

= McDonnell Douglas F @-@ 4 Phantom II in Australian service =

The Royal Australian Air Force ( RAAF ) operated 24 McDonnell Douglas F @-@ 4E Phantom II fighter @-@ bomber aircraft in the ground attack role between 1970 and 1973 . The Phantoms were leased from the United States Air Force ( USAF ) as an interim measure owing to delays in the delivery of the RAAF 's 24 General Dynamics F @-@ 111C bombers . The F @-@ 4Es were considered successful in this role , but the government did not agree to a proposal from the RAAF to retain the aircraft after the F @-@ 111s entered service in 1973 .

The F @-@ 4C variant of the Phantom II was among the aircraft evaluated by the RAAF in 1963 as part of the project to replace its English Electric Canberra bombers . The F @-@ 111 was selected , but when that project was delayed in the late 1960s due to long @-@ running technical faults with the aircraft , the RAAF determined that the F @-@ 4E Phantom II would be the best alternative . As a result of continued problems with the F @-@ 111s , the Australian and United States Governments negotiated an agreement in 1970 whereby the RAAF leased 24 F @-@ 4Es and their support equipment from the USAF .

The RAAF 's F @-@ 4Es entered service in September 1970 , and proved to be highly effective . Used in the air @-@ to @-@ ground role , they prepared aircrew to operate the sophisticated F @-@ 111s , and the intensive training program undertaken using the aircraft improved the RAAF 's professional standards . One of the Phantoms was destroyed in a flying accident in June 1971 , and another was repaired by the RAAF after it sustained heavy damage during a crash landing . The 23 surviving aircraft were returned to the USAF in two batches during October 1972 and June 1973 .

= = Acquisition = =

The McDonnell Douglas F @-@ 4C Phantom II was one of the aircraft types evaluated by the RAAF as a potential replacement for its aging English Electric Canberra bombers in the early 1960s . In mid @-@ 1963 a team of senior RAAF officers headed by the Chief of the Air Staff , Air Marshal Valston Hancock , travelled to the United States to evaluate the General Dynamics F @-@ 111 ( then known as the " TFX " ) , North American A @-@ 5 Vigilante and F @-@ 4C Phantom II strike aircraft . While in the United States , the team also inspected the Boeing KC @-@ 135 Stratotanker , which was considered necessary to support these aircraft . In addition , the RAAF officers travelled to the United Kingdom and France to evaluate the BAC TSR @-@ 2 and Dassault Mirage IV , respectively . In its final report , the team rejected the F @-@ 4C on the grounds that the aircraft lacked the range , performance at low altitude and reconnaissance capability that the RAAF required . The F @-@ 111 was considered to be the most suitable aircraft of those considered , but the team proposed that the RAAF acquire 36 Vigilantes as they also met the force 's requirements and could be delivered within a shorter time frame . The Australian Government rejected this advice , and decided to purchase 24 F @-@ 111s . At the time the order was placed in late 1963 these aircraft were scheduled to be delivered in 1967 ; the delivery date was pushed back to 1968 after Australia decided to order the unique F @-@ 111C variant . In late 1963 the United States Government offered to lend Australia 24 Boeing B @-@ 47 Stratojet bombers until the F @-@ 111s were delivered . The RAAF 's Air Board opposed acquiring these aircraft on the grounds that they were obsolete and would be expensive to operate . Instead , it recommended to Cabinet that a package of F @-@ 4C strike aircraft , the RF @-@ 4C reconnaissance variant of this design , and KC @-@ 135 tankers be leased from the United States if an interim force was considered necessary . Cabinet considered the two options during 1964 , and rejected both of them . Between 1965 and 1970 six Australian pilots serving on exchange postings to the United States Air Force ( USAF ) flew Phantoms in combat during the Vietnam War .

The F @-@ 111 program experienced significant problems during the late 1960s . As a result of delays to the development of the RF @-@ 111 reconnaissance variant of the F @-@ 111 , of which Australia had ordered four , the RAAF considered purchasing eight RF @-@ 4C or RF @-@ 4E reconnaissance aircraft and two tankers in early 1968 . The Air Force and government eventually concluded that it was too early to make a decision on this matter , and no action was taken . The

RAAF accepted all 24 F @-@ 111Cs at a ceremony held at Fort Worth , Texas , on 4 September 1968 . At this time the F @-@ 111 program was in crisis owing to technical problems with the design of the aircraft 's wing assembly , and all F @-@ 111s were grounded after an American F @-@ 111 crashed on 23 September . Subsequent testing revealed further problems with F @-@ 111 components not meeting their intended lifespan , and the Australian aircraft were placed in storage at Fort Worth until these flaws could be rectified . The RAAF subsequently evaluated the F @-@ 4E Phantom II , Blackburn Buccaneer , LTV A @-@ 7 Corsair II and Grumman A @-@ 6 Intruder as possible replacements for the F @-@ 111 . Only the F @-@ 4E was considered to come close to meeting the RAAF 's requirements , though its relatively short range and lack of terrain @-@ following radar and electronic countermeasures were considered problematic .

By 1970 the F @-@ 111Cs were still not airworthy , and the Australian Government was under pressure to cancel the order or acquire an interim design . In April of that year Minister for Defence Malcolm Fraser signed an agreement with his American counterpart , Melvin R. Laird , which specified the conditions under which the Australian Government would accept the F @-@ 111s . As part of the negotiations leading to this agreement , Laird offered to lease Australia 24 F @-@ 4E Phantoms at a reduced price . The Cabinet agreed to Fraser 's recommendation that this offer be taken up , a move supported by the Air Board . The RAAF remained committed to the F @-@ 111C , however , and the Air Board issued a statement during May arguing that these aircraft would " meet the RAAF operational requirement more effectively than the F @-@ 4E by a decisive margin " .

An RAAF team headed by the Deputy Chief of the Air Staff , Air Vice Marshal Charles Read , was sent to the United States in May 1970 to negotiate the lease arrangements . After considering the proposed deal , Read recommended that it go ahead ; according to RAAF historian Alan Stephens this decision " delighted RAAF senior officers and aircrews " . The Cabinet subsequently approved the lease of 24 Phantoms for two years at a total cost of \$ US 41 @-@ 554 million ( including training , spare parts and technical advice ) and the formal agreement to do so was signed on 29 June 1970 . The USAF designated this project Peace Reef . The terms of the lease agreement allowed the Australian Government to purchase the Phantoms outright if the F @-@ 111C program was cancelled , but also allowed the USAF to demand the immediate return of the aircraft and their support equipment in the event of a national emergency . Laird provided Fraser with a written commitment that this option would not be exercised , and it was never publicised . Laird also promised that USAF tankers would be made available to support the Australian Phantoms during crises , subject to American national requirements and the terms of relevant agreements between the two countries .

= = Operational service = =

The RAAF 's Phantoms were delivered soon after the lease agreement was completed . Australian pilots and navigators from the two units that were to operate the aircraft , No. 1 and No. 6 Squadrons , began to arrive in the United States for conversion training in July 1970 . Most of this training was provided by the 4530th Tactical Training Squadron , 1st Tactical Fighter Wing , at MacDill Air Force Base in Florida , and involved 32 hours of flying . USAF personnel were also posted to RAAF Base Amberley in Queensland , where the F @-@ 4Es were to be based , to train Australian ground crew . The Australian Phantoms were diverted from USAF orders and were brand new . The RAAF accepted all 24 aircraft in September 1970 , and they were subsequently ferried to Amberley in four groups of six aircraft ; the first three groups arrived on 14 , 19 and 26 September , and the final group arrived on 3 October . The Phantom was allocated the RAAF serial number prefix " A69 " , but this was never applied to the aircraft , and they retained their USAF serials .

The Phantom represented a significant improvement to the RAAF 's ground attack capabilities . The F @-@ 4Es were more technologically advanced than the Canberra , as they could fly at supersonic speeds , were equipped with air @-@ to @-@ air radar and missiles , and had an inertial navigation system , ground @-@ attack computer and a cannon . The Phantoms were capable of operating in several roles ; the RAAF primarily used them as strike aircraft . This role was selected to prepare

aircrew to operate F @-@ 111s , and most training exercises were focused on tasks that the F @-@ 111s would also be able to perform .

Aircrew training using the F @-@ 4Es began three days after the aircraft first arrived at Amberley . The aircraft were initially operated as a pool controlled by No. 82 Wing ( the parent headquarters for No. 1 and No. 6 Squadrons ) and were allocated between the two squadrons only after all the Phantoms , aircrew and ground crew had arrived in Australia . The training program gradually increased in complexity , with night flying beginning in October , practice @-@ bombing sorties commencing in late November and air @-@ to @-@ air sorties being flown from January 1971 . Ground attack missions were practiced from February 1971 , and in June that year the Phantoms began dropping live bombs during exercises . The introduction of several of the aircraft into service was delayed by an initial shortage of spare parts , but all were operational by the end of 1970 .

During their service with the RAAF , the Phantoms were operated alongside the RAAF 's Dassault Mirage III fighters and the Royal Australian Navy 's Douglas A @-@ 4 Skyhawk ground attack aircraft . In addition to routine training flights , the Phantoms participated in major air defence exercises and also flew practice sorties against warships . The F @-@ 4Es also took part in airshows , including four that formed part of the flying displays conducted in different parts of Australia to mark the RAAF 's 50th anniversary during March and April 1971 .

Maintenance of the Phantoms was undertaken by No. 482 Squadron and No. 3 Aircraft Depot , both of which were located at Amberley . In addition to routine servicing , these units modified the Phantoms ' AN / APQ @-@ 120 radars during early 1971 . In response to problems detected during maintenance , RAAF technical personnel checked all the aircraft for defects to their emergency flap system in September 1971 and used X @-@ ray testing to detect any cracks in their stabilators during early 1972 .

The RAAF 's Phantoms suffered several accidents . The first occurred on 19 October 1970 when the systems needed to power the brake skid and nosewheel steering on board Phantom A69 @-@ 7234 failed during flight . It was decided to use Amberley 's arresting equipment to slow the aircraft as it landed , but this system failed after A69 @-@ 7234 's tail hook engaged the wires , causing the Phantom to slide off the runway . The pilot only suffered minor injuries and the navigator was unhurt , but A69 @-@ 7234 was badly damaged . The aircraft was subsequently rebuilt by No. 3 Aircraft Depot and returned to service on 30 September 1971 ; at the time this was the most complex Phantom repair task to have been undertaken by military personnel in any of the countries operating the aircraft . The next serious accident occurred on the night of 16 June 1971 when A69 @-@ 7203 crashed into the sea during an exercise near Evans Head , New South Wales , resulting in the death of the aircraft 's pilot and navigator . The cost of this aircraft was written off against that of an Australian Lockheed P @-@ 3B Orion that had crashed in the United States during 1968 before being delivered to the RAAF . Other accidents involving the Phantom included A67 @-@ 7220 being over @-@ stressed in flight during February 1971 ( which led to its engines being sent back to the United States for repairs ) and A69 @-@ 7206 's nosewheel collapsing during takeoff in January 1972 .

The RAAF was highly satisfied with the performance of the F @-@ 4Es , and they played an important role in preparing No. 82 Wing to operate the F @-@ 111 . Many personnel in the Air Force believed that it would have been very difficult for the wing to have transitioned directly from the Canberra to the much more complicated F @-@ 111 . In particular , the Phantoms gave RAAF personnel experience operating aircraft fitted with sophisticated avionics and capable of using a wide range of weapons , and the intensive training program undertaken by No. 82 Wing during this period significantly improved its professionalism . In his book *Going Solo : The Royal Australian Air Force 1946 ? 1971* , Alan Stephens also argued that the speed with which the Air Force 's aircrew and technical personnel adapted to operating Phantoms " illustrated the RAAF 's exceptional technical competence " .

= = Return to the USAF = =

Repairs to the RAAF 's F @-@ 111Cs were undertaken from late 1971 , and all 24 were accepted

on 15 March 1973 . The RAAF considered retaining the Phantoms after the F @-@ 111s entered service , and the US Government offered to sell the 23 remaining aircraft to Australia for \$ 54 million . Studies found that the upfront cost of keeping the F @-@ 4Es would be \$ 77 million , and that one of the Mirage III squadrons would need to be disbanded to man the Phantom @-@ equipped units . Nevertheless , the Air Board recommended that the aircraft be retained , but a proposal to do so was rejected by the Cabinet in 1972 on advice from the Treasury . If the Phantoms had remained in service they would have been used to provide close air support for the Army .

The Phantoms began to be returned to the USAF in 1972 . No. 6 Squadron ceased operating the aircraft on 4 October 1972 . Six F @-@ 4Es departed for the United States on 25 October that year , followed by a further five in early November . The first six F @-@ 111s arrived at Amberley on 1 June 1973 , and six Phantoms left for the United States five days later . The final RAAF Phantom flight was made on 20 June , and four of the aircraft departed the next day . The last two Phantoms left Amberley on 21 June . All but two of the former RAAF Phantoms were subsequently converted to specialist Wild Weasel aircraft .

A former USAF F @-@ 4E is on display at the RAAF Museum in Melbourne . This aircraft , which did not serve with the RAAF , was presented to the RAAF by the National Museum of the United States Air Force in 1990 , and is painted as one of the Phantoms operated by No. 82 Wing .