



## B1-B makes northern trek; bomber to undergo fatigue testing

After two years of disassembly and transportation prep work by 309 AMARG, Boeing and Tinker AFB personnel, a 73K lb. streamlined version of B-1B serial no. 85-0082 departed Oct. 26 for a Boeing structural test facility in Washington. Spearheading the effort to remove the wings, tail, engines and landing gear to sufficiently reduce the size to 130 ft. long, 30 ft. wide and 12 1/2 ft. tall for the 1,600 mile overland trek to the Pacific Northwest, was the Air Force lead program engineer assigned to the B-1 Structural Engineering Section.

Selected from 16 B-1Bs stored here at the 309th Aerospace Maintenance and Regeneration Group, this Lancer is the first to be utilized by its manufacturer



*Above, AMARG crane operators place B-1B, Serial No. 85-0082 onto a customized trucking platform designed to cradle and protect the aircraft from stress during the lengthy roadtrip to Washington. Right, aircraft is sealed and protected from weather and road hazards before finally rolling out of AMARG (below).*

as a full-scale fatigue test platform, the result of five-year contract signed in March between the U.S. Air Force's Oklahoma City Air Logistics Center and Boeing to study the aircraft.

The results of these fatigue tests will ensure the fleet can operate safely until 2040.

According to Mr. Chi Chan, a structural engineer with Boeing, the Lancer was delivered to the Air Force in the late 80s with an original service life objective of 30 years. Since induction into service, the bomber's transition from a strategic to a conventional weapons delivery system has also demanded more severe use than what was originally planned. While previous testing had demonstrated that the airframe was durable enough to meet those added demands, testing must now be conducted to the Air Force's current service life objective of 2040.

The fuselage will be reassembled at the test facility and suspended with a complex system of weights and loading fixtures that will apply 150 years of simulated flight loads, or two and one half times the service life objective, in just 5 years. Stresses will be monitored by thousands of sensors installed in strategic



locations on the airframe.

Attracting engineers to this particular B-1B was the fact that it was the last B-1B inducted into 309 AMARG and therefore, the least cannibalized and most structurally intact. In addition, having spent the latter part of its service life as a flight test aircraft at Edwards AFB, the airframe was subjected to relatively low and benign flight hours.

To minimize stress on the fuselage during the move, Boeing worked with professionals at Contractors Cargo Company to design a customized trailer and rear dolly transport system. Steel saddles on turntables cradle the bomber's belly—cradles that rock and turn with the fuselage, minimizing excessive stress during transport.

Personnel from AMARG's 577th Commodities Reclamation and 578th Storage and Disposal squadrons coordinated the lift using three cranes to gently place the wingless bomber onto the specially configured assembly, and after a quick rinse at the Washrack to remove eight years worth of desert sediment, the secured load was taped, sealed with Spraylat and ready for shipment.



## “Boneyard” rifle club members “fired” up over new M-1 Garands

The Boneyard Rifle Club, a loose affiliation of recreational shooters that work at the world famous 309 AMARG, carved out a few hours from a well-deserved October weekend to try out some of their members’ latest acquisitions, M-1 Garands.

The Garand’s distinct sound and battle-worn patina drew attention as the club members began to fire at targets positioned downrange at the Southeast Regional Shooting Park located southeast of Tucson.

According to the club’s president, Mr. Mark Seitz, members enjoy this physical link with our nation’s history, and appreciate the genius of John C. Garand in designing the rifle that still functions perfectly after decades in storage.

But then, as AMARG employees, they are fully aware that with the right storage techniques, assets can indeed last a very long time.

For additional information regarding the

Garand Collector’s Association, or to view photos from the 2011 Arizona Convention, visit the following website: [www.thegca.com](http://www.thegca.com).

And to learn more about the Civilian Marksmanship Program, [www.odcmp.com](http://www.odcmp.com).



The M-1 Garand rifle was the standard battle rifle through WWII and the Korean conflict, and saw service in all areas of the world.

The Boneyard Rifle club had recently traveled to Phoenix to take part in the Garand Collector’s Association annual convention in conjunction with the Civilian Marksmanship Program’s regional “Western Games,” or rifle matches.

During the matches, the club members participated in a 200-yard John C. Garand Rifle match, and also afforded the opportunity to purchase surplus M-1 Garand rifles through the auspices of the federally chartered Civilian Marksmanship Program.



*Above, Boneyard Rifle Club members and family spend some quality weekend time together at the shooting range. Left, Faith Seitz prefers her M-14, a successor to the M-1 Garand and last battle-rifle issued to the U.S. forces; and, Mark Seitz fires at a range target with his “new” M-1 Garand.*

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To prevent overstressing of the fuselage during transport, Boeing engineers installed sensors to monitor and alert them of anomalies, as they expected to travel at speeds of up to 48 miles per hour.

The massive shipment departed Davis-Monthan AFB, Ariz. at 1:30 a.m. with an entourage of 14 vehicles to secure the route, traveling west of the Rockies only during hours of darkness to prevent, as well as avoid, congestion on Interstates 10 and 5.



*In 1995, B-1B, Global Power, 85-0082 (below), was one of two B-1B Lancers to fly a historic non-stop record setting mission around the world called "Coronet Bat." Total flight time, 36 hours and 13 minutes. The retired bomber departed Oct. 26 for Washington.*



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