

**A/C SERIAL NO.XM598**

**SECTION 2B**

**INDIVIDUAL HISTORY**

**AVRO VULCAN B.MK.2 XM598/8778M**  
**MUSEUM ACCESSION NUMBER 84/A/1172**

22 Jan 58	The fifth and final contract KD/B/01 CB.6 (a) was awarded for 40 Vulcan B.MK.2 aircraft with serials in the XM569 - XM657 range. A total of 89 Vulcan B.Mk.2 aircraft were built and incorporated provision to carry the Avro Blue Steel air to surface missile.
30 Aug 63	Awaiting collection from Hawker Siddeley Aviation (Avro Whitworth Division) At Woodford. XM598 was originally built to carry the Skybolt standoff bomb but this project was cancelled. The redundant Skybolt fixtures were put to use during the South Atlantic Campaign to take Martel and Shrike anti - radar missiles.
04 Sep 63	To No.12 Squadron at RAF Coningsby. The RAFM photo collection includes two of XM598 at RAF Lynham during exercise 'Kinsman' in 1963 (P013788 - 013789) in overall white colour scheme.
7 Nov 63	Flown by Flt. Lt Haven on round trip to Goose Bay, Canada - Offutt AFB USA - Goose Bay - returning to Coningsby on 12 <sup>th</sup> November. Colour photo, in overall white scheme, upon its return; Aeromilitaria Winter 2004 rear cover.
16 Jan 64	Flown in 'Exercise Kingpin' - pilot Flt. Lt. Haven.
1 Mar 64	Became part of the Coningsby Wing when all three Coningsby based Vulcan Squadrons, Nos.9, 12 and 35 were amalgamated and centralised into one large unit
7 Nov 64	Transferred with No. 12 Squadron from Coningsby to RAF Cottesmore as part of the Cottesmore Wing.
01 Dec 64	To Hawker Siddeley for modifications.
05 Jan 65	To Nos.9/12/35 Squadrons at RAF Cottesmore.
29 Jan 66	To Hawker Siddeley for modifications. From 1966 the Vulcan B2 Squadrons became fully operational as a low level penetration force using newly developed terrain following radar and nuclear weapons.
02 Mar 66	Returned to Nos 9/12/35 Squadrons.
1966	Noted on a detachment to RAF Seletar, Singapore, wearing the No. IX Squadron 'bat' on the fin.

18 Jul 66	Pilot's logbook of F/Lt K.R. Hayward records 5.05-hour flight during Standardisation Trials at No. 1 Standardisation Unit, RAF Waddington.
29 Dec 66	To Hawker Siddeley for further modifications.
13 Mar 67	Returned to Nos.9/12/35 Squadrons.
13 Nov 67	Pilot's logbook of F/Lt K.R. Hayward records 5 hour flight during Standardisation Trials at No. 1 Standardisation Unit, RAF Waddington.
29 Nov 67	Damaged - Cat 3R (Repairable on site.)
01 Dec 67	Repaired on site by No.60 MU.
24 Jan 68	Returned to Nos 9/12/35 Squadrons.
21 Feb 68	Further Cat.3R repairs.
09 Apr 68	To Nos 44/50/101 Squadrons at RAF Waddington.
16 May 68	Further Cat 3R damage.
20 May 68	Repaired on site by No. 60 MU.
29 May 68	Back on charge with Nos.44/50/101 Squadrons.
15 Oct 68	To Hawker Siddeley for modifications.
21 Nov 68	Returned to Nos 44/50/101 Squadrons.
1970-71	Reported in service with No.27 Squadron at RAF Scampton, Lincs.
20 May 71	Again to Hawker Siddeley for modifications.
13 Oct 71	Returned to units at Waddington, making a return flight to Goose Bay the following month (James Brazier AEO LB – extracts on history file; pilot F/Lt Pete Jeffers).
19 Jun 72	Hi-Lo flight, Jeffers LB, pilot Flt Lt Mike Horton.
15 Feb 73	Pilot's logbook of Sqn Ldr Mike Horton records Exercise Sunflower flights – four Vulcans to Darwin, Australia; co-pilot FO Barton. 1.15 hour air check on this date. See also Brazier LB extracts.
18 Feb 73	Ex. Sunflower – Waddington – Goose Bay (Horton LB – 5.20 hours.
19 Feb 73	Ex. Sunflower - Goose Bay – Offut AFB, USA. 3.50 hours. Then on to McClellan AFB – 3.0 hours.

20 Feb 73	McClellan AFB – Honolulu, Hawaii – 5.25 hours.
21 Feb 73	Ex Sunflower – Honolulu- Pago Pago – crossed the equator. 5.10 hours.
22/23 Feb 73	Pago Pago – Ohakea, New Zealand – crossed the date line. 4.20 hours.
27 Feb 73	ECM support for RNZAF A4 Skyraiders – mock anti-shipping attack on RNZ Navy Waikato base. 4.25 hours.
28 Feb 73	Logbook of Flt Lt Dave Beane records ECM flight as AEO. Copy in Aircraft Dept. history file.
6 Mar 73	Ohakea – Williamtown, ex Sunflower – 3 hour flight. Horton and Brazier LB.
7 Mar 73	Williamtown – Darwin, Australia – 4 hour flight. Horton and Brazier LB.
10 Mar 73	Exercise Sliver Spade. Pilot Flt Lt Horton. Brazier LB.
12 Mar 73	Exercise Silver spade – 4.05 hours – Horton LB. See also Beane LB – flight Darwin – Amberley; pilot Flt Lt Campbell. Further flights 13-Amberley - Darwin, pilot Flt Lt Campbell, and Continuation Training – pilot Wg Cdr Lowe.
21 Mar 73	Beane LB – Bomb practice Song-Song- Navex; Pilot Flt Lt Glyde.
27 Mar 73	Beane LB – flight Tengah – Gan; Pilot Flt Lt Glyde, then Gan – Masirah. Flew on to Tehran the following day (28 <sup>th</sup> ) , then on to Akrotiri the same day and Waddington the following day (29 <sup>th</sup> ).
1 May 73	Bombing competition – Night Profile. Pilot Flt Lt Horton- Brazier LB.
3 May 73	Bombing competition – day profile. Pilot F/Lt Horton – Brazier LB.
24 May 73	Beane LB – Navex; Pilots Flt Lt Steadman and S/Ldr Peach.
25 May 73	Beane LB- Continuation Training; Pilot Flt Lt Campbell.
29 May 73	Exercise Blue Moon. Pilot F/Lt Horton. Brazier LB.
20 Nov 73	Australian Low level flight, 2.30 hours – Flt Lt Alexander Peebles aircrew logbook – pilot Flt Lt Dowler.
5 Feb 74	Pilot's Logbook of Flt Lt Jonathan Tye records 3.20 hour ECM flight with 101 Squadron.
1 Oct 74	Beane LB – Exercise Blue moon ECM Monitor - – Pilot Flt Lt Griffiths;
16 Sep 75	Pilot's Logbook of Flt/Lt Jonathan Tye records four –hour 'Convex' flight.

29 Sep 75	To Hawker Siddeley at Bitteswell for maintenance and modifications including fitment of a fin tip mounted passive RWR ECM pod.
09 Jul 76	Returned to Nos 9/44/50/101 Squadrons.
23 Nov 78	To RAF St Athan for major overhaul.
26 Feb 79	Returned to units.
9 Mar 79	<p>Accident damage during Flight Test following the major servicing; crew of five. At the top of the climb the AEO noticed that the oil temperature on No.4 engine alternator constant speed drive unit was excessive and the engine was shut down as a precaution and the aircraft returned safely.</p> <p>Investigation revealed that a clamp had been incorrectly locked during the major servicing and became detached from the ECU air ducting, allowing hot gas to leak, damaging electrical looms and airframe structure.</p>
23 Mar 79	To British Aerospace Bitteswell for structural modifications.
24 Jul 79	Returned to Nos 9/44/50/101/Squadrons.
6 Feb 80	Noted visiting RAF Manston, Kent as part of No. 50 Squadron.
28 Jul 80	Noted at RAF Valley on No. 9 Squadron strength.
6 Sep 80	Noted visiting RAF Lossiemouth. Served with No. 9 Squadron until June 1981, and had rejoined No. 50 Squadron by October 1981.
24 Aug 81	3-hour training flight, Reeve LB; rudder fault.
14 Oct 81	Basic Training Flight (BTR), 3.50 hours, Captain S/L Burnet – F/Lt Rod Trevaskus as AEO.
16 Oct 81	Noted at RAF Coltishall; on this date flew 3.10 hour crew check flight with Captain S/L Agnew and Rod Trevaskus as AEO.
20 Oct 81	BTR flight, Captain F/L McDougal, 3.20 hrs, AEO Rod Trevaskus.
26 Oct 81	Noted at RAF Wildenrath, West Germany after 2.05 hour flight – Reeve LB.
19 Nov 81	Captain F/L Grieg, 1.30hr Air Test, Rod Trevaskus as AEO.
20 Nov 81	1.30-hour air calibration of navigation equipment- Reeve LB.
1 Dec 81	Captain F/L McDougal, 3.35 hour night BTR, Rod Trevaskus AEO.
2 Dec 81	Captain F/L McDougal, 2.50 hour night BTR, Rod Trevaskus AEO, followed by 10 minute BTR with same crew later that day.

- 6 Jan 82            2.40 hour flight, Reeve LB – crew fighter affiliation check flight.
- 8 Feb 82            Captain F/L Le Brun, 3.55hr BTR, Rod Trevaskus AEO.
- 24 Feb 82           Captain S/L McDougal, 5hr BTR, Rod Trevaskus AEO.
- 1 Mar 82            Captain S/L McDougal, 1.15hr BTR, Rod Trevaskus AEO.

With the rundown of the Vulcan force and its replacement by Tornados, by the end of March 1982 the Vulcan B2 fleet had been reduced to Nos 44/50/101 Squadrons, all based at RAF Waddington. These were expected to disband by the end of June 1982. The Falklands conflict caused these plans to be revised due to the need for a strategic bomber force.

- 09 Apr 82           Personnel at Waddington placed on standby for possible action in the South Atlantic. At this time XM598 was on the strength of No50 Squadron.

Five Vulcans, including XM598, were selected for possible deployment to the South Atlantic as the only remaining aircraft still fitted with forward and aft Skybolt missile attachment points and refrigeration ducts. The aircraft were given extra ECM and navigation equipment, including jamming pods carried on locally devised starboard underwing pylons and Carousel inertial navigation equipment. Squadron insignia was removed from the fin and the undersides painted Dark Sea Grey. The co - pilot received triple offset radar boxes which had been salvaged from a scrap skip at RAF Scampton.

- 13 -17 Apr 82      Air - Air refuelling training carried out with Victor K2's from RAF Marham.
- 15 Apr 82           ‘Last day Air-Air refuelling; several good contacts. Still fuel leaks and lost 3 and 4 engines pulling away from last contact’ (Reeve LB) Crew of six.
- 19 Apr 82           Day AAR. 3 contacts 100lb. Good try by Don Carousel trial with error of one nautical mile on each back in dispersal. Two runs on Waddington to check ballistics’ Reeve LB. Flight time 2.50 hours.
- 21 Apr 82           Pilot’s logbook of Sqn Ldr John Reeve records 2.35-hour flight carrying 7 1000lb bombs, unable to drop; rest of sortie – night AAR and using terrain following radar at 500ft (cancelled). Overshot ‘due to poor approach in crosswind’
- 24 Apr 82           Reeve LB; Day/night tanking exercise, 3.35 hours’ Monty broke his probe on the day tank, lost 1&2 engines and went down like a B17. Drogue damaged and tanker returned’
- 26 Apr 82           Noted parked, on airfield unmarked, at Waddington.
- 29 Apr 82           The first two Vulcans, XM598 flown by F/L Withers and crew and XM607 departed Waddington on a non - stop flight to Ascension Island supported by Victor K2's from Marham. Leaving Waddington at 0900 each Vulcan required two in - flight refuellings, arriving at Wideawake at 1800 after a flight of 4000

nautical miles. Photo taxiing prior to this mission – Classic Aircraft December 2012 p.14. Colour photo at Wideawake - Wingspan International May/June 2001 p.71.

- 30 Apr 82 As part of the overall operation 'Corporate', the first of the 'Black Buck' Vulcan missions from Ascension Island were directed against the runway at Stanley airport with the intention of making the airfield unusable by high performance fighter aircraft. On this date the first strike ('Black Buck 1') was launched with XM598 as the primary aircraft piloted by S/L John Reeve. However the Captain's direct vision window, although slammed shut on departure refused to seal properly, so the crew were unable to pressurise the aircraft, necessitating a decision to return three minutes after takeoff. LB quote; 'Port DV window failed to seal. No pressurisation by 2300ft. Burnt off (fuel) and landed, scraping the tail' Flight time 2.10 hours.
- Therefore XM598 returned to Wideawake and Vulcan XM607 successfully bombed the airfield after an eight-hour flight from Ascension Island. Both aircraft carried 21x1000lb bombs.
- 03 May 82 XM598 acted as flying reserve aircraft for 'Black Buck 2'
- 07 May 82 XM598 and XM607 flown back to Waddington.
- 27 May 82 After a 8.50 hour flight Captained by S/Ldr McDougal with Rod Trevaskus as AEO, XM598 arrived at Wideawake Airfield, Ascension Island from Waddington as the primary aircraft for AGM- 45 Shrike missile armed anti-radar missions. The mission was aborted due to the Victor Tanker hose failure at the final refuel point prior to the attack. The missiles being carried on underwing pylons, the mountings for these being built by No 5 Squadron RAF St Athan. XM597 flew the Shrike armed missions, Black Buck 5 and 6 on 1st June and 2/3 Jun with XM598 as flying reserve (back – up) aircraft for Black Buck 5 and 6. Black Buck 5 and 6 were also flown by the same crew with S/Ldr McDougal (Captain) F/Officer Lackman (Co-Pilot), F/Lt Gardener (Third Pilot), F/Lt Castle (Nav Radar), F/Lt Smith (Nav Plotter) and F/Lt Trevaskus (AEO)
- 28/29 May 82 XM598 was the primary aircraft on 'Black Buck 4' but the mission was aborted at the last re-fuel prior to the attack, the Victor tanker hose failed to deploy, thus no fuel available for the attack and the aircraft had to return to Ascension Island, recalled then F/Lt AEO Rod Trevaskus in 2010. Captain for this eight-hour sortie was again S/L McDougall.
- 14 Jun 82 XM598 and XM607 returned to RAF Waddington.
- 22 Jun 82 XM598 transferred to No. 44 Squadron at Waddington.
- 12 Jul 82 No. 44 Squadron markings applied by this time.
- 19 Jul 82 3.45 hour flight – crew check (Reeve LB' captain S/Ldr Montgomery)

26 Jul 8	3.15 hour Air-Air refuelling flight; 1st Vulcan had loose lamp in HUDU. (Reeve LB)
28 Jul 82	3.05 hour flight, Air-Air refuelling, 'Pop-up on Leuchars' – Reeve LB.
23 Nov 82	Captain S/Ldr McDougal, 3hr BTR, AEO Rod Trevaskus.
8 Dec 82	Captain S/Ldr McDougal, 2.30hr BTR, AEO Rod Trevaskus, with S/L Montgomery Captain for 0.35 hr flight later on same day.
17 Dec 82	Withdrawn from use by this date, and stored at RAF Waddington pending disposal.
21 Dec 82	No 44 Squadron, the last with Vulcan bombers disbanded at RAF Waddington. (No 50 Squadron operated six Vulcans in the flight-refuelling role at Waddington until 31 Mar 84). XM598 retired from operational service.
04 Jan 83	Allocated maintenance serial 8778M.
07 Jan 83	<p>Attempted morning delivery flight to Aerospace Museum Cosford – pilot S/Ldr Reeve LB, 1.05-hour flight. Due to severe rainstorms, coupled with having to land on a short runway, the landing was aborted. The rain started as the pilot made his first approach and he made three more attempts before aborting. The aircraft made a second attempt to fly to Cosford that lunchtime but had to return after a few minutes due to a birdstrike.</p> <p>The aircraft overflowed Cosford and returned to RAF Waddington; the after flight inspection revealed that XM598 had suffered a bird strike in number three engine. The engine was changed and a 2nd delivery flight arranged, using largely the same crew. AEO on the first attempt was again F/Lt Rod Trevaskus.</p>
20 Jan 83	<p>Flown to Aerospace Museum Cosford for display following repairs to the damaged engine. RT problems pre-take off also. 50 minute flight. At 12.30 pm the aircraft made a practice approach from the east, on Runway 25.</p> <p>The Captain, S/L John Reeve made one 'touch and go' landing followed by a final 15 minute circuit before finally touching down at 12.50 pm. The brake parachute deployed immediately and the aircraft stopped in less than two thirds of the runway's length. The crew were met by a welcoming committee and a handing - over ceremony took place. The crew who flew the Vulcan from RAF Waddington were S/L Reeve, co - pilot S/L McDougal, navigator F/L Fletton, and air electronics operator F/L Davies.</p> <p>The taxiway at Cosford is narrow and because of this the decision was made to tow XM598 to the main museum hangar. The starboard main undercarriage leg became bogged down in the soft grass at the edge of the taxiway, and had to be towed out. Photo - Flypast Jan 1992 p.35.</p> <p>XM598 had made a total of 1520 flights and 5404 flying hours. It remained on outside display at Cosford.</p>

- 2004 Repainted prior to moving into position for incorporation onto new Cold War display building. Photo as repainted – Aeroplane January 2005 p.7.
- 5 May 06 Moved into new National Cold War Exhibition building at the Royal Air Force Museum Cosford, which opened to the public 8 February 2007. Photos on display – Aeroplane March 2007 p.13; RADAR Summer 2016 p.33.

As an interesting footnote, an e-mail was received from Mr Roger Pointing in October 2017; Vulcan XM612 flew into Norwich Airport for display on 30 January 1983 just ten days after XM598 arrived at Cosford, so perhaps '598 had donated a serviceable bomb bay fuel tank at some point..

I am a volunteer at the museum hosting tours of our Vulcan XM612 which as you will know was deployed to Ascension Island during the Falklands conflict. Recently after a lot of hard work on the hydraulic system we were able to open the bomb bay doors for the first time in 10 years. We knew a forward bomb bay tank was fitted but have now noticed that 598 is painted on the tank, so we are guessing that it may have one been fitted to your Vulcan. If you enlarge the attached picture, 598 is at the 2 o'clock position.



**TEXT: ANDREW SIMPSON**

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