

AMARG IMPRESSIONS



ISBN 978 94 0214954 8

© Roel van Gestel



Introduction

AMARG, the Aerospace Maintenance and Regeneration Group facility covers four square miles of desert near Tucson (AZ) and attracts aviation enthusiasts from all over the world. Almost 4,000 airframes, varying from scrap carcasses to complete aircraft and helicopters are located at one single spot where natural long-term storage conditions are ideal, thanks to low humidity and a hard soil.

The surplus of aviation hardware is parked in the desert for a couple of reasons. First, the tactical reserves and future FMS (Foreign Military Sales) can be held here for a lengthy period of time. Reclamation, the second reason, is even more important. Spares that are difficult and/or expensive to reproduce are available in large numbers to keep the existing fleet flying. Cost-effective and well-organized 309thAMARG provides the US armed forces and its allies with the much needed spare parts, from hard-to-find bolts to complete structures.

This has proven to bring great profit for the US tax payer year after year. Less important for the tax payer, but more for us (a personal third reason), is that a large number of airframes have found their way to museums all over the States and even abroad. To conclude... Almost 4,000 airframes gathered in one place is a must-visit for anyone with even the slightest fascination for aviation.

In this book I would like to show a compilation of aircraft and helicopters that can be found at AMARG today. I will also provide a brief look at the Pima Air & Space Museum and the various scrapyards surrounding AMARG, taking care of what others may call 'old metal', but is aviation history for enthusiasts. These scrapyards contain aircraft disposed of when the facility was known as the Aerospace Maintenance and Regeneration Center (AMARC: 1985-2007) and previously the Military Aircraft Storage and Disposition Center (MASDC: 1964-1985).

This beautiful location in Arizona has long attracted my interest. Over the years I have gathered enough material to make AMARG Impressions and I hope the aviation enthusiasts love reading this book. It is meant as an impression, focusing on recent history. I hope you will enjoy the pictures and the stories the aircraft tell. All pictures by me, unless stated otherwise.

Acknowledgement: I would like to thank the following people, without whose help and support this book could not have been completed: My wife Jolanda (who always patiently joins me on my trips to 'strange places'), Martyn Swann, Terry Pittman, Barry Fryer, Del Laughery, Danny Bonny, Margreth de Bont, Raymond Shaw, Lt Sydney Smith, SSgt Bradley Sisson, 309th AMARG, Brave New Books Support, SAF/PAON.

AMARG @ work

What happens when an aircraft comes in for storage? Before the actual final flight to Davis-Monthan AFB, the airframes fate has already been sealed and the level of preservation is based upon that decision. After landing, the aircraft and its log books are handed over to AMARG by the crew. Classified material is removed. The standard covers are placed. All armaments and munitions are removed from the aircraft. A green cross is stenciled to show all weaponry has been removed.

The next step, until September 2010, was the allocation of a PCN (Production Control Number), which was stenciled on both sides of the airframe. PCN's were unique inventory numbers consisting of five (prior to 1994) or eight digits. From 1 October 1994 on, the first two letters specified the service ('AA' for USAF, 'AN' for USN/USMC, 'AH' for USAR, 'AC' for USCG and 'AX' for other government agencies), the second pair specified the type of aircraft (like 'FP' for USAF F-4's and '8F' for USN/USMC F-4's), and the three (before 1 October) or four digit number specified the order in which the particular plane of the type went into storage. Since September 2010, a six-digit computer generated ID is created for internal administration. This ID is not visible on the aircraft.

Technical manuals are now removed. Inventory is inspected and removed if on a wish list. A yellow '7', close to the green cross, marks the completion of all necessary inspections before the preservation process commences. At the Flush Farm, all fluids are taken out and collected. A preservative is added and removed again, leaving a protecting film in the internal system.

Helicopters lose their rotor blades here. At the Wash Rack, the aircraft is thoroughly washed and treated with a corrosion inhibitor. Visible corrosion is treated here as well. After final inspection, it is time for the actual preservation.



All openings on the upper side of the aircraft are taped. A first layer of black spraylat is applied. This thin plastic coating protects the airframe from dust and water. A second layer of white plastic protects from the sun and reduces the inside temperature by 15 to 20 degrees. This preserves valuable cockpit items.

The aircraft is now towed to its designated Area. There are five types of storage, visible in stenciling on the port side of the fuselage:

- Type 1000 : Long-term storage. Aircraft may return to service. Regular inspections. Re-preservation takes place every 4-5 years. Old spraylat is removed and the plane is washed and inspected again before receiving new preservation.
- Type 1500: Used for Navy aircraft. Like Type 1000, but re-preservation will not take place as aircraft are not destined to leave AMARG.
- Type 2000: These aircraft are meant for spares reclamation.
- Type 3000: Aircraft maintained in flyable hold status awaiting departure within 90 days (can be extended).
- Type 4000: Excess aircraft, awaiting disposal after final reclamation.

The type of storage can, of course vary, during a lengthy presence at AMARG. When an airframe is ready for disposal, a red D ('De-milled', or de-militarized) with a cross and date is sprayed by AMARG crews. A contractor to whom the plane is sold will eventually pick it up for scrapping.

In general, there are two main areas at AMARG where airframes end up. We speak of 'West or East of Kolb'. Kolb rd. is the vertical border between storage areas 1-20 (West) and 21-29 (East). 'Wrong side of Kolb' is an expression meaning Areas 21-29, where most reclaimed aircraft end up. This part is closest to the popular expression 'boneyard' when referring to AMARG, with various planes missing important parts. Anything East of Kolb will not fly again, that is for sure. In Areas 1-20, all types of storage are present. Many of the aircraft present there will re-enter military service. Others end up as drones, will be transferred to allies under FMS, go to civilian operators or to museums worldwide. It does not all stop at AMARG. Sometimes it is just a new beginning.

For detailed information on AMARG I highly recommend the series MASDC I-IV written by Martyn Swann, Barry Fryer and Danny Bonny. There are no secrets anymore after reading these in-depth books. Also check out www.amarc.info.



An overflight is a perfect way to grasp AMARG's size. You can fly with several companies from Marana or Tucson IAP. These are very early flights, to prevent interference with local operational activities. Display Row (or Celebrity Row) is shown in the center of this picture. The Pima bus tour takes ample time to describe the mixed fleet of aircraft parked here, offering fine photographic possibilities. Some rework afterwards is necessary due to the tinted windows of the bus. Best to take two separate tours and sit on both sides of the bus to have the best views on inventory.



Reclaimed F-15's and F-16's. Their parts are needed to keep others in the air. The revenue thus made at AMARG is the most important reason this facility exists.



Flying over the 'wrong side of Kolb', Areas 21-29 in June 2013. Plenty of space is still available. Closest to the camera are various types of the Boeing C-135.

Content

A-4	07-09
A-6	10-13
A-7	14-15
A-10	16-18
B-1	19
B-52	20-21
B-57	22-23
C-5	24-26
C-9	27
C-12	28-29
C-21	30
C-23	31
C-27	32-33
C-130	34-40
C-135	41-45
C-145	46-47
E-2	48-49
F-4	50-59
F-14	60-62
F-15	63-65
F-16	66-77
F-18	78
F-111	79
H-1	80
H-2	81
H-3	82
H-46	83-85
H-53	86
H-58	87-90
H-60	91-94
O-2	95
P-3	96-99
S-3	100-101
T-2	102-103
T-34	104-106
T-37	107
T-38	108-109
T-39	110-111
T-43	112
Miscellaneous	113-120
Pima Air & Space Museum	121-127
Scrapyards	128-130
AMARG from above	131-132
Aviation history at AMARG	133
AMARG IMPRESSIONS showed	134-135

Douglas A-4 Skyhawk



Douglas A-4M Skyhawk 160258/QP-19 is one of the few single seat Skyhawks remaining at AMARG. It arrived on 30 June 1989 and received PCN 3A571. This A-4 last flew with VMA-124 from NAS Memphis (TN). 160258 was part of the last produced batch of 24 A-4M's, receiving updates like Sidewinder capabilities, laser Maverick and Angle Rate Bombing System. In the mid-1990's, several A-4M's were delivered to Argentina from AMARC. 160258 is in Type 1500- storage. This is long-term storage without re-preservation, meant for aircraft that spent significant time aboard ships.



Type 4000- storage often means no preservation. TA-4J 158134 was assigned to CTW-1/VT-7 before arriving at AMARC on 6 October 1996. It still seems fully intact in this picture, despite two decades of inactivity.



TA-4J 158093 arrived on 18 August 1994 from TW-2. At some point its canopy blew off and it has been dumped under the fuselage. The right fuel tank also seems to have received some damage over time, as it is broken in two. It is obvious this 'Scooter' is ready for the scrapman.



No 'fifty shades of gray' here. Most stored TA-4J's show faded high-visibility training unit colors. One of the few exceptions is TA-4J 153495/ND-04 which flew with VFC-13 from NAS Fallon (NV) until retirement to AMARC on 7 July 1993. It was allocated PCN 3A714.



The Pima bus tour is a perfect opportunity to see a part of the large Skyhawk fleet still parked at AMARG. TA-4J 158506 of TW-2 is closest to the camera during one of these tours in June 2013. It still has its protective but old spraylat applied and carries PCN 3A639. 158506 seems fully intact and the colors only have faded a bit over time. This TA-4J arrived for storage in February 1992 from NAS Kingsville (TX) and is pictured amidst its brothers in Area 15. Currently, around 115 of these dual seated Skyhawks can be found at AMARG, awaiting things to come.



Standing guard, awaiting their fate, two TA-4J 'Scooters' with better protected, more valuable F-16's in the background.



11 TA-4J's and 3 A-4M's parked next to each other. A few air forces still fly the Skyhawk and for these operational survivors a huge amount of spare parts is available at AMARG. There is no doubt that the A-4's at AMARG will be scrapped soon when they are no longer needed for parts and their valuable parking space will be needed for new arrivals.

Grumman A-6 Intruder / EA-6B Prowler



Early EA-6B 158030 clearly shows the signs of serious reclamation since its arrival on 2 October 2009 from VAQ-129 at NAS Whidbey Island (WA). One of the first of the type to come in; one of the last ones to receive a PCN, in this case AN5A0257. After the retirement of the last US Navy Prowlers, the USMC remained the sole operator of the EA-6B, which is destined to soldier on for some time to come.



The story of the A-6 and AMARC, later AMARG, is a long one. The A-6 Intruder served for a lengthy period and even two decades after retirement of the type, plenty of airframes remain present. Some show a faded, neglected condition, awaiting disposal. Others, like A-6E 152954, look fresh and complete (OK, it lacks wing flaps). On 28 September 1994 this Grumman arrived from VA-75 at NAS Oceana (VA), receiving the new 'eight digit' PCN AN5A0133. 152954 started life as an A-6A in 1967 and went on its tour of duty to Vietnam in March 1973, being part of VA-95 'Green Lizards'. All A-6E's are parked in Area 01.

From top to bottom: A recent arrival from VMAQT-1 at MCAS Cherry Point (NC) is EA-6B 163521. It has been put into Type 1000- storage and may be recalled for duty. The Prowler arrived on 19 May 2015. Middle: A-6E 155683 has been parked here since 16 August 1996, showing its VA-34 tail code 'AG' and modex '506'. Scrapped shortly after the picture was taken. Bottom: 1982- built A-6E 161233 shows what the sun can do to naval grey over the years. In this case since 15 March 1995. Identifying a former unit from picture is impossible, but we know it last flew with VA-196 at NAS Whidbey Island (WA).





Dark clouds gather above EA-6B 163035, in Type 2000- storage since arrival on 6 July 2011 from VAQ-133, NAS Whidbey Island (WA). It already had to give up its rudder so far and more is due to follow. The USMC will keep on flying the 'flying fry pan' until at least 2019, as the Marines never bought into the EA-18G Growler program. In June 2015, the US Navy said farewell to their last Prowlers.



An early morning overflight over a group of A-6E's in Area 01. They have all given up some parts over the years. From bottom to top are pictured: 157000, arrival 22 September 1995, last flown with VA-196 from, again, NAS Whidbey Island. Red writings on the nose indicate this 1970-built bird is 'de-milled', meaning that the airframe will be removed soon. This happened in November 2015. Then 161677, arrival 25 June 1996 from VA-165, same NAS. Next Intruder is an older one, 152607. After delivery in 1966, it served two years with the USMC's VMA(AW)-242 over Vietnam as A-6A. Modified to A-6E and last served with VA-165. Arrival at AMARC was 9 July 1996. Last complete A-6E in this picture is 158052, arrival 2 October 1995, last flown with VA-128, again from NAS Whidbey Island. This airframe also shows the red 'done' markings on the nose.



A-6E 154158, slightly high on wheels, has not lost a lot of parts since arrival on 7 May 1996 from VA-196. Delivered as an A-6A in 1968, it served with various USMC- units between 1974 and 1996. 154158 only rejoined the US Navy for a couple of months in 1996. No less than five fuel tanks were brought to Davis-Monthan AFB on that last flight in 1996.



Only one EA-6A (right) remained at AMARG. BuNo 151598 arrived on 6 July 1993 from VAQ-33. There are plenty of EA-6B's present and the USMC has retired the airframes with most hours logged. EA-6B 160788/NJ-905 (above) came in from VAQ-129 on 20 March 2014. Pictured intact and looking ready to be recalled for duty in Area 01, October 2015.



Vought A-7



Hardly any identification is visible after more than 25 years of outside storage, but this is A-7E 160555 with PCN 6A353, operated by VA-37 'Bulls' with tail code 'AE' and modex '316' until retirement on 4 May 1990. Most of the USAF A-7's retired around 1991/1992, but these have all gone. Only a handful of former US Navy Corsair II's awaits things to come.



A-7E 159289 shows more markings and, like 160555, the Texas Instruments AN/AAR-45 LANA (Low-Altitude Night Attack) Forward Looking Infra-Red (FLIR) pod. On 2 August 1990, the exact day Saddam's Iraq invaded Kuwait, 159289 was flown to AMARC after serving with VA-46. Over the years, several unit details from the past have become visible. With no foreign operator flying the Corsair II anymore (Greece retired their last A-7's in October 2014), it is uncertain how long the remaining 14 A-7E's in Area 11 and 21 will survive.