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Pilot's Notes Canberra B (1) Mk 6

AMENDMENTS

Amendment lists will be issued as necessary and should be inserted in the appropriate place in the Notes. New or amended paragraphs will be indicated by triangles positioned in the text thus: to show the extent of the amended text, and thus to show where text has been deleted. When a page is issued or re-issued by amendment the number of the Amendment will appear at the bottom of the page. When a chapter is issued or re-issued in a completely revised form the triangles will not appear. Incorporation of an Amendment list must be certified by inserting the date of its issue, the date of incorporation and signature below.

Amd	t list	Signature	Date of Incorporation	Arnet liet		Signature	Date of Incorporation
No.	Date			No.	Date		
١.	062	3-1-63	HARach	7.	Dec 62	Chiw	7 64 69
2.	Feb by	Abete	1.5 64	8.	202	1	
3.	NON.	gyb.	6.1.65-	9.			
4.	005	MB	19.1.66	10.			333
5.	FEB 67	GAD	11-5-67	П.			
6.	may 67	Grew	30.6-67	12.			

Comments and suggestions regarding Pilot's Notes should be forwarded to the Officer Commanding, Handling Squadron, Royal Air Force, Boscombe Down, Wiltshire. November 1961

A.P.4326F.PN 4th Edition.

Nº 1

PILOT'S NOTES CANBERRA B(I) Mk.6.

M

Prepared by Direction of the Minister of Aviation

Henry Handmany h. J. Sean

Promulgated by Command of the Air Council

NOTES TO USERS

1. These notes are intended primarily for the Canberra B(I) Mk. 6; however, Part I, Chapter 12 includes information on the variations between the Canberra B(I) Mk. 6 and the Canberra B Mk. 6 with SRIM's 2951 or 2696 embodied.

2. The notes are complementary to A.P.129 (6th Edition) Flying, and reference should also be made to the Operating Data Manual (A.P.4326F-O.D.).

3. The limitations quoted in Part II are mandatory and are not to be exceeded except in emergency. The contents of other parts of the book are mainly advisory but instructions containing the word "must" are also mandatory.

4. The notes are divided by marker cards into five 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 FS1. 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.

45. (a) The Flight Reference Cards are complementary to the Notes and reference is made to them, where necessary, throughout the Notes. With effect from Amendment List No. 7 the Flight Reference Cards for the Canberra B(I) Mk. 6, A.P.4326F-FRC, are issued separately from the Notes and are subject to separate amendment procedure.

(b) Special check lists for the Canberra B. Mk. 6 are held by the Central Reconnaisance Establishment, Royal Air Force, Brampton, Hunts.

6. Each Amendment List instruction sheet includes a list of Special Flying Instructions and a list of the modifications covered by the Amendment.

7. 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 before the main contents list, with a cross reference to the position in the text where details of the modifications are given.

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LIST OF ASSOCIATED AIR PUBLICATIONS

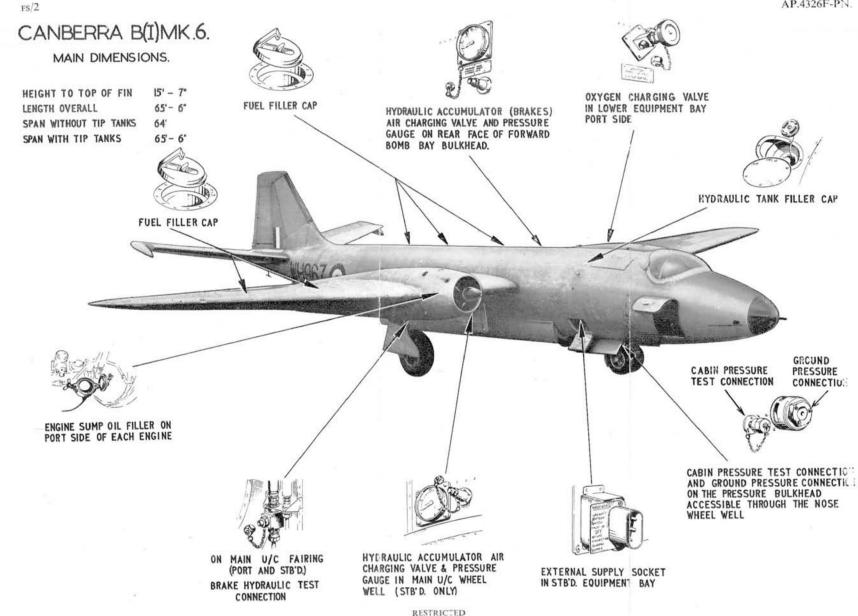
Title

A.P. No.

Canberra B(I) Mk. 6 aircraft	44326F Vol. 1 (101B-0406-1)
Avon Mk. 109 aero engine	4321G, J, L, N, U and V
Aircrew equipment	45210, 5, E, II, 0 and V
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VHF equipment	
Radio altimeter equipment	
(AYF)	2533 series
ILS equipment	
Signal manual	1186 series
R.A.F. engineering	1464 series
Oxygen equipment	1275G (112G series)
Pressurising and air	
conditioning equipment	4340 (107B series)
Canberra B(I) Mk. 6	
Operating Data	
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ARI 23057	2531N

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MODIFICATION NUMBERS MENTIONED IN THE TEXT

Mod. No.	Title	Location in tex (Pt.,Chap.,para.
	CANBERRA MODS.	
1.1	Long range fuel tank.	I, 2, 1(d)
715	Introduction of zero reader.	I. 6. 6(a)
1447	To accommodate fuel expansion	I, 2, 2
2572	in integral tanks.	1
2685	Introduction of Type 2CA 2 Mk. 1 ejection seats for rear crew mem- bers.	I, 9, 1(a)
2695	To provide mounting for an F.95 camera in the nose.	I, 11, 15(c) (i)
3243	Provision for Mk. 2 Ventilated Suits.	I, 8, 5
3367	Revised position for fuel gauge capa- citor belt studs in No. 3 fuel tank.	I, 2, 8
3391	To introduce co-axial cable to No. 3 fuel tank and fuel contents gauge A.G.144.	I, 2, 8
3518	To introduce the Type 2CA 1 Mk. 1	I, 5, 5 and
5510	ejection seat and single lever ejection at the pilot's station.	Î, 9, 1(a)
3525	Introduction of removable fittings for pylon ducts.	I, 11, 16
3545	Revised fuel pressure warning light setting.	I, 2, 7(b)
3776	To introduce Type 2CA2 Mk. 2 ejection seats and single lever ejection at the rear crew station.	I, 9, 1(a)
3911	Revised fuel pressure warning light setting.	I, 2, 7(b)
4064/5	To introduce Type 2CA Mk. 1 ejection seats on the B Mk. 6,	I, 9, 1(a) I, 1, 11
4072	To transfer detonator circuits from busbar P9 to P10.	1, 1, 11
4231	To introduce gun selector switch panel to B (I) 6 aircraft.	I, 11, 5
4296	To provide an external electrical supply point for pre-heating Decca crystals.	I, 1, 4(b)
4319	To introduce PTR175 (V/UHF) and ARI 23057 (Standby UHF) in lieu of AN/ARC52 (UHF) and VHF.	I, 10, 3
4325	To introduce periscopic sextant Mk. 2A and mounting.	I, 10, 9
4329/ 4411	To make provision for a revised armament control panel.	I, 11, 10

Mod. No.	Title	Location in text (Pt., chap., para.)
4345/6	To modify the practice bomb facility box to provide wing prac- tice bomb facilities in conjunction with, or without, Simulator type 105.	I, 11, 13
4420	To replace windscreen heater part No. E.A3.81.2665.	I, 8, 8
4442	To introduce safety points with integral tallies and new stowages	I, 9, 2(b)(i)
0209/ RAFG	To re-position the crash axe.	I, 7, 3 🕨
0216/ RAFG	To introduce gun port transit covers.	I, 11, 5
0217/ RAFG	To introduce empty case chute tran- sit covers.	I, 11, 5
0248/ RAFG	To introduce SFOM gunsight	I, 11, 4
0279/ RAFG	To introduce a demister control at the nose station.	I, 8, 7(d)
0325/ RAFG	To re-position the hand-operated fire extinguisher.	I, 7, 2(d) ▶
	AVON MODS.	- Fr
843	Modified starter fairings.	I, 4, 6(b)(ii)
1.1	EJECTION SEAT MODS.	- PE
544	To introduce leg restraint (Mk. 1C series seats).	
545	To introduce strengthened thigh- guards (Mk. 1C series seats).	I, 9, 1(a) (Appendix)
577	To introduce canopy breakers (Mk. 1C series seats).	
ES3107	To introduce a downward pull negative G restraint strap on Type 2CA series ejection seats.	I, 9, 21(h)-(o)
ES3241	To introduce a modified drogue assembly (Type 2CA seats).	
ESA9	To introduce modified ejection gun assemblies (Type 2CA seats).	5110
ESA10	To introduce modified time release assembly (Type 2CA seats).	I, 9, 23
ESA11	To introduce modified drogue gun assemblies (Type 2CA seats).]

Modification Numbers Mentioned in the Text (continued)

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LEADING PARTICULARS

Th T.

Principal dimensions

		Ft.	In.
Span without tip tanks		64	0
Span with tip tanks		65	6
Length overall		65	6
Height to top of fin		15	7
Height to top of canop	V	8	8

Undercar	riage			
MAINW	HEEL	UNIT		
Туре	•••	•••	••	Single wheel, inwards re- tracting
Shock ab	sorber			Oleo pneumatic
Air pre	ssure			Refer to Vol. 1
				OM-15
Capaci				12 pints
Tyre pres				Refer to Servicing Schedules
	Sure			(Vol. 4)
Brakes	N 10		12	
Pressur			valve	2,700 (+50-0) psi
Pressur				1,500 (+150-0) psi
NOSEWI	HEEL U	JNIT		
Туре		••		Twin wheel, non-steerable, castering, rearward retract- ing.
Shock ab	sorber	••	•••	Levered suspension, liquid spring.
Pressur	e (w)	heels	off	-PB.
grou				1500 psi
TT				OM-15
Capaci				$1\frac{1}{2}$ pints
Tyre pres				Refer to Servicing Sche- dules (Vol. 4)
Hydraulio GENERA Fluid	AL			OM-15
		•••	•••	Lockheed Mk. 9
Pumps				
Maximur				2,700 to 2,750 PSI
Accumula				Air
Thermal	relief va	live set	tting	3,350 to 3,550 psi see Pt. I, Chap. 3, para. 3 (b)

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Hydraulic System (continued)

Number of pumps Two Capacity of system 33 pints (approx.) Accumulator inflation pressures main and wheelbrakes:-1,350 (+50,-0) PSI at +5°C 1,400 (+50,-0) PSI at +15°C 1,435 (+50,-0) PSI at 20°C 1,475 (+50,-0) PSI at 30°C Cut-out valve setting 2,700 to 2,750 PSI Flaps relief valve setting 2,850 to 2,900 PSI Header tank relief valve setting 12 to 17 PSI Power units ENGINES Name .. Avon Mk. 109 (ECU Mk. . . 10901)Type .. Pure jet gas turbine Fuel ... Refer to Part II. Oil J Chapter 1 Oil system capacity .. 19 pints per engine Oil sump capacity 16 pints per engine . . STARTING SYSTEM Type BTH turbo, type TBS 720 . . Mk. 3 Cartridge No. 10 Mk. 1 (720 grammes) . . Accessories gearboxes .. O.E.P.74 BX 38 7 Oil ... Oil sump capacity 31 pints Electrical system Voltage 28 volts . . Generators. **Type 519** ÷ . . . Aircraft battery ... 4×12v, 40 amp. hr. Type C . . connected in series parallel. Emergency batteries 2×12 volts, 4 amp. hr. . . 1×2.4 volt

FS5

Fuel system

Type of	fuel			See Pt. II, Ch.	1, para. 3 🕨
Tank ca	paciti	es		At 7.7 lb./gall.	8.0 lb./gall.
No. 1	520	gall.		4,004 lb.	4,160 lb.
No. 2		gall.		2,441 lb.	2,536 lb.
No. 3	540	gall.		4,158 lb.	4,320 lb.
Main pla	ane in	tegral tan	ks:		
Port		450 gall.		3,465 lb.	3,600 lb.
Starbo				3,465 lb.	3,600 lb.
Total				17,533 lb.	18,216 lb.
Wing tip	tanks	s:			
Port		244 gall.		1,878.5 lb.	1,952 lb.
Starbo		244 gall.		1,878.5 lb.	1,952 lb.
Total				21,290 lb.	22,120 lb.
Overload	l tank	(if fitted)	:		
300 ga	11.			2,310 lb.	2,400 lb.
Total				23,600 lb.	24,520 lb.

NOTE: With Mod. 2572 embodied the capacity of each integral tank is reduced by approximately 20 gallons.

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\mathbf{p}	0.1	ra.	
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INTRODUCTION

1. General

The Canberra B(I) Mk. 6 is a twin-engined tactical bomber modified for night-interdictor duties. Reversion to the tactical bomber role can be effected at short notice. The aircraft is powered by two Avon Mk. 109 engines each of 7,400 lb. static thrust at sea level.

2. Armament

(a) The aircraft is designed to operate as a bomber or interdictor as required, the armament installation being readily adaptable to either role. When required for bombing duties the whole of the bomb-bay and the pylon mounting under each wing are available to carry the armament stores. In the interdictor role a gun pack mounting four 20 mm. guns, is installed in the rear of the bomb bay, the forward portion being occupied by a flare carrier, and the underwing pylons may carry either rockets or bombs.

(b) A Mk. 3N reflector sight is above the pilot's instrument panel. An F.95 camera may be carried in the nose in place of the bomb sight and provision is made for an F.24 camera in the rear fuselage aft of the bomb bay. A G.45 camera may be carried in the starboard wing leading edge. Gun/Bomb/R.P. and camera controls are on the control column, and at the bomb aimer's rear and forward stations.

3. Crew accommodation

The crew cabin is pressurised and extends from the nose fairing to an aft sloping bulkhead which seals off the compartment from the remainder of the fuselage. Accommodation is provided for a crew of three seated in ejection seats. There is an alternative position in the nose for the bomb-aimer but no provision is made for his ejection from this station. A folding seat is provided for occasional use on the starboard side of the cockpit.

4. Entrances and emergency exits

Entrance for all crew members is through the entrance door on the starboard side in line with the pilot's seat. The canopy is jettisonable and provides an emergency

exit for the pilot. A jettisonable hatch is situated in the cabin roof and provides an emergency exit for crew members.

5. Fuselage

There are four bays, upper, lower, port and starboard immediately aft of the pressure bulkhead containing various items of aircraft equipment.

6. Flying Controls

The ailerons, elevators and rudder are all manually operated. The variable-incidence tailplane, aileron trim and rudder trim are all electrically operated.

7. Layout of controls and instruments

(a) Pilot's station

The location of the flying controls is conventional, other controls and instruments are grouped as follows:-(i) To the left of the pilot on the cockpit port wall, on the port console and on the engine controls quadrant (Fig. A).

(ii) In front of the pilot on the main instrument panel, on the coaming above this panel and on the engine starter panel (Fig. B). The main instrument panel is divided into three sections, from left to right; the flight instruments panel, the engine instruments panel and the miscellaneous instruments panel (Fig. C).

(b) Navigator's station

The navigator's controls and instruments are grouped around him on the cabin port wall, on the forward instrument panel and equipment racks (Fig. E).

(c) Bomb-aimer's stations

The bomb aimer's controls and equipment are grouped on the fuselage starboard wall (Fig. F) at the ejection seat position, also in the nose and on the port and starboard sides at the forward position.

(d) The location of all controls and instruments is given relative to the above positions.