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AMARG

The most misunderstood place in the US military

Hans Drost, Henk de Ridder and Dick Wels/Recce Reports describe the activities of the 309th Aerospace Maintenance and Regeneration Group

A LARGE part of Davis-Monthan Air Force Base in Tucson, Arizona is used by the 309th Aerospace Maintenance and Regeneration Group – or in short, AMARG. Most people know it as the boneyard – the place in the desert where military aircraft are left until their fates are determined. However, because the term ‘boneyard’ seems disrespectful to this famous complex, we tried to avoid using it when talking about AMARG to its commander, Colonel Robert S Lepper Jr. That worked... for about a minute! After a slip of the tongue, the Colonel just smiled and said that he has nothing against the name. “Ask in Tucson and its surroundings for

AMARG and most people won’t know what you are talking about. Ask instead where the boneyard is and they’ll all point you in the right direction. But to be honest, ‘boneyard’ is not really the right name for the 309th – we do so much more than just disposing of old aircraft.”

Perfectly preserved

There are several reasons why Davis-Monthan was chosen as the location for storage. The combination of desert, low humidity, very little rainfall and high altitude (2,550ft/780m) makes the stored aircraft less vulnerable to corrosion. Secondly, there is the hard alkaline soil, which makes it possible to move aircraft without having to pave taxi tracks or storage zones. Even an aircraft as huge as a C-5 Galaxy can be parked away from paved areas.

After arriving at AMARG the aircraft are not just parked up in the sunshine. Before entering storage they undergo preparation to ensure they can be

Short history of the 309th AMARG

In April 1946 the 4105th Army Air Force Unit was established at Davis-Monthan Field. The primary responsibility of the unit was to provide a storage location for the large number of aircraft no longer required by the Army Air Force after the end of the Second World War. Hundreds of B-29s and C-47s were flown to Davis-Monthan and stored in the desert. Many were regenerated shortly after their arrival in 1948 to participate in the Berlin airlift.

In 1965 the depot was renamed the Military Aircraft Storage and Disposition Center (MASDC) and tasked with processing aircraft for all the US armed forces, not just the US Air Force. In accordance with the US/Russian START I treaty, the centre was tasked with eliminating 365 B-52 bombers in the 1990s, the progress being verified by Russia via satellite and first-person inspection at the facility. AMARG was transferred to the 309th Maintenance Wing in May 2007, and the centre was renamed the 309th Aerospace Maintenance and Regeneration Group.

Nowadays the 309th is responsible for maintaining aircraft for all the US armed forces (air force, army, navy, marines and coast guard), but also serves federal agencies (customs, border patrol, NASA, FBI) and allied governments.

AMARG’s flight line

After arriving at Davis-Monthan AFB the aircraft are parked on AMARG’s own flight line, at the time of AFM’s visit occupied by A-10s from Davis-Monthan AFB and Osan AB, South Korea, F-16s from the US Air Force and Air National Guard, and F-18s and SH-60s from the US Navy. On the internet you can find an online tool to monitor all the comings and goings at AMARG by going to <http://amarcxperience.com/ui/>.



Commander Colonel Lepper is an enthusiastic ambassador for AMARG: “We do so much more than just disposing of old aircraft,” he says. All images by the authors



Thirty-two Lockheed C-5 Galaxys are already parked at AMARG. The hard alkaline soil makes it possible to park these leviathans in the desert away from paved areas.



used again in the future if necessary. Some parts are removed – such as guns, ejection seat charges and classified hardware. The fuel system is covered with a protective film of oil after the fuel is drained. And last but not least, the aircraft are cocooned – sealed from dust, sunlight and high temperatures by various materials such as the temporary protective plastic film Spraylat.

Missions of the 309th

Colonel Lepper can quote some impressive numbers to illustrate the importance of the 309th. “We store over 4,000 aircraft that cost the taxpayers more than \$34 billion when originally purchased. Besides that we have 7,000 engines and we maintain 400,000 pieces of production tooling. And we are proud to employ 670 of the best technicians in the world. The majority of them are veterans with an average age of 55.”

The boneyard task of storage and preservation is only one of the 309th’s missions. Aircraft are kept in storage as long as the type is still flown with one of the many US ‘customers’ – for example, the last ▶

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Above: In the large hangar at AMARG four F-16s are being regenerated at the same time. About 200 F-16s will go through here to become unmanned QF-16s.

Below: It looks like the operational life of the Fairchild Republic A-10 Thunderbolt II is coming to an end. These Warthogs arrived last September.





“More than 25% of aircraft have flown out again for further service”

F-111 Aardvark was only disposed of after its last allied user, the Royal Australian Air Force, stopped operating it in December 2010. For aircraft that have no further use, private contractors are invited to bid for them to sell them as scrap.

Another very important mission is regeneration and this involves 80 to 100 aircraft a year. How long it takes to get an aircraft operational again depends on the type, its condition and the length of time it has been in storage. “Last April we regenerated an F-4 that had been in storage for 24 years,” the Colonel explains with pride in his voice. “We can get almost anything flying again.”

Currently the regeneration of F-16s is in full swing – about 200 are being regenerated to become unmanned QF-16s. The first QF-16 was recently



*Above: The 164th Airlift Squadron from Mansfield, Ohio, flew Alenia C-27J Spartans between 2011 and 2013. Now the squadron is back to flying Lockheed Martin C-130Js.
Below: Rockwell T-39G Sabreliner from the US Navy on AMARG's flight line. It was used for the undergraduate flight officer training programme and made its final touchdown at Davis-Monthan on September 24, 2013.*



Visiting AMARG

AMARG draws around 30,000 visitors a year. Most take the official bus tour that starts at the Pima Air & Space Museum. During the 90-minute tour the bus drives along ‘Celebrity Row’, where around 60 famous aircraft are on display. If you’re taking the tour don’t be surprised if the commander hops on at some point to talk to the visitors and answer their questions. Occasionally AMARG also welcomes celebrities – a little while ago Hollywood actor Gary Sinise and his Lt Dan Band played a concert there. The boneyard was also a recording location for the 2009 movie ‘Transformers: Revenge of the Fallen’.



Above: After years of being the hunter, this Phantom was a QF-4 hunted by rockets in the last phase of its life. It is now safely parked on the concrete at Davis-Monthan.

Left: One of the aircraft in AMARG's 'Celebrity Row' is this McDonnell Douglas F-15A Eagle from the 199th Fighter Squadron, Hawaii Air National Guard, which nowadays flies the F-22 Raptor.



Above: This Texas ANG F-16 from the 149th FW arrived on September 18, 2013. It was probably its last flight with a pilot on board as it will be regenerated into a QF-16 drone.

Below: A special unit within the Air National Guard is the Air Force Reserve Command Test Center (AATC), which Lockheed Martin Block 25 F-16C 84-1278 served with.



delivered and it flew its first mission on September 19, 2013 from Tyndall AFB, Florida. The QF-16 will replace the QF-4s that were also prepared at AMARG and have been in use since 2008. "Planes leave AMARG on a truck or under their own power," said Lepper. "More than 25% of aircraft have flown out again for further service."

Depot-level maintenance is performed on a variety of types. One of the current programmes is another service life extension programme for the A-10 Warthog. At the end of 2008 AMARG did some mandatory checks and repairs on possible wing cracks on 84 A-10s – this time the Warthogs are at AMARG to get the new Raytheon Scorpion helmet systems installed. **afm**

US Navy Lockheed DC-130A 570497 was the last 'A' model that went to AMARG. It arrived at Davis-Monthan in July 2007.

