

U. S. Army Aviation Digest

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"Houston Center, Army 18923, FL 400, starting descent.

Request clearance to Robert Gray AAF." A portion of the report on how an Army tactical unit by its resolve established **new world aviation records** for climb, sustained flight and maximum altitude.

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EVER HEAR AN Army aircraft report 40,000 feet? [CW2 Thomas G. Yoha](#) reported FL 400 (flight level 40,000) to Houston Center during an international record setting flight in Army OV-10A #67-18923. The 293d Aviation Company (SA), 55th Aviation Battalion (Cbt), Ft. Hood, TX, conducted flights on 8 and 9 June 1971 which represented the first attempts ever made by an Army tactical unit to establish official world performance records. Previous records set in Army aircraft were limited to joint military / manufacturer attempts.

CPT Richard J. Steinbock was copilot on the flights which successfully culminated 4 months of effort in coordinating, planning and preparing for the historical events. In accordance with AR 95-28 a request for authority to establish performance records was forwarded by

Mr. A. Earl Hansen, observed the installation of equipment to register performance and he officially monitored each flight.

The Mohawk performed superbly as anticipated. On 8 June 1971 aircraft #923 took off at 0650 hours from Robert Gray Army Airfield at Ft. Hood, TX, and climbed to 3,000 meters (9,843 feet) in 2 minutes 46 seconds. An altitude of 6,000 meters (19,685 feet) was attained in 5 minutes 46 seconds. A third climb record was set at 9,000 meters (29,528 feet) in 11 minutes 14 seconds. At approximately 33,000 feet a compressor stall caused CW2 Yoha to shut down #2 engine and return to Robert Gray.

After a thorough engine inspection 923 took off the following afternoon and climbed to a maximum altitude of 39,880 feet. A sustained flight record was

stop watches and movie cameras to record performance. Mr. James Morority, AVCO Lycoming field engineer, and Mr. Carl Herrington, field representative, assisted in preparing the engines.

The two best L-15 engines available were selected and installed on aircraft 923. SSG Ray E. Okerson's turbine engine mechanics visually inspected each engine and conducted performance tests. They adjusted each engine for peak performance and determined the maximum available power which was to be safety utilized on takeoff.

Under the guidance and supervision of LTC Thomas Birriel-Carmona, chief flight surgeon, III Corps and Ft. Hood, elaborate plans and procedures were outlined to prepare the crew for safe flight into rarefied atmosphere. Air Force regulations prohibit flights

the 293d on 29 February 1971. Reasoning, as stated in the request, was to carry out Department of the Army and Department of Defense policy of informing the people of the continuous advancement in United States engineering and technological capabilities.

Final approval was granted at Department of Defense, Office of Public Affairs. The unit proposed to establish world altitude and time-to-climb records in Class C-1-e, Group 11. This class comprises turboprop light airplanes weighing 3,000 to 6,000 kilograms (6,614 to 13,227 pounds). The Grumman OV-1C Mohawk, powered by two T53L-15 Lycoming turbine jet engines, weighed 11,875 pounds on takeoff. Maximum altitude was expected to exceed 40,000 feet. Time-to-climb to 3,000, 6,000 and 9,000 meters was expected to be approximately 3, 7 and 12 minutes respectively.

Performance record flights made by CW2 Yoha and CPT Steinbock were officially monitored by the National Aeronautic Association (NAA). NAA is the U. S. representative to the Federation Aeronautique Internationale (FAI) of Paris, France. FAI

set at 36,352 feet. These records are not astounding when compared with records established by jet aircraft, however, the Mohawk's performance is truly significant for turboprop airplanes. The climb records established at 3,000 and 6,000 meters surpassed previous records set by turboprop airplanes in all classes. Army aviation can justifiably boast this achievement by professional aviation personnel. From the coordination, planning and persistent efforts of CW2 Yoha and CPT Steinbock emerged approval for official record attempts by an aviation company for the first time in the history of Army aviation. Their coordination with NAA established procedures for conducting the record flights. Coordination with FAA Regional Headquarters, Fort Worth, TX, and Houston Air Traffic Control Center was necessary for clearance to high altitudes.

Other individuals deserving recognition include Mr. John Mako and Mr. Jack Lacey, Grumman Aerospace Corporation representatives who advised and assisted in planning the attempt. They gave assistance to CPT David B. O'Hara, 293d maintenance

above 25,000 feet in aircraft without pressurized cabins. OV-1s do not have pressurized cabins but boast an excellent diluter demand oxygen system capable of supplying 100 percent oxygen under pressure.

Complete physical examinations were administered and simulated flights were made in an attitude chamber. The chamber flights, profiled with programmed climb rates to a peak altitude of 46,000 feet, simulated almost exactly what the crew would experience on actual flights.

Each crewmember inhaled 100 percent oxygen for 2 hours prior to takeoff. Entering the aircraft cockpit each crewmember unplugged from portable oxygen bottles and plugged into the aircraft oxygen system with zero dilution. Preoxygenation was necessary to rid the blood system of nitrogen. Expansion of nitrogen at high altitude produces bubbles in the blood which become intolerable to the human body above 25,000 feet. These preparations minimized possibility of physical harm resulting from exposure up to 46,000 feet.

The true significance of achieving these records is not just the superb OV-1

is the international authority for certification of world records. NAA representative,

officer, and to the OV-1 mechanics who prepared aircraft 923. The OV-1 mechanics removed all unnecessary equipment and installed a barograph, and additional altimeter,

performance. It took sterling performances by the individuals who planned, prepared and flew Mohawk #923 into the record books.