

## 1: Handley Page Victor - Infogalactic: the planetary knowledge core

*The Handley Page Victor was a British jet-powered strategic bomber, developed and produced by the Handley Page Aircraft Company, which served during the Cold War. It was the third and final V-bomber to be operated by the Royal Air Force (RAF), the other two being the Avro Vulcan and the Vickers Valiant.*

Origins Painting of test Victor B1 XA by artist and former Handley Page employee Peter Coombs The origin of the Victor and the other V bombers is heavily linked with the early British atomic weapons programme and nuclear deterrent policies that developed in the aftermath of the Second World War. Atomic Energy Act of McMahon Act having prohibited exporting atomic knowledge, even to countries that had collaborated on the Manhattan Project. No defensive weapons were to be carried, the aircraft relying on its speed and height to avoid opposing fighters. Although not fully meeting the requirements of the specification, the Valiant design posed little risk of failure and could therefore reach service earlier. By the time the HP. The design of the HP. WB was broken down at the Handley Page factory at Radlett and transported by road to RAF Boscombe Down for its first flight; bulldozers were used to clear the route and create paths around obstacles. Attached to the fin using three bolts, the tailplane was subject to considerably more stress than had been anticipated, and the three bolts failed due to metal fatigue. The fin was shortened to eliminate the potential for flutter while the tailplane attachment was changed to a stronger four-bolt fixing. Allam noticed a cockpit indication of Mach 1. The Victor maintained stability throughout the event. The Sapphire 9 was cancelled, however, and the heavily modified Phase 3 aircraft would have delayed production, so an interim "Phase 2A" Victor was proposed and accepted, to be powered by the Conway and having minimal modifications. The new Conway engines required redesigned enlarged intakes to provide the greater airflow required. These scoops fed ram air to Ram Air Turbines RAT which could provide electrical power during emergency situations, such as engine failure, during flight. An extensive search operation was initiated to locate and salvage the wreckage of XH to determine the cause of the crash. It took until November to recover most of the aircraft; the accident investigation concluded that the starboard pitot head had failed in flight, causing the flight control system to force the aircraft into an unrecoverable dive. These were anti-shock bodies ; bulged fairings that reduced wave drag at transonic speeds see area rule , which were also used as a convenient place to house chaff dispensers. This plan was abandoned when the U. Different camera configurations could be installed in the bomb bay, including up to four F49 survey cameras and up to eight F96 cameras could be fitted to take vertical or oblique daylight photography; nighttime photography required the fitting of F89 cameras. To get some tankers into service as quickly as possible, six B. Handley Page worked day and night to convert these six aircraft, with the first being delivered on 28 April , and 55 Squadron becoming operational in the tanker role in August Work therefore continued to produce a definitive three-point tanker conversion of the Victor Mk. Similar to the K. It served in the tanker role until withdrawn in October It was reported that, with intensive work, a B. These included the H2S radar , the first airborne ground-scanning radar, and the Green Satin radar. Operationally, the accuracy of the bomb-aiming system proved to be limited to roughly yards, which was deemed sufficient for high-level nuclear strike operations. Pilot control movements were transmitted via a low-friction mechanical system. This setup was developed to provide, amongst other capabilities, a level of artificial feel to the pilot. Eight separated hydraulic circuits were present on the aircraft, which comprised the alighting gear, flaps, nose flaps, air brakes, bomb doors, wheel brakes, nose-wheel steering, and the ram-air turbine scoops. The ECM equipment could be employed to disrupt effective use of both active and passive radar in the vicinity of the aircraft, and to provide situational awareness for the crew. Enemy communications could also be jammed, and radar guided missiles of the era were also reportedly rendered ineffective. The AAPU was capable of providing high-pressure air for starting the main engines, and also providing electrical power on the ground or alternatively in the air as an emergency back-up in the event of main engine failures. The AAPU also acted to reduce the need for external specialist support equipment. Turbine-driven alternators, otherwise known as ram air turbines RATs , had been introduced on the B. Retractable scoops in the rear fuselage would open to feed ram air into the RATs, which would provide sufficient electrical power to operate the flight controls. In the

event of engine flameout RATs would assist the crew in maintaining control of the aircraft until the main engines could be relit. The introduction of standoff weapons and the switch to low-level flight in order to evade radar detection was said to be decisive factors in the successful penetration of enemy territory. However, they were never required to fly combat missions and the high readiness alert finished at the end of the month. The RAF had experienced intense demand upon its existing aerial refuelling tanker fleet, and its existing fleet of Victor B. The contract for conversion was instead awarded to Hawker Siddeley , who produced a much simpler conversion than that planned by Handley Page, with the wingspan shortened to reduce wing bending stress and hence extend airframe life. Victor squadrons were dispatched on several extended deployments to the Far East , and short term deployments to Canada were also conducted for training purposes. In service, this type was primarily used in surveillance of the Atlantic and Mediterranean Seas , capable of surveying , square miles in an eight-hour mission; they were also used to sample the fallout from French nuclear tests conducted in the South Pacific. In order to cross the vast distance of the Atlantic Ocean , a single Vulcan required refuelling several times from Victor tankers. A total of three bombing missions were flown against Argentine forces deployed to the Falklands, with approximately 1. These missions provided valuable intelligence for the retaking of South Georgia by British forces. Shortly after the Gulf War, the remaining Victor fleet was quickly retired in , at which point it had been the last of the three V-bombers in operational service; retiring nine years after the last Vulcan, although the Vulcan had survived longer in its original role as a bomber.

### 2: Handley Page Victor K.2/SR.2, Airfix A ()

*The Handley Page Victor was a British jet-powered strategic bomber, developed and produced by the Handley Page Aircraft Company and served during the Cold War. It was the third and final of the V-bombers operated by the Royal Air Force (RAF); the other two V-bombers being the Avro Vulcan and the Vickers Valiant.*

Common measurements, and their respective conversions, are shown when possible. Mission-Specific bombload of up to 35, lb to include conventional drop ordnance as well as nuclear stand-off weaponry. Mk 1A - Based on the B. Mk 1 models but with improved Electronic CounterMeasures suite; 24 B. Mk 1A models but converted to tanker and quick bomber forms; 6 models converted in this fashion. Mk 1 - Tanker conversion models of B. Mk 1 models; 11 conversions. Mk 1A - Tanker conversion models of B. Mk 1A models; 11 conversions. MK 2 - "Improved" Victor Bombers with wider wingspans and new engines. Mk 2 models and more powerful engines; 21 B. Mk 2 models converted in this way. Mk 2 - Strategic Reconnaissance Platforms of B. Mk 2 models; 21 examples converted as such. Mk 2 - Tanker Conversion Models based on the B. Mk 2 bomber; 24 B. Mk 2 bombers converted in this fashion. Authored by Staff Writer. All three would make up the British strategic nuclear strike arm given life by way of a British Air Ministry requirement throughout the Cold War and, though the Victor was never to fire a shot in anger, it served the Royal Air Force well in her twilight years as an aerial tanker aircraft. The Victor was noted for its elegant lines and streamlined design - very distinct in overall appearance when compared to her contemporaries. Development Victor began life as the "HP. The distinct wing arrangement was courtesy of Godfrey Lee who, after the war with Germany had ended, visited the leftover plans of German aircraft. Following his journey, Lee returned to England and designed the crescent wing concept. Two prototypes were built in April of To test the validity of this new wing, a radio-controlled glider known as the HP. Unfortunately for Handley Page, this test aircraft crashed on its maiden flight. This set the project back some to the point that the British Air Ministry called for a full-scale piloted version - this becoming the HP. The tail of the Attacker was revised to a traditional high-mounted "T"-style arrangement. Despite all of this work to prove the validity of the wing design, the original HP. Despite the setback, production had already been ordered with an initial batch of 25 "Victor" bombers, this occurring even before either of the first two prototypes were ever completed. The first of the two HP. The initial flight proved the design a success. Despite an impressive showing at the Farnborough Air Show, WB was also fatally lost in July of the following year due to a weakness in the tail unit. WB was revised to include a reinforced tail unit and went airborne on September 11th, This new tail unit, however, proved to make the design quite tail-heavy and thus production Victors had their fuselages lengthened a full 42 inches and their vertical tail fins shortened to compensate. The first production aircraft was airborne by early and entered service trials. This period saw the aircraft delayed on a variety of fronts as challenges were found and applicable fixes were sought in response. On June 1st, , the Victor became the largest aircraft in the world to break the speed of sound. Operational status was achieved in November of that year and eventually found its first home with RAF No. Initial production models were designated as Victor B. Due to the countless Victor program project delays - either due to fatalities or technological issues - along with enemy technological advancements, the B. A new standard, Victor B. Mk 1A, was devised, giving the massive bomber a defensive chance with the inclusion of the "Red Steer" tail-warning radar system. Along with this addition came jamming transmitters and a radar warning receiver RWR to complement the bombers defensive suite. Mk 1A was also fitted with the Blue Steel, an air-launched, rocket-propelled nuclear stand-off missile common throughout the whole of the "V-Bomber" force and of British origin. Mk 1 served as the prototype which was, again, fatally lost and featured 4 x Rolls-Royce RCo. The wings were extended a total of 10 feet while the electrical suite was revamped. A mid-air refueling probe was added over the cockpit as were underwing fuel tanks for increased range. Additional defensive measures were integrated to the mix and the role of the bomber was now of a low-altitude attacker as opposed to the original high-altitude version. This move was necessitated by the defensive technological advancements made on the part of the Soviets and was quite unavoidable considering the cost and energies put forth into the Victor design up to this point. The new

aircraft emerged as the Victor B. Just 34 examples of the B. Mk 2 model were produced. These were followed up by the Victor B. Mk 2 RS model which featured more powerful engines up to 20,1bf. Additionally, these aircraft had provisions for the "Blue Steel" standoff missile. The missile - due to its sheer size - was held externally in a recessed belly position. From there, Victors did little in the way of armed combat. They would never release any of their ordnance in anger. As time wore on, the type served as a strategic reconnaissance platform in the form of the modified Victor SR. These reconnaissance systems were then pressed into service to replace the long-running - and now decidedly aged - Vickers Valiants in the role. At least 9 Victor SR. Mk 2 bombers with the first being flown on February 25th, and entering service with No. Likewise, the first generation Victors were pressed into service as in-flight refueling tankers to replace - once again - the aging Valiants. These Victors initially took on the designations of BK. Mk 1 and BK. Mk 1A based on their former model designations but these were later more aptly named to K. Mk 1 and K. Mk 1A as their initial roles of dedicated bombers were all but over. Mk 2 soon followed suit and were naturally based on the Victor B. Victor tankers served in an operational role through the Invasion of Iraq and quietly ended their careers from that point on. A total of 86 Victors of all types were constructed as bomber, reconnaissance and tanker forms. Essentially, the Victor was produced in three major batches - the being the two prototype forms followed by the 50 B. Mk 1 models and then the 34 B. Tanker, reconnaissance and updated bomber forms basically appeared as conversion models of the two production batches. Design Design-wise, the Victor was such a unique aircraft even when viewed from any angle. The top-down view offered up a form similar to that of a swallow. Nothing like it had ever flown before. Wings featured the aforementioned crescent shape which consisted of the wing root, then a bend that formed the remaining inboard and outboard wing sections. This choice of engine placement, however, must not have endeared the large aircraft to her ground crews as engine access was hardly an easy affair. The fuselage was pinched at the nose and the tail. The nose appeared as though a finely crafted arrowhead or bullet with a streamlined cockpit made up of framed windows. The fuselage was larger in the forward portion consisting of the cockpit and slimmed somewhat just aft of this area. The fuselage then slimmed much more towards the empennage eventually ending to a point. The empennage was decorated with a high-mounted T-style horizontal planes on a single vertical fin mounted to the extreme point on the fin. The horizontal surfaces had noticeable dihedral. It should be noted that virtually all surfaces of the aircraft featured sweep back, making for one truly streamlined machine. The undercarriage of the Victor was of a traditional tricycle type. The main gears retracted into the wings and featured 8 wheels to a gear. The nose landing gear was fitted with two wheels and recessed aft under the cockpit. When on the ground, the Victor did not offer much in the way of clearance particularly under and around the bulbous forward fuselage. The cockpit offered up quite a bit of room for pilot and co-pilot alike. The forward view was dominated by the slanting window frames while the main instrument panel took up the rest of the area. A centrally-located console was positioned between the pilots. Crew accommodations amounted to the two pilots, a pair of navigators and a dedicated electronic systems officer. Despite the crew of five, only the pilot and co-pilot were afforded ejection seats. Armament As a conventional bomber, the Victor could be fielded with a collection of some 34 x 1,lb bombs. Much like the Boeing B Stratofortress, the Victor could be used in carpet bombing sorties to suppress or disrupt enemy formations and structures through sheer force. Munitions were held in an internal bomb bay which could also be used for additional fuel in place of armament for a vast increase to overall operating range.

## 3: Category:Handley Page Victor - Wikimedia Commons

*Titles: Handley Page Victor No's 1 and 2 The Handley Page HP Victor was the last of the three British V-bombers to enter service. Technically highly advanced for its time, it featured a crescent wing to allow the highest possible cruise mach number.*

Attracting the interest of the Air Ministry, by the start of an official specification B. The intention was to get the aircraft into service by , this showing how little idea the Air Staff had of the task they had laid before the various V-bomber manufacturers. Handley Page decided to test their crescent wing and tail design on a smaller aircraft. A Supermarine type fuselage basically an Attacker fuselage, designated type by Supermarine was bought from Supermarine and after a brief stay at General Aircraft, moved onto Blackburn where it was married to appropriate crescent-shaped wings and a T-tail, becoming known as the YB. Coded VX, it actually flew too late to be of much use in the Victor programme and was lost in an accident on August 26th, , killing HP pilot, Duggie Broomfield. In June an order for 25 aircraft was placed, the official name of Victor being bestowed at this time. After re-assembly the first HP. Differing a lot from the initial tail-less design of the HP. Compared to the Vulcan and Valiant, the HP. On the Vulcan and Valiant the crew compartment was smaller, caused by it being a single sealed unit with pressure bulkheads fore and aft. On the Victor the pressurised crew compartment extended right to the tip of the nose, giving more room and a better view for the pilots. However, the undernose radar was in an unpressurised compartment so the cockpit floor was higher, with the rear crew at almost the same level as the pilots instead of lower down actually the pilots are slightly lower on the Victor. In common with the Valiant and Vulcan, only the pilots had ejector seats. While the initial design had included an escape capsule enclosing the entire crew area, the Air Ministry had changed its mind by , no doubt due to the costs of such a system. So instead the pilots got ejector seats, and the rear crew died if there was an emergency. While lead weights sorted this out in the first two, future examples had a lengthened front fuselage. This also had the bonus of allowing the crew more chance of escape; originally the engine intakes were so close to the crew door that escape was a very risky business. Now it was marginally more safe and there were some successful escapes later on. WB was carrying out a low level calibration run over the runway at Cranfield when the tail ripped off and the aircraft crashed, killing the crew. A combination of mistakes in calculations had led the engineers to believe there would be no problems with the tailplane, when in actual fact the three bolts holding it on were subject to more stress and fatigue than expected, especially when the tail began to flutter. In May a further 33 Victors were ordered. The only fighters in the country that could intercept them and regularly did were the American F Voodoos of the 81st TFW. A shameful tale in terms of RAF defence capability of the time - but it showed how impressive the Victor was. Fitted with more powerful versions of the Sapphire engines used in the HP. Victors were soon part of the nuclear deterrent, initially carrying the Yellow Sun hydrogen bomb. By late , though, Handley Page had put forward proposals for an improved Mk. Despite the future of bombing obviously lying in the low-level under-the-radar attack, the B. Much redesign of the wing roots, intakes and engine boxes was required but eventually the B. The reasoning being that a Victor carrying four Skybolts two under each wing was doing the job of four Blue Steel-carrying Victors, and therefore fewer were needed! Handley Page had not merged with anybody, and further Victor orders were looking increasingly uncertain. The government then reinstated the cancelled Victors with promises of 27 more if only Handley Page would go ahead and merge with somebody. In the middle of negotiations with Hawker-Siddeley, 22 Victors from the promised 27 were cancelled. The production run cut short in this manner, the final B. Sir Frederick Handley Page, on his deathbed, railed at the destruction wrought by the mandarins of Whitehall, saying "The misguided little men think they are having their revenge". He would die without ever seeing the collapse of his beloved company, a small mercy at least. Indonesia backed down when further Victors were deployed to the area, but the V-force remained a regular visitor from then on, usually in the shape of Vulcans. In the middle of the work to convert B. Low-level operations had badly fatigued the Valiant which proved unable to cope with the stress of this new environment, and suddenly the RAF was without its Valiant tankers. With the need for the Victor tanker now

urgent, six B. Later this two-point version would be redesignated the B. The Blue Steel mounts were not needed and the bomb bay was filled with cameras and powerful photoflashes. The cancelled Victors were now proving to be a costly mistake; the tanker force was at the edge of its capability and the K. More tankers were desperately needed. HP had produced a feasibility study for a Victor K. The job of the K. They disregarded many of the planned K. Other changes resulted in a Victor that performed rather poorly compared to previous versions though it still outperformed many other aircraft including jet transports. Entering service in May , saw yet more cancellations in the defence review of that year. In the end only 24 conversions were carried out, and were planned to fly for the next 14 years until around Nelson The Victor tankers would see action twice; first of all, in One problem - the Vulcan had nowhere near enough range to get to the Falklands from the nearest useable airfield Wideawake on Ascension Island and back. Inflight refuelling would be necessary - and a lot of it. There the Victor would refuel the Vulcan for a final time before the attack. Victors would once again be waiting to refuel the Vulcan after the attack took place; five being needed for the return trip. On the first mission, the final pre-attack refuelling revealed the bravery of the Victor crews, when the Victor gave the Vulcan enough fuel to continue, but left itself short - and they would not break radio silence to request a tanker to meet them on the way home; without being refuelled itself, the Victor could not make it back to base. Thankfully after the Vulcan had broken radio silence as planned to announce a successful attack, they could get another Victor scrambled and waiting when they neared home. While the Vulcan missions were long, so were the Victor missions of course - and not just when supporting Black Buck missions. On one occasion, XH carried out a reconnaissance mission, radar mapping the South Atlantic on a mission lasting 14 hours and 45 minutes and covering a distance of 7, miles! The surge in Victor operations required to support the war in the South Atlantic meant, of course, a shortage of tankers at home. Of the eight Victors involved in Granby, six gained colourful and risqué nose art courtesy of Cpl. Cue one kill marking! Later in the US at Offutt AFB, another Victor suffered a slight mishap, running out of taxiway - appropriate artwork was soon applied on the cockpit door! Despite this brief spot in the limelight, the Victors were reaching the end of their lives and were being increasingly replaced by VCs another Conway-powered aircraft of course, which had been in RAF service since the early s. Most Victors ended up in use as firefighter training aids or were scrapped, only a few being preserved. Of the 86 Victors produced including the two prototypes , only 5 full examples now survive. A further unserviceable example and assorted hulks were scrapped. Two of the survivors are capable of fast taxi runs, and this led to an inadvertent flight by the Bruntingthorpe example, which took to the air briefly in May - and thus became the last Victor flight ever.

## 4: Handley Page Victor - Photos - English

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The crescent-shaped wing was created to increase speed by preventing drag rise as the wing approached Mach 1. Handley Page tested their crescent wing and tail design, using a Supermarine Type fuselage designated type by Supermarine. The fuselage was married to crescent-shaped wings and a T-tail, and was known as the HP. Coded VX, it flew too late to be of use in the Victor program and was lost in an accident on August 26th, , killing pilot Duggie Broomfield. In comparison to the Vulcan and Valiant, it had a larger bomb bay and a very different crew compartment, with the pressurized crew compartment extended to the tip of the nose. In common with the Valiant and Vulcan, only the pilots had ejector seats. Thus, in an emergency, the pilots could get out while the rear crew died, given there was really no way to bale out of the side hatch right in front of the engine intakes; the B. The only fighters that could intercept them " and did " were the F Voodoos of the 81st TFW, which showed how impressive the Victor was. The first Victor B. Fitted with more powerful Sapphire engines than used in the prototypes, the cleared maximum speed of Mach 0. Bomber Command became operational with the Victor in April In late , Handley Page proposed an improved Mk. Despite it becoming obvious that the future of bombing was a low-level under-the-radar attack, the B. Following cancellation of the much higher thrust Sapphire 9 engines, Rolls-Royce Conways were adopted, requiring redesign of the wing roots, intakes and engine boxes. With wingspan expanded by an insert in the wing and a larger wingtip, changed tailcone, all-new electrical system and many other modifications, the first B. The B-2 entered service just in time to stand alert during the Cuban Missile Crisis in The role soon changed to low-level bombing in , and with appropriate green and grey camouflage replacing the earlier anti-flash white, XL being the first changed, with a one-off scheme different from what would become standard, and the B. Indonesia backed down when further Victors were deployed in In , XL, which had deployed to Australia, suffered a bomb-bay fire on the return flight and was forced to land at Gan in the Maldives south of India. A team from Handley Page went out and re-wired the bomb-bay. After a fire, re-wire, five weeks on the ground in tropical salt-laden air, there were many crossed fingers when she gingerly took to the air again. We must have done a reasonable job as she flew safely home none the worse for her ordeal. They have now released the kit as a Victor K. This kit is the only one to depict the bomber. The now-standard excellent Airfix instruction booklet clearly shows what new parts are the subject of each logical step of construction; this is very helpful with a kit that is as complex but not complicated! A detailed cockpit is barely visible if one opens the side hatch to allow light inside. Two different aircraft " one in the overall white anti-flash scheme, and one in the later camouflage scheme, are supplied in the decal sheet along with extensive in-scale stenciling. Xtradecals released sheet with several Victor bombers, including XL with its unique markings and scheme. I highly recommend that the wing pitot tubes and all antennas be left until the final step in your assembly. That said, if you take the radical step of following the instructions, you will have a trouble-free build. Everything fits, and the ultimate result looks good. I also painted the interior of the air intakes white before further assembly. Finally, I attached the landing gear as early on as possible, so the model could sit. It requires plenty of weight in the nose, and the fish weights completely filled the area below the cockpit floor. I gave it some weathering so it would look like the original had looked after its five weeks in the tropical Maldives. The kit decals were used for the national markings and the stenciling. Fortunately, the upper wing insignia was sufficiently opaque. I finally gave up on all the stenciling halfway through, given their small size; you can barely see them once applied. I have always thought the Victor was the most interesting of the three V-bombers in terms of its aerodynamic shape " it even gives the Vulcan a run for its money in terms of aerial aesthetics. This kit by Airfix is not difficult, though I would recommend it only to intermediate modelers and above, due to its complexity. My suspicion is the K.

### 5: Handley Page Victor by Jan Forsgren (Matchbox/Revell 1/72)

*The Handley Page Victor v / 01 may 18 / greg goebel \* In the s, the British Royal Air Force (RAF) acquired a strategic nuclear strike force in the form of the "V-Bombers" -- the Vickers Valiant, the Handley Page Victor, and the Avro Vulcan.*

History[ edit ] Frederick Handley Page first experimented with and built several biplanes and monoplanes at premises in Woolwich , Fambridge and Barking Creek. His company, founded on 17 June , became the first British public company to build aircraft. In , Handley Page established an aircraft factory at Cricklewood after moving from Barking. Handley Page had been asked by the Admiralty to produce a "bloody paralysing of an aeroplane". The crew departed for New York from Newfoundland but were forced to land on 5 July in Parrsboro, Nova Scotia where the aircraft was repaired over the course of the summer. Handley Page developed several large biplane airliners, including the luxurious Handley Page H. Handley Page developed the Handley Page Slat or slot, see slats , an auxiliary airfoil mounted ahead and over the main wing, which formed a narrow opening running along the leading edge of the wing to improve airflow at high angles of attack. The design was so successful that licensing fees to other companies was their main source of income in the early s. In , the Cricklewood Aerodrome was closed and a new one built at Radlett , where most aircraft were now to be constructed. However the construction of aircraft at Cricklewood continued until when the premises were sold to become the Cricklewood trading estate. In response to a government request for heavier, longer ranged aircraft, Handley Page tendered the HP. However the Vulture proved so troublesome that " years before the engine was abandoned by Rolls-Royce in " the Air Staff decided that the HP. Therefore, before reaching prototype stage, the HP. Although in some respects such as crew survivability better than the Lancaster, the Halifax suffered in terms of altitude performance [6] and was redeployed toward the end of the war as a heavy transport and glider tug, with several variants being specifically built as such, including the HP. This aircraft remained in service as a tanker aircraft well beyond the demise of the company which created it. In Handley Page bought some of the assets of the bankrupt Miles Aircraft company. These assets include existing designs, tools and jigs, most notably for the Miles M. The whole operation was Handley Page Reading Ltd, the company constituted to buy and operate the assets formed out of the legally alive but otherwise inactive Handley Page Transport Ltd. The most significant of the inherited designs was the Herald airliner. By the late s, the British aviation industry was dominated by just two combines; Hawker Siddeley and the British Aircraft Corporation. Unable to compete for government orders or with large commercial aircraft, Handley Page produced its final notable Handley Page design; the Jetstream. This was a small turboprop -powered commuter aircraft, with a pressurised cabin and a passenger capacity of 12 to It was designed primarily for the United States " feederliner " market. The Jetstream was too late to save Handley Page, and the company went into voluntary liquidation in March and was wound up after 61 years trading under the same name. The Jetstream however lived on as a successful product, the design being purchased and produced by Scottish Aviation at Prestwick , continuing after the company was merged into British Aerospace from

### 6: Handley page victor on Pinterest | Fighter jets, Avro vulcan and Military Aircraft

*Product Description s Cold War V-Bombers, the Handley Page Victor is certainly one of the.*

Origins[ edit ] Painting of test Victor B1 XA by artist and former Handley Page employee Peter Coombs The origin of the Victor and the other V bombers is heavily linked with the early British atomic weapons programme and nuclear deterrent policies that developed in the aftermath of the Second World War. Atomic Energy Act of McMahon Act having prohibited exporting atomic knowledge, even to countries that had collaborated on the Manhattan Project. No defensive weapons were to be carried, the aircraft relying on its speed and altitude to avoid opposing fighters. Although not fully meeting the requirements of the specification, the Valiant design posed little risk of failure and could therefore reach service earlier. By the time the HP. The design of the HP. WB was broken down at the Handley Page factory at Radlett and transported by road to RAF Boscombe Down for its first flight; bulldozers were used to clear the route and create paths around obstacles. Attached to the fin using three bolts, the tailplane was subjected to considerably more load than had been anticipated, causing fatigue cracking around the bolt holes. This led to the bolts loosening and failing in shear. Stress concentrations around the holes were reduced by adding a fourth bolt. The lengthened nose also improved the c. Victors also carried U. Allam noticed a cockpit indication of Mach 1. The Victor maintained stability throughout the event. The Sapphire 9 was cancelled, however, and the heavily modified Phase 3 aircraft would have delayed production, so an interim "Phase 2A" Victor was proposed and accepted, to be powered by the Conway and having minimal modifications. The new Conway engines required redesigned enlarged intakes to provide the greater airflow required. These scoops fed ram air to Ram Air Turbines RAT which could provide electrical power during emergency situations, such as engine failure, during flight. An extensive search operation was initiated to locate and salvage the wreckage of XH to determine the cause of the crash. It took until November to recover most of the aircraft; the accident investigation concluded that the starboard pitot head had failed inflight, causing the flight control system to force the aircraft into an unrecoverable dive. These were anti-shock bodies ; bulged fairings that reduced wave drag at transonic speeds see area rule , which were also used as a convenient place to house chaff dispensers. This plan was abandoned when the U. Different camera configurations could be installed in the bomb bay, including up to four F49 survey cameras and up to eight F96 cameras could be fitted to take vertical or oblique daylight photography; nighttime photography required the fitting of F89 cameras. To get some tankers into service as quickly as possible, six B. Handley Page worked day and night to convert these six aircraft, with the first being delivered on 28 April , and 55 Squadron becoming operational in the tanker role in August Work therefore continued to produce a definitive three-point tanker conversion of the Victor Mk. Similar to the K. It served in the tanker role until withdrawn in October It was reported that, with intensive work, a B. These included the H2S radar , developed from the first airborne ground-scanning radar, and the Green Satin radar. Operationally, the accuracy of the bomb-aiming system proved to be limited to roughly yards, which was deemed sufficient for high-level nuclear strike operations. Since they were fully powered an artificial feel unit was needed, fed by ram air from the pitot in the nose. The control system was duplicated in flying control units which received pilot and autopilot demands. Pilot control movements were transmitted via a low-friction mechanical system to the flying control units. Duplication was provided on the premise that the single pilots input would remain functional and that neither hydraulic motors nor screwjack on a unit would jam. A separate hydraulic circuit was used for each of the following: The ECM equipment could be employed to disrupt effective use of both active and passive radar in the vicinity of the aircraft, and to provide situational awareness for the crew. Enemy communications could also be jammed, and radar guided missiles of the era were also reportedly rendered ineffective. The engines were embedded in pairs in the wing roots. Because of the high mounted position of the wing, the tail had to adopt a high mounting to maintain clearance of the jet turbulence, but the airbrakes were ideally situated to take advantage of this phenomenon. The Conway had significantly higher thrust than the Sapphire engine in the B. The AAPU was capable of providing high-pressure air for starting the main engines, and also providing electrical power on the ground or

alternatively in the air as an emergency back-up in the event of main engine failures. The AAPU also acted to reduce the need for external specialist support equipment. Turbine-driven alternators, otherwise known as ram air turbines RATs , had been introduced on the B. Retractable scoops in the rear fuselage would open to feed ram air into the RATs, which would provide sufficient electrical power to operate the flight controls. In the event of engine flameout RATs would assist the crew in maintaining control of the aircraft until the main engines could be relit. The introduction of standoff weapons and the switch to low-level flight in order to evade radar detection were said to be decisive factors in the successful penetration of enemy territory. However, they were never required to fly combat missions and the high readiness alert finished at the end of the month. The RAF had experienced intense demand on its existing aerial refuelling tanker fleet, and its existing fleet of Victor B. The contract for conversion was instead awarded to Hawker Siddeley , who produced a much simpler conversion than that planned by Handley Page, with the wingspan shortened to reduce wing bending stress and hence extend airframe life. Victor squadrons were dispatched on several extended deployments to the Far East , and short term deployments to Canada were also conducted for training purposes. In service, this type was primarily used in surveillance of the Atlantic and Mediterranean Seas , capable of surveying , square miles in an eight-hour mission; they were also used to sample the fallout from French nuclear tests conducted in the South Pacific. In order to cross the vast distance of the Atlantic Ocean , a single Vulcan required refuelling several times from Victor tankers. A total of three bombing missions were flown against Argentine forces deployed to the Falklands, with approximately 1. These missions provided valuable intelligence for the retaking of South Georgia by British forces. Shortly after the Gulf War, the remaining Victor fleet was quickly retired in , at which point it had been the last of the three V-bombers in operational service; retiring nine years after the last Vulcan, although the Vulcan had survived longer in its original role as a bomber.

## 7: Handley Page Victor Heavy Bomber / Aerial Tanker Aircraft - United Kingdom

*Model Type: HANDLEY-PAGE VICTOR V-Bomber Aircraft. National Markings: British. Color: Hand-Painted Camouflage. Also Available in the following scales: 1/, 1/, 1/, 1/72, 1/*

It was submitted in response to the same British Air Ministry requirement for a nuclear strike platform that gave rise to the Avro Vulcan, B. The aircraft featured a "crescent" wing, with the sweep decreasing in three steps -- Gustav Victor Lachmann, a German national who had been working for Handley Page when war broke out and had been interned. Handley Page was eventually able to prevail on the authorities to let Lachmann continue work for the company, in cooperation with his deputy, Godfrey Lee. Just after the end of the war, Lee went to Germany to learn about German advanced aircraft research; when he returned to England he came up with the crescent-wing design, while bedridden with pneumonia. This exercise having proven a failure, in the Air Ministry issued another specification, "E. General Aircraft obtained a fuselage for the Attacker jet fighter from Supermarine, then refitted it with a crescent wing and a tee tail. General Aircraft had been bought out by Blackburn by this time, and Blackburn test pilot G. Parker was at the controls. In addition, the initial HP. There was a runway at Radlett and the original expectation had been that test flights would take place there, but the government decided that the longer runway at Boscombe Down would provide an additional margin of safety. The transfer of the aircraft was a substantial project in itself. The route had to be scouted out for clearance, with alterations made by bulldozer to the terrain alongside two curves, and then the aircraft was broken down and packed up. WB was reassembled at Boscombe Down. While the aircraft was being run through ground hydraulic tests preparatory to the initial flight, a fire broke out and doused three techs with burning hydraulic fluid, one of them dying in the hospital a few weeks later. It was not fitted with operational kit, ballast being used to achieve flight trim. Hazelden described the initial flight as "comfortable", with "no anxieties". The take-off run was surprisingly short; there had been no real need to move the machine to Boscombe Down. WB made an appearance at the Farnborough Air Show in , with the aircraft painted in spiffy colors -- black fuselage with a red cheatline and silver flight surfaces. Trials showed the basic design to be sound, with some corrections needed. Unfortunately, one of the corrections was discovered very much the hard way, when WB was lost in a crash on 14 July while on a low-level run. The tail assembly was weak and tore off, with test pilot Ronald Ecclestone and his crew all killed. It had the same spiffy color scheme that had been applied to the first prototype, and actually took a joyride to the Farnborough air show during the initial flight. It was fitted with operational kit. Production of the HP. First flight of a production aircraft was on 1 February , with test pilot Johnny Allam at the controls. Allam "accidentally" broke Mach 1 in a shallow dive on 1 June , making it the largest aircraft to that time to exceed the speed of sound. Service trials stretched out, with fixes piling up and leading to delays. It was made mostly of aluminum aircraft alloys, in the form of a two-skin sandwich with corrugated filling, held together with spot welding. The wing had large rear flaps and leading-edge flaps -- somewhat oddly called "nose flaps" -- to reduce take-off distance. The tail was of swept tee configuration. The Victor featured tricycle landing gear. The nose gear had twin wheels and retracted backward; each main gear unit consisted of eight-wheel bogies, with two rows of four tires, and retracted into the wings. Large hydraulic airbrakes were fitted to each side of the tailcone, and the tailcone contained a drag chute. The engines were buried in the wingroots, a configuration that improved aerodynamics but made service access somewhat troublesome. In principle, a liquid-fuel de Havilland Spectre rocket pod could be attached under each wing between the engines to provide take-off boost, but though the Spectre was trialed, it was never used in service. The Victor carried a crew of five, including a pilot, copilot, two navigators, and an electronics systems officer, all in a spacious cockpit. Ejection seats were only provided for the pilot and copilot, on the basis that they would generally stay with the aircraft until the rest of the crew got out. There had been thought of building the entire crew compartment as an escape module, but the Air Ministry judged this measure too tricky and expensive. The Victor could carry a single thermonuclear bomb, generally a British Blue Danube munition, later the Yellow Sun munition -- though it also carried American fusion weapons under a "dual command" arrangement. For conventional carpet bombing, the Victor B. The bombbay

could also carry a long-range ferry tank as a alternate load. However, it is unclear if the Tallboy and Grand Slam were ever qualified on the Victor, and very unclear that they were ever service weapons for the aircraft. The prototypes had proven uncomfortably tail-heavy, and so the forward fuselage was stretched by 1. In addition, the crew door was moved to allow the crew to bail out without being sucked into the engines; cabin glazing was increased and rearranged; the tailfin fillet was eliminated and the tail tee-joint bullet fairing was modified; and the top of the outer wing was fitted with a set of small "vortex generator" airfoils to ensure proper low-speed airflow. The prototypes had two leading-edge flaps on each wing, but the production machines had only one. The prototypes had also proven very responsive to control inputs -- too much so, in fact, making them "touchy", and as a result the production machines had "heavier" controls. The cockpit dashboard layout was also rearranged after initial trials, much to the frustration of Handley Page engineers; they had reviewed the matter with the Air Ministry in the design phase, but when it came time to actually fly the machine, the layout was judged "unacceptable". Three of the B. Pictures survive of a B. By the time the Victor was in full service, adversary fighters and other defenses were well able to reach or exceed its speed and altitude. To improve the survivability of the type, 24 were modified to the "Victor B. Unfortunately, this machine splashed into the Irish Sea in August during trials, the crew being lost. The program went ahead despite the mishap; the B. There had been initially plans to fit Olympus or advanced Sapphire 9 engines, but these schemes fell through and the Conways won by default. Fit of the Conways required substantially bigger inlets to provide greater airflow. A stretched wing, extended 46 centimeters 18 inches at the root and 1. A revised electrical system, plus a Blackburn-Turbomeca Artouste auxiliary power unit APU in the right wing stub for engine self-starting. Although some photos of early production Victor B. Anti-flash white colors gave way to a disruptive camouflage scheme, with the first camouflaged B. Bombbay hardware altered to permit carriage of the Blue Steel standoff missile semi-externally. Modified wings, featuring altered leading edges and a spindle fairing in the middle of the rear of each wing, known as a "Kuechemann carrot" or "speed pod", which improved high-altitude stall characteristics and stored additional chaff dispensers. A "quick start" system to allow the aircraft to get off the runway quickly from a cold start. The Air Ministry felt Skybolt would give more bang for the money and decided to reduce the Victor production buy accordingly, but the Americans canceled the program in , on the basis that other nuclear assets were more cost-effective. The British government had not been briefed on the cancellation, and there was considerable distress over the matter. However, the British government reasonably much preferred the offer of adopting the Polaris submarine-launched missile system, and Skybolt stayed dead. The Victor had to struggle on with the increasingly obsolescent Blue Steel. The Victor never fired a shot in anger. In , Victors were redeployed to Singapore in response to Indonesian hostility to Malaysia. Although there were some small border clashes during the confrontation, that was about as far as the conflict went, and the Victors never did perform any bombing attacks. There had already been plans to modify some of the Victor B. The program was accelerated to make up for the loss of the reconnaissance Valiants. The first Victor B SR. It featured the Yellow Aster radar, up to 15 film cameras in various arrangements in the bombbay, and carriage of photoflash flares; on occasion it also carried fallout-sampling gear, fitted to the front of the wing tanks. A total of eight B. In principle, these machines were still capable of performing strike missions. They were originally designated "Victor B K. The initial tanker trials were completed and following conversions of the B. These modified machines were originally designated "BK. The first Victor tanker squadron, Number 57, became operational in February , to be followed by Number 55 and Squadrons. The decision was made to refit the B. Handley Page had conducted technical studies on the matter from , but the company went under in , with the contract for the upgrades awarded to Hawker Siddeley in Hawker Siddeley completed the upgrade program, with some difficulty since the company had little expertise with the Victor, and had to start from scratch. All the bombing gear was removed, while the wing was strengthened and 46 centimeters 18 inches were clipped off each wingtip to reduce flight stress -- altitude performance no longer being needed. The undernose glazing was finally eliminated. Number Squadron was looted for B. The first Victor K. With the improved K. They were replaced by reconnaissance-configured Avro Vulcan B. The nearest RAF base was on lonely Ascension Island in the central Atlantic, so the Victor tanker was necessarily a critical factor in supporting bombing operations

from the UK. Even before the start of offensive operations, the Victor was performing radar reconnaissance over the South Atlantic, with four Victor tankers hastily modified for reconnaissance by tweaking their radars and installing provisions for cameras. From 20 April, Victors flew from Ascension to conduct radar sweeps of the ocean, in particular reporting on shipping and ice conditions for the assault fleet then on its way to the region. The reconnaissance missions were supported by Victors operating as tankers. Each Vulcan attack involved a single bomber, supported by a number of Victors. It was the longest-ranging bomb raid that had ever been flown to that time; it was not only effective in denying local air support to the Argentine Falklands garrison, but also served notice to the Argentine government that the RAF could bomb Buenos Aires or other mainland targets, if so desired. A second raid with HE bombs was flown on 3 May. Vulcans were then fitted with Shrike anti-radar missiles provided by the US, with a flight on 28 May being scrubbed inflight due to a technical problem with a Victor, but similar missions were flown on 29 May and 2 June, with Argentine radar installations successfully targeted and disabled. The second set of combat operations of the Victor took place in the Gulf War. Victors also provided tanker support for air patrols over Iraq into

### 8: Handley Page Victor: Toys & Hobbies | eBay

*Originally developed to carry nuclear and conventional weapons at subsonic speeds and high altitudes, the Handley Page Victor was part of the RAF V bomber fleet until For a very long time it was assigned a tanker role with active service in 2 wars.*

Fuselage Aeroclub seats that looked like the right ones replaced the originals, apart from those only original parts were used. I had no clue of how much weight to put in the fuselage, so that had to wait. The longitudinal panel lines were rescribed before joining the fuselage halves, the fuselage halves were glued together and the other panel lines were scribed. Then it was time for the wing attachment areas to be prepared and here some work was needed to get a good fit for the wings, due to Matchbox very unusual solution. I found it necessary to strengthen the fuselage with extra spars made from heavy duty tubes. This I do on most airplanes as too much strain is put on the fuselage joins otherwise when handling it. The kit ram air intakes for the turbines in front of the fin were too simple, and had to be replaced. Holes in the fuselage were cut, and new intakes were modeled from Plasticard and finally there was a PE part for the front edge. Tabs were glued on the inside of the fuselage and painted black, and the new intakes were glued to the tabs after painting the fuselage. I decided to have the air brakes in the closed position as open air brakes destroy the clean lines of the rear fuselage, and the internal mechanism were so rudimentary the choice was simple. I glued them shut, applied some Milliput and sanded everything flush, then I scribed along the edge of the air brakes and made new strakes from Plasticard. Wings The wing halves were scribed before joining upper and lower halves. The intakes are difficult to improve as there is a plethora of guide vanes inside that are virtually impossible to put there. The lower lip was extended slightly downwards with Milliput and all the inside was lined with Plasticard. The guide vane closest to the opening was replaced with a more correct one, and covers for the inlets were made and painted bright red. The wings have a dihedral where the inner and outer wing panels are connected, but this was not present on the kit and had to be corrected. Photographs and drawings were used when preparing the outer wing panels. A piece of the wing forward edge was cut and angled downwards to represent extended slats. I chose to have the flaps in the extended position as it gives more weight to the plane, and some rails and rods were added for the extension mechanism. The rear end of the faired in wing tanks had to be cut off and modified to fit the extended flaps, this is something Matchbox has missed to do. The wings were mated with the fuselage and everything looked good, but later a former RAF mechanic told me the wing tips with the pitot tubes should be twisted downwards. This can be seen on photographs but I missed it! Tailplane The vertical fin was thinned down substantially and rescribed. When aligning the tailplane it is best to place the model horizontally on the desk to get the tailplane absolutely vertical. As a symmetrical airframe is vital this should always be done, and to be able to adjust the tail while the cement is curing it is best to use old fashioned liquid cement. The stabilators were added on top of the fin at the correct angle according to photographs. Flightpath white metal cones on the back and front of the tailplane replaced the original cones, this required some Milliput and lots of work. The model almost completed and time to check for necessary nose weight by balancing the model on the main gear, or piano wire representing it. Twenty-five grams was needed and lead was glued into the nose from a hole in the fuselage belly. Cockpit Canopy 1 Now to the nerveracking part of this story! The PE canopy framing was formed to a cylindrical shape over a tube of the right size, but the problem is that the Vulcan canopy is curved in two planes which is impossible to obtain unless heating, cutting and soldering the brass, but I could live with this simplified canopy as the framing was beautiful. Eventually I found a suitable piece and glued the plastic film to the PE framing already painted and installed it all to the fuselage. Some Milliput and it all looked beautiful, except a small problem in profile because of the omission of the double curvature. It looked like that for a week, then the windows cracked! I did it all again with another window material and this time it lasted for three weeks and then I gave up! I have repainted several models when I was unhappy with something. Cockpit Canopy 2 The thick, terrible looking original canopy was retrieved from the scrap box and thinned down from the inside, polished and dipped in Johnson Kleer and glued against the Plasticard fuselage rim, as I had to build up the fuselage after the brass frame

experience picture 6 The fuselage and canopy were sanded flush and polished to a beautiful shine! The location of the glass panels was measured, and the framing covered by tape strips, then the glass panels could be masked. When all panels were covered the tape covering the framing was removed and all could be painted. Landing Gear The gears are standard with a small PE fret. When testing the landing gear height the model sat perfectly with wing tips at equal height! The gears are sturdy enough to carry the weight of the model in my transport box. Painting and Markings Painting was done after the first cockpit canopy attempt, and was completed after the final canopy was there! I used Xtracolor paints and ordinary masking tape for the sharp demarcation lines between the different colors. The standard paint scheme was dark green and medium sea gray with white underside. Before putting on decals I gave the whole model a coat of Johnson Kleer, which I repeated after the decals were set. Then I used a wash of white spirit and dark brown oil color to tone down the colors. For the final weathering touch I used dry pastel powder and a small brush on the matte surface achieved by a small amount of Tamiya Flat Base in Johnson Kleer. Two more to go!

### 9: Handley Page Victor - Wikipedia

*This is an excerpt from our 'Salute the Victor' programme. The video shows the last flight of a Victor - the delivery of Handley Page Victor XH to Shawbury on 30th November for.*

Technologically advanced when conceived, it was quickly outdated and performed more useful service in tanker and reconnaissance roles. After World War II, and anticipating the technological trends of the day, Britain determined to maintain a strategic bombing force that would be jet-powered and carry atomic weapons. The Victor was faster, higher flying and capable of carrying a heavier bombload than both the Valiant and Vulcan. First flown in 1952, the Victor was a graceful, high-wing monoplane of rather sophisticated lines. The wing was crescent-shaped with decreasing degrees of sweep toward the tips. This arrangement allowed a constant critical Mach number over the wing for fast speed and high-altitude performance. However, by the time it debuted in 1952, the Russians had perfected Mach 2 fighters and surface-to-air missiles. Thus, the first-model Victor, the B Mk 1, was obsolete as a nuclear strike craft from the onset. By 1955 several had been converted into K Mk 1 tankers to replace the aging and ailing Vickers Valiant. The 50 initial Victor B. From 24 were fitted with additional ECM gear to become B. Thirty four were built and most were later upgraded to B. By the B. The final version of the Victor, the B Mk 2, was redesigned as a low-altitude bomber and, hence, was fitted with a stronger, redesigned wing. It also possessed trailing-edge fairings to improve low-altitude maneuvering. With manned bombers being supplanted by guided missiles, however, it was decided to convert these aircraft into tankers as well. Several were also subsequently modified into SR Mk 2 strategic reconnaissance craft capable of photographing the entire Mediterranean in only seven hours. Four such craft could also cover the entire North Sea region in only six hours! These graceful machines were finally withdrawn from service in 1966. Variants Ventral plan of a Victor K Mk.

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