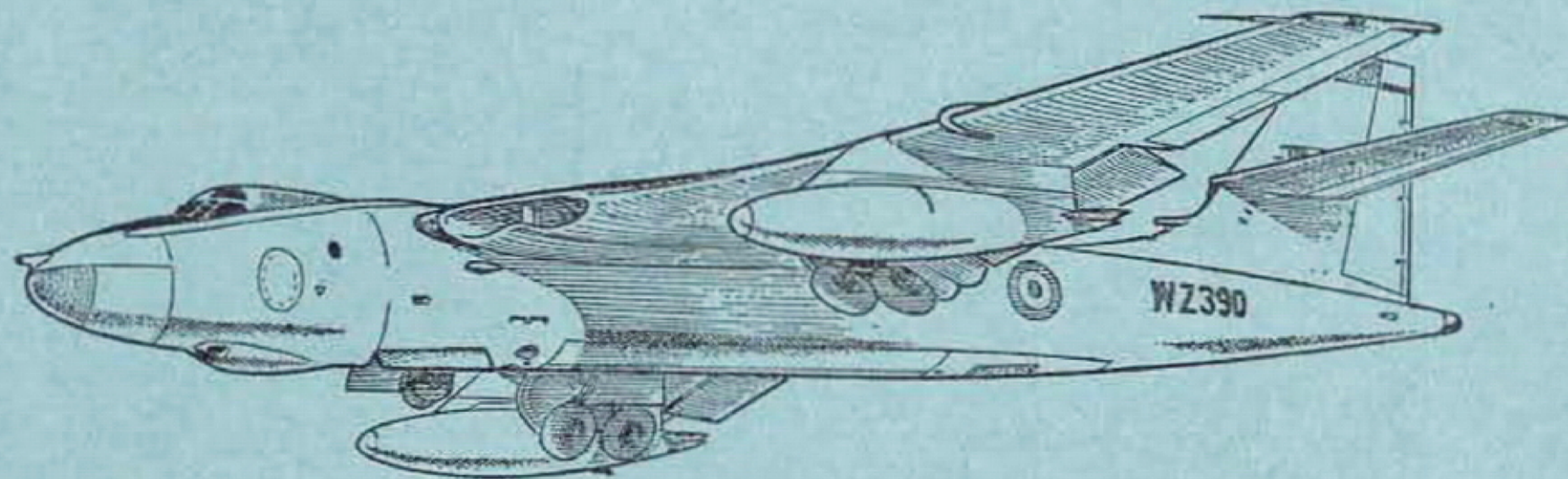




# PILOT'S NOTES

## VALIANT MK. 1 AIRCRAFT



*Prepared by Direction of the  
Minister of Supply*

*R. Musgrave*

*Promulgated by Command of the  
Air Council*

*h. J. Dean.*

# 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 a vertical line on the left of the matter affected. This line merely denotes a change and is not a mark of emphasis.

When a page is issued in a completely revised form the line will not appear. Incorporation of an amendment list must be certified by inserting the date of incorporation and initials below.

A.L. No.	Initials	Date	A.L. No.	Initials	Date	A.L. No.	Initials	Date
1	A. Taylor	31/3/58	11	P. Jones	3/9/63	21		
2	E. Stokes	26/6/58	12	L. Hubby	6.10.64	22		
3	E. Stokes	1/8/58	13			23		
4	E. Stokes	13/1/59	14			24		
5	E. Stokes	23/3/59	15			25		
6			16			26		
7	L. Hubby	4/3/60	17			27		
8	P. Jones	13/4/61	18			28		
9	P. Jones	25/5/61	19			29		
10	P. Jones	23/11/62	20			30		

## Notes to Users

1. These Notes are complementary to AP 129 (6th Edition), Flying, and should be read in conjunction with the Flight Reference Cards which are issued separately. Reference should also be made to the Valiant Operating Data Manual.

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

3. Throughout this publication the following conventions apply:

(a) Words in capital letters indicate the actual markings on the controls concerned.

(b) The numbers quoted in brackets after items in the text refer to the illustrations in Part VI. The letter refers to the illustration and

the number to the item on that illustration, e.g. (F14) refers to Fig. F, item 14.

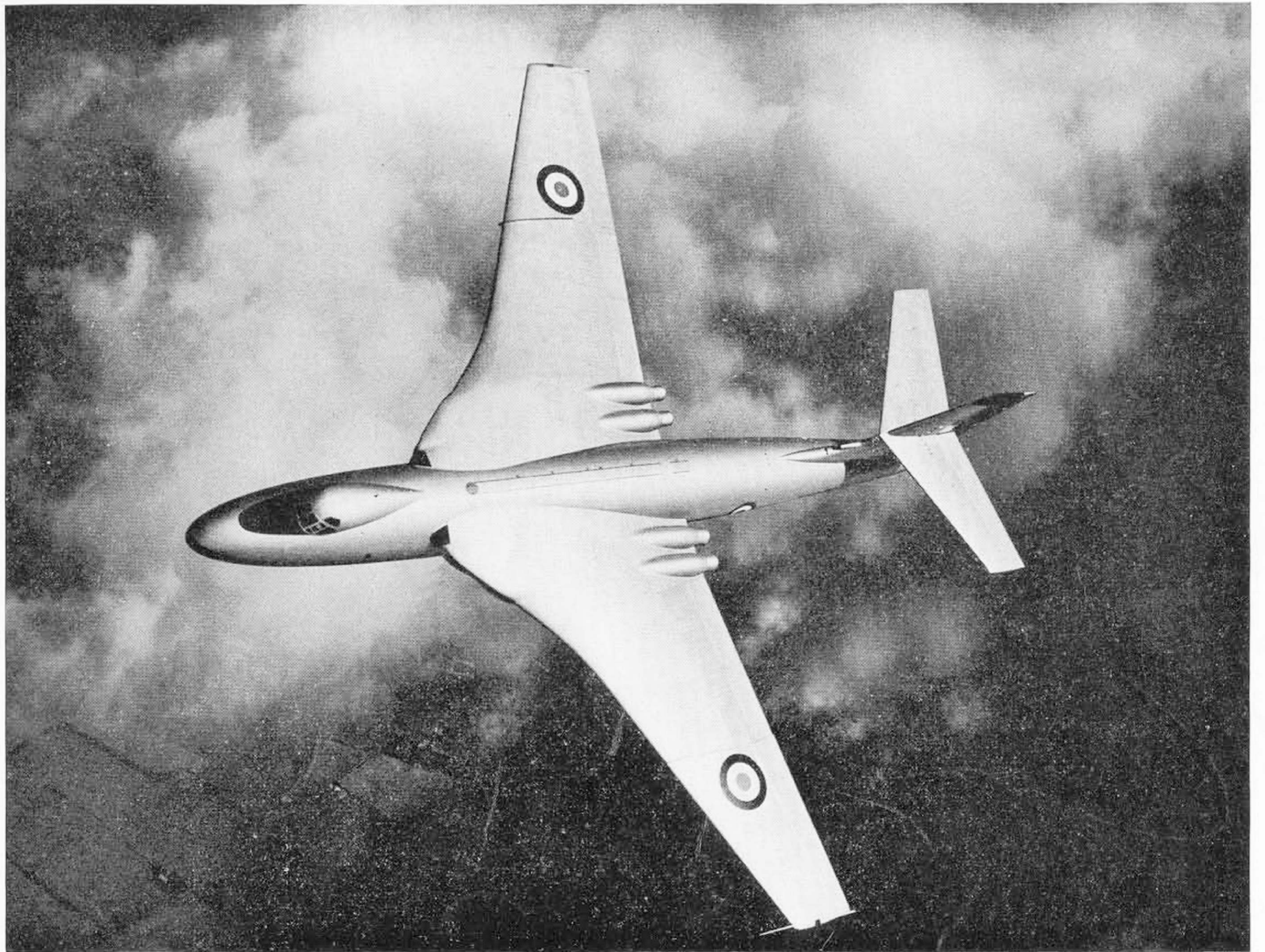
(c) Unless otherwise stated all airspeeds and Mach numbers quoted are "Indicated."

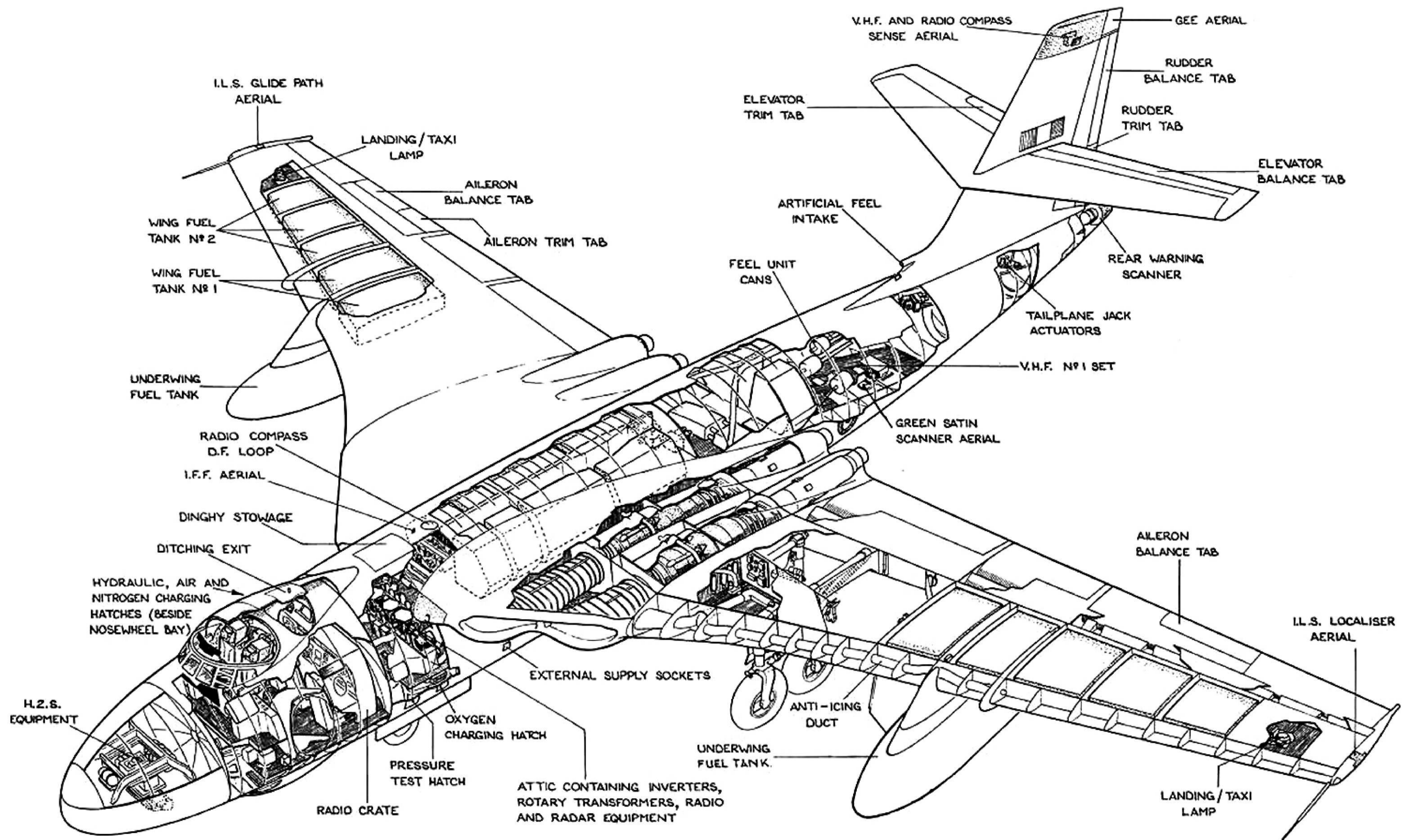
(d) In cases where a Mod. number is followed by an aircraft serial number the latter refers to the first aircraft in which that Mod. was incorporated in production. On aircraft prior to this number it will be necessary to check the aircraft log book and the Form 700 if it is desired to know whether that Mod. has been incorporated.

4. Comments and suggestions should be forwarded to the Officer Commanding, Royal Air Force Handling Squadron, Boscombe Down, Wilts.

## List of Associated Air Publications

	<i>AP</i>		<i>AP</i>
Valiant B1, B(PR)1, BK1 and BK(PR)1 aircraft	4377A	Ejection seats, Mk. 3 . . . . .	4288C
Avon 201 and 204 engines . . . . .	4481A and D	Hydraulic equipment, Vickers . . . . .	1803N
Aircraft fuelling equipment . . . . .	4511	Instrument manuals . . . . .	1275 series
Aircraft refuelling in flight . . . . .	4611	Powered flying controls . . . . .	4603
Aircraft wheels, tyres and brakes . . . . .	2337	Pressurising and air conditioning equipment . . . . .	4340
Electrical manuals . . . . .	4343 series	Safety and survival equipment and flying clothing	4380





*Equipment Layout*

## Contents

Introduction

Part I. Descriptive

Part II. Limitations

Part III. Management of systems and equipment

Part IV. Handling

Part V. Emergency handling

Part VI. Illustrations

NOTE: A List of Contents appears at the beginning of each Part.

Appendices

A. Flight refuelling

# Valiant Mk. I Aircraft. Introduction

(a) The Valiant aircraft is a high-wing, all-metal monoplane powered by four Avon 204 or 205 engines, each of 10,000 lb. static thrust. The only significant difference between the Avon 204 and 205 is that the latter is equipped for water-methanol injection.

(b) The B.I is a bomber and the B(PR)I is a B.I converted to a photographic reconnaissance role. The BK.I and BK(PR)I are equipped for being refuelled in flight and provision is also made in them for the addition of tanker equipment. Thus a BK.I or a BK(PR)I can be either a "receiver" or a "tanker/receiver" aircraft. All types are basically identical and these Notes refer to all aircraft, but where differences exist the words "B.I only", "BK(PR)I only", or as appropriate, appear in the text or in the paragraph headings.

(c) *These Notes refer to WP.205 and subsequent aircraft, the earlier aircraft differing considerably in equipment and instrument layout. Basically, however, the Notes may be used for the earlier aircraft, but Pilots should make sure they know the differences.*

(d) The aircraft is operated by a crew of five accommodated in a pressure cabin. The two pilots are seated side-by-side in ejection seats on a raised portion at the front of the cabin. This portion is referred to in these Notes as the cockpit. Behind the pilots, facing aft, are the air electronics officer, the navigator, and the radar navigator/bomber, seated in front of a large crate containing their equipment. This portion of the pressure cabin is referred to in these Notes as the cabin. The bomb aiming station is below the floor, entry to it being gained through a hatch.

(e) The flying controls are power operated through duplicated supplies, and if complete failure occurs, reversion to manual control is automatic. A Mk. 10 automatic pilot is fitted. Double-slotted trailing-edge flaps are fitted and there are air brakes on the under-surface of the wings. The tailplane incidence is variable. The engines, the leading edges of the air intakes, wings, tailplane and fin are equipped

for thermal anti-icing. The nose-wheel is steerable for manoeuvring on the ground.

(f) The four engines each drive a 22½kW., 112-volt generator, from which all auxiliary power in the aircraft is taken. Air for cabin heating and pressurising, for anti-icing and for fuel tank pressurising is taken from bleeds on the compressor casings of the four engines. Provision is made for assisted take-off, using water-methanol injection or R.A.T.O.G.

(g) The principal dimensions of the aircraft are as follows:

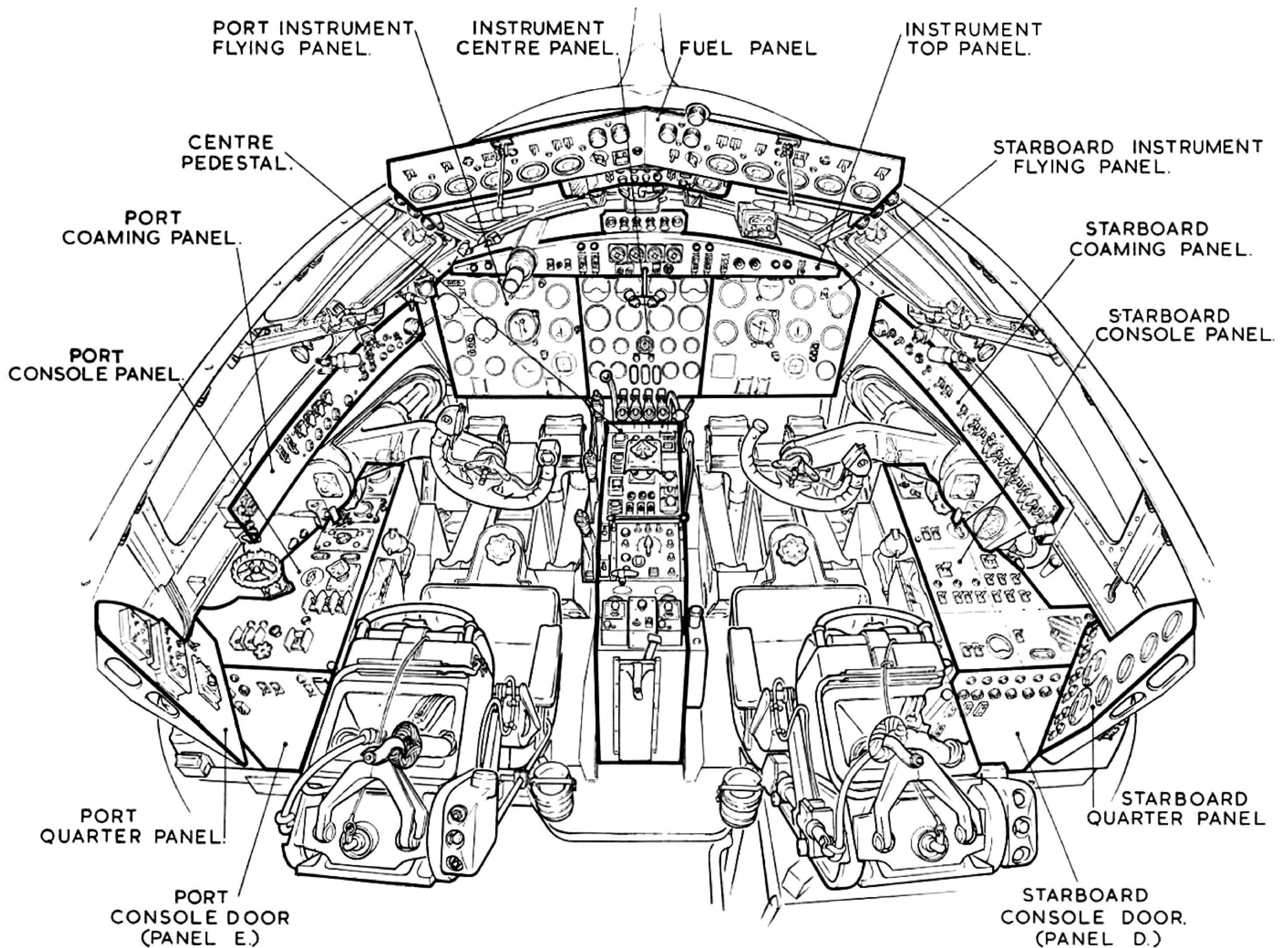
	ft.	in.
Overall length . . . . .	108	3
Wing span . . . . .	114	4
Height to top of fin . . . . .	32	2
Tailplane span . . . . .	40	9
Wheel track . . . . .	28	0
Wheel-base . . . . .	24	8
Minimum turning circle . . . . .	100	0

(but see Part IV, para. 6(e))

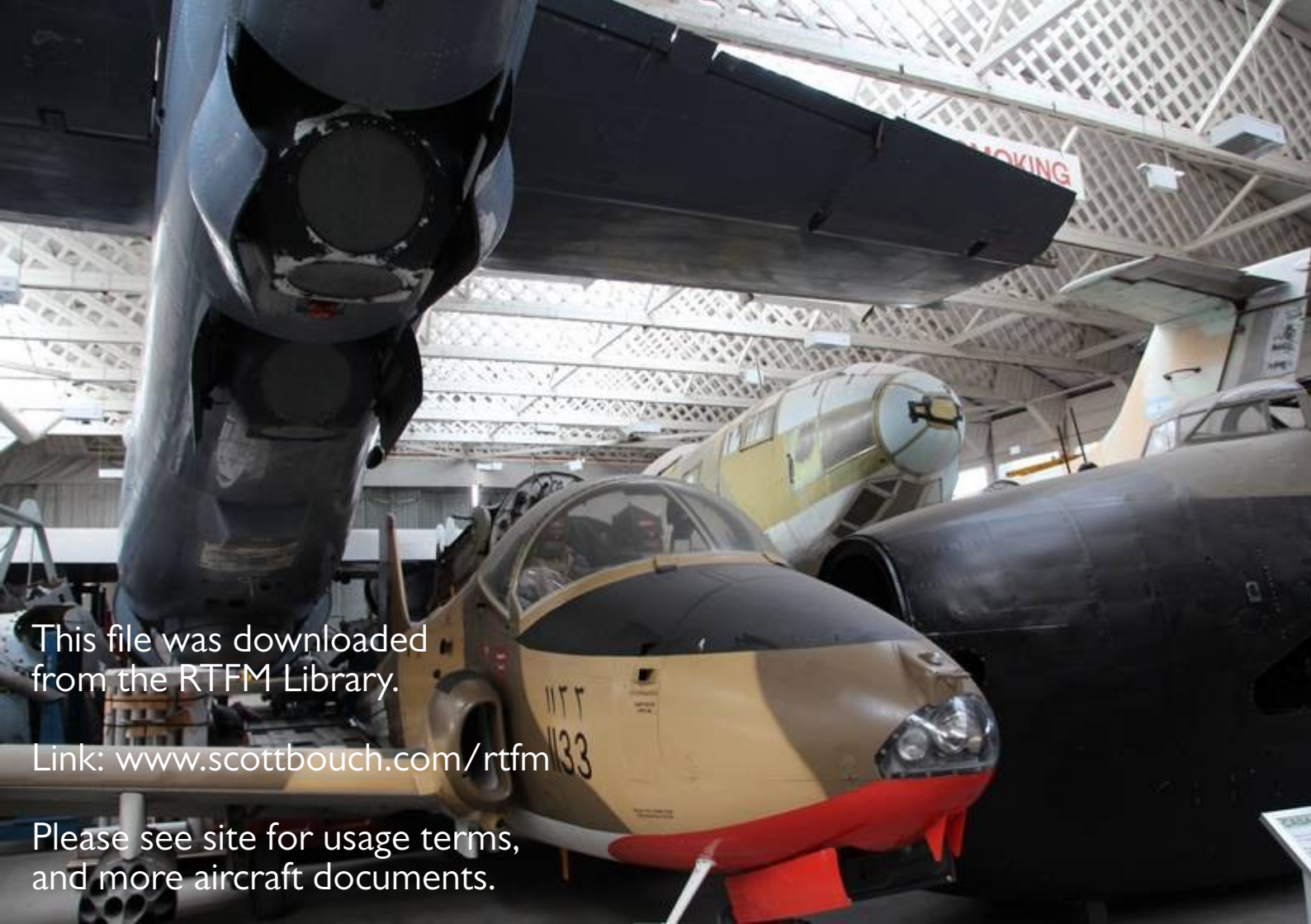
(h) *Load Classification Number*

The following L.C.N's assume a tyre pressure of 112 lb./sq. in. up to a weight of 138,000 lb. and 142 lb./sq. in. above this weight.

Weight (lb.)	L.C.N.
167,000 . . . . .	65
138,000 . . . . .	47
130,000 . . . . .	45
120,000 . . . . .	42
110,000 . . . . .	39
100,000 . . . . .	36
90,000 . . . . .	33
80,000 . . . . .	31



*Location of Instrument Panels*



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