

The RAN's FAIREY GANNETS

By Kim Dunstan

Introduction: The Geopolitical Situation

The Soviet Union's post WW2 domination of large parts of Eastern Europe along with the arms race and communist influence in the Middle East and Southeast Asia was disturbing. Following the onset of the Cold War in 1947 and the build-up of the Soviet submarine fleet in the 1950s, the focus for allied navies was centred on the 'submarine menace.' To counter this, a concerted effort was made to increase surveillance and to boost the allies' Anti-Submarine Warfare (ASW) capabilities. In this role the Fairey Gannet was an important and timely development.

Southeast Asia Concerns

In 1954 the Southeast Asia Treaty Organisation (SEATO) was established to address the region's troubled security situation. At the same time the Australian government made the decision to strengthen its defences, giving the Royal Australian Navy a leading role by increasing its strike and anti-submarine capabilities. In 1955 the Majestic-class light fleet aircraft-carrier HMAS *Melbourne* was commissioned into the RAN at Barrow-in-Furness, and in March the following year she sailed for Australia with De Havilland Sea Venom FAW 53s and Fairey Gannet AS-1s embarked. At the time *Melbourne* was a state-of-the-art aircraft carrier with her aircraft equipped to hunt and destroy submarines.

A New Breed Of Aircraft

In 1945 the Fairey Aviation Company set about designing a new aircraft in response to a request from the Royal Navy (RN) for an advanced carrier-borne ASW aircraft powered by a turbo-prop engine. The prototype took to the air in September 1949, and after successful trials a large order was placed for this advanced aircraft. In 1953 the Gannet AS-1 began rolling off the assembly line.

As the Fairey Gannet had begun entering service with the RN in 1954, it was the logical choice to replace the RAN's ageing Fairey Firefly on the new carrier, HMAS *Melbourne*.

The Gannet AS-1 was a rugged purpose-built aircraft, powered by a 2,950 shp Double Mamba 100 twin driving two contra-rotating propellers on a single hub, giving it a single-engine profile with two-engined performance[1]. This space-saving feature along with its kerosene-fuelled turbines, tricycle undercarriage and folding wings made the Gannet ideal for a light-fleet carrier. Its large underside bomb bay, wing-mounted weapons and retractable radar dome made it a formidable ASW aircraft which remained in service with the RAN until replaced by the Westland Wessex and Grumman Tracker. By the end of August 1967 they were no longer in service.

The Gannet's crew of three included a pilot, navigator/observer and electronics operator; each had a separate cockpit with a wide arc of visibility. Because the jet pipes ran directly under the cockpit floors it was a very hot aircraft in the tropics. Maximum speed at sea level was 299 mph [2], and it had a service ceiling of 25,000 ft. With a range of some 660 miles, and a munitions load of up to 2,850 lbs, the Gannet AS-1 was well equipped for its wide-area, day and night anti-submarine role.

Despite its bulky 'ugly duckling' appearance pilots considered it pleasant to fly, with responsive controls and a stable weapons platform. Good forward vision and tricycle undercarriage aided carrier deck landings, with the touchdown being at 85 to 90 knots.

On patrol the rear mounted radar dome could be lowered to detect surface ships and submarines. If a suspicious target was located a marker flare or a sonar-buoy (hydrophone) could be dropped to listen for submarine noises. ASW patrols and reconnaissance were major roles for the Fairey Gannet.

Above: With strop tensioned and ground crew clear, this unidentified Gannet prepares to launch. Once the pilot has completed his run-up and final checks he will signal the FDO, the chocks will be lowered and the catapult fired (image via Jeff Chartier). ➔

Around 360 Gannets were built. They were produced in several marks and variously operated by the Royal Navy, German Navy, Indonesian Navy, and the Royal Australian Navy. The AS-1 & AS-4 marks were the 3-seat ASW versions, whereas the extensively modified AEW-3 featured a large underbelly radar dome. The ECM-6 was for electronic counter-measures. Dual control T2 training models were also produced. [3].

Gannet Training

In May 1955 an advance party of RAN pilots and observers arrived in the UK for instruction and familiarisation on the Gannet, and to coordinate the ground work for the formation of 816 and 817 Squadrons later in the year. The main body of squadron and headquarters personnel arrived at Portsmouth on 5 August 1955 on HMAS *Vengeance*, which was being returned to the RN.

Aircrew training for 816 Squadron took place at RNAS Eglinton,

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HMS *Gannet*, in Northern Ireland, while attached to the Royal Navy's 820 Squadron. 817 Squadron personnel were stationed at RNAS Culdrose, HMS *Seahawk*, in Cornwall in England. On arrival all squadron personnel set about developing their skills with the Gannet through practical experience and work-up exercises, and with some specialist training at RNAS Arbroath.

The conversion to type for pilots began with a short course of dual training then solo. In a busy schedule pilots quickly gained experience with the Double Mamba engine drill and other Gannet systems, progressing to deck landing exercises using the angle deck and mirror aid on HMS *Bulwark*; and then on HMAS *Melbourne* during her acceptance trials. Further ASW exercises involved various fleet units.

Observers did intensive navigation and ASV radar training on different aircraft, with regular night-time exercises over the sea in a program of squadron activities (ASV, or Airborne Surface Vessel, was an early type of airborne radar used by the RN FAA. It had wavelength features and pulse differences from the standard radar of the time). The senior Air Engineering personnel who went to RNAS Arbroath, HMS *Condor*, in Scotland, where they did maintenance training on the turbo-prop Gannet before transferring to RNAS Culdrose (or to HMAS *Melbourne* headquarters) on completion.

During 1955 the Gannets were progressively ferried from Fairey Aviation's production line and eventually the two Gannet squadrons formed at Culdrose. On 23 August 1955, the official re-commissioning ceremony for the RAN's 816 and 817 Squadrons (and Sea Venom 808 Squadron) took place at RNAS Culdrose, where the Australian High Commissioner, Sir Thomas White, addressed squadron personnel. This was followed by a flypast of the new aircraft. Additional work-up exercises continued to front-line standard with Lt Cdr O'Connell as CO of 816 and Lt Cdr Gledhill CO of 817 Squadron.

Homeward Bound

Near the end of January 1956 preparations for the trip back to Australia began. Arrangements were made to transfer aircraft and stores to RNAS Abbotsinch, (HMS *Sanderling*, now Glasgow Airport), Scotland. Twenty two Gannets were flown to Abbotsinch where they received protective coatings and were cocooned ready for the sea voyage on HMAS *Melbourne*. Other equipment was boxed and sent by road.

On the forenoon of Thursday 8 March 1956 HMAS *Melbourne* secured alongside King George V Dock, Glasgow, where the two squadrons of Gannets with their wings folded were towed and loaded aboard, together with stores and spares; plus two squadrons of Sea Venoms, two Bristol Sycamore helicopters, one Gloster Meteor and one Avro 707 Delta Wing aircraft. On 12 March *Melbourne* departed from the Clyde and headed for home. The aircraft were disembarked at Jervis Bay and transported by road to RANAS Nowra prior to *Melbourne* arriving in Sydney Harbour on 9 May 1956.

For the detail minded, it will be noticed that the Fairey Gannet tails first used the large ship's identifying letter B at Culdrose in the UK. This was soon changed to Y which was the identifying letter on HMAS *Melbourne*'s flight deck. In 1957 this changed to M for Melbourne which lasted until the ship was decommissioned in 1982. The Gannets based at HMAS *Albatross* used the NW identifier on their tail – which is where the RAN Gannet training squadrons 725 and 724 were located. For type conversion, the base had Gannet T2 and T5 dual-control trainers.

The RAN Fairey Gannet AS-1

HMAS *Melbourne* proved to be a ship well-suited to the operational needs of the RAN – and the Gannet. In Australia, the Gannet training base was located at RANAS Nowra, HMAS *Albatross*, south of Sydney. Pilots received intensive training before attempting a deck landing. Landing a Gannet on a pitching rolling deck required skill and concentration. On touch-down the tail hook would pick-up one of the six arrestor wires, bringing the aircraft to a standstill within 30 paces or so. Good engine response, excellent forward vision and tricycle undercarriage made deck landings easier.

Although HMAS *Melbourne* had the latest mirror-assisted landing system, indicating the correct approach for pilots, daytime deck landings were always impressive. Night-time landings were rather more breathtaking. If a Gannet missed the arrestor wires, the pilot applied full power, flying the length of the angle deck, then repositioned for another attempt. Trainee pilots would do 'touch and goes' with the deck-hook up – when proficient they would do a full hook-down landing, then taxi to the bow for a catapult take-off.

To start engines, a cordite cartridge would spin one of the Gannet's Armstrong Siddeley Double Mamba turbines. The first cartridge quite often didn't get the engine up to self-sustaining rpm. If it failed to reach 4,500 rpm the high pressure cock had to be closed and the engine allowed to wind down to about 700 rpm before firing the second cartridge. Once the first engine was running the propeller would then windmill the second into action.

To conserve fuel on patrol one engine could be shut-down and the propeller feathered. This extended the range but cut reserve power – requiring a careful watch on airspeed especially when re-lighting a turbine. In hot climates the engines developed 15-20% less power which made single engine work marginal: for example, the aircraft could not maintain



Training at Eglinton. L to R (standing) Sub Lieutenant Phil Rowe, Lieutenant “Doc” Dunlop (QFI), Sub lieutenant John Champion, Sub Lieutenant James van Gelder. Kneeling with cap: Sub Lieutenant John “Cal” Pain. Kneeling without caps: Lieutenant Norman Lee, Commander Jeffery Gledhill (obscured), Lieutenant Peter Goldrick. Photo courtesy Norman Lee.➔

Training at Eglinton

by LAM John Edwards.

“What a place this is. It rains all the time, if it isn't snowing. Just before we got here it was 30° below zero and everything frozen over, and a gale warning is piped for tonight. It is bitterly cold! There are no liberty cards. You go ashore when you feel like it if you're not on duty and return when you like. But there is a muster at 0800 every morning and if you miss that you're doomed. No excuses are accepted.

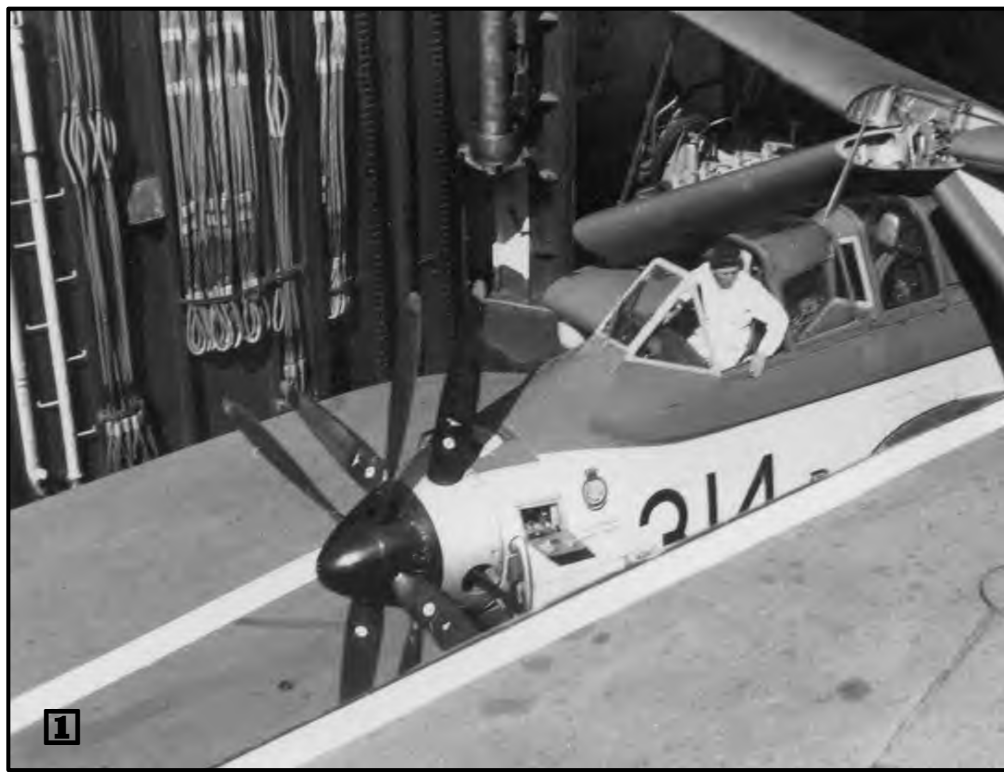
The living areas are all over the place, our collection of huts are a good quarter of a mile from the main camp and you just walk outside and catch the bus when you want to go ashore, but its so cold, wet and miserable few seem to want to go ashore! Of course we are well away from the main areas which are heavily guarded against IRA incursions.

The administration station area which houses all the important buildings including the armoury has a machine gun nest mounted above the main building overlooking the courtyard, and the entire area surrounded by double thickness barbed wire entanglements and mined! There are signs everywhere 'Danger personnel mines' and 'Caution, Dogs patrol this area!' they let the dogs out at night. It's a very serious war, fair dinkum and no joke! The police on the gates carry loaded revolvers and the police ashore are all armed and wear steel helmets at night. In fact the police force here is really an army and Northern Ireland a sort of police state, the police organise 'crash roadblocks' and anyone who doesn't stop is shot. Recently, they shot the driver of a car, killing him, and the car crashed killing the rest of the occupants. The police mean business and we have been warned not to test them but loaded guns will make sure of that, I daresay. All of our aircraft arrived this morning. One was forced down in Wales with radio trouble but arrived about midday. So we have a full squadron and start night flying next week.”

We fly in the snow, and in all weather good or bad and there are no hangar pilots. Its quite important from a Naval point of view especially the anti submarine aspect. All the top brass come here for courses including a lot of Americans, two Captains flew over from America for a weeks course. Our flying will be especially intense over the coming week when the programme includes 76 hours of continual flying and a 'box search' expected to take 76 hours of continued operational flying day and night which will test us out, especially in view of the rotten weather, the routine is different here too. We never had quite so much freedom outside working hours. Eglinton is a much better station than Culdrose from a 'living' point of view. The food is very good and there are no complaints. The NAAFI is good too though I fear some of our crowd have already worn their welcome out. We have a very 'wild' element among us and they terrorised the station dance on Saturday night. One of them mock strangled the duty Chief choking him in a playful manner but unfortunately for him the Chief did not share the same sentiments. They have a stupid game where they creep up behind each other and playfully strangle on another for fun. They lowered the Union Jack as well, then threatened to burn it when ordered to put it back. And they terrorised some of the women so much they will be unlikely to have anything to do with Australians again. I was ashore that night and missed all the 'fun'.

I can state categorically that there are no Leprechauns at Eglinton but there is plenty of ice and snow, and Australians who behave like larrikins.” ➔





[1] A Gannet is brought up on Melbourne's lift. [2] Although its primary role was anti-submarine detection, the Gannet could be armed with rocket projectiles which were an effective strike weapon. [3] Couldn't be anywhere else in the world! Melbourne in Sydney Harbour. [4] Swinging over the side of Melbourne, Gannet 315 is gently lowered onto a barge in Jervis Bay on the final stage of its journey to NAS Nowra (RAN image). ➔



height on one engine with the radome down, so the second engine had to be restarted from time to time to climb back to cruising altitude. In order to balance engine hours and avoid "brinnelling" of the bearings it was practice to change engines about every twenty minutes, which provided an opportunity to do this. Some engine problems were attributed to airborne re-lights where temperatures would quickly rise from below zero to 500 degrees, stressing turbine parts. Once engine drill was mastered pilots found the Double Mamba easy to use, and the improved Double Mamba 101 version, which came later, gave additional power.

The normal procedure during 'flying stations' was for the flight deck crew to position the Gannets on the flight deck, then with engines started and wings unfolded and locked, marshals would guide the aircraft onto the catapult. The sling on the aircraft would then be looped over the catapult shuttle. With the engine revving the Catapult Engineer would drop the hydraulic chocks, so the only thing holding the Gannet back was a small steel ring. Gunning the engine to full power the pilot would signal 'go.' Within seconds a full head of steam would be released into the catapult, breaking the hold-back ring, thrusting the aircraft over the bow into the air. Within moments the next aircraft would be ready to launch.

Robust & Reliable

The Gannet was a sturdy aircraft able to operate in adverse weather conditions and take considerable punishment, and was well-suited to a range of tasks including surveillance, long-range patrols and search and destroy missions. Gannets could carry various weapons with considerable strike power against targets on land or sea. The large bomb bay had space for marine markers (smoke flares), directional sonar buoys

Left: Bearing the moniker "B" (for Culdrose) on their tails, this line up of Gannets makes for an interesting picture. The B was later changed to "Y" for Melbourne.



UNIT CREST
816 SQN



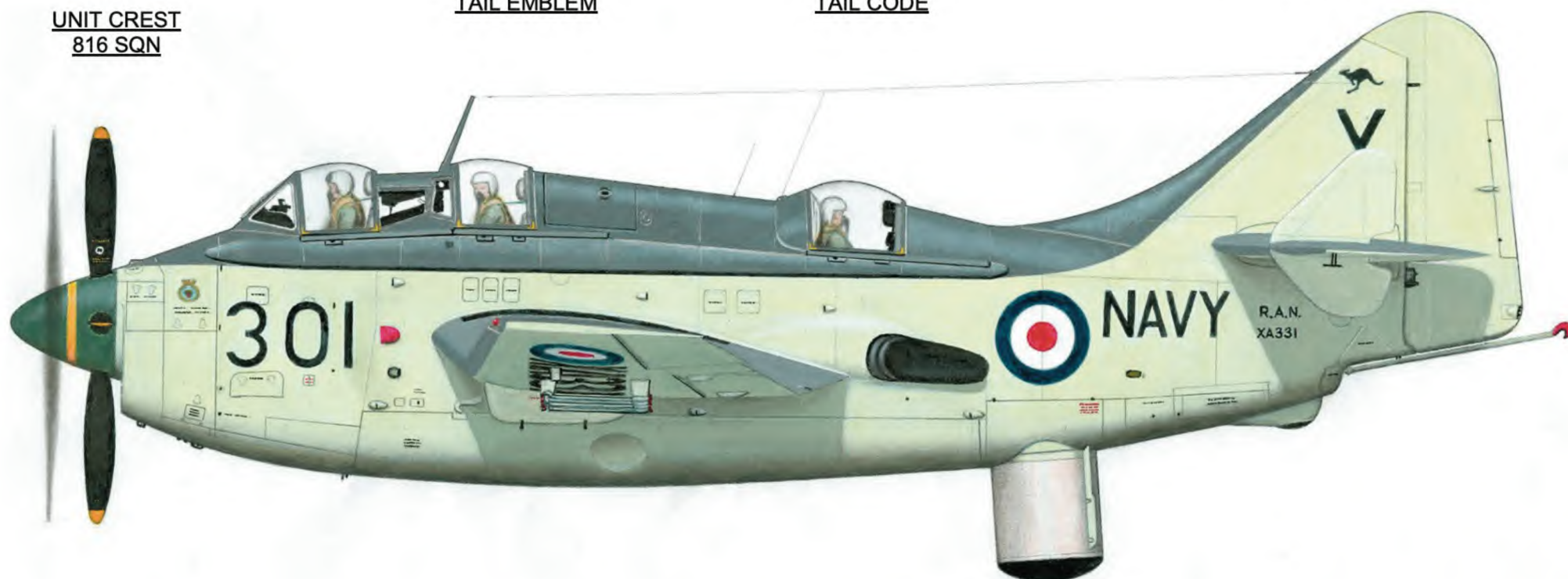
TAIL EMBLEM



TAIL CODE

COLOURS/CONFIGURATION:

- Standard FAA colours.
- Unit crest on port side only.
- Rocket rails & underwing carriers fitted.
- These markings were applied while still stationed at RNAS Culdrose.



***Above.** This beautifully rendered graphic by John Best captures the main features of the Fairey Gannet. It is shown in the livery of 816 Squadron in August 1956, three months after arrival in Australia. The aircraft is in patrol mode with the starboard engine secured and its associated (aft) propeller feathered. The search radar under the aft fuselage is also extended. Note the "Y" on the tail, denoting the aircraft is attached to HMAS Melbourne, is partially obscured by the empennage. (John Best Aviation Art). ➔*

(hydrophones to detect submarine noises), parachute flares, and in different combinations 250lb or 500lb bombs, depth charges and/or Mk30 acoustic torpedoes. Underwing hard-points carried 250lb bombs or depth charges. The 16 underwing RP3 air-to-surface rockets (target dependent) used 60lb H.E. or shaped-charge heads, and the 25lb solid steel heads or anti-submarine heads fired at 600 yards could easily penetrate a submarine hull. The Fairey Gannet gave the RAN a solid, effective anti-submarine capability.

From a maintainers point of view, the Gannet was generally well-liked too, although there were tasks that were particularly unpopular such as spreading or folding the mainplanes by the two hand pumps; putting the starboard 'jury strut' into position or fuelling the outer wing tank whilst at sea with the wing overhanging the side of the ship.

For many years following the Korean War, regular joint exercises with SEATO and RIMPAC navies were conducted. 'War games' with the RN, RAN, RNZN and the US Navy also took place – testing tactics and cooperation. Invariably the Gannets gave a good account of themselves. Although not involved in hostilities, the Gannets were used for surveillance and reconnaissance during the Malay Emergency and Indonesian 'Confrontation.' As a patrol, ASW and surface attack aircraft they were as good in their role as any other aircraft of the time.

Farewell to the Gannets

After a life of 12-years, operating variously with 724, 725 816 and 817

Squadrons, the Fairey Gannet AS-1 was finally withdrawn from active service. By then they were redundant and had been replaced by the Westland Wessex helicopter with its dipping sonar and the Grumman Tracker S-2E/G with its higher-tech electronics and anti-submarine equipment. Most of the retired Gannets went to the wrecker's yard in 1967, with the remainder used for training fire-fighters. Luckily several were saved and one is on display in the Fleet-Air-Arm Museum, near Nowra south of Sydney. Today, apart from the Fairey Gannets on display at other air museums in Australia, various other survivors are to be found in collections in the UK, Germany, Indonesia, Canada, and the USA. ➔

References & Acknowledgements:

Reports of Proceedings – AWM.
'Submarine Hunter' by Zbigniew "Ben" Patynowski.
'Breaking Ranks' by Peter Cabban & David Salter. Random House ISBN 1 74051 315 0.
Messrs Kevin Duffey, Ron Marsh and Barry White for their stories and invaluable technical advice.
Mr Noel Dennett for his technical and handling advice, including on his ditching.
RAN Sea Power Centre.
'Slipstream' magazine.
Wikipedia.

Typesetting by Marcus Peake.

***Below Left.** With catapult strop in place (but not yet tensioned) and hydraulic chocks engaged, Gannet 312 is in the initial stages of a launch. **Right:** Same place, different time! Gannet 847 comes to a halt after an arrested landing. Notice the planeguard helo is now a Wessex, rather than the Sycamore in the first image. The two sailors approaching the aircraft will ensure the arrestor cable is detached from the tail hook before the aircraft is allowed to move forward. ➔*



Footnotes:

- [1] Although the engines were rated at 2,950 shp the pilot's notes limited this to 2,700 (1,350 per engine) at 15,000 rpm [see Limitations page in the 'Documentation' section of this website]. This could only be achieved in fairly temperate conditions or the JPT limit was exceeded. In practical terms the engines delivered 15-20% less than their rated power in hot weather, making single engine performance marginal.
- [2] Maximum Speed as per Pilots Notes was 360 knots. This speed could only be achieved in a steep dive but pilots all had to explore this parameter at least once in their training. It was reported as very exciting but, following Peter Arnold's empenage departure, caused pilots something of a worry as the tail shook quite violently at that speed.
- [3] No story about Fairey Gannets would be complete without mentioning the decommissioning of the Royal Navy's Gannet AEW-3s in 1978 – and how the RN came to regret retiring them without acquiring a suitable replacement. This budget-driven decision created a significant AEW gap for the Royal Navy during the 1982 Falklands War, where several RN ships were lost to Argentine aircraft conducting low level attacks. Airborne early warning aircraft are essential for the protection of a fleet and the RN's Gannet AEW-3 was highly effective in this role, with radar capable of detecting such attacks.

Right. Gannets on display during an open day on Melbourne. (Image via Jeff Chartier).

Below. XA343 above the skies in NSW, with the EKCO ASV Mk19 radar transducer lowered. The aircraft is still bearing the "Y" marking, which was later changed to "M". (Nowra based aircraft were, unsurprisingly, marked "NW".) This particular aircraft survived its service life only to die on the Nowra fire ground. ➔

The Catapult

"The Melbourne had the most sophisticated catapult I saw on any ship. It was fitted with loading chocks which had a set of rollers which centred the aircraft on the catapult centre line after it was stopped by the chocks. Once the stop and "holdback" were put in place by the handlers the loading chocks were lowered and the aircraft allowed to roll forward until the holdback was restraining it but, while the catapult was being tensioned up a further set of "breakout" chocks prevented the aircraft rolling forward if the holdback broke prematurely. This arrangement allowed the Melbourne to launch aircraft as fast as most carriers with two catapults."

Noel Dennett, Gannet Pilot. ➔



DEVELOPMENT HISTORY

From material by
Zbigniew Patynowski



No doubt the bitter experience from German U-Boat attacks on Allied shipping during World War Two, with huge losses in men and material clearly demonstrated the need for a dedicated aircraft capable of protecting the fleet and merchantmen from submarine attack. Accordingly, in 1945 the British MoS (Ministry of Supply) issued specification GR.17/45 for a two-place aircraft capable of detecting and destroying enemy submarines, both on and under the sea. It had to be capable of carrying all its locating radar equipment and offensive weapons within a single airframe and be able to operate from existing aircraft carriers.

In 1945 there were two main aircraft companies short-listed for the contract, Blackburn Aviation and Motor Co. Ltd. and the Fairey Aviation Company. Later under a revised specification Short Brothers also submitted a design for an ASW / AEW aircraft.

Development was somewhat laboured due to the end of hostilities in Europe which inevitably reduced defence spending in post war budgeting. Not until the proposed expansion of the Soviet military, with a declared proposal in 1948 to build a fleet of 1,200 submarines alone, did the alarm bells ring throughout Western Europe. As a result NATO (North Atlantic Treaty Organisation) was formed in 1949 to guard against the threat of Communist expansion, and the need for an anti-submarine warfare aircraft became urgent. As the new radar equipment would demand a heavier workload, a revision of the original MoS specification was issued. Standards were required. The new aircraft would now incorporate a third crew member and an independent search and strike capability coupled with a comparable weapons load capable of destroying both enemy submarines, and surface vessels.

The first Gannet prototype, VR546 known as the "Type Q" flew for the first time in September 1949. It had no third cockpit or auxiliary fins on the tailplane. It was not without teething problems, with stability and trim difficulties contributing to its crash during take off in November 1949.

The Gannet became the first turbo-prop aircraft to land on an aircraft carrier in June of the following year, when it undertook trials on HMS Illustrious. It was also the first to fly with twin-turbines driving contra-rotating propellers through a co-axial shaft. (Inset: Sir Richard Fairey, 1887-1956).✈



Above: This image of a painting by Laurence Bagley is of what seems to be the second Fairey Gannet prototype. Still no third cockpit nor fins on the tailplane but it did have three intakes on the engine cowling and wing 'fences' which were being trialled. It took until the third prototype before the definitive shape of the production Gannet was truly evident, with finlets on the tailplane, a third cockpit and a repositioned radome (which had been one of the causes of earlier instability). These modifications gave the prototype an edge over the Blackburn and Shorts competitors, and resulted in an order for 100 AS1 production aircraft. (Image courtesy of Zbigniew Patynowski).

Left. The double Mamba engine assembly with associated transmission and propeller assembly was a unique design intended to give all the advantages of a twin but constrain the aircraft size to a single for shipborne operations. The entire assembly could be 'rolled out' of the aircraft on rails for easy access.✈



In the meantime the Royal Navy acquired 100 Grumman TBM-3E Avengers to fulfil its commitment to NATO until the new aircraft could be manufactured. These didn't fill the 'hunter-killer' requirement as they required another aircraft to find the target, but they were better than nothing.

Both Fairey and Blackburn submitted their designs to the Admiralty in late '45/early '46, and with a decisiveness driven by operational urgency, a go-ahead was given for both companies to build a prototype.

Astonishingly, both looked eerily similar, comprising a bulbous body, contra rotating propellers driven by gas turbine powerplants and wings that folded in a particular way.

In the meantime a late contender appeared from Short Brothers - the SB.3 based on the Short Sturgeon. It was an ungainly machine and suffered from handling problems. It failed to meet the specification and further development was discontinued, much to the relief of Navy pilots.

Despite early setbacks the Fairey prototype - now in its third iteration - proved superior to the Blackburn contender, and the program gained super-priority status with an order placed for 100 aircraft.

The first production aircraft, dubbed the "AS.1", was delivered to the Royal Navy in April 1954 and intensive trials began without even the luxury of having a dual seat training version. This was, for most pilots, the first turbo prop they had ever flown and it demanded quite different engine handling. One aircraft was deployed to Egypt for tropical trials, which revealed it to be somewhat underpowered, and an uprated engine was earmarked for a later model, the AS.4. Soon afterwards the first operational AS.1 Squadron of Gannets was deployed aboard HMS *Eagle* as 826 Naval Air Squadron.

The Australian government ordered AS.1 Gannets in 1956 with the intent of exchanging or upgrading them to model AS.4s when they became available, but this never came to pass. ➔

The Double Mamba Engine

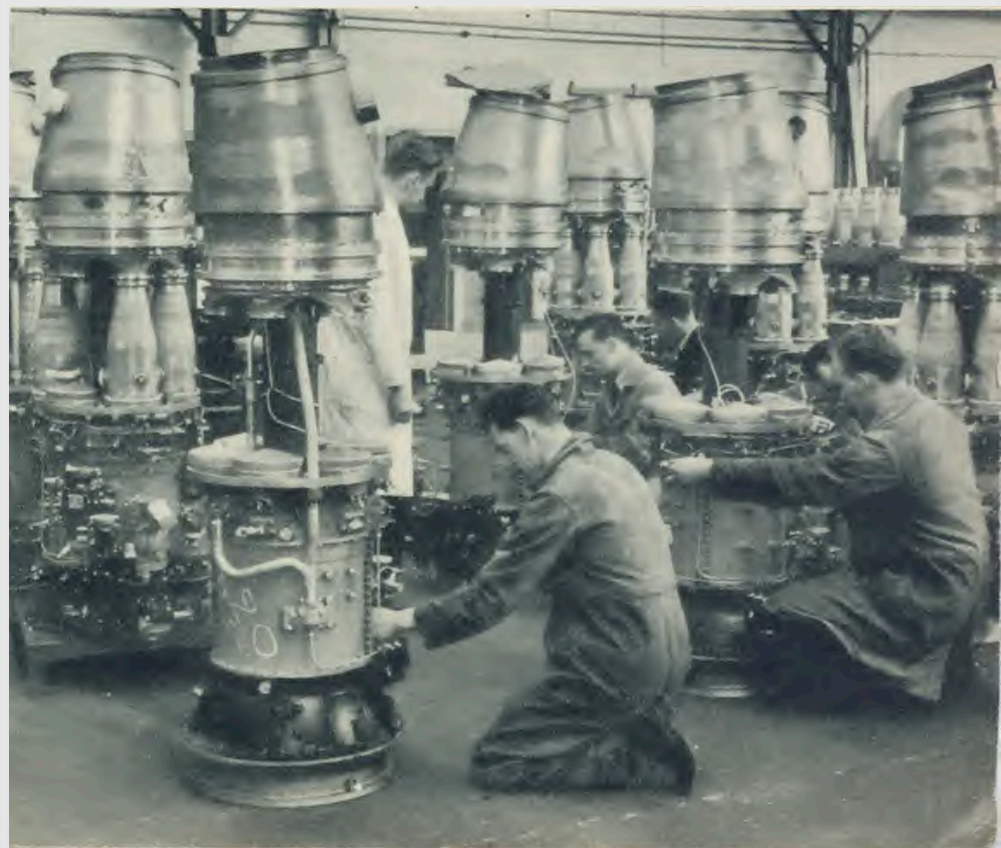
The origins of the Double Mamba can be traced back to 1939 when the experimental facility at Fairey Aviation in the UK began to develop a unique type of engine. Under the direction of Capt. A.G. Forsyth work began on a 24 cylinder piston engine, composed of four 6-cylinder blocks in an H-type configuration with each half engine driving a separate propeller. Due to lack of interest and the high demand for conventional piston engines required for the war effort, the P-24 'Prince' was consequently shelved for the duration of World War Two. The idea was later revived in response for an ASW aircraft for the British Navy, this time the piston engines were replaced with gas turbine engines, two ASMD.3's, that would eventually power the Fairey Gannet as the Armstrong Siddeley ASMD.1 Double Mamba.

Produced by Armstrong Siddeley Motors Ltd. at Ansty and Parkdale, Coventry, the unit was tested in September 1948, and was to eventually power the Fairey Gannet prototype VR546 type 'Q' on 19 September 1949.

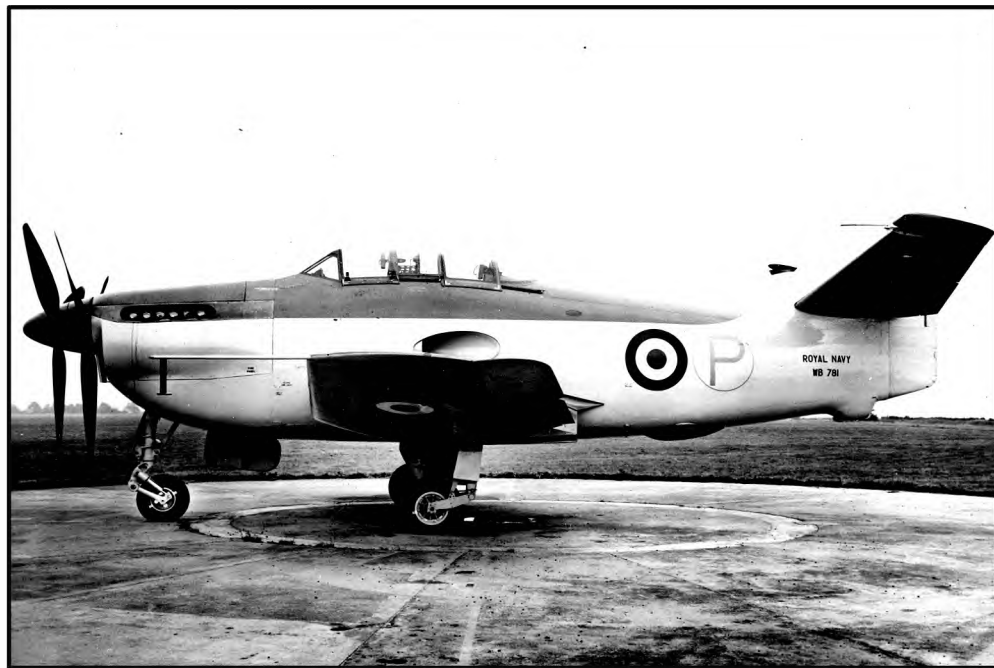
As with all new technology, the engine would invariably suffer from 'teething' problems. Some of the problems encountered during early development were readily fixed, while others presented greater challenges which required the grounding of aircraft, and some problems were never to be rectified throughout its service life.

(Continued next page)

Below: Armstrong-Siddeley Double Mamba production, circa 1950.
Photo: Flight International. ➔



The Contenders



Three companies responded to the Ministry of Supply ASW aircraft Specification, although only two were serious contenders.

Top. Blackburn Aircraft and Motor Co., the only serious rival to Fairey, developed the Y.A.5 (later changed to Y.A.7), powered by a Rolls-Royce Griffon 56 engine driving contra-rotating propellers. This was a substitute powerplant, as the original Napier Double Naiad turbo-prop failed to achieve production. Three prototypes were built and when the aircraft failed to win the contract they provided valuable test beds for Royal Aircraft Establishment (RAE). Photo: Blackburn, courtesy of Roger Jackson.

Middle. Fairey Aviation eventually won the contract with its VR546 Type 'Q', later to be known as the Gannet. This photograph shows the third prototype, WE488 at Fairey Aviation. Photo: Fairey, Ryland Gill.

Bottom. A late contender was Short Brothers, who modified their S.A 1/2 Sturgeon to try and meet the Ministry's specification. Powered by two Armstrong Siddeley Mamba Turboprops, the airframe featured a 'droop' nose housing a radar and two operators. During test flying it proved to have poor handling qualities, and it failed to comply with the specification. It was also, as one observer put it, '...an aircraft so ugly that the very air surrounding it recoiled in horror, thus giving it serious problems in staying airborne.' Photo: Open Source (possibly R. Franks). ➔



Description by Bruce “Kanga” Bounds

The Double Mamba power unit consisted of two Axial-Flow gas turbine engines arranged side by side and separately geared to co-axial, counter rotating propellers. The reduction gearing for both propellers is housed in a single built-up casing to which the port and starboard engines are attached. Each engine is provided with independent control, fuel, electrical and lubricating systems, so that either engine may be operated independently on the ground or in flight.

From a dual air intake, situated behind the propellers, air passes through a duct at each side of the reduction casing into an annular passage in each engine air intake body, which directs the air to the axial flow compressor. The compressor delivers the air, under pressure, through the combustion chambers where it is mixed with fuel; the resultant high velocity gas passes rearwards, through the turbine feed manifold to drive the turbine, which in turn drives the compressor and the propeller. On leaving the turbine, the gases are exhausted through the jet pipe, providing additional thrust to supplement that of the propeller.

Propellers

The Rotol counter-rotating, co-axial propellers provided four bladed variable pitch fully feathering, each having an independent control unit, feathering pump and control system. The front propeller (No.1) was driven in an anti-clockwise direction by the port engine and the rear propeller (No.2) was driven in a clockwise direction by the starboard engine. A propeller brake for each engine was incorporated in the transmission section.

Double Mamba Servicing

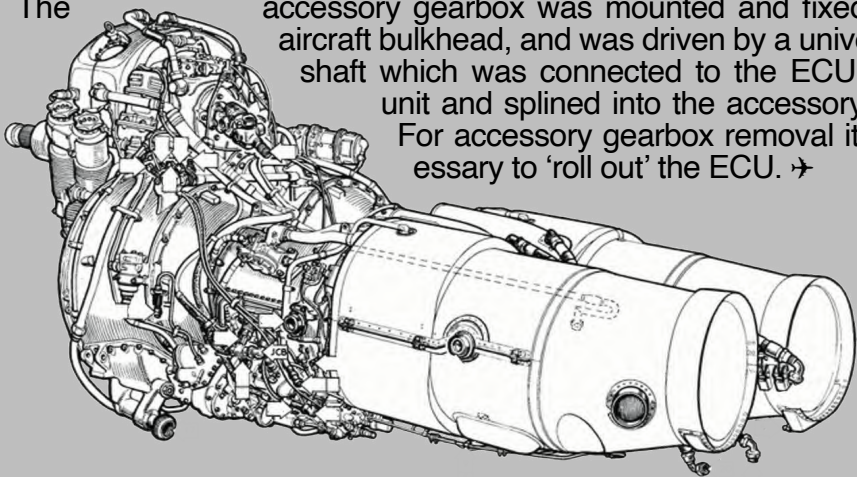
Access to the power plant for normal servicing, was obtained by raising or removing appropriate cowlings and panels. To obtain further access to the many out-of-arm-reach or non-accessible components required ‘rolling out’ of the engine change unit to carry out the maintenance task. (The same procedure for an engine change – not a five minute task). Many a Double Mamba maintainer would recall the poor accessibility, squeezing hands and spanners into restricted locations. Some fruity language always helped to get the job done.

Engine Roll-Out Procedure

In preparation for ‘rolling out’, the yoke was fitted and supported by the nose undercarriage. The port and starboard servicing rails were attached to the yoke and aircraft, and set parallel and centre by adjustable tie-rods.

Roller and pinion assemblies were attached to lugs on both sides of the reduction casing. With the rollers and pinions seated on the rails and racks, and the ECU weight taken on the support blocks, you would then disconnect the ECU connections from the airframe. By manually turning the pinion turning bars the ECU would be rolled out for servicing.

The accessory gearbox was mounted and fixed onto the aircraft bulkhead, and was driven by a universal drive shaft which was connected to the ECU reduction unit and splined into the accessory gearbox. For accessory gearbox removal it was necessary to ‘roll out’ the ECU. ➔



Recollections by John Selby (AEO)

The Double Mamba power plant, with its contra-rotating, coaxial propellers was an elegant solution to the twin-engine installation/single-engine operation space requirements, but in practice suffered from a number of defects, which severely affected the reliability and operating life of the power plant. In RAN service, the scheduled time-between-overhaul never exceeded 250 hours.



One major design weakness (as was subsequently revealed in service) was the common reduction gearbox. While each engine drove its respective propeller through its own epicyclic gear, both gear trains were housed in a common gearbox and shared the same lubricating oil system. Contamination of the oil due to failure of any component (e.g. bearings) in the gearbox eventually led to both gear trains being affected and the possibility of mechanical failure. Oil filter inspection usually gave adequate warning of component failure, requiring replacement of the gearbox.

A number of incidents possibly involving catastrophic gearbox failure did occur, fortunately without any loss of life. In one such incident, the aircraft managed to return to HMAS Melbourne, thereby providing details of the immediate in-flight symptoms and evidence of failure. The cause of failure was attributed to fatigue failure of a gearbox casing lug, one of several which located the annular gear of the epicyclic gear set within the gearbox. Following detachment of the lug from the gearbox internal face, the lug was caught up by the rotating gears and eventually punched through the gearbox casing, causing the loss of gearbox oil into the engine air intakes which surrounded the gearbox (hence the voluminous black smoke seen from the aircraft’s jet pipes). Subsequent gearbox modification (by stiffening the lugs) appeared to have been successful, with no recurrences of this type of failure during the remaining period of RAN service.

The Mamba engine itself also suffered from continuing bearing problems, usually indicated during routine inspection of the engine oil filter. Another recurring cause for engine rejection was turbine blade failure. Every 75 hours of engine operation the jet pipes had to be rolled back and the turbine viewed for damage and, more often than not, turbine blades were found damaged or missing, and yet no reports of engine problems (vibration, power loss, etc) from the pilots. A measure of the engine’s rugged design perhaps!

The remarkably low time between failures of the gearbox and engines would have severely affected aircraft availability more than it did (particularly when Gannets embarked in Melbourne and only a limited number of engines and gearboxes could be stored on board), were it not for the permutations and combinations of serviceable gearboxes and engines that could be assembled from power plants removed from aircraft due to unserviceability of one of the three units comprising the power plant.

Engine starter

The Double Mamba had a twin-breech cartridge starter fitted to each engine. The starter motor was a small impulse-type turbine geared to the engine and driven by high-velocity gases from a burning cordite charge cartridge, which was initiated by an electrically-fired detonator. A safety bursting disc was provided in the gas path to limit any over-pressure that might occur during the starting cycle, and these discs did burst occasionally, particularly when using certain batches of cartridges which obviously had too much “kick”. If time permitted, the burst disc was removed and replaced with a serviceable item; the alternative was to start the other engine (if not already running), go to full power and then windmill-start the engine in question. In the unlikely event that neither of these options was available, a two shilling (20 cent) coin served perfectly as a replacement (and probably un-burstable!) disc.

Maintainability

The aircraft was a product of an era when the concept of “maintainability” did not rate highly in the minds of the designer or manufacturer (or operator for that matter). Unhindered access to components and ease of replacement seldom were taken into account in the construction of an aircraft, and a Gannet maintainer could be identified by the dreaded “Gannet rash” on his hands, fingers and knuckles which had been scraped, cut or burnt by components in incredibly crowded spaces. For many, these are the lasting impressions of the Fairey Gannet. ➔



FAIREY INNOVATION

What Was Envelope Tooling?

Fairey developed a radical method of aircraft production for the Gannet A.S.Mk.1. Known as Envelope Tooling, it fundamentally changed the conventional system of manufacture.

In the past, it had been universal practice to erect the structural framework of the aircraft - that is, ribs and spars, and then apply a skin plating to it secured by rivets.

The marking out and preparation of the metal skin prior to assembly, known as "Lifting", was extremely difficult. If it was marked out whilst flat, the marking template had to take the subsequent curvature of the structural framework into account, so that the skin, when applied, registered correctly with the skeleton underneath. This difficulty was increased when diagonal spars were present, or where other components such as fuel tanks or wheel assemblies had to be taken into account. The complexity was compounded further when the size of the metal sheet was increased, which was desirable to minimise unnecessary joints.

Fairey reasoned that if the markings could be made after the skin had

been brought to the desired curvature it would eliminate inaccuracies. The correct markings would then allow the skin to register with all of its supporting members.

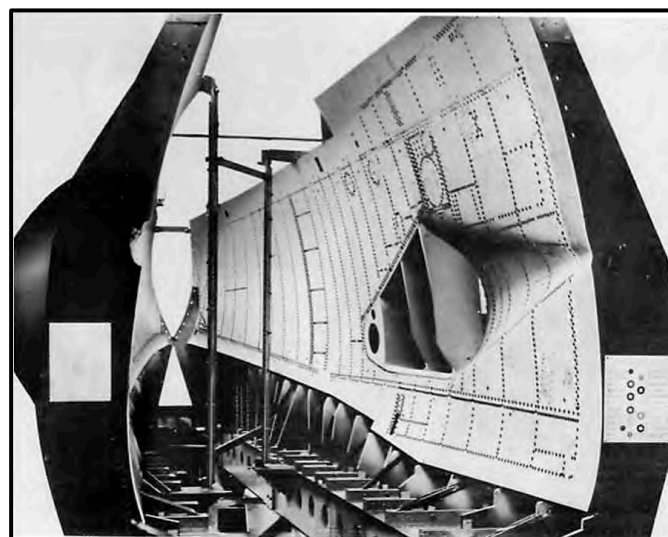
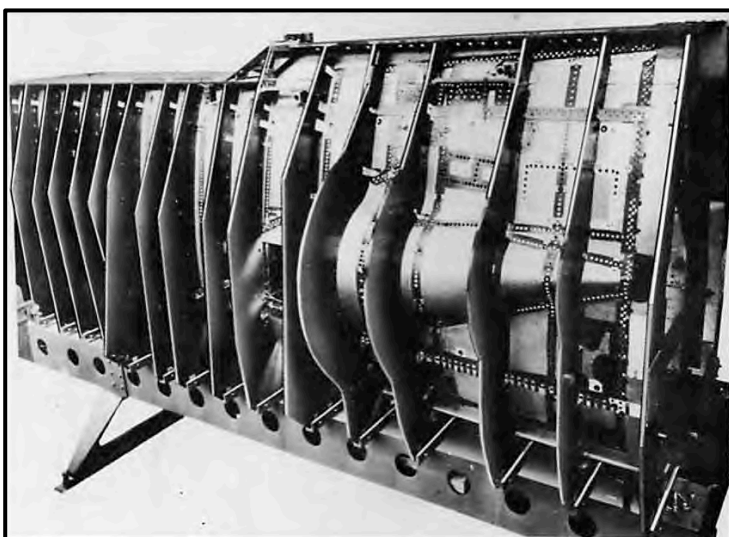
Envelope Tooling reversed this old conventional process as the components were assembled inwards from the skin by use of special jigs. As the jigs were based on the aerodynamic envelope, greater accuracy of the finished job was ensured and a higher degree of interchangeability between assemblies achieved. It also decreased pre-production costs.

Fairey engineers achieved by building the component sub-assemblies from the skin-plating inwards instead of first erecting the structural framework in an assembly fixture, and then applying the skin-plating to it.

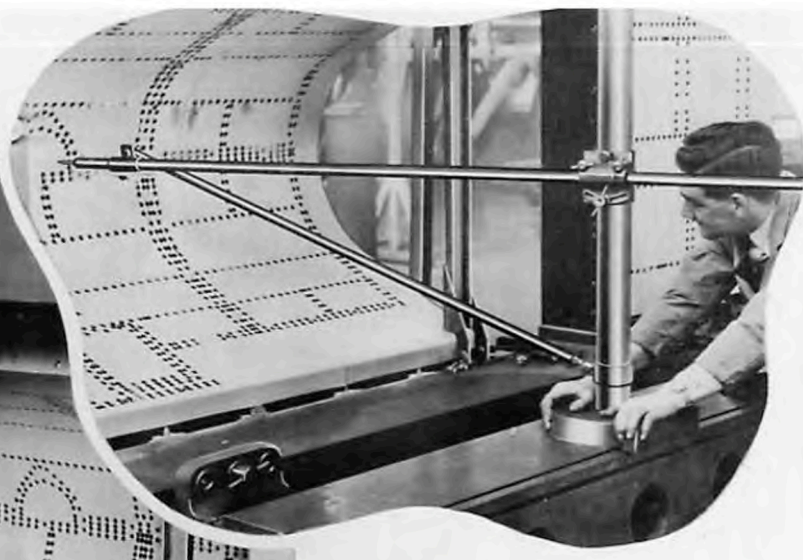
The Lifting apparatus developed by Fairey comprised a means of clamping and supporting a metal sheet; a datum beam adjustable relative to the sheet when it was supported and clamped; a tower slidable on the datum beam and movable relatively about two axes at right-angles to one another, and a scribing mechanism adjustable relative to the tower. →

Left. Assembly Fixtures. Briefly, the assembly fixtures consist of a series of formers mounted on a rigid base, to a common datum. They are accurately lofted to represent the contour at a predetermined distance outside the actual aerodynamic outline. Attached to the formers is a skin or contour-template, the inside surface of which corresponds to the outside contour of the aircraft component. **Right.** This contour template is then accurately marked out, by special equipment, with details of rivets, facings, trim lines, cut-outs, doors and access panels etc., so the template also becomes a drilling template lofted in three dimensions.

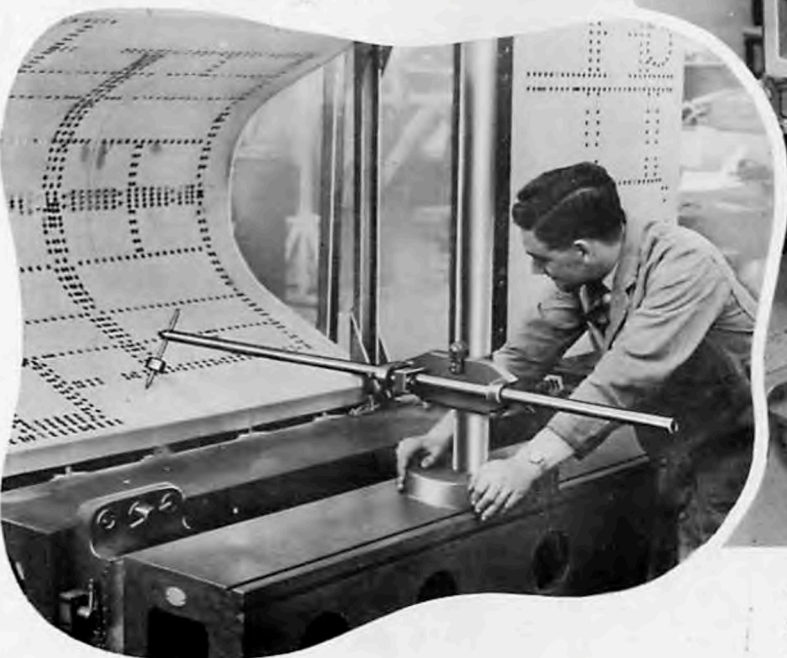
Below. Marking Out. One disadvantage of the conventional method of marking out, aside from its difficulty, was that no permanent record was retained for the purpose of checking or later modifications. Envelope Tooling not only ensures the accuracy of the marking out but leaves a permanent record for inspection, which can be checked before a component is built. Special equipment has been devised for marking out on the assembly fixture and the efficient use of this equipment is the basis of the whole process of Envelope Tooling. In the accompanying views, some of the special equipment can be seen in use. →



Setting-up the scriber with vertical scale.



Marking-out the template in the horizontal plane.



Alternative method of marking out template.



The scribing tower on the special table used for marking out the template in the vertical plane.



The scribing tower set at a low angle and supported by an adjustable tripod.

FLYING THE GANNET

by Ray Morrit



The Fairey Gannet A/S 1 aircraft was introduced into the Royal Australian Navy (RAN) Fleet Air Arm (FAA) in 1955. When embarked in the newly acquired HMAS Melbourne, Australia's Naval Air Anti-Submarine power during the fifties and sixties was the most modern and technically advanced in the whole of South East Asia.

Not a 'glamour' aircraft by any stretch of the imagination, the Fairey Gannet was perhaps one of the most interesting at that time. Its unique engine arrangement, mission profile and capability, and large size and beautiful inverted gull wing still attract admiration and attention from aviation aficionados and enthusiasts alike. A twin turbo-propeller aircraft; it was fitted with an Armstrong-Siddeley Double Mamba turbine engine, driving the contra-rotating propellers via a central shaft and gear box, which in turn was lubricated by engine oil from a single oil supply tank. Herein lay one of the two stings in the tail of the Gannet upon which I shall enlarge a little later.

I seemed destined to set off a string of 'firsts' when, in 1953, having been selected for National Service Training, our course would be the first to undergo Flying Training, and I was selected in this first training group to be trained on Tiger Moths to Private Pilot License standard. Upon completion of NST I decided to join the RAN Fleet Air Arm and continue training to Wings standard. Upon graduation, I was awarded the Weapons trophy and the Goble Trophy for the Most Proficient Pilot on course. Having been trained in the Tiger Moth, followed by Wirraway, Firefly Mk V1 and Sea Fury FB11 aircraft, the shock and awe upon being confronted by the increasing size and complexity of each succeeding model was difficult to overcome. However, the sheer bulk of the Gannet was something to behold when standing next to it trying to work out how to gain entry to the cockpit!

It had a crew of three, pilot in front of course, Observer (Navigator/Tactical operator) in the center cockpit, and Radio Operator in the rear cockpit – facing rearwards. The fuselage was a huge, slab-sided affair with the cockpit some ten feet above the ground. Entry was by means of a three-step ladder, which was lowered and raised by hand, followed by a series of indented foot/handholds ascending in a large diamond pattern. When commencing training on this aircraft the very first lesson was to establish which foot to place in the lowest step in order to ascend successfully into the required cockpit! Start with the wrong foot and one could easily find oneself led into the wrong cockpit. One could only undo this error by descending and re-commencing with the correct foot!

I was very fortunate in that my Flight Instructor, Lieut. Herbie Becker, was an excellent instructor who knew the aircraft inside out and was able to pass this knowledge on to me. I am sure that had it not been for him I would almost certainly not have had the in-depth understanding of the Flight Fine Pitch Stop system in the Gannet which stood me in such good stead later; knowledge which went a long way towards saving my life and those of my crew.

When embarked, the Gannet aircraft routinely averaged sortie times of around 3-4 hours. Anti-Submarine equipment was not much more than the MK1 Eyeball! A basic radar (ASV19B), a mix of mainly non-directional and a small number of directional sonobuoys, and a small number of hand launched smoke markers completed the A/S detection

kit. It was also possible to carry two homing torpedoes, a few depth charges or a small number of 250 lb. bombs either in the bomb bay or on wing racks, and occasionally 60lb rockets. That completed the ASW capability.

Engine Failures

Standard operating procedure called for normal cruise configuration to be on single engine in order to conserve fuel. Anti-submarine search operations were routinely below 1500 feet in all weather, day and night. The single-engine cruise protocols called for the operating engine to be swapped hourly in order to even out the running hours. Operations were normal for the first year or two utilizing the above-mentioned protocols. However, it was not long before aircraft began suffering engine failures at a disturbing frequency, almost always preceded by a rapid loss in oil pressure. This resulted in an increase in single engine deck landings, something to which pilots did not look forward, particularly in heavy seas and/or bad weather. Eventually Fairey Aviation discovered that the prolonged single engine cruising was causing 'Brinelling', or pitting, of the propeller bearings in the feathered propeller. This in turn was causing metal particles to be distributed through the oil into both engines and propellers due to the single oil supply tank ... the first of the two stings in the Gannet tail!

The quick fix was to change the single engine cruise protocol to ensure equal distribution of the time in the feathered position; rotating the feathered engine slightly every ten minutes, and changing operating engines every 30 minutes. All this had to be accomplished while possibly actively tracking a submarine, often at 300 feet on a pitch-black night and possibly in bad weather – and no co-pilot to assist! There were many single engine landings, both day and night on board Melbourne, caused almost exclusively by this problem. This was worrying enough without the knowledge in the back of the pilot's mind that the pieces of metal in the joint oil supply could result in the second engine failing at any time! Many times the pilots missed the wires due to float, deck movement or both – resulting in a BOLTER. However, on 6 June 1958, on completion of a night flare dropping exercise, I again experienced an engine failure – which resulted in a dreaded night BOLTER followed by a successful recovery. Another 'first'.

Night BOLTER

It was a very warm night in South East Asia and the sea was relatively flat with only about 10 knots of wind. Having suffered what was now a routine engine failure, I elected to perform a straight in landing. This was probably an error in that it caused difficulties in attaining and holding the correct approach speed, such that the aircraft was approximately 5 knots fast over the round-down and floated over all the arrestor wires. I immediately applied full power to the operating engine and raised the undercarriage but was unable to climb away. The aircraft settled towards the water but held altitude just above the surface in the ground effect. The altimeter was reading zero, and the needle on the Radar Altimeter, calibrated in 10 feet



increments, was hovering just above zero – but not even half way to the 10 feet marker. As the aircraft passed down the port side of the Rescue Destroyer stationed on the Starboard Bow of the Carrier, the Port Running Light on the bridge was above the eye level of the crew in the Gannet. After what seemed an eternity, the Radar Altimeter began reading a healthy 50 feet above the water, and raising the flaps was commenced in stages. A very wide, climbing circuit was established, levelling at 1,000 feet down-wind. From there, a normal single-engine landing was completed, followed by several medicinal rums in the sick bay afterwards! This was the first and only successful single engine night bolter and recovery ever in either the RAN or RN. I believe it remains so to this day. My crew comprised Lieut. Evans(Observed) and Obs. 1 Hancox(Tel).

Sting in the Tail

Getting back to the Gannet peculiarities, the second sting in its tail – which caused many accidents and injuries, including death – was a little thing called the Flight Fine Pitch Stop. Essentially, this was a pin which prevented each propeller from moving into the fully fine position when the throttles were retarded as for landing, unless the landing gear was down and locked. This stop was actuated (inserted) by the landing gear coming up, and removed by it on lowering for landing. When the propellers were allowed the full movement into the full fine position, they effectively presented two solid disks to the airflow, causing enormous drag and potential for uncontrollable loss of altitude. Of course, this was of little concern when at altitude or when within inches of the ground in the normal landing with the gear down. However, in the single engine configuration, this drag was not at all desirable – so there were two Flight Fine Pitch Stop Override (FFPSO) switches in the cockpit with which the withdrawal of these pins (one on each propeller) was prevented, either individually or together when the landing gear was lowered. Of course, when attempting a single engine landing, the lack of this drag in the final landing phase (assuming the pilot had remembered to make the FFPSO switches) could result in a float before touchdown. This was of no consequence when landing on a runway – but caused untold difficulties in the final phase of a deck landing! It was invariably this, in association with possible deck movement, which caused the aircraft to float over the wires and BOLTER!

Gannet XA330 was lost in February of 1961 when the pilot allegedly lowered the undercarriage during a single engine landing, without selecting the Flight Fine Pitch Stop on for the live engine.

The ability of the Gannet to fly around at low level on one engine with hook down, bomb-bay doors open and radome lowered made the aircraft a great crowd pleaser at flying displays. This act was sometimes varied by turning down wind at the end of the runway after the low fly-past, closing the bomb-bay doors, raising the hook and radome while in the turn, and then lowering the undercarriage to complete a single engine landing as a finale. This always impressed the crowd. However, had the pilot not taken the precaution of selecting the FFPSO ON for the live engine, the lowering landing gear withdrew the FFPS – with the resulting uncontrollable drag and inevitable catastrophic crash! This occurred at NAS Nowra on one



occasion, and resulted in very serious injury to the Gannet pilot. This accident resulted in such demonstrations being banned in the RAN.

One-wing Salute

The odd double vertical folding arrangement for the wings made for quite small ground coverage, but a need for lots of headroom. It did, however, lend itself to inventive initiative at times. Admiral's inspection at NAS Nowra was always a painful day – and one to be dreaded. Very rare was the day when the inspecting Admiral was not displeased about something. On one particular occasion a flight of Gannets provided a short air display for the Admiral's benefit. Upon landing, the four taxiing Gannets passed in front of all the Divisions drawn up on the Hard Stand with the Admiral waiting for them to march past in salute. An astute Air Engineering Officer of the Gannet Squadron had disabled the folding mechanism of the port wing in all the four aircraft prior to take-off. As the flight passed the Admiral in line astern formation, the leader ordered the flight to 'fold wings'. Lo and behold, all starboard wings folded as one in salute to the Admiral, and then spread again after passing the dais! The Admiral was so pleased that he gave the Air Station full marks for their inspection (so the story goes).

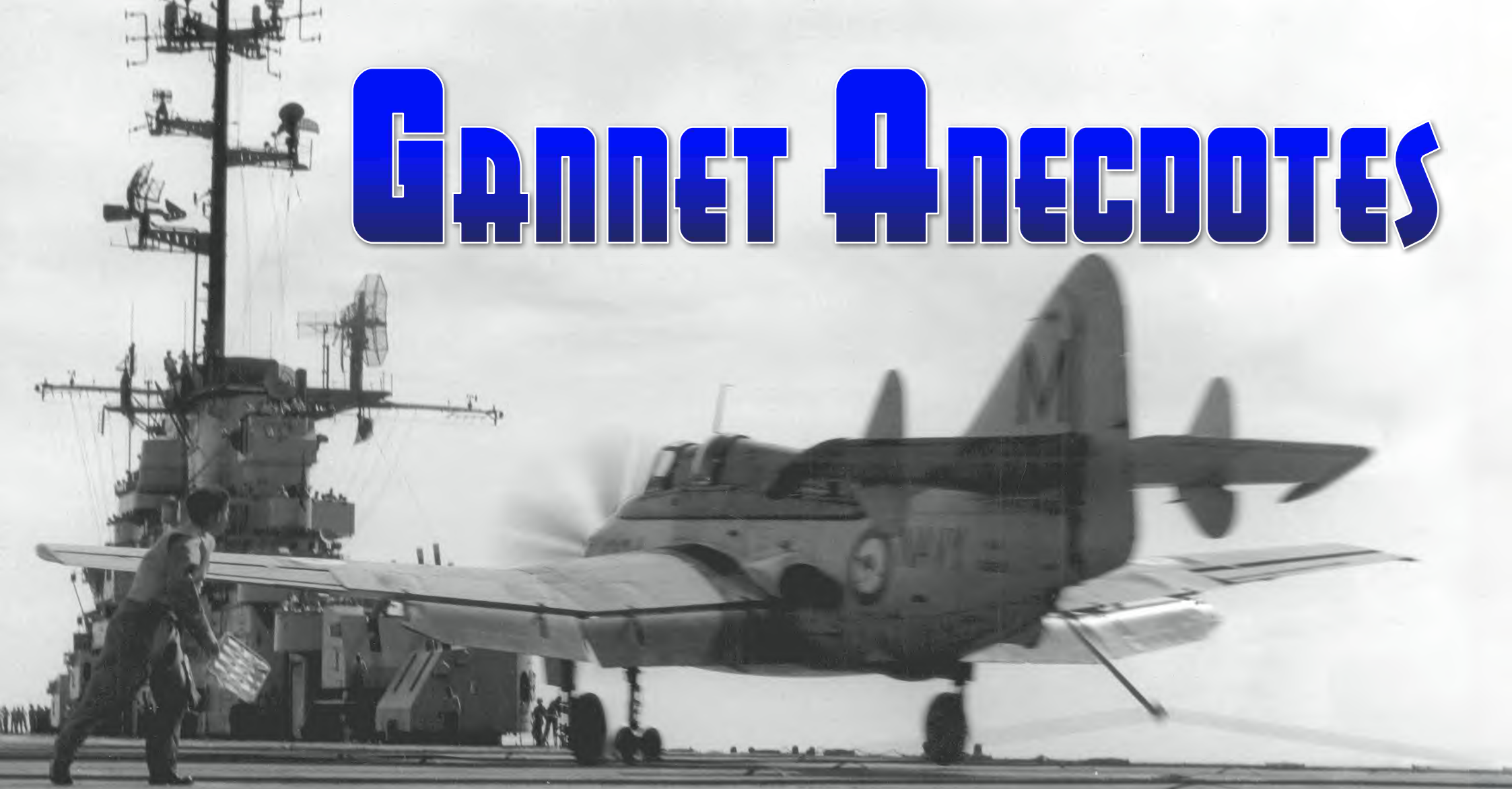
Notwithstanding all that has been said, the Gannet was a delight to fly, very light on the controls, very manoeuvrable, with excellent visibility from the very roomy cockpit. Like the albatross and the pelican, which look most ungainly when on the ground, the Gannet was in its element once it shook itself free of the ground and soared into the air. As described by one pilot 'it was like the fat lady at the barn dance, who you find surprisingly light on her feet, that is how it flew.'

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Above. Forgetting to engage the Flight Fine Pitch Stop(s) could have catastrophic results.

GANNET ANECDOTES



At RANAS Nowra the Fairey Gannets were used in the Air Sea Rescue role as fishing boats or yachts on the South Coast of NSW would occasionally get into trouble, especially during weekends or holiday periods.

To assist in a search and rescue mission a duty Gannet would be on standby with a "G" Dropper loaded on a bomb carrier mounted under the starboard wing. The "G" Dropper case contained a large life raft, survival rations and rescue aids, and designed to inflate automatically upon contact with sea water. Upon sighting survivors, the pilot would position upwind and first release a long cord then release the life raft so that the cord would float towards the survivors with the inflated life raft attached. The life raft could contain up to 20 people and had a hood to provide protection from the elements and a sea anchor to stop drift until a rescue boat arrived. Nowadays helicopters with winches have generally taken over this role. Over many years at Nowra, the "G" Dropper was variously carried on the Fairey Firefly, Dakota, Fairey Gannet, and Grumman Tracker – a very useful device for ASR emergencies.

Night flying activities on the flight deck of HMAS *Melbourne* could be hazardous. Loading munitions on a Gannet under black-out conditions, with engines revving and the Flight Deck Officer barking instructions to 'hurry-up because the aircraft are taking off' tested one's mettle. One night during the loading of armament stores the bomb bay doors closed and the aircraft started to taxi. An armourer in the bomb bay who had his clothing caught on a bomb rack swung his legs up as the bomb bay doors closed. Luckily a supervisor noticed and signalled to the pilot to open the doors again. As the sailor reappeared his only comment was 'it was very dark in there'.

US Navy submariners said they could pick-up the Gannet's radar from some distance, yet they were always puzzled when detected beneath the waves. The truth was that in the deep, clear waters of the Pacific Ocean it was easy to see a submarine from a high-flying Gannet. On occasions foreign submarines were detected in Australian waters. During one exercise a 'mystery' sub was called upon to identify itself (three grenades was the standard signal), its high-speed disappearance suggested a foreign submarine was shadowing the fleet.

In 1960 there was a spectacular crash when a Gannet hit the stern of HMAS *Melbourne*. As the pilot approached to land the Gannet's port engine lost power causing the aircraft to sink suddenly. After hitting the round-down the Gannet bounced onto the flight deck. It then rolled onto its port side and skidded along the deck, tearing off a wing in the process. Fortunately, the aircraft caught an arrestor wire, which prevented it from going over the side. Remarkably all three crew members walked away, but the Gannet was a write-off. The full story and photographs can be seen [here](#).

In another incident, after a Gannet was launched from the catapult, the pilot reported an engine malfunction and requested an emergency landing. As the aircraft was loaded with 16 heavy (underwing) rockets, permission was sought to fire them prior to landing – which was granted and the rockets were fired as a salvo. Unfortunately, this blew the flaps off – as they were still in the take-off position. The result was the aircraft had to land at high speed without flaps. In this case the crash barrier was used for a safe 'assisted landing.' Unfortunately, a piece of the shredded crash barrier webbing hit one of the fire crew in the face knocking him out and delivering a black eye. See [here](#) for photographs of this incident.

816 Sqn Gannet takes the wire. USS Philippine Sea. 3 May 1958. LSO LEUT "Shorty" Roland (RAN image)

In a more dramatic incident, on 10 February 1964 at 8.56 pm, as the CO of 816 Squadron, LCDR T. Dadswell (later Commodore Dadswell AM) approached the aircraft carrier HMAS *Melbourne* to do night touch and goes in Gannet XG784, he noticed HMAS *Voyager* was not in the correct RES-DES (rescue destroyer) position. The resulting collision between *Melbourne* and *Voyager* sank the destroyer with the loss of 83 lives. Because *Melbourne*'s aerals were lowered during flying stations they were damaged, and the ship asked Dadswell to activate rescue services. He immediately radioed RANAS Nowra advising them of an emergency, requesting rescue helicopters from Nowra and search and rescue craft from Jervis Bay. Dadswell then remained over the accident area for the best part of an hour, passing messages from ship to shore before landing at Nowra to report on the situation. Throughout the night and at first light the following day the search for survivors continued. A full article on this tragedy, including Toz Dadswell's account, can be found [here](#).

Another time a Gannet dropped a Mk30 acoustic torpedo (dummy warhead) near two of 'Melbourne's 32ft cutters; one of which had lowered a 'noise-box' 50ft into the depths to attract the torpedo. The drill was to test the functions of the torpedo, which was designed to home-in on the noise of a submarine's propeller. As planned, the Gannet dropped the torpedo, however it was soon noted the torpedo did not dive towards the 'noise-box,' [above 30ft it was supposed to shut down] but circled the cutters (engines off) then – after hitting one boat and splitting a plank, it turned on the other holing it. Both cutters took on water but were saved by buoyancy tanks. ➔

A Tough Bird

Three (RN) Gannets were practising section attacks on Magilligan range, between Eglinton and Limavady. Two were manned by pilots only, but the third had a young Air Mechanic in the centre cockpit on his first ever flight. This aeroplane was caught in the slipstream of the other two, and the only possible recovery action was to pull hard back on the pole. The reaction was so violent that both the outer mainplanes sheared off at the fold, taking with them, of course, the ailerons.

The pilot would have got out and walked had it not been for the youngster behind him. He found that he could still fly the remains and, after a little testing this way and that, decided to land it, which he did considerably faster than normal, running off the end of the runway, but still on the wheels.

Later, I walked around this aeroplane. Both mainplanes had been pushed back on the fuselage and there was a great gap where the leading edges should have joined the fuselage, with the trailing edges pushed into the fuselage for a corresponding amount. The aeroplane was a complete write off in spite of being flown in that condition. I believe the pilot earned a red and green endorsement for the exploit, the red for getting into it, the green for getting out of it. ➔

Gannet Airframes

Unlike other RAN aircraft types, the side numbers on Gannets were changed from time to time, with any particular airframe bearing three or more during its life. This has made things a little difficult in the identification of which airframe was which in the many photographs we have. The following table and the linked individual aircraft pages were compiled from information supplied by ADF Serials; Ross Gillet's book Wings Across The Sea and Ben Patynowski's book "Submarine Hunter". Photographs from these and other sources were used to cross reference side and airframe numbers, where possible, but there's no guarantee we've got them all! Readers are encouraged to inform us of any corrections or errors they perceive.

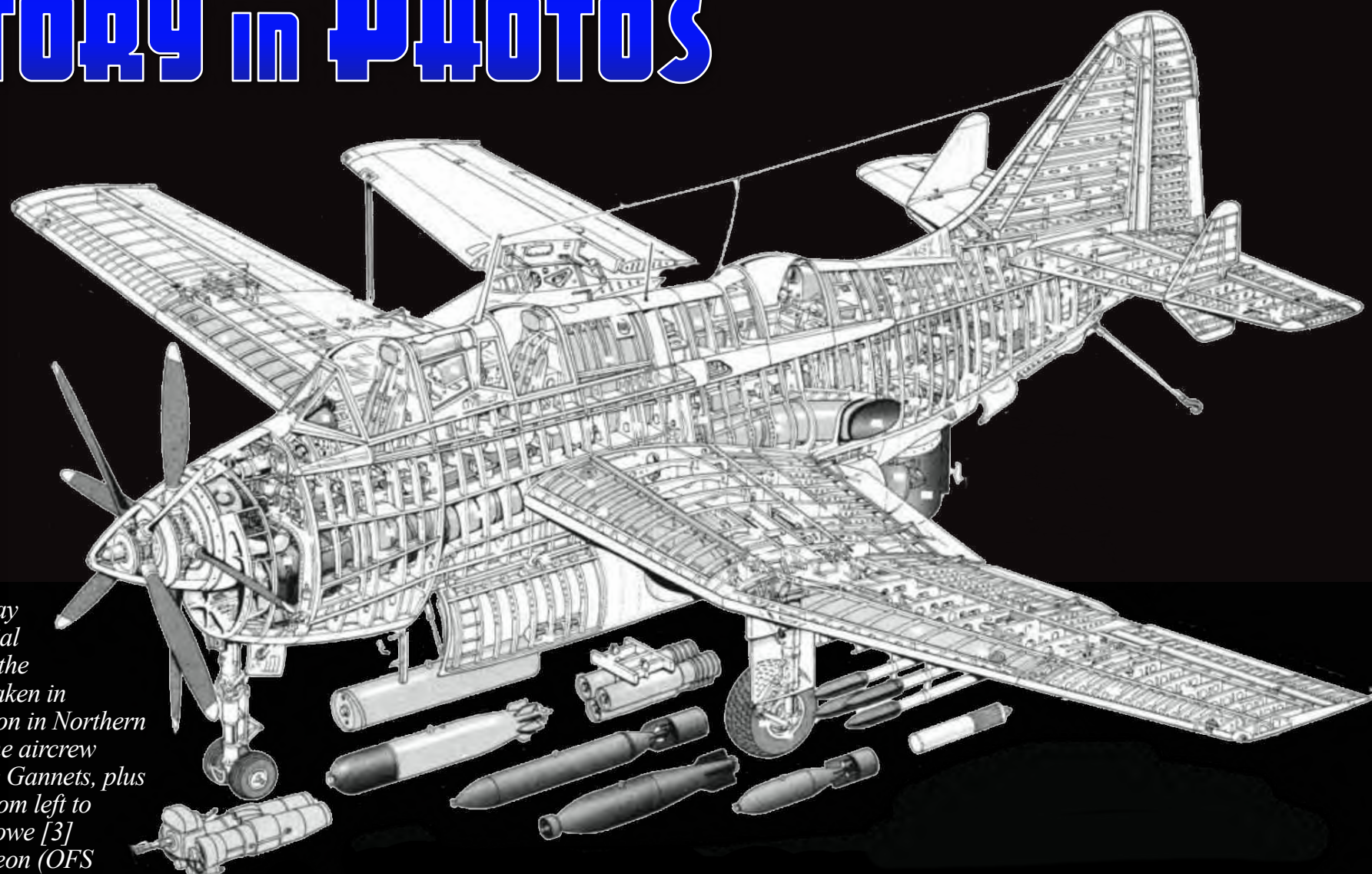
CLICK ON THE LINKS TO GET MORE INFORMATION ABOUT THAT AIRFRAME.

Aircraft Serial	Type	RAN Codes	Delivered	Aircraft History
WN456	AS.1	433/B, 312/Y, 811/M, 884(NW), 884(M), 815(M)	08/05/56	Ditched 25/04/63 816 Sqn SBLT (P) Noel Dennett RAN. Engine failure after catapult launch from HMAS Melbourne. Crew rescued unhurt. MORE INFO
WN457	AS.1	434(B), 436/B, 433/Y, 310/Y, 313/Y, 436/Y, 816/M, 887(NW)	08/05/56	Ditched 25/04/63 816 Sqn SBLT (P) Noel Dennett RAN. Engine failure after catapult launch from HMAS Melbourne. Crew rescued unhurt. MORE INFO
WN458	AS.1	435/B, 314(Y), 434, 313	08/05/56	725 Sqdn. Crashed fatal 15/10/59, when aircraft failed to maintain height during single engine landing at RANAS Nowra. ASLT(P) A.L Mauritz RAN Killed. MORE INFO
WN459	AS.1	436/B, 434/B, 313	08/05/56	817 Sqn, Crashed Fatal 10/11/55 in sea near Isle of Wight. Crew of Lt(O) D Padgett RAN SBLT(P) J.P Van Gelder RAN and ACMN(T) N.J Self killed
XA326	AS.1	432(B), 311(Y), 825/M, 880/NW, 853/M	08/05/56	Damaged 11/8/56 LEUT Rowe(P) RAN when nose oleo collapsed on catapult. Withdrawn 15/08/67. MORE INFO
XA327	AS.1	426/B, 305/Y, 880/NW, 890/NW, 884/NW, 852(M), 852(NW)	08/05/56	Withdrawn 15/08/67, Used for firefighting HMAS Albatross.
XA328	AS.1	425(B), 304(Y), 827/M	08/05/56	Withdrawn 15/08/67. Scrapped 1968.
XA329	AS.1	424/B, 973/NW, 829(M), 814/M, 819(M)	08/05/56	Withdrawn 15/08/67. Sold 30/04/68, reportedly to McCulloch of Landsvale.
XA330	AS.1	423B, 302(Y), 308(Y), 882(NW)	08/05/56	Crashed 20/02/1961, Nowra NSW. 725 Sqn. Aircraft accident resulted from the undercarriage being left down during a single engine flypast. Aircraft stalled and landed in trees, crew unhurt. Reduced to components. MORE INFO
XA331	AS.1	422B, 301(Y), 824(M), 859(M)	08/05/56	Withdrawn 15/08/67, used for firefighting HMAS Albatross. On display Queensland Air Museum, Caloundra QLD.
XA332	AS.1	421/B, 421/Y, 300(Y)	08/05/56	Crashed 30/01/59, near Miranda Sydney. Tail assembly failed in flight. Fatal. Aircraft had just been accepted from factory at Bankstown. 816 SQN test pilot LEUT(P) Peter Arnold RN killed. MORE INFO
XA333	AS.1 T.2	431/B, 310(Y), 857(NW), 857/M, 877/M	08/05/56	Converted to T.2. Trainer. Damaged 21/02/61 Nowra. Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XA334	AS.1	431,308Y,313(Y),832(M) 832/Y, 860(M)	08/05/56	Damaged during barrier landing on HMAS Melbourne. 6/67. Single engine failure on catapult launch; arrestor hook failed to pick up a wire and aircraft crashed into safety barrier. Not economically repairable. Withdrawn from service. MORE INFO.
XA343	AS.1	309/Y, 315/Y, 307(Y), 881/M	08/05/56	817 Sqn. Damaged 17/02/58, wheels up landing at NAS Nowra. Lt (P) M.Astbury 817 Sqdn RAN undercarriage would not lower. Crew uninjured. Withdrawn 15/08/67, used for firefighting HMAS Albatross. Struck off 02/11/70. MORE INFO.
XA350	AS.1	316/881/817 881(NW), 884(NW)	08/05/56	08/05/56 817 Sqn. 01/11/56 made the first live Mk 30 torpedo drop in the RAN near Manus Island whilst being flown by LCDR(P) Gledhill, LEUT(O) Palmer & SBLT(O) Selsmak RAN. Damaged 27/08/59. 816 Sqn. Ditched 16/03/63, off HMAS Melbourne near Manus Island. Flight control lost after engine relight. Crew LT(P) J Smith RAN LT(O)I.Lawson & Observer P.Hancox rescued & returned to HMAS Melbourne. MORE INFO.
XA351	AS.1	305(Y), 831/M, 816/M	08/05/56	Sold for Scrap 30/03/67
XA356	AS.1	829(M)	08/05/56	Crashed 30/03/60 on landing on HMAS Melbourne. Flown by Lt P McNay RAN 816 Sqdn. Aircraft sank on approach and struck round down, port mainplane sheared off at root and aircraft came to rest on it side. MORE INFO
XA359	AS.1	303/Y, 306/Y, 309(Y), 315/M,	08/05/56	816 Sqn Flown by Lt(P) Roland RAN Ditched 09/05/60 off HMAS Melbourne. Single engine failure on being catapulted. Ditched ahead of the ship. Crew safe.
XA389	AS.1	303/Y, 306/Y, 880/M, 814/M, 315/M	08/05/56	Sold for Scrap 30/03/67.

Aircraft Serial	Type	RAN Codes	Delivered	Aircraft History
XA403	AS.1	311(Y) 831(M)	08/05/56	Served with 817 Sqn. Damaged aboard Melbourne July 61. Withdrawn 15/08/67, used for firefighting HMAS Albatross. MORE INFO
XA434	AS.1	830(M), 810/M, 846/M, 846(NW) 08	08/05/56	Flew with 725 , 816 and 817 Squadron RAN. Withdrawn 15/08/67. On display Fleet Air Arm Museum. MORE INFO
XA436	AS.1	306/Y	?	Ditched 17/06/58 off HMAS Melbourne. Pilot LtCdr Payne RAN Senior Pilot 816 Sqdn and crew rescued safely
XA436	AS.1	306/Y	?	Ditched 17/06/58 off HMAS Melbourne. Pilot LtCdr Payne RAN Senior Pilot 816 Sqdn and crew rescued safely
XA514	AS.1	878(M), 848(M)	08/05/56	T2 Trainer. Side number 971 was on the aircraft at the time of the accident. Maintenance test flight 13Nov56 after ECU change. Suffered PCU failure during test flight and resultant mismanagement caused the aircraft to crash at HMAS ALBATROSS. Both pilots unhurt but aircraft written off.
XA517	T.2	876(NW), 876/M, 855/M, 972(NW), 855(NW)	08/05/56	Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XD898	AS.1	826(M), 811/M, 847(M)	1957	Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XG784	AS.1	822(NW), 810/M, 811/M, 828/M	09/58	Damaged 01/61 during landing. Flown by CO 816 Sqdn L/Cdr T Dadswell on the night of the 10/2/1964 who witnessed the collision of HMAS Melbourne and HMAS Voyager. Sold for Scrap 30/03/67.
XG785	AS.1	833(M), 813/M, 883(NW)	09/58	Sold for Scrap 30/03/67.
XG787	AS.1	815(M), 818/M, 828(M)	1957	Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XG789	AS.1	811/M, 841(M)	09/58	Withdrawn 15/08/67. Sold to AARG. Eventually purchased by the National Aviation Museum in Moorabbin, VIC. Was transported as deck cargo aboard HMAS Sydney, which at that time was being used as a logistics support ship.
XG791	AS.1	812/M, 813/M, 830/M	09/58	Sold for Scrap 30/03/67.
XG792	AS.1	813(M) 831(M)	09/58	816 Sqn. Coded 813 Crew Lt(P) D.Farthing RAN LT(O) G.Bessel-Browne RAN & POACM McCreanor. Ditched 02/02/65, off HMAS Melbourne near Kiama NSW. Both Engines failed after launch. Some wreckage recovered to HMAS Albatross. Crew returned safely to HMAS Melbourne.
XG795	AS.1	813/M, 826(M), 811(M), 814/M, 815/M	09/58	816 Sqdn. Coded as 815. Sold for Scrap 30/03/67.
XG796	AS.1	812/M, 816(M), 815(M), 882/M, 858(M)	09/58	10/01/1964 LEUT(P)P Adams RAN and crew made a wheels up landing on the bomb bay doors at NAS Nowra, HMAS Albatross, when the undercarriage would not come down. 816 Sqn. Crashed 24/02/66 Lt(P) Fyfe RAN. Whilst carrying out his first night deck arrested landing on HMAS Melbourne, took his wave off too late catching six and came to a stop hanging over the port side by the wire. Crew rescued uninjured. Aircraft fell into sea during subsequent unsuccessful recovery attempt. MORE INFO
XG825	AS.1	13(M), 813/M, 843/M	09/58	Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XG826	AS.1	810, 813, 817	09/58	Withdrawn 15/08/67, used for firefighting HMAS Albatross.
XG888	T.2	09, 58	09/58	Returned to Royal Navy and converted to T.5. Returned to Fleet Air Arm Museum Nowra NSW. Was displayed in Royal Navy scheme but has since been restored to RAN scheme. MORE INFO

HISTORY in PHOTOS

FLIGHT Magazine cutaway of the Fairey Gannet gives a good idea of the construction and capacity of this remarkable aircraft. Artwork by Mike Badrocke.



Below: As was the way in those days, all initial training was done in the UK. The photo was taken in 1955 at RNAS Eglinton in Northern Ireland, and shows the aircrew advance party for the Gannets, plus one OFT student. From left to right: [1] Pain [2] Rowe [3] Champion [4] Spurgeon (OFS student) [5] Norman Lee [6] Jeffrey Gledhill, a Kiwi, who had earlier been awarded a DSC for his dive-bombing attack on the German battleship Tirpitz in a Barracuda [7] William Dunlop, who was later to lose his life in a tragic Vampire accident [8] Peter Goldrick, the only pilot to be wounded by enemy fire in Korea [9] Murray Douglas, who had the distinction of having the shortest ever instrument rating test in a Gannet, when he tried to raise the gear during the take-off run. The instructor took over and landed, and that was it! [10] James Van Gelder, killed not long after this photograph was taken. There were two Observers in the advance party who are not pictured: 'Snow' O'Connell and Len Anderson. (Image courtesy of Norman Lee).



Below: Two images of Gannets at Culdrose in the UK. Left: Bearing the "B" marking on the tail (for Culdrose), XV326 (432(B)), this image was probably snapped in 1955. The aircraft would undoubtedly have been engaged in training RAN aircrew prior to the embarkation of the air group on the new HMAS Melbourne early in 1956. Note the parachutes on the starboard wing, and the marker marines ready to be loaded into the bomb bay. Right: A winter shot, most probably in January 1956. The 'B' markings had been replaced by a 'Y', which was Melbourne's pennant prior to her arrival back in Australia (when it was changed to 'M'). Side numbers seem to have been used in a somewhat random fashion, but it is believed that 311(Y) was XV326, the same aircraft as in the left hand image here.



Above: Snow at Culdrose (Cornwall, UK) is unusual as its proximity to the west coast usually brings wetter but milder weather. The winter of 1955/56 was an exception, as the images show. From L to R: Two shots of Gannet 311 which is shown above (right) starting up. The black smoke is from the cartridge used to spin up one of the two engines. The second engine was then started by 'windmilling' the prop in the wash of the first. Images 3 and 4 depict ground crews amusing themselves in the snow. All pictures via Jeff Chartier.

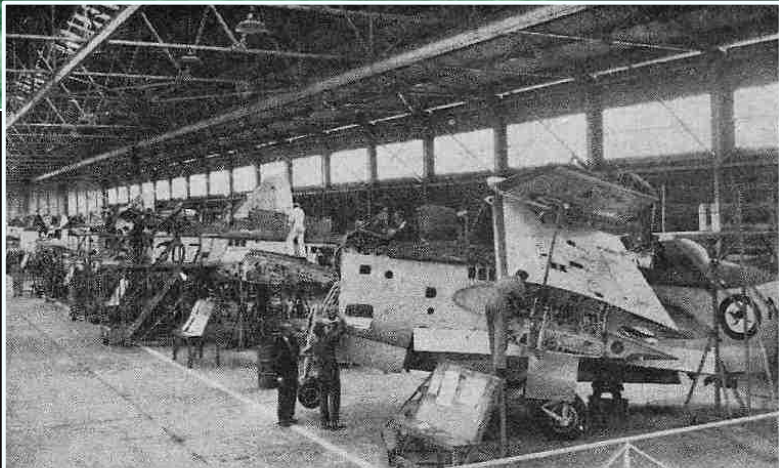


Above: This photo of 816 Squadron aircrew aboard Melbourne in 1958. We have identified those pictured, as follows: (1) Bob Bloffwitch [O] (2) Toz Dadswell [P] (3) Les Anderson [O] (4) Trevor Wilce (5) John Nestor [P] (6) John Griffen [O][CO] (7) Jerry O'Day [P] (8) Don McLaren [O] (9) Pat Stewart [SOBS] (10) Alastair Davis-Graham [O] (11) Arthur 'Wacka' Payne [Senior Pilot]* (12) Keith Stopford [O] (13) LEUT A.M. Johnson RN [O] (14) Graham Stevens [P] (15) Leo Baker (16) Malcolm 'Blackie' Barratt [P] (17) Peter Moy [O] (18) John Dudley [O]. [Image via Ron Marsh, and thanks to Gordon Turner and Toz Dadswell for help with the names]. * Ken Barnet was nominal Senior Pilot but was temporarily absent so 'Wacka' Payne was standing in.



Above: A great shot of Gannet 433(B) doing an engine start at Culdrose. Barry White remembers the difficulty in installing starter cartridges in the Sea Venom and Gannet. The sea Venom was not too bad as the starter breech was situated just behind the cockpit. The Gannet was a whole different story being up high, just aft of the propellers. He recalled it was bad enough when the breech was cold, but distinctly interesting loading fresh cartridges into a hot breech whilst clinging onto the aircraft via a couple of hand/toe holds. The Gannet was also capable of being air-started, using a ground-based compressor (see page 61 of the Pilots Notes). It was seldom used in the RAN except, perhaps, for the occasional foray to shore airfields to collect stores and personnel.

Under: Two images of the Hawker De Havilland workshops at Bankstown in 1958, where the overhauling, repairing and assembly of the Gannets for the RAN was done. Previously the factory had been set up in 1948 to service RAN's Fairey Firefly and Sea Fury aircraft. (Left: Navy News, Right: RAN image via Jeff Chartier).



Below left. An RN Gannet launches aboard the newly commissioned HMAS MELBOURNE, probably in late 1955 or early 1956. Note the wire catapult strop about to fall free from the aircraft. Melbourne was later modified to catch these strops to prevent their loss.

Below. A Gannet launches from Melbourne off the south coast of NSW, circa 1960. The number of personnel on the flight deck was typical for fixed wing take-offs, and comprised a team of Handlers to quickly move the aircraft off the catapult if it became unserviceable at the last minute, together with several maintainers of different trades to fix an electrical or radio problems. In this case the Gannet has launched safely and the next aircraft (off frame) is already being marshalled to the catapult in preparation for launching. (Photo Kim Dunstan).





Left: Hunter and Prey. HMAS Melbourne with one of her Gannets overflying the USS Catfish (01 May 1962) during an ASW exercise. The submarine was sold to the Argentine Navy nine years later and renamed the ARAA Santa Fe. Ironically, she was sunk during airborne ASW operations in the Falklands War by helicopters from HMS Antrim, Plymouth and Brilliant. See story [here](#). (Imagery Scanned from Navy Historic Archive).



Above. This image was sent in by Ron Marsh. It is of interest as the Squadron introduced the practice of painting maintainer names on the side of the aircraft for a time. It was taken at Albatross, probably in the summer of 60/61 or perhaps late in 61. We believe the person on the left is S/Lt (O) Dick Holmes, and the remaining three (L-R) are Lt.(O) Bruce Ledlie (known as "Poonah" after the town in which he was born); S/Lt.(P) Robin Spratt, and L/Cdr. Pat Stewart who was the Squadron's Senior Observer. (Navy photo). **Right, from top:** A 'Beat The Retreat' ceremony aboard RAN warships was always a treat for visitors. This was particularly true in far-flung parts of the Empire that regarded Britain as 'home' and warships of the Dominion as a proud projection of its maritime strength. This photograph was taken aboard HMAS Melbourne in Singapore in 1960 and was probably the concluding event of an evening cocktail party. The Gannets would have provided a spectacular backdrop. (via Kim Dunstan).



The effectiveness of the double wing-fold is demonstrated in Melbourne's hangar deck, where with a folded span of only 19'11" the Gannet takes up considerably less lateral space than the smaller Venom to its left (Image Kim Dunstan).

Plunging towards its prey, this Sulid (Gannet) demonstrates a wing configuration and an ability to carry large payloads in its belly that probably influenced Fairey Aviation's choice for the aircraft name.

Right: A slice of history. Melbourne and some of her Gannets salute the Royal Yacht Britannia during her visit to Hobart in 1963 (Image via Jeff Chartier). **Left.** The effectiveness of the double wing-fold is demonstrated in Melbourne's hangar deck, where with a folded span of only 19'11" the Gannet takes up considerably less lateral space than the smaller Venom to its left (Image Kim Dunstan).





Above Left: Night operations on Melbourne. This remarkable picture is a time-lapse shot taken in 1961 as two Gannets unfold their wings in preparation for a sortie (picture Ron Marsh). **Above Right:** 830 hangs suspended by the ship's crane during an undercarriage retraction test in 1963. The maintainer standing by the hydraulic rig is Bruce Burns (back to the camera). The names of others have been lost in time. (Picture: Ron Marsh). **Below Right:** Two images taken by Ray Guest – upper: there was a period in 1961 when engine units were in short supply and a large number of aircraft were without them. The exact reason is not clear to us. Lower: a Gannet with the powerplant removed. We apologise for the quality of these images.

THE FIGHTING TIGERS

It was somewhere south of Sydney, somewhere way out in the sticks, That there was a Gannet squadron called the fighting 816. They were tried and trusty pilots, their observers were first class. Though their favourite word while resting (or so I'm told) was "Pass". But as well as playing games of chance, they boomed holes in the sky. And Gannet never turned a prop those pilots wouldn't fly. For those Double Mambas kept them up completely safe and sound, And if one failed, the other one would get them on the ground. So they flew those Gannets daily, everyone was so impressed That they won the Collins Trophy; and were voted "Just the best."

This year, just out from refit, the flagship put to sea With her flight deck newly painted. All the Tigers cried with glee! For it's off to the East again, their final fixed-wing trip: "The best one yet," they all avowed, while "Whacker" cracked the whip. "Come on my boys, we'll show this bunch just how they ought to fly, Keep circuits tight and speed right back — you'll never miss a wire, For I mean to show the S.E.A.T.O. how to hack that dread'd sub, Though we've got four Venoms with us — they are just a flying club!"

But somewhere up near Manus on a bright and sunny day, Joe tried to light his other donk — it wouldn't pull away! And the Gannet he was flying like a solid, streamlined brick. Just went heading for the oggin, and it got there pretty quick! They all jumped into their dinghies (all three were slightly twitched) And until the boss flew overhead, no one even knew they'd ditched. So Pedro to the rescue; they were picked up feeling fine, But where there once had been full ten, there now were only nine.

Then one day upon the booster, 816 so proudly sat, (The flagship of the Squadron) "No finer plane than that Has ever flown" the boys all said. It was a real delight to fly; until that day it flew — like magic out of sight! And as it slowly sank and sank, the crew abandoned ship, (They had, indeed, a very short, but most eventful trip). 'Twas somewhere in the China Sea, that aircraft met its fate. But on the Squadron 816, there now were only eight.

Now Wingnut hadn't flown for days (He'd always curse and swear), Although his "lookers" weren't too keen, to get back in the air. But finally they made it and their mission was to hack Four Krupny's ninety miles away; but on the long flog back One engine failed; the other one was going quite all right 'Til near the ship it got too hot, but they had lots of height, And made it to the deck O.K. (Much better than to heaven). But of our ten fine aeroplanes; that now left only seven.

So the Gannets now are grounded, and they make a sorry sight With their engines all in pieces — but soon they'll be all right, For we'll fix those bloody gear trains so they'll never, never fail, ('Cause if one does, I'll call it quits, and travel safe by rail). Though the buzz is slowly spreading and some folk are heard to say That the Gannets aren't yet finished, and they'll fly another day. To hit the deck, and bolt at night and do all wondrous things Much better than their counterparts — those beasts that have no wings.

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In fact I rather hope they do, 'Twere wrong that we should los;
The glamour of the fixed wing and the pleasure of the cruise,
Should engines fail and wings fall off, I s'ill won't have a care,
The reason's very simple; for you see — I WON'T BE THERE!

— G. A. T.

TOWER TOPICS

GREETINGS FROM THE BAILEY HILTON

- The management is now back in full swing, following the leave period, but a quick perusal of the log shows that of the ten working days of leave the airfield was open for eight — well done, the staybacks.
- Alza-selters and cokes were the order of the day following the end of term party at the White Ensign Club. There were the usual "stars," but these shall remain nameless!
- The "Happy Hour" at the Petty Officers' Mess also led some of the staff astray. Why is it that these "hours" have at least 180 minutes?!
- It must be a cruel world outside, as we are happy to see our chief regulator has honoured us with a few years more service.
- This is the time of the taxation returns and many are sad to see just how healthy their families have been when they look for medical deductions. Loss Angeles Oz, I believe, is claiming a certain S.P. man as being "WHOLLY" maintained.
- Congratulations to 817 Squadron on their re-commissioning — may their night sorties be shorties (Air Trafficwise).
- By the way, I heard from a good source that a bee was seen frantically flying down the Princess Highway with his legs crossed, looking for a B.P. Station!

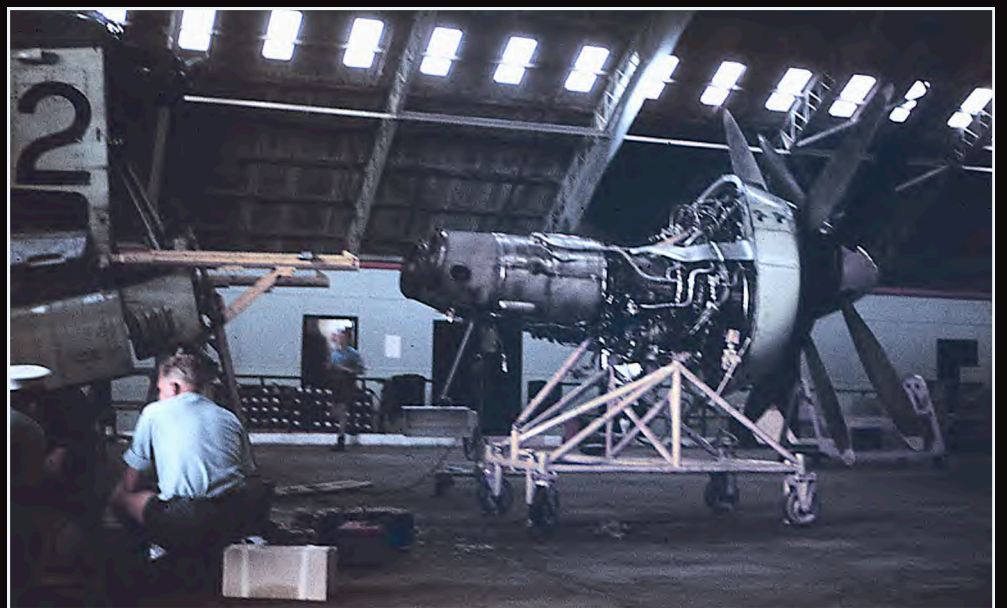


THE ALBATROSS LAUNDRY AND DRY CLEANING SERVICE

NO JOB TOO BIG OR TOO SMALL

SAME DAY DRY CLEANING SERVICE

37

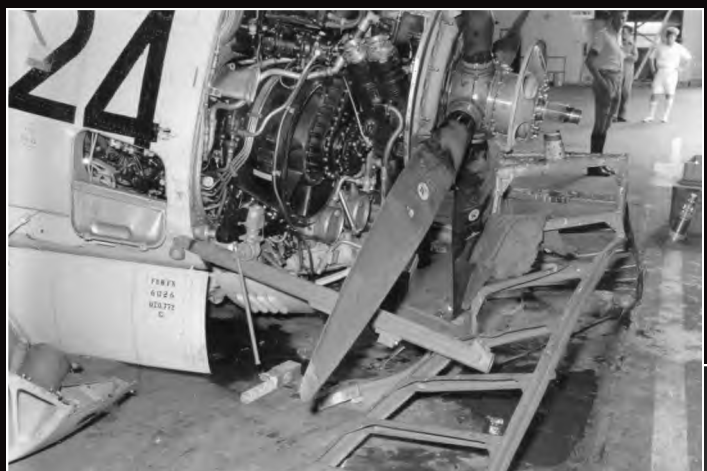


Above Left: The July Slipstream of 1963 featured a poem by Gordon Arthur Turner with a light hearted look at some of the aircraft lost. Beneath the banter it gives a clear indication of the gearbox problems that were causing accidents. Gear trains were eventually strengthened but this may not necessarily have solved the problem as there was at least one ditching in which gearbox casing failure was suspected as the cause. Gordon recently contacted the webmaster and provided the following explanations on some of the more colloquial terms in his work: The factor that caused me to make this attempt at poetry was that I, and Terry Pennington were Winston James' crew on that cruise and the incident referred to was interesting to say the least. Winston was in fact later awarded the Queens Commendation for Meritorious Conduct in the Air. The mention of "Pass" is because a number of the aircrew used to spend a lot of time playing bridge. "Whacker" was the Squadron C.O. LCDR. Arthur Payne. We did have four Sea Venoms on board but my recollection is that they were "B Flight" of 816; the first Gannet lost was near Manus Island (Joe Smith, Ian Lawson and Hank Hancox). The second ditched off the catapult (John Rowland, Tony Horton, Dave Findlay) I remember that incident very clearly as we were waiting to land and had a bird's eye view of the whole event....I remember being pleasantly surprised at the time it took a Gannet to sink! "Wing nut" was Winston James's nickname.

Right: *Fire in the Hold! We thought this was a fire caused by a starter cartridge malfunction, but it was actually more significant than that. LCDR 'Toz' Dadswell (P) and LEUT Gordon Turner (O) were tasked with a rocketing display for a families day aboard HMAS Melbourne. On attempting to start the port engine Dadswell suffered a cartridge malfunction, which was not unusual. He got the starboard engine started but was then surprised to see his Observer standing on the deck waving his arms wildly, and a fire crew approaching the aircraft indicating he should shut down the running engine. On doing so, a wall of flame surged over the cockpit, so Dadswell made a quick exit from the aircraft. The fire crew smothered the fire with foam.*

It transpired that the Naval Airman who had loaded the starter cartridges had failed to properly secure the cap on the cartridge chamber. When the cartridge was fired it blew the heavy cap into the oil tank on top of the engine. The starboard cartridge then ignited the six litres of oil, but while the engine was running the flames were pushed under the aircraft before curling up over the trailing edge of the mainplane. This attracted LEUT Turner's attention who decided to make a hasty exit.

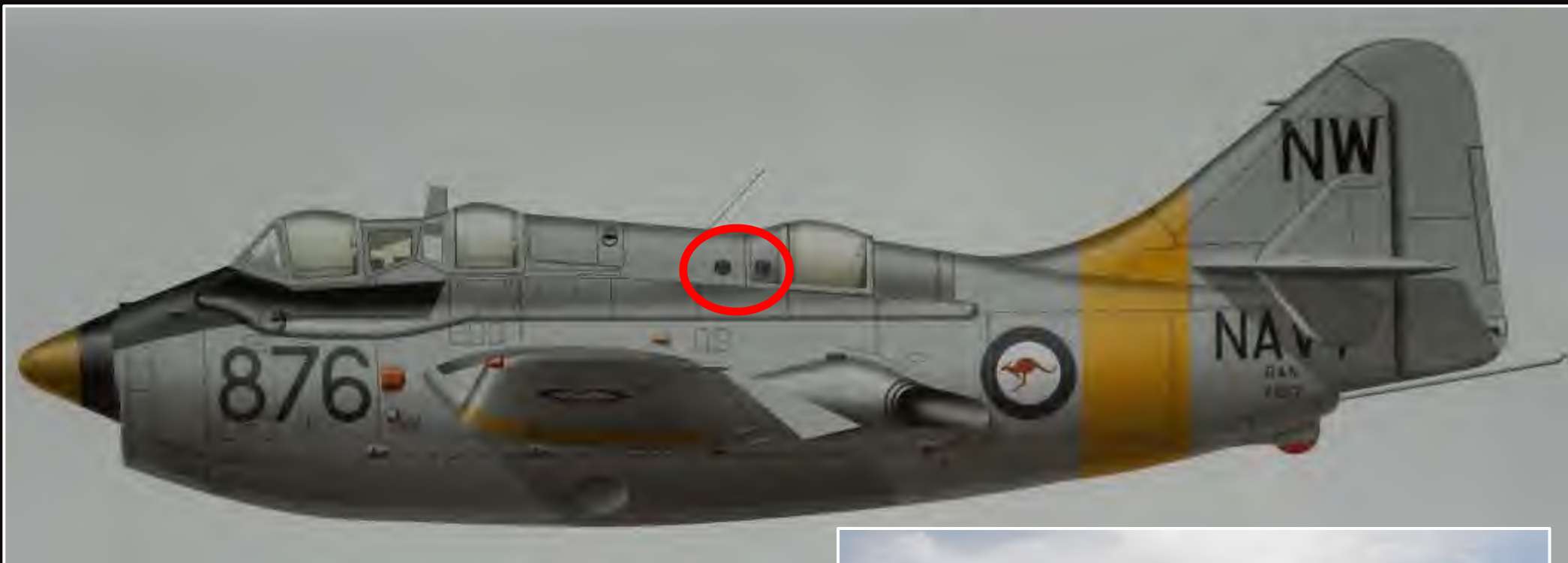
Damage to XG796 was extensive and the aircraft was craned ashore for major repairs. Unfortunately, on flying back to Nowra the undercarriage failed to lower, requiring the pilot (LEUT Peter Adams) to land wheels-up – necessitating another period of repair. Some time later the same aircraft made headlines by plunging over the side of the ship to hang suspended. It subsequently fell to a watery grave. (Thanks to Toz Dadswell for details on this incident). See here for XG796's story. (RAN image).



Above: A visually pleasing shot of a Gannet doing a touch and go on Melbourne. **Above Left:** An unusual shot of the bomb bay, which could hold two torpedoes, bombs or depth charges. (Images via Jeff Chartier).

Middle Left: Oops! A jack collapse during servicing at NAS Nowra caused substantial damage to this Gannet. **Lower Left:** An unusual shot showing the underside of a Gannet in flight. Note the size of the bomb bay and the retractable radar transducer just aft of it. Both images via Jeff Chartier. **Below Right:** A visitor to RAAF Point Cook in late 1965 (possibly XA343 in October), this Gannet attracted the attention of a Midshipman who sits in the centre (Observer's) cockpit. A SBLT – possibly Peter Coulson – is next to him explaining some of the finer points of the aircraft equipment. The identity of the person in the pilot's cockpit is not known. Photo via Graeme Baseden, Facebook.





Above and Right. A little known fact about the Fairey Gannet T Mk2 trainer is that it was a four-seater. The additional seat was located in the rear cabin, positioned forward of the rear seat. This extra seat was fitted with a normal harness and faced aft – the two small, round windows in the fuselage indicate its position. Between the seats was a netting type cargo holder, with quick release fittings, suitable for non-ordnance items such as mail or other light objects. In the event of an emergency the occupant of the 'spare seat' would have had great difficulty extracting themselves, which may explain why no one can remember it being used.



Left: 847(M) takes a wire whilst still airborne. The Gannet was a particularly rugged aircraft and this would have been regarded as a soft landing (image David Tomkinson via Jeff Chartier).



Right: Melbourne's flight deck was very small, particularly in comparison to USN carriers. Barry White recalls the time a team of RAN maintainers were returning from the USS Ticonderoga in a USN COD, much like an S2 Tracker but with passenger seats. On sighting Melbourne the USN pilot exclaimed "I ain't going to land on there, man." Barry asserts there was at least one USN COD aircraft with finger indents in the arm rests. From what he heard later the Melbourne flight deck crew thought there were half a dozen ghosts disembarking the aircraft.

Right: The end of the line. Three Gannet airframes, with their engines ripped out, await their final fate in a corner of the airfield at Nowra (image via Jeff Chartier). Of the 37 Gannets originally purchased, about one third (13) were lost to accidents, one returned to the Royal Navy (later to be repatriated) and a handful (4) saved for museums. The remainder were sold for scrap or burned at the stake in the fire ground at NAS. It was an ignominious end for aircraft which had rendered such faithful service.

