



# Taming the BRONCO

## Cactus Air Force's Flying OV-10

BY DAVID LEININGER

**W**ithin the quiet confines of Carson City Airport, Nevada, sits the Cactus Air Force, which houses an exceptional private collection of aircraft owned by Rick Clemens.

Clemens' appreciation of aircraft is somewhat biased; within his stable

you will find mostly North American Aviation-built hardware. Included in his collection are a number of T-28s, T-33s, O-2s, and an F-86 Sabre. Most recently, Clemens has added a T-41B, and is currently working on a Bell AH-1 Cobra helicopter. However, it is the North American P-51 Mustang that Clemens has his sights

on as the next addition to his expanding collection.

The latest aircraft to roll out of his stable is another example from North American, and probably one of the most unique aircraft to join the warbird community—the first civilian-owned OV-10 Bronco. A few years ago the German Air Force retired its









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Broncos, which they had used as target tugs. Two Broncos were located at the Flug Werk Museum, Germany, and Clemens saw his opportunity to acquire this Vietnam-era warbird. He used one of his T-28s as a partial trade for both of the OV-10Bs. Since the two examples were used mainly as target tugs, their condition was better than expected.

Once delivered to the Cactus Air Force, Juan Redick and Melvin Clouser began the process of converting the ex-target tug into a pristine warbird. The fact that Clouser was a Marine Corps mechanic on the OV-10 for 18 years meant his expertise would be invaluable in getting the Bronco airborne. The most daunting task during the restoration was converting the “B” model back to the two-seat “A” model. This transformation required the addition of the rear seat and full instrumentation. As a

target tug, the rear seat and rear clamshell are removed and clear Plexiglas installed to provide the target tug operator an unobstructed view of the target. Conversion back to an “A” model was made more difficult because spare parts are hard to come by. Clemens explains, “The Bronco is still being widely used by the State Department, Bureau of Land Management, and the California Department of Forestry, and as such the surplus of spare parts were absorbed by those airframes.” Those parts most difficult to acquire are main landing gear struts, control linkage, control sticks, and some of the instruments, but through determination and patience Clemens was able to gather the necessary parts to accurately convert his Bronco back to the “A” model configuration.

The fact that Clemens operates a machine shop made it possible for him to fabricate some of the parts



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needed to complete the restoration. “The aircraft is operated and typed as an OV-10A, which is the configuration most of the U.S military aircraft built were operated as,” Clemens said. The outstanding performance of the Bronco is delivered by two AiResearch T76G-10/12 turbo-

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prop engines, which generate over 700 shaft horsepower each. The T-76 turbojet engine is a derivative of the 331 engines, used on the Mu-2 and Turbo Commander, and is commonly known throughout the aviation industry. Once the restoration was completed, Tom Gregory took time

from his responsibilities at the Lone Star Flight Museum to inspect the aircraft. Relying on his experiences as an OV-10 pilot for both the U.S. Marine Corps and U.S. Customs Department, Gregory made the first flight on December 17, 2004, putting the aircraft through its paces. Once the



flight tests were completed and the aircraft certified airworthy, Clemens' son, Brian, painted the OV-10 in Marine markings, VMO-2.

### **The Lucky Pilot**

Lee Griffin comes from an aviation-rich family, his father having flown

fighters in the U.S. Air Force. So it was only natural that Griffin would follow in his father's footsteps and become a fighter pilot with the Air Force, only he chose the U.S. Navy. His 21-year career in the Navy soon found him in the seat of a number of aircraft, including the F-4 Phantom, which he

flew while patrolling the skies over Vietnam. Griffin also flew F-86 Sabres at Point Mugu, as well as adversary aircraft at NAS Miramar. Currently flying for FedEx, he still has a real passion for flying military aircraft. A chance meeting with Rick Clemens would provide him the opportunity to once again fly some of the same ex-military aircraft he had flown in the Navy. In 2004 Griffin was visiting the Carson City Airport when he spotted the Sabre project in Clemens' hangar. Chatting about the Sabre, the two men embarked on a friendship that is stronger today. Griffin had been flying for Clemens nearly a year when the OV-10 project was launched, and when the aircraft was test flown Griffin received his checkride in the aircraft through the cooperation of the FAA and Tom Gregory. Griffin is currently passing his experience in the Bronco onto Clemens.

"The Bronco is truly an honest aircraft," said Griffin. "I have not found an area where the aircraft exhibits any qualities that would be considered detrimental." The T-76 turbojets are mounted in a non-critical configuration, a right-side and left-side engine, meaning both engines rotate their respective propellers inward. "This configuration creates a more stable platform, as there is no torque felt when both engines are running, unlike other conventional aircraft with two engines," said Griffin. When changing out an engine, configuration must be taken into consideration. "Two right-

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side or two left-side engines can be utilized at the same time, but certain speed and g-force restrictions must be maintained and would only be used in ferry situations," Griffin explained.

During his combat missions over Vietnam, Griffin was directed many times by Forward Air Controllers (FAC) flying OV-10s. Flying those ground support missions over Vietnam, Griffin soon acquired a real respect for the FAC community, as they would pin-

point and call out enemy ground fire for the fast movers. Griffin currently has a little more than 150 hours piloting the Bronco and looks forward to many more enjoyable flights in the aircraft. "It is a real joy to take this aircraft to air shows, and watch the attention given to it," he said.

Excellent progress is being made on the second Bronco, and it is hoped one of the OV-10s can be used as trade for a P-51 Mustang. Regardless of what

happens to the Broncos it is certain Clemens' enthusiasm for these aircraft, and the expansion of his collection, will bring a valuable contribution to the warbird community.

### **The Bronco Lineage**

In 1963 the U.S. Navy, Air Force, and Army set out a specification for a "LARA" (Light Armed Reconnaissance Aircraft) in an effort to replace the O-1 and O-2, at the time



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perceived to be obsolete. The specification called for a twin-engine, two-man aircraft that could carry at least 2,400 pounds of cargo and be able to operate from short, unconventional airstrips. In addition to the specifications, the new aircraft would need to be configured for a variety of armament, to include four 7.62mm machine guns and external weapons including 5-inch Zuni rockets, 2.75-inch rockets, a 20mm gun pod, and AIM-9 Sidewinder missiles.

With fierce competition for military contracts, 11 proposals were submitted, of which seven made the first cut: Helio 1320, Lockheed CL-760, Beech PD183, Douglas D-855, General Dynamics/Convair Model 48 Charger, and the North American/Rockwell NA300. In 1964, the NA300 was selected, and a contract for seven prototype aircraft was issued in October of that year. Very

unhappy with the decision, General Dynamics/Convair protested, and built a prototype of their model 48 Charger, which first flew on Nov. 29, 1964. The Charger outperformed the Bronco in many respects, but when the prototype crashed on Oct. 19, 1965, after 196 flights, so did the Charger's chances of landing the contract. The Bronco began flying on July 16, 1965, and became the premiere COIN (COunter INsurgence) aircraft.

The first to acquire the new COIN aircraft was the U.S. Marine Corps, who fitted two observation squadrons with 18 aircraft, nine OV-10As, and nine OV-10D night observation aircraft. In addition, the U.S. Marine Corps modified four OV-10As into Night Observation Gunships (NOGS), which included a turreted forward-looking infrared (FLIR) sensor and turreted M-197 20mm gun. The NOGS were extremely effec-

tive in Vietnam. The U.S. Marine Corps used the OV-10s as FACs until 1994, and by 1995 all Broncos were phased out of the inventory.

The U.S. Air Force acquired its first Broncos for combat in Vietnam on July 31, 1968, and a total of 157 OV-10s were delivered before the production ended in April 1969. The Air Force was less satisfied with the Bronco than its Marine counterparts, pointing out the aircraft's vulnerability while flying low and slow over hostile areas. By 1980, the U.S. Air Force deemed the aircraft no longer fit for its mission needs and phased them out of service.

The U.S. Navy formed the VAL-4 in January 1969 and operated in Vietnam from April to October 1970. Using the Bronco as a light ground-attack aircraft, the Navy ran interdiction of enemy logistics, and provided fire support for Marines, SEALs, and riverboats, where it succeeded in these rolls.

