BAC

Canberra

Canberra

British Aircraft Corporation

Canberra B2, B6, B(I)8, T4

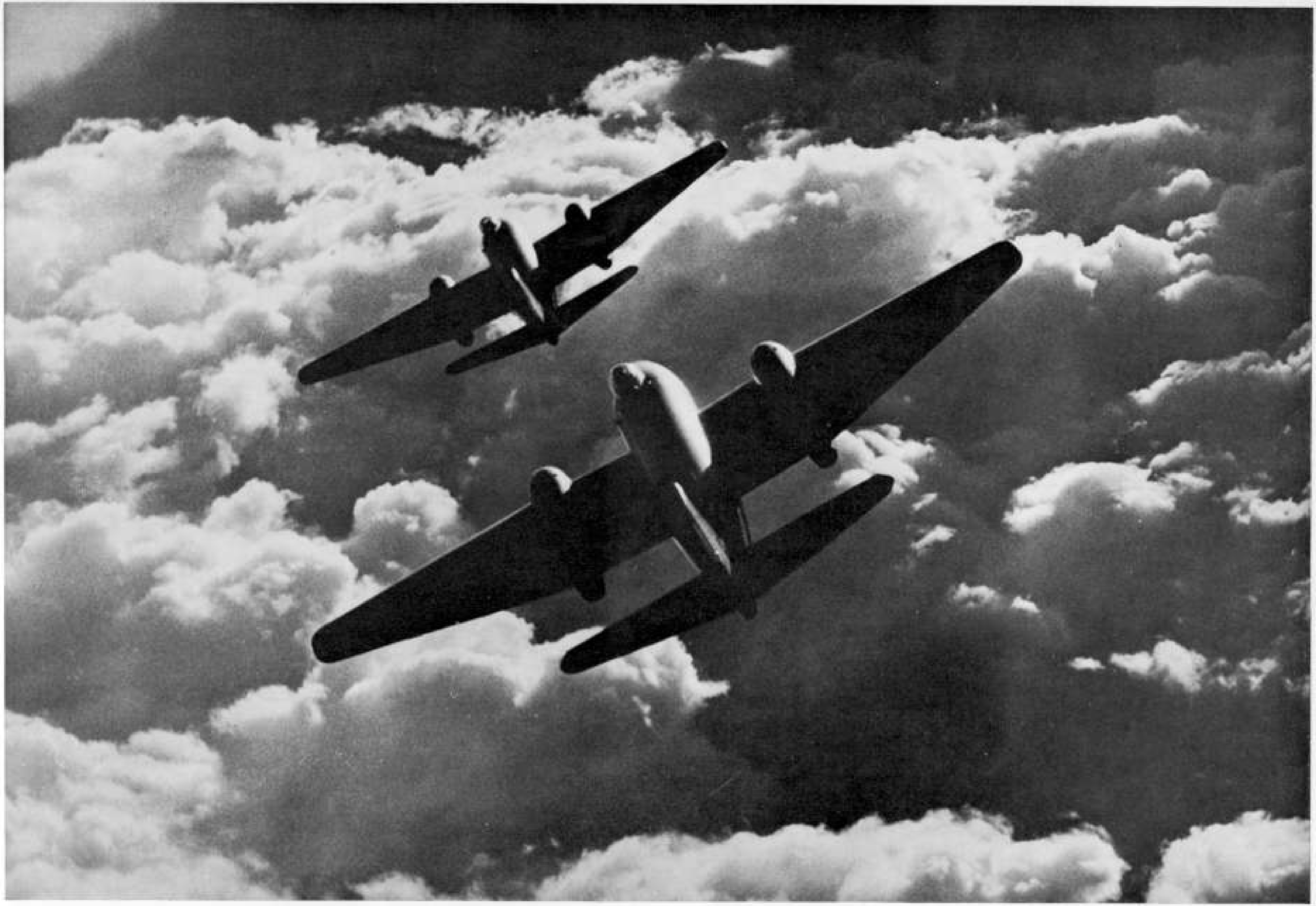
Introduction

The first Canberra flew in 1952. At that time it represented an entirely new concept in bomber aircraft. Capable of flying higher and faster than the majority of contemporary defensive fighters, it formed the backbone of the Royal Air Force Bomber Command until the advent of the 'V' bombers and the present generation of supersonic interceptors.

In the interim the Canberra has been adopted by many Air Forces throughout the world and has been in quantity production in a number of countries including the USA. Development continued over the years and it has appeared in several bomber versions, three photographic reconnaissance developments, an interdictor version, dual control trainer, radar calibration, target towing and even as a radio-controlled drone for missile interception trials.

Full production of Canberra airframes has now ceased but far from this being the end of a fine aircraft, the release of ex Royal Air Force machines has enabled many countries to acquire at a very economical price a highly effective general purpose counter insurgency aircraft. Not only are these machines completely overhauled and brought up to the latest standards of radio and navigation equipment but recent operational experience in the role has shown that the Canberra's performance parameters fall within the range which that experience has shown to be desirable. The weight carrying capacity and range of the Canberra has been augmented by the fitting of external hardpoints and pylons capable of carrying an additional range of bombs, rocket packs or gun pods. On a cost effective basis this represents an opportunity to acquire an aircraft with a considerable armament potential at a low initial cost.

The aircraft allocated for re-sale are given a comprehensive major overhaul at the British Aircraft Corporation factories. Thereafter maintenance is simple and straightforward with full service backing on spares, technical representation and training if required.



The Canberra today and for the future

Role Fulfilment
The Canberra is currently in service in a wide variety of roles including tactical bombing, day and night interdiction, counter insurgency and anti-personnel operations, photographic reconnaissance, pilot training and target towing. Its capabilities in these roles are well-known but the question of its continued viability can be answered by consideration of the following factors:

Attack Speed
The importance of target acquisition and accurate delivery of air-to-ground weapons for which attack speeds of 350-450 knots are appropriate and which are well within Canberra capability.

The experience of recent operations which not only supports the above but has also demonstrated the limited usefulness of the high Mach number performance of sophisticated and very expensive aircraft when used in such an environment.

Weapons Load
A similar experience which has shown that the optimum weapons load for tactical use against a defended target where a single pass only would be made is of the order of 4000 - 6000 lbs. which load is again well within Canberra capability.

Armament Spectrum
The Canberra has an ability to accept a wide range of modern armament including 540 lbs. and 1000 lb. bombs with or without retarded tails; 2 in. and 68 mm. rockets; podded guns of varying calibres; and guided air-to-ground missiles.

The Canberra possesses an insensitivity and a comparative lack of vulnerability to the effects of ground fire and consequent war damage; in contrast to sophisticated high equipment density aircraft.

Range
The Canberra's good internal fuel capacity gives a most useful radius of action and lengthy loiter capabilty thus enabling operations to be mounted from rearward bases secure from the risk of guerilla action.

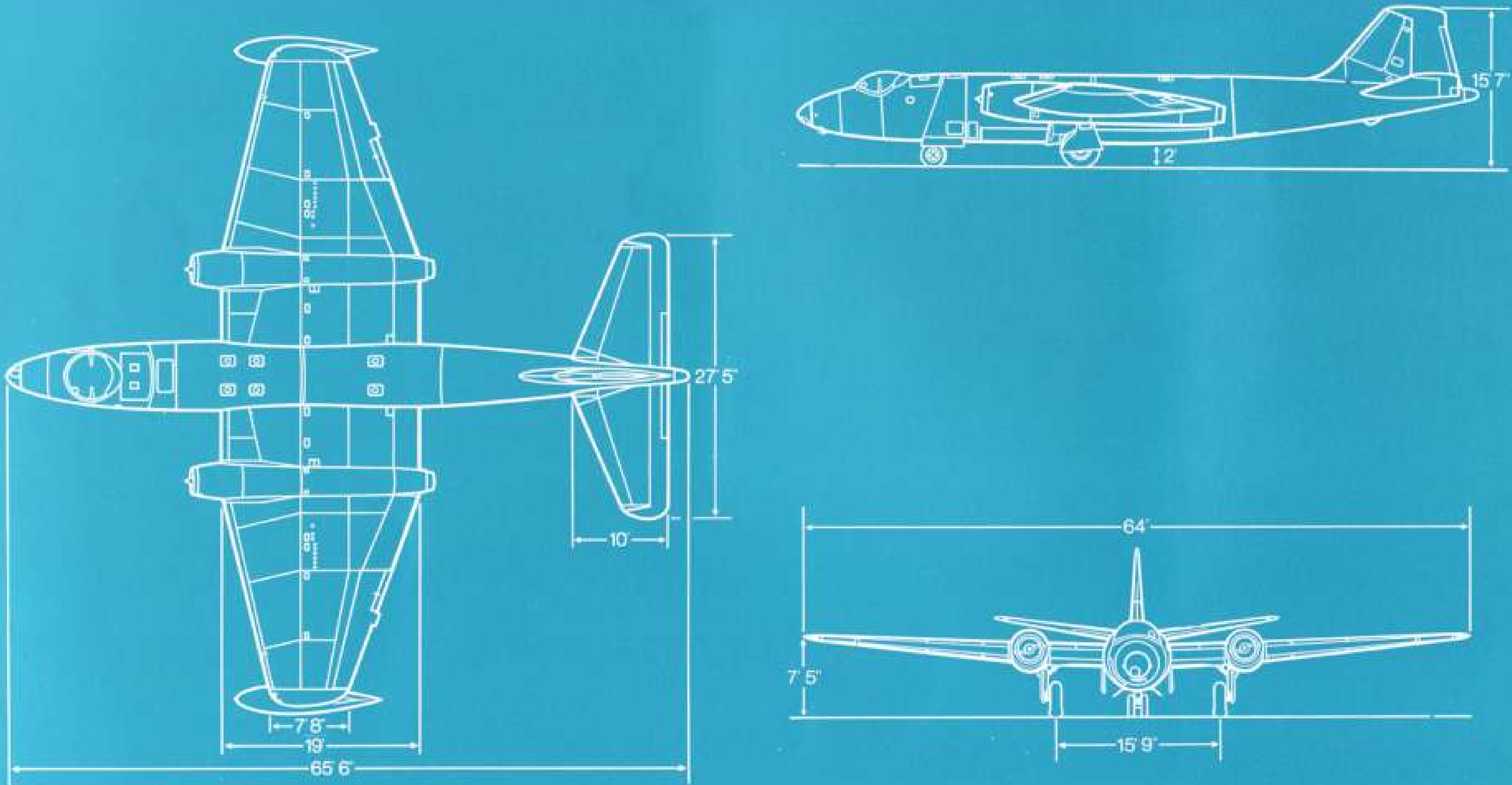
Modern Equipment
A range of the most modern radio and navigation equipment can be offered on aircraft leaving the BAC factory including multi-channel VHF/UHF/HF; VOR/ILS; ADF; TACAN; AUTO-PILOT; DOPPLER with Auto-Pilot or Bombsight Coupling; IFF etc.

Aircraft Life
This is closely related to fatigue life and spares availability. On the question of fatigue it has been confirmed that even the most rigorously used aircraft in service have only consumed a small percentage of their fatigue life. The Corporation's refurbish and overhaul schemes are very comprehensive and replacement work includes fatigue conscious structural components. All components subject to life limitations are changed, together with a high percentage of electrical wiring, ensuring at least 10 years of useful life. With regard to spares availability, all items of BAC manufacture will likewise be maintained in supply for at least ten years and a policy of re-equipping with modern radio and navigation equipment ensures equivalent support for ancilliary components.

Cost Effectiveness
On this most critical question it can be said that the average unit cost of current aircraft capable of carrying out the tasks mentioned in the foregoing is certainly in excess of £500,000–£600,000 ($1.2 m. — 1.4 m.); and can be well above £1,000,000 ($2.4 m.). Re-furbished and overhauled Canberras will be competitively priced by comparison. The operating costs of the Canberra is low by any military aircraft standards and is significantly less than that for any sophisticated aircraft operating in the same roles.

Although the performance of the Canberra cannot be claimed as being greater than that of sophisticated aircraft with the same wide overall capability, it is fully competitive and often superior in the tactical role and will be so for many years to come.

General arrangement



General description

THE CANBERRA VARIANTS

In the following pages the main characteristics of the basic Canberra B Mk. 2 are described, Much of the data given is common to the B2, B6, B8 and T4 versions and can be taken as such unless an accompanying note is given in the text. However performance data given in the sections relating specifically to the B6, B8 and T4 versions are applicable only to the particular version featured in that section.

A brief summary of the main differences between the four variants described in this brochure is given below:—

Mark	Engines	Crew	Range	Type
B2	2 × Avon Mk. 1 6,500 lbs. s.t. each	3	2,600 n.m.	Bomber
B6	2 × Avon Mk. 109 7,500 lbs. s.t. each	3	3,400 n.m.	Bomber
B8	2 × Avon Mk. 109 7,500 lbs. s.t. each	2	3,400 n.m.	Interdictor
T4	2 × Avon Mk. 1. 6,500 lbs. s.t. each	1	3,050 n.m.	Trainer

The greater range of the B6 and B8 versions is attained by the incorporation of integral wing fuel tanks containing an additional 900 gallons of fuel more than the B2. This, together with the increased thrust of the Avon Mk. 109 engine gives improved range and performance.

The basic B2 and T4 versions are similar in performance.

Armament configurations for the B2, B6 and B8 Marks are similar and can consist of bombs carried in the fuselage bomb bay, and externally on pylons; with internal or external gun packs; and externally carried rocket launchers. The T4 is limited to external carriage of gun packs or rocket launchers.

Total armament load capacity for the B2, B6 and B8 versions is 8,000 lbs. (i.e. 6,000 lbs. internally and an additional 2,000 lbs. on under wing pylons) this figure being attainable with full wingtip tanks fitted. However the B2 versions requires 21" undercarriage wheels to be fitted for operation at this maximum load configuration.

The following paragraphs offer an outline description of the Canberra. There are numerous points of detail difference between the various Marks, some principal one's being mentioned in the text. Fuller details of all Marks and specific variations from the basic description are available on request.

Front Fuselage

The front fuselage in the B2, B6 and B8 versions consists of a transparent plastic nosefairing fitted with an optical glass sighting panel, a pressure cabin, equipment compartments and the nose heel unit.

A pressure bulhead seals off the pressure cabin from the remainder of the fuselage. The T4 version varies from the above in having a hinged metal nose which serves as an additional equipment compartment and facilitates ease of servicing.

The pilot and crew are equipped with Martin-Baker ground-level 0-90 knots single lever ejection seats; the pilots canopy and the hatch above the navigator's and bomb-aimer's seats being jettisonable for emergency exit. Normal entry and exit is through a door in the starboard side. The B8 version differs from the above in having ejection facilities and a jettisonable canopy at the pilot's position only. In this Mark the navigator uses the normal entry door for emergency exit but is protected at this point by a hydraulically operated windbreak door.

Instrument panels are arranged conventionally in front of the pilot and a control console is fitted along the port side.

General description

Main Plane

The main plane is a single-spar cantilever structure built in port and starboard units, incorporating engine mountings and jet pipe structure, and attached to a centre section spar forging built into the fuselage. Each wing incorporates inner and outer leading edge assemblies, a detachable wing-tip, air-brake installation, inner and outer wing flaps and ailerons. The main undercarriage is attached to a forging in board of each engine and retracts inwards. Provision is made for a jettisonable fuel tank at each wing tip and up to two strong points beneath each wing for the attachment of pylons.

Tail Surfaces

The tail-plane is a single-spar structure built in port and starboard units joined at their roots to form a single assembly. The unit is supported at its forward end by two brackets attached to the fuselage and at the rear by an attachment to the electrical actuator. This latter permits the pilot to adjust tailplane incidence in flight thus ensuring precise control at all speeds. The elevators are horn and mass balanced; and incorporate a spring tab fitted to the port elevator and a geared tab to the starboard elevator.

The fin consists of a metal spar and main structure but for VOR aerial installation construction forward of the spar is of wood. A metal leading edge protection is provided for this portion of the fin.
The metal rudder is horn and mass balanced and is fitted with a spring tab which, through an electrical actuator, acts also as a trim tab.

Alighting Gear

The alighting gear is fully retractable, being hydraulically operated and electrically controlled. It comprises a fully-castoring, self-centring, twin-nosewheel undercarriage unit of Dowty levered-suspension, liquid-spring design with main oleo-pneumatic units of English Electric design.
The nose-wheel unit is mounted on the rear face of the pressure bulkhead and retracts rearwards into the front fuselage. Mechanical locks and electrical position indicators are provided for 'up' and 'down' positions.
Each main undercarriage unit consists of an oleo-pneumatic shock absorber strut having a single wheel mounted on a cantilever axle. These are anchored to forged brackets on the main spar and retract inboard. Electrical position indicators are provided. The nose and main wheel doors are hydraulically operated by jacks through sequence valves. They are fitted with positive latch locking.

General description

Engines

Two Rolls-Royce turbojet engines are fitted; those in the B2 and T4 being the Avon Mark 1; and in the case of the B6 and B8 the Avon Mark 109. Maximum static rating of the Avon Mark 1 engine at sea-level is 6,500 lbs. at 7,800 RPM; that of the Mark 109 being 7,500 lbs. Starting is fully automatic, the engines being rotated by means of cartridge-operated turbo-starters. Ignition is by high energy ignition units and igniter plugs fitted in two of the combustion chambers. A barometric pressure control unit provides automatic compensation for changes in altitude and speed. An automatic acceleration controls unit is fitted. To ensure good low engine speed characteristics, the engine compressor is fitted with variable angle inlet stator guide vanes and air bleeds.

Fuel System

In the B2 and T4 versions three fuel tanks with a total capacity of 1,377 imperial gallons are carried in the fuselage above the bomb bay and a further 240 gallons in wing tip tanks. The front and centre tanks are internally braced, self-sealing and flexible; the rear tank being a crash proof collapsible bag. All tanks are removable. The B6 and B8 versions incorporate, in addition to the above, additional fuel capacity by means of an integral tank within the outboard leading edge of the wings, the two having a total additional capacity of 900 imperial gallons.
An auxiliary fuel tanks of 300 gallons may be fitted in the forward or rear bomb bay position for ferrying; while a 650 gallon tank is also available for extended ferrying.

The 300 gallon tank may also be fitted in the rear bomb bay for extended operations and when so fitted allows space for up to 3000 lbs. of bombs in the forward portion of the bomb bay.

Hydraulics

Continuously-running hydraulic pumps, mounted on the engine gearboxes, supply hydraulic pressure to actuate the undercarriage, flaps, air brakes, wheel brakes, and bomb doors.

An independent hand pump system with a reserve fluid supply provides for the emergency functioning of the undercarriage flaps and bomb doors.
A secondary accumulator holds a reserve power supply for the aircraft wheel brakes.

To guard against an electrical power failure, the undercarriage 'DOWN' and bomb doors 'OPEN' positions can be mechanically selected.

For ground servicing, all the hydraulic services can be operated by means of the hand pump. A nose wheel ground selector facilitates the retraction of the nose wheel.

General description

Electrical Services
Two generators, one driven by each engine, supply 28-volt d.c. current. In addition to maintaining all normal loads of the aircraft, the generators also charge four 12-volt, 40-amp./hr., lead-acid batteries connected in series/parallel to give a capacity of 80 amp./hr. at 24 volts. The batteries are mounted on removable trays which are accessible through a hinged door in the port side of the fuselage.

A number of the electrical instruments operate on 400-cycles three-phase a.c. current supplied by inverters run from the 28-volt d.c. system. The essential instrument circuits have emergency supplies with automatic change-over.

Navigational installations are supplied with single-phase a.c. obtained from inverters running from a 28-volt input.

The Plessey system of wiring, using cable assemblies with multi-pin plugs and sockets, is employed throughout the aircraft.

The services which utilize electrical power for part or whole of their operation are listed hereunder:–

(1) Instrument power supplies 28-volts d.c. and 115-volts, 400-c/s 3-phase a.c.

(2) Radio and signals power supplies 28-volts d.c. and 115-volts, 1600-c/s single-phase a.c.

The following systems operate from the 24-volt d.c. power supply:

(*a*) Engine starting. (*Cartridge firing ignition*).
(*b*) Fuel pumps and cock actuators.
(*c*) Fire extinguishers.
(*d*) Hydraulic actuator controls for flaps, air brakes, bomb doors, and alighting gear.
(*e*) Heated clear vision panel.
(*f*) Tail plane incidence control.
(*g*) Aileron and udder trimmers.
(*h*) Canopy and hatch jettison.
(*j*) Wing tip tank jettison.
(*k*) External lighting.
(*l*) Instrument panel lighting.

Air Conditioning System
Air for heating and pressurizing the cabin is ducted from both engine compressors. The temperature is controlled by an electrically-operated mixing valve by means of which any desired proportion of hot air may be routed through coolers in the inner plane leading edges and a cold air unit in the port inner plane.

Cabin pressure is governed automatically by a pressure control valve and a master valve unit. A warning horn sounds if, through any defect, cabin pressure fails excessively.

The canopy and the navigator's window are of sandwich construction and are fitted with dry-air de-misting systems.

A ventilated suit system, terminating in supply points at each crew position, may be incorporated in the aircraft.

Oxygen System
A pressure demand oxygen system is installed at each crew member's station.

The main supply is supplemented by an emergency bottle carried in the parachute packs of crew members.

Equipment

The principal items of equipment carried are summarised below

Flying
Compass (Gyro-Magnetic)
Compass (Magnetic)
Machmeter
Air Speed Indicator
Artifical Horizon
Turn and Slip Indicator
Rate of Climb Indicator
Altimeters

Navigation
Air Position Indicator
Air Mileage Unit
Compass
Altimeter
Air Speed Indicator
Air Temperature Gauge
Clock

Miscellaneous Optional
Single or Twin VHF/UHF with stand-by VHF, IFF, Radio Compass, VOR/ILS.
Wingtip fuel tanks
Fuel Recuperators
Practice bomb facilities
Droppler

T3 or T4 bombsight installation
Forward and aft bomb beams with 3 release units
Avro Triple Carriers or ML Universal

Compatible items of equipment which are not included in the basic standard can be supplied if required.

Weight analysis

Basic Aircraft

Ferry Roles

		lbs.
1.	Basic aircraft weight (computed)	22,265
	Full fuselage fuel	11,016
	Crew, equipment and aux. bomb beams	1,204
	Total weight	**34,485**
2.	Basic aircraft weight	22,265
	Full fuselage fuel	11,016
	Wing-tip tanks plus fuel	4,148
	Crew, equipment and aux. bomb beams	1,204
	Total weight	**38,633**
3.	Basic aircraft weight	22,265
	Full fuselage fuel	11,016
	Wing-tip tanks plus fuel	4,148
	650-gal. bomb bay tank plus fuel	5,658
	Crew and equipment	858
	Total weight	**43,945**

Bombing Roles

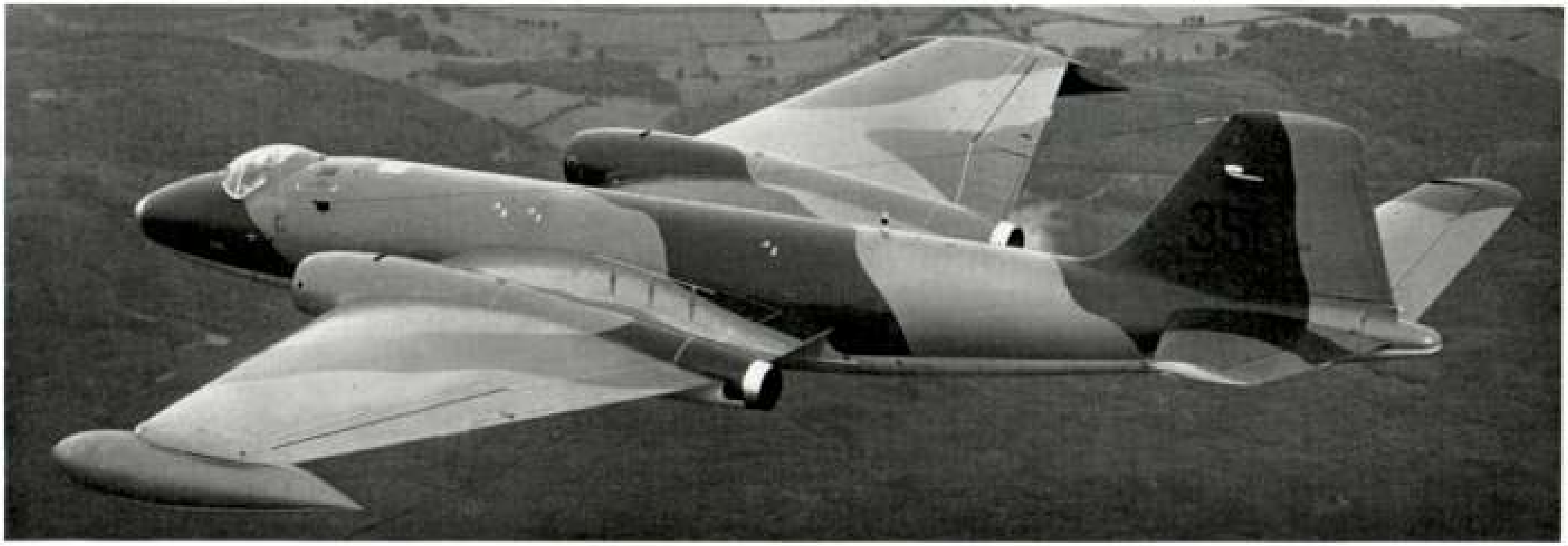
1.	Basic aircraft weight	22,265
	Full fuselage fuel	11,016
	Wing pylons	98
	8 x 1000 lb. bombs	8,436
	Triple Carriers and bomb-sight	185
	Crew, equipment and aux. bomb bemas	1,204
	Total weight	**43,204**
2.	Basic aircraft weight	22,265
	Full fuselage fuel	11,016
	Wing pylons	98
	6 x 1000 lb. bombs	6,336
	2 x S.N.E.B. Type 356	900
	Crew, equipment and aux. bomb beams	1,204
	Triple carriers and bomb-sight	185
	Total weight	**42,014**

Air-to-air and low level attack roles

General
Air-to-air and low level attack equipment, carried on the wing pylons, may consist of either bombs or rockets according to operational requirements. (Rockets or guns only for T.Mk.4) Wing bombs are released in conjunction with the T3 or T4 bombsight; while rockets, launched by a control column firing switch, are sighted by a SFOM gunsight mounted on the cockpit coaming.

Wing Bombs
Wing bombs are controlled by the BOMBS/RP selector switch and released by either the control column firing switch or the navigator's bomb-release switch at the prone nose position. Flying and selector switches are located on a switch panel at the navigator's station; the jettison switch being on the pilot's coaming panel.

Rocket Projectiles
According to customer's requirements the wing pylons can be fitted with either SNEB 68 mm. Matra 155 launchers or Mk. 7 RP launchers thus enabling either 18 x 68 mm. or 72 x 2 in. rocket projectiles to be carried as a complete unit on each pylon.



Structural strength in flight

The main aircraft components have been stressed and tested to comply with the flight manoeuvres laid down in the Aircraft Specification and Air Publication 970. The manoeuvres considered represent the extremes that can be reasonably taken into account for the particular operational role of the aircraft.

The greatest load estimated to occur in a specified manoeuvre is defined as the 'specified load'. The specified load multiplied by the 'proof factor' (1.125) gives the 'proof load'. The specified load multiplied by the 'ultimate factor' (1.5) gives the 'ultimate load'.

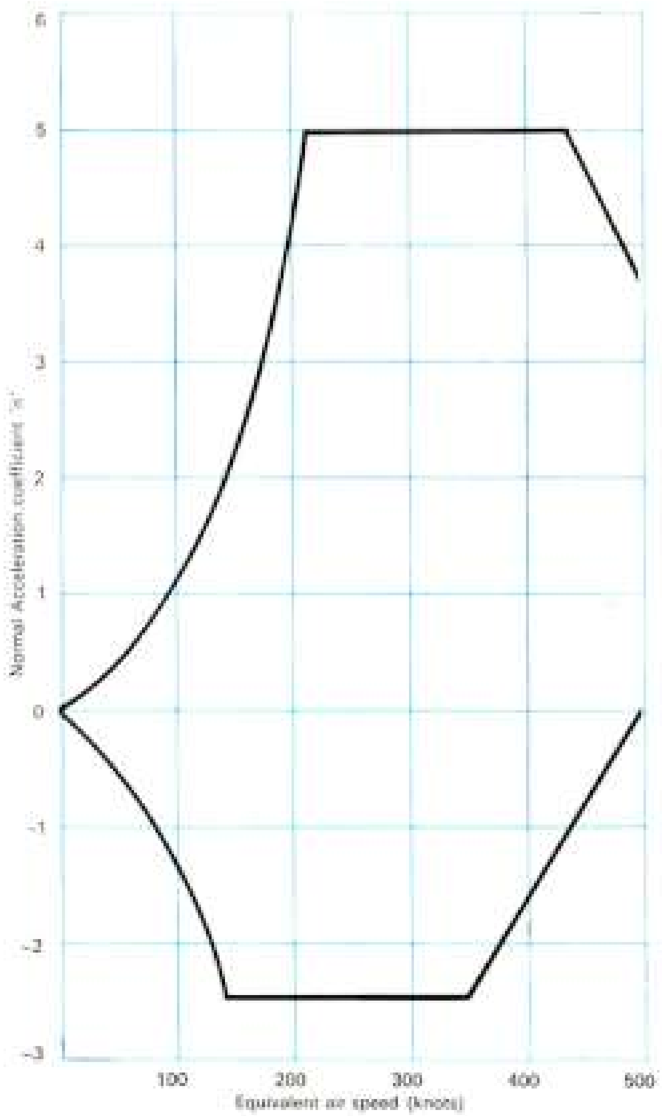
The requirements met in the design of the Canberra state:

(*a*) Structural failure should not occur until the ultimate load is reached.

(*b*) No part of the structure shall sustain deformation detrimental to safety, and moving parts essential to safety shall function satisfactorily at all loads up to the proof load.

(*c*) After removal of the proof load, no effects of loading shall remain which might reasonably cause the aeroplane to be deemed unserviceable.

Flight envelope 37,600 lb. at 10,000 ft.



Still air range

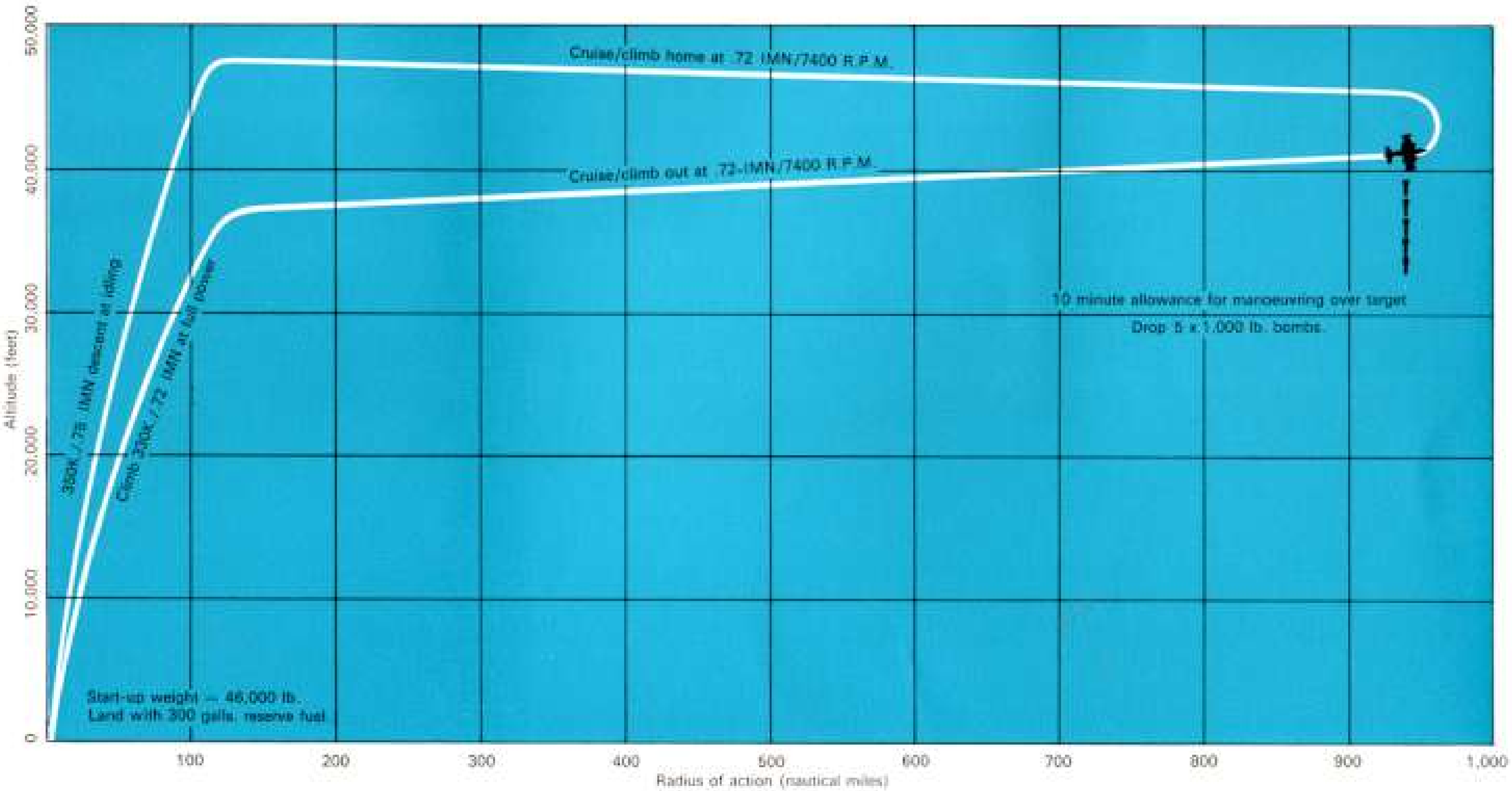
The following are the maximum ranges (nautical miles) in still air leaving no fuel reserves (subject to calculation error of 10 to 15 miles either way):

Still Air Range (nautical miles)

Condition	*Retained*	*Wing Tip Tanks*	
		Blown Off	*Not Fitted*
1. 650 gall. tank	2,885	3,230	2,715
2. (*a*) 300 gall. tank	2,560	2,855	2,320
(*b*) 300 gall. tank plus 3,000 lb. of bombs . . .	2,420	2,690	2,160
3. Full fuselage fuel plus W/Tip tanks	2,275	2,535	
4. Full fuselage fuel plus W/Tip tanks plus 6,000 lb. of bombs	2,030	2,220	

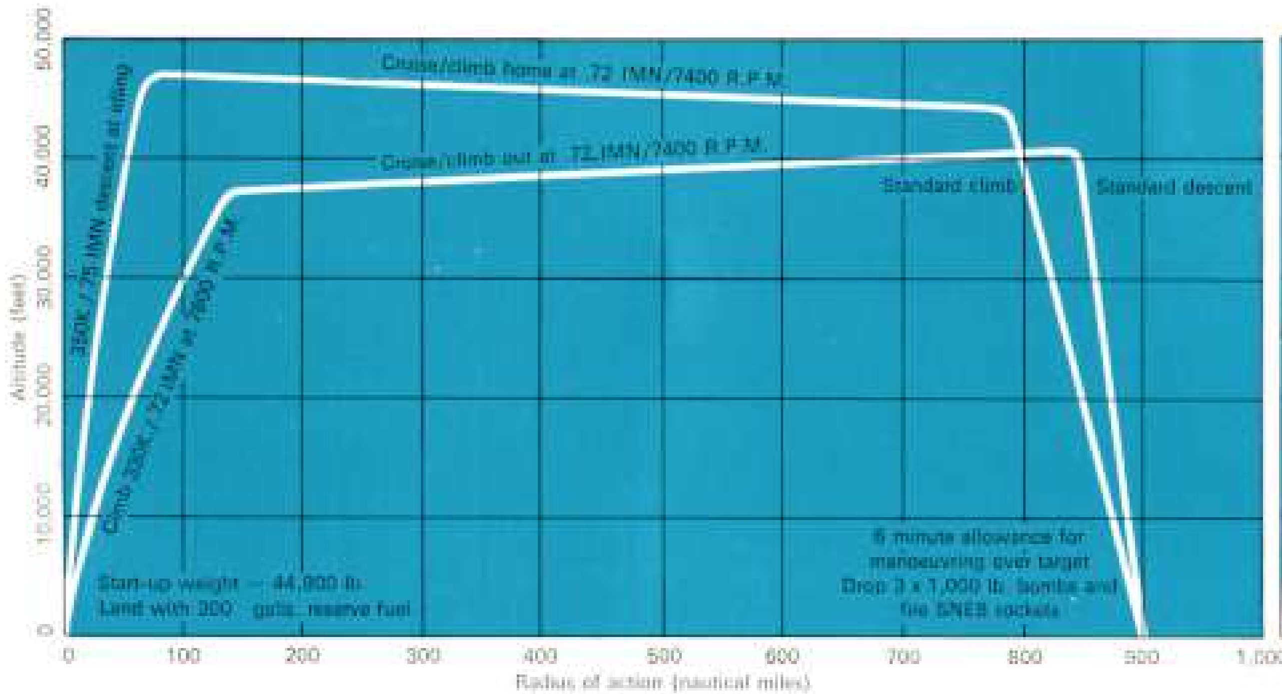
Radius of action

Performance in still air
Drop tanks + 300 gallon bomb bay tank + 5 × 1,000 bombs 2 × 1,000 bombs on pylons

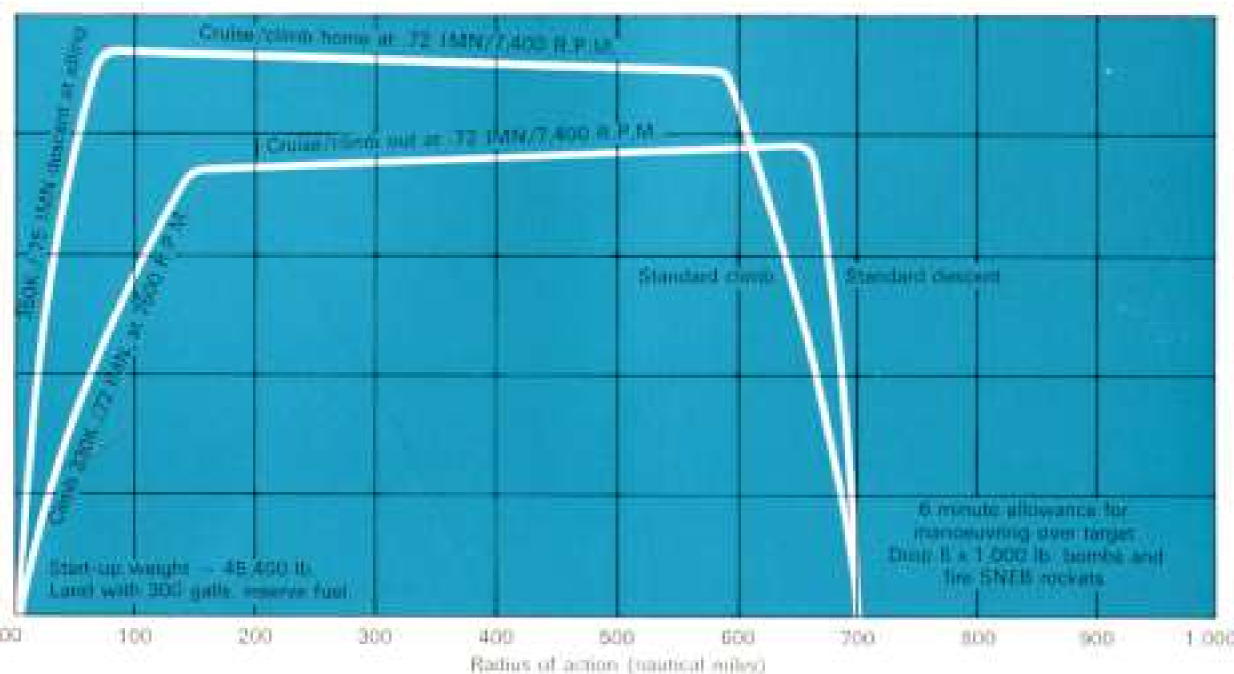


Radius of action

Performance in still air
Drop tanks + 300 gallon bomb bay tank + 3 × 1,000 lb. bombs (internal) + 2 × Matra launchers (Rib 3)

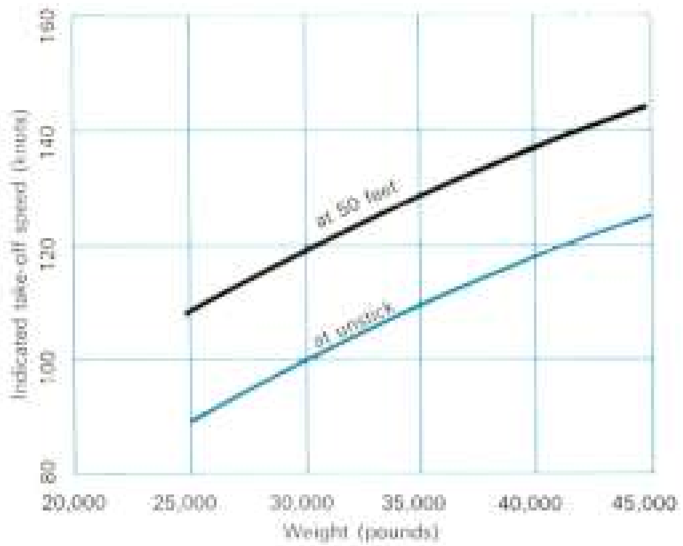


Performance in still air
Aircraft + drop tanks + 6 × 1,000 lb. bombs (internal) + 2 × Matra launchers (Rib 3)

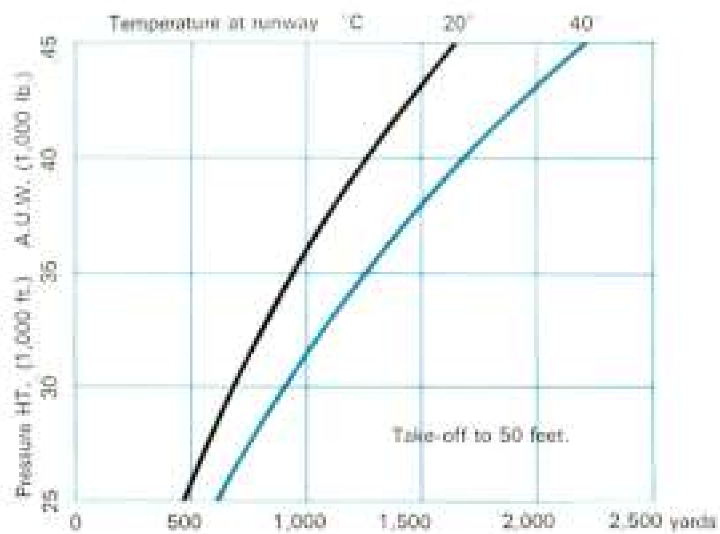


Take-off distance

Take-off distance to 50 ft.
The take-off distances shown are based on maximum r.p.m. The take-off run is affected by runway altitude as well as atmospheric conditions.

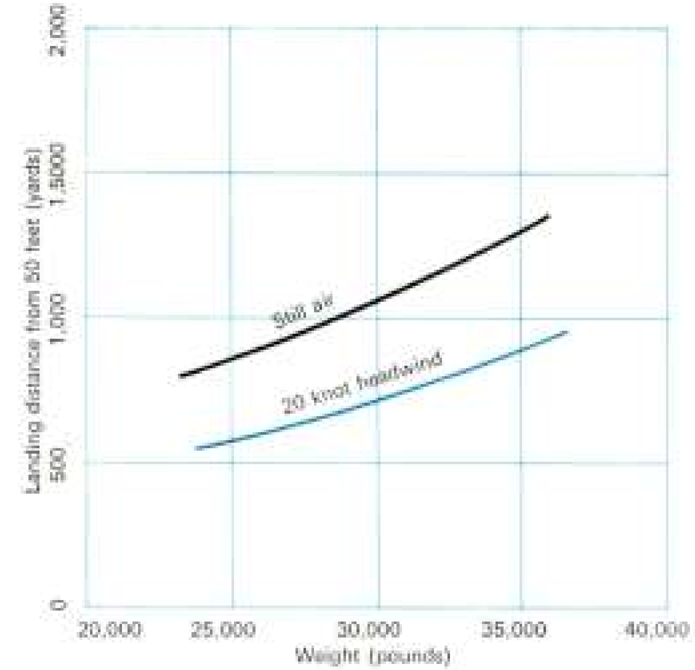


Take-off distance to 50 ft. in standard I.C.A.N. S.L. atmosphere (15°C. 760 mm. pressure) (Dry concrete runway)

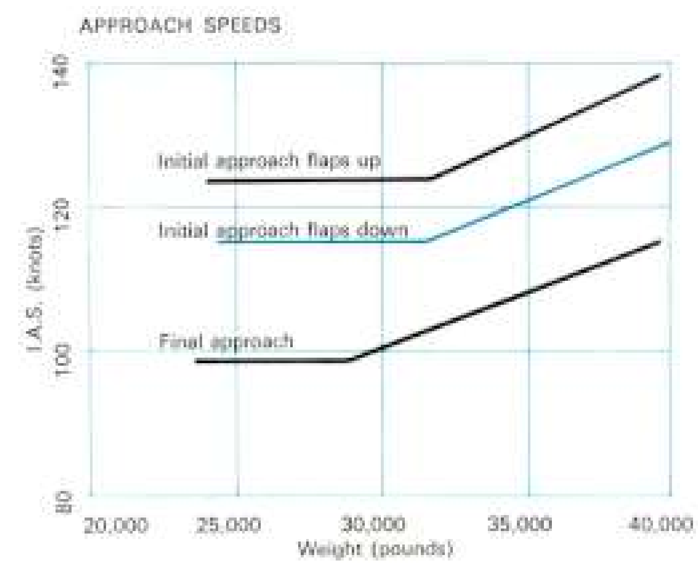


Landing distance

Landing distance from 50 ft. in standard I.C.A.N. atmosphere (Dry concrete runway)



Approach speeds

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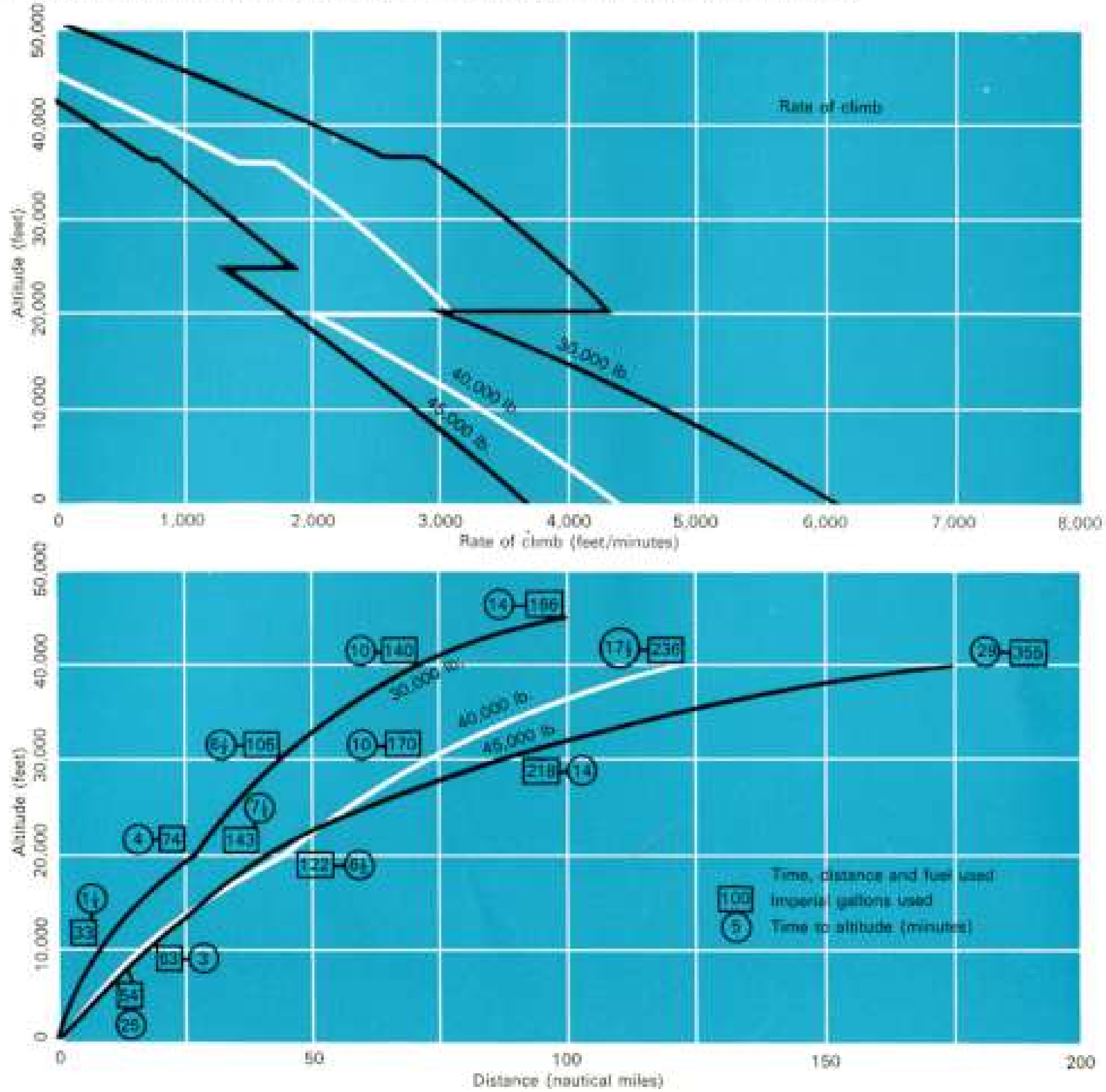
Climb performance

Climb Performance
Shows the integrated climb with and without drop tanks. The recommended climbing technique ensures conditions which closely approximate to maximum air miles per gallon on the climb. The discontinuities on the curves allow for the acceleration when climbing at constant indicated air speed and then decelerating at constant Mach Number in the standard troposphere.

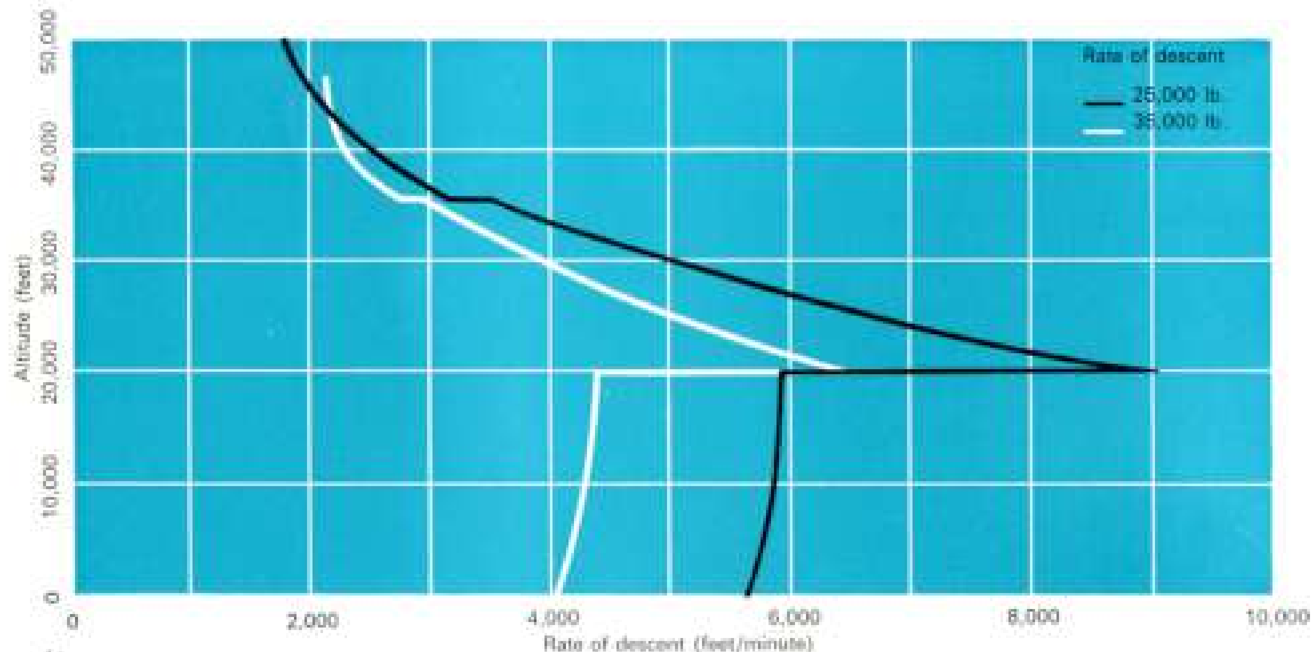
Presents the rate of climb and the corresponding time to height and fuel used is shown.

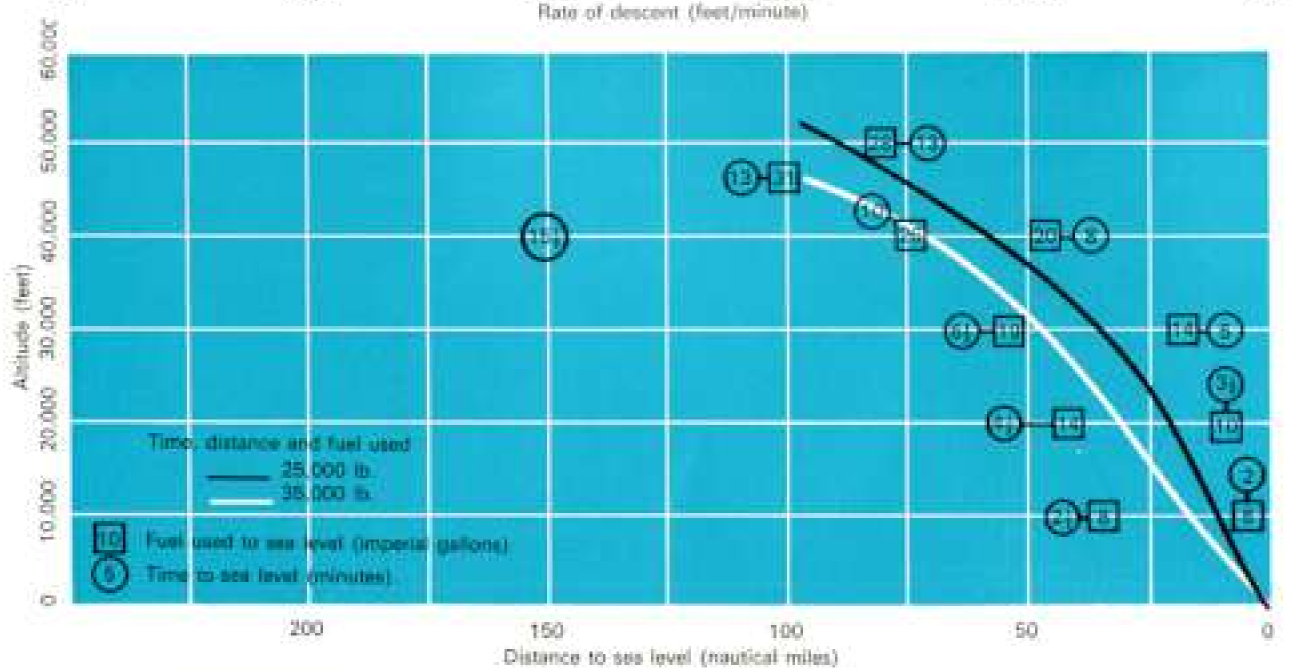
Climb performance in standard I.C.A.N. atmosphere at 7600 r.p.m.



Descent performance

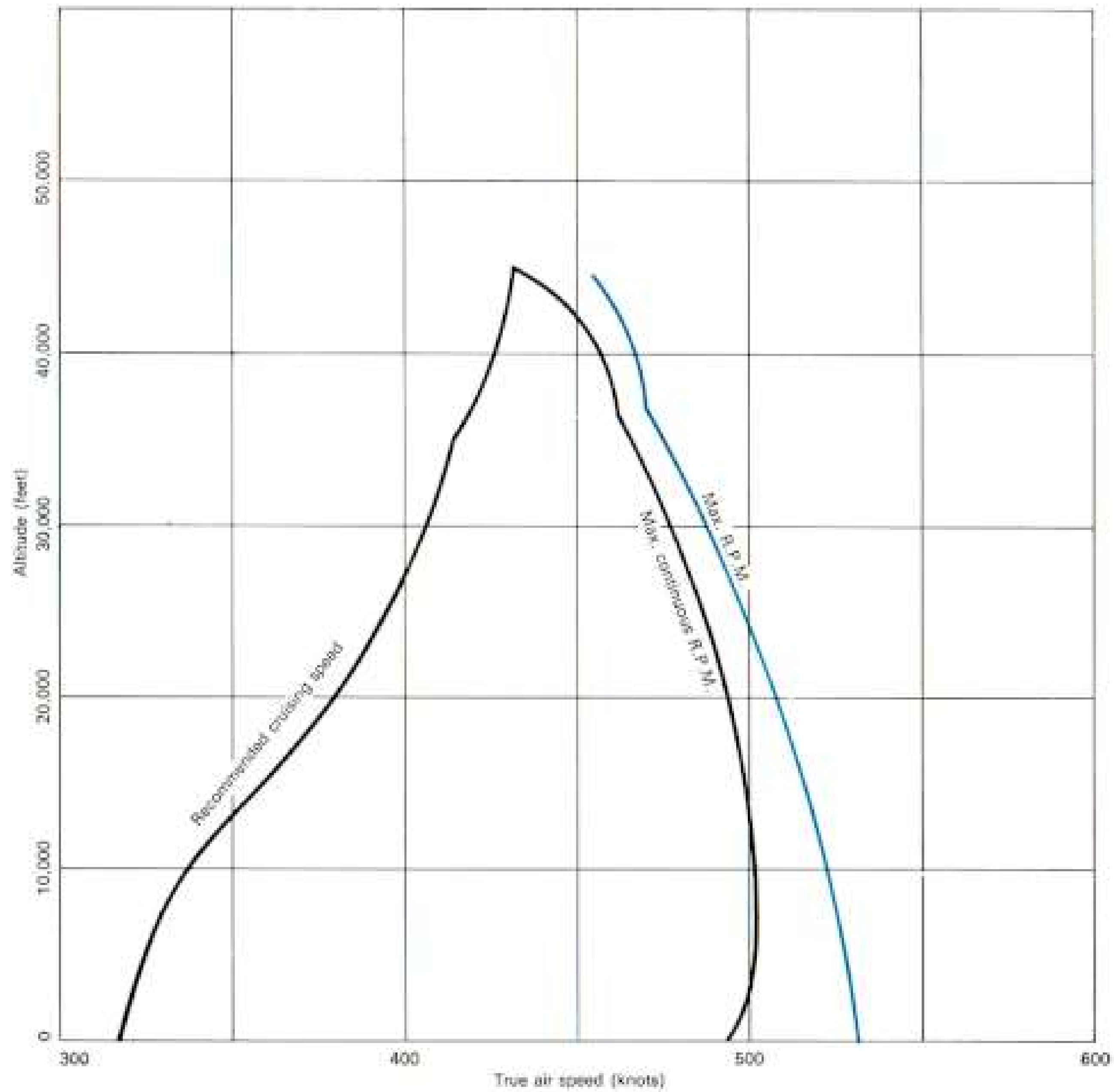
Descent performance in standard I.C.A.N. atmosphere 0.75 m above 20,000 ft. and 350 knots I.A.S. below 20,000 ft.





Level speed performance

Level speed performance in standard I.C.A.N. atmosphere (35,000 lb.) (without drop tanks)



Armament capability

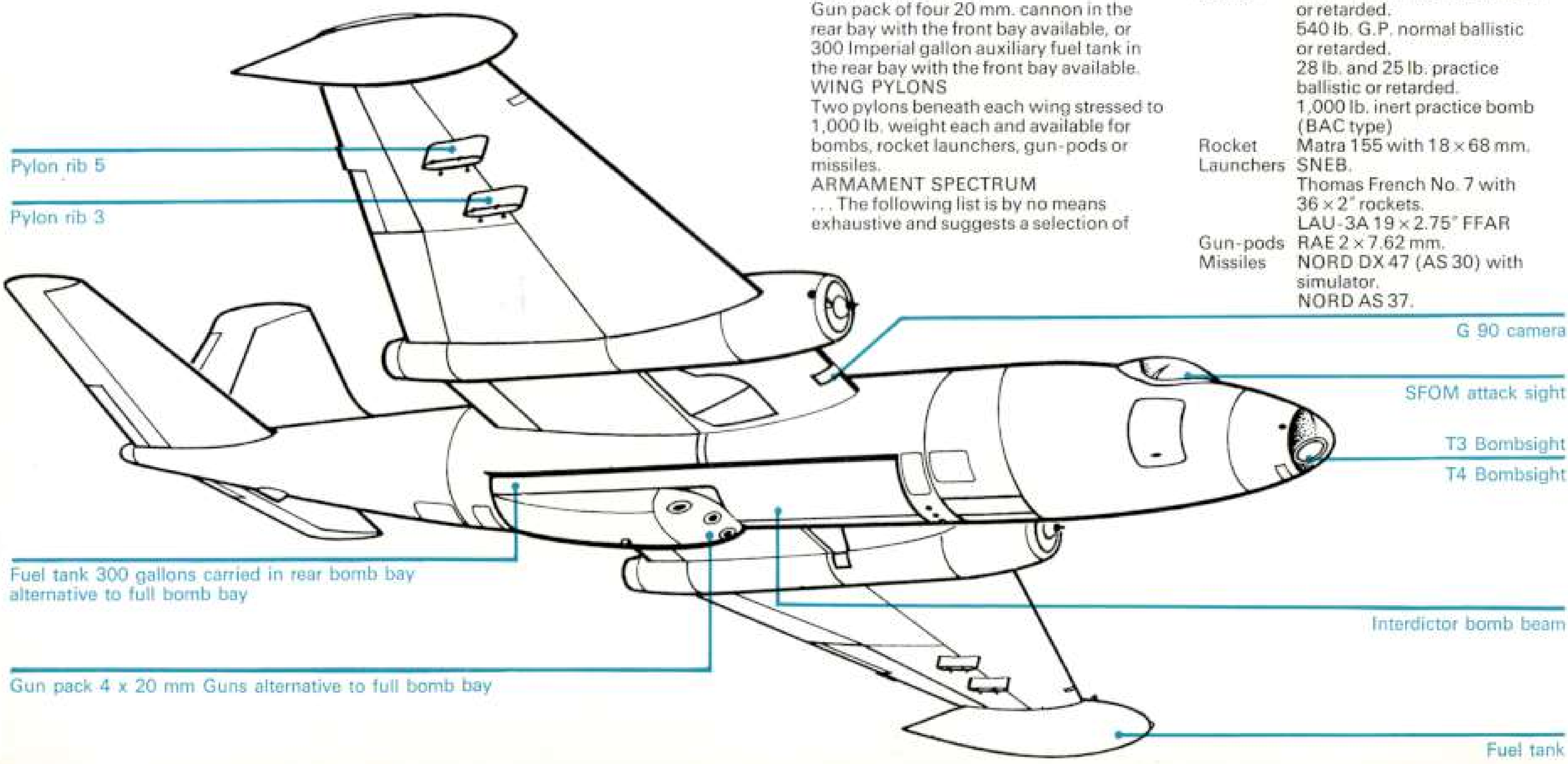
INTERNAL AND EXTERNAL ARMAMENT STATIONS

BOMB BAY
... Complete bay with forward and rear secondary beams, or
Gun pack of four 20 mm. cannon in the rear bay with the front bay available, or
300 Imperial gallon auxiliary fuel tank in the rear bay with the front bay available.

WING PYLONS
Two pylons beneath each wing stressed to 1,000 lb. weight each and available for bombs, rocket launchers, gun-pods or missiles.

ARMAMENT SPECTRUM
... The following list is by no means exhaustive and suggests a selection of currently available armaments which the Canberra can carry.

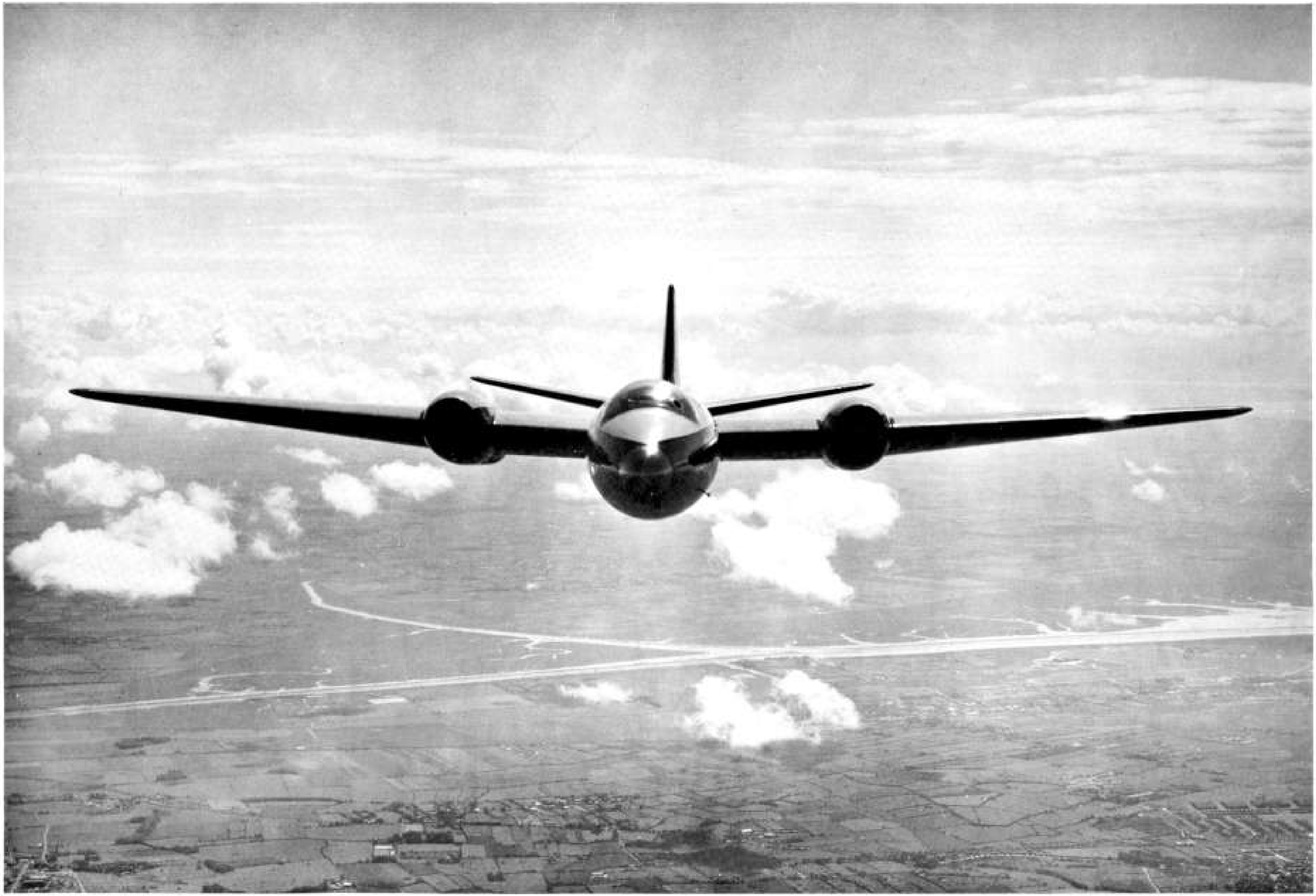
Bombs	1,000 lb. G.P. normal ballistic or retarded. 540 lb. G.P. normal ballistic or retarded. 28 lb. and 25 lb. practice ballistic or retarded. 1,000 lb. inert practice bomb (BAC type)
Rocket Launchers	Matra 155 with 18 × 68 mm. SNEB. Thomas French No. 7 with 36 × 2" rockets. LAU-3A 19 × 2.75" FFAR
Gun-pods	RAE 2 × 7.62 mm.
Missiles	NORD DX 47 (AS 30) with simulator. NORD AS 37.



Canberra B6

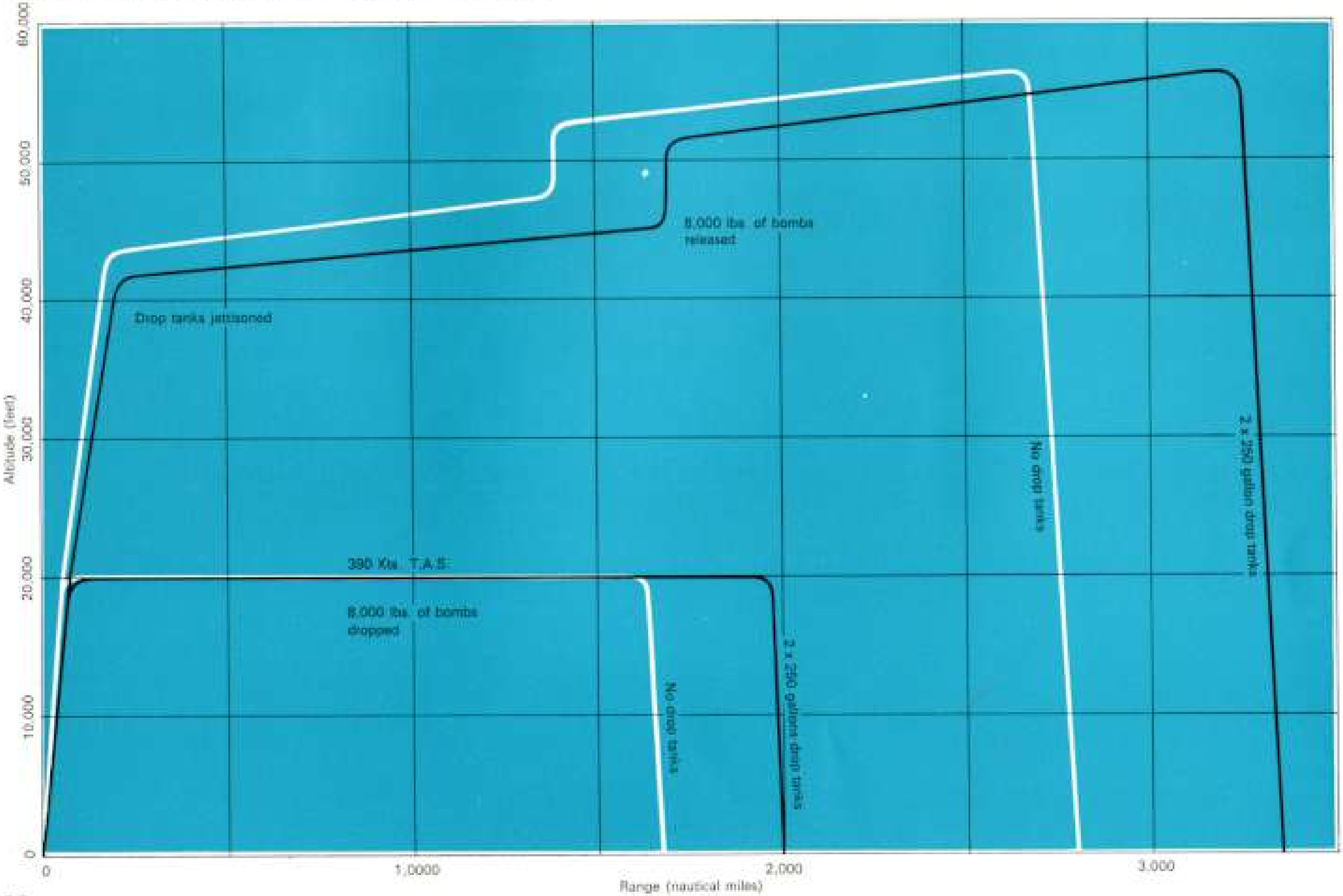
Canberra B. Mark 6

Although generally similar to the B Mark 2, the B. Mark 6 has greater range because of additional integral fuel tanks; and also has the additional thrust of the Avon Mark 109 engines as already described earlier in this brochure. The all-up-weight is higher by virtue of the increased fuel capacity and it has a load carrying capacity of 8,000 lbs. total.



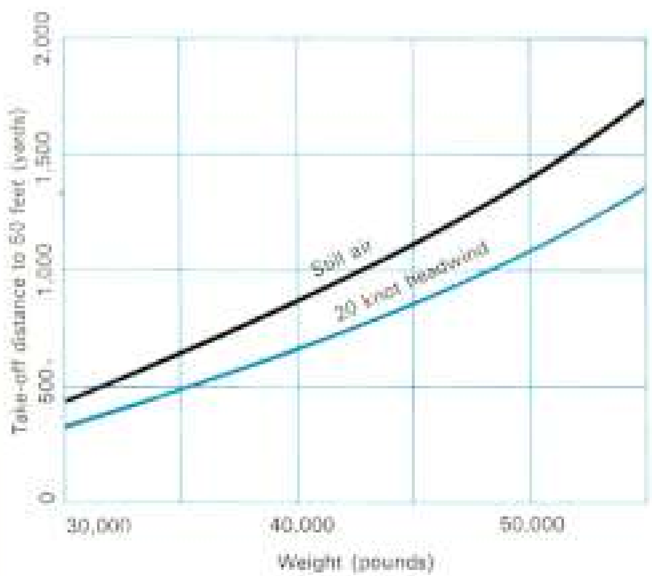
Radius of action

Still air flight plans in standard I.C.A.N. atmosphere



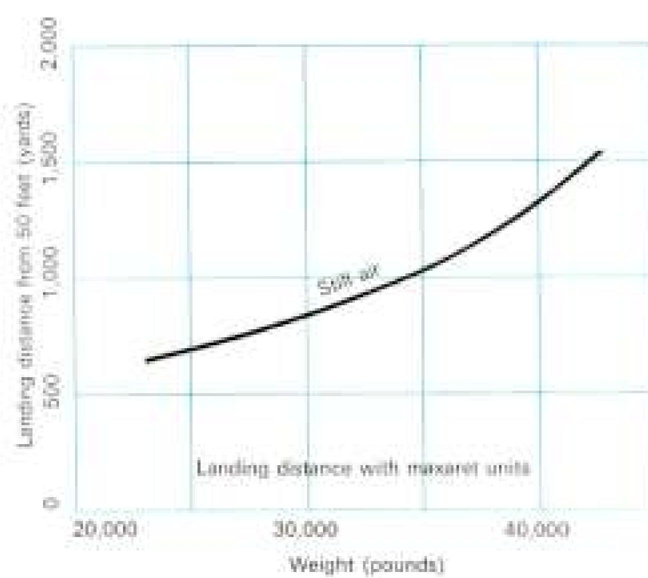
Take-off distance

Take-off distance to 50 ft. in standard
I.C.A.N. S.L. atmosphere
(15°C. 760 mm. pressure)
(dry concrete runway)



Landing distance

Landing distance from 50 ft.
in standard I.C.A.N. atmosphere
(Dry concrete runway)
Normal brake capacity
= 14.6×10^6 ft./lb. ke

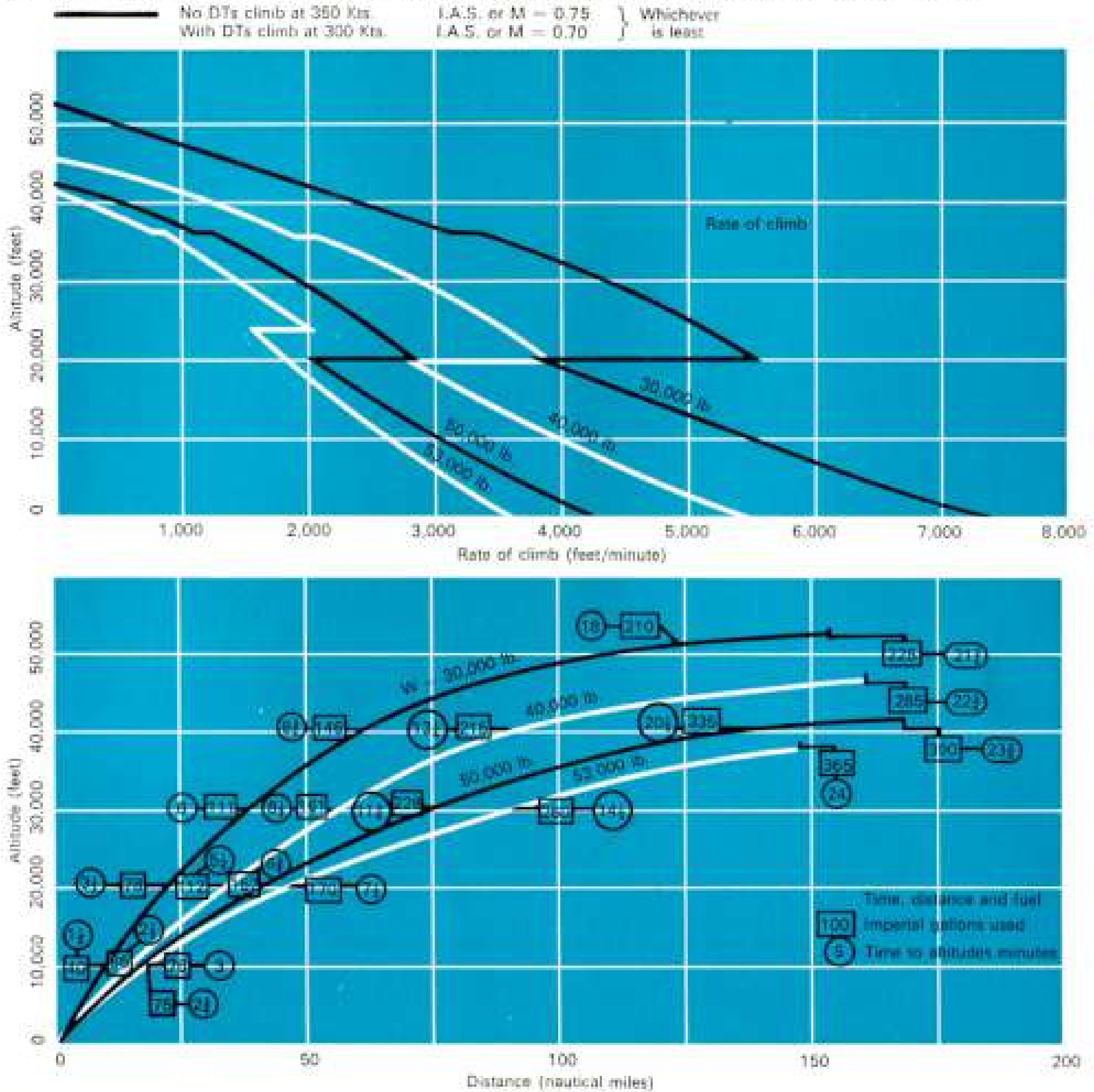


Climb performance

Climb Performance

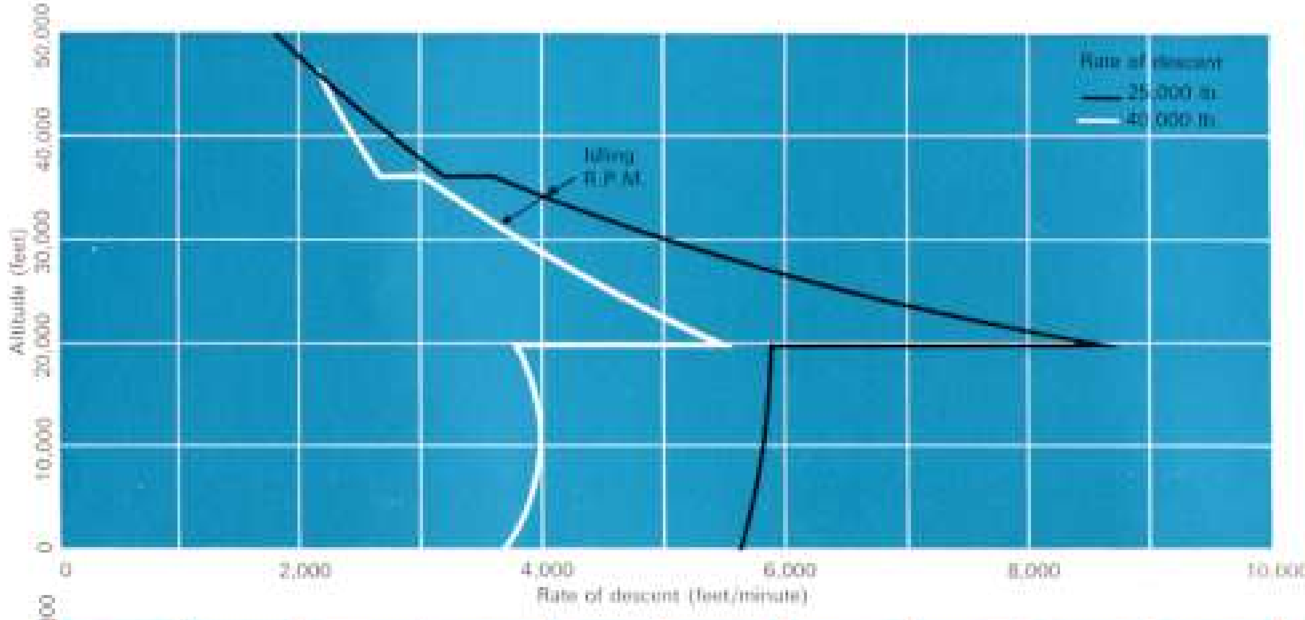
Shows the integrated climb with and without drop tanks. The recommended climbing technique ensures conditions which closely approximate to maximum air miles per gallon on the climb. The discontinuities on the curves allow for the acceleration when climbing at constant indicated air speed and then decelerating at constant Mach Number in the standard troposphere.

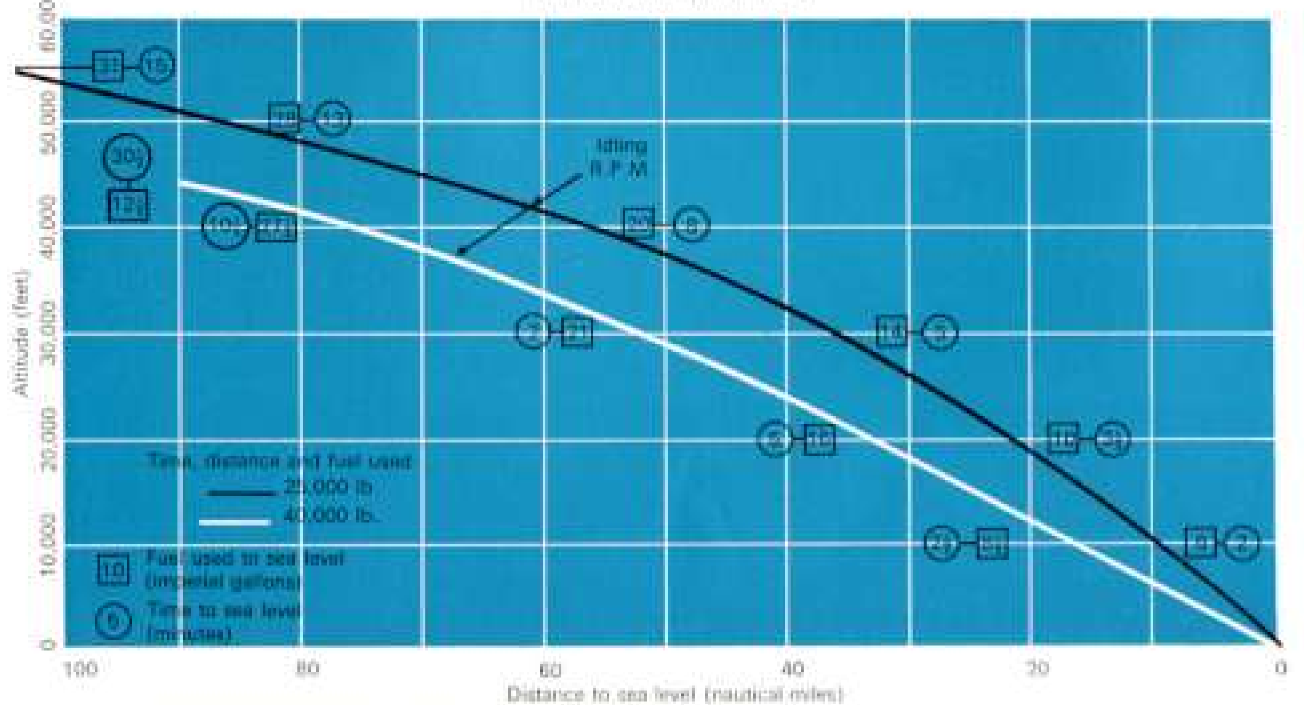
Climb performance in standard I.C.A.N. atmosphere at 97.5% maximum r.p.m.



Descent performance

**Descent performance in standard I.C.A.N. atmosphere (without drop tanks)
(0.75 m. above 20,000 ft. and 350 knots I.A.S. below 20,000 ft.)**





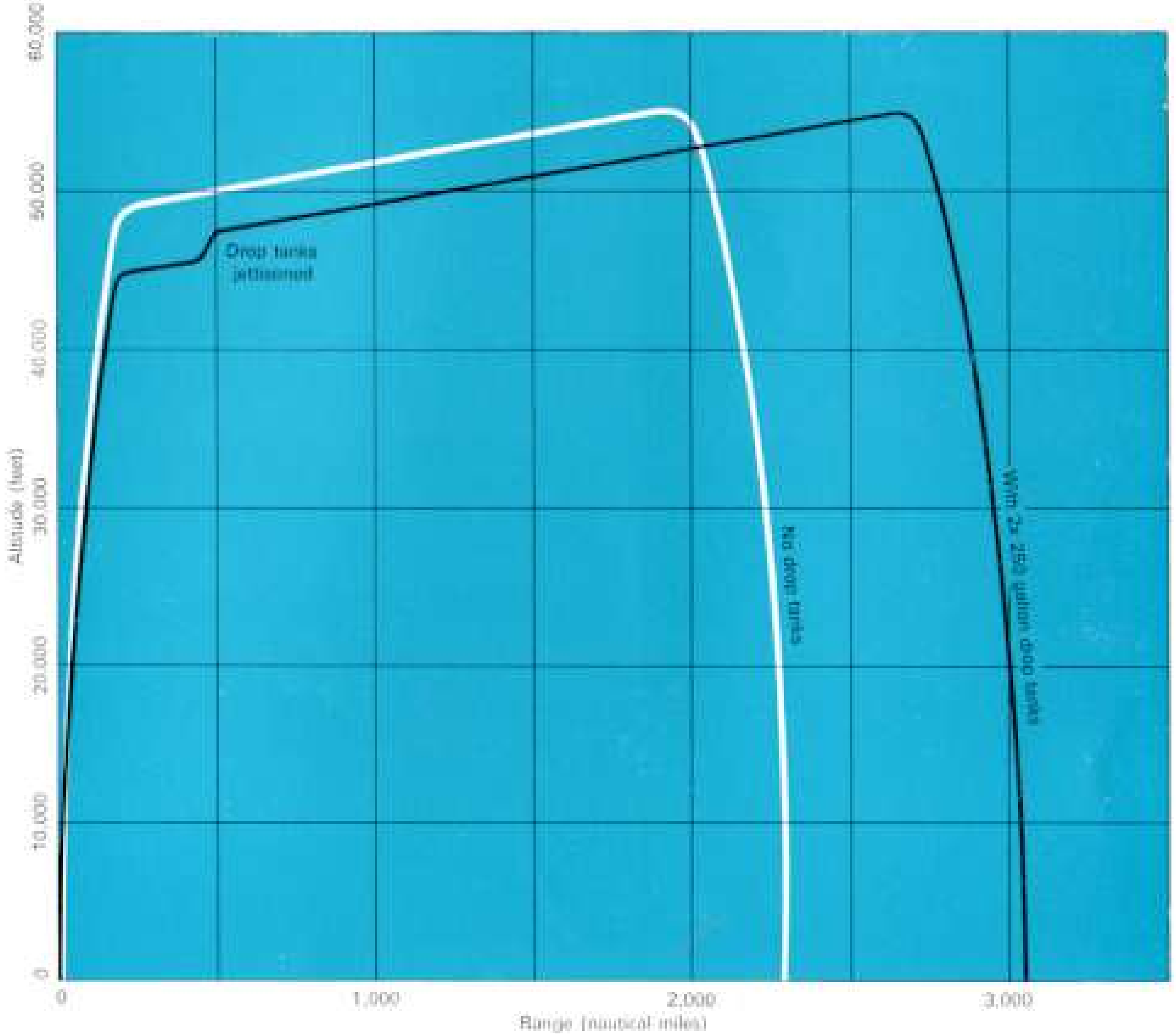
Canberra B(I)8

The B Mark 8 was designed as an interdictor aircraft having an offset fighter-type pilot's canopy and a re-designed nose for improved visibility. In addition to the pilot it carries a navigator/bomb aimer positioned in the nose. In general terms it is similar in performance to the B6 having the same additional 900 gallons fuel capacity.

Canberra T4   Radius of action

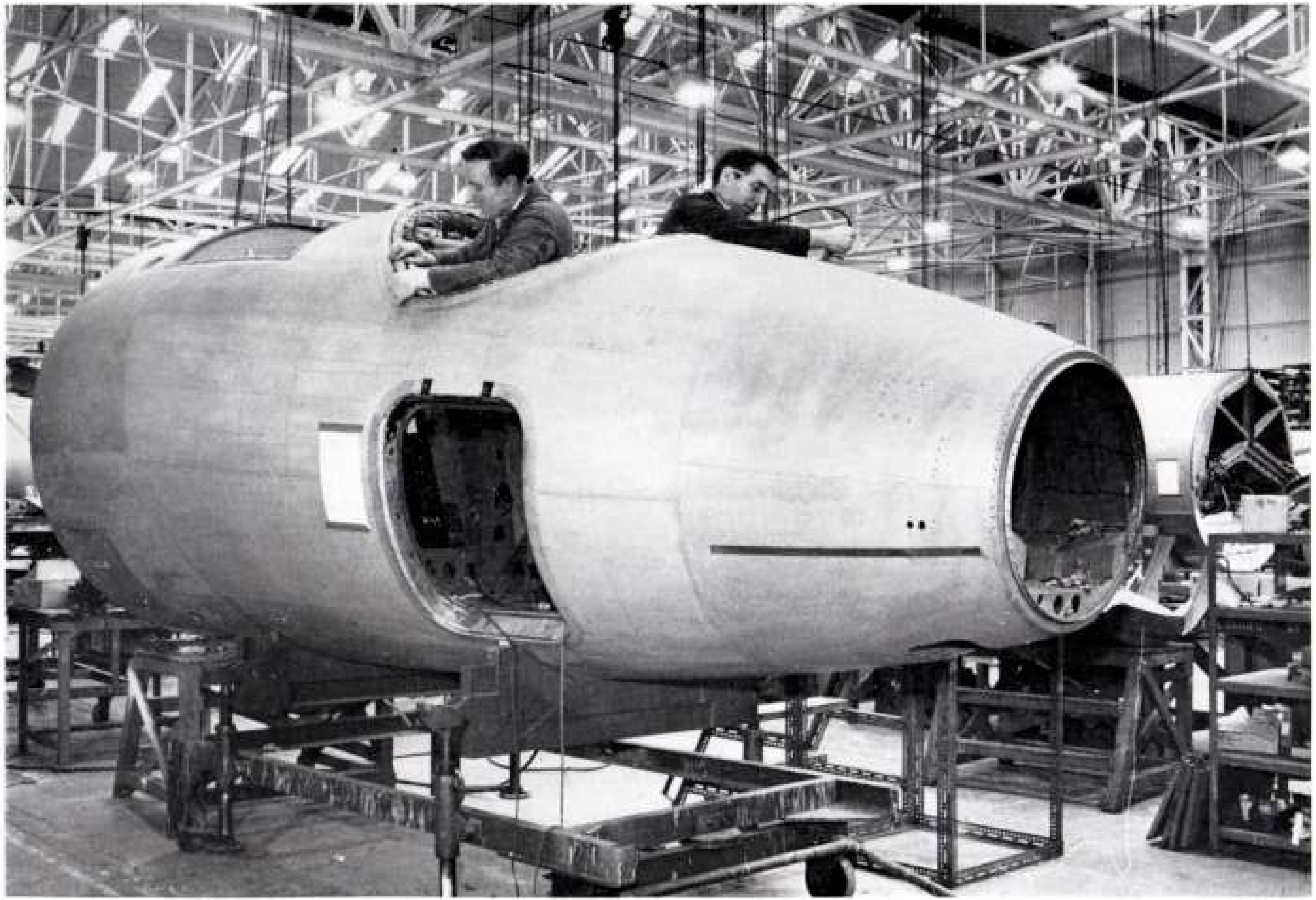
Canberra T Mark 4

The T. Mark 4 is designed primarily as an operational trainer and in this role its performance is equivalent to the basic B2 bomber but offering a slightly slightly increased still-air range in the training role. A normal crew of pilot and pupil is carried, but for long-range navigation training there is provision for a navigator to be carried in addition. An offensive capability may be provided in this Mark of Canberra to special order.



Refurbishing and overhaul

The re furbishing and overhaul of Canberras is based on Royal Air Force procedure as laid down in Air Publication 4326. In addition an intensive British Aircraft Corporation inspection procedure, based on many years experience of Canberra construction, maintenance and overhaul, ensures that a re-furbished Canberra on delivery has an airframe life-between-overhaul of 1000 hours, and a similar life-between-overhaul for the engines of 1350 hours.



Airframe Structure
The main and most important operation is that in which the main spar centre forging is changed for a new component thus ensuring the maximum fatigue life for this vital part of the structure.

Wings
These are removed and the engine despatched to the Rolls Royce works for separate overhaul. Such items as airbrake bushes and bearings, flap shrouds, wingtip skin, undercarriage main brackets, and side stay forgings are carefully examined, repaired where necessary and the latest modifications incorporated.

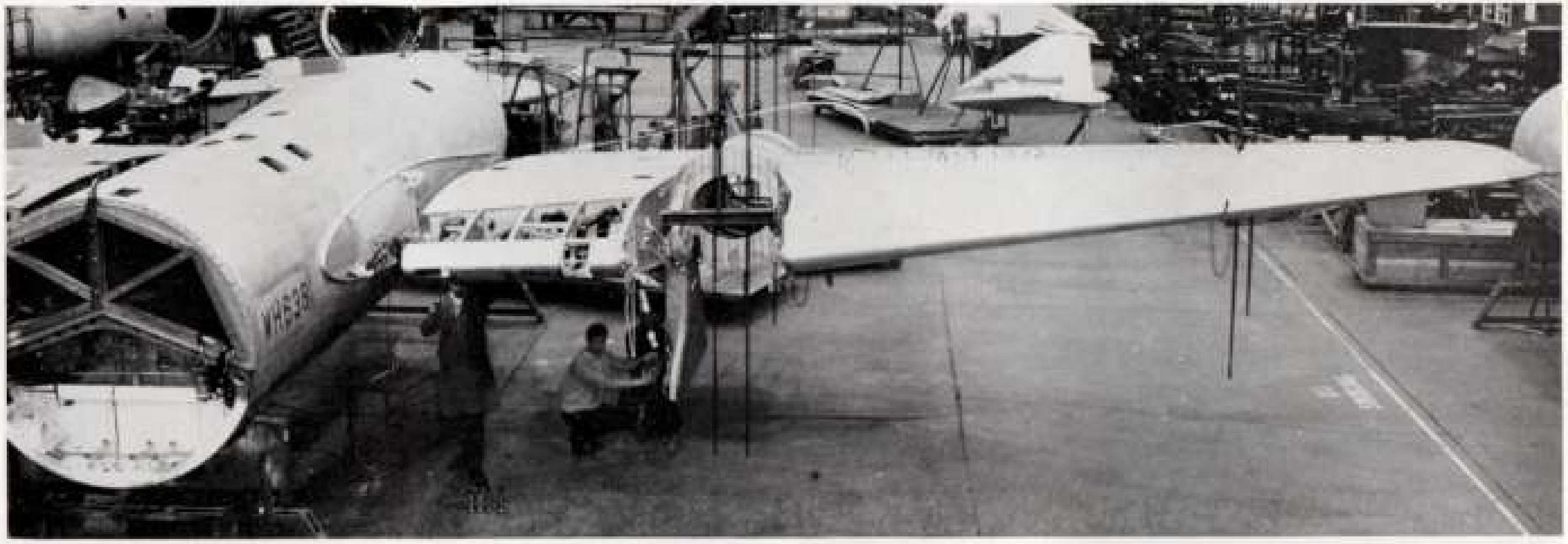
Nose Fuselage
Canopy and transparencies checked for crazing or scratching; pressure cabin carefully inspected for corrosion and any weakened points of the structure restored.

Refurbishing and overhaul

Centre Fuselage
Fuel tanks removed, inspected and replaced if necessary. Structure inspected and repaired or renewed as necessary.

Rear Fuselage
Fin removed and metal leading edge fitted. Elevator and trim tabs examined and repaired if necessary. Rudder and tailplane examined.

Flying Controls
All rods, levers and bearings examined and removed for overhaul where necessary.



Product support

Product Support
A full service and spares back-up augments Canberra operation. Technical advice and representation is available both during preliminary discussions and for a period in the customer's country of operation as decided in contract negotiation. Continued representation can be made available for as long as the customer requires it under separate arrangements.

Comprehensive training courses for technical officers, engineers and maintenance personnel, and aircrew familiarisation courses in engine and airframe functions are held in the Corporation's Service Training School. Engineers and personnel from many countries have been trained at Warton, each course being arranged to best suit individual requirements. Theoretical instruction is supported by practical demonstration, cine-films, and a variety of modern training aids and instructional rigs. All students are provided with printed lecture notes which become important later sources of reference during subsequent work in the field, supplementing the information given in official technical manuals. Where necessary courses include visits to the

Product support

works of manufacturers of incorporated equipment not of BAC manufacture such as engines, radio, radar, etc.

The Spares Provisioning Section of the Service Department can supply an operator with lists of recommended spares holdings to suit a wide variety of operational conditions. These recommendations are based on experience gained by the Royal Air Force and other overseas customers over many years of operation in all climates.

An extensive Technical Publications Department is in a position to supply a full range of the necessary manuals and handbooks for maintenance of the aircraft and ancilliary equipment.