

CA-11 Woomera



Le CAC Woomera, également connu sous le nom de CA-4 et CA-11, est un bombardier Australien, qui a été conçu et fabriqué par le Commonwealth Aircraft Corporation au cours de la Seconde Guerre mondiale. L'ordonnance du Woomera a été annulée avant, qu'il devienne opérationnel dans la Royal Australian Air Force. En 1941, en raison de la nécessité de remplacer le Bristol Beaufort et le Lockheed Hudson, la RAAF émet la Spécification No 241. Celle-ci demande un appareil adapté à la reconnaissance, au bombardement en piqué et au torpillage. Le prototype du CA-4 prend l'air le 19 Septembre 1941. Celui-ci est un bombardier monoplane, bimoteur, armé de quatre mitrailleuses 12.7 mm montés dans le nez et deux autres à l'arrière des nacelles moteur. Il peut emporter soit 450 kg de bombes ou deux torpilles. Il a d'abord été alimenté par deux moteurs Pratt & Whitney Twin Wasp R-1830-G-S3C3 radiaux. Le prototype du CA-4 a été abandonné en 1943 après avoir subi des dommages importants, suite à une explosion due à une fuite de carburant et à un incendie. Avec une nouvelle conception de la queue et du gouvernail, et une amélioration de l'armement de nez, avec deux canons de 20 mm et deux mitrailleuses de calibre 12.7 mm, le CA-4 devient le CA-11 Woomera. La RAAF a accepté le prototype et a commandé 105 CA-11 le 8 Mars 1942. Cependant, le prototype du CA-11 n'a pas été livré à la RAAF avant le 22 Novembre 1944. Au moment où la production a commencé, le concept de bombardier en piqué était tombé en discrédit. En conséquence, la commande originale a été ramenée de 105 à 20 appareils. Après que quelques CA-11 Woomera eurent été fabriqués, l'ensemble du programme fut annulé et les capacités de production mises en jachère pour passer à la construction sous licence du CAC CA-18 ou P-51 Mustang.

CA-11 Woomera :

- 2 Moteurs Pratt Whitney R-1830-S3C3-G-14 Twin Wasp
- 2 X 1200 Ch
- 450 Km/h
- 2 Canons de 20 mm et 5 Mitrailleuses 12.7 mm 450 Lg de bombes ou 2 torpilles
- 10400 Kg en charge
- 7165 m de plafond pratique
- 1935 Km de distance franchissable
- 3 Equipiers





Source : <http://les-avions-de-legende.e-monsite.com/pages/les-bombardiers/les-bombardiers-australiens/ca11-woomera/>

Version anglaise Wikipédia

The **CA-11 Woomera** was a production development of the earlier **CA-4 Wackett Bomber** prototype, and was an Australian torpedo and dive [bomber](#) aircraft that was designed and constructed by the [Commonwealth Aircraft Corporation](#) (**CAC**) during [World War II](#). The order for the Woomera was cancelled before it became operational with the [Royal Australian Air Force](#) (RAAF).

Design and development

In early 1939, the Australian Government ordered large numbers of [Bristol Beaufort](#) bombers, with major components to be built in a variety of locations, including railway workshops, and in doing so it by-passed the local aircraft company, the Commonwealth Aircraft Corporation. CAC, under Sir [Lawrence Wackett](#), began work on its own design, hoping to out-perform the Beaufort by building a machine that could serve as both a torpedo-bomber and dive bomber.^[1] To keep down weight, Wackett dispensed with traditional [self-sealing fuel tanks](#) and opted to make the wing cavities liquid-tight, and thus serve as fuel storage. The Australian Government was initially uninterested in the CAC design. However, in mid-1940, cut off from the supply of British-made components for the Beaufort program (thanks to a British embargo on the export of aviation products, due to the need to maximise British production during the Battle of Britain), the Australian Government ordered a prototype of the CAC design, even before the [Royal Australian Air Force](#) had expressed a view about the machine.^[2] This prototype **CA-4 Wackett Bomber** took to the air on 19 September 1941.^[3] The CA-4 was a low-wing, twin-engined, multi-role bomber with a crew of three. It was armed with four nose-mounted .303 calibre machine guns and two remote-controlled twin machine-guns [barbette](#) mounted at the rear of the engine [nacelles](#).^[3] It could carry either 500 lb (230 kg) bombs, 250 lb (110 kg) bombs or two torpedoes. It was originally powered by two [Pratt & Whitney Twin Wasp](#) R-1830-S3C3-G radials. Unfortunately, the novel fuel tanks never proved reliable, and in January 1943 the CA-4 prototype was completely destroyed in a mid-air explosion,^[3] probably due to a fuel leak. With a re-designed tail and rudder, and an improved nose armament of two 20 mm cannon and two .303 (7.7 mm) calibre machine guns, the CA-4 became the CA-11 Woomera.^[3]

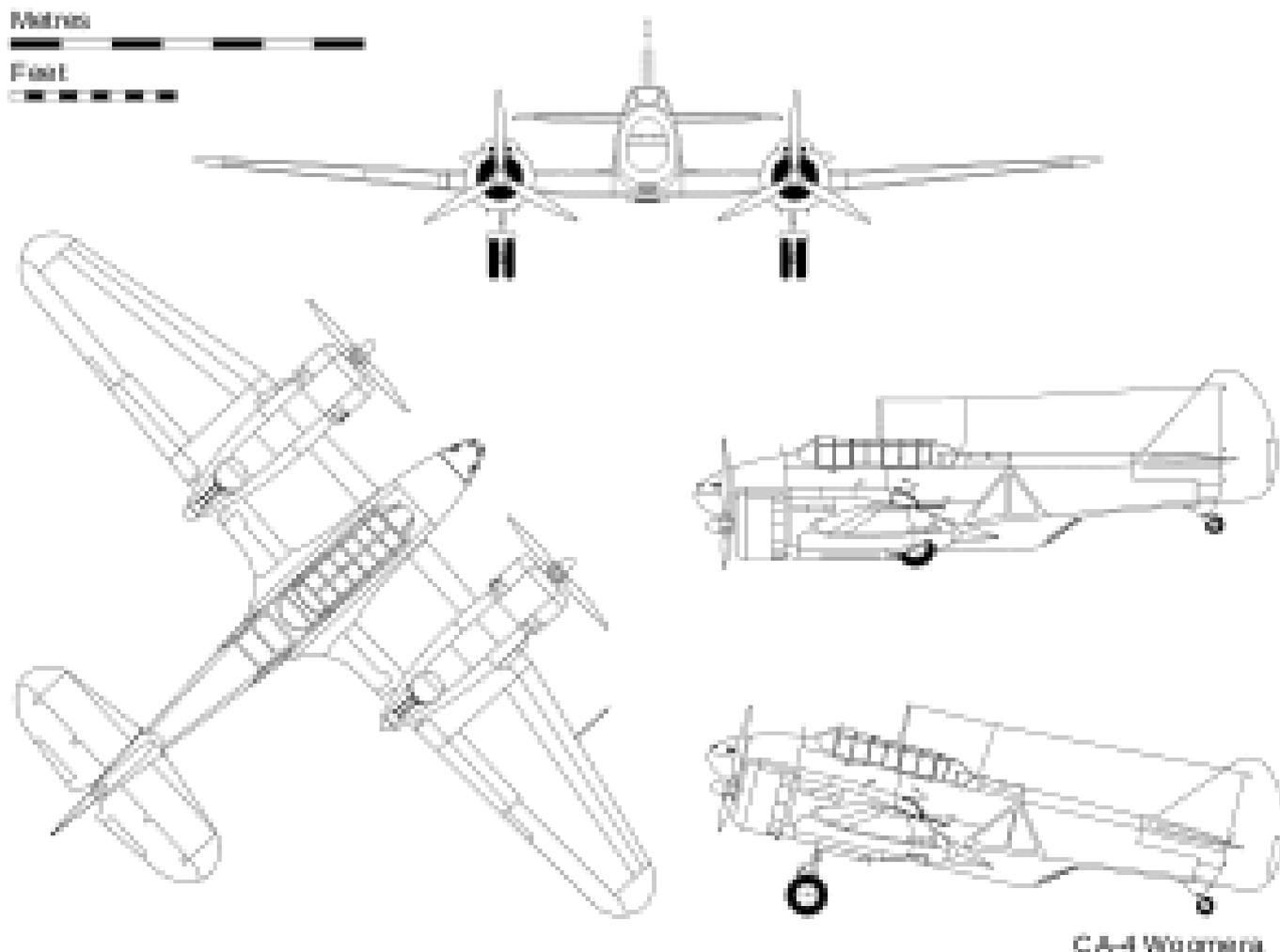
Production

Faced with the crisis caused by the Japanese entry into the war in December 1941, the RAAF accepted the design even before testing was complete, and ordered 105 examples of the CAC bomber on 8 March 1942. However, after the loss of the CA-4 prototype, the redesigned CA-11 did not fly until June 1944. By the time production was due to commence, the dive-bombing concept had fallen into disfavour and the RAAF was filling the light bomber/reconnaissance/strike role with British-designed [Bristol Beaufighters](#) (which were being made in Australia by the [Department of Aircraft Production](#)); US-made bombers, including the [B-25 Mitchell](#), had also become available. Consequently, the original Woomera order was reduced from 105 to 20. After the first CA-11 flew, the whole program was cancelled and the production capacity set aside for Woomeras at CAC was switched to [P-51 Mustang](#) fighters. The only completed CA-11 Woomera, A23-1, was stripped for parts and scrapped in 1946.

Loss of CA-4

On 15 January 1943, the prototype CA-4 Wackett Bomber, *A23-1001*, crashed on a test flight to assess powerplant performance and evaluate aerodynamic effects of a new fixed leading edge slat. During the return to the CAC airfield at Fisherman's Bend, the pilot, Squadron Leader Jim Harper, had detected a fuel leak in the port [Pratt & Whitney R-1830](#) engine. As the problem worsened he attempted to shut down the engine, feathering the propeller; however, the actuation of the feathering switch caused an explosion and uncontrollable fire. The three-man crew subsequently attempted evacuation at 1,000 feet (300 m), yet only Harper succeeded in parachuting free, while the CAC test pilot Jim Carter and power plant group engineer Lionel Dudgeon were both killed. The airframe subsequently impacted 3 miles (4.8 km) south-west of [Kilmore, Victoria](#). The wreckage was recovered and used for components.^[4]

Specifications



Orthographic projection of the first prototype CA-4 Wackett Bomber

General characteristics

- **Crew:** 3
- **Length:** 39 ft 7 in (12.07 m)
- **Wingspan:** 59 ft 2.5 in (18.047 m)
- **Height:** 18 ft 2 in (5.54 m)
- **Wing area:** 440 sq ft (41 m²)
- **Airfoil:** root: [NACA 2218.5](#); tip: [NACA 2209](#)^[6]
- **Empty weight:** 12,765 lb (5,790 kg)
- **Max takeoff weight:** 22,885 lb (10,380 kg)
- **Powerplant:** 2 × [Pratt & Whitney R-1830-S3C3-G Twin Wasp](#) 14 cylinder air-cooled radial piston engines, 1,200 hp (890 kW) each
- **Propellers:** 3-bladed constant-speed propellers

Performance

- **Maximum speed:** 282 mph (454 km/h, 245 kn)
- **Cruise speed:** 184 mph (296 km/h, 160 kn)
- **Range:** 2,225 mi (3,581 km, 1,933 nmi) (with external tank and one torpedo)
- **Service ceiling:** 23,500 ft (7,200 m)
- **Rate of climb:** 2,090 ft/min (10.6 m/s)

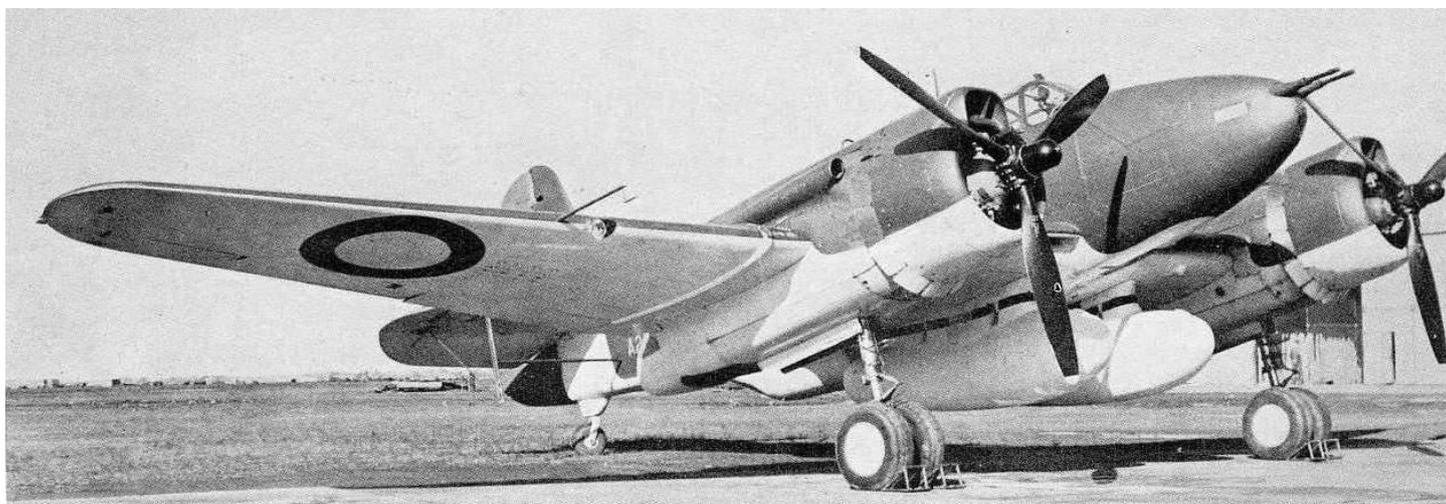
Armament

- **Guns:**

- 2 × .303in (7.7 mm) [Browning machine guns](#) in the nose
- 2 × 20 mm [Hispano Mk II cannon](#) in the nose
- 4 × .303 Browning machine guns in two rear-firing remotely controlled barbettes
- 1 × .303 [Vickers K](#) machine gun in a ventral position

- **Bombs:**

- 4× 250 lb (113 kg) bombs internally in engine nacelle bays
- *and* 4× 500 lb (224 kg) bombs
- *or* 2× 45 cm [Mk XII](#), [Mk XV](#) or 57 cm [Mk 13 aerial torpedoes](#) mounted under the fuselage
- *or* 1× torpedo and 1× 293 imp gal (1,330 L; 352 US gal) [external fuel tank](#) mounted under the fuselage



Source : https://en.wikipedia.org/wiki/CAC_Woomera