

2nd Edition

Restricted

A.P. 4506 A and C-P.N.

PILOT'S NOTES
VICTOR B. Mks. I and Ia

Restricted

2ND EDITION

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AP 4506A & C—PN

PILOT'S NOTES
VICTOR Mk. 1 & 1A

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Minister of Aviation*

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*Promulgated by Command of the
Air Council*

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Notes to Users

- 1 These Notes are complementary to AP129 (6th Edition) Flying, and reference should also be made to the Operating Data Manual (AP4506A/OD), Victor B. Mk. 1.
- 2 The limitations quoted in Part II are mandatory and are not to be exceeded except in emergency. The contents of the other Parts are mainly advisory but instructions containing the word "must" are also mandatory.
- 3 The Notes are divided by marker cards into six Parts each consisting of a number of chapters listed on the marker cards. A Folio Sheet reference number is at the top left-hand corner of each sheet, each Part starting at FS/1. The following conventions also apply:
 - (a) Words in large capital letters in the text indicate the actual markings on the controls concerned.
 - (b) Unless otherwise indicated, all airspeeds, mach numbers and accelerometer readings quoted are indicated values.
- 4 When first published these Notes included information covering the then current Special Flying Instructions:
SFI/Victor/23, 30, 33, 39, 41, 42
and each Amendment List instruction sheet includes a list of further Special Flying Instructions and a list of Modifications covered by the Amendment.
- 5 Modification numbers are only referred to in these Notes when it is necessary to differentiate between pre- and post-Mod. states. For ease of reference a list of Modifications mentioned in the text is included after the main contents list, with a cross reference to the position in the text where details of the modification are given.



Victor B Mk. 1A

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AEO's fascia panel	G
AEO's side panel	H

List of Associated Air Publications

	AP		AP
Aircraft hydraulic equipment	1803 Series	Instrument manual	1275 Series
Aircraft pneumatic equipment	4303	Lifting equipment and haulage accessories	2817A
Aircraft pressurizing and air conditioning equip- ment	4340	Powered flying control units and equipment, Hobson	4604B, C & D
Aircraft tanks	4117 Series	Pressure cabin testing trolleys	2306G
Aircrew equipment assemblies	1182 Series	Pressure refuelling equipment	4511
AYF installations	2533C	RAF engineering	1464 Series
Sapphire Mk. 20200 and 20700 series	4543 C & H	Rotol accessory gearboxes and drives	2240A
Ejection equipment, aircraft	4288B	Signals manual	1186 Series
Electrical equipment manual	4343 Series	Starting systems for aero engines	1181
Fire prevention and fire extinguishing equipment	957C	Wheels, tyres and brake systems, aircraft	2337
Gee installation	2557M	Wireless installations	2538AH
Hydraulic servicing trolley	2306B		
IFF installation	2887N		

Leading Particulars

DIMENSIONS

Length	114 ft. 11 in.
Height	26 ft. 9 in.
Span	110 ft.
Tail span	32 ft. 8 in.
Track	30 ft. 2 in.

ALIGHTING GEAR

Type	Electro-Hydraulic
<i>Main Shock Absorber</i>	
Fluid	Oil, hydraulic OM.15 34B/9100572
Fluid capacity	311.0 cu. in.
Air pressure	1,400 PSI (with leg extended)
<i>Dash Pot</i>	
Fluid	Oil, hydraulic OM.15 34B/9100572
Fluid capacity	9.5 cu. in.
Air pressure	1,930 PSI (extended)
<i>Nose Shock Absorber</i>	
Fluid	Oil, hydraulic OM.15 34B/9100572
Fluid capacity	486.0 cu. in.
Air pressure	Upper 210 PSI Lower 1,450 PSI (with leg extended)

WHEELS

<i>Main (Dunlop Tubeless Tyres)</i>	
Tyre size	27 in. x 6.5 in. x 15 in.
Pressure	Aircraft weight 160,000 lb: 194 + 6 — 4 PSI
	Aircraft weight 180,000 lb: 240 + 5 — 5 PSI
<i>Nose (Dunlop Tubeless Tyres)</i>	
Size	30 in. x 9 in. x 15 in.
Pressure	170 PSI all weights
<i>Tail Bumper (With Tube)</i>	
Type	AH 8864
Size	7 in. x 4.75 in.
Pressure	35 PSI

BRAKES

<i>Dunlop, hydraulic Maxaret</i>	
Pressure	1,600 PSI

HYDRAULIC SYSTEM

Type	High pressure 4,000 PSI
Components	Electro Hydraulic with certain Dowty and British Messier
Fluid	OM.15 34B/9100572
System capacity	26 galls. approx.

ANTI-ICING

Thermal and Electrical . . .

ENGINES

Four Sapphire Mk. 202 (Mk. 1)
or 207 (Mk. 1A) . . . Jet Turbine
Oil 34A/9100591 . . . (Oil tank 18 pints excluding 3
pints air space)
Fuel 34A/179 AVTUR or 34A/251 AVTAG

FUEL SYSTEM

Divided into three groups

Port Wing Group . . . + (Long Range Tanks)
Starboard Wing Group . . . + (Long Range Tanks)
Fuselage Group . . .
Booster Pump delivery
pressure . . . 11 PSI
Fuel Tank pressurisation provided

ELECTRICAL POWER SUPPLIES

DC *supplies*

112 volts. From alternators via transformer rectifier units.
28 volts. From alternators via transformer rectifier units.

AC *supplies*

208 volt 3-phase 400 c/s . From alternators
115 volt 3-phase 400 c/s . From motor generators supplied
by 112V bus-bars
115 volt 1-phase 1,600 c/s . From motor generators supplied
by 112V bus-bars

BATTERIES

Varley Type J.24 volt. 25 Amp/Hr. (Ten installed.)

List of Modifications mentioned in the Text

Mod. No.	Brief Title	Location in Text		
		Part	Chap.	Para.
591	AN/ARC 52 introduced	I	12	2
656	Canopy unlocking lever and stowage	I	14	3(c)
745	Tone-modulated VHF introduced	I	12	3
769	Thermal ice detector introduced	I	9	2
813	Changes to anti-icing system	I	9	3
820	Interconnect tanks 7 P&S and duplicate pumps in tanks 12 P&S	I	2	2(b)
828	Pressure-off brakes for PFCU's	I	5	4(d)
864	Twin-pointer ASI for 1st pilot	I	11	2(a)
891	Automatic cabin depressurisation	I	8	13
908	CAU bypass introduced	I	8	5
2007	Automatic opening of CAU valves and wing air exit shutters	I	6	1(d)
2023	Protective screens for aircrew	I	8	8(b)
2154	Magnetic indicators for MV and LV paralleling	I	1	14
2163	Automatic operation of brakes	I	4	10(c)
2348	Hydraulic pump ammeters introduced	I	4	5(b)
2352	Droop leading edge introduced	I	4	17
2357	Alcohol spray for 1st pilot's windscreen	I	8	8(d)
2529	Changes to hydraulics control system	I	4	6(a)
2545	Guards for fire detection test switches	I	13	2
2548	High pressure ducting revised	I	8	9
2598	Additional lock at canopy gas gun release	I	14	3(b)
2657	Override for roll error excess torque cut-out	I	7	7(d)
2690	Lights for flight refuelling probe	I	3	5
2744	Engine-mounted alternators (Mk. 1 aircraft)	I	1	1(a);(ii)
2789	Control column automatic release mechanism	I	5	2(b)
2802	Ducting insulation revised	I	8	9
2820	Render ice-protection system inoperative	I	9	1
2842	Nylon studs to identify port fuel pump switches	I	2	9(c)
2866	Continuous running hydraulic pumps	I	4	5(a)
2910	Reposition boathook	I	14	8
2979	Engine-mounted alternators (Mk. 1A aircraft)	I	1	1(a);(ii)
2987	Twin-pointer ASI for 2nd pilot	I	11	2(c)
3008	Guard over 1st pilot's canopy jettison gun sear	I	10	3
3031	Independent switching of ECM pumps	I	1	11(b)
3079	Nitrogen system for undercarriage emergency lowering	I	4	9(c)
3125	Hand fire-extinguishers altered	I	13	6
3144	Delete radio altimeter Mk. 5	I	12	10

Mod. No.	Brief Title	Location in Text		
		Part	Chap.	Para.
3149	Guard for auto-pilot power button	I	7	3(a)
3190	Vibrators for Mk. 19B or C altimeters	I	11	2(b)
3248	Brake parachute system revised	I	4	14(d)
3295	Swivel seats introduced	I	10	11
3326	Automatic hand line for rear crew escape	I	14	9
3583	Direct reading of bomb-bay tank contents	I	2	14(c)
3486	Vibrators for 19F altimeters	I	11	2(b)
3589	Pressure gauge for nitrogen purging	I	3	2(b)
3606	Cross-feed cock wiring revised	I	2	17(f)
3645	Guard on 1st pilot's throttle box	I	6	2(c)
3646	Mk. 17F regulator in lieu of Mk. 17D	I	10	13(a)
3817	Cabin differential pressure gauge	I	8	2(g)
3881	Reposition UHF controller	I	12	2(b)
◀ 3886	Fitment of 7th oxygen regulator	I	10	13(a)
3925	Repositioning of brake parachute switch	I	4	14(d)
3929	Cabin differential pressure gauge	I	8	2(g)
3955	"Crew gone" indication	I	14	10
◀ 3996 } 3997 }	Provision for bomb-bay tank fuel jettison	I	3B	2(c)
4020	Visual indicator for throttle trip lever	I	6	2(c)
BC 039	Alterations to automatic hand line	I	14	9(c)

Introduction

1 The Victor B. Mk. 1 is an all metal mid-winged medium bomber powered by four Sapphire Mk. 202 jet turbine engines. The B. Mk. 1A aircraft is powered by four Sapphire Mk. 207 engines ; both marks are rated at 11,000 lb static thrust at sea level. ECM equipment is carried in the rear fuselage compartment and below the cabin floor.

2 *These notes are based primarily on the Mk. 1A aircraft, but where differences occur between the two marks specific mention is made.*

3 A crew of five is carried in the aircraft :

- 1st Pilot
- 2nd Pilot
- Air Electronics Officer
- Navigator/Radar Plotter
- Navigator/Bomb Aimer

Provision is made for the fitment of a sixth seat should this be required, i.e., for a crew chief.

4 Conventional type mechanical flying control signalling systems operate Power Units installed adjacent to their associated control surfaces.

5 A high-pressure hydraulic system operates the following :

- (a) Tricycle undercarriage
- (b) Wheel brakes
- (c) Main flaps
- (d) Wing nose flaps
- (e) Bomb-doors, which are withdrawn into the fuselage when open
- (f) Airbrakes, in the rear fuselage
- (g) Nosewheel steering

6 (a) Thermal and electrical anti-icing systems are fitted, the hot air for thermal anti-icing is derived from the engine compressors and diluted with ram air, ducted from auxiliary ram air intakes, before being passed to the areas to be anti-iced.

(b) A thermal heating system is also provided for the bomb-bay this air being derived from the starboard engine compressors.

7 A pressurised fuel system is installed in the wings and fuselage. Although consisting of a number of fuel tanks it is greatly simplified by the use of fuel proportioners. The fuel system is adapted for "Flight Refuelling" and bomb-bay tanks can be installed as required.

8 (a) Mk. 1 and 1A aircraft converted to the tanker role are designated (K)1 and (K)1A. All Mk. (K)1 aircraft are three-point tankers. The majority of Mk. (K)1A aircraft are three-point tankers, the remainder being an interim two-point version.

(b) All (K)1 aircraft are brought up to (K)1A (three-point) standards in the following respects :

- 1 Flight refuelling (receiver) facility
- 2 Ice protection and pressurisation systems
- 3 Fixed droop leading edges
- 4 Sapphire Mk. 207 engines, but excluding top temperature control
- 5 New radio and intercomm. facilities
- 6 Individual fuel tank gauging

9 All the instrument panels and electrical distribution boards on the aircraft are coded. Those located in the cabin are shown on Figures 1 and 2 ; the codings and designations are listed overleaf.

Key to distribution boards and control panels at pilots' station

<i>Board</i>	<i>Designation</i>
' A '	Pilots' Centre Instrument Panel
' AA '	1st Pilot's Instrument Panel
' AAJ '	2nd Pilot's Side Panel (rear)
' AB '	2nd Pilot's Instrument Panel
' AC '	1st Pilot's Side Panel
' AD '	2nd Pilot's Side Panel
' AE '	1st Pilot's Console
' AF '	2nd Pilot's Console
' AH '	Fuse and Distribution Board
' AJ '	Fuse and Distribution Board
' AL '	Engine Starting Panel
' AU '	Visual Bomb-Aimer's Control Panel
' AT '	Pilots' Centre Sliding Panel
' AV '	Circuit Breaker Panel
' AW '	Pilots' Upper Coaming Panel
' AZ '	Pilots' Coaming Panel

Key to distribution boards and control panels at rear crew stations

<i>Board</i>	<i>Designation</i>
' BA '	AEO's Fuse and Distribution Board
' BB '	AEO's Side Panel (Generating System Controls)
' BC '	AEO's Sloping Panel
' BD '	I.V. Bus-Bars and Distribution Board
' BI '	AEO's Facia Panel
' BG '	Nose Flap Signalling Panel
' CA '	Navigator's Radar Switch Panel
' CAC '	Bomb-Gear Control and VG Recorder Cock
' CB '	Navigator's Side Panel (Bomb-Bay Heating Control)
' CD '	Radar Relay and Distribution Board
' CC '	Navigator's Side Panel (Normal Bomber Release)
' CP '	Camera Door Circuit Breaker Panel
' CE '	Fuse and Distribution Board (PR Role)
' CH '	Bomb Fuse and Distribution Board
' CN '	Bomb Jettison Circuit Breaker Board

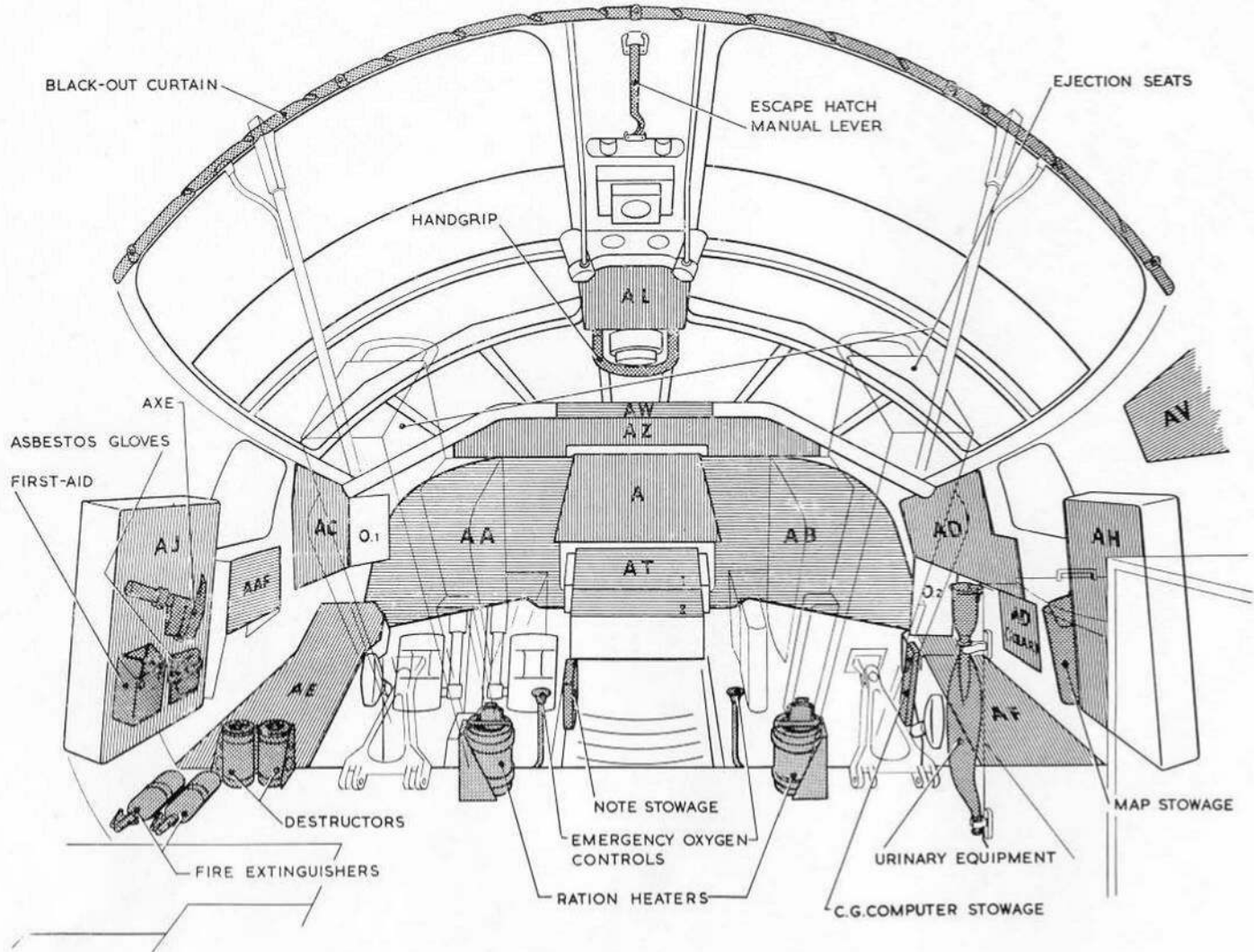


Fig. 1 Pilots' panels

RESTRICTED

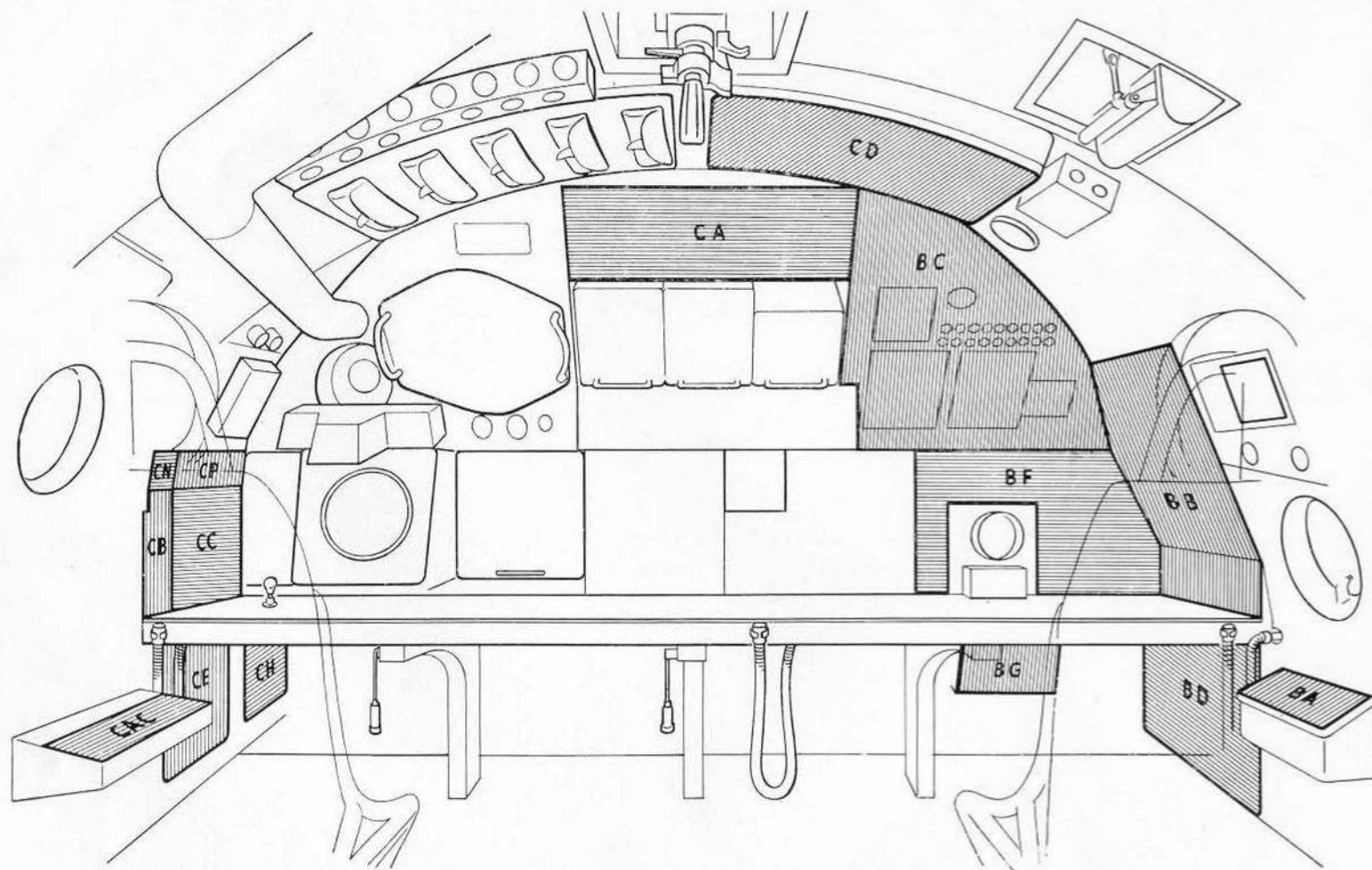


Fig. 2 Crew panels



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