  
Book 3 - Modifications Nos. 201 to 300 inclusive.  
Book 4 - Modifications Nos. 301 to 400 inclusive.  
Book 5 - Modifications Nos. 401 and subsequent.
2. One series of amendments will cover the five Books and all amendments are to be recorded in the Amendment Certificate contained in Book 1.
3. The index to the complete set of Vampire Modifications is at the front of Book 1.

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SWORDSMAN 3 LB BCF PORTABLE EXTINGUISHER FIRE  
IN LIEU OF GRAVINER TYPE 34H EXTINGUISHER FIRE -  
VAMPIRE AIRCRAFT

Introduction

1. a. The Reason for the Modification

To standardise aircraft portable fire extinguishers containing BCF (Bromochlorodifluoromethane), a safe non-poisonous extinguishant approved by the Department of Civil Aviation. To eliminate overhaul of portable fire extinguishers which is more expensive than the cost of a new 3 lb fire extinguisher.

b. Description and Features by which the Modification can be Recognised

Graviner BCF Swordsman fire extinguisher fitted with a Graviner bracket.

c. Relationship with Other Modifications

Nil.

d. Reason for Classification

The Graviner BCF 3 lb Swordsman fire extinguisher is fitted in lieu of the Graviner 34H fire extinguisher.

e. Effect on Servicing and/or Ground Handling

Nil.

f. Effect on Aircraft Limitation

Nil.

g. Effect on Aircrew Operation

Nil.

h. Number of Parts Comprising the Order

One.

(Issued with A/L 362) /Application

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 454

Application

2. All Vampire aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately  $\frac{1}{2}$  man-hour will be involved. Trade mustering involved is Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all Vampire aircraft when the Graviner Type 34H fire extinguishers are time expired or replacement stocks are not available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

RESTRICTED

(Issued with A/L 362) /Modification

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 454

Modification Parts List

10. The following item is required to complete one modification set:

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	4210-PN-Type 3-15BCF	Type 3-15BCF	Portable Fire Extinguisher 3 lb Swordsman complete with Bracket	1	A

Supply

11. Modification sets are to be drawn from unit store.

Method and Sequence of Incorporation

- 12.
- Remove the Graviner Type 34H fire extinguisher from its bracket.
  - Remove and retain the four Phillips screws and remove and discard the Graviner Type 34H fire extinguisher and its bracket.
  - Using three of the Phillips screws, previously retained, secure the Graviner bracket supplied with the Swordsman fire extinguisher (item 1) in the same position as the Graviner Type 34H bracket was positioned. The top two holes and the lower single hole in the bracket are to be used.
  - Install (item 1) extinguisher Graviner 3 lb Swordsman in the bracket.

/Items

(Issued with A/L 362)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 454

Items Removed

13. The following item is removed on incorporation of the modification

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	1680-RAF-27N299	Type 34H	Graviner Portable Fire Extinguisher Type 34H and Type 11B Bracket	1	A

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application, and is to be reduced to scrap vide ABO E 22/1.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Refer to AAP 729.517 for servicing Graviner Swordsman 3 lb portable fire extinguisher.

Tests

18. Nil

(Issued with A/L 362)

/Recording

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 454

Recording

19. Record incorporation of the modification as follows:
- a. In the Airframe Log Book Form EE 512 and on the Modification Status Form EE 512A.
  - b. Modification certificates are to be completed and forwarded by units, aircraft depots and civilian contractors in accordance with ABO T 19/1.
  - c. Form EE 515 Component Log.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/7876

Attachment: Nil

Date of Issue: 28th July 1969

RESTRICTED

(Issued with A/L 362)



FUEL CONTENTS SYSTEMS - INTRODUCTION OF ONE-PIECE  
CABLE ASSEMBLIES FROM RECTIFIER TO WHEEL-WELL  
JUNCTION UNITS

Introduction

1. (a) The Reason for the Modification

The co-axial cable end fittings and straight connector at the No 1 rib disconnect points, readily absorb heat from the engine. This has the effect of softening the polythene dielectric, in those portions of the cables adjacent to the end fittings, to the extent where short circuits between the inner conductor, and outer braid will occur.

(b) Description and Features by which the Modification can be Recognized

The cable assemblies from the rectifier to the wheel-well junction units are in one piece. There are no disconnect points at the No 1 rib stations in the engine bay.

(c) Relationship with other Modifications

Vampire Modifications 332 and 379 must be embodied prior to, or concurrently with this modification.

(d) Reason for Classification

(i) Preventative maintenance.

(ii) Improved operation.

(e) Effect on Servicing and/or Ground Handling

There will be no limitation on servicing and/or ground handling after incorporation of this modification.

(f) Effect on Aircraft Limitation

There will be no effect on aircraft limitation after incorporation of this modification.

(g) Effect on Aircrew Operation

There will be no effect on aircrew operation after the incorporation of this modification

(Issued with A/L 359)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 452

(h) Number of Parts Comprising the Order

This modification is not written in parts.

Application

2. This modification is applicable to all Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 15 man-hours are required to incorporate the modification. RAAF trade musterings involved are airframe, instrument and electrical fitters.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable, but not later than the next D Servicing after modification sets are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. (a) The following instructions are superseded on incorporation of this modification:-

RAAF Special Technical Instruction Vampire/201.

(b) The following modification orders are cancelled by the introduction of this modification:-

Vampire Modifications 405 and 451.

Special Tools, Jigs, etc

8. Not applicable.

(Issued with A/L 359)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 452

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	6145-PN-MOS SPEC-EL-1973	MOS SPEC EL1973	Cable, Co-Axial Unigauge 31	30 ft	C
2	9160-027- 1106	Vacuum Oil 2305	Wax, Microcrystalline 2305	Supplied in 10 lb block only. Approx 1 oz per mod.	C
3	I32A/94		Cord Stringing, Braided Spec 4F35	4 ft	C
4	9505-912- 9786		Wire, Locking 22 SWG DTD 189	2 ft	C
5	9150-223- 4019	K2-274	Grease, Spec XG315  Available against P.C.8407 (H.C. Sleigh Ltd) 8 oz tube)	1 oz	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1-5 - Draw from unit store.

Method and Sequence of Incorporation

12. The airframe fitter is responsible for sub-paragraphs (b) to (g) inclusive and (o). The instrument fitter is responsible for the remainder.

(Issued with A/L 359)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 452

- (a) Open nose-cap and disconnect batteries.  
(Electrical Fitter).
- (b) Remove gun-bay doors.
- (c) Open lower access doors to gain access to the engine bay.
- (d) In the main undercarriage wheel-wells, remove the two access panels on the rear walls.
- (e) Remove the co-axial cable fairleads from the port and starboard sides of the engine bulkhead. Retain all parts for further use.
- (f) Locate the junction units through the panels in the wheel-wells, and disconnect the co-axial cables which pass from the junction units to the wing-root disconnect points.
- (g) At the rectifier, disconnect the co-axial cables which pass through the engine bulkhead to the wing-root disconnect points.
- (h) At the port and starboard wing-roots, break the cables at the disconnect points.
- (j) Remove the four cable assemblies from the aircraft.
- (k) Remove from the cable assemblies, and retain for further use, those end fittings which connect the cables to the rectifier and the wheel-well junction units.
- (l) Using co-axial cable "UNIGAUGE 31" (item 1), microcrystalline wax (item 2), and the end fittings retained in sub-paragraph (k). Manufacture the replacement cable assemblies. The new assemblies (one each for port and starboard installation) are to consist of a single length of cable. The length of each assembly is to be sufficient to ensure capacitance within the limits 238-248 pF (port) 190-200 pF (stbd). (To meet this requirement it is suggested that the cable be cut at least 1 foot longer than the two cables it is to replace).

(Issued with A/L 359)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 452

(m) Install the new cable assemblies in the aircraft.

NOTE: Vampire Modification 379 paragraph 12 may be used as a guide during removal and installation of co-axial cables.

(n) Lock wire all cable connectors, using lock-wire, (item 4).

(o) Replace all access panels, and the gun-bay doors.

(p) Reconnect batteries and close nose cap. (Electrical Fitter)

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
6	6680-016-5044	N15-1445A	Connector, No 1 Rib Disconnect to Rectifier, Stbd	1	
7	6680-016-5040	N15-1447A	Connector, No 1 Rib Disconnect to Junction Unit	2	
8	6680-016-5042	N15-1449A	Connector, No 1 Rib Disconnect to Rectifier, Port	1	
9			Connector, Straight, No 1 Rib Disconnect	2	

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application, and are to be actioned as follows:-

Items 6-9 - Retain for other applications.

Action on Stock Holdings of Removed Items

15. Not applicable.

(Issued with A/L 359)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 452

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. After incorporation of the modification, carry out a calibration check of the system in accordance with AAP 721.79, Vol 1, Sect 5, Chap 2, paragraph 72.

Recording

19. Record incorporation of the modification as follows:-

- (a) On Form EE512, modification log.
- (b) On Form EE512A, modification progress chart.
- (c) Modification incorporation certificates are to be completed and forwarded by units, aircraft depots and civilian contractors in accordance with ABO T 19/1.

Weight Sheet Summary

20. The effect of the modification on weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command, 2601/79/66-452 and 2501/110/6818.

Attachment: Nil.

Date of Issue: 19th December 1967.

(Issued with A/L 359)

RESTRICTED

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 451

Class 2

PACITOR FUEL GAUGE SYSTEM - INTRODUCTION OF  
LOCK NUTS ON STRAIGHT CO-AXIAL CONNECTOR  
IDENT NO 5935-PN-C32-14

Introduction

1. (a) The Reason for the Modification

Incidents of cable connectors at the wing break becoming loose due to high temperature changes and vibrations experienced in flight. When the connector becomes loosened, the fuel quantity indicator drops to zero or fluctuates wildly.

(b) Description and Features by which the Modification can be Recognised

The existing co-axial straight connection is reworked and two brass lock nuts are added to the assembly.

(c) Relationship with Other Modifications

Vampire Modification Nos 379 and 405 must be incorporated prior to this modification.

(d) Reason of Classification

To allow for more positive locking of the co-axial cables at the wing break connections.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 347)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 451

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 5 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Fitter and Turner	2.5 man-hours
Instrument Fitter	2.5 man-hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawings Nos DA66217000, DA66217001 and DA66217002 attached.

Modification Parts List

10. The following item is required to complete one modification set:-

(Issued with A/L 347)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 451

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	I1/8035		Brass Bar Hexagon .820" Across Flats		C
	alt I1/817		Brass Bar Hexagon .820" Across Flats		C

Supply

11. Item 1 is to be drawn from unit stores.

Method and Sequence of Incorporation

12. (a) Manufacture lock nuts (2 off) in accordance with Drawing No DA66217000 using item 1.
- (b) Open the nose cap and disconnect the aircraft batteries.
- (c) In the main undercarriage wheel wells remove the two access panels situated on the rear walls.
- (d) Open the lower inspection door to gain access to the engine bay.
- (e) Locate the existing junction boxes through the panels in the wheel wells and disconnect the connector from the engine bay and undo all ties.
- (f) Working from the engine bay, pull the disconnected connector back along the conduit until the wing break joint becomes visible at the engine bay end.
- (g) Undo the joint and remove the straight connector.
- (h) Obtain completely threaded connector with lock nuts and couple up both ends of the existing pacitor cable finger tight and lock with spanners on centre lock nuts.

(Issued with A/L 347)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 451

- (j) Working from the wheel wells, draw the pacitor cable down into the wing conduit until the joint is no longer visible.
- (k) Connect the cable back into the wing junction box, interlock the joint as per Vampire Modification No 397, and replace all ties previously undone using waxed cord stringing as required, treated with beeswax as required.
- (l) Replace all panels removed by operation (c).
- (m) Replace the lower engine inspection doors.
- (n) Reconnect the aircraft batteries and close the nose cap.

Items Removed

13. Nil.

Action on Items Removed

14. Nil.

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not required.

Additional Information

17. Nil.

Tests

18. No tests are required other than to note that the pacitor fuel system is functioning upon switching on the power.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book or E/E 512 as applicable.
- (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

(Issued with A/L 347)

RESTRICTED



RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 451

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

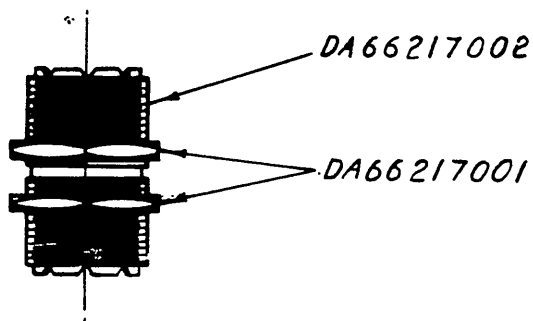
References: Files, Headquarters Support Command, 2601/79/66-451  
and 2501/110/6264



Attachments: Drawings Nos DA66217000, DA66217001 and DA66217002

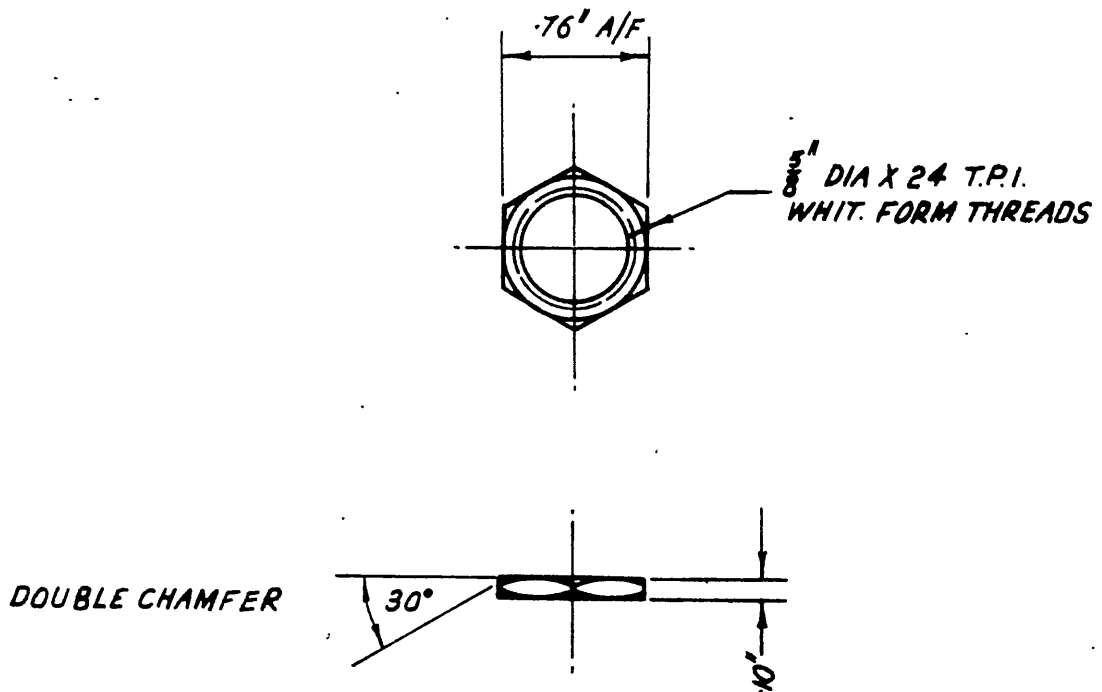
Date of Issue: 23rd January 1967

(Issued with A/L 347)


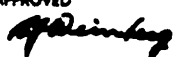
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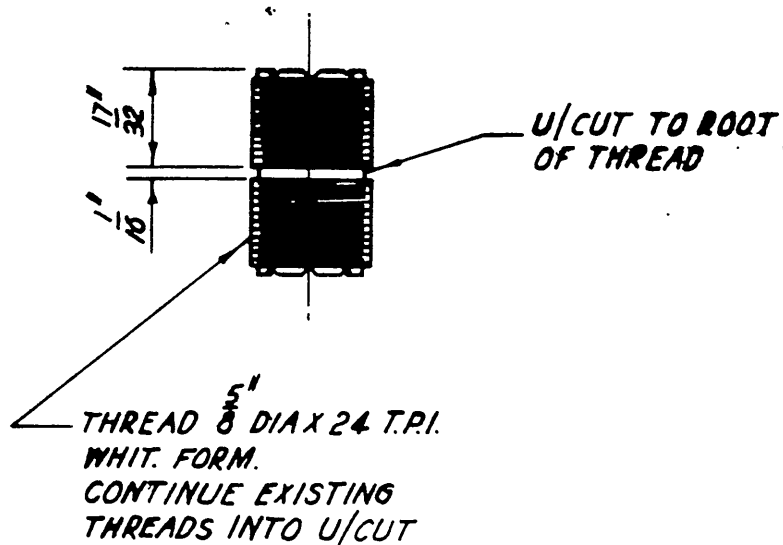


<b>DEPARTMENT OF AIR</b> ISSUED BY <b>SENIOR TECHNICAL STAFF OFFICER</b> <b>SUPPORT COMMAND</b>			TITLE <b>PACITOR FUEL GAUGE SYSTEM</b> <b>INTRODUCTION OF CONNECTOR</b> <b>LOCK NUTS</b>	
DRAWN <b>H. WOLFE</b>	CHECKED 	APPROVED 	MODIFICATION NUMBER <b>VAMPIRE MOD 451</b>	DRAWING NUMBER <b>DA66217000</b>



MATERIAL :- BRASS HEX. TO B.S.B. 11(E) D703 IDENT. 11/8035  
 ALTERNATIVE :- B.S. 251 AS H3 IDENT. 11/817  
FINISH :- CAD. PLATE TO D.T.D. 904 C

<b>DEPARTMENT OF AIR</b> ISSUED BY <b>SENIOR TECHNICAL STAFF OFFICER</b> <b>SUPPORT COMMAND</b>			TITLE  <b>LOCK NUT</b>	
DRAWN <b>H WOLFE</b>	CHECKED 	APPROVED 	MODIFICATION NUMBER <b>VAMPIRE MOD 451</b>	DRAWING NUMBER <b>DA 66217001</b>



MODIFY CONNECTOR IDENT. NO. 5935 -PN-C32-14

<b>DEPARTMENT OF AIR</b> <small>ISSUED BY</small> <b>SENIOR TECHNICAL STAFF OFFICER</b> <b>SUPPORT COMMAND</b>			<small>TITLE</small> <b>MODS TO CONNECTOR</b>	
<small>DRAWN</small> <b>H WOLFE</b>	<small>CHECKED</small> 	<small>APPROVED</small> 	<small>MODIFICATION NUMBER</small> <b>VAMPIRE MOD 451</b>	<small>DRAWING NUMBER</small> <b>DA 66 217002</b>

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 450

Class 2

ELECTRICAL - REPOSITIONING OF DOWNWARD IDENTIFICATION  
LIGHTING BREEZE PLUG AT REAR TAIL CONE

Introduction

1. (a) The Reason for the Modification

To facilitate mating of the electrical plug and socket constituting the electrical disconnect in the downward identification lighting circuit, and also to obviate chafing damage to the electrical cable.

(b) Description and Features by which the Modification can be Recognized

The connector plug is mounted on a plate which is rivetted across a lightening hole in the front former of the rear tail cone.

(c) Relationship with Other Modifications

The connector was previously repositioned per medium of Vampire Modification No 204.

(d) Reason for Classification

Improved servicing aspects.

(e) Effect on Servicing and/or Ground Handling

Will facilitate disconnections and reconnections during servicing.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and Mk 35A aircraft incorporating Vampire Modification No 204.

(Issued with A/L 346)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 450

Man-Hours and Trade Mustering Involved

3.           Electrical Fitter   -   one man-hour  
             Airframe Fitter     -   one man-hour

When Modification is to be Incorporated

4.           This modification is to be incorporated in all applicable aircraft after modification parts are available, as soon as practicable but not later than the next D servicing or the next engine change, whichever is the sooner.

Responsibility for Incorporation

5.           The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6.           Nil.

Orders and Instructions Superseded or Cancelled

7.           Nil.

Special Tools, Jigs, etc

8.           Nil.

Drawings

9.           Drawing No DA66212000 attached.

Modification Parts List

10.          The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	IL/10026	Spec BSL-72	Al Alloy Sheet	A/R	C
2	5320-117-6814	MS20470AD3-3	Rivet Al Alloy Uni Hd 3/32" Dia x 3/16" Lg	6	C

(Issued with A/L 346)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 450

Supply

11. Modification parts are to be obtained as follows:-

Items 1 and 2 : Demand through unit stores.

Method and Sequence of Incorporation

12. (a) Isolate electrical power from the aircraft and refer to attached drawing for the following operations.
- (b) Using item 1, manufacture mounting plate to dimensions, hole locations and hole sizes as shown.
- (c) Using plate as template, position across lightening hole in front former of rear tail cone, drill mounting holes and rivet plate in position, using item 2.
- (d) Reposition the downward ident light connector plug on mounting plate using existing mounting hardware.

Items Removed

13. Not applicable.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Functionally check the operation of the downward identification light.

(Issued with A/L 346)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 450

Recording

19. Record incorporation of the modification in accordance with AAP 701.5, Vol 1.

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

Reference: File, Headquarters Support Command, 2501/110/6260  
Attachment: Drawing No DA66212000  
Date of Issue: 23rd January 1967

(Issued with A/L 346)

RESTRICTED







VAMPIRE AIRCRAFT - CONVERSION FROM MK 35 TO MK 35W

Introduction

1. (a) The Reason for the Modification

To realize the life-of-type Vampire flying commitment by the most economical method.

(b) Description and Features by Which the Modification can be Recognized

- (i) This modification authorizes the fitment of Vampire Mk 35A wings to Mk 35 aircraft.
- (ii) The main difference between the two Marks of wing is in the fuel system. The Mk 35 wings are fitted with thin-wall bag type tanks with a fuel capacity per wing of 139 gallons whilst the Mk 35A wings are fitted with semi-rigid type tanks with a fuel capacity per wing of 117 gallons. This means that, with this modification embodied, the aircraft total fuel quantity is reduced by 44 gallons and therefore the range and flying time of the aircraft are reduced to that of the Mk 35A aircraft.
- (iii) Replacement of the existing cockpit fuel contents gauge with the type fitted to Mk 35A aircraft is necessary.
- (iv) Other differences exist in the tank venting system and fuel transfer pipes in the engine bay.
- (v) For identification purposes a yellow strip 12" in width is painted on the upper surface of each wing between Rib Nos 3 and 4.

(c) Relationship with Other Modifications

- (i) Vampire Modification No 408 must be embodied prior to or concurrently with this modification.
- (ii) Hawker De Havilland Repair Scheme No RS001655 is to be carried out concurrently with this modification.

(Issued with A/L 351)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

(d) Reason for Classification

To ensure that the proposed modification programme does not interfere with the flying commitment.

(e) Effect on Servicing and/or Ground Handling

It will be necessary to obtain Mk 35A spares for the items listed in paragraph 10 and Mk 35 spares for the remainder of the aircraft.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Because of the reduced fuel capacity of Mk 35A wings, the aircraft range and flying time are reduced to that of the Mk 35A Vampire aircraft.

(h) Number of Parts Comprising the Order

One.

Application

2. Mk 35 Vampire aircraft as specified by Headquarters Support Command.

Man-Hours and Trade Mustering Involved

3. Approximately 1080 man-hours are required to incorporate the modification. All trade musterings are involved.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Mk 35 Vampire aircraft on completion of mainplane fatigue life of 2000 flying hours.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors designated by Headquarters Support Command.

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V449.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, etc

8. No special tools, jigs, etc, are required to incorporate this modification, however, jigging is required when carrying out Hawker De Havilland Repair Scheme No RS001655.

Drawings

9. Drawing No DA 66190000 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/505011	W15-1407A/19	Plane Main Mk 35A Port	1	A
2	A79/505012	W15-1409A/18	Plate Main Mk 35A Stbd	1	A
3	A79/503363	P003867ND	Pipe Fwd Outlet No 1 Tank LH	1	C
4	A79/503364	P003868ND	Pipe Fwd Outlet No 1 Tank RH	1	C
5	4720-016-5965	P15-593 P/30	Hose Coupling 1" ID x 3" long	8	C
6	4720-016-5965		Hose	A/R	C
7	4730-912-8961	AGS1000/1	Clip Hose	28	C
8	A79/503131	P002055AND	Pipe Assy Vent Wing Tank 1st to 2nd Joint at Rib 1 LH	1	C
9	A79/503132	P002056AND	Pipe Assy Vent Wing Tank 1st to 2nd Joint at Rib 1 RH	1	C

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
10	A79/503117	L00201A	Clip Support Vent Pipe LH	1	C
11	A79/503118	L00201A Mk 2	Clip Support Vent Pipe RH	1	C
12	Not identified	P00127	Clip	2	C
13	5305-943-6920	A25/1C	Bolt 2BA	2	C
14	5310-PN-2001C1NYLON	AGS2001/C1 NYLON	Nut 2BA	10	C
15	4720-016-5957	P15-593 L/30	Hose, Coupling 3/4" ID x 3" long	2	C
16	4720-016-5957		Hose	A/R	C
17	A79/503121	P003383A	Elbow, Rear Outlet No 1 Tank LH	1	C
18	A79/503122	P003384A	Elbow, Rear Outlet No 1 Tank RH	1	C
19	A79/504925	DHS209 Mk 4	Guard, Hose Clip	4	C
20	5305-RAF-28D12533	A25/5C	Bolt 2BA	4	C
21	5310-941-9402	SP13/C	Washer	4	C
22	A79/503129	P00104	Pillar, Wing Vent at Rib No 1	2	C
23	5310-RAF-28F9653	AGS1138F	Washer Jointing	2	C
24	4730-801-1819	AGS904B	Union Nut	2	C
25	4730-H28C-11018	AGS1159B	Cone Cap	2	C
26	5315-234-1856	SP9/C8	Pin Split	46	C
27	6680-RAF-6A4333	GP250-016	Gauge Fuel Contents	1	A
28	9515-RAF-30A547		Mild Steel Plate 20 SWG	A/R	C
29	8010-018-5139	Brolite ELR 115	Lacquer Yellow	A/R	C

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
30	A79/502130	AM1402P	Tank No 1 Port	1	A
31	A79/502131	AM1402S	Tank No 1 Stbd	1	A
32	A79/502089	AM1419P	Tank No 2 Port	1	A
33	A79/502090	AM1419S	Tank No 2 Stbd	1	A
34	A79/502132	AM1422P	Tank No 3 Port	1	A
35	A79/502133	AM1422S	Tank No 3 Stbd	1	A
36	A79/501610	AM907P	Tank No 4 Port	1	A
37	A79/501611	AM907S	Tank No 4 Stbd	1	A
38	A79/503362	P003861A	Adapter	2	C
39	5310-RAF-28F9439	AGS1138H	Washer	2	C
40	4720-016-5958	P15-593/G30	Hose Coupling 1/2" ID x 3" long	2	C
41	4720-016-5958		Hose	A/R	C
42	4720-016-5957	P15-593/L60	Hose Coupling 3/4" ID x 6" long	2	C
43	4720-016-5957		Hose	A/R	C
44	4720-016-4690	P15-593/X30	Hose Coupling 2" ID x 3" long	2	C
45		P15-593/X40	Hose Coupling 2" ID x 4" long	4	C
46	4720-016-4690		Hose	A/R	C
47	4730-912-9090	AGS1000/0	Clip, Hose	4	C
48	4730-912-9562	AGS1000/3	Clip, Hose	12	C
49		OOP197ND	Packing	4	C
50	6680-RAF-6A2821	GP352/058	Tank Unit Pacitor	1	A
51	6680-RAF-6A2820	GP352/057	Tank Unit Pacitor	1	A
52	A79/502752	15V195	Gasket, Air Pipe Flange to Fuselage	1	C

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
53	A79/503635	W15-99ND	Fairing, Nose, Port	1	C
54	A79/503636	W15-100ND	Fairing, Nose, Stbd	1	C
55	5315-251-4701	AN381-2-8	Pin Split	32	C
56		L00127A	Hook, Cowl Fastener	8	C
57		L00438A	Rod, Tie, Assembly	12	C
58		SP4Z/B7	Pin, Shackle	12	C
59	5315-RAF-28P5499	SP4Z/B9	Pin, Shackle	8	C
60	5315-RAF-28P5507	SP4Z/D5	Pin, Shackle	8	C
61	5315-H28B836	SP4Y/B10	Pin, Shackle	4	C
62	A79/502949	L00444	Spring, Tension, Tie Rod	4	C
63	A79/502950	L00445	Spring, Tension, Tie Rod	4	C
64	A79/502951	L00446	Spring, Tension, Tie Rod	4	C
65	2620-016-4463	2302	Tyre, Outer	2	A
66	2620-016-4448	T9	Tube, Inner	2	A
67	1630-016-4730	ACM14434	Unit, Maxaret, Port	1	A
68	1630-016-4729	ACM14436	Unit, Maxaret, Stbd	1	A
69	W21F/500060		Bottle, Fire Extinguisher	1	A
70	1375-RAF-12K1316		Cartridge, Fire Extinguisher	1	C
71	5305-943-5717	A33/C20	Bolt, 2BA	36	C
72	5310-PN-166C	DHS166C	Washer, Cup	36	C
73	6240-995-3219		Filament, Nav Lamp	2	A
74	6240-995-4717		Filament, Landing Lamp	1	A

(Issued with A/L 351)

RESTRICTED



RESTRICTED

AAP 721.79, Vol 2, Pt 2

- 7 -

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
75	6605-RAF-6B1993		Detector, G4B Compass	1	A
76	A79/502147	K00453 Mk 12	Cable Assembly	1	C
77	A79/502150	K00453 Mk 21	Cable Assembly	1	C
78	A79/502127	13 CF 515	Guide, Cable	1	C
79	A79/502129	13 CF 521	Washer, Plate	1	C
80	5310-PN-2001B1 NYLON	AGS2001B1 NYLON	Nut, 4BA	13	C
81	5305-941-9452	A25/3B	Bolt, 4BA	13	C
82	A79/503329	13 CF 529	Washer, Plate	1	C
83	A79/502128	13 CF 523	Guide, Cable	1	C

Supply

11. Modification sets are to be obtained as follows:-
- (a) Items 5, 12, 15, 40, 42, 44 and 45 to be manufactured from items 6, 28, 16, 41, 43 and 46 respectively.
  - (b) Item 7 obtained 10 off from items removed and remainder from Unit Stores.
  - (c) Items 56-83 to be obtained from items 84 and 85.
  - (d) Remaining items to be obtained from Unit Stores.

Method and Sequence of Incorporation

12. This modification is to be embodied as follows:-
- (a) Disconnect all electrical power supplies.
  - (b) Drain the aircraft fuel system.
  - (c) Remove the engine in accordance with AAP 721.79, Vol 4, Part 5.
  - (d) Remove items 84 to 105 inclusive from aircraft and retain item 92.

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

- (e) Remove both Mk 35 wings in accordance with AAP 721.79, Vol 1, Sect 3, Chap 2 and from these wings remove items 56-83 inclusive which are to be retained for fitment to the Mk 35A wings. Remove items 106-147 inclusive and dispose of in accordance with para 14.
- (f) Refer to the attached Drawing No 66190000 and manufacture clip (item 12) (qty 2) from item 28.
- (g) Make up items 5, 15, 40, 42, 44, 45, hose couplings, from items 6, 16, 41, 43, 46 respectively.
- (h) Fit both Mk 35A wings in accordance with AAP 721.79, Vol 1, Sect 3, Chap 2. Fit items 30-83 to the Mk 35A wings.
- (j) Fit items 3 and 4 using ~~attaching parts~~ items 5 (2 off) and 7 (4 off).
- (k) Fit items 8 and 9 using ~~attaching parts~~ items 7 (4 off), 10 (1 off), 11 (1 off), 12 (2 off), 13 (2 off), 14 (2 off) and 15 (2 off).
- (l) Fit items 17 and 18 using attaching parts items 7 (4 off), 19 (4 off), 20(4 off), 21 (4 off) and 14 (4 off).
- (m) Fit items 22 (2 off) using attaching part item 23 (2 off).
- (n) Fit items 24, 25 and 26 to blank off the pressure reducing valves.
- (o) Reinstall the engine in accordance with AAP 721.79, Vol 4, Part 5.
- (p) Fit fuel contents gauge (item 27).
- (q) Using lacquer yellow (item 29), paint 1 12" wide strip, running chordwise on the upper surface of each wing between ribs Nos 3 and 4.
- (r) Refuel the aircraft and carry out fuel flow checks in accordance with AAP 721.79, Vol 1, Sect 4, Chap 2A.

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

- (s) Calibrate the fuel contents system in accordance with AAP 721.79, Vol 1, Sect 5, Chap 2.
- (t) Weigh the aircraft in accordance with AEIG Part 1, Section 3, Instruction No 2. Insert new tare weight, CG and moment on Form E/E 512A and forward copy of Form E/E 191 to Headquarters Support Command.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
84	(A79/504643 or A79/504945 or A79/505009	W15/1041A/15 or W15/1041A/18 or W15/1041A/19	Plane Main Mk 35 Port or Plane Main Mk 35 Port or Plane Main Mk 35 Port	1 1 1	A A A
	(A79/504644 or A79/504834 or A79/505010	W15/1043A/15 or W15/1043A/17 or W15/1043A/10	Plane Main Mk 35 Stbd or Plane Main Mk 35 Stbd or Plane Main Mk 35 Stbd	1 1 1	A A A
	A79/504836	P15/301ND	Pipe Fwd Outlet No 1 Tank LH	1	C
87	A79/504866	P15/302ND	Pipe Fwd Outlet No 1 Tank RH	1	C
88	Not identified	P15-495A	Clip LH	1	C
89	Not identified	P15-496A	Clip RH	1	C
90	5305-943-5715	A33/B15	Bolt 4BA	2	C
91	A79/504309	MS 382/10	Sleeve Moulded Rubber	6	C
92	4730-912-8961	AGS1001/1	Clip Hose	10	C
93	A79/504369	P15-545ND	Pipe Assy Vent Wing Tanks 1st to 2nd Joint at Rib No 1	2	C
94	Not identified	P15-473ND	Hose Coupling Rubber	2	C

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 10 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
95	4730-RAF-28E10154	AGS1000/00	Clip Hose	4	C
96	Not identified	P15-169A/1	Elbow Rear Outlet No 1 Tank	2	C
97	Not identified	P15-153A	Support Elbow Rear Outlet LH	1	C
98	Not identified	P15-154A	Support Elbow Rear Outlet RH	1	C
99	5305-RAF-28D8300	AS1242/1B	Bolt 4BA	4	C
100	5310-PN-2001B1NYLON	AGS2001/B1 NYLON	Nut 4BA	4	C
101	5310-941-9465	SP13/B	Washer	4	C
102	A79/504339	MS382/10N	Sleeve Moulded Rubber	2	C
103	5305-RAF-28D8306	AS1242/1C	Bolt 2BA	4	C
104	A79/504906	P15-623AND	Pipe Assy Pressurizing N/R Line to Relief Valve LH	1	C
105	A79/504907	P15-624AND	Pipe Assy Pressurizing N/A Line to Relief Valve RH	1	C
106	6620-PN-GP251-001-2	GP251-001-2	Gauge Fuel Contents	1	A
107	A79/503924	DC1175	Tank No 1, Port	1	A
108	A79/503925	DC1176	Tank No 1, Stbd	1	A
109	A79/503926	DC1177	Tank No 2, Port	1	A
110	A79/503927	DC1178	Tank No 2, Stbd	1	A
111	A79/503928	DC1179	Tank No 3, Port	1	A
112	A79/503929	DC1180	Tank No 3, Stbd	1	A
113	A79/503930	DC1181	Tank No 4, Port	1	A
114	A79/503931	DC1182	Tank No 4, Stbd	1	A

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 11 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
115		P15-509ND	Disc, Chafing	4	C
116	A79/504308	MS382/12/N	Sleeve, Moulded	4	C
117	A79/504310	MS382/15	Sleeve, Moulded	4	C
118	4730-912-9092	AGS1000/2	Clip, Hose	8	C
119	A79/504270	P15-195A/1	Valve, Anti-Surge	2	C
120	A79/504269	P15-193A/1	Valve, Anti-Surge	2	C
121	A79/504271	P15-329A	Valve, Anti-Surge	1	C
122	A79/504272	P15-330A	Valve, Anti-Surge	1	C
123	A79/504268	P15-321A	Valve, Anti-Surge	4	C
124	A79/504304	MS328C or MS400C	Ring, Clamp	8	C
125	A79/504574	P15-39	Washer, Ring	8	C
126	5310-PN- 2001/C/1NYLON	AGS2001/C/1 NYLON	Nut, 2BA	132	C
127	A79/501859	BM1257/13	Neck, Sub-Assy	4	C
128	A79/503575	MS306/B/R	Gasket	4	C
129	A79/504338	MS306/B/M	Gasket	4	C
130	A79/504336	OOP101	Washer	4	C
131	A79/503573	P003427ND	Gasket	4	C
132	A79/504335	P003969ND	Gasket	4	C
133	A79/501725	BM1593/14	Cap, Sub-Assy	4	C
134	5305-RAF- 28D8324	AS1242/3E	Bolt	16	C
135	5310-941-9402	SP13/C	Washer	100	C
136		W15-591	Support, Tank	4	C
137	A79/504337	P15-141A	Stud-Ring	4	C
138	A79/504378	CM3290/13	Stud-Ring	4	C
139	5310-941-8921	SP13/E	Washer	8	C

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 12 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
140	5310-PN-2001/E/1NYLON	AGS2001/E/1 NYLON	Nut 1/4" BSF	8	C
141	5305-RAF-28D8327	AS1242/6E	Bolt, 1/4" BSF	56	C
142	A79/504219	12.20PT.41	Ring, Sealing	14	C
143	5305-RAF-28D8326	AS1242/5E	Bolt, 1/4" BSF	140	C
144	5305-RAF-28D12708	AS1246/9C	Bolt, 2BA	16	C
145	A79/504291	12.20PT.27	Spider	4	C
146	A79/504181	P15-567	Cage, Filler	2	C
147	6680-PN-352-057-A	GP352/057/A	Tank Unit, Pacitor	2	A
148	6680-PN-352-058-A	GP352/058/A	Tank Unit, Pacitor	2	A

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application, and are to be actioned as follows:-

- (a) Items 84, 85 and 106 to 148 are to be returned to repairable stock.
- (b) Item 92 is to be retained.
- (c) Items 86 to 91 and 93 to 105 are to be discarded.

Action on Stock Holdings of Removed Items

15. Stock holdings of items removed are to be retained against future use.

Modification of Spares

16. Not applicable.

(Issued with A/L 351)

RESTRICTED

RESTRICTED

- 13 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 449

Additional Information

17. (a) Fuel tank venting pressures are identical for both marks of aircraft and therefore no alteration will be required to the vent system pressure reducing valves.
- (b) Wing attachment fittings are identical in type and location and the electrical installation including the G4 compass and pacitor fuel contents systems are similar.

Tests

18. In accordance with paragraph 12.

Recording

19. Record incorporation of the modification as follows:-
- (a) In the Airframe Log Book or E/E 512A as applicable.
- (b) Modification Incorporation Certificates are to be completed and forwarded by units, aircraft depots or contractors in accordance with ABO T 19/1.

Weight Sheet Summary

20. There will be a change in weight and moment as a result of the embodiment of this modification. Due to the magnitude of this change each aircraft is to be weighed after modification embodiment. (See para 12, sub-paragraph (t) above).

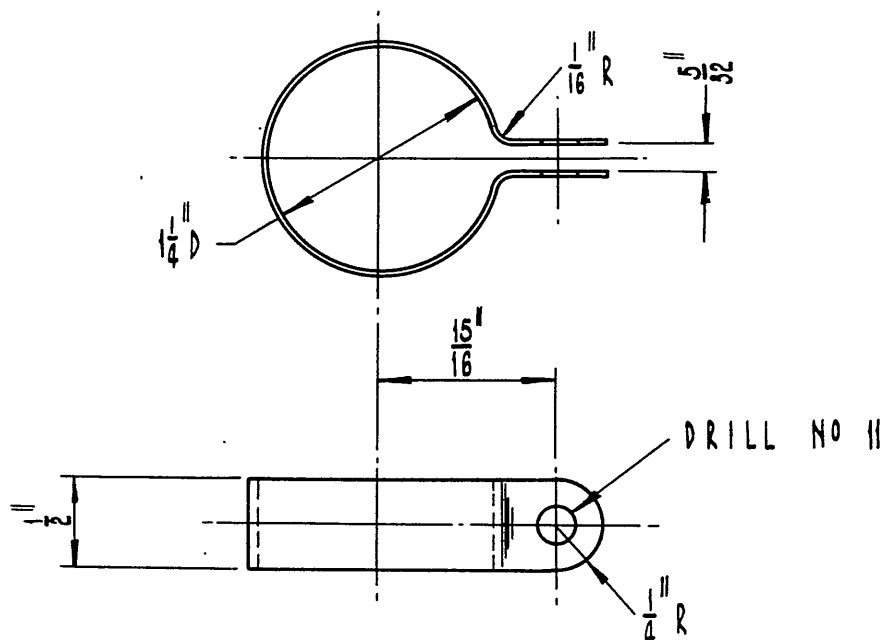
References: Files, Headquarters Support Command, 2601/79/60 and 2501/110/6250.

Attachment: Drawing No DA 66190000.

Date of Issue: 5th May 1967.

(Issued with A/L 351)

RESTRICTED



DETAIL OF CLIP P00127  
MATL. MSP 20 SWG SPEC 83  
FINISH. CADMIUM PLATE  
 1 COAT OF ZINC CHROMATE  
 PRIMER  
 2 COATS COCKPIT GREEN  
 LACQUER

<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			TITLE FITMENT OF MK35A WINGS TO MK35 AIRCRAFT	
DRAWN L.O.W.	CHECKED <i>Hutchins</i>	APPROVED <i>[Signature]</i>	MODIFICATION NUMBER VAMPIRE NO 449	DRAWING NUMBER DA66190000



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 448

Class 2

INTRODUCTION OF GUARD FOR EMERGENCY LIGHT SWITCH

Introduction

1. (a) The Reason for the Modification

To prevent inadvertent operation of the emergency lighting switch and resultant discharging of emergency lighting battery.

(b) Description and Features by Which the Modification can be Recognized

A suitable metal guard is fitted over the emergency lighting switch.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Improved safety aspects.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

The emergency light switch operation remains unchanged. The wings of the guard will protect the switch against inadvertent operation.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

RESTRICTED

(Issued with A/L 341)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 448

Man-Hours and Trade Mustering Involved

3. Two man-hours - Electrical Fitter and Aircraft Metal Worker.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next D servicing after modification parts are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No DA66123000 attached.

Modification Parts List

10. The following item is required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	I1/2637	QQ-A-362-T3	Sheet Al Alloy .048" Thick (18 SWG)	A/R	C

Supply

11. Item 1 is to be demanded through unit stores.

RESTRICTED

(Issued with A/L 341)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 448

Method and Sequence of Incorporation

12. (a) Using item 1, manufacture guard in accordance with attached drawing. Finish matt black.
- (b) At top left hand side of centre instrument panel shroud, remove and retain the emergency light switch mounting screws.
- (c) Fit manufactured guard over switch toggle and secure with the mounting screws retained above.

Items Removed

13. Not applicable.

Modification of Spares

14. Not applicable.

Additional Information

15. Not applicable.

Tests

16. Functionally check the emergency lighting for correct operation.

Recording

17. Record incorporation of the modification as follows:-
  - (a) In the airframe log book.
  - (b) On Form E/E 78.

Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

18. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

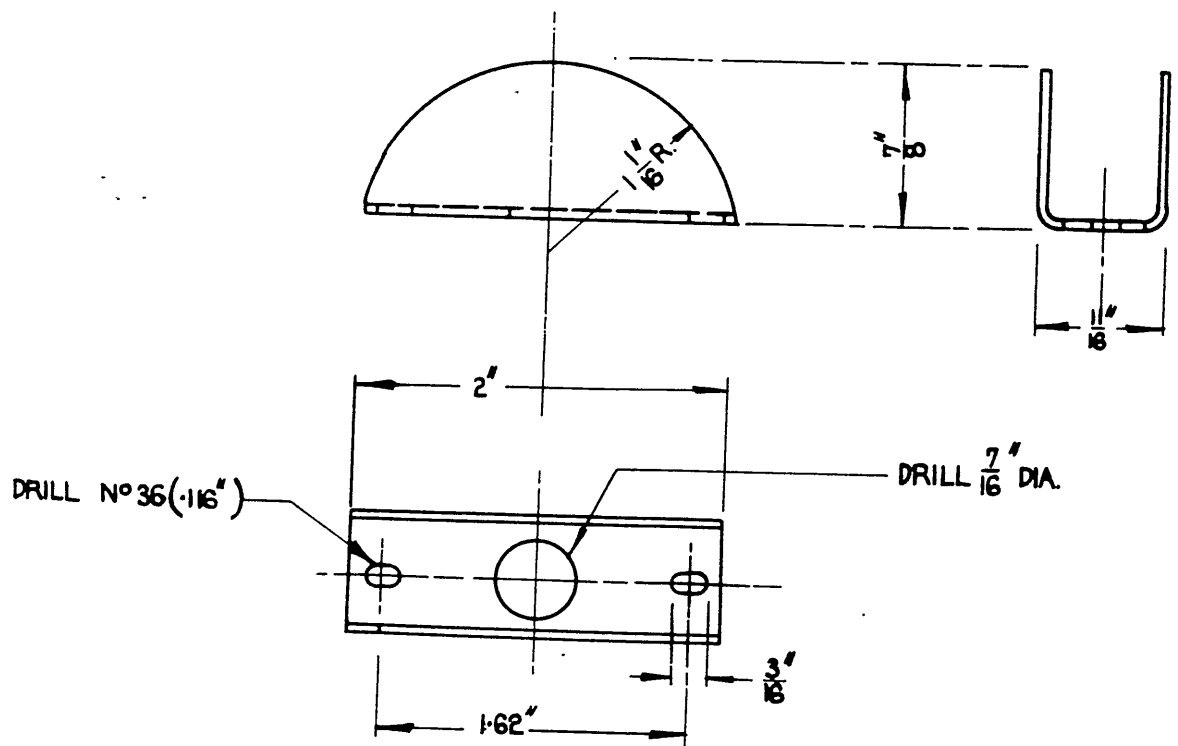
Reference: File, Headquarters Support Command, 2501/110/6184

Attachment: Drawing No DA66123000

Date of Issue: 31st October 1966

RESTRICTED

(Issued with A/L 341)



MATERIAL : .048" ALUM. ALLOY SHEET  
 SPEC : QQ - A - 362 T3  
 FINISH : ZINC CHROMATE. PAINT MATT BLACK.

<b>DEPARTMENT OF AIR</b> ISSUED BY <b>SENIOR TECHNICAL STAFF OFFICER</b> <b>SUPPORT COMMAND</b>			TITLE SWITCH GUARD EMERGENCY LIGHT	
DRAWN  	CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	MODIFICATION NUMBER VAMPIRE MOD 448	DRAWING NUMBER DA66123 000

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 447

Class 2

HYDRAULIC CUT-OUT VALVE - INTRODUCTION  
OF BONDED SEALING WASHERS

Introduction

1. (a) The Reason for the Modification

To prevent hydraulic fluid leaking from the pump supply banjo connection on the hydraulic system cut-out valve.

(b) Description and Features by which the Modification can be Recognised

This modification introduces bonded sealing washers Ident No 5330-942-9532 Part No AGS1186C in lieu of aluminium crush washers Ident No 5310-RAF-28F9649 Part No AGS1138C to hydraulic cut-out valve pump supply connection.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Improved operational safety.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk's 35 and 35A aircraft.

RESTRICTED

(Issued with A/L 348)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 447

Man-Hours and Trade Mustering Involved

3. Approximately three man-hours are required to incorporate the modification. The trade mustering responsible is Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next D servicing.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. RAAF STI Vampire/180 is hereby cancelled.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following item is required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5330-942-9532	AGS1186C	Washer Composite	2	C

Supply

11. Modification sets are to be obtained as follows:-

Item 1 : Demand from unit store.

RESTRICTED (Issued with A/L 348)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 447

Method and Sequence of Incorporation

12. (a) Release hydraulic pressure.
- (b) Remove the pump supply banjo connection from the hydraulic cut-out valve and remove the existing aluminium crush washers Part No AGS1138C Qty 2.
- (c) Re-assemble the banjo connection using washer composite Part No AGS1186C and install on the cut-out valve.
- (d) Bleed and test the hydraulic system in accordance with AAP 721.79 Vol 1 and lockwire the supply connection.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	5310-RAF-28F9649	AGS1138C	Washer Jointing	2	C

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application, and is to be actioned as follows:-

Discard.

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not applicable.

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(Issued with A/L 348)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 447

Additional Information

17. Because of the number of aircraft incidents involving fluid leakage from the hydraulic cut-out valve pump supply connection, RAAF Special Technical Instruction Vampire/180 was issued as a forerunner to this modification. Accordingly an aircraft on which the requirements of this instruction have been carried out, conformance with the requirements of this modification, with the exception of normal log book recording action, is not necessary.

Tests

18. See paragraph 12(d).

Recording

19. Record incorporation of the modification as follows:-
- (a) In the airframe log book or E/E 512 as applicable.
  - (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

Weight Sheet Summary

20. Incorporation of this modification will have no effect on the weight and balance of an aircraft.

Reference: File, Headquarters Support Command, 2501/110/6142

Date of Issue: 23rd January 1967

RESTRICTED

(Issued with A/L 348)



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 446

Class 2

115 VOLT AC CIRCUIT PROTECTION

Introduction

1. (a) The Reason for the Modification

To eliminate a possible fire hazard arising in the event of a short circuit in the instrument inverter leads.

(b) Description and Features by which the Modification can be Recognized

Suitable protective fuses are connected in each output phase of the inverter. The fuse box is mounted on the starboard side of the VHF test panel.

(c) Relationship with Other Modifications

Not applicable.

(d) Reason for Classification

Improved safety aspects.

(e) Effect on Servicing and/or Ground Handling

Not applicable.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order.

One.

Application

2. Vampire Mk 35 and Mk 35A aircraft as nominated by Headquarters Support Command.

(Issued with A/L 354)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 446

Man-Hours and Trade Mustering Involved

3.           Electrical Fitter       -     4 man-hours  
              Airframe Fitter       -     .1 man-hour (Para 12(c) only)

When Modification is to be Incorporated

4.           This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next D Servicing after modification sets are available.

Responsibility for Incorporation

5.           The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6.           Hawker De Havilland Australia Modification No V446.

Orders and Instructions Superseded or Cancelled

7.           Nil.

Special Tools, Jigs, etc

8.           Nil.

Drawings

9.           Drawing No DA 6740000, attached.

Modification Parts List

10.          The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1		N15-1581A	Bracket Assy	1	
2	5305-999-2522	A32-B16	Screw Rd Hd 4BA	2	C
3	5320-941-7266	AGS2050-419BS	Rivet, Blind, Monel 1/8" Dia x 0.19"lg	1	C

(Issued with A/L 354)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 446

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
4	5320-941-7267	AGS2050-424BS	Rivet, Blind, Monel 1/8" Dia x 0.24" lg	1	C
5	5920-RAF-5H76	AS2747	Clamp, Socket	4	C
6	5920-RAF-5H73	AS2736	Fuse Block, 19 Amp, 3 Way	1	C
7	5920-RAF- 10H23864	G6688	Fuse, 5 Amp	2	C
8	5975-940-0051	AS2672	Ferrule	4	C
9	8010-018-5100	K53	Varnish, Oil	A/R	C
10	8010-011-2453		Enamel Matt Black	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1 to 8 - Demand on Modification Centre Hawker  
De Havilland, BANKSTOWN NSW, for item  
9999-PN-MODVAMP446, Vampire Modification  
No 446, "A" Class, "Set".

Items 9 and 10 - Draw from unit store.

Method and Sequence of Incorporation

12. (a) Isolate electrical power from the aircraft.
- (b) In the nose compartment locate the AC output cable from the suppressor Part No N15-1143ND to No 1 Bulkhead. Cut the cable approximately 40 inches from the outlet gland of the suppressor at a point adjacent to the starboard end of the VHF test panel. Terminate the cut ends of the cable using ferrules (item 8). Re-code the wires as shown in drawing.

(Issued with A/L 354)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 446

- (c) Lift the VHF test panel from Bulkhead No 1 and using the bracket (item 1) as a template drill two rivet holes 1/8" diameter in the panel such that the bracket is positioned approximately 5/8" up from the bottom of the test panel (to allow access to the attachment bolt) and the front face of the bracket is flush with the front face of the panel. Apply item 9 to mating surfaces and fit bracket to test panel using rivets (items 3 and 4). Using item 10, restore paintwork and refit the panel to Bulkhead No 1.
- (d) Fit socket clamps (item 5) to fuse block (item 6) at position shown in drawing and fit fuse block to bracket using item 2.
- (e) Connect the AC output cables to fuse block as shown and re-lash cables as necessary. Fit fuses (item 7) at positions as shown. Mark fuse box cover "GC + AC RED" and "GC2 + AC BLUE" at appropriate positions and fit fuse box cover.
- (f) Re-part number the suppressor and cable assembly as "N15-1583A".
- (g) Reconnect aircraft batteries.

Items Removed

13. Not applicable.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

(Issued with A/L 354)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 446

Tests

18. Functionally check the instrument inverter system for correct operation.

Recording

19. Record incorporation of the modification in accordance with AAP 701.5, Vol 1. Units are to forward incorporation certificates.

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of the aircraft.

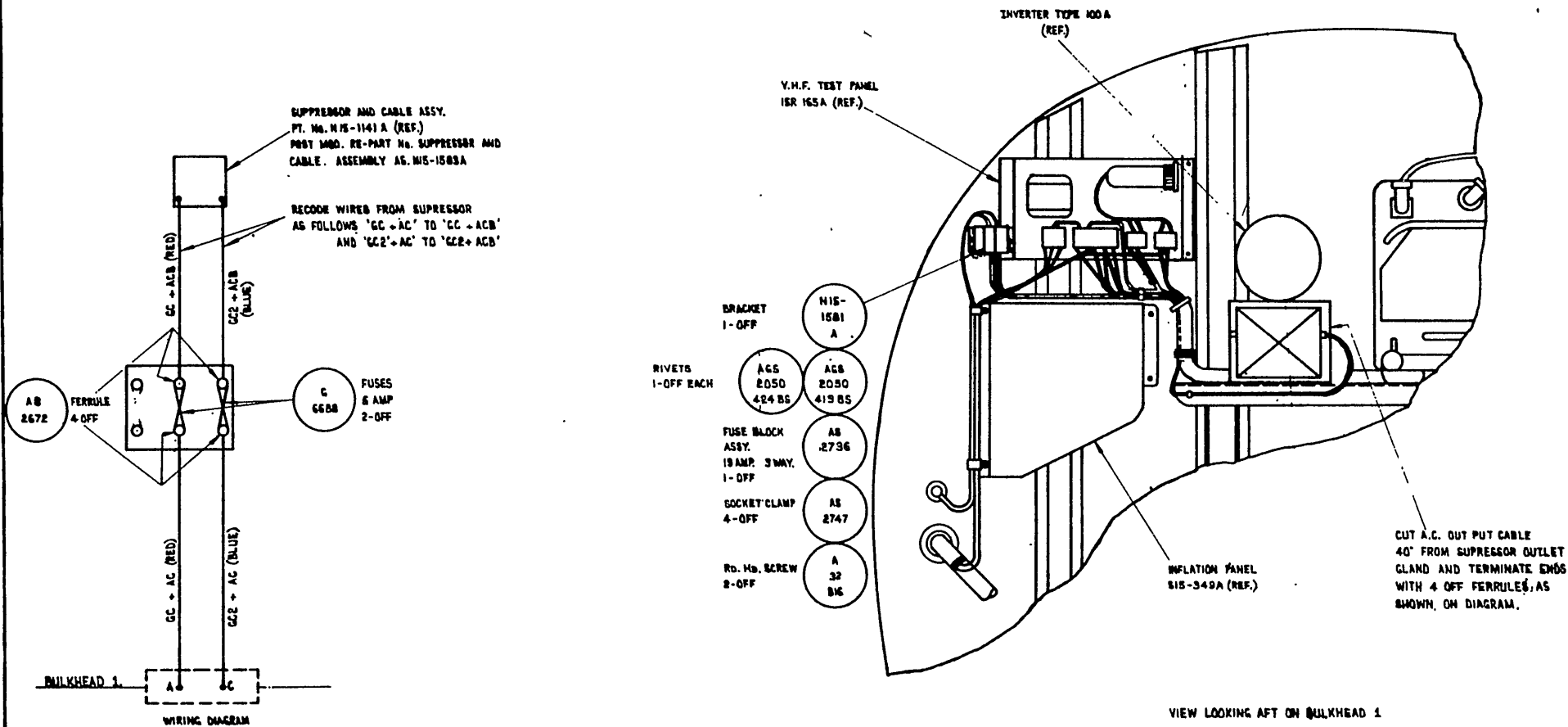
References: Files, Headquarters Support Command, 2501/110/6116  
and 2601/79/69-446

Attachment: Drawing No DA 6740000.

Date of Issue: 29th May 1967

(Issued with A/L 354)

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**DO NOT SCALE**

ISSUE NO	DATE	ALTERATION	D.T.L.	INITIALS	APPROVED	REFERENCE	ISSUED BY	TITLE
1	FEB 6			P.L.			DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND	115 VOLT A.C. CIRCUIT PROTECTION
						LIMITS UNLESS STATED	MATERIAL	COMPONENT
						DECIMALS $\pm .010$	SPEC.	MACHINE
						FRACTIONS $\pm \frac{1}{32}$	TREATMENT	ENGINE
						ANGLES $\pm \frac{1}{2}^\circ$	FINISH	TECH. ORDER
						SURFACE FINISH	SCALE	
						AUSTRALIAN STANDARD	DRAWN	DRAWING NO.
						END DIMS. PRACTICE AS 21	TRACED	DA67 40000
							APPROVED	DRWG.
							CHECKER	

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 445

Class 3

VAMPIRE AIRCRAFT - MKS 35 AND 35A - REPLACEMENT  
OF ALLOY TUBING WITH MARICON TUBING AT  
REAR OF INSTRUMENT PANEL

Introduction

1. (a) The Reason for the Modification

Instances have occurred where ill fitting pipelines have fouled equipment behind the panel. This modification introduces flexible tubing in lieu of the original dural pipes.

(b) Description and Features by which the Modification can be Recognised

This modification can be recognised by the flexible Maricon tubing in place of the 5/16" dural piping connecting the pitot-static instruments.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

The modification reduces the possibility of damage to pitot-static pipelines and the resultant failure of the associated instruments.

(e) Effect on Servicing and/or Ground Handling

This modification facilitates the removal and installation of pitot-static instruments.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

RESTRICTED

(Issued with A/L 343)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 445

Application

2. All Vampire Mks 35 and 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 2 man-hours are required to incorporate this modification. The trade mustering involved is Instrument Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in Vampire aircraft on an "as required" basis.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units and units responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. No special tools or jigs are required to complete this modification.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	4720-RAF-320679	Dwg BT816	Tubing Maricon	30 ins	C
2	5970-018-8475		Tape Electrical	A/R	C

RESTRICTED

(Issued with A/L 343)



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 445

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
3	7510-PN-M5-BLACK		Dymotape Black $\frac{3}{8}$ "W	3 ins	C
4	7510-PN-M5-WHITE		Dymotape White $\frac{3}{8}$ "W	3 ins	C

Supply

11. Modification sets are to be obtained from stores stock.

Method and Sequence of Incorporation

12. (a) Cut 4 lengths of Maricon tubing to lengths of  $4\frac{1}{4}$ ", 6",  $6\frac{5}{8}$ " and  $8\frac{1}{2}$ ".
- (b) Lower the instrument panel and remove existing pitot-static pipelines.
- (c) Cut  $1\frac{1}{4}$ " from the ends of these pipelines and replace the ends in their respective low pressure connections.
- (d) Connect the Maricon tubing in their respective places leaving  $\frac{1}{8}$ " between the nut and the end of the tubing, ie -

The  $4\frac{1}{4}$ " length between Altimeter and ASI Static

The 6" length between ROC and Machmeter Static

The  $6\frac{5}{8}$ " length between Machmeter Pitot and ASI Pitot.

The  $8\frac{1}{2}$ " length between Altimeter and ROC.

- (e) Wrap three turns of the tape electrical around the end of the tubing and lockwire the connections with not less than 6 turns of lockwire. Bind the end of the lockwire with tape.
- (f) Around each section of pitot pressure tubing, secure a 3" length of black dymotape (item 3) with the letter "P" impressed at each end so that the impressed ends form a tag.
- (g) Around each section of static pressure tubing, secure a 3" length of white dymotape (item 4) with the letter "S" impressed at each end so that the impressed ends form a tag.

RESTRICTED

(Issued with A/L 343)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 445

- (h) Carry out leak tests in accordance with Instrument Instruction No 0/0/4.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5			Pipeline	1	C
6			Pipeline	1	C
7			Pipeline	1	C
8			Pipeline	1	C

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application, and are to be actioned in accordance with current equipment procedures.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. A pitot-static leak check in accordance with Instrument Instruction No 0/0/4 is to be carried out.

Recording

19. Record incorporation of the modification as follows:-

RESTRICTED

(Issued with A/L 343)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 445

- (a) In the airframe log book or E/E 512 as applicable.
- (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

Weight Sheet Summary

20. The effect of the modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command, 2601/79/66-445  
and 2501/110/6071  
Maintenance Squadron EAST SALE, MS 2505/4/Tech

Date of Issue: 14th December 1966

(Issued with A/L 343)

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VAMPIRE AIRCRAFT MKS 35 AND 35A - INTRODUCTION  
OF INSTRUMENT PANEL SECURING CLAMP

Introduction

1. (a) The Reason for the Modification

To provide a positive means of preventing fore and aft movement of the instrument panel in its anti-vibration mounts, thereby eliminating:-

- (i) false attitude indications by the artificial horizon indicator; and
- (ii) possible damage to tubing and instruments behind the panel due to fouling on aircraft fittings.

(b) Description and Features by which the Modification can be Recognised

The single panel securing clamp on the port side of the panel is replaced by two clamps of a heavier material which retain the panel in the plane of fore and aft movement. The securing bolt has a screwdriver slot cut in its head to allow alternative means of adjustment.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Improved instrument panel stability.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

RESTRICTED . (Issued with A/L 336)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 443

(h) Number of Parts Comprising the Order

One.

Application

2. This modification is applicable to all Vampire Mk 35 and 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately three man-hours are required for the incorporation of the modification. The trade mustering responsible are:-

Aircraft Metal Worker	-	2 man-hours
Instrument Fitter	-	1 man-hour

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next C servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units and the contractor responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Refer to Drawing No A16229 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 336)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 443

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1			Clamp Panel Securing Front (Manufacture from Aluminium Alloy Sheet, 10 SWG 11/10090)	1	
2			Clamp Panel Securing Rear (Manufacture from Aluminium Alloy Sheet, 10 SWG 11/10090)	1	
3	5310-PN-2007E1 NYLON	AGS2007-E1	Nut, Steel, Mild, Self Locking Double Anchor $\frac{1}{4}$ " BSF	1	C
4	5310-941-6644	SP47-E	Washer, Steel 0.256" ID, 0.527" x 0.061" Thick	1	C
5	5306-100-8151	A25-4E	Bolt Steel Heragord Head $\frac{1}{4}$ " BSF, 0.9" Long, .4" Plain	1	C
6	9320-016-5429	Commercial	Rubber Sheet, Cellular $\frac{3}{8}$ " Thick, 1" x 1" Square	1	C
7	9320-016-5447	ABM RAAF 13	Rubber Sheet, Neoprene 1/16" Thick, $\frac{1}{2}$ " x $\frac{1}{2}$ " Square	1	C
8	8040-200-9190		Adhesive, Pliobond	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

- (a) Items 1 and 2 manufactured locally.
- (b) Items 3 to 8 inclusive - draw from stores stock.

Method and Sequence of Incorporation.

12. (a) Manufacture the two panel securing clamps (items 1 and 2) and secure the  $\frac{1}{4}$ " BSF anchor nut (item 3) to the rear panel clamp (item 2) in accordance with Drawing No A16229.

RESTRICTED

(Issued with A/L 336)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 443

Note: The anchor nut must be secured to the unchamfered surface of the panel clamp so that when fitted, the chamfered surface faces aft to allow for the fillets on the internal angles in the GGS retraction mounting bracket.

- (b) Cut a screwdriver slot in the head of the bolt (item 5) in accordance with Drawing No A16229.
- (c) Attach the sponge rubber (item 6) to the front panel clamp (item 1) and the neoprene rubber (item 7) to the rear panel clamp (item 2) using the plibond adhesive. Refer to Drawing No A16229.
- (d) Lower the instrument panel and remove the existing panel clamp nut and bolt.
- (e) Assemble and fit the new securing clamps, bolt and washer (items 1, 2, 4 and 5) to the port GGS retraction mount bracket as shown in Drawing No A16229 ensuring that the instrument panel is not held too rigidly and is sufficiently free to allow the anti-vibration mountings to function normally. Adjust if necessary by slightly bending the front panel clamp.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
9	5306-101-1246		Bolt, Steel Hex Head $\frac{1}{4}$ " BSF	1	C
10	5310-PN-200 - IEI Nyloc		Nut, Self Locking, Nylon Insert $\frac{1}{4}$ " BSF	1	C
11			Clamp Panel Restraining	1	

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application, and are to be actioned in accordance with current equipment procedures.

RESTRICTED

(Issued with A/L 336)



RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 443

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book or E/E 512 and 512A as applicable.
- (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command, 2601/79/66-443  
and 2501/110/5883  
Maintenance Squadron EAST SALE  
2505/4/Tech Pt 8 (39)

Attachment: Drawing No A16229

Date of Issue: 1st March 1967

RESTRICTED

(Issued with A/L 336)

**A**

DO NOT SCALE		THIRD ANGLE PROJECTION	
ISSUE	DATE	ALTERATION	INITIALS
1	22-8-66		

DRAWING NUMBER  
A16229-1

2	KS-401	ADHESIVE PLIOBOND	A.R.	
1	9320-016-5429	RUBBER CELLULAR .375" THICK	ISA	
ITEM	PART	IDENT	DESCRIPTION	QTY REQ

<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		REFERENCE 1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5	MODIFICATION <b>VAMPIRE 443</b> EFFECTIVE ON COMPONENT OF INSTRUMENT PANEL SECURING CLAMP.
DRAWN <b>CASTLE</b> TRACED <b>P.A.B.</b> LIMITS UNLESS STATED DECIMALS $\pm .010"$ FRACTIONS $\pm \frac{1}{32}"$ ANGLES $\pm 0^\circ 30'$	CHECKED <i>[Signature]</i> APPROVED <i>[Signature]</i> TREATMENT ZINC CHROMATE PRIME	FINISH MATT BLACK	TITLE <b>PANEL STRAP-FRONT</b>
MATERIAL <b>AL. ALL. SHT. 10 SWG (125)</b> IDENT. No <b>I1-10090</b>		SCALE <b>1-1</b>	NEXT ASSEMBLY <b>A-16229</b> DRAWING NUMBER <b>A16229-1</b> SIZE <b>A</b>

SECURITY CLASSIFICATION



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 442

Class 2

REPOSITIONING OF CENTRE EMERGENCY LIGHT

Introduction

1. (a) The Reason for the Modification

To reposition the centre emergency light so that it will not obstruct the left hand pilot's view of the fire warning light, and will still provide adequate illumination of the instrument panel.

(b) Description and Features by which the Modification can be Recognised

The centre emergency light is fitted to an extendable bracket which, in the stowed position, is lockwired to the dinghy knife bracket.

(c) Relationship with Other Modifications

Not applicable.

(d) Reason for Classification

Improved flight safety aspects.

(e) Effect on Servicing and/or Ground Handling

Not applicable.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

The centre emergency light bracket is normally secured to the dinghy knife bracket by a single strand lockwire. To operate the light first break the lockwire, then switch on and swivel the light to any desired position.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 333)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 442

Application

2. All Vampire aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 2 man-hours will be required to incorporate the modification. The trade mustering responsible is Electrical Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification parts are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A16237.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	I1/10095	BSL70	Al Alloy Sheet 20 SWG 10" x 1"	1	C

RESTRICTED

(Issued with A/L 333)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 442

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	5305-RAF-28S2431	BSI-A44B28	Screw Mach Rd Hd Brass Tin Plated No 4 BA x $\frac{7}{8}$ " lg	1	C
3	5310-PN	2001B4NYLON	Nut Nyloc 4 BA	1	C
4	5310-943-7455	SP25-B	Washer Brass	4	C
5	6145-RAF-5E4183	110037	Cable Electric Uni-Nyvin 20	A/R	C
6	5975-017-6809		Tubing Insulating 5 mm	A/R	C
7	I32A/94		Cord Stringing	A/R	C
8	K4/152		Beeswax	A/R	C
9	I1/1010		Copper Wire 26 SWG	A/R	C

Supply

11. Modification parts are to be obtained as follows:-

Items 1 to 9 - Draw from unit store.

Method and Sequence of Incorporation

12. (a) Disconnect main and emergency batteries.
- (b) Disconnect and remove lamp assembly from bracket situated on instrument panel shroud and retain.
- (c) Disconnect and discard wiring from lamp assembly at emergency light switch and instrument panel earth.
- (d) Remove rivets and discard lamp bracket.
- (e) Using item 1 make up bracket as per drawing.
- (f) Cut screw (item 2) to reduce to length of  $\frac{1}{2}$ ".
- (g) Using items 2, 3 and 4, mount bracket in hole nearest to E2A compass, from operation (d). Tighten nut sufficiently to give bracket a firm grip to enable it to be selected to any desired position.

RESTRICTED

(Issued with A/L 333)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 442

- (h) Mount lamp assembly removed in operation (b) to bracket and connect to emergency light switch and instrument panel earth, operation (c), using items 5 and 6. Run cables along existing looms and secure where necessary with item 7 treated with item 8.
- (j) Using item 9 lockwire lamp bracket to dinghy knife bracket with a single strand of lock wire.
- (k) Reconnect main and emergency batteries.

Items Removed

- 13. Not applicable.

Modification of Spares

- 14. Not applicable.

Additional Information

- 15. Not applicable.

Tests

- 16. Check the emergency lighting for correct operation.

Recording

- 17. Record incorporation of the modification as follows:-
  - (a) In the airframe log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

- 18. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

Reference: File, Headquarters Support Command, 2501/110/5860

Attachment: Drawing No A16237

Date of Issue: 21st June 1966

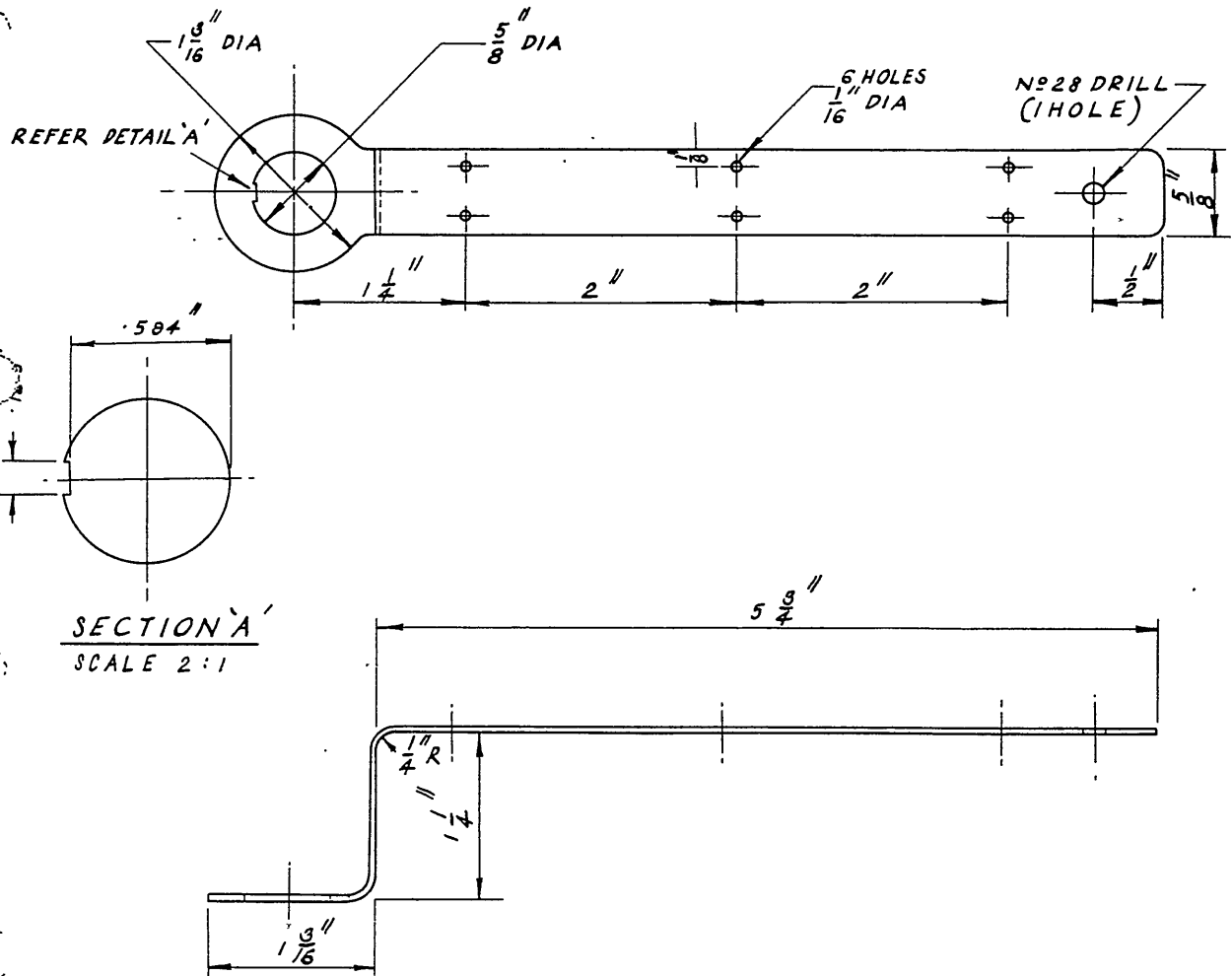
(Issued with A/L 333)

RESTRICTED



**DO NOT SCALE****THIRD ANGLE PROJECTION**DRAWING NUMBER  
**A 16237-1**

ISSUE	DATE	ALTERATION	INITIALS	APPROVED
1	7-2-66			

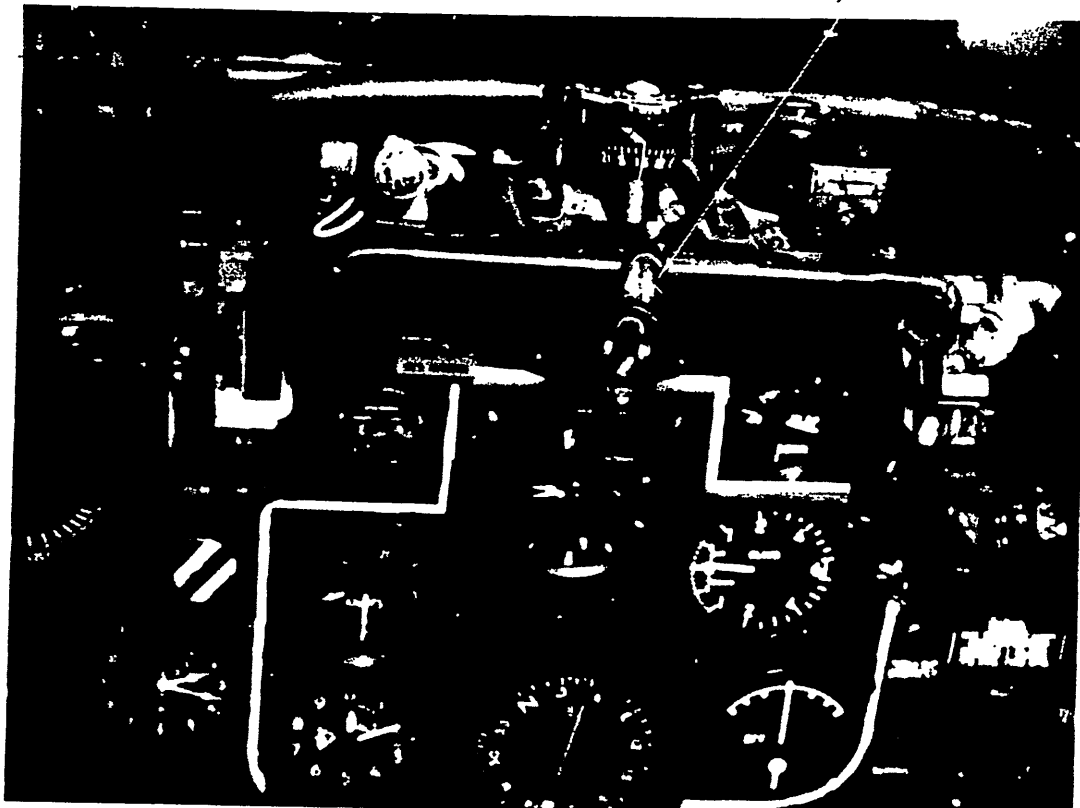
RADIUS ALL EDGES & CORNERS

ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE
<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			REFERENCE 1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5	MODIFICATION <b>Nº 442</b> EFFECTIVE ON <b>VAMPIRE</b> COMPONENT OF	
DRAWN <b>J.H.</b> CHECKED DESIGNED <b>H.R.P.</b> APPROVED <i>[Signature]</i> UNLESS STATED DECIMALS $\pm .010$ FRACTIONS $\pm \frac{1}{32}$ ANGLES $\pm 0^\circ 30'$			TREATMENT <b>ZINC CHROMATE</b> MATERIAL <b>036 AL ALLOY SHEET</b>	FINISH <b>MATT BLACK</b> SPECIFICATION <b>BS L 70</b>	
<b>REPOSITIONING OF CENTRE EMERGENCY LIGHT</b>			SCALE <b>1/1</b>	NEXT ASSEMBLY	DRAWING NUMBER <b>A 16237-1</b>
					SIZE <b>A</b>

DO NOT SCALE		THIRD ANGLE PROJECTION	
ISSUE	DATE	ALTERATION	INITIALS
1	7-2-66		

DRAWING NUMBER  
**A-16237**

A-16237-1



ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>DEPARTMENT OF AIR</b></p> <p>ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND</p> </div> <div style="width: 30%;"> <p>REFERENCE</p> <p>1 DIM'S IN</p> <p>2 DEF (AUST) - 85</p> <p>3 DEF (AUST) - 46</p> <p>4</p> <p>5</p> </div> <div style="width: 20%;"> <p>MODIFICATION <i>VAMPIRE MOD 442</i></p> <p>EFFECTIVE ON</p> <p>COMPONENT OF</p> </div> </div>					
<p>DRAWN</p> <p>TRACED <i>H.R.P.</i></p> <p>LIMITS UNLESS STATED</p> <p>DECIMALS <math>\pm .010"</math></p> <p>FRACTIONS <math>\pm \frac{1}{32}</math></p> <p>ANGLES <math>\pm 0^{\circ}30'</math></p>		<p>CHECKED</p> <p>APPROVED <i>JW</i></p> <p>TREATMENT</p> <p>MATERIAL</p>		<p>FINISH</p> <p>SPECIFICATION</p>	
			<p>TITLE</p> <p style="text-align: center;"><i>REPOSITIONING OF CENTRE EMERGENCY LIGHT</i></p>		
		<p>SCALE</p> <p>NEXT ASSEMBLY</p>		<p>DRAWING NUMBER</p> <p style="text-align: center;"><i>A-16237</i></p>	
				<p>SIZE</p> <p style="text-align: center;"><b>A</b></p>	

SECURITY CLASSIFICATION

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

Man-Hours and Trade Mustering Involved

The man-hour content by trade mustering is:-

- (a) Aircraft Metal Worker - 1 hour to manufacture bracket.
- (b) Airframe Fitter - 2 hours to fit bracket.
- (c) Instrument Fitter - 3 hours to fit charging valve, replace pipeline and T piece, and replenish oxygen system.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next C servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by all units and contractors operating and servicing Mks 35 and 35A Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawings A16209 and -1 attached.

Modification Parts List

1. The following items are required to complete one modification set:-

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(Issued with A/L 338)

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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

Class 2

VAMPIRE AIRCRAFT MKS 35 AND 35A - RELOCATION  
OF OXYGEN CHARGING VALVE

Introduction

1. (a) The Reason for the Modification

To reduce the possibility of inadvertent charging of the oxygen system with compressed air.

(b) Description and Features by Which the Modification can be Recognised

This modification relocates the charging valve on the starboard side of the aircraft, adjacent to the aircraft main batteries in the nose bay compartment.

(c) Relationship with Other Modifications

This modification has no relationship with other modifications.

(d) Reason for Classification

Safety modification.

(e) Effect on Servicing and/or Ground Handling

This modification improves the accessibility of the oxygen charging valve and reduces the man-hour content of this servicing task.

(f) Effect on Aircraft Limitation

Aircraft limitation is unchanged by the incorporation of this modification.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. This modification is applicable to all Mks 35 and 35A Vampire aircraft.

RESTRICTED

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RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5305-914-0645	A25-10C	Bolt, 2BA, H/T 1.45" lg	1	C
2	5305-913-3013	A25-5C	Bolt, 2BA, H/T 0.95" lg (K0195)	3	C
3	5310-941-9402	SP13-C	Washer 2BA	8	C
4	5310-PN200ICI Nylon	200ICI Nylon	Nuts, Mild Steel, 2BA Nylon Insert	4	C
5	5310-PN2008CI Nylon	2008CI Nylon	Nuts, Mild Steel, 2BA Self Locking Double Anchor Nyloc	4	C
6	7510-014-5780		Tape, Aircraft Tubing Identification Marker Black and White Warning Symbol, 0.3941" W 5 yd Roll 1" ID	1	C
7	7510-014-5770		Tape, Aircraft Tubing Identification Marker Breathing Oxygen Green 1" W 5 yd lg Roll 1" ID Core	A/R	C
8	11/8551	COM	Mounting Bracket No 18 Gauge Alclad Sheet 7 $\frac{1}{2}$ " x 3". Good commercial quality	1	C

Supply

11. Modification sets are to be obtained as follows:-

- (a) Item Nos 1 to 7 inclusive to be drawn from unit stores stock.
- (b) Item No 8 to be locally manufactured by incorporating unit.

RESTRICTED

(Issued with A/L 338)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

Method and Sequence of Incorporation

12. (a) Manufacture the mounting bracket in accordance with Drawing No A16209 using items 5 and 8.
- (b) Discharge oxygen system in the open air.

CAUTION: During draining of oxygen systems always have aircraft in a well ventilated location. Mask-to-regulator tubing ends should be placed outside the aircraft whenever possible.

- (c) Remove starboard outer oxygen cylinder from nose bay and remove pipelines from the 3 way connector to the charging valve.
- (d) Remove the existing charging valve from the bracket on bulkhead number 1. Retain the four 2BA bolts and the washers.
- (e) Remove wooden packing blocks on Mk 35A service aircraft and drill four 2BA clearance holes in the positions shown on Drawing No A16209.

Note: Mk 35 aircraft do not have wooden packing blocks fitted. For these aircraft the four 2BA clearance holes are to be drilled as shown on Drawing No A16209.

- (f) Fit the bracket (refer paragraph 12(a)) using items 1 to 4 inclusive.

Note: The 1.45" lg bolt is necessary due to the presence of a packing piece under the decking near the false former.

- (g) Fit charging valve to mounting bracket using the four 2BA bolts and the washers retained from the operation at paragraph 12(d).
- (h) Fit pipeline to the charging valve and re-route to the 3 way connector, replace oxygen cylinder, check all connections. Purge and recharge the oxygen system after ensuring there is no oil or grease present.

RESTRICTED

(Issued with A/L 338)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

- (j) Apply Tape, Aircraft Tubing, Identification Marker (Ident No 7510-014-5770) and Warning Symbol (Ident No 7510-014-5780) in accordance with AAP 729.24 Vol 1 Ch 1 Sect 2.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
9	5310-PN200ICI Nylon		Nut, Mild Steel, 2BA Nylon Insert	4	C

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application and is to be actioned as follows:-

The removed item is to be discarded.

Action on Stock Holdings of Removed Items

15. Nil action required.

Modification of Spares

16. Not applicable.

Additional Information

17. The bracket which is fitted as part of this modification will accept the Mk 8 Charging Valve, Ident No 1660-RAF6D-223, and the Adaptor, Base Plate used with item 1660-RAF6D-2313, Oxygen Valve Master Mk 10A. When the Mk 10A valve is fitted, the bracket forming part of this modification should have the Adaptor Base Plate, item 1660-RAF6D-1892, mounted on it to facilitate charging of the oxygen system and to eliminate the need for bending the pipeline from the charging valve.

Tests

18. On completion of incorporation of this modification and charging of the oxygen system normal leak checks are to be carried out.

RESTRICTED

(Issued with A/L 338)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 441

Recording

19. Record incorporation of the modification as follows:-
- (a) In the airframe log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by incorporating units in accordance with the terms of ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. This modification has negligible effect on the aircraft's weight and balance.

References: Files, Headquarters Support Command, 2601/79/66,  
2601/79/66-441 and 2501/110/5865  
RAAF Base EAST SALE, MS 2505/4/Tech Pt 8 (35)

Attachments: Drawings A16209 and -1

Date of Issue: 26th July 1966

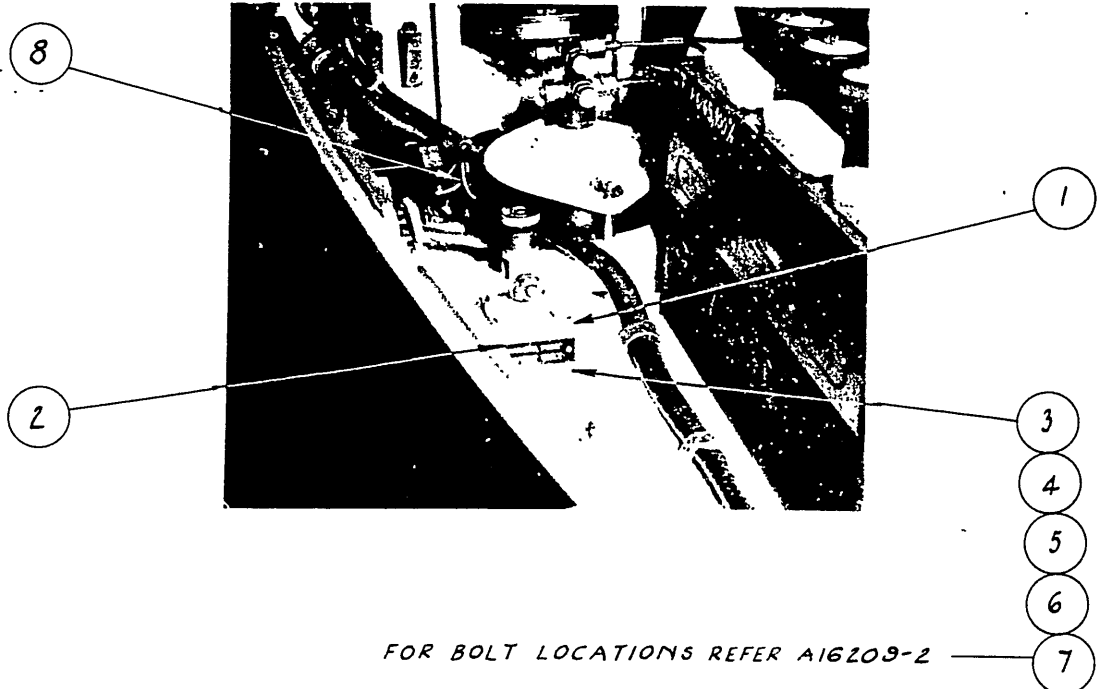
RESTRICTED

(Issued with A/L 338)



**DO NOT SCALE****THIRD ANGLE PROJECTION**DRAWING NUMBER  
**A16209**

ISSUE	DATE	ALTERATION	INITIALS	APPROVED
1	15-7-66			



FOR BOLT LOCATIONS REFER A16209-2

8		7510-014-5770	TAPE AIRCRAFT TUBING IDENT. MARKER	A.R.	
7		5310-PN2001C1	NUTS 2BA NYLOC	4	
6		A79-504297	WASHER 2BA	4	
5	SP13-6	5310-941-9402	WASHER 2BA	4	
4		5306-101-1305	BOLT HEX STEEL 2BA X.95"L	3	
3		5305-RAF2BD12515	BOLT HEX STEEL 2BA X1.45"L	1	
2		7510-014-5780	WARNING SYMBOL	1	
1	A16209-1		BRACKET MOUNTING	1	
ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE

<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		REFERENCE		MODIFICATION <b>VAMPIRE 441</b>	
		1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5		EFFECTIVE ON <b>MKS. 35 AND 35A</b>	
DRAWN <b>CASTLE</b>		CHECKED <i>[Signature]</i>		COMPONENT OF	
TRACED <b>H.R.R.</b>		APPROVED <i>[Signature]</i>		TITLE	
LIMITS UNLESS STATED		TREATMENT		<b>RELOCATION OXYGEN CHARGING VALVE</b>	
DECIMALS $\pm .010"$		FINISH			
FRACTIONS $\pm \frac{1}{32}$		MATERIAL		SPECIFICATION	
ANGLES $\pm 0^{\circ}30'$				SCALE	NEXT ASSEMBLY
				DRAWING NUMBER <b>A16209</b>	
				SIZE <b>A</b>	

SECURITY CLASSIFICATION

DO NOT SCALE		THIRD ANGLE PROJECTION	
ISSUE	DATE	ALTERATION	INITIALS
1	7-7-66		

DRAWING NUMBER  
**A16209-1**

2	H128F/18147	RIVET AL. ALL 8	8
1	5310-PN-2008C1	NUT ANCHOR DOUBLE SELF LOCKING NYLOC	4
ITEM	PART	IDENT	DESCRIPTION
			QTY REQ
			ZONE

<b>DEPARTMENT OF AIR</b>		REFERENCE		MODIFICATION VAMPIRE 441	
ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		1 DIM'S IN		EFFECTIVE ON	
DRAWN CASTLE		2 DEF (AUST) - 85		COMPONENT OF	
CHECKED <i>[Signature]</i>		3 DEF (AUST) - 46		TITLE	
TRACED P.A.B.		4		BRACKET MOUNTING	
APPROVED <i>[Signature]</i>		5		OXYGEN CHARGING VALVE	
LIMITS UNLESS STATED		FINISH		DRAWING NUMBER	
DECIMALS $\pm .010$ "		ALLUMINIUM PAINT		A16209-1	
FRACTIONS $\pm \frac{1}{32}$ "		MATERIAL		NEXT ASSEMBLY	
ANGLES $\pm 0^{\circ}30'$		AL ALL. SHEET 18 SWG		SIZE	
		SPECIFICATION		A	
		COMM.			

SECURITY CLASSIFICATION

PROVISION OF ADDITIONAL RADIO MUTING  
FACILITIES ON AIRCRAFT CONTROL COLUMN

Introduction

1. (a) The Reason for the Modification

The existing aircraft panel mounted radio mute switch is difficult to reach during instructor/student flying training.

(b) Description and Features by which the Modification can be Recognised

A  $\frac{1}{4}$ " diameter black push button is situated on the left-hand side approximately two inches from the top of one of the control columns.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Incorporation of this modification improves the radio muting facilities in Vampire aircraft.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Radio muting facilities are available on aircraft control column as well as the aircraft instrument panel.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and 35A aircraft.

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Man-Hours and Trade Mustering Involved

3.	<u>Trade Mustering</u>	<u>Man-Hours</u>
	Armament Fitter	2
	Radio Technician Air	4
	Electrical Fitter	5
	Airframe Fitter	6
	Metal Machinist	4
		21

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. All aircraft depots, operating units and civilian contractors.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Headquarters Support Command Drawing Nos A15822, A15822/1, A15822/2 and D15824.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5930-272-1315		Switch Push	1	C
2	5940-940-2803		Block Connecting Base - 5 Way	1	C
3	5940-940-2794		Cover Block Connecting - 5 Way	1	C
4	5940-940-2799		Socket Double	2	A
5	5975-940-0055		Ferrule Cable End 19 Amp	16	C
6	5935-PN-ACO-4011		Plug Assembly	2	A
7	1680-PN-ACM15373		Socket Assembly	2	C
8	6145-805-5739		Cable Special Purpose Eight Conductors	6 Ft	C
9	6145-G5E-30154		Cable Electric AA20	6 Ft	C
10	6145-506-1625		Braid Wire	1 Ft	C
11	5940-665-6242		Cable End 2BA	2	C
12	5310-PN-2007B1		Nuts Anchor Nylon 4BA	1	C
13	5340-910-7068		Sleeves Binding 7.5 mm	4	C
14	I32A/94		Cord Stringing	25 Ft	C/lbs

Supply

11. Modification kits are to be obtained by demanding on No 2 AD Modification Section for Vampire Modification kit No 439, Ident No 1680-NSL-0394.

Method and Sequence of Incorporation

12. Armament Fitter

(a) Remove both ejection seats.

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Airframe Fitter

- (b) Remove the centre and starboard sections of the cockpit false floor.

Electrical Fitter

- (c) Disconnect the aircraft batteries.
- (d) Remove both control handles (1680-PN-AC11240) from the aircraft. Remove the trigger switch from one control handle. From the same handle remove and disassemble the seven pin plug. Pull the leads with male connectors attached through the body of the control handle and out the aperture created by the removal of the trigger switch. Deliver this handle to the metal machinist to rework in accordance with sub-para (t).
- (e) Locate the connecting blocks for the control handle wiring on the centre section of the cockpit floor and disconnect all leads.
- (f) Remove the cables running up the control columns, unsolder the seven pin socket and retain.

Airframe Fitter

- (g) Locate the connecting blocks disconnected in sub-para (e) and remove the panel on which these are mounted.
- (h) Remove the starboard 3 way connecting block from this panel. Using item 12 fit the 5 way connecting block (item 2) to the panel as shown in HQSUPCOM Drawing No A15822.
- (j) Refit the panel to the cockpit floor.

Electrical Fitter

- (k) Using the seven pin socket removed in sub-para (f), eight core cable (item 8) and the socket assembly (item 7), manufacture two new control column cables in accordance with HQSUPCOM Drawing No A15822/1. The red, green, white, blue and yellow conductors and the PVC outer cable sheathing are to be the same length as those in the removed cable. The orange and black conductors are to be ten inches longer. The eighth conductor is not used and is to be cut off flush with the PVC sheath at each end of the cable. Instal 7.5 mm binding sleeves (item 13) at these points.

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

- (l) Remove the double sockets from the 3 way connecting block and fit two double sockets (item 4) to the 5 way connecting block. Fit the new cables and sockets to the control columns and connect to the terminal boxes (using item 5) in accordance with HQSUPCOM Drawing No A15822/1, reconnect all the armament circuit wiring to these boxes.
- (m) Manufacture and fit earthing strap (using items 10, 11 and 5) in accordance with HQSUPCOM Drawing No A15822.

Radio Technician "Air"

- (n) Using item 5 ferrule connect one end of a six foot length of AA20 cable (item 9) into the right hand terminal in the 5 way terminal box fitted in sub-para (h).
- (o) Run this cable to starboard along the ventilation pipe on the floor to the main loom. Lace it forward along this loom to the oxygen pipe which runs up the starboard cockpit wall, immediately forward of JB1. Run the cable up this pipe then across to the cleat which secures the cable for the starboard cockpit lighting. Secure the cable in this cleat and run it up the existing loom to the back of the instrument panel mounted mute switch.
- (p) Cut to length and terminate the cable to the active (centre) terminal of the spring loaded mute switch using a 2BA cable end (item 11).
- (q) Secure the cable to pipes and looms as required, using cord (item 14).

Metal Machinist

- (r) Unscrew and remove the top section of the switch (item 1), discard the loose plastic button, locknut and washer. From this top section manufacture the mounting ring in accordance with HQSUPCOM Drawing No D15824.
- (s) Manufacture the "key" in accordance with HQSUPCOM Drawing No D15824.
- (t) Cut a 9/16" hole in the control handle as shown in HQSUPCOM Drawing No A15822/2. Tap this hole using  $\frac{5}{8}$  inch brass thread taps.

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Radio Technician "Air"

- (u) Cut 12 inches of the eight core cable (item 8), remove the outer PVC sheathing and retain the black and orange conductors only. Solder these to the opposing (outer) terminals on the switch (item 1).
- (v) Lightly coat the threaded portion of the switch body with locking varnish. Screw the mounting ring fully on to the switch, with the slats uppermost and allow the varnish to dry.
- (w) Pass the wires connected to the switch through the hole cut in the control handle and down through the handle. Lightly coat the mounting ring with locking varnish and screw it into the control handle using the key manufactured in sub-para (t). While screwing the mounting ring into the handle check through the aperture left by the trigger guard that the leads do not tangle on the terminals of the switch. The mounting ring is to be screwed in flush with the surface of the control handle.
- (x) Pass the leads with the male connectors attached down through the body of the control handle.

Electrical Fitter

- (y) Fit the male connectors (item 6) to the orange and black leads from the switch (item 1) cutting the leads to the length required for fitment to the seven pin plug.
- (z) Re-assemble the seven pin plug, fitting the new male connectors into the two previously vacant holes.
- (aa) Refit the seven pin plug and trigger switch to the control handle.
- (ab) Refit both control handles (1680-PN-AC11240).
- (ac) Replace all terminal box covers (including item 3) and reconnect the aircraft batteries.

Airframe Fitter

- (ad) Refit the cockpit false floor.

RESTRICTED

(Issued with A/L 330)



RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Armament Fitter

(ae) Install the ejection seats.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
15	5940-014-4847		Block Connecting 3 Way	1	C

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application, and is to be actioned as follows:-

Discard.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. The modified control handle may be installed on either left or right hand control column, as required by the aircraft operating unit.

Tests

18. Radio Technician "Air"

- (a) After para 12, sub-para (aa) and before sub-para (ab) temporarily fit the control handle with mute switch to each control column checking the radio receiver muting in each position using both control handle and instrument panel mute switches.

RESTRICTED

(Issued with A/L 330)

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 439

Electrical Fitter

- (b) After para 12, sub-para (ab) and before sub-para (ac) using an external power source carry out a functional check on the gun, bomb and camera circuits from both control handles.

Recording

- 19. Record incorporation of the modification as follows:-
  - (a) Record the incorporation of this modification in the aircraft log book.
  - (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

- 20. The incorporation of this modification will have negligible effect on the weight and balance of the aircraft.

Reference: File, Headquarters Support Command, 2846/2/247

Attachments: HQSUPCOM Drawing Nos A15822, A15822/1, A15822/2 and D15824

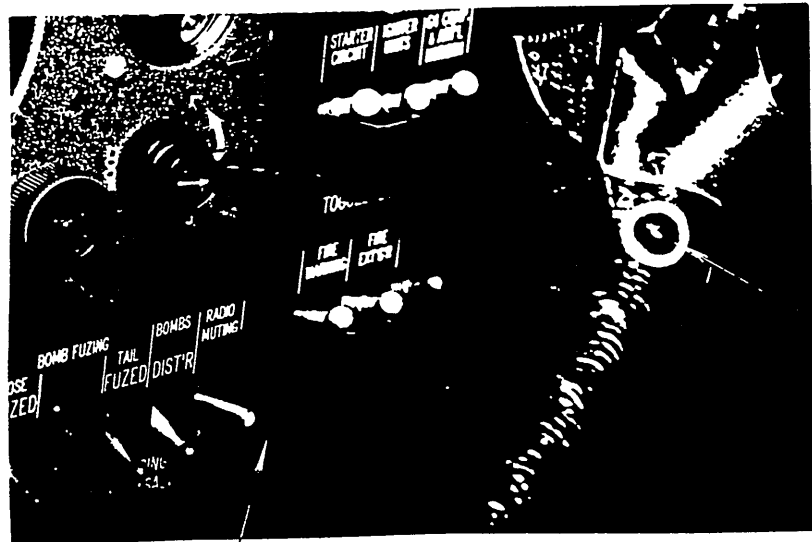
Date of Issue: 16th June 1966

RESTRICTED

(Issued with A/L 330)

**DO NOT SCALE****THIRD ANGLE PROJECTION**DRAWING NUMBER  
**A 15822**

ISSUE	DATE	ALTERATION	INITIALS	APPROVAL
1	26-4-66			



MUTE SWITCH (REF)

\* ITEMS NOT SHOWN  
KEY SPANNER PART NO D15824  
(INSTALLATION - SWITCH MOUNTING RING)

ITEM	PART	IDENT	DESCRIPTION	QTY REQ
4	A15822-4		SWITCH MOUNTING HOLE - CONTROL HANDLE	2
3	A15822-3		MOUNTING RING - SWITCH	2
2	A15822-2		MOUNTING - 5 WAY TERMINAL BOX	1
1	A15822-1		CABLES, CONTROL COLUMN - CIRCUIT DIAGRAM	2

<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		REFERENCE 1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5	MODIFICATION VAMPIRE NO 439		
			EFFECTIVE ON VAMPIRE		
DRAWN		CHECKED <i>[Signature]</i> APPROVED TREATMENT MATERIAL	COMPONENT OF		
TRACED			TITLE PROVISION OF ADDITIONAL RADIO MUTING FACILITIES		
LIMITS UNLESS STATED DECIMALS $\pm .010''$ FRACTIONS $\pm \frac{1}{32}$ ANGLES $\pm 0^\circ 30'$		FINISH	SCALE	NEXT ASSEMBLY	DRAWING NUMBER <b>A 15822</b>

SECURITY CLASSIFICATION

DO NOT SCALE		THIRD ANGLE PROJECTION	
ISSUE	DATE	ALTERATION	INITIALS
1	26-4-66		

DRAWING NUMBER  
**A 15822-1**

PORT

STARBOARD

7 PIN SOCKETS IN CONTROL COLUMNS

BASE VIEW OF SOCKET IN CONTROL COLUMN

BLOCKS CONNECTING

ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>DEPARTMENT OF AIR</b></p> <p>ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND</p> <p>DRAWN: _____</p> <p>TRACED L. O. W.</p> <p>LIMITS UNLESS STATED DECIMALS <math>\pm .010"</math> FRACTIONS <math>\pm \frac{1}{32}</math> ANGLES <math>\pm 0^\circ 30'</math></p> </div> <div style="width: 45%;"> <p>REFERENCE</p> <ol style="list-style-type: none"> <li>DIM'S IN</li> <li>DEF (AUST) - 85</li> <li>DEF (AUST) - 46</li> <li></li> <li></li> </ol> <p>FINISH</p> </div> <div style="width: 45%;"> <p>MODIFICATION VAMPIRE NO 039</p> <p>EFFECTIVE ON VAMPIRE</p> <p>COMPONENT OF PROVISION OF ADDITIONAL RADIO MUTING FACILITIES</p> <p>TITLE <b>CABLES - CONTROL COLUMN CIRCUIT DIAGRAM</b></p> </div> </div>					
MATERIAL		SPECIFICATION		SCALE	SIZE
				NEXT ASSEMBLY <b>A 15822</b>	DRAWING NUMBER <b>A 15822-1</b>

SECURITY CLASSIFICATION

DO NOT SCALE		THIRD ANGLE PROJECTION		
ISSUE	DATE	ALTERATION	INITIALS	APPROVED
1	27-4-66			

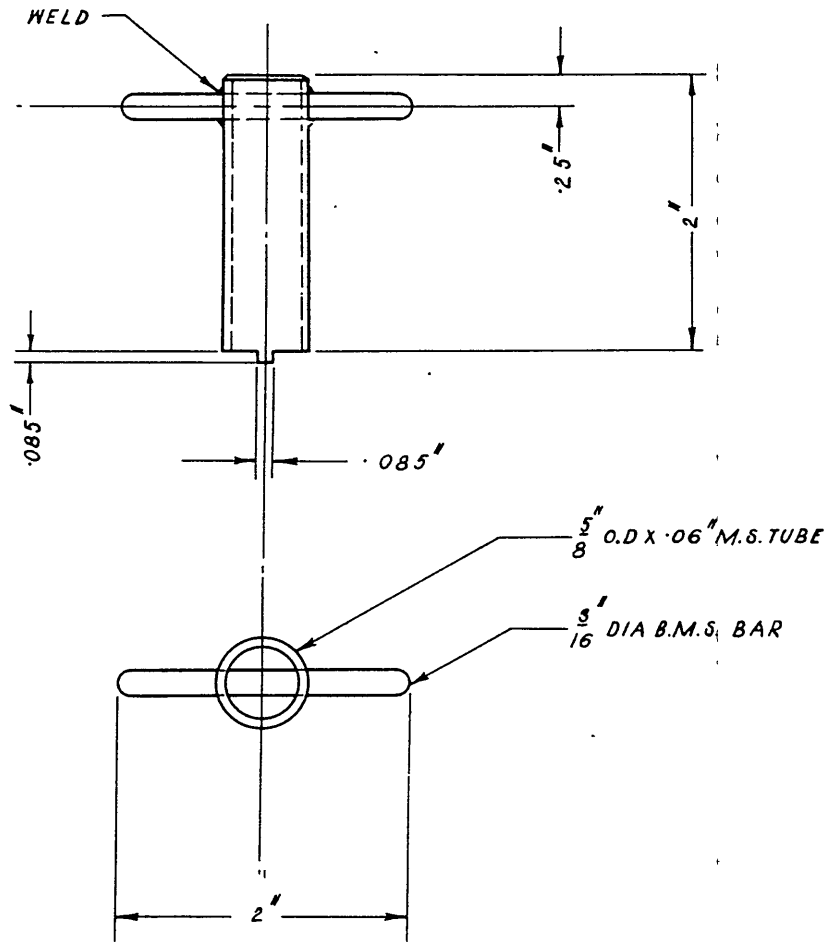
DRAWING NUMBER  
**A 15822-2**

ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>DEPARTMENT OF AIR</b>  <small>ISSUED BY</small>  <b>SENIOR TECHNICAL STAFF OFFICER</b>  <b>SUPPORT COMMAND</b></p> </div> <div style="width: 30%;"> <p><small>REFERENCE</small>                      1 DIM'S IN                      2 DEF (AUST) - 85                      3- DEF (AUST) - 46                      4                      5  <small>FINISH</small></p> </div> <div style="width: 25%;"> <p><small>MODIFICATION</small> VAMPIRE NO 439  <small>EFFECTIVE ON</small> VAMPIRE  <small>COMPONENT OF</small> PROVISION OF ADDITIONAL                      RADIO MUTING FACILITIES</p> </div> </div>					
<small>DRAWN</small>	<small>CHECKED</small>	<small>APPROVED</small>	<b>MOUNTING OF TERMINAL BOX</b>		
<small>TRACED</small> L. O. W.	<small>APPROVED</small>				
<small>LIMITS UNLESS STATED</small>	<small>TREATMENT</small>				
<small>DECIMALS</small> ± .010"					
<small>FRACTIONS</small> ± 1/32"	<small>MATERIAL</small>	<small>SPECIFICATION</small>	<small>SCALE</small>	<small>NEXT ASSEMBLY</small>	<small>DRAWING NUMBER</small>
<small>ANGLES</small> ± 0°30'					<b>A 15822-2</b>
					<b>A</b>

SECURITY CLASSIFICATION

**DO NOT SCALE****THIRD ANGLE PROJECTION**DRAWING NUMBER  
D-15824

ISSUE	DATE	ALTERATION	INITIALS	APPROVED
1	2-5-66			



ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE
<b>DEPARTMENT OF AIR</b>			REFERENCE	MODIFICATION <i>VAMPIRE 439</i>	
ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			1 DIM'S IN	EFFECTIVE ON	
DRAWN <i>CASTLE</i>			2 DEF (AUST) - 85	COMPONENT OF	
CHECKED <i>[Signature]</i>			3 DEF (AUST) - 46	TITLE	
TRACED <i>H.R.P.</i>			4	TUBULAR KEY SPANNER	
APPROVED <i>[Signature]</i>			5	(INSTLN. SWITCH MOUNTING RING)	
LIMITS UNLESS STATED			FINISH	SCALE	NEXT ASSEMBLY
DECIMALS $\pm .010$			CAD PLATE	1:1	
FRACTIONS $\pm \frac{1}{32}$			SPECIFICATION	DRAWING NUMBER	SIZE
ANGLES $\pm 0^{\circ}30'$			COMMERCIAL	D-15824	A
TREATMENT			MATERIAL	SECURITY CLASSIFICATION	
CASE HARDEN			NOTED		

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Class 2

FUSELAGE - INTRODUCTION OF BAFFLES ACROSS THE  
STARBOARD SIDE OF THE COCKPIT FLOOR BEHIND  
THE ELECTRICAL EQUIPMENT

Introduction

1. (a) The Reason for the Modification

To reduce the critical area around the flying controls against ingress of foreign objects.

(b) Description and Features by Which the Modification can be Recognised

Baffles are introduced below the false floor between the electrical components on the cockpit floor and the control column, including a sock over the electrical looms running along the RH side of the cockpit.

(c) Relationship with Other Modifications

Vampire Modification No 437, Relocation of Undercarriage Flasher Warning Unit, is to be embodied concurrently with this modification.

(d) Reason for Classification

Based on safety aspect.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mks 35A and 35 aircraft.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Man-Hours and Trade Mustering Involved

3. Approximately 32 man-hours are required to incorporate the modification. The trade mustering responsible are:-

Armament Fitter - 1 man-hour (para 12(b) and (z))  
Electrical Fitter - 4 man-hours (para 12(e) and (m))  
Airframe Fitter - 27 man-hours (remainder of para 12)

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland AUSTRALIA Modification No V438.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A16215 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 340)



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	NI	F15-1083	Plate Sealing	1	
2	NI	F15-1087ND	Plate	1	
3	NI	F15-1089	Baffle	1	
4	NI	F15-1091	Panel Corner	1	
5	NI	F15-1093	Block, Baffle Locating	1	
6	NI	F15-1101ND	Plate	1	
7	NI	F15-1103ND	Plate	1	
8	NI	F15-1109A	Channel Assembly	1	
9	5305-101-0658	A25/1B	Bolt, 4BA, Hex Hd	2	
10	5305-914-0638	A25/4B	Bolt, 4BA, Hex Hd	2	
11	5305-999-2525	A32/B12	Screw, 4BA, Rd Hd	2	
12	5305-999-2522	A32/B16	Screw, 4BA, Rd Hd	9	
13	5310-PN-2008B1NYLON	AGS2008/B/1NYLON	Nut, 4BA, Double Anchor	9	
14	5310-PN-2009B1NYLON	AGS2009/B/1NYLON	Nut, 4BA, Double Anchor	4	
15	5310-167-0876	AN936-A6	Washer, Shakeproof	2	
16	5320-117-6815	AN470AD3-4	Rivet, Rd Hd, Al Al, 3/22" dia x 1/4" long	6	
17	5320-00-117-6827	MS20470AD4-5	Rivet, Rd Hd, Al Al, 1/8" dia x 5/16" long	6	
18	5320-913-7404	AS2229/304	Rivet, 90° Csk Hd, Al Al, 3/32" dia x 1/4" long	26	
19	5320-101-1949	AS2229/405	Rivet, 90° Csk Hd, Al Al, 1/8" dia x 5/16" long	5	
20	5320-912-9592	AS2230/404	Rivet, 120° Csk Hd, Al Al, 1/8" dia x 1/4" long	10	
21	5305-010-2119	AGS250/58	Woodscrew, Brass, 1" long x 8G, Csk Hd	3	
22	5340-PN-DHS103 MK 1	DHS103 MK 1	Ferrule	2	

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
23	9320-016-6177		Rubber, Sponge, Kenworth A65	2 ft	
24	I32B/500019		Tape, PVC, Black, Non-Adhesive, 1" wide	75 ft	
25			Strip, Rubber, U-Section, Shore 31 or J554 Section, .58" long x $\frac{1}{8}$ " gap x $\frac{1}{16}$ " wall	6.5 ins	
26	8040-200-9190		Adhesive, Pliobond	AR	
27	8040-PN-252		Adhesive, Cement, Bostik 252	AR	
28	I32B/500085		Tape, Lassoband, Adhesive, Black, 2" wide	AR	C
29	8040-018-5111		Adhesive, Resin Synthetic BSI.1204	AR	
30	K3/410 or K3/411 or K3/412		Hardener, Beetle, 2B (Blue) Hardener, Beetle, W15 (Violet) Hardener, Beetle, GP30 (Yellow)	AR AR AR	
31	K4/191		Paper, Glass No 1 Medium	AR	
32	W3/1372		Brad, Brass $\frac{1}{2}$ "	AR	
33	8010-018-5103		Enamel, Matt Black, K18	AR	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 25 : Demand on Modification Centre, Hawker de Havilland AUSTRALIA Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 438 identified as 1560-NSL-0363.

Items 26 - 33 : Draw from unit stores.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Method and Sequence of Incorporation

12. (a) Remove the canopy hatch.
- (b) Remove both ejection seats in accordance with current authorized procedure.
- (c) Remove the false floor panels.
- (d) Remove the false floor beam P/No F15-341A and bracket P/No F15-329 from the aircraft. Refer to the attached drawing and fit the plate (item 6) to the outboard face of the bracket to close the lightening hole, using rivets (item 16). Remove the existing round head rivet which attaches the bracket to the rear face of the beam and replace with rivet (item 19), 1 off, with the countersunk head to the outside. Drill five No 26 holes in the beam and four No 26 holes in the bracket at the anchor nut locations. Fit the nine anchor nuts (item 13) and attach using rivets (item 18), 18 off. Repart number the bracket as F15-329A/1 and the beam as F15-341A/1.
- (e) Detach the main electrical loom from the fuselage. Refer to the attached drawing and sheath all cables of the loom except the forward end of the cable connected to the rear socket of JBI with PVC tape (item 24) as shown. Reposition the loom to run inboard of the bracket, P/No F15-329A/1. At the position where the main loom passes through the cut out in the baffle (item 3), wrap the loom with  $1\frac{1}{2}$  layers of sponge rubber strip (item 23), such that the double layer is around the underside of the loom. Glue the strip joint using adhesive (item 26).
- (f) Refit the false floor beam and bracket to the aircraft.
- (g) Obtain the baffle (item 3) and baffle locating block (item 5). Remove the finish from the cockpit floor in the area where the block is to be fitted using paper, glass (item 31). Position the block with the screw pilot holes to the rear of the aircraft, locate the baffle in the groove of the block and offer up the baffle and block to the false floor beam and bracket. Carefully remove the baffle and mark off the position for the block on

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

the cockpit floor. Relieve the block wherever necessary to clear the existing ferrules in the cockpit floor. Fit the block to the cockpit floor at the marked off position using glue, hardener and woodscrews (items 29, 30 and 21). Glue, using (item 26), a piece of rubber sponge 1" x 1" x 3/16" thick (item 23) to the nosewheel fairing lower flange in the space between the block and the nosewheel fairing.

- (h) Offer up the corner panel (item 4) and on the fuselage wall below JBI mark off the positions for the two ferrules (item 22). Remove the corner panel.
- (j) At the positions marked off on the fuselage wall for the ferrules, using a suitable 0.75 in dia bit, counterbore two holes to a depth of 0.43 in. Remove the finish from the fuselage back to the bare wood over an area slightly larger than that of the ply ferrules, using glass paper No 1 (item 31). Fit the ferrules to the fuselage using glue and hardener (items 29 and 30) and pin using brads (item 32). Apply a coat of enamel (item 33) to the worked area of the fuselage and the surface of the ferrules.
- (k) Refer to the attached drawing and at the position where the oxygen pipes are to pass through the cut out of the corner panel fill the space between and under the oxygen pipes with adhesive cement (item 27) for a distance of 1" either side of the corner panel. At the position where the electrical loom passes through the cut out of the corner panel wrap the loom with one full layer of rubber sponge strip (item 23). Glue the strip joint using adhesive (item 26). Fit the corner panel using attaching parts (items 11 and 15) at the ferrules and (item 12), 3 off, at the anchor nuts.
- (l) Fit the baffle (item 3) in the groove of the baffle locating block fitted in operation (g), position the loom wrap, fitted in operation (e), in the cut out of the baffle and attach the baffle to the support beam and bracket using screws (item 12), 6 off. The rear edge of the false floor angle support on the nosewheel fairing, P/No 15 FS970A, may be trimmed as required to clear the baffle.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

- (m) Ensure that the plug connections for the main electrical loom at JBI are secure. Re-attach the main loom to the fuselage using existing attaching items.
- (n) Refer to the attached drawing and fit the sealing plate (item 1) to the nosewheel fairing at the position shown such that the top corners of the plate are flush with the upper surface of the false floor support beam and the false floor support angle and it fills the space bounded by the support beam, support angle, false floor and nosewheel fairing. Attach the panel to the nosewheel fairing using rivets (item 17), 4 off. Repart number the nosewheel fairing as 15 FS393A/43.
- (o) Refer to the attached drawing and offer up the channel assembly to the position shown. Mark off the positions of the two anchor nuts at the channel assembly attachment points on the ejection seat floor beam. Remove the channel assembly. Check the fit of the channel section in the centre false floor panel tunnel and dress the channel flanges in as required so that the channel just fits between the sides of the tunnel.
- (p) Remove the false floor support beam P/No 15 F709A/1. Refer to the attached drawing and to the inboard front face of the support beam fit the plate (item 7) such that the upper edge of the plate is flush with the upper surface of the support beam and the inboard edges are flush. Attach the plate to the beam using rivets (item 19), 3 off, the countersunk heads to be inside the support beam. Repart number the beam as 15 F709A/41.
- (q) Remove the false floor support beam P/No 15 F707A/2. Refer to the attached drawing and to the inboard front face of the support beam fit the plate (item 2) such that the upper edge of the plate is flush with the upper surface of the support beam and the inboard edges are flush. Attach the plate to the beam using rivets (item 19), 1 off, at inboard hole and with the countersunk head inside the support beam and (item 17), 2 off. Repart number the beam as 15 F707A/41.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

- (r) Remove the false floor, rear centre support bracket P/No 15 F743A from the nosewheel fairing. Refer to the attached drawing and drill two No 26 holes at the anchor nut positions. Fit the anchor nuts (item 14), 2 off, to the undersurface of the bracket using rivets (item 18), 4 off. Refit the bracket to the nosewheel fairing. Repart number the bracket as 15 F743A/41.
- (s) At the positions marked off on the ejection seat floor beam for the channel assembly rear attachment anchor nuts drill two No 26 holes. Fit the anchor nuts (item 14), 2 off, to the undersurface of the beam and attach using rivets (item 18), 4 off. Fit the channel assembly (item 8) and attach with bolts (item 9) at the front and (item 10) at the rear.
- (t) Refer to the attached drawing and seal all gaps along the edges of the baffle and corner panel, around the main loom assembly and in the areas marked "See Note 1" with tape (item 28). To ensure good adhesion the contact area must be perfectly clean. To avoid the possibility of the tape becoming loose in the critical area around the controls, the tape should be applied preferably outside the area and wherever possible held securely by an overlying panel.
- (u) Obtain the false floor rear centre panel P/No F15-683A. If the panel is riveted in lieu of spot welding at the sections where the panel rests on the flanges of the channel assembly fitted in operation (s) remove the ten existing rivets and replace with rivets (item 20), the countersunk heads of the rivets on the underside. Cut a strip of rubber sponge (item 23), approximately 5.6" long, into two  $\frac{1}{2}$ " strips. Glue the strips to the upper surface of the flanges of the channel section fitted in operation (s). Affix the strips to the flanges using adhesive (item 26).
- (v) Obtain the starboard access panel P/No F15-753A. Remove the existing rubber sponge strip from the upper surface of the front right hand section of the panel. Trim the panel to just clear the corner panel fitted in operation (k). Fit the U-section strip of rubber (item 25) to the front right hand section of the panel where the panel abuts the corner panel. Adhere the rubber strip to the upper and lower surfaces of the panel with adhesive (item 26). Repart number the panel as F15-753A/1.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

- (w) Check and ensure that all controls adjacent to items fitted in the preceding paragraphs have a minimum clearance of 0.10". Rectify as required.
- (x) Carry out a loose article check of the cockpit floor.
- (y) Refit false floor panels.
- (z) Refit both ejection seats in accordance with current authorized procedure.
- (ab) Refit the canopy hatch in accordance with current authorized procedure.

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
(a) A79/504658	15 FS393A/42	Fairing, Nosewheel	Rework to para 12(n), and repart number as 15 FS393A/43, Ident No A79/505024
(b) A79/503842	F15-329	Bracket, Beam Supporting	Rework to para 12(d), and repart number as F15-329A/1, Ident No A79/505025

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 10 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Ident No	Part No	Nomenclature	Remarks
(c) A79/503808	15 F707A/2	Beam, False Floor Support, Rear LH	Rework to para 12(q), and repart number as 15 F707A/41, Ident No A79/505026
(d) A79/503809	15 F709A/1	Beam, False Floor Support, Rear RH	Rework to para 12(p), and repart number as 15 F709A/41, Ident No A79/505027
(e) A79/503807	F15-341A	Beam, False Floor Support Front RH	Rework to para 12(d), and repart number as F15-341A/1, Ident No A79/505028
(f) A79/502418	15 F743A	Bracket, False Floor Support Centre Rear	Rework to para 12(r), and repart number as 15 F743A/41, Ident No A79/505029
(g) A79/504109	F15-753A	Panel, Access, RH	Rework to para 12(v), and repart number as F15-753A/1, Ident No A79/505030
(h) A79/504108	F15-683A	Panel, False Floor, Centre Rear	Alternative methods of manufacture permitted these panels to be riveted or spot welded. Rework riveted panels to para 12(u). No change of part number required.

A partial modification set will comprise:-

For spare (a) Item 1 (1 off) - Item 17 (4 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/504658.

For spare (b) Item 6 (1 off) - Item 16 (6 off) - Item 13 (4 off) - Item 18 (8 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/503842.

RESTRICTED

(Issued with A/L 340)



RESTRICTED

- 11 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

- For spare (c) Item 2 (1 off) - Item 19 (1 off) - Item 17 (2 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/503808.
- For spare (d) Item 7 (1 off) - Item 19 (3 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/503809.
- For spare (e) Item 13 (5 off) - Item 18 (10 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/503807.
- For spare (f) Item 14 (2 off) - Item 18 (4 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/502418.
- For spare (g) Item 25 (6.5"). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, Modification No V438/A79/504109. Item 26 is also required and is to be obtained from unit stores.
- For spare (h) Item 20 (10 off). Set to be obtained by demand on Modification Centre, Hawker De Havilland Pty Ltd, for spares Modification No V438/A79/504108.

- (c) Unit maintenance spares of the above items are to be modified by -

Not applicable.

- (d) Headquarters Support Command is responsible that stores depot stock holdings of the above items are to be modified by -

Not applicable.

Additional Information

17. Not applicable.

Tests

18. Not applicable.

RESTRICTED

(Issued with A/L 340)

RESTRICTED

- 12 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 438

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5856

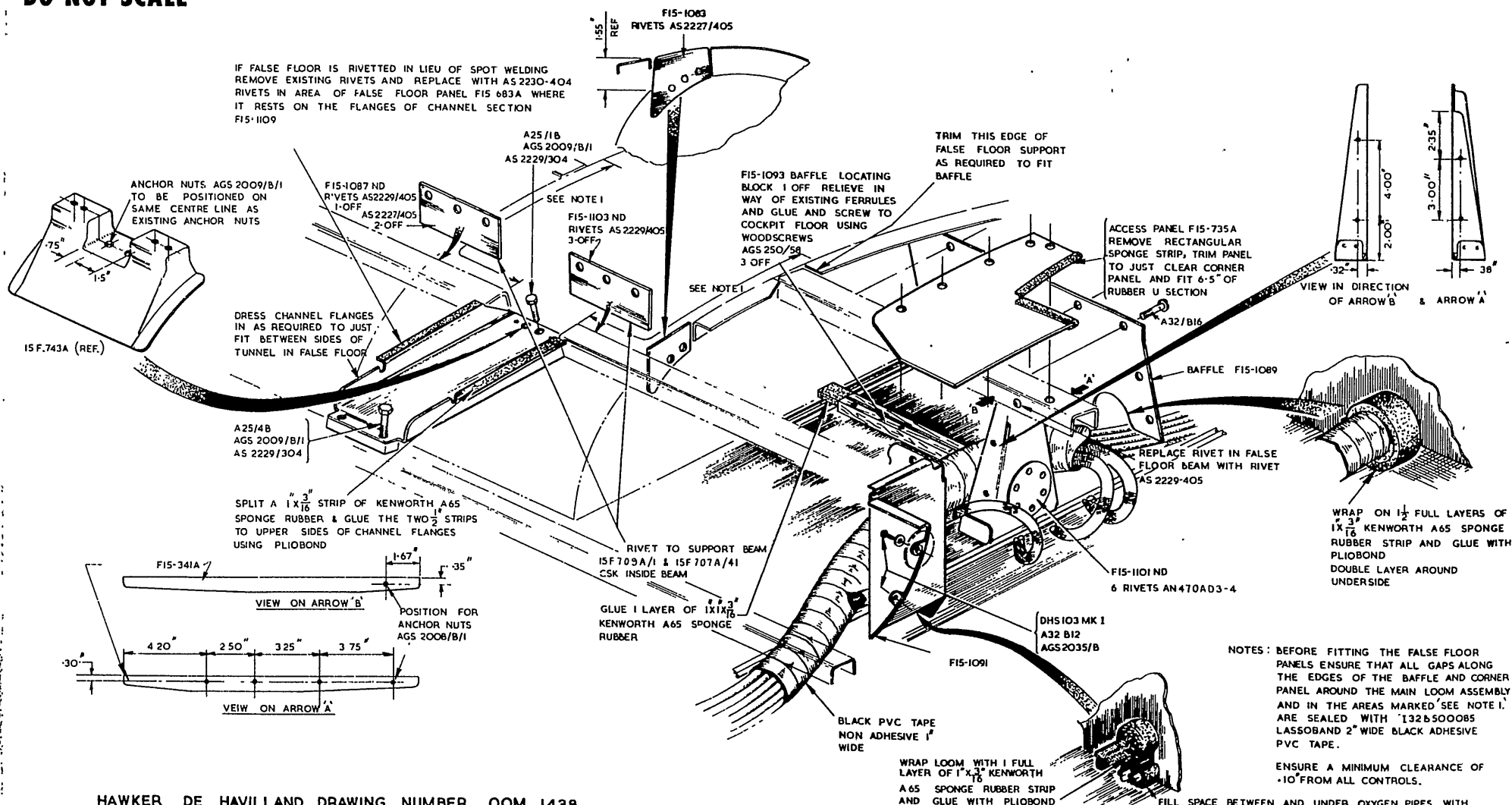
Attachment: Drawing A16215

Date of Issue: 29th August 1966

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(Issued with A/L 340)

IF FALSE FLOOR IS RIVETTED IN LIEU OF SPOT WELDING  
REMOVE EXISTING RIVETS AND REPLACE WITH AS2230-404  
RIVETS IN AREA OF FALSE FLOOR PANEL F15 683A WHERE  
IT RESTS ON THE FLANGES OF CHANNEL SECTION  
F15-1109



NOTES: BEFORE FITTING THE FALSE FLOOR  
PANELS ENSURE THAT ALL GAPS ALONG  
THE EDGES OF THE BAFFLE AND CORNER  
PANEL AROUND THE MAIN LOOM ASSEMBLY  
AND IN THE AREAS MARKED SEE NOTE 1  
ARE SEALED WITH 1325500085  
LASSOBAND 2" WIDE BLACK ADHESIVE  
PVC TAPE.

ENSURE A MINIMUM CLEARANCE OF  
•10' FROM ALL CONTROLS.

FILL SPACE BETWEEN AND UNDER OXYGEN PIPES WITH BOSTIK 252 FOR A DISTANCE OF 1" EITHER SIDE OF PANEL

HAWKER DE HAVILLAND DRAWING NUMBER OOM 1438

ATTACHMENT DE TRAVELING DRAWING NUMBER 00M 1436										BOSTIK 252 FOR A DISTANCE OF 1" EITHER SIDE OF PANEL									
ISSUE NO	DATE	ALTERATION				D.I.L.	INITIALS	APPROVED	REFERENCE		ISSUED BY		TITLE						
						RAF	MS			DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		INTRODUCTION OF BAFFLES ACROSS THE STARBOARD SIDE OF THE COCKPIT FLOOR BEHIND THE ELECTRICAL EQUIPMENT							
									LIMITS UNLESS STATED		MATERIAL		COMPONENT OF						
									DECIMALS	± .010"	SPEC.		MACHINE						
									FRACTIONS	± 1/16"	TREATMENT		ENGINE						
									ANGLES	± 1/2°	FINISH		TECH. ORDER						
									SURFACE FINISH		SCALE		VAMPIRE MOD No 438.						
														DRWG.					



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

Class 2

REPOSITIONING OF THE UNDERCARRIAGE LIGHT FLASHER  
UNIT FROM THE COCKPIT FLOOR TO THE FORWARD  
FACE OF BULKHEAD NO 2

Introduction

1. (a) The Reason for the Modification

To reposition the flasher unit in order to make it readily accessible for servicing purposes.

(b) Description and Features by which the Modification can be Recognised

The flasher unit is now mounted on a spruce block which is affixed to the upper starboard forward face of No 2 bulkhead, adjacent to the armament services junction box.

(c) Relationship with Other Modifications

Not applicable.

(d) Reason for Classification

Improved servicing aspects.

(e) Effect on Servicing and/or Ground Handling

Not applicable.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

RESTRICTED

(Issued with A/L 337)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

Man-Hours and Trade Mustering Involved

3. Approximately 7 man-hours are required to incorporate the modification. The RAAF trade musterings involved are:-

Armament Fitter	-	0.5 man-hours
Electrical Fitter	-	3.5 man-hours
Airframe Fitter	-	3 man-hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V437.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, etc

8. Not applicable.

Drawings

9. Drawing No A16205 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

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(Issued with A/L 337)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2VAMPIRE MODIFICATION NO 437

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1		N15-1557A	Cable Assembly	1	
2		N15-1559A	Cable Assembly	1	
3		FS15-697ND	Block, Spruce, $\frac{1}{4}$ " Thick	1	
4		FS15-693A	Block, Relay Mounting	1	
5	5940-940-2802	AS2633	Block, Connector, 2 Way	1	A
6	5940-940-2796	AS2601	Cover for Connector Block	1	C
7	5940-940-2799	AS2606	Socket, Clamp, Double Tier	2	C
8	5975-940-0053	AS2673 or AMP 150155	Ferrule	4	C
9	5340-100-6377	AS3180/12B	Clip, "P"	1	C
10	5305-180-1985	AN545B4-3	Woodscrew	1	C
11	5305-180-1970	AN545B6-4	Woodscrew	2	C
12	5305-180-1993	AN550B10-14	Woodscrew	4	C
13			Strip, Tinned, Copper, $\frac{1}{4}$ " x 9" (approx) x 26 SWG	1	
14		DHS 3 Mk 4	Tab, Bonding	1	
15	W3/1372		Brad, Brass, 20 SWG x $\frac{1}{2}$ " Lg	A/R	C
16	I1/10281		Solder, Resin Cored, DTD599	A/R	C
17	8040-018-5111		Glue, Beetle, Type A	A/R	C
18	K3/410 or K3/411 or K3/412		Hardener, Beetle 2B (Blue)	A/R	C
			Hardener, Beetle W15 (Violet)	A/R	C
			Hardener, Beetle GP30 (Yellow)	A/R	C
19	8010-018-5103		Enamel, Matt Black, K18	A/R	C
20	K4/191		Paper, Glass, No 1	A/R	C

RESTRICTED

(Issued with A/L 337)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 14 : Demand on Modification Centre, Hawker  
De Havilland Australia Pty Ltd,  
BANKSTOWN, NSW, for Vampire Modification  
No 437, identified as 1680-NSL-0402.

Items 15 - 20 : Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Disarm both ejection seats.
- (b) Remove the canopy hatch and second pilots seat.
- (c) Isolate all sources of electrical power from aircraft system.
- (d) Remove the rear and starboard forward false floor panels.
- (e) Disconnect electrical connection to the flasher unit Part No EA3-80-0442. Remove flasher unit from cockpit floor and retain attaching parts for later use. Disconnect and discard the flasher unit earthing cable.
- (f) Remove the Hoelle terminals from cables Part Nos N15-319A and N15-1211A which were connected to the flasher unit and replace them with ferrules (item 8).
- (g) Remove the cover of the upper external connector block on the armament junction box, disconnect the existing lead from terminal E and remove the existing single tier socket clamp Part No AS2605. Retain the socket clamp for later use. Fit a double tier socket clamp (item 7) to terminal E and connect cable assembly N15-1559A and existing wiring to the socket. In the unused hole of the socket fit a ferrule (item 8).
- (h) Refer to the attached drawing and using paper glass (item 20), remove the fuselage finish from the area where the spruce block (item 3) is to be fitted. Fit the spruce block to the cockpit floor using glue, hardener and brads (items 17, 18 and 15).
- (j) To the spruce block, fitted in operation (h), fit a 2 way connector block (item 5). Attach with two woodscrews (item 11). Fit to the connector block the single tier socket clamp retained from operation

RESTRICTED

(Issued with A/L 337)



RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

- (g) and the new double tier socket clamp (item 7). Connect existing cables to the connector block as shown. Obtain cable assembly (item 1), connect it to the connector block as shown and fit the cover (item 6) to the connector block. Route the cable assembly (item 1) with existing wiring to the new position for the flasher unit on bulkhead No 2.
- (k) Refer to the attached drawing and using paper glass (item 20), remove the finish from bulkhead No 2 in the area where the flasher unit mounting block is to be fitted. Fit the mounting block (item 4) using glue, hardener and woodscrews, (items 17, 18 and 12).
- (l) Fit a new clip (item 9) to the cables serving the gyro gunsight relay. Position the cable such that it clears the flasher unit mounting block and attach the cable clip to the bulkhead with woodscrew (item 10).
- (m) Obtain the bonding strip (item 13) and solder it to the adjacent bonding strip on bulkhead No 2 as shown. Route the strip to the relay mounting block and attach to the bulkhead using brads (item 15). Solder a bonding tab (item 14) to the relay end of the bonding strip at a position where the hole will coincide with the flasher unit upper inboard mounting bolt.
- (n) Fit the flasher unit to the mounting block, with the hole for the cable assemblies facing downwards. Use the attaching items retained in operation (e). Ensure that the bonding strip is fitted to the upper inboard mounting bolt between the flasher unit and the mounting block. Route the cable assemblies (items 1 and 2) through the hole in the bottom of the flasher unit box and connect cable N15-1559A to terminal E27 of the relay and cable N15-1557A to terminals 29 and U210 as shown on the attached drawing. Fit the cover to the flasher unit. Connect the other end of the earthing cable N15-1559A to terminal E of the upper external connector block on the armament JB and refit the cover plate of the connector block.
- (o) Restore the finish of all worked areas using enamel (item 19).

RESTRICTED

(Issued with A/L 337)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

- (p) Carry out a check of the cockpit floor for loose articles and refit the false floor panels removed in operation (d).
- (q) Refit the 2nd pilot's ejection seat.
- (r) Refit the canopy hatch.
- (s) Reconnect the aircraft batteries.
- (t) Re-arm both ejection seats.

Items Removed

13. Not applicable.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Test the flasher unit for correct operation in accordance with AAP 721.79, Vol 1, Sect 5, Group F, para 12 (3) and (4).

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

RESTRICTED

(Issued with A/L 337)

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 437

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5855  
Attachment: Drawing No A16205  
Date of Issue: 19th July 1966

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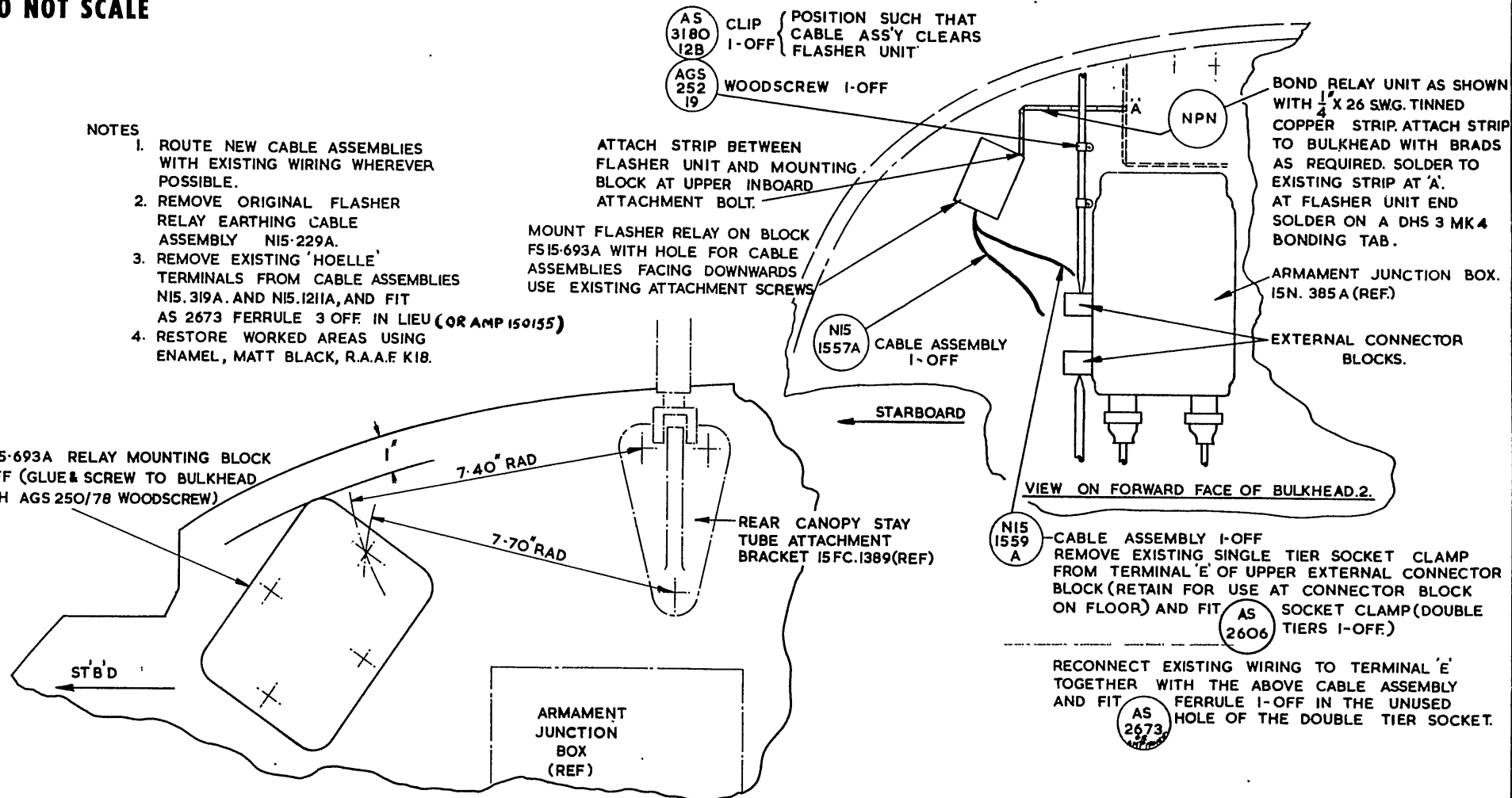
(Issued with A/L 337)



**DO NOT SCALE****NOTES**

1. ROUTE NEW CABLE ASSEMBLIES WITH EXISTING WIRING WHEREVER POSSIBLE.
2. REMOVE ORIGINAL FLASHER RELAY RELAY EARTHING CABLE ASSEMBLY N15-229A.
3. REMOVE EXISTING 'HOELLE' TERMINALS FROM CABLE ASSEMBLIES N15-319A AND N15-1211A, AND FIT AS 2673 FERRULE 3 OFF IN LIEU (OR AMP 150155)
4. RESTORE WORKED AREAS USING ENAMEL, MATT BLACK, R.A.A.F K18.

FS15-693A RELAY MOUNTING BLOCK  
1-OFF (GLUE & SCREW TO BULKHEAD  
WITH AGS 250/78 WOODSCREW)



LOCATION OF RELAY MOUNTING BLOCK ON BULKHEAD.2

HAWKER DE HAVILLAND DRAWING No.00M1437 SHEET 1 OF 2.

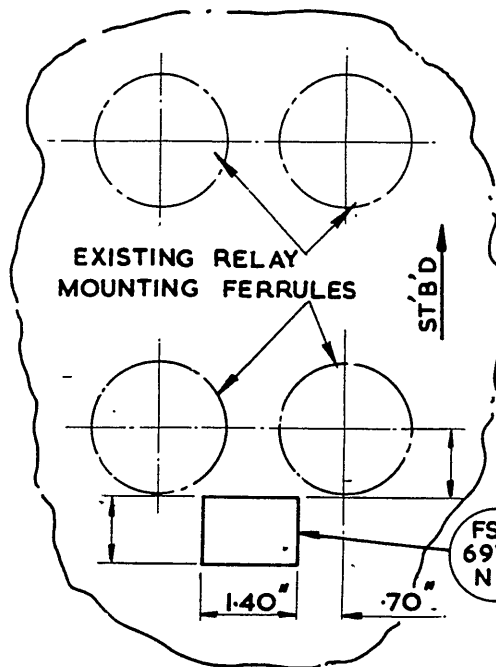
ISSUE NO.	DATE	ALTERATION	D.L.L.	INITIALS	APPROVED	REFERENCE	ISSUED BY	TITLE
1							DEPARTMENT OF AIR. SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND	RELOCATION OF U/C WARNING FLASHER RELAY
						LIMITS UNLESS STATED	MATERIAL	COMPONENT OF
						DECIMALS ± .010"	SPEC.	MACHINE
						FRACTIONS ± 1/32"	TREATMENT	ENGINE
						ANGLES ± 1°	FINISH	TECH. ORDER
						SURFACE FINISH	SCALE	

VAMPIRE MK.35 &amp; MK35 A

VAMPIRE MOD No. 437

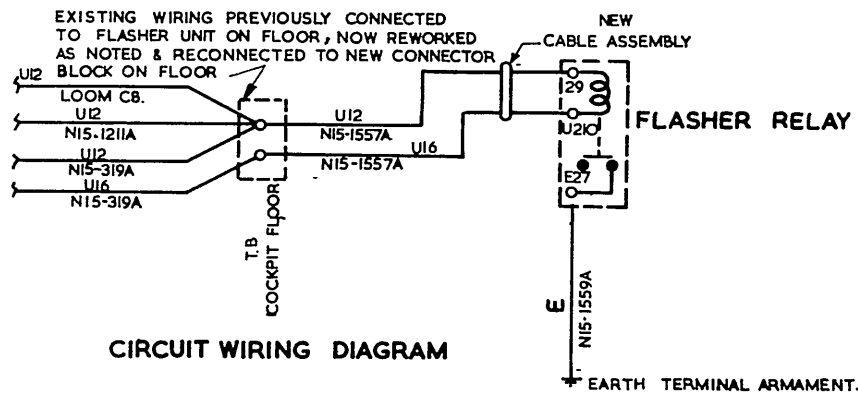
1/11/54

DRAWING NUMBER	<b>DO NOT SCALE</b>		<b>THIRD ANGLE PROJECTION</b>	
	ISSUE	DATE	ALTERATION	INITIALS
				APPROVED



SPRUCE BLOCK  $\frac{1}{4}$ " THICK  
1-OFF (GLUE & BRAD TO FLOOR.)

VIEW ON UPPER SURFACE OF COCKPIT FLOOR



**CIRCUIT WIRING DIAGRAM**

**HAWKER DE HAVILLAND DRAWING No. OOM 1437 SHEET 2 OF 2.**

ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE															
<table border="1"> <tr> <td colspan="3"> <b>DEPARTMENT OF AIR</b>                  ISSUED BY                  SENIOR TECHNICAL STAFF OFFICER                  SUPPORT COMMAND             </td> <td colspan="3">                 REFERENCE                  1 DIM'S IN                  2 DEF (AUST) - 85                  3 DEF (AUST) - 46                  4                  5             </td> <td colspan="3">                 MODIFICATION                  EFFECTIVE ON <b>VAMPIRE MK35 &amp; MK 35 A.</b>                  COMPONENT OF                  TITLE <b>RELOCATION OF U/C WARNING FLASHER RELAY</b> </td> </tr> <tr> <td colspan="2">                 DRAWN                  TRACED                  LIMITS UNLESS STATED                  DECIMALS <math>\pm .010</math>                  FRACTIONS <math>\pm \frac{1}{16}</math>                  ANGLES <math>\pm 0^{\circ}30'</math> </td> <td colspan="2">                 CHECKED                  APPROVED <i>[Signature]</i>                  TREATMENT                  MATERIAL                  SPECIFICATION             </td> <td colspan="2">                 FINISH                  SCALE                  NEXT ASSEMBLY                  DRAWING NUMBER  <b>A16205 SHT 2</b>                  SIZE  <b>A</b> </td> </tr> </table>						<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			REFERENCE 1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5			MODIFICATION EFFECTIVE ON <b>VAMPIRE MK35 &amp; MK 35 A.</b> COMPONENT OF TITLE <b>RELOCATION OF U/C WARNING FLASHER RELAY</b>			DRAWN TRACED LIMITS UNLESS STATED DECIMALS $\pm .010$ FRACTIONS $\pm \frac{1}{16}$ ANGLES $\pm 0^{\circ}30'$		CHECKED APPROVED <i>[Signature]</i> TREATMENT MATERIAL SPECIFICATION		FINISH SCALE NEXT ASSEMBLY DRAWING NUMBER <b>A16205 SHT 2</b> SIZE <b>A</b>	
<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			REFERENCE 1 DIM'S IN 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5			MODIFICATION EFFECTIVE ON <b>VAMPIRE MK35 &amp; MK 35 A.</b> COMPONENT OF TITLE <b>RELOCATION OF U/C WARNING FLASHER RELAY</b>														
DRAWN TRACED LIMITS UNLESS STATED DECIMALS $\pm .010$ FRACTIONS $\pm \frac{1}{16}$ ANGLES $\pm 0^{\circ}30'$		CHECKED APPROVED <i>[Signature]</i> TREATMENT MATERIAL SPECIFICATION		FINISH SCALE NEXT ASSEMBLY DRAWING NUMBER <b>A16205 SHT 2</b> SIZE <b>A</b>																

SECURITY CLASSIFICATION

MAIN UNDERCARRIAGE COMPRESSION LEGS - INTRODUCTION  
OF NEW JACK OPERATING LEVER AND LOCATING PINS

Introduction

1. (a) The Reason for the Modification

Cases have occurred of cracking of the main undercarriage jack operating lever through the area where a hole is drilled for insertion of a lock pin which retains the dowel introduced under Vampire Modification No 377. This modification standardizes the type and attachment of the jack operating lever on all compression legs.

(b) Description and Features by Which the Modification can be Recognized

The two centre jack lever attachment bolts or countersunk dowels are replaced by HT parallel locating pins which are locked to the lever arm with araldite and staking.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Based on safety aspect.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35A and 35 aircraft.

(Issued with A/L 331)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Man-Hours and Trade Mustering Involved

3. Approximately 45 man-hours are required to incorporate the modification. The RAAF trade mustering responsible is Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D Servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland AUSTRALIA Modification V436.

Orders and Instructions Superseded or Cancelled

7. This modification supersedes and cancels Vampire Modification No 377 "Introduction of Steel Dowels and Locking Pins to Positively Locate the Retraction Jack Lever". The instructions of STI Vampire/163 and 185 are cancelled by the incorporation of this modification.

Special Tools, Jigs, etc

8. The following special tools are required and are held by Hawker De Havilland AUSTRALIA Pty Ltd:-

<u>Tool No</u>	<u>Nomenclature</u>	
SDM 423	Reamer	
SDM 423A		
SDM 424	Plug Gauge	} go diameter .3594" no-go diameter .3602"

Drawings

9. Drawing No DA66191000 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

(Issued with A/L 331)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504991	U15-139A	Lever, Jack Operating, RH	1	
2	A79/504992	U15-140A	Lever, Jack Operating, LH	1	
3	A79/505003	U15-145	Locating Pins	4	
4	8040-220-2077		Adhesive Araldite AY103	A/R	
5	8040-220-2078		Hardener HY951	A/R	
6	5315-234-1854	AN381-2-12	Pin Split, N1 Alloy, 1/16" dia x 3/4" long	2	
7	5315-234-1856	AN381-2-16	Pin Split, N1 Alloy, 1/16" dia x 1" long	2	
8	9505-912-9786		Wire Locking, 22 SWG, DTD 189	A/R	
8A	5305-RAF-28D8330	AS1242/11E	Screw, 1/4" BSF, Csk Hd	A/R	
8B	A79/500771	GOO1014	Nut, Special, 1/4" BSF	A/R	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 3 : Demand on Modification Centre Hawker De Havilland AUSTRALIA Pty Ltd BANKSTOWN NSW for 9999-PN-MODVAMP436 Vampire Modification No 436 "A" Class "Set".

Items 4 - 8B : Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Jack up the aircraft and remove both main undercarriage legs complete in accordance with current authorized procedure. Remove the forward hinge fitting. Carry out the following operations (b) to (j) on both main undercarriage legs.

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

- (b) Applicable to legs and leg assemblies Pre-Mod 377 Part Nos U15-25A/1, U15-26A/1 only. Remove the four countersunk head bolts, Part No G001695, Ident No A79/501511, which secure the jack operating lever to the compression leg. Remove the jack operating lever from the leg. Examine the four securing bolts for signs of bending or shearing. If any one bolt shows signs of such damage discard all four bolts and obtain two new bolts from stores. If all four bolts are serviceable return two to stores for future re-use and retain the remaining two.
- (c) Applicable to legs and leg assemblies Post-Mod 377 Part Nos U15-117A, U15-118A, U15-115A, U15-116A only. Remove the two countersunk head bolts, Part No G001695, Ident No A79/501511, which secure the jack operating lever to the compression leg. Remove the jack operating lever, complete with dowels and lock pins, from the leg. Do not use force during this operation as use of force is liable to cause damage to the dowel holes in the leg. If the lever complete with dowels will not detach easily the countersunk heads of the dowels, and that part of the lock pin in the dowels, should be removed by drilling. The lever should now be removed from the leg and dowels and then the remaining portions of the dowels removed from the holes in the leg. Examine the two securing bolts for signs of bending and shearing. If either bolt shows signs of such damage discard both and obtain two new bolts from stores. If both are serviceable retain them for later use.

The following sub-paragraphs are applicable to all legs and leg assemblies:-

- (d) Obtain the new jack operating lever, item 1 or 2, and bolt to the leg at the outer bolt holes using the two bolts retained from operations (b) or (c).
- (e) "Using a letter S drill and reamer P/N SDM 423 followed up by reamer P/N SDM 423A. Carefully drill and ream out the two centre holes to a diameter of 0.3594 to 0.3602 inch by 0.94 inch deep. Prior to and after using reamer SDM 423A check the diameter of the hole using plug gauge P/N SDM 424. It is recommended that a suitable cradle be made up so that the reaming may be done on a vertical drill."

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

- (f) Obtain the new locating pins, item 3. Groove each locating pin along parallel length with a 60° Vee groove 0.03" deep. Ensure that the locating pins and holes are completely degreased and free of other foreign matter.
- (g) Using item 4 (adhesive) and item 5 (hardener), mix a solution containing 8% by weight of the hardener and apply the solution sparingly to the locating pins and the interior of the holes.
- (h) Fit the locating pins ensuring that the heads of the pins are flush with the outer surface of the jack operating lever, items 1 and 2. The groove is to be fitted to the outboard side of the lever.
- (j) Tighten the two bolts fitted in operation (d) and finally lock the two bolts and locating pins with two centre pops in the lever which are to be on the pitch circle diameter of the holes as shown in the attached Drawing No DA66191000.

Note: Curing time for adhesive is 36 to 48 hours.

- (k) Repart number the port compression leg assemblies from U15-25A/1 or U15-117A to U15-151A and the starboard compression leg assemblies from U15-26A/1 or U15-118A to U15-152A. Also repart number the port compression leg from U15-31A/1 or U15-115A to U15-149A and the starboard compression leg from U15-32A/1 or U15-116A to U15-150A.
- (l) Refit the forward hinge fitting using new items 8A and 8B as required. Centre pop the screw to effect locking.
- (m) Replace the undercarriage legs in the aircraft in accordance with current authorized procedure. Fit new split pins, item 6, at the jack bolt and item 7 at the radius rod bolt. Wirelock using item 8 as required. Remove the aircraft jacks.

Items Removed

13. The following items are removed on incorporation of the modification:-

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
9	A79/501511	G001695	Bolt, 5/16" BSF Special (Pre-Mod 377 only)	4	C
10	A79/500767	G001007A	Lever, Jack Operating Stbd	1	C
11	A79/500768	G001008A	Lever, Jack Operating Port	1	C
12	A79/504837	U15-113	Dowel (Post-Mod 377 only)	4	C
13	A79/504838	U15-111ND	Pin, Lock (Post-Mod 377 only)	4	C

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-

Item 9 : Retain as current stock subject to paragraph 12 (b).

Items 10, 11, 12, 13 : Discard.

Action on Stock Holdings of Removed Items

15. Item 9 : Retain as current stock.

Items 10, 11, 12, 13 : To be discarded.

Modification of Spares

16. (a) The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
(a) A79/504333	U15-25A/1	Leg, Compression Assy, Port	Rework to para 12(b) to (j) inclusive and repart number U15-151A and Ident No A79/505005.

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Ident No	Part No	Nomenclature	Remarks
(b) A79/504334	U15-26A/1	Leg, Compression Assy, Stbd	Rework to para 12(b) to (j) inclusive and repart number U15-152A and Ident No A79/505006.
(c) 1620-010-8690	U15-31A/1	Leg, Compression, Port	Rework to para 12(b) to (j) inclusive and repart number U15-149A and Ident No A79/505007.
(d) 1620-010-8691	U15-32A/1	Leg, Compression, Stbd	Rework to para 12(b) to (j) inclusive and repart number U15-150A and Ident No A79/505008.
(e) A79/504540	U15-117A	Leg, Compression Assy, Port	Rework to para 12(c) to (j) inclusive and repart number U15-151A and Ident No A79/505005.
(f) A79/504541	U15-118A	Leg, Compression Assy, Stbd	Rework to para 12(c) to (j) inclusive and repart number U15-152A and Ident No A79/505006.
(g) A79/504659	U15-115A	Leg, Compression, Port	Rework to para 12(c) to (j) inclusive and repart number U15-149A and Ident No A79/505007.
(h) A79/504660	U15-116A	Leg, Compression, Stbd	Rework to para 12(c) to (j) inclusive and repart number U15-150A and Ident No A79/505008.
(j) A79/504643	W15/1041A/15	Plane, Main, Mk 35 Port c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and when Mods 410 and 416 are embodied, repart number as W15-1041A/19, Ident No A79/505009.

RESTRICTED

(Issued with A/L 331)

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Ident No	Part No	Nomenclature	Remarks
(k) A79/504644	W15-1043A/15	Plane, Main, Mk 35 Stbd c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and when Mod 380 is embodied, repart number as W15-1043A/18, Ident No A79/505010.
(l) A79/504645	W15-1407A/15	Plane, Main, Mk 35A Port c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and when Mods 410 and 416 are embodied, repart number as W15-1409A/18, Ident No A79/505011.
(m) A79/504646	W15-1409A/15	Plane, Main, Mk 35A Stbd c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and when Mod 380 is embodied, repart number as W15-1409A/18, Ident No A79/505012.
(n) A79/504945	W15-1041A/18	Plane, Main, Mk 35 Port c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and repart number as W15-1041A/19, Ident No A79/505009.
(o) A79/504834	W15-1043A/17	Plane, Main, Mk 35 Stbd c/w Controls, Fuel Lines, Piping Electrical Services and Undercarriage	Rework to para 12 and repart number as W15-1043A/18, Ident No A79/505010.
(p) A79/504946	W15-1407A/18	Plane, Main, Mk 35A Port c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and repart number as W15-1407A/19, Ident No A79/505011.
(q) A79/504835	W15-1409A/17	Plane, Main, Mk 35A Stbd c/w Controls, Fuel Lines, Piping, Electrical Services and Undercarriage	Rework to para 12 and repart number as W15-1409A/18, Ident No A79/505012.

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

(b) A partial modification set will comprise:-

For Spares (a), (c), (e), (g), (j), (l), (n), (p) -  
Item 2 (1 off), Item 3 (2 off). Set to be obtained  
by demand on Modification Centre, Hawker De  
Havilland Pty Ltd for spares Mod No V436/1620-010-8690,  
A79/504333, 504540, 504643, 504645, 504659, 504945,  
504946.

For Spare (c) A79/501511, Part No G001695, Bolt  
Special and 4730-017-9715, Part No 6878/1, Fitting  
Lubricating, will also be required and are to be  
obtained from unit stores.

For Spares (b), (d), (f), (h), (k), (m), (o), (q) -  
Item 1 (1 off), Item 3 (2 off). Set to be obtained  
by demand on Modification Centre, Hawker De  
Havilland Pty Ltd for spares Mod No V436/1620-010-8691,  
A79/504334, 504541, 504644, 504646, 504660, 504834,  
504835.

For Spare (d) A79/501511, Part No G001695, Bolt  
Special and 4730-017-9715, Part No 6878/1, Fitting  
Lubricating, will also be required and are to be  
obtained from unit stores.

Unit maintenance spares of the above items are to be modified by the user  
unit prior to fitment to aircraft. Headquarters Support Command is  
responsible that stores depot stock holdings of the above items are  
modified.

Additional Information

17. If the jack operating levers have to be replaced post this  
modification it will be necessary to use the oversize locating pins  
Ident No A79/505004, Part No U15-147, as called for on Hawker De Havilland  
Drawing RS001997. These pins are to be grooved and fitted as described in  
paragraph 12. Future manufacture of the pins will include the grooving  
during the manufacture.

Tests

18. Carry out a full functional and operational check on the complete  
hydraulic system and all hydraulically operated components in accordance  
with AAP 721.79 Vol 1 Sect 3 Chap 6.

Check the undercarriage and door lock mechanisms and micro-  
switches for correct adjustment and setting in accordance with AAP 721.79  
Vol 1 Chap 5 App 2.

(Issued with A/L 331)

RESTRICTED

RESTRICTED

- 10 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 436

Recording

19. Record incorporation of the modification as follows:-
- (a) In the airframe log book or E/E 512A as applicable.
  - (b) On the wing modification plate.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.
  - (d) Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5840

Attachment: Drawing No DA66191000

Date of Issue: 14th February 1967

(Issued with A/L 331)

RESTRICTED



<b>DEPARTMENT OF AIR</b>		<b>TITLE</b>	
ISSUED BY <b>SENIOR TECHNICAL STAFF OFFICER</b>		MAIN U/C COMPRESSION LEGS	
DRAWN M.I.F.		INTRO. OF NEW JACK OPERATING LEVER AND LOCATING PINS	
CHECKED <i>Relution</i>	APPROVED <i>W.B.</i>	MODIFICATION NUMBER VAMPIRE MOD N° 436	DRAWING NUMBER DA66 191000
SUPPORT COMMAND			

REMOVE EXISTING JACK LEVER, G00 1007-8A (REF)  
AND ITS ATTACHMENT ITEMS AND FIT:

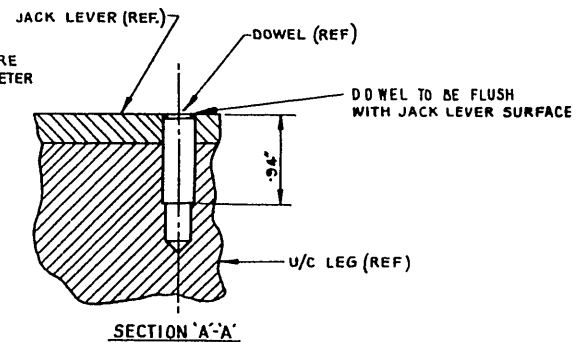
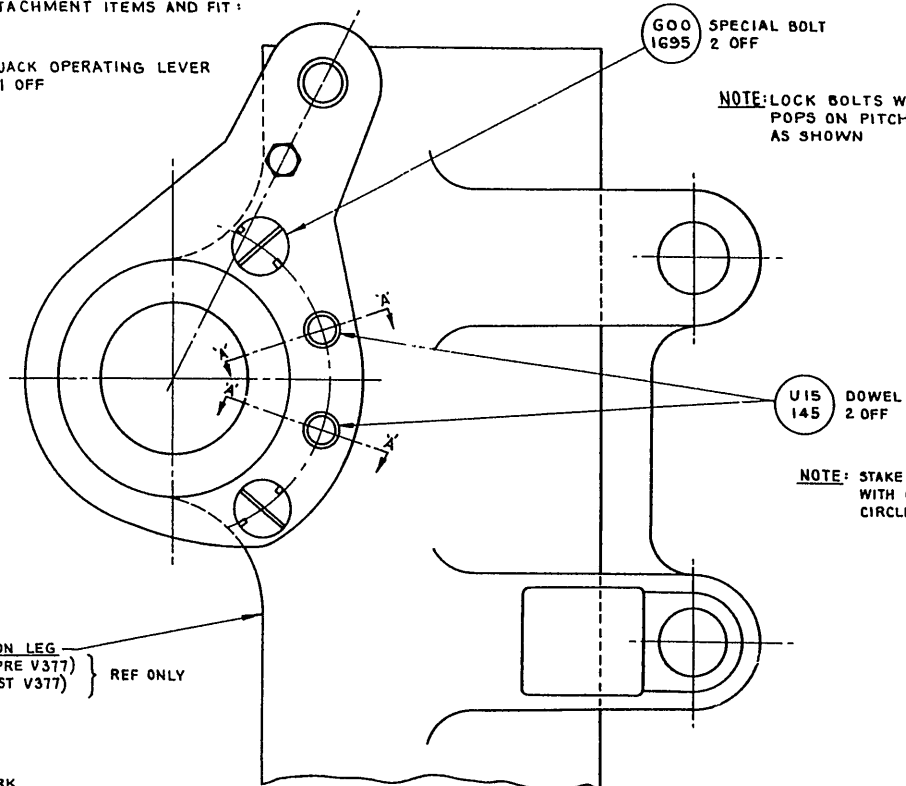
RH  $\begin{pmatrix} \text{U15} \\ 139 \\ \text{A} \end{pmatrix}$  } JACK OPERATING LEVER  
LH  $\begin{pmatrix} \text{U15} \\ 140 \\ \text{A} \end{pmatrix}$  } 1 OFF

ISSUE 2.13-9-67  
(RH WAS LH, LH WAS RH)

COMPRESSION LEG  
U15-31-2A/1 (PRE V377) } REF ONLY  
U15-115-6A (POST V377)

#### AFTER REWORK

1. REPART NUMBER THE COMPRESSION LEG FROM U15-31A/1 OR U15-115A TO U15-149A FROM U15-32A/1 OR U15-116A TO U15-150A
2. REPART NUMBER THE COMPRESSION LEG ASSEMBLY FROM U15-25A/1 OR U15-117A TO U15-151A FROM U15-26A/1 OR U15-118A TO U15-152A



OPEN OUT THE BOLT HOLES WITH A LETTER 'S' DRILL

AND REAM TO  $.3594''$  DIA X  $.03''$   
FILLET RAD

FIT:  $\begin{pmatrix} \text{U15} \\ 145 \end{pmatrix}$  DOWEL  
\* 2 OFF

\* **NOTE:** DECREASE DOWEL AND INTERIOR OF HOLE AND ASSEMBLE DOWEL WITH ARAIDITE AY103 RESIN WITH 8% BY WEIGHT OF HY951 HARDENER



REAR CANOPY - INTRODUCTION OF AN  
ALL STEEL SPIGOT BRACKET

Introduction

1. (a) The Reason for the Modification  
Cases have been reported of cracking of the canopy spigot brackets, Part Nos 15FC-2753 and 15FC-2754, causing the canopy to jam in the closed position.
- (b) Description and Features by which the Modification can be Recognised  
This modification replaces the existing bracket of magnesium alloy by one of steel.
- (c) Relationship with Other Modifications  
Not applicable.
- (d) Reason for Classification  
Safety is affected.
- (e) Effect on Servicing and/or Ground Handling  
Nil.
- (f) Effect on Aircraft Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mks 35A and 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 5 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Armament Fitter	.5 man-hour
Airframe Fitter	4.5 man-hours

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 435

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V435.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A15991 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504964	FC15-177	Spigot Bracket RH	1	C
2	A79/504965	FC15-178	Spigot Bracket LH	1	C
3	A79/503777	15FC-2823	Eccentric Bush	A/R	C
4	5310-RAF-28M 13553	A16Y/LP	Nut, Plain, 7/16" BSF	A/R	C
5	A79/504989	15FC-3341ND	Shim, Lam Attwell LA3	A/R	C
6	9505-912-9786	DTD189	Wire, Locking, 22 SWG to DTD189	A/R	C
7	8010-018-5100		Varnish Oil Spec TRS K53	A/R	C

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Supply

11. Modification sets are to be obtained as follows:-

Items 1 & 2 : Demand on Modification Centre, Hawker  
De Havilland Australia Pty Ltd, BANKSTOWN  
NSW, for Vampire Modification No 435,  
identified as 1560-NSL-0313.

Items 3 - 7 : Draw from unit stores.

Method and Sequence of Incorporation

12. The airframe fitter is responsible for operations (b) to (f) the armament fitter is responsible for operations (a) and (g).

- (a) Open the canopy hatch and disarm the ejection seats in accordance with current accepted procedure.
- (b) Locate spigot brackets (items 8 and 9) on the canopy rear arch casting and remove them complete with eccentric bushes (item 3) and nuts (item 4). Retain all attachment items.
- (c) Detach the bush and nut from each bracket and fit them to brackets (items 1 and 2). Renew bushes and nuts if found to be unserviceable.
- (d) Bolt the bracket to the rear canopy arch casting using the retained attachment items.
- (e) Slowly lower the canopy hatch and adjust the bushes that the spigots (Part No FC15-77) align correctly with them. If the adjustment is insufficient it may be increased in accordance with the attached drawing.
- (f) When the bushes are correctly aligned with the spigots, tighten the nuts and lock the bushes by lightly peening. Wirelock the two lower attachment bolts on each bracket.
- (g) Rearm the ejection seats and close the canopy.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
8	A79/504952	15FC-2753	Spigot Bracket	1	C
9	A79/504953	15FC-2754	Spigot Bracket	1	C

RESTRICTED (Issued with A/L 329)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 435

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-

Items 8 and 9 : Discard.

Action on Stock Holdings of Removed Items

15. Items 8 and 9 to be discarded.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

- (a) In aircraft log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command, 2501/110/5540  
and 2601/79/53-435

Attachment: Drawing No A15991

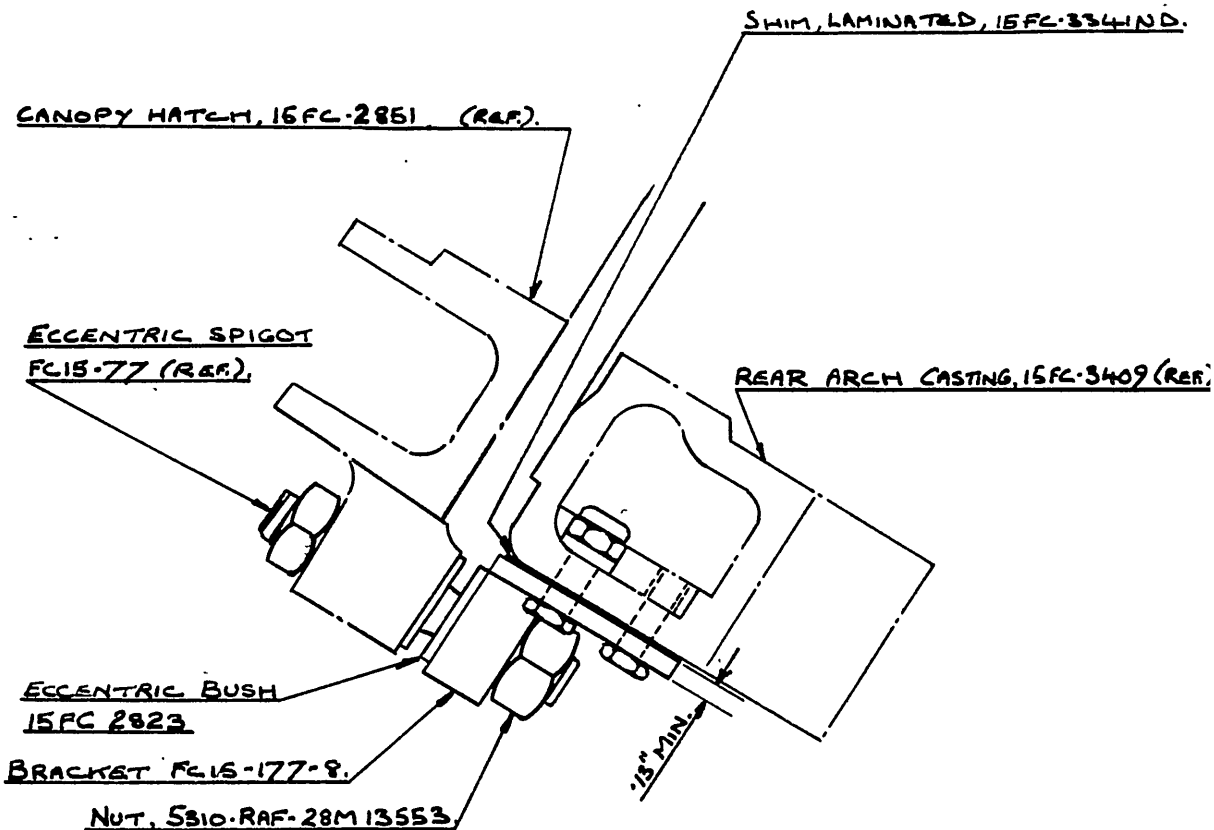
Date of Issue: 13th December 1965

RESTRICTED

(Issued with A/L 329)

DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D. I. L.	INITIALS	APPROVED



CORRECT ADJUSTMENT MAY BE OBTAINED BY:

1. ADJUSTMENT OF ECCENTRIC BUSH AND/OR SPIGOT.
2. INTRODUCTION OF ATTWELL SHIMS AS SHOWN.

OR

REDUCTION OF HEIGHT OF BRACKET BY  
FILING THE BASE TO NO LESS THAN THE  
MINIMUM DIMENSION GIVEN.

HAWKER DE HAVILLAND DRAWING NO. 00M 1435.

DEPARTMENT OF AIR.				REAR CANOPY			
SENIOR TECHNICAL STAFF OFFICER - INTRODUCTION OF AN ALL STEEL				SPIGOT BRACKET.			
SUPPORT COMMAND.							
DESIGNED	BY	SPEC.	COMPONENT				
DRAWN	BY	Y. J. M. H.	MACHINE		VAMPIRE Mk. 36, 36A		
CHECKED	BY	F. E. J.	ENGINE				
APPROVED	BY		ITEM ORDER		VAMPIRE MOD. 435		
AUSTRIAN STANDARD			DRAWN		J. D. S.		DRAWING NO. A 15991
ENGL. DRWG. PRACTICE NO. 121			TRACED		CHECKED		
							DRWG. A SIZE





RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 432

Class 3

HYDRAULIC SYSTEM - INTRODUCTION OF A SHOULDERED  
FLUTTER PLATE IN THE HYDRAULIC CUT-OFF VALVE  
IDENT NO 1650-RAF-27M433

Introduction

1. (a) The Reason for the Modification

As the result of numerous defect investigations carried out on the subject, it was recommended by Hawker De Havilland that the flutter plate Part No AIR28754 be modified to incorporate a shoulder to locate the flutter plate spring centrally in the bore of the valve cylinder and thereby prevent scoring of the cylinder walls.

(b) Description and Features by which the Modification can be Recognised

The modified cut-out valve has a new shouldered flutter plate with increased bearing area for the spindle, a new plunger which is counterbored to clear the flutter plate and its Part No is changed from AIR40020 to AIR48112.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Improvements of design to increase service life of the valve and to eliminate the source of foreign particles from the valve.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

RESTRICTED

(Issued with A/L 328)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 432

Application

2. All Vampire Mk35A and 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 6 man-hours are required to incorporate the modification. The trade mustering responsible is Airframe Fitter.

When Modification is to be Incorporated

4. This modification affects stock holdings of cut-out valves, Part No AIR40020, Ident No 1650-RAF-27M433. When a hydraulic cut-out valve is removed from an aircraft, for any reason, it must be replaced by a modified cut-out valve, Part No AIR48112, Ident No 1650-66-022-6039. The unmodified valve is to be returned to store and modified in due course.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V432.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 328)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 432

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	1650-RAF-27M9279	AIR59450	Flutter Plate	1	
2	1650-RAF-27M9042	AIR57332	Plunger	1	
3	5330-RAF-27M7877	AIR40414	Seal	1	
4	5330-RAF-27M4238	ADS34A	Seal	1	
5	5330-RAF-27M7878	ADS403/13	Seal	1	
6	5330-RAF-27M7876	ADS409/17	Seal	1	
7	9505-912-9786		Wire, Locking, 22 SWG, Spec DTD189A	A/R	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 6 : Demand on Modification Centre, Hawker  
De Havilland Australia Pty Ltd, BANKSTOWN  
NSW, for Vampire Modification No 432.

Item 7 : Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Dismantle the cut-out valve in accordance with AP1803B, Vol 1, Sect 10, Chap 2.
- (b) Replace items 8, 9, 10, 11, 12 and 13 with items 1, 2, 3, 4, 5 and 6 and reassemble the cut-out valve in accordance with the AP.
- Note: Before assembly, carefully examine items 1 and 2 and ensure that they have been completely deburred.
- (c) Delete the Part No AIR40020 from the nameplate on the body of the cut-out valve and stamp the No AIR48112 directly above it.
- (d) Adjust the valve as detailed in AP1803B, Vol 1, Sect 10, Chap 2, and then apply the tests of Appendix 1 of the same chapter.

Items Removed

13. The following items are removed on incorporation of the modification:-

RESTRICTED (Issued with A/L 328)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 432

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
8	1650-RAF-27M6096	AIR28754	Flutter Plate	1	
9	1650-RAF-27M6095	AIR28752	Plunger	1	
10	5330-RAF-27M7877	AIR40414	Seal	1	
11	5330-RAF-27M4238	ADS34A	Seal	1	
12	5330-RAF-27M7878	ADS403/13	Seal	1	
13	5330-RAF-27M7876	ADS409/17	Seal	1	

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-

Items 8 - 13 : Discard in accordance with current authorised procedure.

Action on Stock Holdings of Removed Items

15. Items 8 - 13, retain as current stock.

Modification of Spares

16. (a) The following spare is affected and is to be modified at the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
1650-RAF-27M433	AIR40020	Valve, Cut-out, Lockheed	Rework in accordance with para 12 and re-identify as Part No AIR48112, Ident No 1650-66-022-6039.

- (b) One complete modification set will be required to modify the above spare.
- (c) Unit maintenance spares of the above item are to be modified prior to fitment.
- (d) HQSUPCOM is responsible that stores depot stock holdings of the above item are modified.

RESTRICTED

(Issued with A/L 328)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 432

Additional Information

17. Nil.

Tests

18. See para 12(d).

Recording

19. Record incorporation of the modification as follows:-

- (a) In aircraft log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command 2501/110/5628

Date of Issue: 29th November 1965

RESTRICTED

(Issued with A/L 328)



HYDRAULIC SYSTEM - INSTALLATION OF "IN LINE"  
MICRONIC FILTERS IN THE NORMAL AND EMERGENCY  
(HAND PUMP) HYDRAULIC CIRCUITS

Introduction

1. (a) The Reason for the Modification

It is suspected that repeated reports of malfunction of the hydraulic system is attributable to the absence of suitable filters and subsequent contamination of hydraulic fluid.

(b) Description and Features by Which the Modification can be Recognized

Two 5 micron filters are introduced into the hydraulic system, one downstream of the hand pump and the other downstream of the main E.D. pump. Both filters are located in the gun bay.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Aircraft safety is affected.

(e) Effect on Servicing and/or Ground Handling

Both filters are to be cleaned at each C Servicing. However extension of this periodicity may be possible in the light of knowledge gained. The hand pump line filter must be removed complete for dismantling, but the main line filter bowl may be removed whilst leaving the filter body in-situ. P/Nos of element assemblies are as follows:-

Main line filter - P/No 62565 or 62964.

Emergency line filter - P/No 63232 or 7500984.

(f) Effect on Aircraft Limitation

Nil.

(Issued with A/L 355)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 36 man-hours are required to incorporate the modification. The trade mustering responsible is Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D Servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland (Australia) Modification V431.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. RAAF Drawings Nos DA 6625000, DA 6626000 (Issue 2) and DA 6627000 attached.

(Issued with A/L 355)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/505072	S15-1633	Adaptor	2	C
2	A79/505073	S15-1635	Adaptor	2	C
3		S15-1639	Bracket, Mounting	1	C
4	A79/505067	S15-1641AND	Pipe Assembly	1	C
5	A79/505068	S15-1643AND	Pipe Assembly	1	C
6		S15-1645AND	Pipe Assembly	1	C
7		S15-1647AND	Pipe Assembly	1	C
8		S15-1649	Block, Clamp	1	C
9		S15-1655	Packing	2	C
10	4330-618-7016	62954	Filter Assembly, Type G406MS2, Main Line	1	
11	4330-PN-	63196	Filter Assembly, Type G363MS9, Emergency Line	1	
12	5306-901-5170	A25/16B	Bolt, Steel, Hex Hd, 4BA	1	
13	5306-RAF-28D 12550	A25/22E	Bolt, Steel, Hex Hd, 1/4 BSF	2	
14	5310-PN-AGS 2001E11NYLON	AGS2001/E/1 NYLON	Nut, Hex, Nylon Insert, 1/4 BSF	2	
15	5310-PN-AGS 200731NYLON	AGS2007/B/1 NYLON	Nut, Double Anchor, Nylon Insert, 4BA	1	
16	5310-941-9465	SP13/B	Washer	1	
17	5310-941-8921	SP13/E	Washer	2	
18	5330-942-8453	AGS1186B	Seal Bonded	2	
19	5320-913-7403	AS2229-303	Rivet, 90° Csk Head, Al Alloy, 3/32" dia x 3/16" long	2	
20	5330-808-0794	MS28778-8	Packing, Preformed	2	

(Issued with A/L 355)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
21	9505-912-9786	-	Lockwire	A/R	
22	I32A/94	-	Cord	A/R	
23	8010-010-0032	-	Enamel, White	A/R	
24	8010-942-7565	-	White Spirit, Lead Free	A/R	
25	9150-910-0572	OM15	Fluid, Hydraulic	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1-20 - Demand on Modification Centre, Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 431.

Items 21-25 - Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Jack up the aircraft and remove the gun bay doors.
- (b) Release all hydraulic pressure in the accumulators.
- (c) Remove the E.D. pump pressure pipe from cut-out to connection on bulkhead No 4 (item 26). Reassemble the fairlead on the port side of the cannon bay to support the one remaining pipe only.
- (d) Remove the handle from the pressure release valve, P/N 13.S.155A, and reposition as shown in the attached drawing. Use existing bolts, nuts and washers.
- (e) Fit the bracket (item 3) to the existing bolts and nuts in the cannon floor as shown on the attached drawing. Discard the washers.
- (f) Assemble the adaptors (item 2) to the filter (item 10) using gaskets (item 20). Loosely assemble pipe assemblies, (items 4 and 5) to the filter assembly.

(Issued with A/L 355)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

- (g) Loosen the banjo union on the cut-out valve and rotate the banjo to the position shown on the attached drawing. Offer up the filter and pipes assembly, connect at bulkhead and cut-out unions and attach to the mounting bracket using (items 9, 13, 14 and 17). Tighten the attaching nuts and bolts. Tighten pipe unions, cut-out banjo bolt and wirelock using (item 21).
- (h) Remove the hand pump pressure line (item 27), from the union above the cannon floor to non return valve, (P/No UMC 7030).
- (j) Drill a No 27 hole in the pneumatic panel, for the clamp block attachment bolt, in the position shown on the attached drawing. Fit the anchor nut (item 15) on the forward face of the panel, attach using rivets (item 19). Repart number the panel as (S15-705A/2).
- (k) Assemble the adaptors (item 1) and jointing washers (item 18) to the filter (item 11). Ensure the jointing washers are centralized after tightening. Wirelock both adaptors using (item 21). Using white enamel (item 23) colour code the filter as shown on the attached drawing.
- (l) Fit pipe assembly (item 7) to the connector above the cannon floor. Wirelock the union using (item 21).
- (m) Connect the filter to the upper pipe union with the arrow pointing in the direction shown on the attached drawing. Fit pipe assembly (item 6) between the filter and non-return valve. Fit the clamp block (item 8) attaching with bolt and washer (items 12 and 16). Tighten and wirelock all unions using (item 21). Lash pipes as required using (item 22). Paint an arrow on the pneumatic panel using (item 23), as shown on the attached drawing.
- (n) Carry out a purging of the hydraulic system as follows:-
  - (i) Remove both accumulators and flush these with white spirit (item 24) and dry with air.
  - (ii) Refit the accumulators.
  - (iii) Connect the hydraulic rig and top up the hydraulic tank with oil (item 25).

(Issued with A/L 355)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

- (iv) Select flaps and operate with the hand pump.
- (v) Purge the individual circuits independently, ie, flaps, speed brakes, undercarriage and brakes by disconnecting the feed and return lines as close to the jacks as permits and connecting the lines together so that while the system is being rig run for 10 minutes (approximately) per circuit, the oil is being cycled back to the tank then through the filter. During the rig run the appropriate selector is to be operated several times so disturbing as many foreign particles as possible and trapping them in the filter. For the final two minutes purging the selector must be left in the one position. Prior to reconnecting manually operate the jack through its range of travel to dispel as much oil as possible.
- (vi) Operate the windscreen wiper for approximately two minutes.
- (vii) Disconnect the line at the canopy jettison jack and, using the hand pump, drain 1/4 pint (approximately) of oil. Reconnect the line.
- (viii) Remove both filters and clean in white spirits, (item 24) and dry with air.
- (ix) Refit the filters.
- (x) Wirelock all disturbed unions using item 21.
- (o) Top up the hydraulic tank using oil (item 25) and carry out a full functional test of the hydraulic system in accordance with AAP 721.79, Vol 1, Sect 3, Chap 6.
- (p) Remove the aircraft from the jacks and refit the gun bay doors.

Items Removed

13. The following items are removed on incorporation of the modification:-

(Issued with A/L 355)

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RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
26	A79/504162	S15-1135AND	Pipe, Assembly	1	C
27	-	15.S.853AND	Pipe, Assembly	1	C

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application and are to be discarded.

Action on Stock Holdings of Removed Items

15. Items 26 and 27 - Action will be taken by HQSUPCOM at normal review period.

Modification of Spares

16. (a) Unit maintenance spares of the following items are to be modified by the user unit prior to fitment:-

Ident No	Part No	Nomenclature	Remarks
A79/504500	S15-705A/1	Panel, Pneumatic, Assembly	Rework to para 12(j) Re-part number as S15-705A/2, Ident No A79/505069

(b) A partial modification set will comprise:-

For spare (a) Item 15 (1 off), item 19 (2 off),  
obtain from unit stores.

Additional Information

17. Not applicable.

Tests

18. As detailed in para 12 (o).

(Issued with A/L 355)

RESTRICTED

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 431

Recording

19. Record incorporation of the modification as follows:-
- (a) On Form E/E 512A.
  - (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

Weight Sheet Summary

20. Amendments to Weight Sheet Summaries will be consolidated and issued by Headquarters Support Command.

The effect of this modification on the weight and balance of the aircraft is as follows:-

Item	Weight (lb) $\pm$	Arm (in) $\pm$	Moment (lb in) $\pm$
Filters (2) c/w Assembly	+ 3.2	- 32.4	- 104

Reference: File, Headquarters Support Command, 2501/110/6077.

Attachments: Drawings Nos DA 6625000, DA 6626000 (Issue 2), and DA 6627000.

Date of Issue: 14th July 1967.

(Issued with A/L 355)

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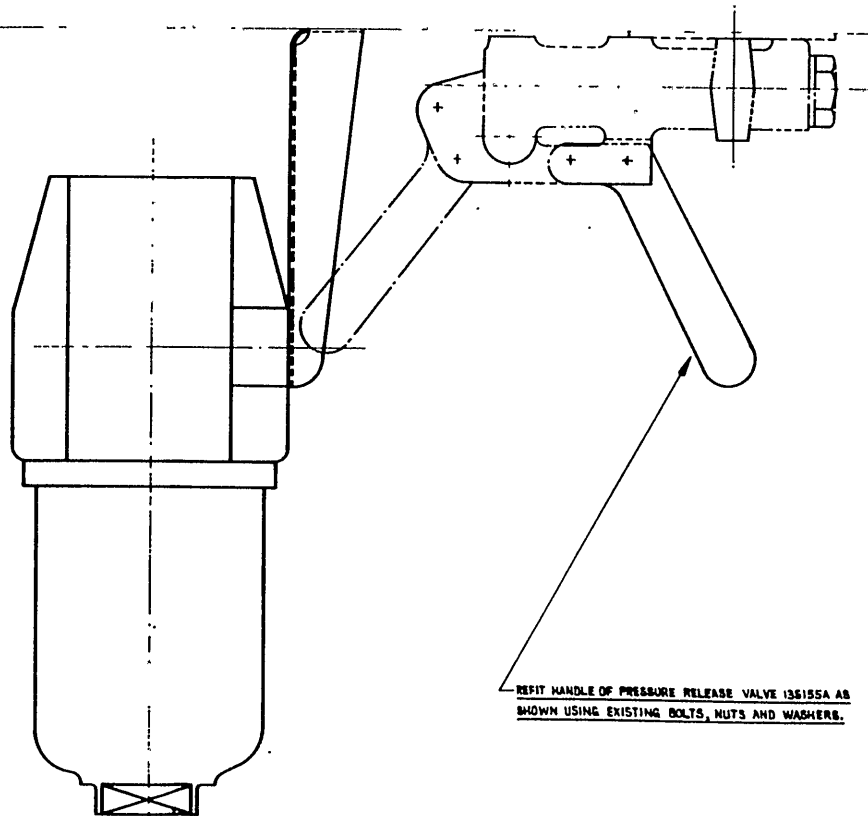






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DO NOT SCALE



VIEW LOOKING FORWARD

HAWKER DE HAVILLAND DRAWING No. OOM 1431 SHEET 3 OF 3

REVISION NO.		DATE	ALTERATION	D. I. L.	INITIALS	APPROVED	REFERENCE	ISSUED BY		TITLE	
1		APR 68						DEPARTMENT OF AIR		INTRO. OF MICRONIC FILTER IN	
								ISSUED BY		NORMAL & EMERGENCY CIRCUITS	
								SENIOR TECHNICAL STAFF OFFICER			
								SUPPORT COMMAND			

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AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 429

Class 4

MAIN UNDERCARRIAGE - INTRODUCTION OF AN IMPROVED  
FLEXIBLE CONDUIT, PART NO C136233 AND C136234

Introduction

1. (a) The Reason for the Modification  
To overcome defects experienced in service wherein the rubber outer covering of the existing teleflex conduits was incompatible with the Molybond GS10 grease and resulted in swelling and deterioration of the conduit.
- (b) Description and Features by which the Modification Can be Recognised  
The new type flexible conduits, Part Nos C136233 and C136234, provide effective compatibility with GS10 grease.
- (c) Relationship with other Modifications  
Vampire Modification No 391 must be incorporated prior to this modification.
- (d) Reason for Classification  
Introduction of improved spares.
- (e) Effect on Servicing and/or Ground Handling  
Nil.
- (f) Effect on Aircraft Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mk 35A and 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Incorporation time will be absorbed into normal servicing procedures. The trade mustering responsible is airframe fitter.

(Issued with A/L 325)

RESTRICTED

RESTRICTED

- 2 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 429

When Modification is to be Incorporated

4. This modification is to be incorporated in each applicable Vampire aircraft by replacement of conduits U15-127 and U15-129 by conduits C136233 and C136234 when the former becomes unserviceable.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V429.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504967	C136233	Flexible Teleflex Conduit, Fwd	2	C
2	A79/504968	C136234	Flexible Teleflex Conduit, Aft	2	C
3	I1/9715		Wire Locking, 22 SWG, DTD189	AR	C
4	9150-013-6094	GS10	Molybond Grease	AR	C

(Issued with A/L 325)

RESTRICTED

RESTRICTED

- 3 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 429

Supply

11. Modification sets are to be obtained as follows:-  
Items 1 - 4 : Draw from unit stores.

Method and Sequence of Incorporation

12. Not applicable.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5	A79/504663	U15-127A	Flexible Teleflex Conduit, Fwd	2	C
6	A79/504664	U15-129A	Flexible Teleflex Conduit, Aft	2	C

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-  
Items 5 and 6 : Discard in accordance with current authorised procedure.

Action on Stock Holdings of Removed Items

15. Stock holdings of removed items will have been exhausted prior to incorporation of this modification.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

(Issued with A/L 325)

RESTRICTED

RESTRICTED

- 4 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 429

Tests

18. Carry out undercarriage retraction tests to ensure correct fitment and operation of door lock assembly.

Recording

19. Record incorporation of the modification as follows:-

- (a) In Aircraft Log Book.
- (b) On Form E/E 78.
- (c) On the wing modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

References : Files, Headquarters Support Command, 2601/79/33-429  
and 2501/110/5497

Date of Issue : 18th October 1965

(Issued with A/L 325)

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PROVISION OF BALLAST WEIGHTS WHEN THE GUNS  
AND ASSOCIATED ITEMS OF ARMAMENT EQUIPMENT ARE REMOVED

Introduction

1. (a) The Reason for the Modification

To remove guns and associated equipment currently used as ballast, thus achieving a significant reduction in operating weight.

(b) Description and Features by which the Modification can be Recognized.

Guns and accessories, gunsights, gun heating equipment and rear gun mountings are removed from the aircraft and six 10 lb lead ballast weights are fitted in the nose compartment.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Based on reduced operating weight of the aircraft and improved maintenance aspect.

(e) Effect on Servicing and/or Ground Handling

All relevant servicing schedule items become non-applicable when this modification is incorporated.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

All relevant cockpit controls are rendered inoperative when this modification is incorporated.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 356)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

Application

2. Vampire Mk 35 and 35A, other than aircraft allotted to No 2 OCU, as directed by HQSUPCOM.

Man-Hours and Trade Mustering Involved

3. Approximately 24 man-hours are required to incorporate the modification. The RAAF trade musterings involved are:-

Armament Fitter	-	5 man-hours (para 12 a,h,j,k,m,x)
Electrical Fitter	-	1/2 man-hour (para 12 d, e, v)
Airframe Fitter	-	11 man-hours (para 12 c,l,n,o,p,r,w)
Engine Fitter	-	4 man-hours (para 12 b, s, t, u)
Instrument Fitter	-	4 man-hours (para 12 f, g, q)

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next E Servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland (Aust) Modification No V428.

Orders and Instructions Superseded or Cancelled

7. The instructions of STI/Goblin/46 are superseded by this modification.

Special Tools, Jigs, etc

8. Not applicable.

Drawings

9. Drawing No B14595, attached.

(Issued with A/L 356)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1		F15-1097 ND	Weight, Ballast, Lead 10lb	6	
2		F15-1107 ND	Plate, Blanking, Alclad	1	
3		A25-42J	Bolt, Hex Hd 3/8" BSF	4	C
4	5310-941-9466	SP13/J	Washer	4	C
5 )		DHS781/47/16	Washer	8	
)		or	or		
)	5310-999-4217	SP18/E	Washer	8	C
6	I1/2099		Sheet, Mild Steel, 18 swg Comm	1b	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1-5 : Demand on Modification Centre Hawker De Havilland (Aust) Pty Ltd BANKSTOWN NSW for 9999-PN-MODVAMP428 Vampire Modification No 428.

Items 6 : Draw from unit stores.

Method and Sequence of Incorporation

12. The Armament Fitter is responsible for a, h, j, k, m, x.

The Electrical Fitter is responsible for d, e, v.

The Airframe Fitter is responsible for c, l, n, o, p, r, w.

The Engine Fitter is responsible for b, s, t, u.

The Instrument Fitter is responsible for f, g, q.

(a) In accordance with current authorized procedure disarm the ejection seats.

(b) Remove engine cowlings.

(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

- (c) Remove cannon doors and cannon fairings, open nose cap.
- (d) Disconnect the aircraft batteries.
- (e) Remove fuses Nos 14 and 15 from Junction Box No 1 and stow them in the fuse box lid. Refit lid.
- (f) If fitted, disconnect and remove the gyro gunsight recorded from the left hand GGS together with its magazine and mounting bracket (items 46, 47, 48).
- (g) Disconnect the port and starboard gyro gunsight electrical connections, secure them to the retraction unit. Remove both gyro gunsight assemblies (item 44, comprising, GGS 1270-RAF-8B2912, Cable Assemblies L262-135D and L262-136D, pulleys and mounting plate assembly). Replace special pin, securing gunsight to range control extending shaft, in shaft and lash shaft to retraction unit. Lockwire the retraction unit operating switch in the "Down and Off" position.
- (h) Detach the firing units (item 35) from the guns. Do not detach units from their electrical connections.
- (j) Remove the blast tubes (item 15), belt feed mechanisms (items 7, 8) ammunition chutes (items 9, 10) and link chutes (item 12).
- (k) Remove the guns and No 3 Mk 1 front mountings c/w eccentric pistons (item 25) with items 24, 26, 27, 28 and 32 attached. Remove items 24, 26, 27, 28 and 32 from the guns. Re-assemble the eccentric mountings on the aircraft ensuring the outer eccentric is firmly held using wirelocked screw P/No 12.3A.111, Ident No A79/503767.
- (l) Disconnect firing unit cables Pt Nos 15N1885A and 15N1889A at the connector block on the ammunition bay floor. Disconnect mounting stirrups from ammunition bay floor by removing the eight attaching bolts. Remove the stirrup assemblies (items 36, 37), comprising Stirrup Assemblies Pt Nos S00615AND and S00616AND, Bracket Electrical Connection Pt No 12-20N1531, Cable Assemblies Pt Nos 15N1885A, 15N1889A and 12N2183A, Firing Units (item 35) and all attaching parts, from the aircraft. Replace the stirrup assembly attaching  
(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

bolts into their positions in the ammunition bay floor using washers (item 5) in place of the original mounting brackets. The SP18/E washers may be trimmed if necessary.

- (m) Remove the gun cocking tool (item 38) from its stowage on the cannon doors.
- (n) Detach the magazine stay tube assemblies (item 18) from the eyebolts on the rear face of the gun beam and remove them from the aircraft.
- (o) Remove the gun heating pipes (items 49, 54) from the gun bay.
- (p) Disconnect the electrical cable to the hot air control valve at the gun heat test switch and the earthing cable at the bulkhead. Remove the hot air control valve (item 59) from the fireproof bulkhead complete with electrical cables. Using the existing attaching parts fit the blanking plate (item 2) to the hole in the fireproof bulkhead.
- (q) If fitted, remove the camera (item 39) camera adaptor (item 40) and camera mounting (item 41) from the nose compartment. Stow the camera cable assembly in the dummy stowage which is provided.
- (r) Fit the ballast weights (item 1) in the stowage provided in the nose compartment. Use attaching parts (items 3 and 4).
- (s) Remove the gun heating pipe assembly (item 60) and all attaching parts (items 61-68). Detach the flexible connectors (items 78, 80) from the pipe. Remove the gun heating pipe assembly (item 69) and all attaching parts (items 70-77). Detach the flexible connectors, (item 78) from the pipe. Remove the elbows and gaskets (items 82, 83, 84) from the jet pipe and replace the attaching bolts and washers.
- (t) If a blanking cap as manufactured for STI Goblin/46 is not available, manufacture a blanking cap P/N F15-1111ND, to drawing B14595 attached using item 6. Fit the cap to the open end of pipe assembly, P/N 13V305A and secure with the existing hose clip.

(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2,

VAMPIRE MODIFICATION NO 428

- (u) Refit engine cowlings.
- (v) Reconnect aircraft batteries.
- (w) Refit cannon doors and cannon fairings, close the nose cap.
- (x) Re-arm the ejection seats.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
7	1005-RAF-7G924		Mechanism, Belt Feed, LH	1	
8	1005-RAF-7G925		Mechanism, Belt Feed, RH	1	
9	A79/500005	S00113	Chute, Ammunition, LH	1	
10	A79/500007	S00114	Chute, Ammunition, RH Attaching parts for items 9, 10:-	1	
11	A79/503491	15A203A	Skewer	2	
12	A79/501169	S00322A	Chute, Links Attaching parts for item 12:-	2	
13	5305-943-6920	A25/1C	Bolt, 2BA, Hex Hd	4	C
14	5310-940-3520	A27/CP	Nut, 2BA	4	C
15	A79/503301	C/MBBT/83	Tube, Blast Attaching parts for item 15:-	2	
16	A79/503440	S001245A	Clip, Worm Type LH	1	
17	A79/503441	S001246A	Clip, Worm Type RH	1	
18	A79/503958	00A342A	Tube, Stay Assembly, Magazine Attaching parts for item 18:-	2	
19	5306-101-1256	A25/5G	Bolt, 5/16" BSF Hex Hd	2	C
20	5310-PN-2001 G1NYLON	AGS2001/G/ 1NYLON	Nut 5/16" BSF	2	C

(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2VAMPIRE MODIFICATION NO 428

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
21	5315-RAF-28P5524	SP4Z/F9	Pin, Clevis	2	C
22	5315-234-1863	AN381-3-12	Pin, Split	2	C
23	5310-941-9403	SP13/G	Washer 5/16"	2	C
24	A79/501155	S00143	Bar, Tie, Inner	2	
25	1005-E7G786	-	Gun, Hispano, 20 mm, Mk 5 No 2 (c/w Front Mounting Unit 3M1	2	
26	1005-RAF-7G1181	-	Lever, Rack Operating, LH	1	
27	1005-RAF-7G1182	-	Lever, Rack Operating, RH	1	
28	A79/501627	S00607A/1	Slide, Assembly Attaching parts for item 28:-	2	
29	5310-RAF-28M13259	A27/NS	Nut Slotted 1/2" BSF	2	C
30	5310-941-9468	SP13/N	Washer 1/2"	2	C
31	5315-241-7330	AN381-3-20	Pin, Split	2	C
32	A79/501134	S0061	Spigot, Gun Attachment Attaching parts for item 32:-	2	
33	A79/502693	S98781	Bolt, Special 3/8" BSF	4	
34	5310-941-9466	SP13/J	Washer	4	C
35	1270-G5D-1489 or 1270-RAF-5D1737	AH8360 AC11066	Unit, Firing Unit, Firing	2 2	
36	A79/504999	A15-135AND	Stirrup Assembly, LH	1	
37	A79/505000	A15-136AND	Stirrup Assembly, RH	1	
38	1005-RAF-7G1164	-	Tool, Gun Cocking	1	
39	F14A/500180	-	Camera, GSAP	1	
40	F14A/501218(Z)	-	Adaptor, Camera	1	
41	F14A/1042(Z)	-	Mounting, Camera Attaching parts for item 42:-	1	
42	5306-101-1238	A25/3E	Bolt, 1/4 BSF Hex Hd	4	C
43	5310-941-8921	SP13/E	Washer	4	C

(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

Item No	Ident No	Part. No	Nomenclature	No Off Per Set	Stores Class
44	A79/505018	A15-137AND	Gyro Gunsight Assembly Attaching part for item 45	2	
45	5315-251-4701	AN381-2-8	Pin, Split	1	C
46	F14A/3629		Recorder, Gyro Gunsight	1	
47	F14A/4008		Magazine, Gyro Gunsight Recorder	1	
48	F14A/3929		Bracket, Mounting, Gyro Gunsight Recorder	1	
49	A79/503018	RO01683ND	Pipe, Gun Heating, Aft of Bulkhead No 2 Attaching parts for item 50:-	1	
50	5305-914-0647	A25/14C	Bolt, 2BA, Hex Hd	2	C
51		RO0247	Clip	2	
52	5310-PN-2001C1 NYLON	AGS2001/C/ 1NYLON	Nut, 2BA	2	C
53	5310-RAF-28W12588	SP18/C	Washer	2	C
54	A79/504256	A15-103A	Pipe, Gun Heating, at Control Valve Attaching parts for item 55	1	
55	4730-912-8961	AGS1000/1	Clip	1	C
56	4730-912-9092	AGS1000/2	Clip	1	C
57	A79/504694	RO0246	Clip	1	
58	5305-RAF-28S2297	AGS252/54	Woodscrew, No 8 x 1/2"	1	C
59	A79/504278	A15-55A	Valve, Hot Air Control	1	
60	A79/503213	RO0627AND	Pipe, Gun Heating Assembly Attaching parts for item 60	1	
61	A79/504811	RO0622A	Clamp Assembly	2	
62	A79/504702	RO0619A	Bracket, Support	2	
63	A79/503200	RO0305	Bolt, 1/4" BSF Special	2	

(Issued with A/L 356)

RESTRICTED

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
64	5310-RAF-28M12 928	A27/EP	Nut 1/4" BSF	2	C
65	5310-941-8921	SP13/E	Washer	2	C
66	A79/503204	ROO211A	Clip, Pipe	1	
67	5305-943-6920	A25/1C	Bolt, 2BA, Hex Hd	1	C
68	5310-PN-2001C1 NYLON	AGS2001/C/1 NYLON	Nut, 2BA	1	C
69	A79/503658	V15-75AND	Pipe, Gun Heating Assembly Attaching parts for item 69	1	
70	A79/504811	ROO622A	Clamp Assembly	1	
71	A79/504702	ROO619A	Bracket, Support	1	
72	A79/503200	ROO305	Bolt, 1/4" BSF Special	1	
73	5310-RAF-28M12 928	A27/EP	Nut, 1/4" BSF	1	C
74	5310-941-8921	SP13/E	Washer	1	C
75	A79/503203	ROO167A	Clip	1	
76	5305-943-6920	A25/1C	Bolt, 2BA, Hex Hd	1	C
77	5310-PN-2001C1 NYLON	AGS2001/C/ 1NYLON	Nut, 2BA	1	C
78	A79/503206	ROO301	Connector, Flexible Attaching parts for item 78	3	
79	4730-912-9562	AGS1000/3	Clip, Hose	5	C
80	A79/503207	ROO302	Connector, Flexible Attaching parts for item 80	1	
81	4730-912-9562	AGS1000/3	Clip, Hose	2	C
82	A79/503208	ROO287A	Elbow at Jet Pipe, LH	1	
83	A79/503209	ROO288A	Elbow at Jet Pipe, RH Attaching parts for items 82 and 83	1	
84	A79/503210	ROO195	Gasket, Jointing	2	

(Issued with A/L 356)

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RESTRICTED

- 10 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 428

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-

Items 7-21, 23-30, 32-44, 46-84 - Return to Stores

Items 22, 31, 45 - To be discarded

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

(a) In aircraft log book or E/E 512A as applicable.

(b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO T 19/1.

Weight Sheet Summary

20. This modification causes a Tare Weight Change of + 39.5 lb and a moment change of - 8715 lb in.

Reference: File, Headquarters Support Command, 2501/110/5846

Attachment: Department of Air Drawing B14595

Date of Issue: 28th August 1967

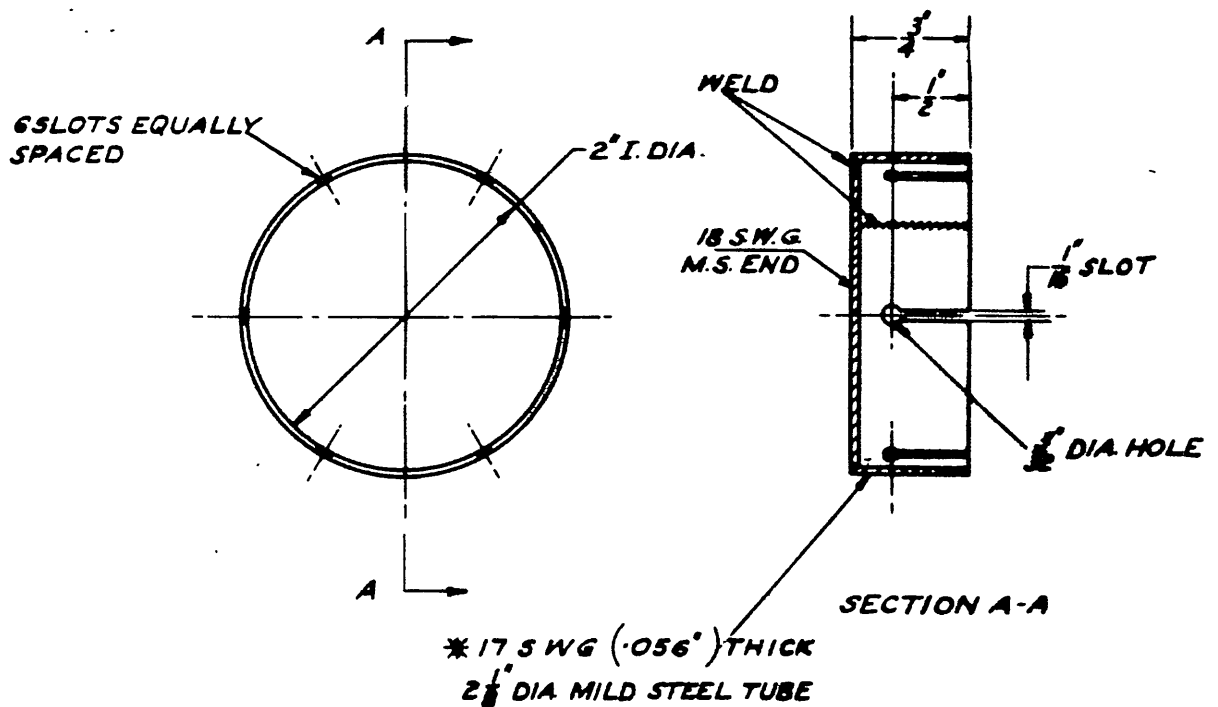
(Issued with A/L 356)

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# DO NOT SCALE

ISSUE NO.	DATE	ALTERATION	D.T.L.	REVISIONS	APPROVED
	9/1/62				



MATERIAL \* IF TUBE SIZE NOT AVAILABLE, FOLD FROM  
1/2" M.S. STRIP & WELD AS INDICATED.

REFERENCE		ISSUED BY			TITLE		
		DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			BLANKING CAP - GUN HEATER PIPES		
LIMITS UNLESS STATED		MATERIAL	AS ABOVE		COMPONENT OF		
DECIMALS	± .010"	SPEC.	APPROVED COMMERCIAL		MACHINE		
FRACTIONS	± 1/32"	TREATMENT	BREAK SHARP EDGES		ENGINE	GOBLIN	
ANGLES	± 1°	FINISH	CAD. PLATE		TECH. ORDER	S.T.I. GOBLIN/46	
SURFACE FINISH		SCALE	FULL SIZE		DRAWING NO.	B14595	
AUSTRALIAN STANDARD		DRAWN	CDULSON	APPROVED			
ENR. DOW. PRACTICE A.S. 621		TRACED	E. MCK.	CHECKED			
							DWG. A SIZE



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AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 427

Class : 4

ELECTRICAL - INTRODUCTION OF GRAVINER SERIES 5 HSRS FIRE  
DETECTOR SWITCHES IN LIEU OF SERIES 3 SWITCHES

Introduction

1. (a) The Reason for the Modification

To introduce fire detector switches of an improved type which are sealed to prevent the ingress of moisture, etc, into the thermal switch compartment.

(b) Description and Features by which the Modification can be Recognised

The new detector switch has a "snap on" cover fitted over the terminal connections, whereas the superseded switch has a cover attached with two securing screws.

(c) Relationship with Other Modifications

Not applicable.

(d) Reason for Classification

Introduction of improved spares.

(e) Effect on Servicing and/or Ground Handling

Not applicable.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

RESTRICTED

(Issued with A/L 318)

RESTRICTED

- 2 -

AAP 72:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 427

Manhours and Trade Mustering Involved

3. Incorporation time will be absorbed into normal servicing procedures. The trade mustering responsible is Electrical Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft when serviceable RAAF stocks of item 3 are exhausted.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	1680-RAF-27N340	Graviner P/No 150D/01/300(2) (RAF Ref No 27N/340)	Switch, Fire Detector	10	
2	5940-258-3587	32440	Terminal	20	

RESTRICTED

(Issued with A/L 318)

RESTRICTED

- 3 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 427

Supply

11. Modification sets are to be obtained as follows:-

Items 1 and 2 - Demand from unit store when serviceable stocks of item 3 are exhausted.

Method and Sequence of Incorporation

12. Fit item 1 in lieu of item 3 using terminals (item 2) in lieu of existing cable terminals.

NOTE: To enable the new terminals to be fitted it will be necessary to strip off (immediately behind the bared wire) a length of the outer layer of fibre glass braid sufficient only to permit the insulating sleeve of the terminal to be crimped on to the teflon insulation of the Unifire F12 cable, ie, the overall diameter of the cable is slightly larger than the inner diameter of the terminal insulating sleeve.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
3	W21F/5642		Switch, Fire Detector	10	A

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application and is to be actioned as follows:-

Item 3 - Classify as not repairable and transfer to Board of Survey.

Action on Stock Holdings of Removed Items

15. Not applicable.

RESTRICTED

RESTRICTED

- 4 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 427

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Apply a tong tester to each newly installed switch and ensure that the warning light operates.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO "E" 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Note: Where replacement of existing detector switches is carried out on a progressive basis, record part incorporation of the modification. When all switches have been replaced, record as above.

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

References: Files, Headquarters Support Command 2501/110/5173 and 2603/5/71.

Date of Issue: 23rd August 1965.

RESTRICTED

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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

Class 2

WINDSCREEN ARCH MEMBER AND SIDE CASTINGS -  
INTRODUCTION OF REINFORCEMENT

Introduction

1. (a) The Reason for the Modification

To prevent probable loss of canopy due to possible fracturing of the windscreen side castings.

(b) Description and Features by which the Modification can be Recognised

The modification introduces steel reinforcing straps over the junction of the side castings and the windscreen arch member on both the aft and outboard faces.

(c) Relationship with Other Modifications

Nil.

(d) Reason for Classification

Based on the safety aspect.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk35A and 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 40 man-hours are required to incorporate the modification. The trade mustering involved is airframe fitter - 40 man-hours.

RESTRICTED

(Issued with A/L 326)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable, but not later than the next C servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V426.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, etc

8. The following tools are required and are to be obtained from Hawker De Havilland Australia Pty Ltd, BANKSTOWN:-

8" Screwdriver Special Radius Blade	1 off
12" Screwdriver Special Radius Blade	1 off
$\frac{1}{4}$ " Back Marker	1 off
$\frac{3}{16}$ " x 90° Adjustable Countersink	1 off
$\frac{3}{16}$ " x 120° Adjustable Countersink	1 off
$\frac{1}{4}$ " x 120° Adjustable Countersink	1 off
$\frac{3}{8}$ " WAD Punch	1 off

Drawings

9. Drawing No A15891 Sheets 1 and 2 attached. (Hawker De Havilland Drawing Nos Z15-1831 and 15FC3313-4 may be obtained from Hawker De Havilland).

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 326)



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504981	15FC-3677ND	Reinforcing LH	1	
2	A79/504982	15FC-3678ND	Reinforcing RH	1	
3	A79/504983	15FC-3679ND	Reinforcing LH	1	
4	A79/504984	15FC-3680ND	Reinforcing RH	1	
5	A79/504985	DHS 365/3C	Bolt 120° Csk Hd 2BA	16	
6	A79/504986	DHS 365/6C	Bolt 120° Csk Hd 2BA	2	
7	A79/504987	DHS 365/9E	Bolt 120° Csk Hd $\frac{1}{4}$ " BSF	6	
8	A79/504988	DHS 365/10E	Bolt 120° Csk Hd $\frac{1}{4}$ " BSF	2	
* 9	5310-PN-2007C1 Nylon	AGS2007/C1	Anchor Nut (Nyloc) 2BA	6	
10		Z15-1833ND	Washer, Special Csk	6	
*11	5310-PN-2001C Nylon	AGS2001/C1	Nut, (Nyloc), 2BA	18	
12	5310-PN-2001E1 Nylon	AGS2001/E1	Nut, (Nyloc), $\frac{1}{4}$ " BSF	6	
13	5310-100-6473	A27/CT	Nut, Plain, 2BA	2	
14	5310-RAF-28M 12931	A27/ET	Nut, Plain, $\frac{1}{4}$ " BSF	2	
15	5305-RAF-28D 8507	AS1242/5C	Bolt, 90° Csk Hd 2BA	2	
16	5305-RAF-28D 8310	AS1242/6C	Bolt, 90° Csk Hd 2BA	6	
17	5320-913-7142	AS2229/305	Rivet 90° Csk Hd 3/32" Dia	12	
18	5310-941-8920	SP10/E	Washer, 26 SWG, $\frac{1}{4}$ " BSF	8	
19	5310-941-9454	SP10/C	Washer, 26 SWG, 2BA	20	
20	5310-PN	FC15-175ND	Washer, Special 18 SWG	16	
21		Spec L76	Aluminium Alloy $\frac{1}{4}$ " x $\frac{1}{2}$ " x $\frac{5}{8}$ "	A/R	
22	8040-PN-1410	Bostik 1410	Sealant	A/R	C
23	K4/11055		Selenious Acid	A/R	C
24	NIV		Filler, "Hermetal", Spec DTD900/4572	A/R	C

RESTRICTED

(Issued with A/L 326)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
25	8010-018-5103	AS2230-308	Enamel, Cellulose, Matt Black - Spec K18	A/R	C
26	8010-018-5140		Covering, High Speed Alum	A/R	C
27	8010-220-2104		Epoxy Primer, Spec DTD5555	A/R	C
28			Alum Alloy Spec L72 18.6" x .4", Gauge to Suit	A/R	C
29	5320-101-2154		Rivet, 120° Csk Hd 3/32" Dia	4	C
30			Alum Alloy Spec L72 24" x 3.5" Gauge to Suit	A/R	C
31	8010-018-5103		Filler, Eppistop Types A and B	A/R	C

" \* If necessary, anchor nuts Ident No 5310-PN-2008C1 (Nylon) Part No AGS2008/C1 may be used in lieu of item 9, and thin nuts Ident No 5310-PN-2002-C1 (Nylon) Part No AGS2002/C1 may be used in lieu of item 11."

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 20 : Demand on Modification Centre, Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 426.

Items 21 - 27 : Draw from unit stores.

Method and Sequence of Incorporation

12. The airframe fitter is responsible for the complete paragraph.

- (a) Carry out a crack detection check on the windscreen structure in accordance with STI Vampire/156 immediately prior to incorporating the modification.

RESTRICTED

(Issued with A/L 326)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

- (b) Refer to Drawing No A15891 sheet 1. From the aft face of the windscreen side casting, remove the four 4BA bolts securing the extruded guide Part No 15FC-2933 (ref), retaining only one bolt.
- (c) From the extruded guide, drill out the rivets that secure the top three, now redundant, anchor nuts. With the guide in position, re-drill the three holes No 11 through both guide and side casting.
- (d) Remove four, now redundant,  $\frac{1}{4}$ " BSF bolts, nuts and washers from the junction of the side casting and the windscreen arch, Part No 15FC-3163 (ref).
- (e) Position the reinforcing (item 1) as shown, and dress the profile to suit the windscreen casting. It is not necessary to maintain the width of the chamfer.
- (f) Mark off and drill three No 11 and four letter 'F' holes in the reinforcing to match the holes in the structure, then drill the one additional No 11 hole through all parts, as shown. Countersink all holes in the top surface of the reinforcing to suit their respective bolt heads.
- (g) Remove the reinforcing and guide. Position the three new anchor nuts (item 9) on the extruded guide picking up on the original anchor nut positions, then secure them with rivets (item 17).
- (h) Deburr all parts and restore the local finish using selenious acid (item 23) epoxy primer (item 27) and lacquer (item 25).
- (j) Prior to assembly, fill the existing countersunk areas in the side casting at the letter 'F' holes with "Hermetal" filler (item 24) and at the re-drilled No 11 holes, with special washers (item 10).
- (k) Coat all mating faces with "Bostik 1410", then secure all items in position with their attachments as shown on sheet 1 of the drawing. Remove the surplus threads of the top five bolts where necessary ensuring that the bolt heads are flush and that the slots are aligned as shown. Secure the retained 4BA bolt in the lowest hole of the side casting and extruded guide.
- (l) Install item 2 in a similar manner to that described in paras (b) to (k).

RESTRICTED

(Issued with A/L 326)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

- (m) Refer to sheet 2 of the drawing. Remove one 2BA and four 6BA redundant bolts, nuts and washers from the positions shown in the side casting. The four 6BA holes are to be re-drilled No 11.
- (n) Position the reinforcing (item 3) (ref) on the outside of the side casting as illustrated, then dress the profile to suit the structure. Drill the four No 11 holes through from the casting and then drill an additional four No 11 holes through all parts spaced equally between existing holes as shown. Countersink the top surface of the reinforcing to suit the attachment bolts called for.
- (o) Remove the reinforcing, deburr all holes and restore the local finish with selenious acid (item 23), epoxy primer (item 27), matt black lacquer (item 25) and silver lacquer (item 26).
- (p) Fill the countersunk area of the top existing hole in the side casting with "Hermetal" filler (item 24).
- (q) Coat all mating surfaces with Bostik 1410 (item 22) then secure the reinforcing to the side casting with the attachments shown on sheet 2 of the drawing. Remove surplus threads where necessary.
- (r) Install item 4 in a similar manner to that described in paras (m) to (q).
- (s) Close the canopy and ensure that a minimum clearance of .002" exists between the reinforced windscreen arch and the canopy hatch seal capping strip. Also check that the gap between the hatch casting and the canopy rail is between 0.30 ins and 0.50 ins. If either, or both of these requirements is not met, refer to Drawing Nos Z15-1831 and 15FC-3313-4, and carry out the appropriate operations as shown.

Items Removed

13. The following items are removed on incorporation of the modification:-

RESTRICTED

(Issued with A/L 326)

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
32	5305-RAF-28D9294	AS1242/5B	Bolt, 4BA	6	C
33	5310-PN-2008B1 Nylon	AGS2008/B1	Anchor Nut, 4BA	6	C
34		AS160/305	Rivet, 3/32" Dia	12	C
35	5305-RAF-28D9435	AS1242/8E	Bolt, 1/4" BSF	6	C
36	5305-RAF-28D8329	AS1242/9E	Bolt, 1/4" BSF	2	C
37	5310-RAF-28M12931	A27/ET	Nut, Thin, 1/4" BSF	8	C
38	5305-RAF-28D8507	AS1242/5C	Bolt, 2BA	2	C
39		A37/A14	Bolt, 6BA	8	C
40	5310-PN-2002A1 Nylon	AGS2002/A1 Nylon	Stiffnut, 6BA	8	C

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be actioned as follows:-

Items 32 - 40 : Discard.

Action on Stock Holdings of Removed Items

15. Retain as current stock.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. After the incorporation of this modification, carry out cabin pressurisation leak tests in accordance with current procedure.

Recording

19. Record incorporation of the modification as follows:-

RESTRICTED (Issued with A/L 326)

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 426

- (a) In aircraft log book.
- (b) On Form E/E 78.
- (c) On the wing modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. Amendments to weight sheet summaries will be consolidated and issued by Headquarters Support Command.

The effect of this modification on the weight and balance of the aircraft is as follows:-

Item	Weight (lb) $\pm$	Arm (in) $\pm$	Moment (lb in) $\pm$
Reinforcing Straps	+ 1.25	- 76.8	- 96

References: Files, Headquarters Support Command 2501/110/5457  
and 2601/79/53-426

Attachments: Drawing No A15891 Sheets 1 and 2

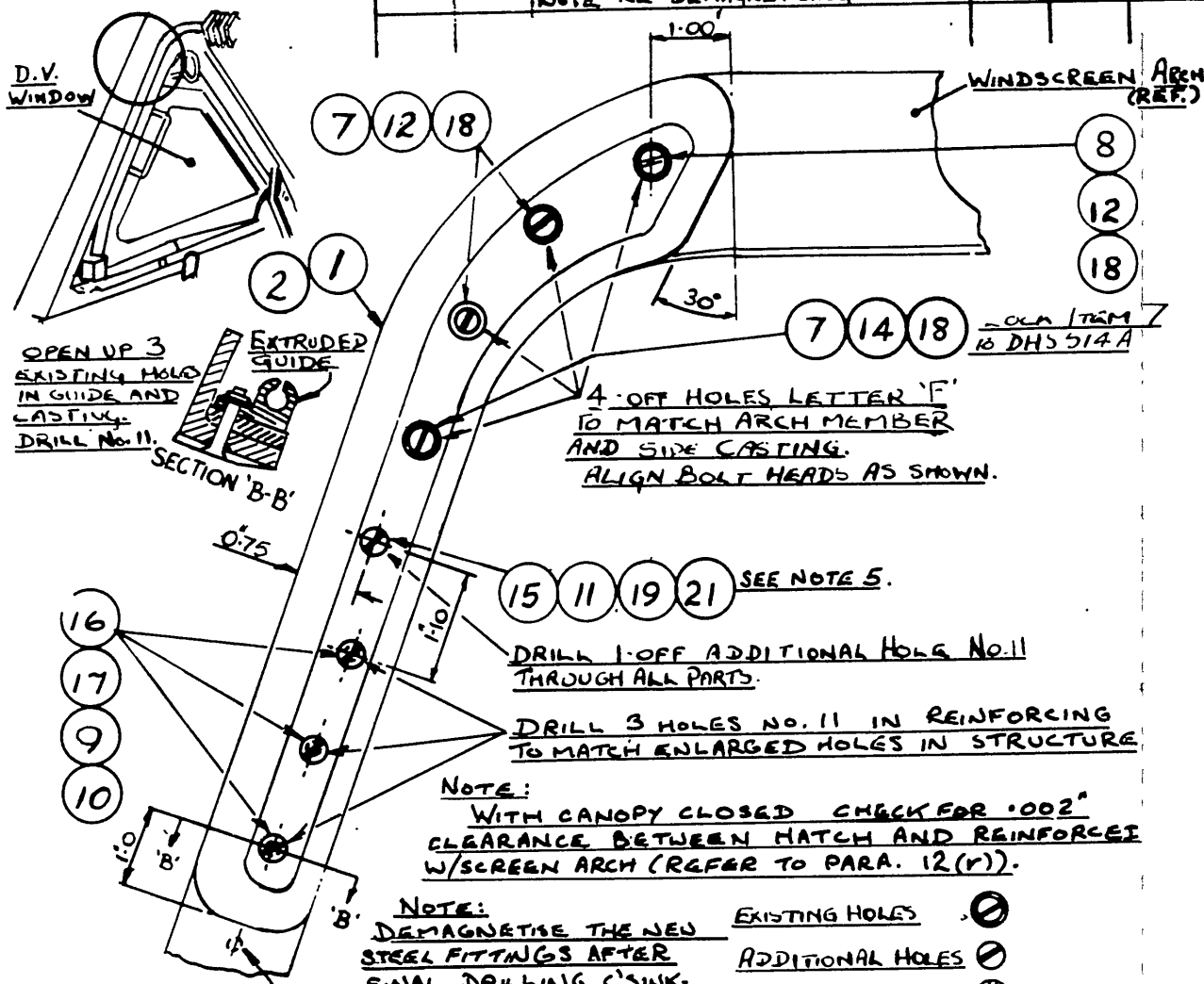
Date of Issue: 1st November 1965

RESTRICTED

(Issued with A/L 326)

NOT SCALE

ISSUE NO	DATE	ALTERATION	D.L.	INITIALS	APPROVED
2	11-5-65	NOTES ADDED RE .002" GAGE & EPAPTOP. NOTE RE DEMAGNETISING ADDED.		720	



EXISTING 4BA BOLT.

NOTE:  
A FILLET OF  
EPAPTOP, EPOXY  
RESIN MAY BE  
APPLIED BETWEEN  
REINFORCING AND  
W/SCREEN STRUCTURE  
TO REDUCE LOSS OF  
COCKPIT PRESSURE.

NOTES:-

1. ALL BOLT HEADS MUST BE FLUSH
2. DRESS PROFILE OF REINFORCING TO MATCH W/SCREEN STRUCTURE.
3. MAKE JOINTS WITH 'BOSTIK 1410'.
4. NUMBERS IN CALLUPS INDICATE ITEM NUMBERS IN THE MODIFICATION PARTS LIST
5. USE ITEM 21 TO MANUFACTURE A PROFILE WASHER TO BE LOCATED BETWEEN ITEM 11 AND THE W/SCREEN CASTING. THIS ITEM WILL NOT BE REQUIRED ON ALL AIRCRAFT.

THIS DRAWING SHOWS INSTALLATION  
OF ITEM - 1. INSTALLATION OF ITEM - 2  
IS SIMILAR.

HAWKER DE HAVILLAND DRAWING NO. OOM 1426. SH'T 1.

DEPARTMENT OF AIR  
DIRECTOR-GENERAL  
OF ENGINEERING.

REINFORCEMENT OF WINDSCREEN  
ARCH MEMBER AND SIDE CASTINGS.

VAMPIRE MK.35 & 35A.

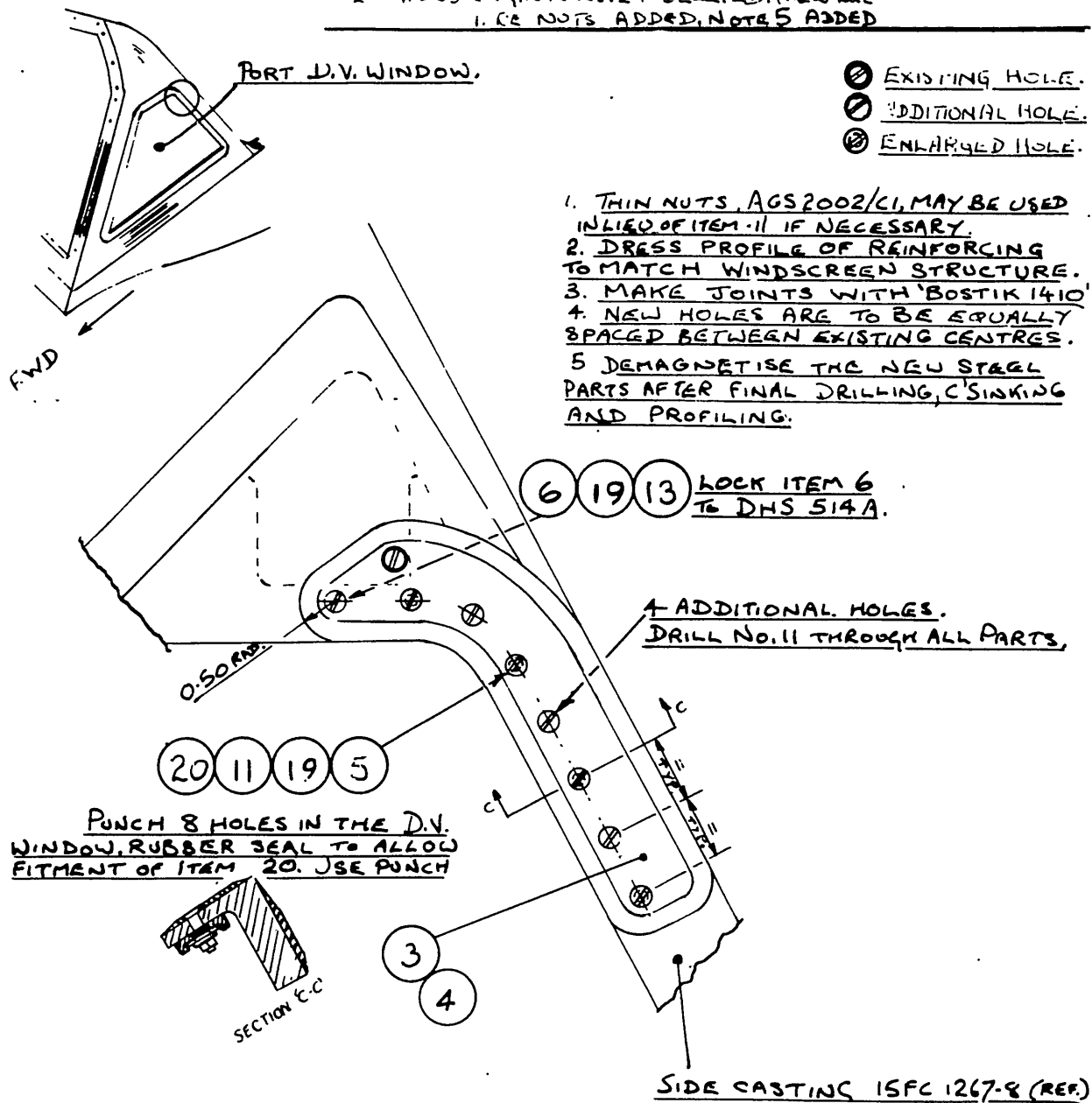
VAMPIRE MOD. 426

A15891  
SHT 1 OF 25HTS.

J.D.S.

221

2 11-3-65 ORIGINAL NOTE 1 DELETED. NEW NWS  
1. CE NOTS ADDED, NOTE 5 ADDED



THIS DRAWING SHOWS INSTALLATION OF ITEM 3  
INSTALLATION OF ITEM 4 IS SIMILAR.

HAWKER DE HAVILLAND DRAWING No. OOM 1426 SHEET 2

DEPARTMENT OF AIR.  
DIRECTOR GENERAL  
OF ENGINEERING.

REINFORCEMENT OF WINDSCREEN  
ARCH MEMBER AND SIDE CASTINGS

VAMPIRE MK. 35-35A

VAMPIRE MOD. 426.

J.D.S.

7.28

A15891  
SHEET 2



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 424

Class: 4

NAVIGATION LIGHT FAIRINGS - INTRODUCTION OF FIBRE  
GLASS REINFORCING

Introduction

1. (a) The Reason for the Modification

This modification introduces fibre glass reinforcing to overcome service defects.

(b) Description and Features by Which the Modification can be Recognised

The modification provides for the fitment of fibre glass tape to strengthen attachment edges to minimise cracking around screw holes.

(c) Relationship with Other Modifications

Nil.

(d) Reason of Classification

To give navigation light fairings a longer service life.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35A and 35 aircraft.

(Issued with A/L 307)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 424

Man-Hours and Trade Mustering Involved

3. Approximately 4 man-hours are required to incorporate the modification. The trade mustering responsible is Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all Vampire aircraft when replacing damaged navigation light fairings after modified parts become available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V424.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79-504950	W15-1605	Cover, Navigation Light Port	1	
2	A79-504951	W15-1606	Cover, Navigation Light Stbd	1	

RESTRICTED

(Issued with A/L 307)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 424

Supply

11. Modification sets are to be obtained as follows:-

Item 1 or 2 - Draw from unit store.

Method and Sequence of Incorporation

12. Remove the damaged navigation light cover and install new cover (item 1 or 2) in accordance with current authorised procedure.

Note: Painting of new covers is not required.

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

<u>Ident No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Remarks</u>
A79-501953	D00-6543	Cover Navigation Light Port	To be returned to Hawker de Havilland, BANKSTOWN, for modification action.
A79-501955	D00-6544	Cover Navigation Light Stbd	

Additional Information

17. Not applicable.

Tests

18. Nil.

(Issued with A/L 307)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 424

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command 2501/110/5366

Date of Issue: 31st May 1965

(Issued with A/L 307)

RESTRICTED

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 422

Class: 2

REPOSITIONING OF MISCELLANEOUS EARTH CONNECTIONS AND  
PROVISION OF IMPROVED CABLE TERMINATION  
AT THE VOLTAGE REGULATOR

Introduction

1. . (a) The Reason for the Modification

To improve the security of cable terminations at the voltage regulator terminal block.

(b) Description and Features by which the Modification can be Recognised

The modification is not readily recognisable. After incorporation, terminal No 4 on the voltage regulator terminal block will have one only cable connected to it.

(c) Relationship with Other Modifications

Where Vampire Modification No 403 is incorporated subsequent to (or concurrently with) this modification, then the earth connection from the throttle micro switch is to be made (using terminal lug 5940-197-0613) to the main earth point in lieu of terminal No 4 on the regulator terminal block.

(d) Reason for Classification

Elimination of a fault hazard and low incorporation time.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

RESTRICTED

(Issued with A/L 312)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 422

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately one man-hour will be required to incorporate the modification. The trade mustering responsible is Electrical Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next C servicing after modification parts are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. (a) 5120-256-1535 - Crimping Tool Part No 47387  
(b) 5120-318-9875 - Crimping Tool Part No 47386

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED (Issued with A/L 312)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 422

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5975-940-0055	31898	Ferrule Cable End	1	C
2	6145-RAF-5E4186		Cable Electric Uninyvin 14	13"	C
3	5940-204-5080		Lug Terminal	1	C
4	5940-197-0613		Lug Terminal	3	C
5	5940-258-3587		Lug Terminal	3	C
6	I32A/94		Cord	A/R	C
7	K4/152		Beeswax	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1 to 5 : Demand from unit store.

Method and Sequence of Incorporation

12. (a) Isolate electrical power from the aircraft.
- (b) Open the starboard ventral compartment and locate the voltage regulator and cutout unit mounted on bulkhead No 2.
- (c) Disconnect, remove from the aircraft and discard the AA12 regulator earth cable (connected to terminal 4 on regulator and adjacent earth terminal block).
- (d) Using items 1, 2 and 3 make up a new earth cable and connect to terminal 4 of regulator and adjacent SBAC type earth terminal block.

Note: If existing earth cable is size AA14, leave intact but fit terminals as above.

- (e) Disconnect all other cables from terminal 4 of regulator, re-route and connect to earth terminal below regulator and cutout using item 4.
- (f) Disconnect all cables from regulator terminals 3 and 5, fit terminal lugs (item 5) and reconnect to respective terminals.

RESTRICTED

(Issued with A/L 312)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 422

- (g) Secure all cables as necessary using item 6 treated with item 7.

Items Removed

13. Not applicable.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Run the engine and functionally check the DC generator system for correct operation.

Recording

19. Record incorporation of the modification as follows:-
- (a) In the Airframe log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

Reference: File, Headquarters Support Command 2501/110/5093

Date of Issue: 19th July 1965

RESTRICTED

(Issued with A/L 312)



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 421

Class: 2

FITMENT OF COVERS IN PORT AND STARBOARD  
REAR AMMUNITION BAYS

Introduction

1. (a) The Reason for the Modification

To prevent the ingress of loose objects into the aircraft from equipment normally stowed in the aircraft ammunition bins during ferry flights.

(b) Description and Features by which the Modification can be Recognised

Two rectangular shaped metal covers are fixed to the sides of the port and starboard ammunition bins with screws. These cover the existing holes in the bottom of each bin.

(c) Relationship with other Modifications

Nil.

(d) Reason for Classification

Improved flying safety.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and 35A aircraft.

(Issued with A/L 302)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 421

Man-Hours and Trade Mustering Involved

3. Approximately 3 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Airframe fitter	-	2 man-hours
Aircraft metal worker	-	1 man-hour

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots or the civilian contractor responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing No A15433 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5305-175-3405	AGS 252-37	Screw Wood Rd Hd Slotted Drive Brass, Cad Plated 6 Gauge x $\frac{1}{2}$ " long	6	C

RESTRICTED

(Issued with A/L 302)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 421

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	<del>I1/10029</del> 11/10	<del>BSL 72</del>	<del>Al Alloy 22 SWG Sheet</del> <del>4028 (Spec L72)</del> ALUMINIUM SHEET 22 SWG	A/R	C
3			Cover Assy LH	1	C
4			Cover Assy RH	1	C

A/L 31.

Supply

11. Modification sets are to be obtained as follows:-

Items 1 and 2 - Draw from unit store. Unit demands for item 1 must quote cad plating in nomenclature.

Items 3 and 4 - Manufacture from item 2.

Method and Sequence of Incorporation

12. (a) Manufacture cover assemblies to the dimensions and specifications as shown on the Drawing A15433.
- (b) Open the port and starboard ammunition bin doors.
- (c) Locate the opening in the bottom of the port rear ammunition bin and fit cover plate (item 3), using three round headed wood screws (item 1).
- (d) Remove pneumatic system air bottle from position on the starboard rear ammunition bin.
- (e) Locate the opening in the bottom of the starboard rear ammunition bin and fit cover plate (item 4), using three round headed wood screws (item 1). Ensure that the two pneumatic lines (P/Nos S15-1071 and S15-1075) do not chafe on the cover plate.
- (f) Refit the pneumatic system air bottle and wire lock the connections and retaining strap bolt. Inflate the pneumatic system to 450 psi and test for leaks.
- (g) Close the port and starboard ammunition bin doors.

Items Removed

13. Nil.

(Issued with A/L 302)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 421

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On the Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5005

Attachment: Drawing No A15433

Date of Issue: 15th March 1965

(Issued with A/L 302)

RESTRICTED

1

SECURITY CLASSIFICATION

4

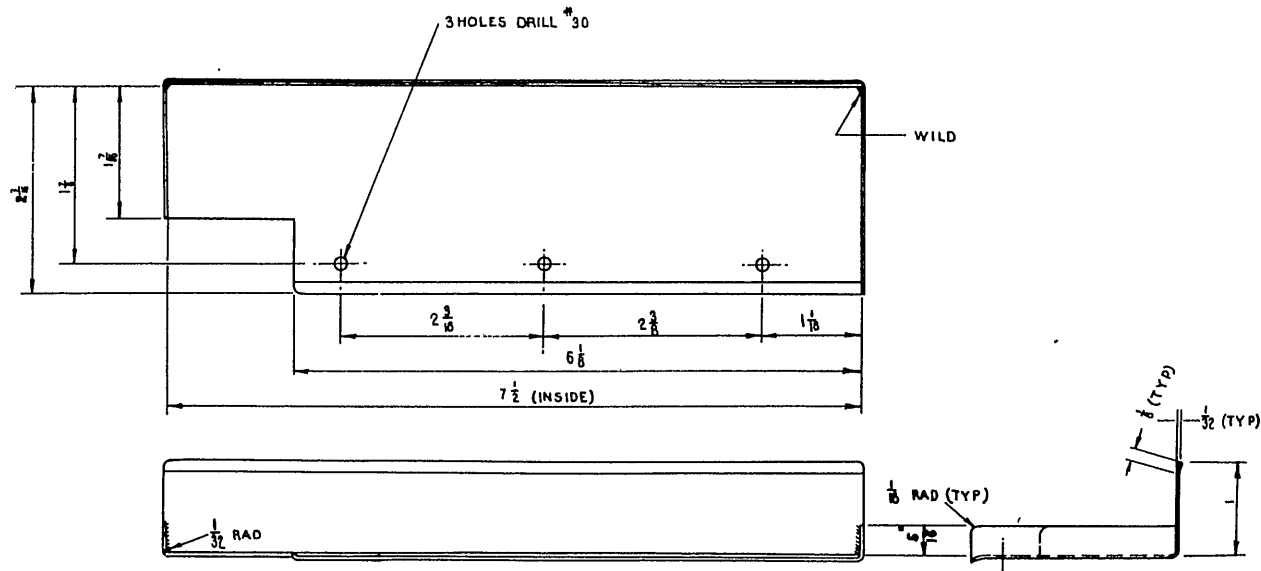
3

2

1

DO NOT SCALE

THIRD ANGLE PROJECTION

DRAWING NUMBER  
A-15433-1

A

ISSUE	DATE	ALTERATION	INITIALS	APPROVED
	18-1-65			

ITEM	PART	IDENT	DESCRIPTION	QTY	ZONE
<b>DEPARTMENT OF AIR</b>					
ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND			REFERENCE 1 DIM'S IN INCHES 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5	MODIFICATION <b>VAMPIRE #421</b>	
DRAWN R.G.W.			CHECKED <i>[Signature]</i>	EFFECTIVE ON <b>MK 35 &amp; 35A</b>	
TRACED G.F.H.			APPROVED <i>[Signature]</i>	COMPONENT OF <b>FITMENT OF COVERS IN PORT AND STARBOARD REAR AMMUNITION BOXES</b>	
LIMITS UNLESS STATED DECIMALS ± .010" FRACTIONS ± 1/32" ANGLES ± 0°30'			TREATMENT <b>ZINC CHROMATE PRIME</b>	TITLE <b>COVER - PORT</b>	
MATERIAL <b>22 GWS MS SHEET</b>			FINISH <b>WHITE GLOSS ENAMEL</b>	SCALE <b>1</b>	NEXT ASSEMBLY <b>A 15433</b>
			SPECIFICATION <b>COMMERCIAL</b>	DRAWING NUMBER <b>A-15433-1</b>	SIZE <b>B</b>

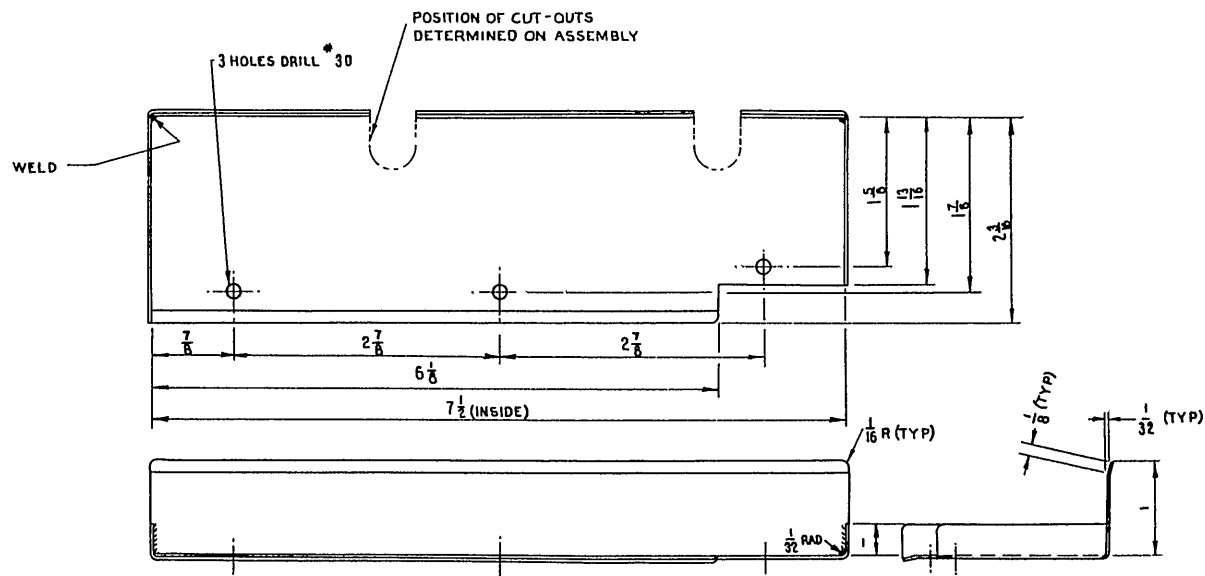
SECURITY CLASSIFICATION

A-15433

SECURITY CLASSIFICATION

DO NOT SCALE

THIRD ANGLE PROJECTION

DRAWING NUMBER  
2-15433-2  
A-15433-2

ISSUE	DATE	ALTERATION	INITIALS	APPROVED
1	27 1 65			
2				
3				
4				
5				
6				
7				
8				
9				
10				

ITEM	PART	IDENT	DESCRIPTION	QTY	ZONE
<b>DEPARTMENT OF AIR</b> ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND					
DRAWN R G W TRACED G F H LIMITS UNLESS STATED DECIMALS ± .010" FRACTIONS ± 1/32" ANGLES ± 0.30°			REFERENCE 1 DIM'S IN INCHES 2 DEF (AUST) - 85 3 DEF (AUST) - 46 4 5 TREATMENT ZINC CHROMATE PRIME MATERIAL 22 GING M 5 SHEET		
FINISH WHITE GLOSS ENAMEL			MODIFICATION VAMPIRE 421 EFFECTIVE ON MK 35 A 35 A COMPONENT OF FITMENT OF COVERS IN PORT AND STARBOARD REAR AMMUNITION BOXES TITLE COVER - STARBOARD		
SCALE 1" = 1"			NEXT ASSEMBLY A-15433		
SPECIFICATION COMMERCIAL			DRAWING NUMBER A-15433-2		
SIZE B			SECURITY CLASSIFICATION		

0A 310





RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 420

Class 2

VAMPIRE MK 35 AND MK 35A AIRCRAFT - INSTALLATION OF  
VHF VOLUME CONTROL

Introduction

1. (a) The Reason for the Modification

To provide a continually variable pilot operated volume control for the VHF installation in Vampire Mk 35 and Mk 35A aircraft.

(b) Description and Features by which the Modification can be Recognised

A control knob labelled "AUDIO VOLUME" is situated below the AN/ARN-6 Radio Compass indicator.

(c) Relationship with Other Modifications

Nil.

(d) Complication of Classification

Nil.

(e) Effect on Servicing and/or Ground Handling

Volume control operation is to be checked during all aircraft functional radio checks.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

This modification provides an additional control for the pilot to enable adjustment of the VHF output level. Operation of this control also varies the Radio Compass output level.

(h) Number of Parts Comprising the Order

One.

RESTRICTED

(Issued with A/L 296)

RESTRICTED

- 2 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 420

Application

2. This modification is applicable to all Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. (a) Airframe Fitter 1 hour  
(b) Instrument Fitter  $\frac{1}{2}$  hour  
(c) Radio Technician (Air) 2 hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all Vampire Mk 35 and Mk 35A aircraft as soon as possible but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. All units operating Vampire Mk 35 or Mk 35A aircraft are responsible for the incorporation of this modification.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings and Photographs

9. Drawing No A15441 Sheet 1 (Issue 2) attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5905-011-9859	501423	Resistor Variable 1,000 ohm, Painton and Co Ltd Type PV2 Model 501423	1	C

RESTRICTED

(Issued with A/L 296)

RESTRICTED

- 3 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 420

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	5355- <del>019</del> <sub>020</sub> -2500		Knob Round, Aegis Type MV3 Engraved to RAAF Drawing No A15441 Sheet 2	1	C
3	6145-G5E-30154		Cable Electric AA20	2 ft	C
4	5940-258-3025		Terminal Pre-insulated Connector Butt Red	1	C
5	K4/11177		Tape Electric Black PVC Adhesive	As Req'd	C
6	5975-017-6795		PVC 3 mm Tubing Flexible Non Metallic Elec	1 ft	C

Supply

11. Modification sets are to be obtained as follows:-

(a) Items 1 and 2 : Demand on Modification Section, No 2 Aircraft Depot, for item 5831-NSL-0002 Vampire Modification No 420.

(b) Items 3, 4, 5 and 6 : Draw from unit store.

Method and Sequence of Incorporation

12. (a) Instrument Fitter

Lower the instrument panel and remove the nut from the instrument panel hinge pivot bolt adjacent to the AN/ARN-6 Radio Compass indicator.

(b) Airframe Fitter

Drill a 3/8" diameter hole in the instrument panel as shown in Drawing No A15441 Sheet 1 (Issue 2) Fig 1. (Ensure all swarf is collected and removed from cockpit).

(Issued with A/L 296)

RESTRICTED

RESTRICTED

- 4 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 420

(c) Radio Technician (Air)

- (i) Solder 6 inches of cable (item 3) to the centre terminal of the potentiometer (item 1). Cover this joint with 3 mm PVC sheathing (item 6).
- (ii) Refer to Drawing No A15441 Sheet 1 (Issue 2) Fig 2. Disconnect the Tel +2 wire from the Tels Select Compass/VHF-UHF switch.
- (iii) Check that the Tel +2 wire will reach the terminals of the potentiometer when this item has been installed, with the instrument panel in the lowered position. If the wire will not reach, add sufficient cable (item 3) using the Butt Connector Red (item 4) and an appropriate crimping tool.
- (iv) Temporarily hold the potentiometer in place with terminals pointing down. Solder the Tel +2 cable to the terminal nearest the Tels Select switch, covering the joint with 3 mm PVC sheathing (item 6).
- (v) Place 1/4 inch of 3 mm PVC sheathing (item 6) over the unused terminal of the potentiometer. Bend the terminal back on the potentiometer body so that the sheathing is held in position.
- (vi) Install the potentiometer in the instrument panel with its terminals facing downwards.
- (vii) Trim to correct length and solder the wire from the centre terminal of the potentiometer to the terminal on the Tels Select switch from which the Tel +2 cable was removed in step (ii).
- (viii) Secure knob (item 2) on the potentiometer shaft.

(d) Instrument Fitter

Replace and lock in position the nut removed from the instrument panel hinge pivot bolt by step (a). Raise the instrument panel.

(Issued with A/L 296)

RESTRICTED

RESTRICTED

- 5 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 420

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Switch on TR1936 VHF set and ensure audio volume control varies audio output throughout its full range.

Recording

19. Record the modification in the Airframe Log Book and on Form E/E 78.

Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of the incorporation of this modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command 2846/2/187 and 2501/110/5141

Attachment: Drawing No A15441 Sheet 1 (Issue 2)

Date of Issue: 27th November 1964

(Issued with A/L 296)

RESTRICTED

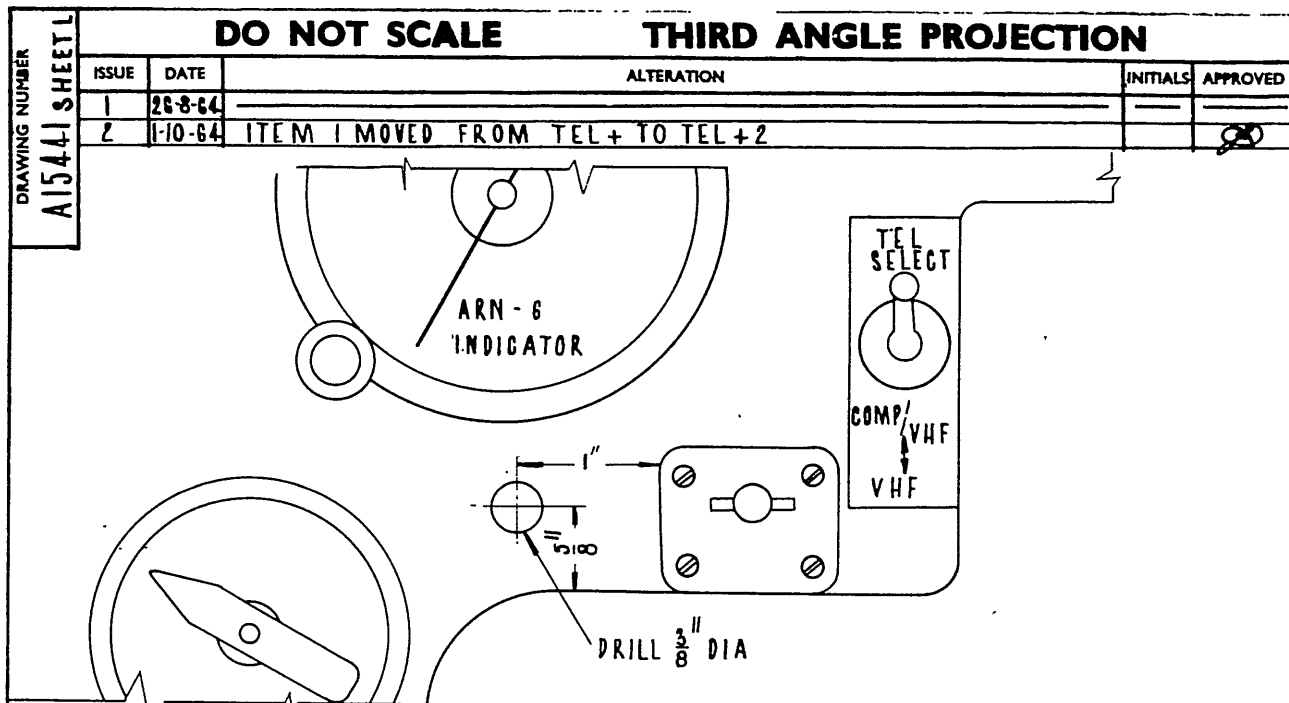
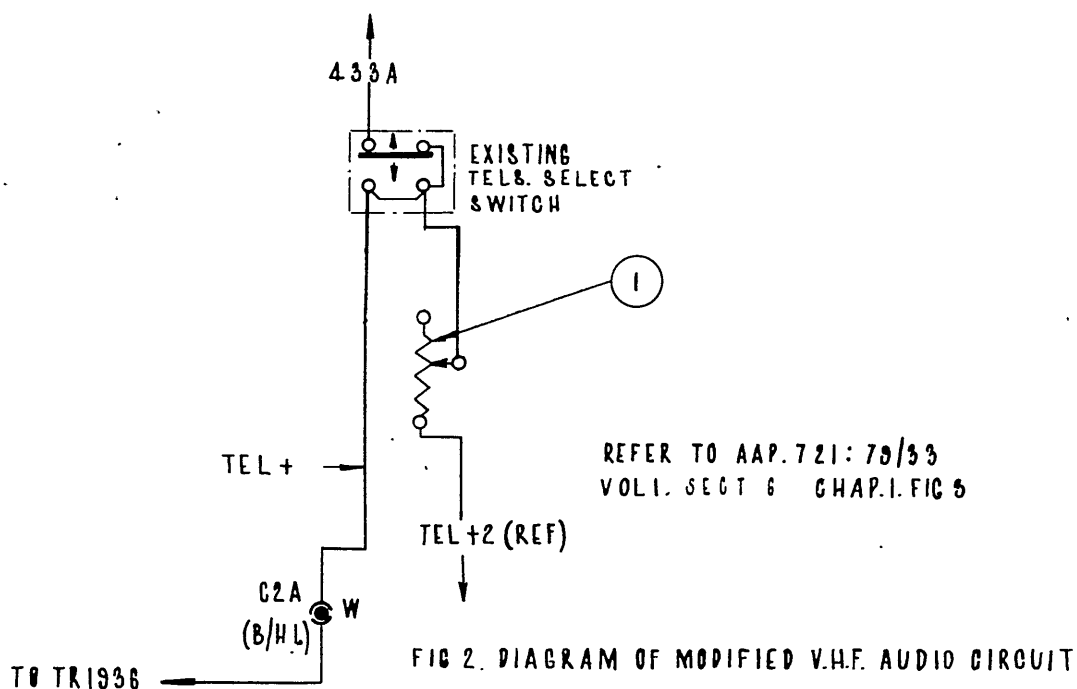


FIG. 1. VIEW SHOWING POSITION OF HOLE IN INSTRUMENT PANEL



1	501423	5905-011-9859	RESISTOR VARIABLE - 1000 OHM	1	
ITEM	PART	IDENT	DESCRIPTION	QTY REQ	ZONE

<b>DEPARTMENT OF AIR</b>		REFERENCE		MODIFICATION VAMPIRE MOD: NO 420	
ISSUED BY SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		1 DIM'S IN		EFFECTIVE ON	
2 DEF (AUST) - 85		3 DEF (AUST) - 46		COMPONENT OF	
4				TR1936	
5				TITLE	
DRAWN F. A. B.		CHECKED <i>F. A. B.</i>		DRILLING DETAIL & WIRING DIAGRAM	
TRACED H. R. P.		APPROVED <i>[Signature]</i>		SCALE	
LIMITS UNLESS STATED		TREATMENT		NEXT ASSEMBLY	
DECIMALS $\pm .010"$		FINISH		DRAWING NUMBER	
FRACTIONS $\pm \frac{1}{32}$		MATERIAL		A15441 SHEET 1.	
ANGLES $\pm 0^{\circ}30'$		SPECIFICATION		SIZE	
				A	

SECURITY CLASSIFICATION

RESTRICTED

AAP 721.79, Vol 2. Pt 2

VAMPIRE MODIFICATION NO 4'9

Class: 2

INSTRUMENT COVERS - LIMITED PANEL FLIGHT

Introduction

1. (a) The Reason for the Modification

To provide standard officially approved instrument covers for use in limited panel flying practice in Vampire aircraft

(b) Description and Features by which the Modification can be Recognised

The face of the instrument panel around the A/H and the G4 compass is covered with a nylon material consisting of many small hooks. Stowed in a vinex bag on the starboard cockpit wall of the aircraft are two instrument covers with photographs of unserviceable instruments on the outside.

(c) Relationship with other Modifications

Nil.

(d) Reason for Classification

The modification is a training requirement.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

This modification affects the operation of the aircraft when used in the IF training role. Use of the covers allows the instruments (A/H and compass) to be covered for training purposes while retaining realism in the instrument presentation.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 311)

RESTRICTED

RESTRICTED

- 2 -

AAP 7279, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 419

Application

2. Applicable to all Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 4 man-hours involved in the incorporation of the modification. The trade musterings responsible are:-

Instrument Fitter	-	2 hours
Photograph	-	1 hour
Fabric Worker	-	1 hour

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable, but not later than the next C servicing after modification sets are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units and the aircraft depot responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing A15401-1 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 311)



RESTRICTED

- 3 -

AAP 721.79- Vol 2- Pt 2

VAMPIRE MODIFICATION NO 419

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	8305-NSL-0018		"Velcro" Nylon Strip Material 1" Wide Black (Approx 2 ft)	A/R	C
2	9330-66-015-6937		Polyvinal Chloride Sheet Transparent (DD 10) (Approx 1 sq ft)	A/R	C
3	NIV		Photograph of G4F on the Instrument Panel (Vampire)	1	
4	NIV		Photograph of the A/H on the Instrument Panel (Vampire)	1	
5	K3-401		Flitchboard	A/R	
6	I32B-473		Cloth American - Green Vinex-Fire Resistant (Approx 1 sq ft)	A/R	
7	5325-66-018-8418		Durable Dot Fastener Part "A"	1	
8	5325-66-018-8419		Durable Dot Fastener Part "B"	1	
9	5325-66-018-8420		Durable Dot Fastener Part "C"	1	
10	5325-66-018-8421		Durable Dot Fastener Part "D"	1	
11	5305-175-3367		Screws RN $\frac{3}{4}$ lg	4	
12	5310-167-0816		Washer Flat MS	4	

Supply

11. Modification sets are to be obtained as follows:-

Items 1, 2 and 6 - Demand on No 1 Stores Depot for required amount as shown in paragraph 10.

Items 5, 7, 8, 9, 10, 11 and 12 - To be drawn from unit store.

Items 3 and 4 - Manufacture on unit.

RESTRICTED

(Issued with A/L 311)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 419

Method and Sequence of Incorporation

12. (a) Using the hook portion of item 1 attach it to the instrument panel, as detailed in Drawing A15401, with item 5 adhesive.
- Note: Apply a minimum amount of pliobond to the desired areas and allow them to nearly dry before bringing them together.
- (b) Cut item 2 to the shapes detailed in Drawing A15401, trimming each piece individually to fit the panel over the instruments.
- (c) Using item 5 attach the "wool tuft" portion of item 1 to item 2, as detailed in the drawing.
- (d) Photograph two failed instruments, one of an artificial horizon and one of a G4F compass.
- (e) Reproduce sufficient copies of these photos for all aircraft being modified, ensuring the copies produced are the exact scale of the instruments themselves.
- (f) Using item 5 attach items 3 and 4 (photos) to the front of the covers made in step (b), ensuring that when fitted to the panel, they are in the correct relative position for each instrument.
- (g) Using items 6 to 10, manufacture a stowage bag as detailed in Drawing A15401.
- (h) Using items 11 and 12 attach the stowage bag to the starboard cockpit wall.

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

RESTRICTED

(Issued with A/L 311)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 419

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On the Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

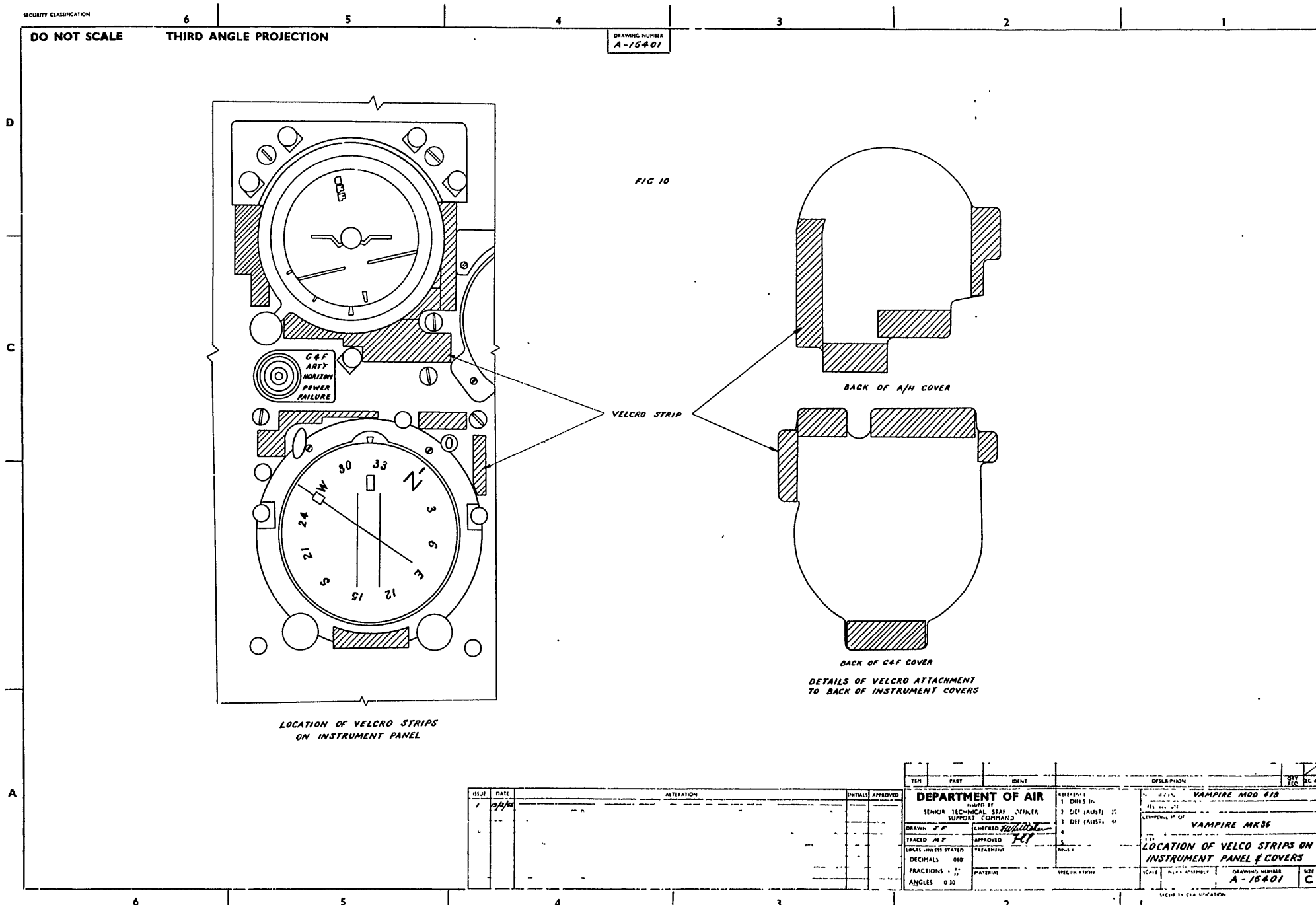
References: ARDU Technical Note Eng/9 "Vampire Aircraft - Instrument Covers - Limited Panel Flight", Flt Lt B.J. Graf, BSC, BE, dated March 1964  
File, Headquarters Support Command, 2501/110/4958

Attachments: Drawing A15401-1

Date of Issue: 12th July 1965

(Issued with A/L 311)

RESTRICTED



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 418

Class: 4

PERSPEX CANOPY PANELS - INTRODUCTION OF TERYLENE  
STRIPS AND BLOCKS IN LIEU OF FIBREGLASS

Introduction

1. (a) The Reason for the Modification

Cases have been reported of disintegration of the perspex panels due to "built-in" stress and stresses introduced by temperature changes. The new terylene strips and blocks reduce these stresses and so help to overcome the defect.

(b) Description and Features by which the Modification  
can be Recognised

The new perspex panels have terylene strips and blocks in lieu of fibreglass.

(c) Relationship with other Modifications

Nil.

(d) Reason of Classification

This modification introduces improved spares that are interchangeable with the superseded type.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35A and 35 aircraft.

(Issued with A/L 308)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 418

Man-Hours and Trade Mustering Involved

3. Approximately 85 man-hours are required to replace both perspex panels in a canopy hatch. The trade mustering responsible is airframe fitter.

When Modification is to be Incorporated

4. On replacement.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Modification V418 and Air Ministry Modification VAM3582.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504933	15FC3629	Perspex Panel Canopy Hatch Port	1	
2	A79/504934	15FC3630	Perspex Panel Canopy Hatch Starboard	1	

RESTRICTED

(Issued with A/L 308)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 418

Supply

11. Modification sets are to be obtained as follows:-

Item 1 or 2 - Draw from unit stores.

Method and Sequence of Incorporation

12. With the canopy hatch removed from the aircraft, proceed to remove the damaged perspex panel and install a new panel (item 1 or 2) in accordance with current authorised procedure.

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

(a) In aircraft log book.

(b) On Form E/E 78.

(Issued with A/L 308)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 418

- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5365

Date of Issue: 7th June 1965

(Issued with A/L 308)

RESTRICTED



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 417

Class: 2

REPOSITIONING OF FIRE EXTINGUISHER  
BOTTLE IN THE COCKPIT

Introduction

1. (a) The Reason for the Modification

To give pilot easy access to fire extinguisher without having to remove shoulder harness.

(b) Description and Features by which the Modification can be Recognised

Removal of bracketry from existing location on right hand side of cockpit to position just forward of ejection seat.

(c) Relationship with other Modifications

Nil.

(d) Effect on Servicing and/or Ground Handling

Nil.

(e) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35A and 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 8 man-hours are required to incorporate the modification. The trade mustering responsible are:-

Armament fitter -  $\frac{1}{2}$  man-hour (para 12 (a) and (1))  
Electrical fitter -  $\frac{1}{2}$  man-hour (para 12 (e))  
Airframe fitter - 7 man-hours (remainder of para 12).

RESTRICTED

(Issued with A/L 317)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 417

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V417.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing No A15998 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1		FS15-691A	Assy Mounting Block	1	
2	5305-RAF-28S-2856	A32/C12	Bolt, 2BA, Rd Hd, MS	3	
3	5310-941-9402	SP13/C	Washer, Plain, Standard 2BA, MS	3	
4	5310-167-0878	AGS2035/C	Lockwasher, Shakeproof Flat, Internal Teeth, 2BA, Steel	3	

(Issued with A/L 317)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 417

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5	5340-943-6947	AS3180/4B	Clip, "P", Rubber Covered	1	
6	5305-206-5372	AGS252/19	Woodscrew, No 6 x $\frac{1}{2}$ " Rd Hd, Brass	1	
7	8010-018-5120		Lacquer, Red, Brolite ELR115	A/R	
8	8010-018-5103		Enamel, Cellulose, Matt Black, Spec K18	A/R	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 6 - Demand on Modification Centre, Hawker de Havilland Australia Pty Ltd, BANKSTOWN, for Vampire Modification No 417.

Items 7 - 8 - Draw from unit stores.

Method and Sequence of Incorporation

12. The armament fitter is responsible for sub-paragraphs (a) and (1). The electrical fitter is responsible for sub-paragraph (e). The airframe fitter is responsible for the remainder.

- (a) Disarm both ejection seats in accordance with current authorised procedure.
- (b) Remove starboard ejection seat from aircraft in accordance with current authorised procedure.
- (c) Remove fire extinguisher and bracket from existing mounting block and plug ferrule holes using items 2, 3 and 4.

Note: On the next occasion the aircraft visits Hawker de Havilland, BANKSTOWN, the redundant mounting will be removed and inside skin repaired.

- (d) Fit new mounting block (item 1) as shown on Drawing A15998
- (e) Remove and refit existing bonding lead to lower bonding strip. Re-route upper bonding strip.

RESTRICTED

(Issued with A/L 317)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 417

- (f) Fit existing bracket using existing bolts and washers.
- (g) Attach instrument light cable to mounting block using items 5 and 6.
- (h) Fit existing fire extinguisher bottle and wirelock quick release clip using one strand of 26 SWG tinned copper wire.
- (j) On outside of fuselage, starboard side, delete existing fire extinguisher identification marking and repaint (item 7) in approximate new position of extinguisher, taking care not to interfere with existing markings. Restore black finish on inside of fuselage and on mounting block (item 8).
- (k) Replace the starboard ejection seat in accordance with current authorised procedure.
- (l) Rearm both ejection seats in accordance with current authorised procedure.

Items Removed

13. Nil.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

RESTRICTED

(Issued with A/L 317)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 417

- (a) In aircraft log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5364  
Attachment: Drawing No A15998  
Date of Issue: 23rd August 1965

(Issued with A/L 317)

RESTRICTED

DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D.L.L.	INITIALS	APPROVAL

BEFORE GLUEING MOUNTING BLOCK IN POSITION SHOWN, CHECK TO ENSURE A MINIMUM CLEARANCE OF  $\frac{5}{8}$ " BETWEEN FIRE EXTINGUISHER BOTTLE AND CONTROL COLUMN GRIP, WITH COLUMN AGAINST ST'B'D AILERON STOP.

FIT EXISTING BRACKET AND FIRE EXTINGUISHER WITH EXISTING BOLTS AND WASHERS. WIRELOCK QUICK RELEASE CLIP WITH ONE STRAND OF 26 S.W.G. TINNED COPPER WIRE.

PLUG FERRULE HOLES IN OLD MOUNTING BLOCK USING

A 32 BOLT-2 BA.-ROUND HEAD.  
C 12 3 OFF.

AGS. 2035 WASHER-SHAKEPROOF.  
C 3 OFF.

SP 13 WASHER-PLAIN.  
C 3 OFF.

CLIP-'P'-RUBBER COVERED - 1 OFF.

AS 3180  
4 B

WOODSCREW-ROUND HEAD-BRASS-1 OFF.

AGS. 252  
19

JUNCTION BOX N° 1.  
(REF.)

RELIEVE BLOCK TO CLEAR BONDING STRIP.

VIEW LOOKING OUTBOARD, ST'B'D SIDE OF COCKPIT.

FS 15  
691  
A

ASSY-MOUNTING BLOCK, 1 OFF  
SHAPE AS REQUIRED TO FIT FUSELAGE CONTOURS.

RE-ROUTE BONDING STRIP TO CLEAR TOP OF BLOCK.

REMOVE SEGMENTS OF FERRULES TO CLEAR BLOCK.

SOLDER EXISTING BONDING LEAD LOWER BONDING STRIP AS SHOWN.

HAWKER DE HAVILLAND DRAWING N° 00M 1417.

SHEET 1 OF 1.

REVISION		SHEET 1 OF 1	
DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		REPOSITIONING OF FIRE EXTINGUISHER BOTTLE IN THE COCKPIT.	
LIMITS, UNLESS STATED	MATERIAL	COMPONENT	
TEMPERATURE	SPEC	MATERIAL	VAMPIRE MK. 35, 35A.
TREATMENT			VAMPIRE MOD 417.
1/4 FULL SIZE		A 15998	

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Class 2

CAU - INCREASED CAPACITY OF OIL TANK AND INTRODUCTION  
OF NEW DIPSTICK AND COUPLING HOSES

Introduction

1. (a) The Reason for the Modification

Numerous reports on failure of ACRE 8 cold air units through entry of contaminants into lubrication supply, and reports on failure of coupling hoses due to rubber embrittlement.

(b) Description and Features by which the Modification can be Recognised

Introduction of larger capacity reservoir and re-designed dipstick cap, together with silicone hose in lieu of existing rubber connections.

(c) Relationship with Other Modifications

Vampire Modification No 388 "Introduction of Strengthened CAU Filter and Improved Dipstick Seal", is to be incorporated prior to or concurrently with this order.

(d) Reason for Classification

To increase the reliability of the CAU.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrow Operation

Nil.

(h) Number of Parts Comprising the Order

Two.

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Application

2. All Vampire Mk 35A and Mk 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 15 man-hours are required to incorporate the modification. The trade mustering responsible is airframe fitter.

When Modification is to be Incorporated

4. Part A is to be incorporated as soon as possible but not later than the next D servicing after modification sets are available.

PART A

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification No V416 Part A.

Orders and Instructions Superseded or Cancelled

7. This modification partially supersedes Vampire Modification No 388 by omission of the rubber "O" ring seal P/No MS28775-113.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A15888, Sheets 1 to 3.

Modification Parts List

10. The following items are required to complete one modification set:-

RESTRICTED

(Issued with A/L 324)



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	Not Identified	V15-343A	Reservoir - CAU - Oil	1	
2	Not Identified	V15-345	Spacer	1	
3	A79-504944	V15-329A	Dipstick Assembly	1	C
4	4720-PN	DAS393/16/3.5	Hose - Coupling	6	C
5	4720-PN	DAS393/20/3.5	Hose - Coupling	2	C
6	H28/8184	AGS605/1	Clip Hose	4	C
7	5305-100-7319	AS1242/4B	Bolt - 4BA Csk Hd - HTS	6	C
8	5975-017-6921	PN-G167	Sleeve - 22 mm I/D x 5" Lg Black Nylex Tube	1	C
9	I32A/94		Cord Stringing	A/R	C
10	K4/152		Beeswax	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 8 : Demand on Modification Centre, Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 416 Part A, identified as 1650-NSL-0017.

Items 9 and 10 : Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Remove CAU access panel complete with oil reservoir from port wing.
- (b) Remove CAU from wing - AAP 721.79, Vol 1, Sect 3, Chap 8.
- (c) Remove upper engine inspection doors.
- (d) Split nylex sleeve (item 8) and bind to conduit using waxed cord (items 9 and 10) as shown on sheet 1 of Drawing No A15888.

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

- (e) Replace coupling hoses (items 15, 16 and 2 off item 17) and hose clips (item 18) with coupling hoses (items 4 and 5) and hose clips (item 6) as shown on sheet 2 of Drawing No A15888.
- (f) Replace CAU in wing - AAP 721.79, Vol 1, Sect 3, Chap 8.
- (g) Remove CAU oil reservoir (item 11) and packing (item 12) from access panel.
- (h) Rework access panel and fit CAU oil reservoir (item 1) If necessary spacer (item 2) is to be 3 bolts (item 7) with tapered in the fore and aft direction as shown on sheet 3 of to obtain a minimum of .05" clearance between reservoir and air intake duct aw dipstick assembly (item 3). in wing. Restore finish on spacer after reworking. " replace access panel, ~~on reservoir in wing.~~
- (l) Fill the reservoir to correct level with engine oil OEP 71.
- (m) Replace upper engine inspection doors.

Items Removed

13. The following items are removed on incorporation of Part A of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
11	Not Identified	RO02621A	Reservoir - CAU - Oil	1	C
12		13V359ND	Packing	1	C
13	A79-503513	RO02619A	Dipstick Assembly	1	C
14		AS1882/2B	Bolt - 4BA Csk Hd	6	C
15	T32C/500005(Z)	DHS159J/30	Hose - Coupling	4	C
16	4720-016-5965	P15/593P/30	Hose - Coupling	2	C
17	T32C/500067(Z)	DHS159L/30	Hose - Coupling	2	C
18		AGS605/2	Clip - Hose	4	C
19	5330-582-2855	MS28775-113	Seal, "O" Ring, Rubber, Hydraulic 9/16" I/D $\frac{3}{4}$ " OD x .103" Thick	1	C

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be discarded.

Action on Stock Holdings of Removed Items

15. Item 11 : Obsolete/obsolescent instructions will be issued.

Modification of Spares

16. (a) The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
A79-504931	W15-1041A/17	Plane, Main, Port (Mk 35)	Rework to para 12. If both Part A and Part B are embodied, re-identify as Part No W15-1041A/18 and Ident No A79-504945.
A79-504930	W15-1407A/17	Plane, Main, Port (Mk 35A)	Rework to para 12. If both Part A and Part B are embodied, re-identify as Part No W15-1407A/18 and Ident No A79-504946.

(b) A partial modification set will comprise:-

For Spares W15-1041A/17 and W15-1407A/17

A complete aircraft modification set less two off item 4. Sets to be obtained by demand on Modification Centre Hawker De Havilland Australia Pty Ltd BANKSTOWN NSW for Spares/Modification V416 Part A Ident No A79-504930-1.

(c) HQSUPCOM is responsible that stores depot stock holdings of the above items are modified.

Additional Information

17. Nil.

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book, as Part A of the modification.
  - (b) On Form E/E 78.
  - (c) On the wing modification plate.
  - (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. Amendments to weight sheet summaries will be consolidated and issued by HQSUPCOM.

The effect of this modification on the weight and balance of the aircraft is as follows:-

Item	Weight (lb) $\pm$	Arm (in) $\pm$	Moment (lb in) $\pm$
Oil Reservoir and Fittings	+ 1	- 7.3	- 7

PART B

21. This modification is to be incorporated in all applicable Vampire aircraft. Part B is to be incorporated on an opportunity basis when access to the coupling hoses is available during normal servicing or overhaul.

Responsibility for Incorporation

22. To be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

23. Hawker De Havilland Australia Modification V416 Part B.

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Orders and Instructions Superseded or Cancelled

24. Nil.

Special Tools, Jigs, etc

25. Nil.

Drawings

26. See para 9.

Modification Parts List

27. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
20	4720-PN	DAS393/16/5.0	Hose, Coupling	1	C
21	4720-PN	<sup>DAS 393/20/3.5</sup> <del>DAS393/20/3.5</del>	Hose, Coupling	1	C
22	H28/8184	AGS605/1	Clip, Hose	2	C

HL 357.

Supply

28. Modification sets are to be obtained as follows:-

Items 20-22 : Demand on Modification Centre, Hawker  
De Havilland Australia Pty Ltd, BANKSTOWN  
NSW, for Vampire Modification No 416 Part B,  
identified as 1650-NSL-0030.

Method and Sequence of Incorporation

29. Refer to sheet 2 of Drawing No A15888.

- (a) If access from tank bay No 1 is available, replace coupling hose (item 24) with coupling hose (item 20).
- (b) If access from the wing root is available, replace coupling hose (item 23) and hose clips (item 25) with coupling hose (item 21) and hose clips (item 22).

Items Removed

30. The following items are removed on incorporation of Part B of the modification:-

RESTRICTED (Issued with A/L 324)

RESTRICTED

- 8 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
23	T32C/500067(Z)	DHS159L/30	Hose, Coupling	1	C
24		P15/593/P45	Hose, Coupling	1	C
25		AGS605/2	Clip, Hose	2	C

Action on Items Removed

31. The removed items listed above have no further application to this use and are to be discarded.

Action on Stock Holdings of Removed Items

32. Nil.

Modification of Spares

33. (a) The modification spares are affected and are to be modified at the direction of HQSUPCOM:-

Ident No	Part No	Nomenclature	Remarks
A79-504931	W15-1041A/17	Plane, Main, Port (Mk 35)	Rework to para 28. Ensure that both Part A and Part B are embodied and re-identify as Part No W15-1041A/18 and Ident No A79-504945.
A79-504930	W15-1407A/17	Plane, Main, Port (Mk 35A)	Rework to para 28. Ensure that both Part A and Part B are embodied and re-identify as Part No W15-1407A/18 and Ident No A79-504946.

(b) A partial modification set will comprise:-

For Spares W15-1041A/17 and W15-1407A/17

A complete aircraft modification set. Sets are to be obtained by demand on Modification Centre Hawker De Havilland Australia Pty Ltd BANKSTOWN NSW for Spares/Modification No V416 Part B Ident No A79-504930-1.

RESTRICTED

(Issued with A/L 324)

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 416

- (c) HQSUPCOM is responsible that stores depot stock holdings of the above items are modified.

Additional Information

34. Nil.

Tests

35. Nil.

Recording

36. Record incorporation of the modification as follows:-

- (a) In aircraft log book, as Part B of the modification.
- (b) On Form E/E 78.
- (c) On the wing modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

37. The effect of Part B of the modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command 2501/110/5456  
and 2601/79/47-416

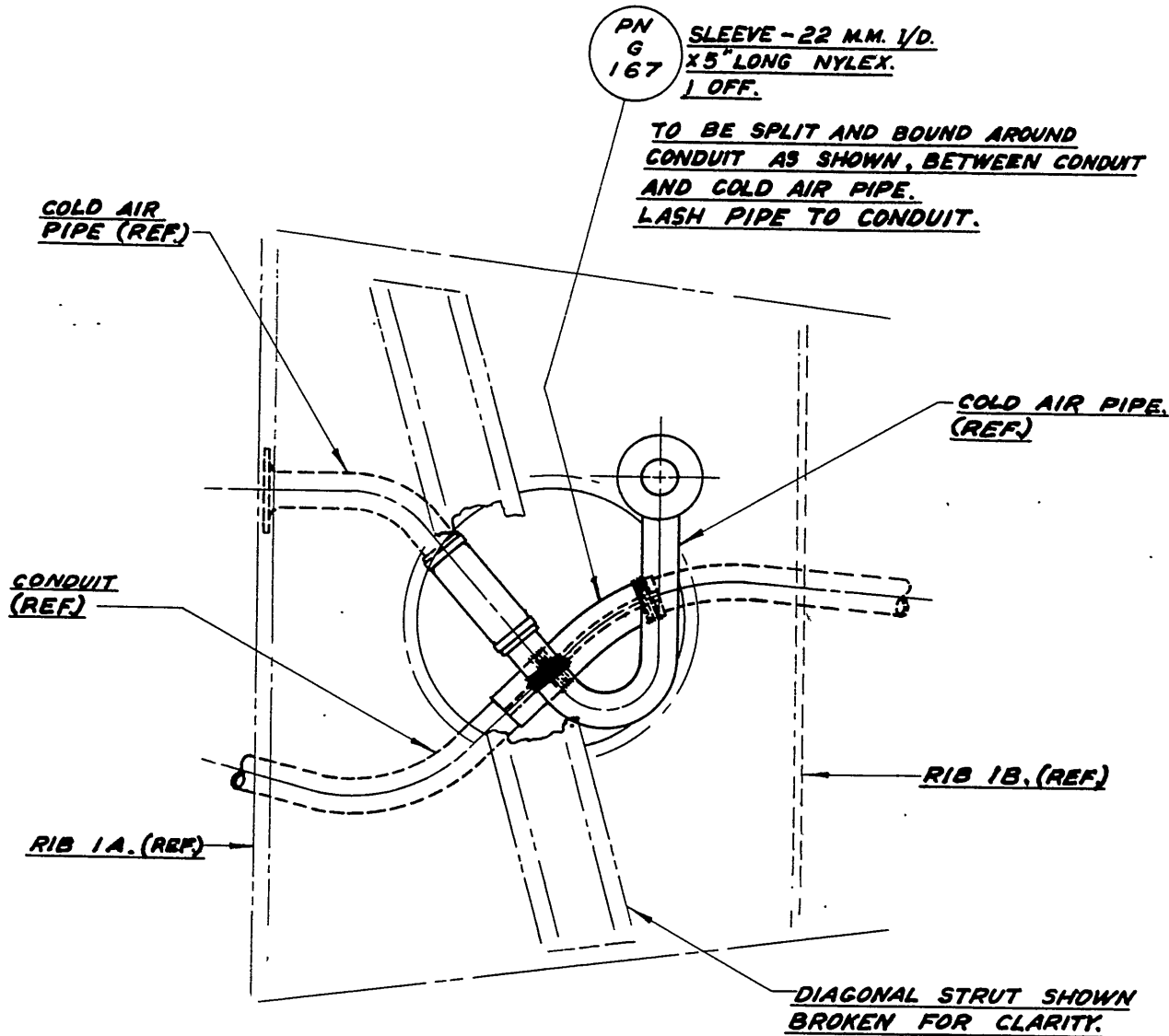
Attachments: Drawing No A15888, Sheets 1 to 3

Date of Issue: 11th October 1965

RESTRICTED (Issued with A/L 324)

DO NOT SCALE

ISSUE NO	DATE	ALTERATION	U.T.L	INITIALS	APPROVED
	26-3-85				



VIEW LOOKING AFT ON MAIN SPAR WEB,  
WITH COLD AIR UNIT REMOVED.

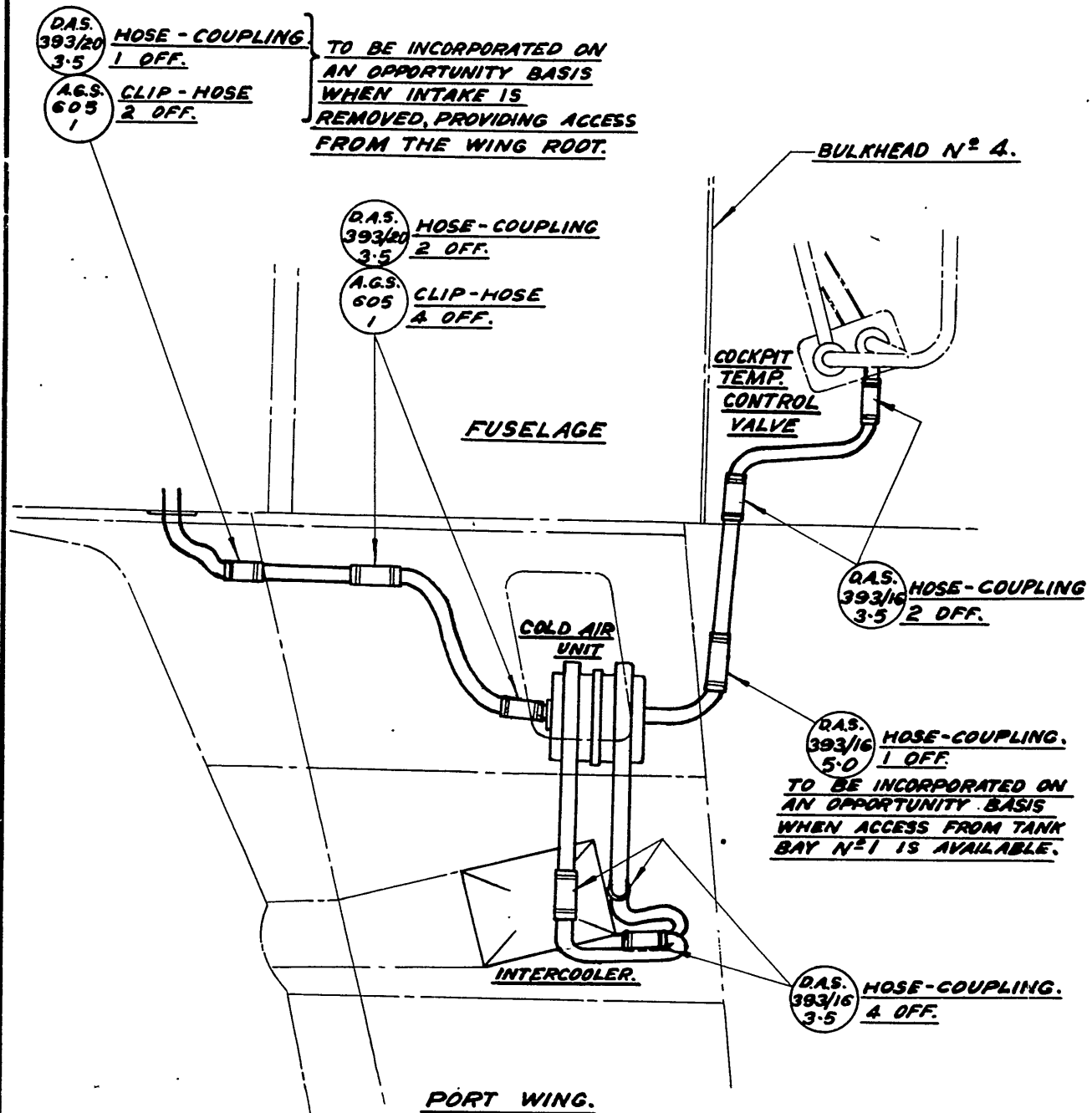
HAWKER DE HAVILLAND DRAWING N2 OOM 1416 SHEET 1 OF 3.

REFERENCE		DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND.		TITLE INCREASE CAPACITY OF C. A. U. OIL TANK AND INTRODUCE NEW DIPSTICK.	
LIMITS UNLESS STATED		MATERIAL		COMPONENT	
DECIMALS	± .010"	SPEC.		OF	
FRACTIONS	± 1/32"	TREATMENT		MACHINE	
ANGLES	± °	FINISH		ENGINE	
SURFACE FINISH		SCALE		TECH. GRADE	
AUSTRALIAN STANDARD		1/4 FULL SIZE.		VAMPIRE MK. 35, 35A.	
ENG. DRWG. PRACTICE A.S.C.21		DRAWN		VAMPIRE MOD 418	
		TRACED		DRAWN N2	
		CHECKED		A 15888	
				SHEET 1 OF 3	



# DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D. I. L	INITIALS	APPROVED
	26-3-65				



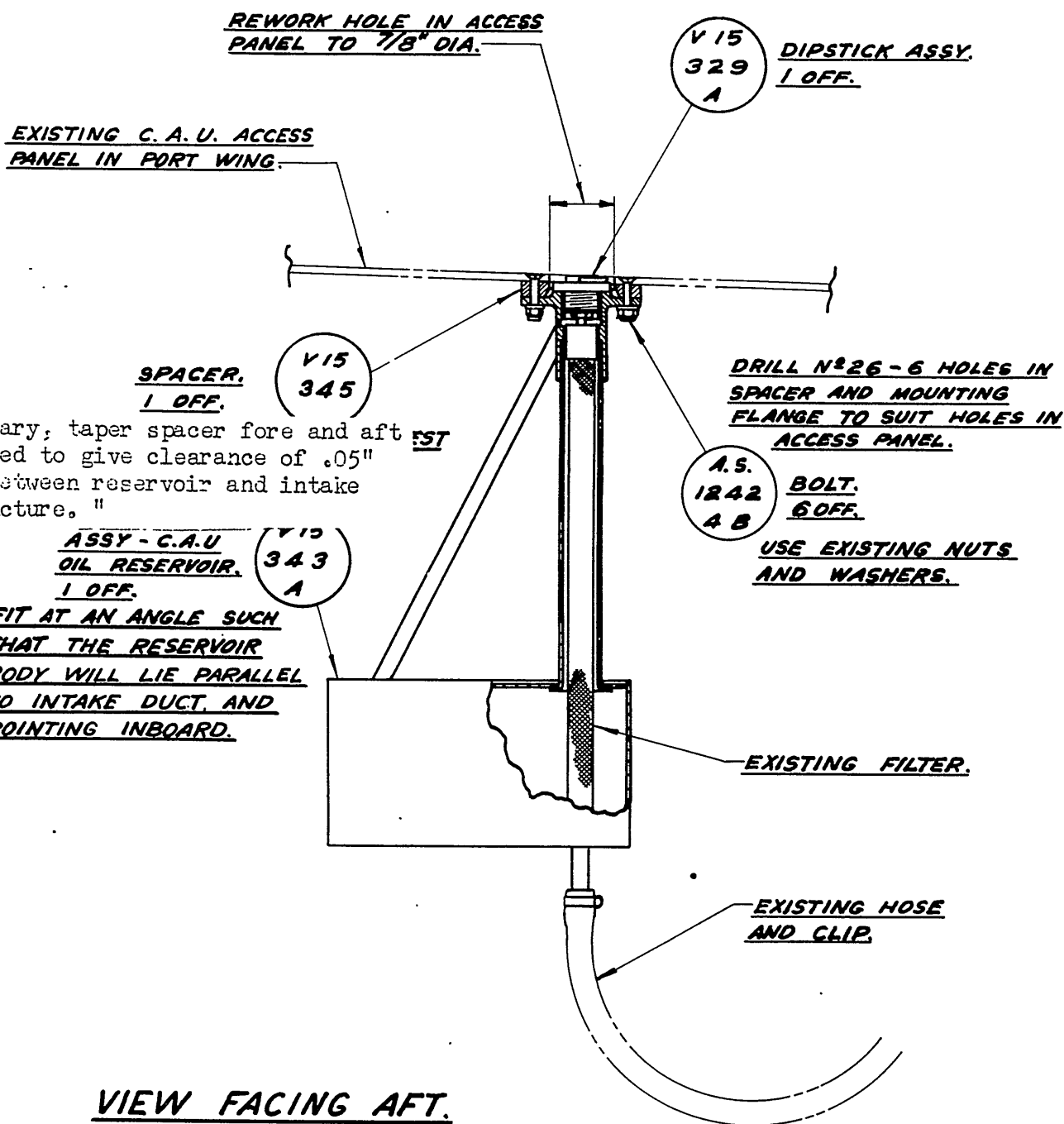
HAWKER DE HAVILLAND DRAWING N° 00M 1416 SHEET 2

REFERENCE	ISSUED BY	TITLE
	DEPARTMENT OF AIR. SENIOR TECHNICAL STAFF OFFICER, SUPPORT COMMAND.	INCREASE CAPACITY OF C. A. U. OIL TANK AND INTRODUCE NEW DIPSTICK.
LIMITS UNLESS STATED	MATERIAL	COMPONENT OF
DECIMALS ± 0.1"	SPEC.	MACHINE
FRACTIONS ± 1/16"	TREATMENT	ENGINE
ANGLES ± 1°	FINISH	TECH. ORDER
SURFACE FINISH	SCALE 1/8 FULL SIZE	VAMPIRE MOD. 416.
AUSTRALIAN STANDARD	DRAWN	
ENC DRWG PRACTICE	TRACE	

A 15888  
SHEET 2

DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D. I. L.	INITIALS	APPROVED
	26-3-63				



HAWKER DE HAVILLAND DRAWING NO. DDM 1416 SHEET 3

REFERENCE	ISSUED BY		TITLE	
	DEPARTMENT OF AIR. SENIOR TECHNICAL STAFF OFFICER, SUPPORT COMMAND.		INCREASE CAPACITY OF C.A.U. OIL TANK AND INTRODUCE NEW DIPSTICK.	
LIMITS UNLESS STATED	MATERIAL		COMPONENT OF	
DECIMALS ± .010"	SPEC.		MACHINE	VAMPIRE MK. 35, 35A.
FRACTIONS ± 1/32"	TREATMENT		ENGINE	
ANGLES ± 1/2°	FINISH		TECH. ORDER	VAMPIRE MOD. 416.
SURFACE FINISH	SCALE	1/2 FULL SIZE.		
AUSTRALIAN STANDARD	DRAWN	JFH	DRAWN	A 15888
ENG. DRWG. PRACTICE A.S. 521	TRACED		CHECKED	SHEET 3

RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 415

Class: 2

MAIN FUEL TANK - IMPROVED METHOD OF SECURING  
THE SAFETY CHAIN TO THE FILLER CAP

Introduction

1. (a) The Reason for the Modification

Cases have been reported of failure of the safety chain attachment to the filler cap, permitting the unsecured chain to fall into the main fuel tank.

(b) Description and Features by which the Modification  
can be Recognised

This modification introduces a closed wire swivel link which is bolted to the safety chain, thus providing a positive means of securing the filler cap.

(c) Relationship with other Modifications

Nil.

(d) Reason of Classification

Based on the safety and servicing aspects.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and 35A aircraft.

(Issued with A/L 301)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 415

Man-Hours and Trade Mustering Involved

3. Approximately  $\frac{1}{2}$  man-hour is required to incorporate the modification. The trade mustering responsible is airframe fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next "C" servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification V415.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing No A15582 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504917	P15-625	Swivel Link	1	
2	5305-RAF-28D12621	A25-2A	Bolt, MS, Hex Hd 6BA x 0.5" Long	1	
3	5310-940-3518	A27-AP	Nut, MS, Plain, 6BA	1	
		or A16YAP	Nut, MS, Plain, 6BA	1	

RESTRICTED

(Issued with A/L 301)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 415

Supply

11. Modification sets are to be obtained as follows:-

Items 1-3 - Demand on Modification Centre, Hawker De  
Havilland Australia Pty Ltd BANKSTOWN NSW  
for Vampire Modification No 415.

Method and Sequence of Incorporation

12. The airframe fitter is responsible for the complete modification:-

- (a) Open the main fuel tank filler access panel and remove the fuel tank cap assembly by disengaging the wire locking ring from the tank filler neck. Lower the access panel to prevent foreign bodies entering the tank while the cap is removed.
- (b) Separate the chain assembly from the cap by removing the swivel plate from the grooved boss on the cap. Refer to the attached drawing and remove the swivel plate from the chain by cutting across the lug of the swivel plate. Discard the plate.
- (c) Fit the new swivel link (item 1) in the groove of the cap boss, locate the end link on the chain between the loops of the swivel link, and bolt as shown on the attached drawing. Ensure that the swivel link is free to turn before trimming the bolt to  $1\frac{1}{2}$  threads above the nut. Peen the bolt to lock. If the swivel link tends to bind on the boss of the cap, adjust the angle of the loops as necessary, still ensuring free movement in the groove of the boss.
- (d) Re-identify the fuel tank cap assembly from P/No 15PT19A and Ident No A79/504129, to P/No P15-627A and Ident No A79/504904.
- (e) Replace the cap assembly in the main fuel tank filler neck and close the access panel. Gain access to the bottom of the tank through the cannon bay doors and re-identify the tank from P/No P15-597A and Ident No A79/504368, to P/No P15-597A/1 and Ident No A79/504905.
- (f) On the fuselage adjacent to the access panel alter the sign "Filler Cap 15PT19A must be used here" to read "Filler Cap P15-627A must be used here".

(Issued with A/L 301)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 415

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
4	A79/504913	P001156	Swivel Plate, Fuel Tank Cap	1	

Action on Items Removed

14. Discard.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. The following spares are affected and are to be modified at the direction of Headquarters Support Command, by the user unit prior to fitment:-

<u>Ident No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Remarks</u>
A79/504129	15PT19A	Fuel Tank Cap Assembly	Rework to paras 12(b) to (d) inclusive and re-identify as P/No P15-627A and Ident No A79/504904.
A79/504368	P15-597A	Assembly Main Fuel Tank with Submerged Booster Pump	Rework to para 12 and re-identify as P/No P15-597A/1 and Ident No A79/504905.

Additional Information

17. Nil.

Tests

18. Nil.

(Issued with A/L 301)

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RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 415

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) On the wing modification plate.
  - (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5117

Attachment: Drawing No A15582

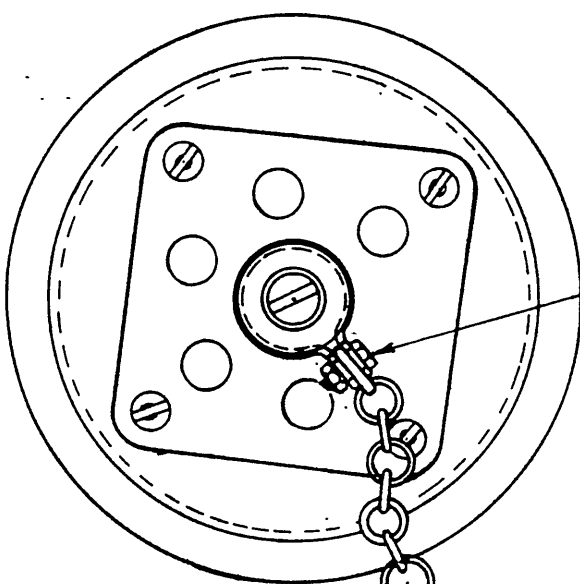
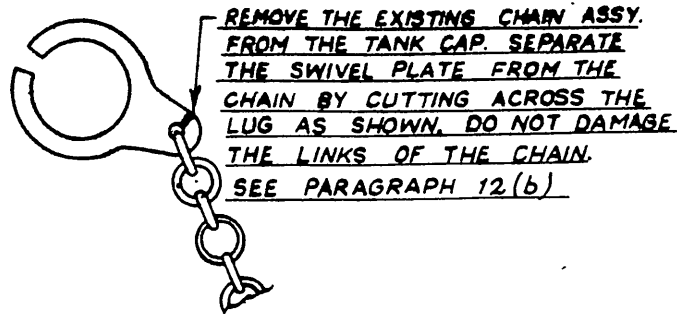
Date of Issue: 15th March 1965

(Issued with A/L 301)

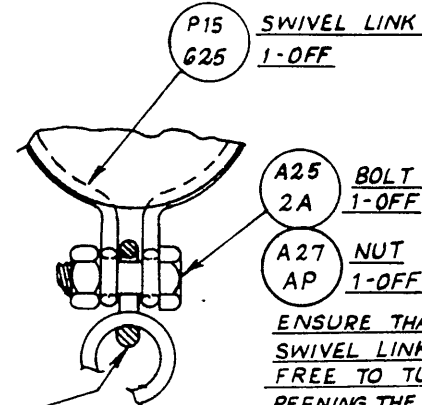
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ISSUE NO.	DATE	ALTERED BY	REASON	APPROVED BY



VIEW ON INSIDE FACE  
OF MAIN FUEL TANK CAP ASSEMBLY  
PART NUMBER P15-G27A  
SEE PARAGRAPH 12(d)



ATTACH EXISTING  
CHAIN THROUGH END  
LINK AS SHOWN.  
(LINK SHOWN IN SECTION)

DETAIL 'A'  
SHOWING NEW SWIVEL ATTACHMENT  
DRAWN TWICE FULL SIZE  
SEE PARAGRAPH 12(C)

HAWKER DE HAVILLAND DRAWING No. QQM1415

SHEET 1 OF 1

REFERENCE	ISSUED BY		TITLE	
	DEPARTMENT OF AIR DIRECTOR GENERAL OF ENGINEERING		MAIN FUEL TANK — INTRODUCTION OF AN IMPROVED METHOD OF SECURING THE SAFETY CHAIN TO THE FILLER CAP	
LIMITS UNLESS STATED	MATERIAL		COMPONENT OF	
DECIMALS ± .010"	SPEC.		MACHINE	VAMPIRE MK. 35 & 35A
FRACTIONS ± 1/16"	TREATMENT		ENGINE	
ANGLES ± 1°	FINISH		TECH. ORDER	VAMPIRE MOD. N9 415
SURFACE FINISH AUSTRALIAN STANDARD ENB. DRWG. PRACTICE A.S.21	SCALE		DRAWING NO.	A15582
	DRAWN		APPROVED	
	TRACED		CHECKED	



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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

Class: 2

VAMPIRE ELEVATORS - INTRODUCTION OF A REINFORCING  
BRACKET FOR RIBS J00688 AT ELEVATOR CUTOUT LOCATIONS

Introduction

1. (a) The Reason for the Modification

Cases have been reported of cracking of the elevator ribs J00688 adjacent to the ends of the trim tab hinge.

(b) Description and Features by Which the Modification can be Recognised

This modification introduces a reinforcing bracket inside the aft end of the ribs to strengthen the affected area.

(c) Relationship with Other Modifications

Nil.

(d) Reason of Classification

Safety aspect.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. Vampire Mk 35A, 35 - All aircraft.

(Issued with A/L 306)

RESTRICTED

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- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

Man-Hours and Trade Mustering Involved

3. Approximately 42 hours are required to incorporate the modification. The RAAF trade mustering responsible is the Airframe Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next "D" Servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V413.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A15561 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

(Issued with A/L 306)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	-	TE15-21	Reinforcing Bracket	2	
2	-	TE15-23ND	Packing	2	
3	5320-PN-AS2230-304	AS2230-304	Rivet, Al Al, 120° Csk Hd 3/32" dia x 1/4" Long	14	
4	5320-PN-AS2230-404	AS2230-404	Rivet, Al Al, 120° Csk Hd 1/8" dia x 1/4" Long	41	
5	H128F/NIV	AGS2048-420-BS	Rivet, 'Pop', Dome Hd Al Al, 1/8" dia x 1/4" Long	6	
6	H128F/NIV	AGS2065-508	Rivet, Avdel, Snap Hd, Al Al, 5/32" dia x 1/4" Long	4	
	(5320-PN-2045-508	AGS2045-508	Alternate Rivet, Chobert, Snap Hd, Al Al, 5/32" dia x 1/4" Long	4	
	(5320-PN-2047-508	AGS2047-508	Pin, Sealing, for Chobert Rivet	4	
7	5320-PN-AS2230-405	AGS2230-405	Rivet, Al Al, 120° Csk Hd 1/8" dia x 5/16" Long	8	
8	5315-234-1856	SP9/C8	Pin, Split, Ni Alloy, 1/16" dia x 1" Long	16	
9	8010-018-5100	-	Compound, Jointing to Spec RAAF TRS No K53	A/R	
10	I/9715	-	Wire, Locking, 22 SWG, DTD189	A/R	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 8 - Demand on Modification Centre, Hawker de Havilland Australia Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 413.

Items 9 & 10 - Draw from unit stores.

(Issued with A/L 306)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

Method and Sequence of Incorporation

12. The airframe fitter is responsible for the complete modification.

- (a) Remove the elevator, Pt No 13TE1A from the aircraft in accordance with current authorised procedure.
- (b) Disconnect the trim tab operating rod, Pt No J00896A from the trim tab, and remove the trim tab, complete with hinge, from the elevator.
- (c) De-rivet and remove the trim tab support spar, Pt No 13TE9A from the elevator. If a reinforcing bracket has been introduced as a repair scheme (Drawing No RS001635) in one or both of the elevator ribs, Pt No J00688 shown in the attached drawing, remove this bracket.

Note that the rear flange on a repair bracket will only be as deep as the rear flange of the rib in which it is fitted.

Check both ribs for cracking in the rear corners. If a crack is present, or cracking has propagated beyond an existing stop drill hole, stop drill the crack  $\frac{1}{8}$ " diameter.

- (d) Refer to the drawing and drill out the outboard solid rivet through the short channel stiffener at each end of the tab support spar.
- (e) Refer to the drawing and drill out the two rearmost rivets in the top and bottom flanges of both the elevator ribs. Mark out three rivet positions on the outboard face of each rib. If modifying a repaired rib, the existing holes in the rib will be used.
- (f) Hold the reinforcing bracket, Pt No TE15-21 firmly in position against the flanges and web of the rib and drill the three holes  $\frac{3}{32}$ " diameter. Note that the existing holes in the web of a repaired rib may be dimpled, in which case it will be necessary to dimple the three holes in the bracket to suit before proceeding. This will enable the reinforcing bracket to be seated on the web of the rib.

RESTRICTED

(Issued with A/L 306)

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

- (g) Pin the bracket in position against the web of the rib and drill No 41 dia into the bracket flanges through the rivet holes drilled out in (e) above.
- (h) Dimple the three holes in the web of the reinforcing bracket and the elevator rib to suit 120° countersunk head 3/32" dia rivets (unless the dimpling was done in (f) above, or the existing holes in a repaired rib are countersunk). The rivet heads are to be flush with the outboard face of the rib.
- (j) Assemble the packing pieces, Pt No TEL5-23ND and the tab support spar, and drill 5/32" dia through two holes at each end of the spar. Dismantle all the parts, deburr and clean out any swarf in the elevator.
- (k) Re-assemble the reinforcing brackets using jointing compound between mating surfaces, and rivet up to the web and top and bottom flanges of the ribs. After conducting a "foreign body" check of the elevator, assemble the packing pieces and the tab support spar and rivet up completely.
- (l) Replace the trim tab using the existing attaching items, and re-connect the operating rod, using a new split pin (item 8).
- (m) Replace the elevator assembly in the aircraft in accordance with current authorised procedure. Use new split pins (item 8) where required, and wirelock as necessary.

Items Removed

13. As detailed in paragraph 12(c) above, certain elevators may be fitted with one or two repair brackets (repair scheme RSO01635) in which case these brackets are removed on incorporation of the modification.

Action on Items Removed

14. Any removed brackets are to be discarded.

(Issued with A/L 306)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. (a) The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

<u>Ident No</u>	<u>Part No</u>	<u>Nomenclature</u>	<u>Remarks</u>
A79/504023	13TE1A/41	Elevator	Rework to para 12(b) to 12(1). Re-identify as Pt No 13TE1A/42 and Ident No A79/504903.

(b) A partial modification set is identical to the aircraft modification set, except that only 1 off item 8 is required, and item 10 is not required.

Items 1 - 8 - Set to be obtained by demand on Modification Centre, Hawker de Havilland Australia Pty Ltd, BANKSTOWN, for Spares Mod V413/A79-504023.

Item 9 - To be drawn from unit stores.

(c) Unit maintenance spares of the above items are to be modified by the user unit prior to fitment.

(d) HQSUPCOM is responsible that stores depot stock holdings of the above items are modified.

Additional Information

17. Nil.

Tests

18. Check the elevator and trim tab movements over their full travel to ensure free operation.

Recording

19. Record incorporation of the modification as follows:-

(a) In aircraft log book.

RESTRICTED

(Issued with A/L 306)

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 413

- (b) On Form E/E 78.
- (c) On the elevator modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command 2501/110/5111

Attachment: Drawing No A15561

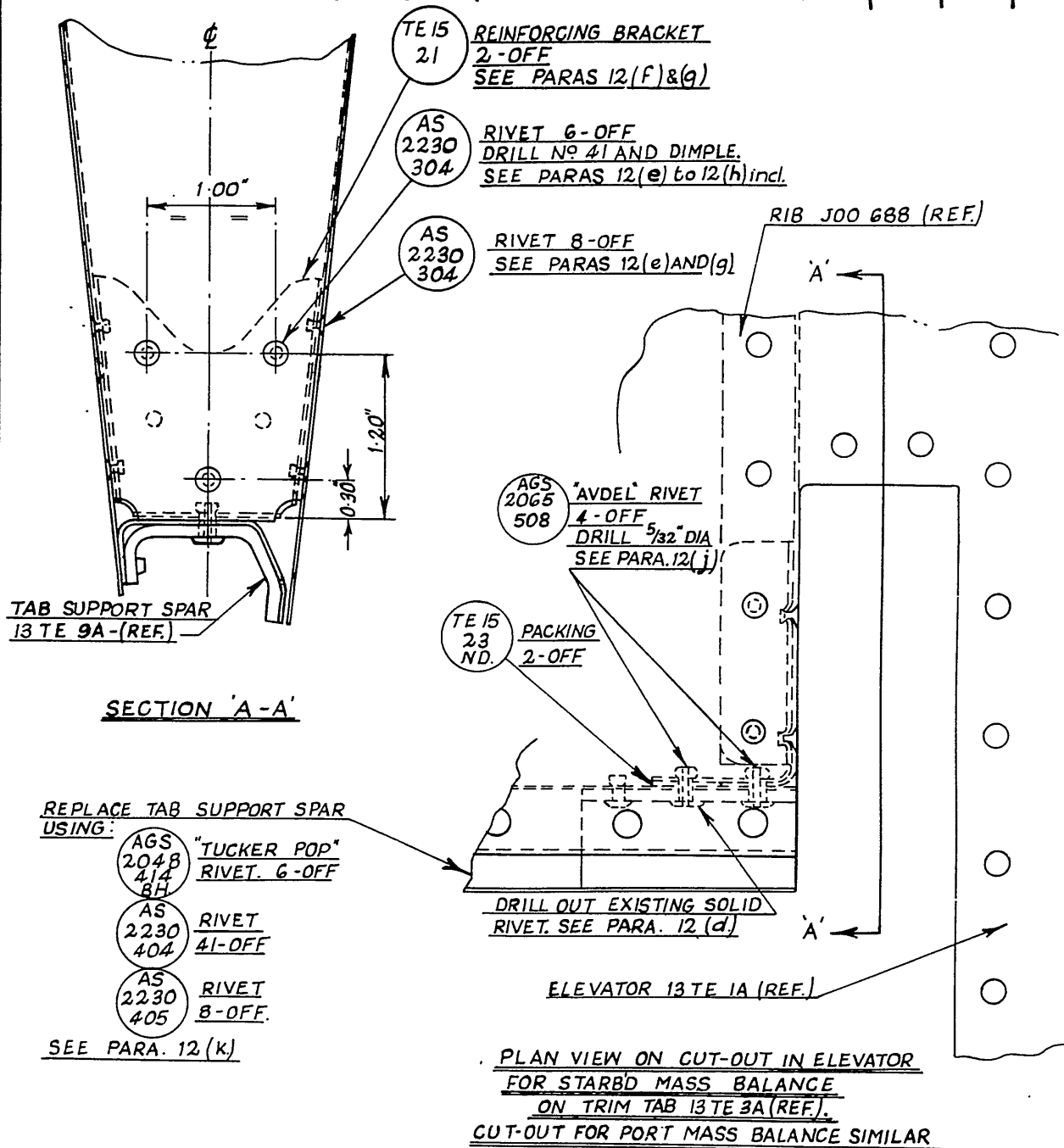
Date of Issue: 31st May 1965

(Issued with A/L 306)

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ISSUE NO	DATE	ALTERATION	D I L	INITIALS	APPROVED



HAWKER DE HAVILLAND DRAWING No. 00M1413

SHEET 1 OF 1

DEPARTMENT OF AIR  
DIRECTOR GENERAL  
OF ENGINEERING

VAMPIRE ELEVATORS-INTRODUCTION OF  
REINFORCING BRACKET FOR RIBS J00688  
AT ELEVATOR CUTOUT LOCATIONS

LIMITS UNLESS STATED	MATERIAL	COMPONENT OF
DECIMALS $\pm .010"$	SPEC.	
FRACTIONS $\pm 1/32"$	TREATMENT	
ANGLES $\pm 1'$	FINISH	
SURFACE FINISH	SCALE	
AUSTRALIAN STANDARD	DRAWN	APPROVED
ENG. DRWG. PRACTICE A.S. 621	TRACED	CHECKED

VAMPIRE MOD. 413

A-15561



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AAP 721:79, Vol 2, Part 2

VAMPIRE MODIFICATION NO 412

Class : 2

HYDRAULIC SYSTEM - INTRODUCTION OF NON-RETURN  
VALVE IN HYDRAULIC HAND PUMP PISTON

Introduction

1. (a) The Reason for the Modification  
Particles from the piston seal have been extruded through the holes in the piston head and have contaminated the hydraulic system.
- (b) Description and Features by which the Modification can be Recognised  
The piston of the modified hand pump has a non-return ball valve incorporated in the piston head. The modified pump is re-part numbered from UMC.501 to S15-1457A.
- (c) Relationship with other Modifications  
Nil.
- (d) Reason of Classification  
To prevent damage to the piston seal and contamination of the system.
- (e) Effect on Servicing and/or Ground Handling  
Nil.
- (f) Effect on Aircrew Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mk 35A and 35 aircraft.

(Issued with A/L 316)

RESTRICTED

RESTRICTED

- 2 -

AAP 721:79, Vol 2, Part 2

VAMPIRE MODIFICATION NO 412

Man-Hours and Trade Mustering Involved

3. Approximately 2 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Armament Fitter - 0.5 man-hours

Airframe Fitter - 1.5 man-hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification V.412.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	1650-PN-S15-1457A	S15-1457A	Hand Pump Less Handle	1	A

(Issued with A/L 316)

RESTRICTED

RESTRICTED

- 3 -

AAP 721:79, Vol 2, Part 2

VAMPIRE MODIFICATION NO 412

(a) Para 10, after item 6 add the following items:-

Item No	Ident No	Part No	Nomenclature	No Off per Set	Stores Class	No Off	Stores Class
7	A79/504956	S15-1449A	Piston Assy	1	C		C
8	5330-RAF-27W1011	UMC 511	Seal Piston	1	C		C
9	5330-RAF-27W1015	UMC 506	Ring Sealing	2	C		C
10	5330-RAF-27W1076	UMC 541	Ring Sealing	1	C		C
11	5315-234-1856	AN381-2-16	Pin Split	1	C		C
		Alt SP9/C8					

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 5: Demand on Modification Centre,  
Hawker De Havilland Australia  
Pty Ltd, BANKSTOWN NSW, for  
Vampire Modification No 412.

Item 6 : Draw from unit stores.

Method and Sequence of Incorporation

12. The armament fitter is responsible for operations (a) and (g).  
The airframe fitter is responsible for the remainder of the paragraph.

(a) Open the canopy and disarm the ejection seats  
in accordance with current authorised  
procedure.

(b) Locate the hydraulic hand pump (<sup>item 12</sup>~~item 7~~),  
disconnect the suction and pressure pipes  
and discard the banjo sealing washers.

Note: All necessary precautions must be  
taken to prevent spillage of  
hydraulic fluid during this  
operation and on no account should  
fluid be allowed to spill in the  
vicinity of the oxygen economisers.

(Issued with A/L 316)

RESTRICTED

RESTRICTED

- 4 -

AAP 721:79, Vol 2, Part 2

VAMPIRE MODIFICATION NO 412

- (c) Detach the hand pump mounting bolts and nuts and discard them, retain their washers for refitment. The hand pump may now be removed from the aircraft.
- (d) Unscrew the 2BA nuts, bolts and washers, securing the sliding handle assembly (Part No S15-1217A/1) to the hand pump (item 1), and remove the handle. Obtain a modified hand pump (item 1) and attach the sliding handle assembly using the nuts, bolts and washers supplied with the pump.
- (e) Install the modified hand pump (item 1) in the aircraft using bolts (item 2) 2 off, nuts (item 3), 2 off and the washers previously removed. Reconnect the hydraulic pipes using sealing washers (item 4) 2 off and sealing washers (item 5) 2 off. Lockwire all hydraulic unions with item 6.
- (f) Carry out the tests detailed in Paragraph 18.
- (g) Rearm the ejection seats and close the canopy.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
<del>Item 7</del> 12	1650-PN-UMC501	UMC.501	Handpump Less Handle	1	A

Action on Items Removed

14. The removed item listed above has no further application to this use and is to be actioned as follows:-

~~Item 7~~  
Item 12 Return to stores and despatch to Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for conversion to S15-1457A.

(Issued with A/L 316)

RESTRICTED

RESTRICTED

- 5 -

AAP 721:79, Vol 2, Part 2

VAMPIRE MODIFICATION NO 412

Para 15, after S15-1457A insert the following:-3

" Piston Assy Ident No 1650-RAF-27W1007 and Australia Pty Ltd, BANKSTOWN  
PN UMC 510 when removed from item 12  
during the conversion is to be disposed  
of in accordance with current authorised  
procedure as it has no further application  
to Vampire aircraft. " cted and are to be modified at  
the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
1650-PN-UMC501	UMC.501	Handpump Less Handle	Despatch to Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for conversion to handpump, Part No 1650-PN-S15-1457A.
1650-RAF-T27W/1007	UMC.510	Piston	Despatch to Hawker De Havilland Australia Pty Ltd, BANKSTOWN NSW, for conversion to 1650-PN-S15-1449A. <i>Using items 7-11/A79-504955</i>

Additional Information

17. As supply of modified handpumps is dependent on receipt of unmodified pumps it is important that the UMC.501 pumps are returned promptly to Hawker De Havilland Australia Pty Ltd.

Tests

18. After installation, check that the handpump functions satisfactorily.

Recording

19. Record incorporation of the modification as follows:-

- (a) In aircraft log book.
- (b) On form E/E 78.
- (c) On the wing modification plate.

(Issued with A/L 316)

RESTRICTED

RESTRICTED

- 6 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 412

- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5284

Date of Issue: 23rd August 1965

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(Issued with A/L 316)

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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 411

Class: 2

PITOT STATIC LINE - INTRODUCTION OF UNION NUTS P/NO  
AGS838-13 IN LIEU OF UNION AGS838-4 AND BUSH AGS838-8

Introduction

1. (a) The Reason for the Modification

Deterioration of rubber sealing ring in existing union due to action of hydraulic oil weeping from brake control valve. This modification introduces a connection which is impervious to hydraulic oil.

(b) Description and Features by which the Modification can be Recognised

The depth of the hexagon on the pre mod unions is 0.15 inch whilst that of the post mod is 0.3 inch.

(c) Relationship with Other Modifications

Vampire Mod 352 - Pitot and Static System, Relocation - must be incorporated prior to, or concurrently with this modification.

(d) Reason for Classification

To obviate malfunction of the Pitot Static System due to deterioration of the bush.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

This modification is not written in parts.

RESTRICTED

(Issued with A/L 305)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 411

Application

2. All Vampire Mk 35A aircraft and Vampire Mk 35 aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately one man-hour is required to incorporate the modification.

Trade mustering responsible - Instrument Fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next "C" servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia V 411.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following item is required to complete one modification set:-

RESTRICTED

(Issued with A/L 305)



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 411

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	4730-RAF-28F-17910	AGS838-13	Union Nut Assembly	2	C

Supply

11. Modification sets are to be obtained as follows:-

Item 1 - Demand on Modification Centre, Hawker De Havilland Australia Pty Ltd, BANKSTOWN, NSW, for Vampire Mod No 411.

Method and Sequence of Incorporation

12. (a) Open the nose cowl.  
(b) Locate the static line at the forward face of bulkhead No 1 and trace it down to the adaptor.  
(c) Remove the 2 union nuts (item 3) and bushes (item 2) from adaptor and replace with 2 union nut assemblies (item 1).  
(d) Test static system in accordance with Instrument Instruction O/O/4 AAP 750.0, Vol 2, Pt 1.  
(e) Close nose cowl.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	H28B-13603	AGS838-8	Bush	2	
3	H28-5108	AGS838-4	Union Nut	2	

Action on Items Removed

14. The removed items listed in paragraph 13 have no further application, and are to be actioned as follows:-

Items 2 and 3 : To be discarded.

RESTRICTED (Issued with A/L 305)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 411

Action on Stock Holdings of Removed Items

15. Retain as current stock.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Refer to paragraph 12(d).

Recording

19. Record incorporation of the modification as follows:-

- (a) In aircraft log book.
- (b) On Form E/E 77.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

References: Files, Headquarters Support Command 2601/79/66-411  
and 2501/110/5271

Date of Issue: 12th April 1965

RESTRICTED

(Issued with A/L 305)

RESTRICTED

AAP 721.79 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

Class : 2

CABIN COOLING SYSTEM - INTRODUCTION OF  
AN INTERCOOLER AIRFLOW EXTRACTOR

Introduction

1. (a) The Reason for the Modification  
To improve the airflow through the inter-cooler.
- (b) Description and Features by which the Modification Can be Recognised  
The modification introduces an extractor fairing on the lower skin of the port mainplane below the inter-cooler.
- (c) Relationship with other Modifications  
Nil.
- (d) Reason of Classification  
Based on the need for improved operation of the cold air unit.
- (e) Effect on Servicing and/or Ground Handling  
Improved access to the jubilee clips securing the inter-cooler air pipes, at the rear of the inter-cooler, is obtained by removing the extractor fairing.
- (f) Effect on Aircraft Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mk 35A and 35 aircraft.

(Issued with A/L 313)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

Man-Hours and Trade Mustering Involved

3. Approximately 48 man-hours are required to incorporate the modification. The trade mustering responsible is the airframe fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V410.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing No A15717 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1		W15-1599	Doubler	1	
2		W15-1587	Packing	1	
3		W15-1589	Packing	1	

(Issued with A/L 313)

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RESTRICTED

- 3 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

Item No	Ident No	Part No	Nomenclature	No off Per Set	Stores Class
4		W15-1591ND	Stringer, jogged	1	
5		W15-1581	Bracket, stringer attachment	1	
6		W15-1595ND	Packing piece	1	
7		W15-1593ND	Packing, tapered	1	
8		W15-1585	Bracket, intercooler mounting	1	
9		W15-1583	Bracket, intercooler mounting	1	
10	A79/504949	W15-1597	Fairing, extractor	1	
11	5305-RAF-28D/8337	AS1248/1B	Bolt, Mush, Hd, MS, 4BA x 0.55" long	9	
12		AGS2018/B1	Nut single, anchor MS, 4BA	9	
13	5305-100-7979	AS1246/1B	Bolt, Round Hd, MS, 4BA x 0.55" long	1	
14	5305-101-0658	A25/1B	Bolt, Hex Hd, MS, 4BA x 0.55" long	3	
15	5310-941-9486	SP16/B	Washer, Thick, AL AL, 4BA x 0.30" O/D	4	
16	5310-RAF-27M/0327 Nylon	AGS2002/B1	Stiffnut, Thin, MS, 4BA	4	
17	5305-914-2406	AS1248/3C	Bolt, Mush Hd, MS, 2BA x 0.7" long	1	
18	5305-101-3284	AS1248/2C	Bolt, Mush Hd, MS, 2BA x 0.6" long	1	
19	5320-101-2750	AS2227/504	Rivet, Round Hd, AL AL, 5/32" x 1/4" long	2	
20	5320-913-7142	AS2229/305	Rivet, 90° Csk Hd AL AL, 3/32" dia x 5/16" long	18	

(Issued with A/L 313)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

Item No	Ident No	Part No	Nomenclature	No off Per Set	Stores Class
21	5320-101-1969	AS2229/505	Rivet, 90° Csk Hd AL AL, 5/32" dia x 5/16" long	18	
22	5320-101-1970	AS2229/506	Rivet, 90° Csk Hd AL AL, 5/32" dia x 3/8" long	65	
23	5320-101-1984	AS2229/507	Rivet, 90° Csk Hd AL AL, 5/32" dia x 7/16" long	23	
24	8010-018-5060		Primer, Zinc Chromate to Spec RAAF 2K7	AR	C
25	8010-018-5140		Covering, High Speed alum ELR 9372	AR	
26	8010-018-5100		Varnish, pigmented, jointing compound to Spec TRS K53	AR	C

Supply

11. Modification sets are to be obtained as follows -

Items 1 - 23 - Demand on Modification Centre, Hawker de Havilland Australia Pty Ltd, BANKSTOWN, NSW, for Vampire Modification No 410.

Items 24 - 26 - Draw from unit stores.

Method and Sequence of Incorporation

12. The airframe fitter is responsible for the complete paragraph.

- (a) Remove the small hand hole covers above and below the intercooler intake duct in the port mainplane leading edge. Remove the cold air unit from the wing in accordance with AAP 721.79, Vol 1, Sect 3, Chap 8, Para 12. Proceed to disconnect the intercooler as directed in paragraph 13 of the manual. Note that No 1 fuel tank will not be removed. It may not be practical to remove the intercooler through the CAU access hole, owing to interference on the air duct, in which case the intercooler will have to be left within the wing while the modification is being embodied.

RESTRICTED (Issued with A/L 313)

Remove the two mounting brackets from the intercooler, retaining the attaching items for reassembly of new brackets. To prevent the ingress of swarf into the intercooler, if it is left in the wing, place the unit into a thick plastic bag.

- (b) Refer to the attached drawing and remove the second stringer forward of the main spar, on the bottom skin between the wing root rib 1A and rib 2. Note that two blind tack rivets attach the stringer to the tapered buttstrap at rib 2, and it will be necessary to drill out the tails of these rivets. To facilitate removal of the stringer section, break the stringer at a point between the rib and the first rivet inboard from the rib, leaving the rivet hole intact. Refer to paragraph 12(j).  
With the stringer removed, mill the tails of the two blind rivets flush with the buttstrap.
- (c) Refer to the drawing and drill out the seven rivets, through the wing skin and the buttstrap at rib 2, which will become the outboard row of rivets in the new doubler.
- (d) Assemble the two tapered packings (W15-1587 and W15-1589 ref.) in the cutouts of the buttstrap. Trim the packings as required to line up the tapered surfaces.
- (e) Assemble the doubler plate (W15-1599 ref) with the centreline of the access hole on the rivet line of the removed stringer. Trim the rear outboard corner of the doubler if necessary to provide clearance on the first stringer forward of the main spar. Push the joggle of the doubler plate up against the tapered surface of the buttstrap and packings.
- (f) Drill 5/32" diameter through all the pilot holes in the doubler plate, and cut out the access hole in the wing skin to suit the hole in the doubler plate. Drill 5/32" diameter into the doubler through the seven holes drilled out in paragraph (c) above. Open out to 5/32" diameter the stringer rivet holes outboard of the access hole. Countersink the

(Issued with A/L 313)

RESTRICTED

- 6 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

holes in the wing skin as called for on the drawing.

- (g) Offer up the extractor fairing (W15-1597 ref) and position it over the new access hole. Drill No 26 through the pilot holes in the fairing, into the wing skin and the doubler. Remove the fairing.
- (h) Position the nine anchor nuts on the doubler plate as shown, varying the angles given if necessary to obtain clearance against the inter-cooler mounting feet. Drill and countersink the anchor nut rivet holes.
- (j) On the new joggled stringer section (W15-1591ND ref) mark a rivet centre line with 0.25" edge distance as shown on the drawing. Refer to "view on arrow B" and drill a No 30 pilot hole pitched in the centre of the joggle. Line this hole up with the corresponding rivet hole in the removed inboard section of stringer (refer paragraph (b) above).  
Pin together, and using the old stringer as template, drill several No 30 diameter locating holes spaced along the new stringer. Also drill three No 30 pilot holes through the inboard end of the flange of the new stringer to match the three gusset attachment holes in the removed stringer. Trim the inboard end of the new stringer identically to the old stringer.
- (k) Assemble the tapered packing piece (W15-1595ND) in the joggle of the stringer section and drill through the No 30 hole in the centre of the joggle. Locate the packing over the corresponding rivet hole at rib 1B and mark the edge of the doubler plate on the packing. Trim the packing to this line so that on assembly with the stringer, it will butt against the doubler. Note that if the rivet hole specified above is close to the doubler and the joggle extends over the doubler plate, the doubler should be tapered to suit. Assemble the packing and the new stringer as shown on the drawing. Increase the size of the

RESTRICTED

(Issued with A/L 313)



RESTRICTED

- 7 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

stringer cut out in rib 1B as necessary to provide clearance on the stringer bulb. Mark the edge of the access hole on the stringer for trimming in paragraph (p).

- (l) Open out the three holes at the rib 1A gusset plate to No 26 diameter. Drill 5/32" diameter holes into the new stringer through the existing rivet holes in the wing skin. Countersink the holes in the skin as called for on the drawing.
- (m) Fit the new stringer attachment bracket (W15-1581 ref) on rib 1B. Refer to "view on arrowB" on the drawing and trim the bottom of the bracket to enable the pilot holes to be aligned with the existing holes in the rib. Ensure a small clearance on the doubler plate. Drill 5/32" diameter through the two pilot holes into the rib. Drill one hole No 26 diameter into the stringer flange in the position shown.
- (n) Locate the tapered packing (W15-1593ND ref) as shown on the drawing and drill 5/32" diameter for the two attaching rivets. If necessary relieve the packing to clear the adjacent rivet position inboard of the packing. Drill No 11 through the rear two intercooler mounting holes, into the doubler plate and the packing (outboard position only).
- (o) Remove all the parts and deburr. Trim the outboard end of the new stringer flush with the edge of the access hole and chamfer as shown on the drawing. Clean out all swarf inside the wing. Touch up any damaged paintwork.
- (p) Reassemble all the parts, using jointing compound between mating surfaces. Rivet as called for on the drawing. Bolt the stringer to the rib 1A gusset plate and the rib 1B attachment bracket and ensure that the stiffnuts are screwed fully home. Restore the aircraft's external finish using chromate and lacquer.

RESTRICTED

(Issued with A/L 313)

RESTRICTED

- 8 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

- (q) Remove the protective coverings from the intercooler. Fit the new mounting brackets (W15-1583 and W15-1585 ref) using the attaching items retained in paragraph (a). Mount the intercooler in position, using the new longer bolts at the rear feet as called for on the drawing, and the existing forward bolts.
- (r) Make all the intercooler connections, taking advantage of the improved access through the additional hole, and then replace the cold air unit and all access panels as detailed in the maintenance manual.
- (s) Fit the extractor fairing over the new access hole, and attach with the nine mushroom head bolts.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
27		D00758	Bracket, stringer attachment	1	
28		D007413A	Bracket, intercooler mounting	2	
29		J723	Stringer 'S', approx 27" long	1	

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be discarded.

Action on Stock Holdings of Removed Items

15. Not applicable.

(Issued with A/L 313)

RESTRICTED

RESTRICTED

- 9 -

AAP 721.9 VOL 2 PART 2

VAMPIRE MODIFICATION NO 410

Modification of Spares

16. The following spares are affected and are to be modified at the direction of Headquarters Support Command:-

Ident No	Part No	Nomenclature	Remarks
A79/504832	W15-1407A/16	Mainplane, port, Mk 35A (c/w controls, fuel lines, piping, electrical services and undercarriage)	Rework to para 12. Reidentify as part No W15-1407A/17 and Ident No A79/504930.
A79/504830	W15-1041A/16	Mainplane, port, Mk 35, (c/w controls, fuel lines, piping, electrical services, and undercarriage)	Rework to para 12. Reidentify as part No W15-1041A/17 and Ident No A79/504931.

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of this modification as follows:-

- (a) In aircraft log book.
- (b) On form E/E 78.
- (c) On the wing modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

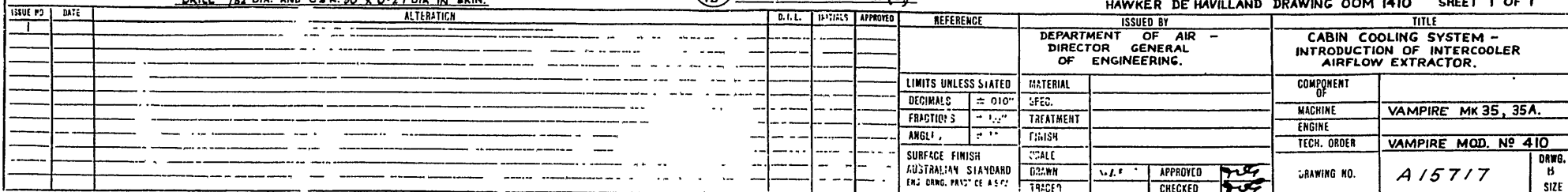
20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference : File, Headquarters Support Command, 2501/110/5256

Attachment : Drawing A15717

Date of Issue: 2nd August 1965 (Issued with A/L 313)

RESTRICTED



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 409

Class 2

OXYGEN SYSTEM - TO PROVIDE GUARDS FOR FLEXIBLE  
HOSES ON MARTIN BAKER EJECTION SEATS AND  
REVISE THE HOSE LENGTH

Introduction

1. (a) The Reason for the Modification  
Incidents of anoxia have occurred due to inadvertent operation of the quick release on the flexible hose.
- (b) Description and Features by Which the Modification Can be Recognised  
This modification re-routes and alters the length of the flexible hoses to enable connection at the rear of the seat and introduces a bracket guard to prevent inadvertent disconnection and damage to the hose.
- (c) Relationship with Other Modifications  
This modification must be embodied concurrently with RAAF Escape Facility Modification 13:27.
- (d) Reason for Classification  
Based on the safety aspect.
- (e) Effect on Servicing and/or Ground Handling  
Nil.
- (f) Effect on Aircraft Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mk 35 and 35A aircraft.

(Issued with A/L 327)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 409

Man-Hours and Trade Mustering Involved

3. Approximately 4 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Armament Fitter	-	1 $\frac{1}{4}$ man-hours
Airframe Fitter	-	2 $\frac{1}{2}$ man-hours
Instrument Fitter	-	$\frac{1}{4}$ man-hour

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V409 and AM Modification VAM3620.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A16071 is attached.

Modification Parts List

10. The following items are required to complete one modification set:-

(Issued with A/L 327)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 409

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	1660-PN-	F15-1075A	Guard Assy Oxygen Hose	2	
2	4730-912-9562	AGS1000/3	Clip, Hose	2	
3	4720-RAF-6D1715		Tubing, LP Mk 5A (Length approx 5 ft)	1	
4	I1/10027	NPN	Alclad Sheet, .048" (18 SWG) Spec L72	AR	

Supply

11. Modification sets are to be obtained as follows:-

Items 1 - 3 : Demand on Modification Centre  
Hawker de Havilland Australia  
Pty Ltd BANKSTOWN NSW for  
Vampire Modification No 409  
Ident No 1560-NSL-0031.

Item 4 : Draw from unit stores.

Method and Sequence of Incorporation

12. The instrument fitter is responsible for paragraph 12(c), (h) and (l). The armament fitter is responsible for paragraph 12(a) and (k). The airframe fitter is responsible for the remainder.

- (a) Remove both ejection seats in accordance with current authorised procedure.
- (b) Working on hose assembly (5 ft long) (15S1185AND) between the starboard economiser and the second pilot's seat, remove from the end attaching to the seat, and retain one quick release plug (6D/1466 ref) and replace with one quick release socket (6D/1467 ref), retained on removal from the seat during embodiment of RAAF Escape Facility Modification 13:27.
- (c) Remove and reposition the outlet connection on the starboard economiser to face outboard (port), as shown on Drawing No A16071.

RESTRICTED

(Issued with A/L 327)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 409

- (d) Remove the hose assembly (5 ft long) (15S1185AND ref) between port economiser and first pilot's seat from the aircraft and retain the hose assembly and clip (AGS1000/0 ref). Remove and discard the two "P" clips (item 5).
- (e) Obtain one 24 inch hose (S15-269ND ref) removed from the seat on embodiment of RAAF Escape Facility Modification 13:27 and, retaining the parallel end, cut the hose to a length of 18 inches.
- (f) Rework hook plate of oxygen hose guard assemblies (item 1) as required to clear relief valve clamp and pins in cross tube.
- (g) If necessary, fit packing (item 4) between relief valve and cross tube.
- (h) If necessary, rework G4 gyro compass amplifier cover plate as required to clear guard.
- (j) Fit oxygen hose guard assemblies to cross tube using hose clips (item 2) and fit guards and quick release sockets of both hoses to the quick release fitted support brackets on seat guide rails, routing hoses as shown on drawing.
- (k) Replace both ejection seats in accordance with current authorised procedure.
- (l) Carry out a check on the oxygen system in accordance with AAP 721.79, Vol 4, Pt 2, Sect 1, Card 2, Item 2.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5		AS3180/16C	"P" Clip	2	

(Issued with A/L 327)

RESTRICTED



RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 409

Action on Removed Items

14. The removed item listed above has no further application to this use and is to be discarded.

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Not applicable.

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

References : Files, Headquarters Support Command, 2501/110/5703 and 2601/79/22-409

Attachment : Drawing A16071

Date of Issue : 8th November 1965

RESTRICTED

(Issued with A/L 327)

**DO NOT SCALE**

● PARTS MARKED THUS ARE EXISTING ON A/C.

IF NECESSARY, PLACE A PIECE OF 18 SWG. PACKING  
BETWEEN RELIEF VALVE AND CROSSTUBE AND RELIEVE  
HOOK PLATE AS REQUIRED TO CLEAR RELIEF VALVE CLAMP.

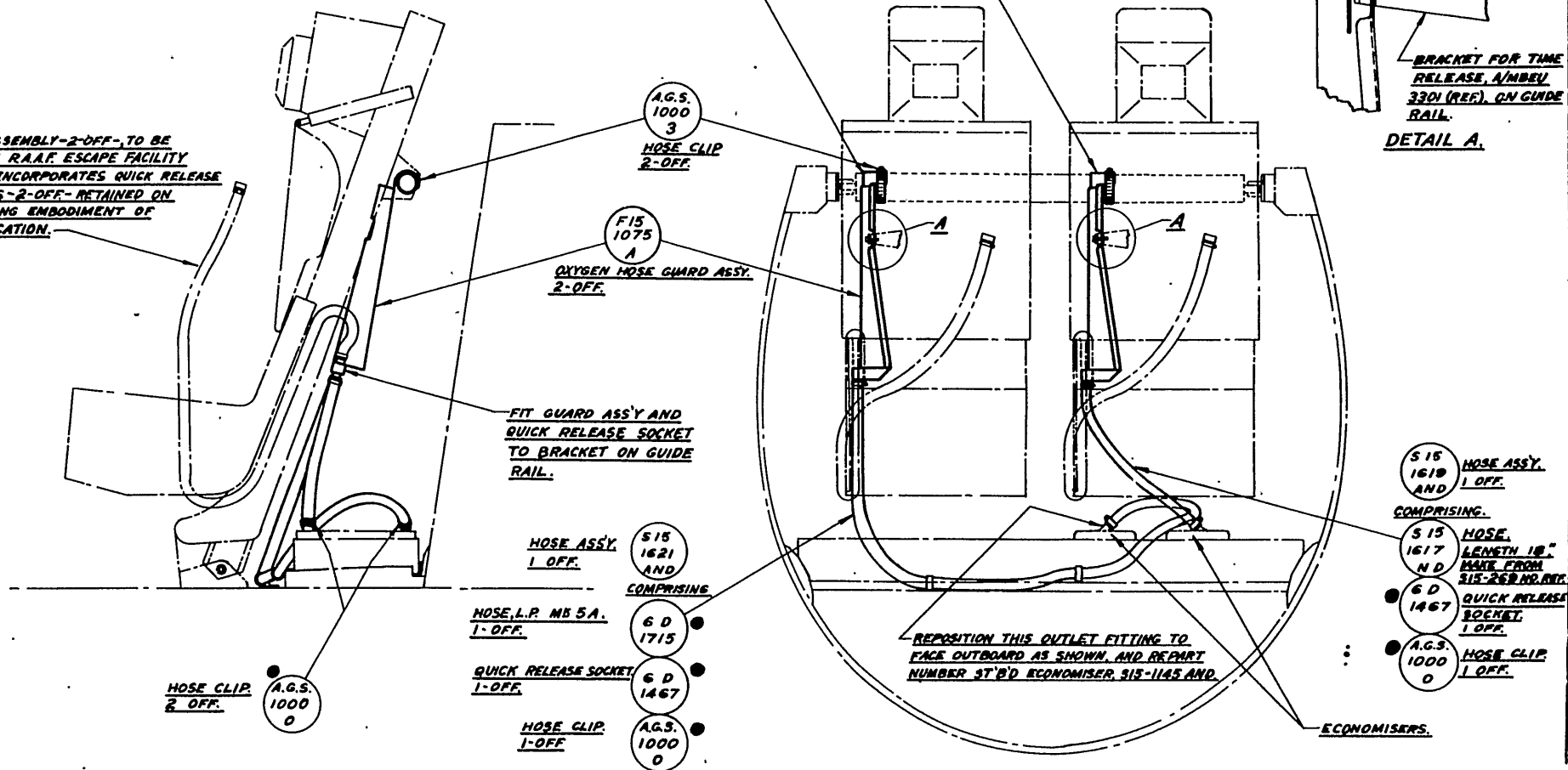
POSITION GUARD ON CROSSTUBE SO  
THAT THESE TWO FACES COINCIDE.

RELIEVE HOOK PLATE AS REQUIRED  
TO CLEAR PINS IN CROSSTUBE.

THIS HOSE ASSEMBLY-2-OFF- TO BE  
EMBODIED BY R.A.A.F. ESCAPE FACILITY  
MOD. 13:27, INCORPORATES QUICK RELEASE  
PLUG 6D/1466-2-OFF- RETAINED ON  
REMOVAL DURING EMBODIMENT OF  
THIS MODIFICATION.

BRACKET FOR TIME  
RELEASE, A/MBEV  
3301 (REF.) ON GUIDE  
RAIL.

DETAIL A.



HAWKER DE HAVILLAND DRAWING N° OQM 409. SHEET 1 OF 1.

IMAGE NO.	DATE	ALTERATION	B.I.L.	INITIALS	APPROVED	REFERENCE	ISSUED BY	TITLE
							DEPARTMENT OF AIR. SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND.	OXYGEN SYSTEM - GUARDS FOR FLEXIBLE HOSES ON MARTIN BAKER EJECTION SEATS.
						LIMITS UNLESS STATED	MATERIAL	COMPONENT
						DECIMALS ± .010"	SPEC.	MACHINE
						FRACTIONS ± 1/32"	TREATMENT	ENGINE
						ANGLES ± 1°	FINISH	TECH. ORDER
						SURFACE FINISH	SCALE	
						AUSTRALIAN STANDARD	DRAWN	
							APPROVED	
								DRAWING NO.
								A16071
								DWG. B

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AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 408

Class : 2

FUEL SYSTEM - TO INTRODUCE A NEW TANK  
PRESSURISING PIPE LINE ASSEMBLY AND FITTINGS

Introduction

1. (a) The Reason for the Modification  
Cases have occurred of the pressurising pipe line fracturing, resulting in the loss of pressurisation of the flexible bag tanks in the wings.
- (b) Description and Features by Which the Modification can be Recognised  
This modification introduces a more robust assembly and additional fastening of the flexible hose to prevent fracturing of the pipe line.
- (c) Relationship with other Modifications  
Nil.
- (d) Reason of Classification  
Based on the safety aspect.
- (e) Effect on Servicing and/or Ground Handling  
Nil.
- (f) Effect on Aircraft Limitation  
Nil.
- (g) Effect on Aircrew Operation  
Nil.
- (h) Number of Parts Comprising the Order  
One.

Application

2. All Vampire Mk 35 aircraft.

(Issued with A/L 323)

RESTRICTED

RESTRICTED

- 2 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 408

Man-Hours and Trade Mustering Involved

3. Approximately 6 man-hours are required to incorporate the modification. The trade mustering involved is the airframe fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker de Havilland Australia Modification V408.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Drawing No A15636 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504935	P15-621	Special Adaptor	2	C
2	A79/504906	P15-623AND	Pipe Assembly	1	
3	A79/504907	P15-624AND	Pipe Assembly	1	
4	A79/503419	13P-97	Adaptor	2	

(Issued with A/L 323)

RESTRICTED

RESTRICTED

- 3 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 408

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5	5310-RAF-28F8215 or 5310-801-4021	AGS1138/B	Washer, Aluminium, Jointing	6	
6	5310-RAF-28F9649	AGS1138/C	Washer, Aluminium, Jointing	2	
7	4730-RAF-28F10798 or 4730-943-9533	AGS1129/B	Banjo Body	2	
8	4730-RAF-28F12956	AGS1215/B	Banjo Bolt	2	
9	I/9715		Wire, Locking, 22 SWG, DTD189	AR	
10	I32A/94		Cord, Stringing, Spec 4F35	AR	
11	K4/152		Beeswax	AR	

Supply

11. Modification sets are to be obtained as follows:-
- Items 1 - 8 Demand on Modification Centre, Hawker de Havilland Australia Pty Ltd, BANKSTOWN NSW, for Vampire Modification No 408.
- Items 9 - 11 Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Remove the upper inspection doors from the aircraft to provide access to the pressurising pipe lines in the forward section of the engine bay.
- (b) Referring to the attached drawing, remove the existing wirelocking at three points on both three-way pipe assemblies (P15-575A, port, and P15-576A, starboard), which join the flexible metal supply lines from the engine to the restrictor and relief valve assemblies, and through non-return valves, to the pressure reducing valves (ACM 16314 refers).

(Issued with A/L 323)

RESTRICTED

RESTRICTED

- 4 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 408

- (c) Remove each three-way pipe assembly, together with the double ended union body (AGS1103/B or AGS949/B) connecting it to the engine supply line.
- (d) Assemble the new components as shown on the attached drawing, and wirelock all connections.
- (e) Lash the starboard flexible metal supply line as necessary to the warm air pipe passing above the engine.
- (f) Replace the upper inspection doors on the aircraft.

Items Removed

13. The following items are removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
12	A79/504766	P15-575A	Pipe Assembly	1	
13	A79/504767	P15-576A	Pipe Assembly	1	
14	4730-RAF-28F9501	AGS1142/B	Nipple Adaptor	4	
15	4730-RAF-28F8213 or 4730-RAF-28V7623	AGS1103/B AGS949/B	Union Body	2	

Action on Items Removed

14. The removed items listed above have no further application to this use and are to be discarded.

Action on Stock Holdings of Removed Items

- 15. (a) Stock holdings of items 12 and 13 are to be discarded.
- (b) Items 14 and 15 are standard parts and stock holdings are not affected.

(Issued with A/I 323)

RESTRICTED

RESTRICTED

- 5 -

AAP 721:79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 408

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-
- (a) In aircraft log book.
  - (b) On Form E/E 78.
  - (c) On the wing modification plate.
  - (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference : File, Headquarters Support Command, 2501/110/5167

Attachment : Drawing A15636

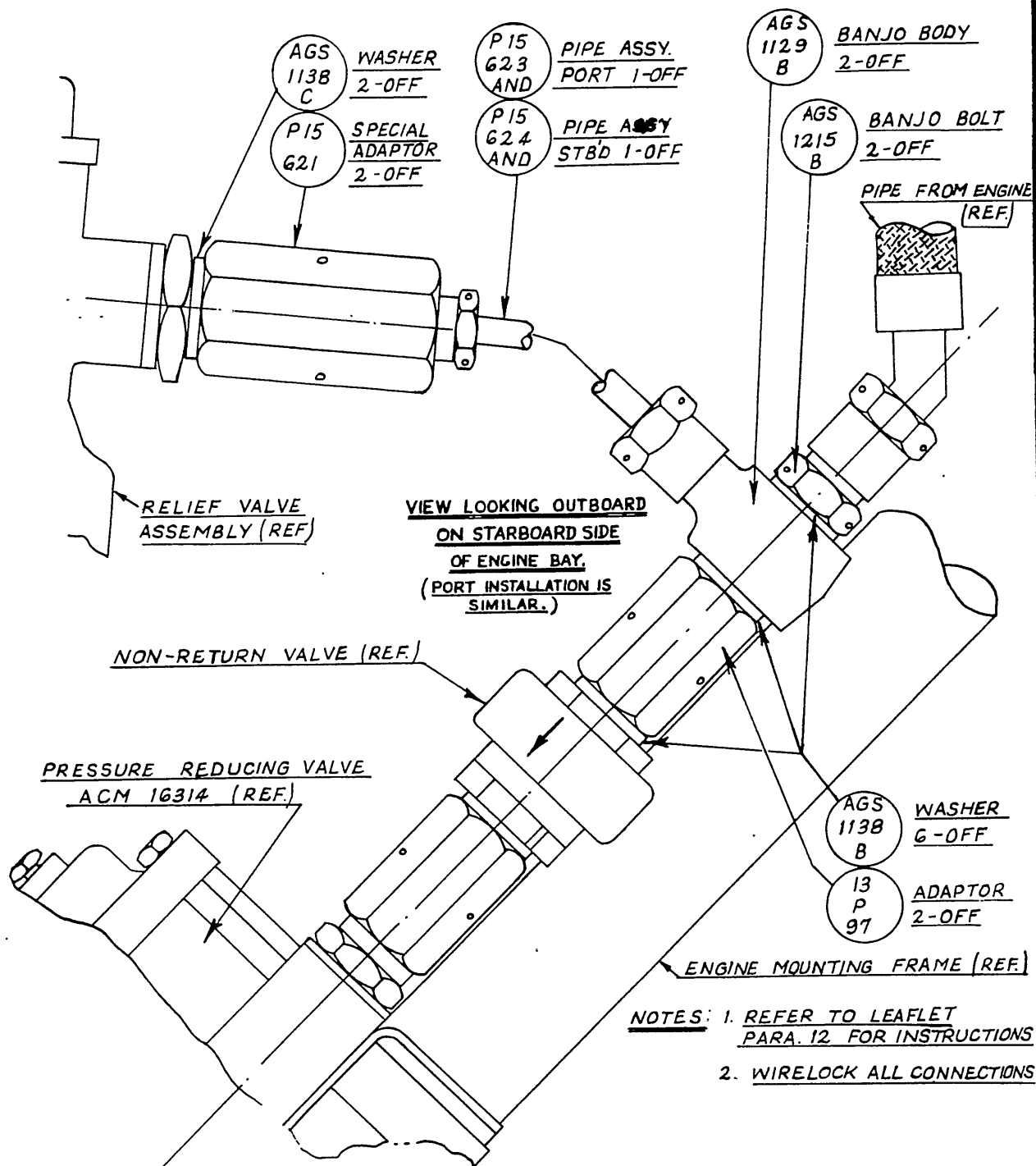
Date of Issue : 11th October 1965

(Issued with A/L 323)

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DO NOT SCALE

ISSUE No	DATE	ALTERATION	DIL	INITIALS	APPR
1	7-10-64				



HAWKER DE HAVILLAND DRAWING DDM 1408 SHEET 1 OF 1

REFERENCE		ISSUED BY		TITLE	
		DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		FUEL SYSTEM - TO INTRODUCE A NEW TANK PRESSURING PIPE LINE ASSEMBLY AND FITTINGS	
LIMITS UNLESS STATED		MATERIAL		COMPONENT OF	
DECIMALS	$\pm 0.10$	SPEC		MACHINE	VAMPIRE MK.35
FRACTIONS	$\pm \frac{1}{32}$	TREATMENT		ENGINE	
ANGLES	$\pm 1^\circ$	FINISH		TECH ORDER	VAMPIRE MOD. N°408
NEXT ASSEMBLY		SCALE		DRAWING No A 15636	
		DRAWN		DRWG A SIZE	
		TRACED			
			APPROVED		
			CHECKED		



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 407

Class: 2

ELECTRICAL - AIRSPEED INDICATOR LIGHTING  
INTRODUCTION OF EYEBROW LIGHT IN LIEU OF PILLAR LIGHT

Introduction

1. (a) The Reason for the Modification

The airspeed indicator lighting is of the pillar type, which partially obscures the indicator when viewed from the starboard seat.

(b) Description and Features by Which the Modification can be Recognised

An eyebrow type light is fitted above the airspeed indicator to replace the pillar type lighting.

(c) Relationship with Other Modifications

Not applicable.

(d) Reason for Classification

The classification is based on improved operational aspects.

(e) Effect on Servicing and/or Ground Handling

Not applicable.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 and 35A aircraft.

(Issued with A/L 292)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 407

Man-Hours and Trade Mustering Involved

3. Approximately 1 man-hour will be required to incorporate the modification. The trade musterings responsible are electrical fitter (.75 man-hour) and instrument fitter (.25 man-hour).

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" Servicing after modification sets are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Not applicable.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, etc

8. Not applicable.

Drawings

9. Not applicable.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	6220-217-1752	B48551	Light, Panel Grimes	1	A
2	I32A/94		Cord Stringing Braided	A/R	C
3	K4/152		Bees Wax	A/R	C

RESTRICTED

(Issued with A/L 292)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 407

Supply

11. Modification sets are to be obtained as follows:-

Item 1 Demand on Modification Centre, Hawker  
De Havilland, BANKSTOWN NSW, for Vampire  
Modification No 407.

Items 2 and 3 Demand from unit store.

Method and Sequence of Incorporation

12. (a) Render both ejection seats safe.
- (b) Fit undercarriage locks.
- (c) Isolate electrical power from the aircraft.
- (d) Lower the instrument panel and remove the airspeed indicator.
- (e) Disconnect and remove the airspeed indicator pillar light assembly from the instrument panel.
- (f) At a point approximately 7/8" below the right hand retaining screw of the undercarriage indicator drill one hole 1/8" diameter, through which the cable for the new lighting fixture is to pass (place item 1 in position to ascertain the exact position for the hole to be drilled).
- (g) Insert the new lighting fixture cable through the hole and connect it to the terminal from which the pillar light cable was disconnected. Secure lead to existing cables.
- Note: There are no identification markings for the above terminal.
- (h) Refit the airspeed indicator and secure item 1 in position.
- (j) Raise and secure the instrument panel.
- (k) Reconnect the aircraft batteries.

Items Removed

13. The following item is removed on incorporation of the modification:-

RESTRICTED

(Issued with A/L 292)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 407

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
4	6220-768-2130	B6618-2	Light, Pillar	1	A

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application, and is to be actioned as follows:-

Item 4 - If serviceable return to stock and if unserviceable transfer to Board of Survey.

Action on Stock Holdings of Removed Items

15. Retain as current stock.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Functionally check the new lighting installation and the airspeed indicator for correct operation.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

(Issued with A/L 292)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 407

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

References: Files, Headquarters Support Command 2501/110/4762 and 2601/79/69-407

Date of Issue: 9th November 1964

(Issued with A/L 292)

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RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

Class 2

ELECTRICAL - MODIFICATION TO UNDERCARRIAGE  
FLASHING WARNING SYSTEM

Introduction

1. (a) The Reason for the Modification

To improve the pilot presentation of the undercarriage warning system.

(b) Description and Features by which the Modification can be Recognized.

The following items are connected into the system and mounted in positions described at paragraph 12: Airspeed switch, warning horn and relay type 9B.

(c) Relationship with other Modifications

This modification is to be incorporated in conjunction with or subsequent to Vampire Modification No 437 (Repositioning of Flasher Unit).

(d) Reason for Classification

Improved flight safety aspects.

(e) Effect on Servicing and/or Ground Handling

AAP 721.79, Vol 4, will be suitably amended to include servicing procedures.

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Operation of the undercarriage warning system will now be:-

- (i) When the undercarriage is in any position between fully up and locked and fully locked down, the undercarriage indicator will show unsafe indication.

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

- (ii) Both visual flashing and pulsating audible undercarriage warning indications will occur when the following conditions are simultaneously satisfied:-

The airspeed is less than 150 ( $\pm$  3) knots, the throttle setting is less than 10,000 RPM and the undercarriage is in the fully up and locked position.

- (h) Number of Parts Comprising the Order.

One.

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 21 man-hours will be required to incorporate the modification. The trade musterings responsible are:-

Electrical Fitter	-	9 man-hours
Airframe Fitter	-	6 man-hours
Armament Fitter	-	3.5 man-hours
Instrument Fitter	-	2.5 man-hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next D Servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Nil.

(Issued with A/L 350)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Drawing No A16394. Copies may be obtained from Headquarters Support Command, as required. Copies have been issued to applicable units.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	6610-RAF-6A5322	Mk 10	Switch Airspeed	1	A
2	5935-011-9123	CZ49181	Plug	1	A
3		2CZ108002	Outlet 90° c/w Fittings	1	C
4	I1/9888	WW-T-789	Tubing 5/16" OD x 22 Swg	A/R	C
5	4730-RAF-28V5105	AGS838-2	Tee Pieces	2	C
6	I1/10029	BSL72	Sheet Al Alloy 22 Swg	A/R	C
7	I1/10027	BSL72	Sheet Al Alloy 18 Swg	A/R	C
8	5935-RAF-5X3237	Z27330	Pin Socket	1	C
9	5940-RAF-5X3149		Thimble	1	C
10	6145-017-2001		Cable Electric AA18 3.Core Vin Met	A/R	C
11	4730-RAF-28F17190	AGS838-13	Nut Low Pressure	8	C
12	I1/10335		Sheet, Mild Steel 10 Swg	A/R	C

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt. 2

VAMPIRE MODIFICATION NO 406

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
13	5340-017-2078	DHS103 Mk 2	Ferrule 2BA	3	C
14	5305-RAF-28D11255	1246-2C	Screw Rd Hd 2BA x 0.6" Long	3	C
15	5930-RAF-5CW6453		Relay Type 9B No 2A	1	A
16	6145-RAF-5E4184		Cable Uninyvin 18	A/R	C
17	6145-G5E30156		Cable Two Core	A/R	C
18	5975-017-6823		Tubing Insulating 7 mm	A/R	C
19	6350-RAF-5CZ1961		Horn Type C	1	A
20	5920-RAF-10H23864		Fuse 5 Amp	1	C
21	5340-943-6947	AS3180-4B	Clamp Loop	1	C
22	5305-175-3407	AN545B6-6	Screw Wood Rd Hd No 6G x 3/4" long	2	C
23	5305-175-3405	AN545B6-4	Screw Wood Rd Hd No 6G x 1/2" long	1	C
24	5970-018-8475		Tape Electrical Scotch No 33	A/R	C
25	5330-RAF-28F13603	AGS838-8	Ring Rubber	8	C
26	I32A/94		Cord	A/R	C
27	K4/152		Beeswax	A/R	C
28	8040-018-5111		Adhesive Resin Synthetic	A/R	C
29	K3/410		Hardener Beetle, 2B (Blue)	A/R	C
	or K3/411		Hardener Beetle, W1S (Violet)	A/R	C
	or K3/412		Hardener Beetle, GP30 (Yellow)	A/R	C
30	W3/1372		Brads, Brass 20 Swg x 1/2" long	A/R	C
31	8010-018-5103		Enamel, Matt Black, K18	A/R	C
32	K4/191		Paper, Glass No 1	A/R	C

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
33			Block Spruce 1/4" Thick 3" x 2 1/2"	1	C
34	5310-167-0878	AN936-A10	Washer Shake Proof 2BA	3	C
35	5975-940-0053		Ferrule 7 Amp	1	C

Supply

11. Modification sets are to be obtained as follows:-

Items 1, 2, 3, 13, 15, 19 and 33:

Demand on Modification Centre, Hawker De Havilland,  
BANKSTOWN NSW, for Vampire Modification No 406,  
identified as 9999-PN-MODVAMP406, "A" Class, "Set".

Items 4 to 12, 14, 16, 17, 18, 20 to 32, 34 and 35:

Demand from stores stock.

Method and Sequence of Incorporation

12. (a) Fit undercarriage locks in accordance with AAP 721.79, Vol 1, Sect 2, Chap 1, Para 3.
- (b) Open canopy and render both ejection seats safe.
- (c) Isolate all sources of electrical power from the aircraft.
- (d) Remove canopy hatch from aircraft.
- (e) Disarm and remove both ejection seats.
- (f) Remove both ejection seat guide rails.
- (g) Remove both oxygen economisers, blank off oxygen lines to prevent contamination and ingress of foreign matter.
- (h) Refer to Drawing No A16394 for the following operations.
- (j) Cut pitot and static pressure lines as shown in drawing, removing one half (1/2) inch from each tube.

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 6 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

- (k) Fit "tee" pieces (item 5) in the pitot static lines as shown, using items 11 and 25 as required.
- (l) Using item 4, cut to length, pre-shape and pre-paint pitot static tubes. Install tubes and secure with metal straps (as shown) manufactured from item 6 using existing bolts and screws; ensure tubes are correctly marked as "pitot" and "static".
- (m) Manufacture airspeed switch bracket as shown using item 7 and fit bracket to G4 F Compass Amplifier Bracket.
- (n) Install airspeed switch (item 1), preset to 150 knots ( $\pm 3$  knots) and connect the pitot static tubes to the switch using item 11.
- (o) Carry out leak test of the aircraft pitot and static pressure systems in accordance with Instrument Instruction No 0/0/4.
- (p) Reinstall both oxygen economisers and carry out functional check of the aircraft oxygen system.
- (q) Make up horn bracket as shown using item 12.
- (r) Mount ferrules (item 13) to airframe as shown using items 28, 29, 30 and 32.
- (s) Fit horn bracket to ferrules using items 14 and 34 and fit horn.
- (t) Fit spruce block (item 33) to forward face of bulkhead No 2 as shown using items 28, 29, 30 and 32.
- (u) Fit relay (item 15) to spruce block using item 22.
- (v) Manufacture a loom using items 2, 3, 8, 9 and 10 as follows:-
  - (i) Connect blue lead to pin C in item 2.
  - (ii) Connect red lead to pin E in item 2.
  - (iii) Connect green lead to pin F in item 2.Connect plug (item 2) to airspeed switch (item 1).

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 7 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

- (w) Locate plug C8 on pressure bulkhead sealing plate and disconnect. Remove cable U12 from pin V of this plug and tape back using item 24.
- (x) Remove starboard cockpit flooring, locate terminal block on cockpit floor, disconnect other end of cable U12 from pin V in plug C8 and tape back, using item 24. Replace cockpit flooring.
- (y) Connect free end of red lead from pin E on item 2 to above vacated pin V in plug C8 using items 8 and 9.. Reconnect plug to bulkhead sealing plate.
- (z) Connect green lead from pin F on item 2 to earth terminal E27 on flasher unit terminal block.
- (aa) Connect free end of blue lead from pin C on item 2 to terminal 2 of relay 9B (item 15) fitted in step (u).
- (ab) Connect terminal 6 on relay (item 15) to fuse 9 on armament services fuse box using item 16.
- (ac) Using item 16 connect terminal 5 on relay (item 15) to terminal block on horn (item 19). Connect other horn terminal to earth terminal No 2 on starboard side of armament services panel.
- (ad) Remove armament services fuse box cover, code fuse No 9 "U/C HORN", fit fuse (item 20) and refit fuse box cover.
- (ae) Connect terminals 1 and 2 of relay (item 15) to terminals U210 and U29 respectively on undercarriage flashing relay terminal block.
- (af) Route and secure all cables with existing cables in aircraft using items 18, 21, 23, 24, 26 & 27 where necessary.
- (ag) Locate the throttle operated undercarriage warning micro switch on the rear of the fireproof bulkhead (Bulkhead No 4). Remove cable U12 from terminal C of this switch and replace on terminal B of the same micro switch.
- (ah) Remove the throttle micro switch (U/C warning) operating cam from the throttle lay shaft and grind the opposite face (to the face already ground) to the same configuration and dimensions as the original ground side.

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 8 -

AAP 721.72, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406

- (aj) Replace the cam on the throttle lay shaft, so that the newly ground cam surface operates the micro switch.
- (ak) Carry out a functional check of the airspeed switch using the airspeed indicator for reference and the standard leak tester for supply pressure.
- (al) Adjust undercarriage flasher relay to give approximately two flashes per second to allow for a better build up of the horn voltage.
- (am) Using item 31, restore finish of all worked areas.
- (an) Replace all covers, panels, equipment, etc, removed for access.
- (ao) Reconnect all electrical sources to aircraft.
- (ap) Re-arm ejection seats.

Items Removed

13. Not applicable.

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. Carry out tests in accordance with paragraph 12, sub-paras (o), (p) and (ak), also the following additional checks:-

- (a) Run the aircraft engine and set the throttle operated undercarriage warning cam to hold the micro switch in the operated (contacts open) position at throttle settings below 10,000 RPM (micro switch contacts to close at RPM of 10,000 and above).

(Issued with A/L 350)

RESTRICTED

RESTRICTED

- 9 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 406.

- (b) With the aircraft on jacks check for correct operation of the undercarriage warning indicator system.
- (c) Check the undercarriage warning indicator system in flight; operation should be such that both the flashing visual and pulsating audible indications will occur when the following conditions are simultaneously satisfied:-
  - (i) The airspeed is less than 150 ( $\pm$  3 knots).
  - (ii) The throttle setting is less than 10,000 RPM.
  - (iii) The undercarriage is in the up and locked position.

Recording

19. Record incorporation of the modification in accordance with AAP 701.5, Vol 1.

Weight Sheet Summary

20. Amendments to Weight Sheet Summaries will be consolidated and issued by Headquarters Support Command.

The effect of this modification on the weight and balance of an aircraft is as follows:-

Item	Weight (lb) $\pm$	Arm (in) $\pm$	Moment (lb in) $\pm$
Fixed Fittings - Undercarriage Warning Horn and Relay (Type 9B)	+3	-42.0	-126

References: Files, Headquarters Support Command, 2501/110/5852 and 2601/79/69-406.

Attachment: Nil.

Date of Issue: 24th March 1967

(Issued with A/L 350)

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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 405

Class: 2

PACITOR FUEL GAUGE SYSTEM - INTRODUCTION  
OF ACME TYPE STRAIGHT COAXIAL CONNECTOR  
IN LIEU OF EXISTING TYPE PL258 CONNECTOR  
AT PACITOR CABLE WING BREAK

Introduction

1. (a) The Reason for the Modification

Reported incidents of cable connectors at the wing break becoming loose due to connector introduced by Vampire Modification No 379 not mating correctly with the existing straight connector.

(b) Description and Features by which the Modification can be Recognised

The new type straight connector has more serrations in each end and are of a deeper more definite "V" shape. The dielectric consists of Teflon in lieu of polystyrene.

(c) Relationship with other Modifications

Vampire Modification No 379 must be embodied prior to, or concurrently with, this modification.

(d) Reason of Classification

To allow for more positive locking of the pacitor cables at the wing breaks.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 300)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 405

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 4 man-hours are required to incorporate the modification. The trade musterings responsible are:-

Airframe fitter	-	2 man-hours
Instrument fitter	-	2 man-hours

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Modification V405.

Orders and Instructions Superseded or Cancelled

7. The following modification order is cancelled by the introduction of this modification:-

RAAF STI Vampire/129.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

(Issued with A/L 300)

RESTRICTED

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 405

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
*1	5935-PN-C32-14	C32-14	Connector Coaxial Straight	2	
2	I1-9715		Wire Locking 22 SWG DTD 189 or DTD 169	A/R	C
3	I32A-94		Cord, Stringing Spec 4F35	A/R	C
4	K4-152		Beeswax	A/R	C

\* It is not permissible to substitute for this item without prior approval of Headquarters Support Command..

Supply

11. Modification sets are to be obtained as follows:-

Item 1 - Demand on Modification Centre, Hawker De Havilland Australia Pty Ltd for Vampire Modification No 405.

Items 2-4 - Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Open the nose cap and disconnect the aircraft batteries.
- (b) In the main undercarriage wheel wells remove the two access panels situated on the rear walls.
- (c) Open the lower inspection door to gain access to the engine bay.
- (d) Locate the existing junction boxes through the panels in the wheel wells and disconnect the connector from the engine bay and undo all ties.
- (e) Working from the engine bay, pull the disconnected connector back along the conduit until the wing break joint becomes visible at the engine bay end.
- (f) Remove all bindings around the joint (embodied by STI Vampire/129), undo the joint and dispose of the straight connectors (item 5).

(Issued with A/L 300)

RESTRICTED

## VAMPIRE MODIFICATION NO 405

- (g) Obtain straight connection (item 1) (2 off - 1 off per wing joint) and couple up both ends of the existing pacitor cable to it and tighten. Addition of the tape around the joint is no longer required.
- (h) Working from the wheel wells, draw the pacitor cable down into the wing conduit until the joint is no longer visible.
- (j) Connect the cable back into the wing junction box, interlock the joint using item 2 as required, and replace all ties previously undone using waxed cord stringing (item 3) as required, treated with beeswax (item 4) as required.
- (k) Replace all panels removed by operation (b).
- (l) Replace the lower engine inspection doors.
- (m) Reconnect the aircraft batteries and close the nose cap.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5	Y110H/1555 or Y110H/19397	PL258	Straight Connector	2	

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application and is to be actioned as follows:-

Item 5 - Is to be examined and if found serviceable, return to stores.

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not applicable.

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 405

Additional Information

17. Nil.

Tests

18. No tests are required other than to note that the pacitor system is functioning upon switching on the power.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command, 2501/110/5091

Date of Issue: 15th March 1965

(Issued with A/L 300)

RESTRICTED



RESTRICTED

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 404

Class: 2

PROVISION OF SPRING LOADED MUTE SWITCH FACILITY

Introduction

1. (a) The Reason for the Modification

The existing VHF Radio Mute Switch can be inadvertently left in the "ON" position resulting in loss of radio contact.

(b) Description and Features by which the Modification can be Recognised

The VHF Radio Mute Switch located on the lower right portion of the aircraft instrument panel has a spring loaded "UP" operating position.

(c) Relationship with other Modifications

Nil.

(d) Reason for Classification

Provides an improved aircraft VHF Radio Muting Facility.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Radio Mute Switch is to be held in the "UP" position to have VHF radio mute operation.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk 35 aircraft.

(Issued with A/L 321)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 404

Man-Hours and Trade Mustering Involved

3. Approximately 2 man-hours are required to incorporate this modification. The trade mustering man-hours involved are as follows:-

- (a) Instrument Fitter -  $\frac{1}{2}$  man-hour
- (b) Radio Technician (Air) - 1 man-hour
- (c) Airframe Fitter -  $\frac{1}{2}$  man-hour

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. All aircraft depots, operating units, and civilian contractors as applicable.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, Etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

(Issued with A/L 321)

RESTRICTED



RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 404

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	5930-RAF-5CW5830		Switch Tumbler	1	A
2	5305-120-0066		Screws Steel 4BA x $\frac{5}{8}$ "	2	C
3	5310-941-6642		Washers 4BA	2	C

Supply

11. Modification sets are to be obtained as follows:-

- Item 1 - Demand on No 2 Aircraft Depot Modification Centre.  
Items 2 and 3 - Demand on unit store.

Method and Sequence of Incorporation

12. Instrument Fitter

- (a) Remove the perspex cover from the right-hand side of the aircraft instrument panel.  
(b) Lower the instrument panel.

Radio Technician (Air)

- (c) Disconnect and remove the existing mute switch.

Airframe Fitter

- (d) Fit new switch (item 1) flush with the bomb distribution switch using items 2 and 3, using the following procedures:-  
(i) Enlarge the centre hole, moving the centre of this hole  $\frac{1}{32}$ " to the right to permit the larger base of the new switch to fit.  
(ii) Enlarge the mounting holes moving the centres of these holes  $\frac{1}{32}$ " to the right, to clear 4BA screws.  
(iii) The washers are to be fitted between the instrument panel and the mounting studs on the switch body.

Radio Technician (Air)

- (e) Reconnect the leads disconnected in paragraph 12(c) to the new spring loaded switch.

(Issued with A/L 321)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 404

- (f) Check that the switch has the spring loaded toggle in the "UP" position.

Instrument Fitter

- (g) Raise and lock the instrument panel in position and replace the perspex cover removed in paragraph 12(a).

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
4	5930-RAF-5CW4836		Switch	1	A

Action on Items Removed

14. The removed item listed in paragraph 13 has further application, and is to be actioned as follows:-

Returned to stores depot if serviceable, (retained for spares backing for Canberra aircraft requirements).

Action on Stock Holdings of Removed Items

15. Nil.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. Radio Technician (Air)

Carry out a functional check on the VHF muting ensuring that the VHF radio muting function is operated on the spring loaded "UP" position.

(Issued with A/L 321)

RESTRICTED

RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 404

Recording

19. Record incorporation of the modification as follows:-
- (a) Record the incorporation of this modification in the aircraft log book.
  - (b) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The incorporation of this modification will have negligible effect on the weight and balance of the aircraft.

Reference: File, Headquarters Support Command, 2846/2/189

Date of Issue: 13th September 1965

(Issued with A/L 321)

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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 403

Class: 2

ELECTRICAL - ISOLATION OF GENERATOR POWER  
AT LOW ENGINE RPM

Introduction

1. (a) The Reason for the Modification

This modification provides a means of isolating the generator from the aircraft battery, by opening the cut-out at low engine RPM. This will prevent the relatively high reverse current from draining the battery during engine idling periods, prior to take-off.

(b) Description and Features by which the Modification can be Recognised

An additional cam is fitted to the throttle shaft to operate a micro switch adjacent to the undercarriage throttle micro switch, which is also operated by a cam. The new cam is designated "Cam, Generator Control".

(c) Relationship with other Modifications

Electrical Modification No 1/3/2 must be incorporated concurrently with this modification.

(d) Reason of Classification

The classification is based on improved operational aspects.

(e) Effect on Servicing and/or Ground Handling

AAP 721.79, Vol 4, Part 3, will be amended to include adjustment procedure as detailed at paragraph 12(n).

(f) Effect on Aircraft Limitation

Not applicable.

(g) Effect on Aircrew Operation

Not applicable.

(h) Number of Parts Comprising the Order

One.

(Issued with A/L 315)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 403

Application

2. All Vampire Mk 35 and Mk 35A aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately 20 man-hours will be required to incorporate the modification. The trade mustering responsible is electrical fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next "D" servicing after modification sets are available.

Responsibility for Incorporation

5. The modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for the servicing of Vampire aircraft.

Equivalent Modifications

6. Not applicable.

Orders and Instructions Superseded or Cancelled

7. Not applicable.

Special Tools, Jigs, Etc

8. Not applicable.

Drawings

9. Drawing No A15072 attached.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off. Per Set	Stores Class
1	2915-66-018-6254	A15072-1	Cam	1	
2	5305-RAF-8D12515	A25-10C	Bolt 2BA	2	C

RESTRICTED

(Issued with A/L 315)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 403

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
3	5310-PN-2001C1 (Nylon)	AGS2001/C/1	Nut 2BA Nylon Insert	2	C
4	5310-941-9402	SP 13/C	Washer	2	C
5	6145-G5E30155		Cable Electric AA18 One Core Vin	20 ft	C
6	6145-G5E30156		Cable Electric AA18 Two Core Vin	15 ft	C
7	5325-RAF-5X1874	Z1840	Grommet 0.281" ID x 0.562" OD	1	C
8	5940-197-0613	AMP 31896	Lug Terminal	2	C
9	5940-258-3587	AMP 32440	Lug Terminal	2	C
10	I32A/94		Cord	A/R	C
11	K4/152		Beeswax	A/R	C

Supply

11. Modification sets are to be obtained as follows:-

Item 1 - Demand on Modification Section No 1  
Aircraft Depot for Vampire Modification  
No 403.

Items 2 to 11 - Draw from unit store.

Method and Sequence of Incorporation

12. (a) Isolate electrical power from the aircraft.
- (b) Remove the regulator and cut-out unit, modify in accordance with Electrical Modification No-1/3/2 and refit the unit in the aircraft.
- (c) Locate and remove covers from terminal blocks and nose wheel micro switches. (Situating below ground/flight switch and RH gun fairings).
- (d) Insert grommet (item 7) in existing hole in port side of wall adjacent to terminal blocks. (Located previous step).

RESTRICTED

(Issued with A/L 315)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 403

- (e) Make cable (item 5) into 2 lengths, one 4 feet and one 16 feet. Connect one end of each length to terminals A and C of nose wheel door lock micro switch. (Rendered redundant by Vampire Modification No 348).
- (f) Route the new cables with the ground/flight switch loom. Crimp lug (item 8) to the shorter cable and connect to main earth terminal. Connect the longer cable to terminal 5 on the regulator and cut-out unit using item 9. Secure as necessary using item 10 treated with item 11.
- (g) Connect red core of two core cable (item 6) to the regulator and cut-out terminal 5 using item 9, and blue core to the main earth terminal below the regulator and cut-out, using item 8.
- (h) Route the cable (item 6) with main loom on starboard side of gun bay, through engine bulkhead, up to and over JB2, along loom to existing unused micro switch adjacent to the undercarriage warning throttle micro switch.
- (j) Disconnect, remove and discard existing cables between the unused micro switch and terminal block. Connect the two core cable (item 6) to terminals A and B of the micro switch. Secure the cable as necessary with item 10 (waxed with item 11).
- (k) Replace all covers, fairings and equipment removed for access.
- " (l) Fit Cam (Item 1) loosely on throttle shaft using items 2, 3 and 4. Position the cam laterally on the shaft such that when the leading edge of cam is just level with the centre of the micro switch plunger, a gap of approximately 0.050" exists between the cam and plunger. Mark the position on the shaft. " ~~position on micro switch,~~ 27.5 volts. until generator operate the
- (n) Run up engine until generator voltage is 27.5 volts, reduce slowly and ensure that the throttle micro switch is operated by the generator control cam to open the cut-out points at 25 volts. Readjust and repeat above procedure as necessary until an accurate setting is obtained.
- " Ensure that the 0.050" (approx) clearance set at sub-paragraph (l) is maintained and finally tighten the cam on the shaft. "
- Items Removed

13. Not applicable.

(Issued with A/L 315)

RESTRICTED



RESTRICTED

- 5 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 403

Action on Items Removed

14. Not applicable.

Action on Stock Holdings of Removed Items

15. Not applicable.

Modification of Spares

16. Not applicable.

Additional Information

17. Not applicable.

Tests

18. (a) Carry out undercarriage retraction test and ensure that the undercarriage warning system functions correctly.
- (b) Check the operation of the generator control cam as detailed at paragraph 12(n).
- (c) When bench testing regulator and cut-out units modified in accordance with Electrical Modification No 1/3/2, it is necessary to first short out terminals 4 and 5. The shorting strip must be removed at completion of testing.

Recording

19. Record incorporation of the modification as follows:-
- (a) In the airframe log book.
- (b) On Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. Incorporation of this modification will have negligible effect on the weight and balance of an aircraft.

References: Files, Headquarters Support Command, 2501/110/4642 and 2601/79/69-403

Attachment: Drawing No A15072

Date of Issue: 23rd August 1965

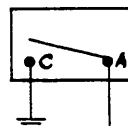
RESTRICTED

(Issued with A/L 315)

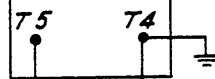
DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D I L	INITIALS	APPROVED
2	25-9-63	C-A, A, B ADDED TO MICRO CONTACTS.		R.	J.M.

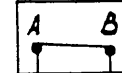
NOSE MICRO CONTACTS  
OPEN WHEN WHEEL DOWN



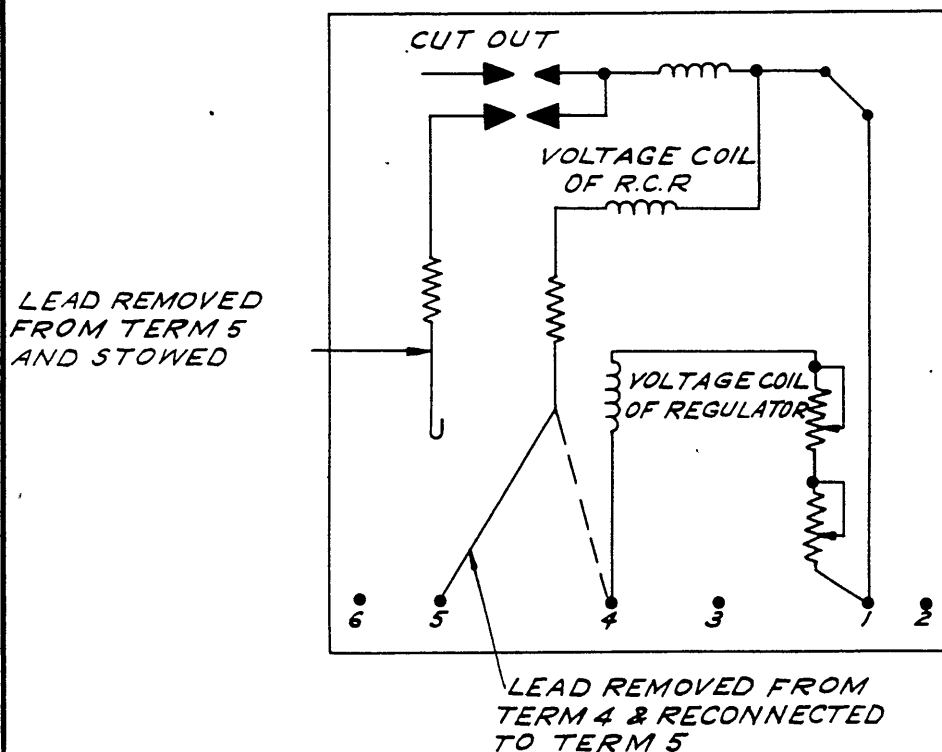
REGULATOR  
CUT OUT  
UNIT



THROTTLE MICRO CONTACTS  
OPEN WHEN THROTTLE  
IN IDLE POSITION



SCHEMATIC DIAGRAM OF MICRO S/W CIRCUITS



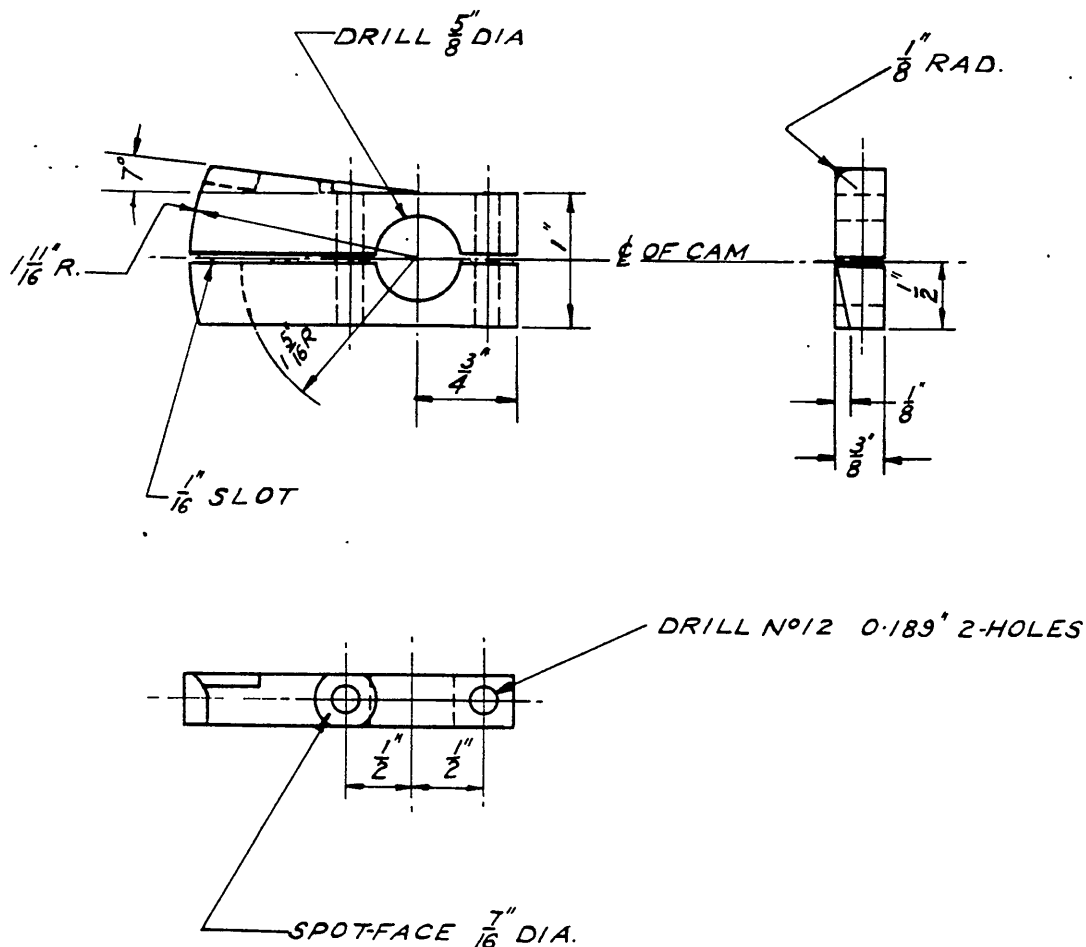
MODS TO REGULATOR-R.C.R. UNIT  
WIRING DIAGRAM

NOTE - SEE CAM - PART No A/5072-1  
FOR PART OF THIS MODIFICATION.

DEPARTMENT OF AIR SENIOR TECHNICAL STAFF OFFICER SUPPORT COMMAND		TITLE ISOLATION OF GENERATOR POWER AT LOW ENGINE RPM	
LIMITS UNLESS STATED	MATERIAL	COMPONENT	GENERATOR - MODIF.
DECIMALS $\pm .010"$	SPEC.	WASH NO	VAMPIRE MK 35
FRACTIONS $\pm \frac{1}{32}"$	TREATMENT	ENGINE	VAMPIRE MOD. 403
ANGLES $\pm 1^\circ$	FINISH	TECH NO	
SURFACE FINISH AUSTRALIAN STANDARD ENG DRWG. PRACTICE A.S.CZ1	SCALE	DRAWING NO	A/5072
	DRAWN	APPROVED	
	TRACED		

DO NOT SCALE

ISSUE NO	DATE	ALTERATION	D I. L	INITIALS	APPROVED
	25-9-63				



REFERENCE		ISSUED BY		TIT E	
		DEPARTMENT OF AIR		CAM-ISOLATION OF GENERATOR	
		SENIOR TECHNICAL STAFF OFFICER		POWER AT LOW ENGINE RPM	
		SUPPORT COMMAND			
LIMITS UNLESS STATED	MATERIAL	MILD STEEL BAR		GENERATOR MODIF.	
DECIMALS ± .010"	SPEC.	COMMERCIAL		VAMPIRE MK35	
FRACTIONS ± 1/32"	TREATM.	CAD PLATE		TECH. ORDER	
ANGLES ± 1°	FINISH			VAMPIRE MOD 403	
SURFACE FINISH	SCALE	FULL SIZE		DRAWING NO	
AUSTRALIAN STANDARD	DRAWN			A 15072-1	
ENG DRWG. PRACTICE A S.021	TRACE	E.M.K.			



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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 402

Class 2

ENGINE DRIVE HYDRAULIC PUMP - INTRODUCTION OF LONGER  
SUCTION HOSES TO CATER FOR THE REPOSITIONING OF THE PUMP

Introduction

1. (a) The Reason for the Modification

Introduction of Goblin Modification No 5027 - "Relocation of Engine Driven Hydraulic Pump" - necessitates introduction of a longer flexible suction hose.

(b) Description and Features by which the Modification  
can be Recognised

The new suction hose is 3 inches longer than that previously used.

(c) Relationship with Other Modifications

This modification is to be incorporated prior to or concurrently with Goblin Modification No 5027.

(d) Reason for Classification

To provide a suction hose of sufficient length to reach the relocated hydraulic pump.

(e) Effect on Servicing and/or Ground Handling

Nil.

(f) Effect on Aircraft Limitation

Nil.

(g) Effect on Aircrew Operation

Nil.

(h) Number of Parts Comprising the Order

One.

Application

2. All Vampire Mk35A and 35 aircraft.

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(Issued with A/L 322)

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 402

Man-Hours and Trade Mustering Involved

3. Approximately 2 man-hours are required to incorporate the modification. The trade mustering responsible is the airframe fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable Vampire aircraft as soon as practicable but not later than the next D servicing after modification sets are available.

Responsibility for Incorporation

5. This modification is to be incorporated by operating units, aircraft depots and civilian contractors responsible for servicing Vampire aircraft.

Equivalent Modifications

6. Hawker De Havilland Australia Modification V402.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following items are required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
1	A79/504932	S15-1483A	Flexible Hose Assembly	1	C
2	I32A/94		Cord Stringing, Spec 4F35	A/R	C
3	K4/152		Beeswax	A/R	C
4	I1/9715		Wire, Locking, 22 SWG, DTD189	A/R	C

RESTRICTED

(Issued with A/L 322)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 402

Supply

11. Modification sets are to be obtained as follows:-

Item 1 : Demand on Modification Centre, Hawker  
De Havilland Australia Pty Ltd, BANKSTOWN  
NSW, for Vampire Modification No 402.

Items 2-4 : Draw from unit stores.

Method and Sequence of Incorporation

12. (a) Release the pressure from the hydraulic system in accordance with AAP 721.79/33, Vol 1, Sect 3, Chap 6, para 26.

(b) Remove the lower engine inspection doors and locate the now redundant hydraulic suction hose (item 5), routed from the central coupling on the engine driven hydraulic pump to the coupling on the aft face of bulkhead 4. Remove this hose and replace it with a new hose assembly (item 1). Route the new hose with the existing hydraulic pressure hose and lash the two together with items 2 and 3. Lock the hose connections with item 4.

Note: During the embodiment of this modification, the necessary precautions are to be taken as regards fluid spillage and avoidance of ingress of matter.

(c) Check the level of hydraulic fluid in the reservoir and top up if necessary. Replace the engine inspection doors.

Items Removed

13. The following item is removed on incorporation of this modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
5	A79/503240	Q001008	Flexible Hose Assembly	1	C
	1650-016-2594	ADH123A/21.8	Flexible Hose Assembly		

RESTRICTED

(Issued with A/L 322)

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 402

Action on Items Removed

14. The removed item listed above has no further application to this use and is to be actioned as follows:-

Item 5 : To be discarded in accordance with current authorised procedure.

Action on Stock Holdings of Removed Items

15. Stock holdings of the removed item are no longer necessary and may be disposed of in accordance with current authorised procedure.

Modification of Spares

16. Not applicable.

Additional Information

17. Nil.

Tests

18. After the first engine run subsequent to embodiment of this modification, check the suction hose for leakage.

Recording

19. Record incorporation of the modification as follows:-

- (a) In aircraft log book.
- (b) On Form E/E 78.
- (c) On the wing modification plate.
- (d) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots in accordance with ABO E 12/4. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. The effect of this modification on the weight and balance of the aircraft is negligible.

Reference: File, Headquarters Support Command 2501/110/5255

Date of Issue: 18th October 1965

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(Issued with A/L 322)



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AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 401

Class: 2

INTRODUCTION OF TYPE 34H FIRE EXTINGUISHER  
HAND OPERATED IN LIEU OF TYPE 27H

Introduction

1. (a) The Reason for the Modification  

To standardise fitment on all types of aircraft and thus employ standard filling media practices, equipment, and storage conditions.
- (b) Description and Features by Which the Modification can be Recognised  

The extinguisher is coloured red with a green label or stencil, which specifies the filling as BCF.
- (c) Relationship with Other Modifications  

Nil.
- (d) Reason for Classification  

To enable serviceable stocks of the water glycol type to be exhausted.
- (e) Effect on Servicing and/or Ground Handling  

The type 34H extinguishers are to be check weighed at each aircraft D servicing. Extinguishers are to be returned to the reconditioning contractor for overhaul 5 years from the date of manufacture: when operated, or when failing the weighing check.
- (f) Effect on Aircraft Limitation  

Nil.
- (g) Effect on Aircrew Operation  

Nil.
- (h) Number of Parts Comprising the Order  

One.

(Issued with A/L 289)

RESTRICTED

RESTRICTED

- 2 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 401

Application

2. All Vampire aircraft.

Man-Hours and Trade Mustering Involved

3. Approximately  $\frac{1}{2}$  man-hour will be required to incorporate the modification. The trade mustering responsible is airframe fitter.

When Modification is to be Incorporated

4. This modification is to be incorporated in all applicable aircraft as soon as practicable but not later than the next C servicing after modification sets are available.

Responsibility for Incorporation

5. Modification to be carried out by user units of the aircraft.

Equivalent Modifications

6. Nil.

Orders and Instructions Superseded or Cancelled

7. Nil.

Special Tools, Jigs, etc

8. Nil.

Drawings

9. Nil.

Modification Parts List

10. The following item is required to complete one modification set:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
Ø 1	1680-RAF27N 299		Extinguisher Fire Portable Hand Operated Type 34H	1	A

Ø This item is to be inserted on Aircraft Schedule.

RESTRICTED

(Issued with A/L 289)

RESTRICTED

- 3 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 401

Supply

11. Modification sets are to be obtained as follows:-

Demand on No 1 Master Modification Centre for  
Vampire Mod 401.

Method and Sequence of Incorporation

12. (a) Remove the water glycol type fire extinguisher from its bracket and replace with item 1.
- (b) Safety lockwire the new extinguisher into the mounting bracket.

Items Removed

13. The following item is removed on incorporation of the modification:-

Item No	Ident No	Part No	Nomenclature	No Off Per Set	Stores Class
2	W21F/5623		Extinguisher Fire Portable Water Glycol Type	1	A

Action on Items Removed

14. The removed item listed in paragraph 13 has no further application, and is to be actioned as follows:-

- (a) Removed from aircraft schedule.
- (b) Submitted to Board of Survey as having no further Service requirement.

Action on Stock Holdings of Removed Items

15. Submit to Board of Survey as having no further Service requirement.

Modification of Spares

16. Not applicable.

(Issued with A/L 289)

RESTRICTED

RESTRICTED

- 4 -

AAP 721.79, Vol 2, Pt 2

VAMPIRE MODIFICATION NO 401

Additional Information

17. Nil.

Tests

18. Nil.

Recording

19. Record incorporation of the modification as follows:-

- (a) In the airframe log book.
- (b) On the Form E/E 78.
- (c) Modification incorporation certificates are to be completed and forwarded by units and aircraft depots. Forms E/E 9 are to be submitted by civilian contractors.

Weight Sheet Summary

20. Amendments to weight sheet summaries will be consolidated and issued by Headquarters Support Command.

The effect of this modification on the weight and balance of the aircraft is as follows:-

Item	Weight (lb) $\pm$	Arm (in) $\pm$	Moment (lb in) $\pm$
<u>Removed</u>			
Fire extinguisher (Type 27H)	- 2.5	- 73.0	+ 183
<u>Installed</u>			
Fire extinguisher (Type 34H)	+ 5.5	- 73.0	- 402

References: Files, Headquarters Support Command 2501/110/4957 and 2501/110/4980

Date of Issue: 26th October 1964

(Issued with A/L 289)

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