



From Target To T

When old military aircraft reach the end of their working lives they normally have three final destinations. The majority are ignominiously scrapped and sent to the smelter, with the valuable aluminium and other metals comprising their fabric recycled for a variety of purposes. Alternatively, a select and lucky few are sent to museums for preservation and a possible return to flight, although most of these will spend the remainder of their days on the ground - critiqued by the curious and visited by the nostalgic. Thirdly, there are the airframes that are chosen to perform one last valuable service for their country such as being

used as training aids in fire schools, shot at and re-patched for battle-damage repair training or taken to a desolate gunnery range and used as static targets for other pilots in newer aircraft to practise their firing skills.

One such facility is the Naval Air Weapons Station (NAWS) at China Lake in California's Mojave Desert. Covering more than 1,100,000 (4,500sq km) acres of land and using 19,600 square miles (51,600sq km) of controlled airspace over its two ranges - more than 12% of California's total - it is a place where once proud aeroplanes 'go to die'.

Yet, perversely, it is thanks to China Lake's existence

that a number of Boeing B-29 Superfortresses survive today. By the mid-1950s, the B-29 fleet was rapidly being diminished, with the final survivors soon disposed of and replaced by the later B-50 variant and B-47 Stratojet. Numbers of the Boeing veterans gathered at China Lake - the majority flown in - and parked in a spot known as the 'B-29 area'. Most of these aircraft met their designated end as targets but some lingered on as late as the 1990s, with 13 successively sold on for preservation, including the two flying examples - 44-62070 *Fifi* and 44-69972 *Doc*. Among them was 44-69729, known to all as *T Square 54*.

A charmed life

Rolling off Boeing's Kansas production line in 1944, construction number 10561 was allocated the serial number 44-69729 and sent to the 875th Bomb Squadron, 498th Bomb Group, 73rd Bombing Wing operating out of Isley Field at Saipan in the Mariana islands. The B-29 was given the task of a crew rotational aircraft, acting as a spare when no other Superfortresses were available, or when one was undergoing



Once the most classified instrument in the Army Air Force, this is the Norden bomb sight in the nose of the B-29. ALL PICTURES MUSEUM OF FLIGHT/KENT RAMSEY UNLESS NOTED



Triumph

Boeing B-29-60 Superfortress 'T Square 54' was rescued from the brink after life on the range. **Chris Gilson** travelled to Seattle's Museum of Flight to see a grand work in progress.

repairs. Probably because of this, and unlike most USAAF bombers, it was never named and instead was known by its code, painted on the vertical stabiliser, *T Square 54*. It saw combat with 37 missions over Japan, before its allocation for conversion to a KB-29 tanker in June 1949.

Early KB-29s were fitted with so-called 'Tokyo Tanks', where additional fuel capacity was fitted in the bomb bay with a trailing hose system used for refuelling.

This was later changed to a fixed boom that was still fitted when the aircraft was recovered from China Lake. During the Korean War, and by now in the black and silver colour scheme worn by the majority of the last B-29s in use, 44-69729 was stationed in Europe, before being sent back to the United States, finally being retired in 1956 and sent to California for destruction as a test target.

While other Superfortresses were destroyed, or saved, *T Square 54* baked in the hot sun until December 1986 when the aircraft was sent in sections by low-loader to the Lowry Heritage Museum (LHM) at the

then Lowry Air Force Base, Denver, Colorado.

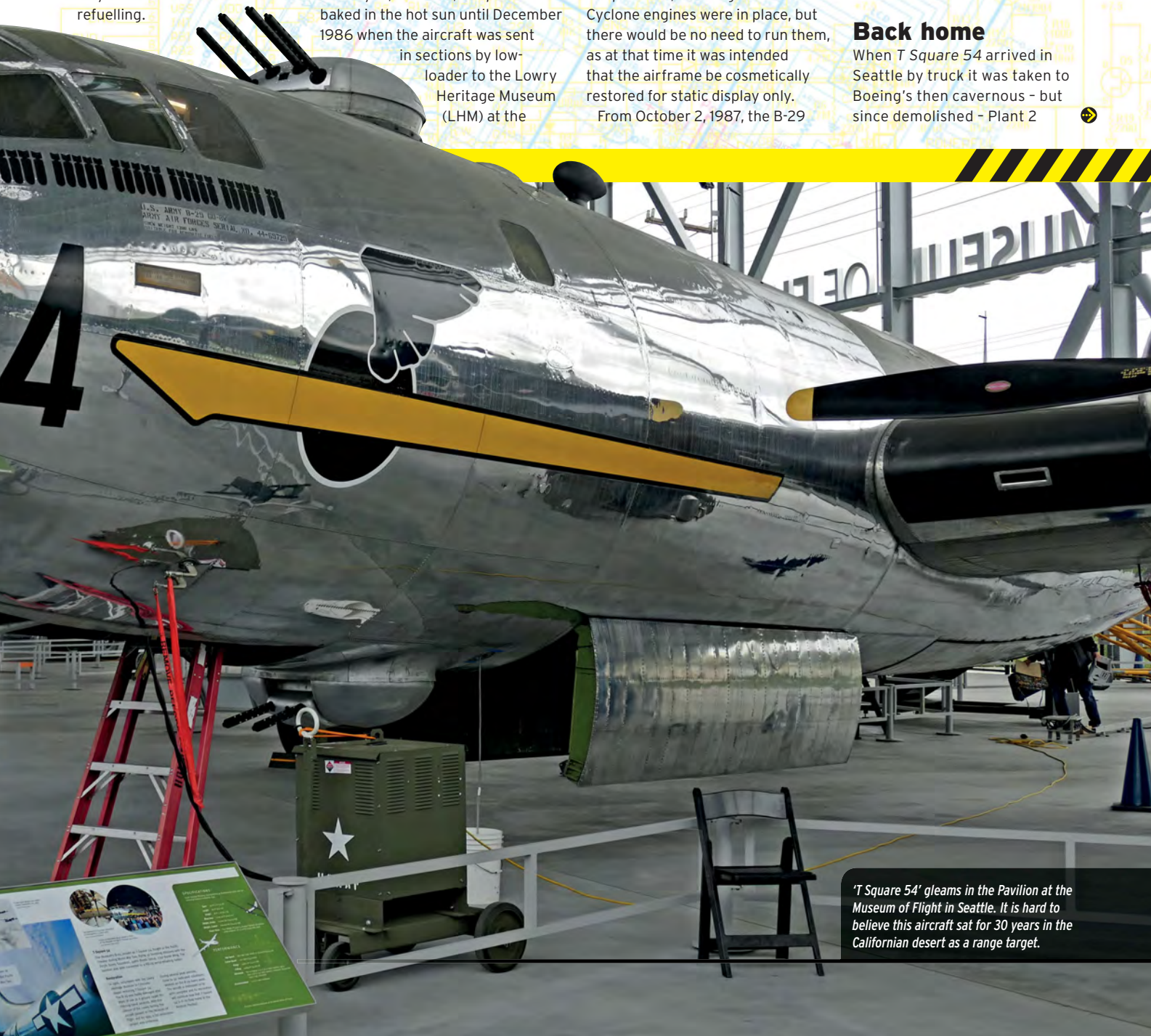
On arrival 44-69729 had already lost its rudder, but unlike other B-29s at China Lake retained its vertical stabiliser. Inside however, was a different story. Years of exposure to the elements, unwanted attention from souvenir hunters, in addition to the parts removed after the bomber arrived in California had left many areas of the aircraft, such as the cockpit, a stripped shell. On the plus side, the Wright R-3350-23 Cyclone engines were in place, but there would be no need to run them, as at that time it was intended that the airframe be cosmetically restored for static display only.

From October 2, 1987, the B-29

was re-dedicated and placed on display at LHM as part of the base's 50th anniversary celebrations, and the 40th anniversary of the USAF. By September 1994 however, Lowry AFB had closed, and LHM had become the Wings Over the Rockies Air and Space Museum. The USAF moved *T Square 54* to the Museum of Flight (MoF) in Seattle, Washington - the home of parent company Boeing, and there began a new phase in the story of 44-69729.

Back home

When *T Square 54* arrived in Seattle by truck it was taken to Boeing's then cavernous - but since demolished - Plant 2



'T Square 54' gleams in the Pavilion at the Museum of Flight in Seattle. It is hard to believe this aircraft sat for 30 years in the Californian desert as a range target.



The flight engineer's complex station, situated behind the pilot, with duplicate sets of throttles clearly visible.

for assessment and decisions on how to proceed. A more suitable restoration site could not have been chosen, given the type of aircraft involved.

Once again work resumed on the Superfortress with a regular team of up to 25 volunteers readying it for display. By 1996, the B-29 was unveiled to the public at MoF, albeit outside because there was no space in the museum for

such a large airframe. During this time, the wetter Seattle weather affected the metal, and a battle with the elements began to prevent the aircraft suffering from corrosion and deteriorating in the damper environment. At the same time, extensive interior work began in earnest with components replaced, overhauled and renewed where necessary - a shortlist from a membership bulletin dating from

2001 gives some idea of the scale of the operation:

- Installed restored control columns of pilot and co-pilot
- New control cables in the cockpit section
- Installed restored lower front turret
- Continued restoration for the four-gun upper turret
- Treated catwalk structure to stop corrosion

- Restored generators and other rotary electrical equipment
- Started design of blister sight mounts
- Started tail turret fabrication
- Rebuilt body structure to support lower aft turret

The aim now was to restore *T Square 54* as completely as possible short of returning the aircraft to flight - no mean

Sitting unhappily after a landing gear collapse, B-29A 42-65221 'Gravel Gertie' of the 882nd BS, 500th BG, at Saipan on June 8, 1945. Note the 73rd Bomb Wing markings on the fuselage. VIA KENT RAMSEY.





The co-pilot's station.

task given the complexity of the systems on a Boeing B-29. Even with the earlier restoration undertaken at Lowry, the sheer amount of work required would have daunted fainter hearts, but the volunteers pressed on.

In 2011, 44-69729 was once again removed from the public eye by the MoF and stored. It was shrink-wrapped to preserve the airframe, which was still outdoors, with the team's work continuing steadily under the protective covering. Finally, on April 7 last year, it was moved inside the new Pavilion at the museum and unveiled to

a sea of Zinc Chromate green primer, one of the cockpit colours favoured by the USAAF for its aircraft. What first strikes you about the 'office' of the Superfortress is how compact everything is, although in *T Square 54*, it's the amazing level of detail that draws the eye. Even the Bakelite ashtrays on the pilot's panels are faithful recreations of the original - they're identical to car ashtrays from the same era, and were sourced accordingly.

"All the instruments were stripped out at China Lake," confirms Dale, "so everything has



The navigator's restored plotting table in the rebuilt cockpit of 44-69729. Note the green padding on the walls.

The pilot's seat in the B-29. The round, brown spherical object in the instrument panel is the ashtray - identical to that used by car manufacturers of the time.



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specially invited guests who had been associated with the B-29 throughout its life. The unwrapping was the highlight of a ceremony that involved the restoration team cutting away the shrink-wrap with scissors and knives in a matter of minutes to reveal the gleaming Superfortress underneath. Since then, *T Square 54* has been on display, but work has by no means abated and continues in earnest.

The guided tour

Dale Thompson is the crew chief for *T Square 54*'s restoration, and on a damp Seattle morning I was privileged to join him, Museum of Flight trustee Kent Ramsey and the volunteers working on *T Square 54* - Larry Tietze, Syd Baker and Wally Cain. As I take notes, his team is listening to him proudly explain the story so far. Standing in the B-29's cockpit, which is not as spacious as you might expect, we're gazing at

had to be replaced. It was just the barest shell."

Looking round it's hard to believe this aircraft sat for 30 years on a test range. The complex flight engineer's station - essentially replicating the pilot's engine controls plus all the instruments - is a masterpiece of restoration, while the fabric padding that insulates the walls of the cockpit is clean and fresh. Outside, visitors are continuously taking pictures of the aircraft - a B-29 always draws interest in an exhibition setting and 44-69729 is no exception.

Dale continues the tour, first showing us the famous tunnel that runs down the Superfortress' tubular fuselage, before taking us to the spacious bomb bay, now stripped of its extra tanks.

"We're not finished yet," Dale says, "[We've completed] maybe 90 to 95%. Recently, we have installed the trailing wire liaison radio antenna system, ➔



One of the defining characteristics of the Superfortress is its nose glazing. This view from inside gives some indication of the all-round visibility given to the pilots.



No trace remains of the black paint worn by 'T Square 54' from its time as a KB-29 tanker.



Control cables within the bomb bay, most of which have been replaced.



Sister ship to 'T Square 54', B-29A 44-61781 'T Square 57' of the 875th BS, 498th BG sits at Isley Field, Saipan. VIA KENT RAMSEY





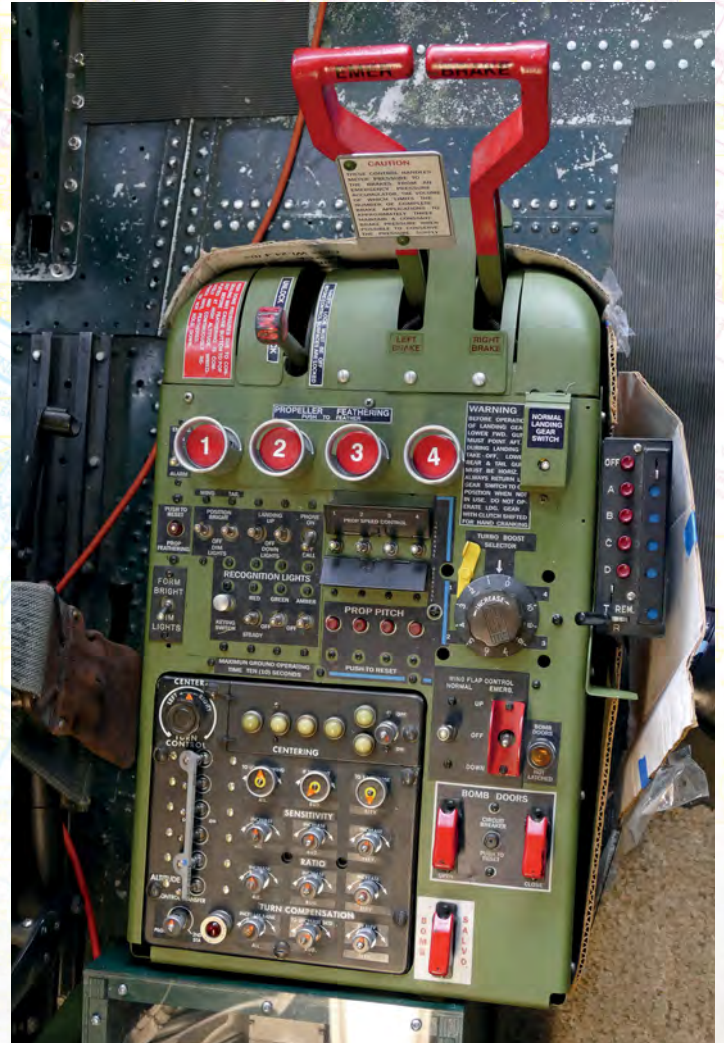
completed the liaison radio wiring at the operator's position, made the tail skid operational, completed more of the interior wiring, and moved forward on the radar operator's equipment. The central fire control (CFC) system [to operate the General Electric remotely controlled gun turrets] is also operational now for the first time since we put it into storage."

The fire control computer is the only functioning example of its kind on a B-29 today, a remarkable achievement on the part of Dale's team when considering how complex the primitive system is.

Stage by stage we work our way through the giant aircraft while

members of the team point out their handiwork with pride. To them, this is the culmination of a project that began 31 years ago, and each restored item represents part of that journey.

The radar compartment is a sobering place to visit. Bereft of windows, it houses the upper four-gun turret as well as the radar operator's station. It does not take much imagination to envisage the operator sealed off from the rest of the crew without a visual reference to the outside world. Initially, the turret was removed after restoration, and was on display in the MoF Great Gallery, but has now been refitted.



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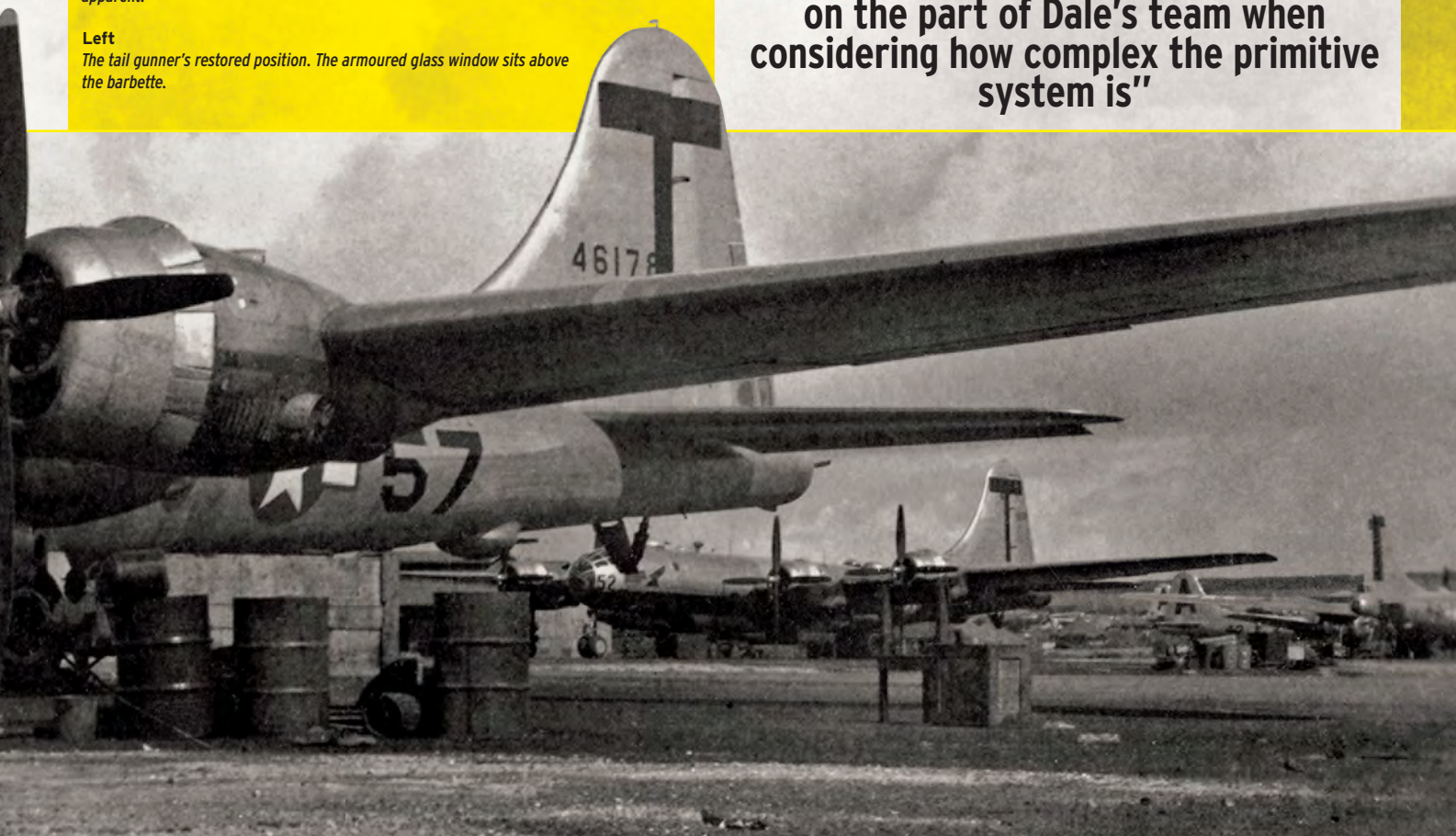
A rare colour view of the radar operator's compartment on a B-29. VIA KENT RAMSEY

Right

Engine controls for 'T Square 54'. The attention to detail during the restoration process is apparent.

Left

The tail gunner's restored position. The armoured glass window sits above the barbette.





The restoration team on the day of FlyPast's visit. From left: crew chief Dale Thompson, Larry Tietze, Syd Baker and Wally Cain.

The China Lake survivors

- 42-24791 (nose only) *Big Time Operator* - Maryland (awaiting restoration)
- 42-65281 *Miss America 62* - Travis Air Force Base Heritage Centre, Fairfield, California
- 44-61535 *Raz'N'Hell* - Castle Air Force Museum, California
- 44-61669 *Three Feathers III* - March Field Air Museum, Riverside, California
- 44-61748 *It's Hawg Wild* - Imperial War Museum, Duxford
- 44-62022 *Peachy* - Pueblo Weisbrod Aircraft Museum, Pueblo, Colorado
- 44-62070 *Fifi* - Commemorative Air Force, Addison Texas (airworthy)
- 44-69729 *T Square 54* - Museum of Flight, Seattle, Washington
- 44-69972 *Doc* - Doc's Friends, Wichita, Kansas (airworthy)
- 44-69983 *Duke of Albuquerque* - National Atomic Museum, New Mexico
- 44-70102 *Here's Hopin'* - in store for Naval Museum of Armament & Technology, China Lake, California
- 44-87779 *Legal Eagle II* - South Dakota Air and Space Museum, Rapid City, South Dakota
- 45-21739 *Unification Kia* - KAI Aerospace Museum, Sachon, South Korea



Of the two aircraft in the background at China Lake in 1975, 44-62022 survives as 'Peachy' in Pueblo, California. The other aircraft, 44-69957, suffered an unknown fate. KEY COLLECTION

“One of the restoration team's greatest memories of the project was created last October, when 94-year-old Wallace van Eaton visited T Square 54 in the Pavilion”

A walk around the outside of the airframe offers a chance to admire the gleaming skin of the bomber, with the giant 'T' emblazoned on the tail, followed by the square and the number 54. Along the fuselage runs the yellow stripe of the 73rd Bomb Wing, together with the unit's distinctive winged globe insignia.

One of the restoration team's greatest memories of the project was created last October, when 94-year-old Wallace van Eaton visited T Square 54 in the Pavilion. Van Eaton was co-pilot of the crew that ferried 44-69729 from the

Boeing factory at Kansas, to Saipan in January 1945. He went on to fly five of his 23 combat missions in the aircraft.

“I just figured I'd never see the 'plane again,” he told the *Everett Herald* newspaper.

Of that time, Dale said: “I walked up to him and he gave me a hug. He was so happy we are looking after the 'plane he flew. [For the restoration team] that's our pay.”

FlyPast thanks Dale Thompson and his team, Kent Ramsey, John Dibbs and the Museum of Flight in Seattle for their help with this feature. ●



Former co-pilot Wallace van Eaton revisiting T Square 54 last October.