

1931 Great Lakes Model 2T-1E
Serial Number 246
Manufactured July 1931
by
Great Lakes Aircraft Corporation
under
Approved Type Certificate 354



Rebuilt in 2009
and
Returned To Service
as
1931 Great Lakes Model 2T-1A
Serial Number 246
Approved Type Certificate 228
Powered By A
Warner R500 Super Scarab Radial Engine



This aircraft, SN 246, has had a long history, with several owners, several different engines, and even a change in the aircrafts model designation and Approved Type Certificate.

The 1930's, the era in which this aircraft was built, was a time when aircraft tended to be less complex and in many ways simpler than today. In regards to certification and documentation, granted things have changed, but overall, much remains unchanged.

The following few pages, will share this aircrafts past, starting originally as a Great Lakes Aircraft Corporation Sport Trainer, Model 2T-1E, Serial Number 246, to the aircrafts current designation as a Model 2T-1A, remaining Serial Number 246, but re-engined with a Warner R500 radial.

July, 1931, SN246 was manufactured and approved under ATC 354 by the predecessor to the Federal Aviation Administration, the Civil Aeronautics Administration.

<u>GREAT LAKES AIRCRAFT COMPANY</u>	
<u>MODELS:</u>	Great Lakes 2T-1E, 1 or 2 POLB
<u>T.C. NUMBER:</u>	ATC 354
Engine	American Cirrus Hi-Drive 95 hp
Propeller	Wood or adj. metal
Fuel	26 gallons (one tank in center section)
Oil	3 gallons
No. passengers	None or 1
Baggage	5 lbs. as 2-place 200 lbs. as 1-place (Pay load includes 2 parachutes 20 lbs. each)
Standard weight	1580 lbs.
Spec. basis	Approved Type Certificate No. 354
Serial Nos.	124, 191, 193, 201 and up manufactured prior to 11/19/36 eligible. Approval expired as of that date. (See NOTE 1)
NOTE 1. Serial No. 54 is eligible as 2-place with the following:	
Oil	3-1/2 gallons
Baggage	20 lbs. (Pay load includes 2 parachutes 20 lbs. each)
Equipment	Wheel streamlines and wing root fairing.

Approved Type Certificate, ATC 354 for the 2T-1E

The aircrafts first owner, was a Mr. Charles F. Robie of Alameda California. Mr Robie is shown to have received his aircraft on August 29, 1931. According to historical information, Great Lakes Aircraft were built to order, non were built to stock inventories. With that said, it can be assumed that Mr Robie, placed the order for this 2T-1E, which was built specifically for him, and he took ownership on that day in August of 1931. Mr Robie owned the aircraft only a short time, selling it a mere 7 months after purchasing it. The reasons for the short ownership is unknown, but history of the time, being that of Americas Great Depression, no doubt may have been an influence on his decision to sell.

Moreau Flying Services of Oakland California became the second owner of the 2T-1E, SN 246. They purchased the aircraft in March of 1932. West E. Moreau opened his

Moreau Flying Service operations at Oakland Airport near San Francisco. The approximate date he began operations was likely late 1931. He would have been about 22 years old at the time, and ultimately owned and operated the largest west coast flying service operation of the time. According to records, the attack on Pearl Harbor essentially closed Oakland Airport to civilians and it is noted the airport was totally blacked out. Moreau relocated his operations, ultimately ending up in Southern Arizona, but returned to Oakland after the war.

Reading historical items, referenced from West Moreaus grandson, West flew to Oakland in possibly the other Great Lakes that essentially was the foundation of his early Moreau Flying Service. That aircraft was NC11337, a 2T-1A Great Lakes, SN250. On the Davis-Monthan historical website, and the West Moreau / Moreau Flying Service pages, there are several photos of the 2T-1A aircraft. Sadly, regarding the Great Lakes, the registration numbers are not readable in the old photos, however, the trained eye can obviously spot one aircraft to be a 2T-1E and the other a 2T-1A. Possibly Moreau owned more Great Lakes, but this story enjoys the thoughts that those aircraft are NC11333, SN246 and NC11337, SN250.



Moreau Flying Service of Oakland California Circa 1930s
Likely 2T-1E, N11333, SN246 and 2T-1A N11337, SN250



A Holiday Card from The Moreaus
Note both Great Lakes, 2T-1E in Foreground, with 2T-1A Between Stinson and 2T-1E.

During the years that Moreau Flying Service owned and operated the aircraft, NC11333, SN246, the aircraft had several engine changes. Ultimately, on January 28, 1936 the documents were approved to convert the 2T-1E, SN246 into 2T-1A, remaining SN246. The work accomplished involved replacing the engine to the Cirrus upright engine, removing the oil tank, rotating the engine cowl 180 degrees and swapping the engine controls from the cockpits right side, to the left.

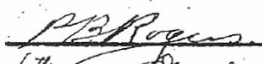
All this was described in a signed Manufactures Affidavit from Great Lakes Aircraft Corporation, Dated December 6, 1935. Also described, was that the airframes were identical structurally, but also weights and CG were the same too.

MANUFACTURER'S AFFIDAVIT

I, F B ROGERS, Vice President in Charge of Engineering of the GREAT LAKES AIRCRAFT CORPORATION, being first duly sworn on oath, depose and say that the aircraft, Manufacturer's Number 246, Model 2T-1E, License Number NC-11333, A/C 354, manufactured by the GREAT LAKES AIRCRAFT CORPORATION, is identical structurally and convertible to Model 2T-1A, A/C 228. The weight and horizontal c.g. are identical for both Models.

To convert Model 2T-1E to Model 2T-1A it is necessary to install a 90HP Cirrus upright engine, remove the oil tank, rotate the engine cowling 180 degrees and change the engine controls to the left hand side.

Subscribed and sworn to before me this 10th day of December, 1935.



F. B. ROGERS
SECRETARY PUBLIC
My commission expires
D. E. WILSON, Notary Public
My Commission Expires Aug. 10, 1938

Manufacturers Affidavit Regarding Conversion of 2T-1E into a 2T-1A

GREAT LAKES AIRCRAFT COMPANY

MODELS: Great Lakes 2T-1A, 1 or 2 POLB

T.C. NUMBER: ATC 228

Engine	American Cirrus Mark III 100 hp
Propeller	Wood or adj. metal
Fuel	26 gallons
Oil	2 gallons
No. passengers	None or 1
Baggage	13 lbs. as 2-place (See NOTE 1a) 200 lbs. as 1-place (Pay load includes 2 parachutes 20 lbs. each)
Standard weight	1618 lbs.
Spec. basis	Approved Type Certificate No. 228
Serial Nos.	124, 184, 185, 186, 187, 189, and up manufactured prior to 11/19/86 eligible. Approval expired as of that date. (See NOTE 1)

Class III equipment:

26x8, 22x10, 22x6, 24x4 wheels; tail wheel (Air Associates (6x2.00)
2 lbs. net increase.

NOTE 1. (a) Serial Nos. 6, 8, 15, 21, 23, 30, 34, 37, 45, 48, 50 to 123,
125 to 183 and 188 eligible with 27 lbs. baggage as 2-place instead of
13 lbs.

(b) All serial numbers eligible under ATO 167 eligible under this
approval when changed to conform.

Approved Type Certificate, ATC 228 for the 2T-1A



West Moreau, possibly the test flight after converting the 2T-1E into a 2T-1A

Moreau Flying Service owned the aircraft for many years. From early 1932 until it was sold in January of 1941.

The aircraft's third owner was actually a co-ownership. Mr. Thomas Seslar and Mr. Paul Madsen of Oakland, California purchased the aircraft. For unknown reasons, they owned it a very short time, selling it just six months later.

In July of 1941, Mr. James R. Laws of Holister, California purchased the aircraft. He too kept the aircraft a short time, selling it in September of 1942. Again it seems unknown as to why the aircraft was sold so quickly.

Mr. Raymond L. Johnston, of Watsonville, California purchased the aircraft on September 15, 1942. Like the several previous owners, he too sold it quickly, having owned the aircraft for three months.

December 19, 1942, SN 246 got yet another owner. Again remaining in California, the aircraft was purchased on December 19, 1942 by Mr. Don Richard Langson. Like those before him, Mr. Langson sold the aircraft quickly, keeping it only until June of the following year.

On June 22, 1943, a Mr. H.L. Crumrine, representing the Morton Air Academy of Blythe, California purchased the Great Lakes. This ownership represents possibly the shortest duration with the aircraft sold again, this time in less than thirty days.

July 19, 1943, the aircraft was purchased by three individuals: Mr. A.V. Baylor, Silas Guthrie, and Mr. Bill Buckelew. Ownership was listed as Blythe, California. These owners retained the aircraft for two years, selling it in July of 1945.

O.W. Simila of Blythe, California next owned the Great Lakes. He purchased it July 25, 1945. He too owned the aircraft a short time, selling it in April of 1946.

The aircraft continued to remain in California, this time though the ownership was listed as Needles, California. The new owner, Mr. William Natte purchased the aircraft on April 23, 1946. Again for reasons unknown, the aircraft was sold about five weeks later.

The aircraft finally found a longtime home and ownership with Mr. Russell W. Swanson and his brother Mr. Vernon L. Swanson. The ownership was listed as Needles, California, and the two of them purchased NC11333 on June 3, 1946.

Russell Swanson, or his estate, owned the aircraft from 1946 until 2004. Russell was an aviator. His career showed he was a pilot in the National Guard. Russell Swanson enjoyed his Great Lakes NC11333 for several years, powered by the American Cirrus engine, until accomplishing the Warner Engine conversion.

Current ownership of the aircraft is with Dr Clive Roberson of Palm Beach Florida. The aircraft was purchased in 2004 from the heirs of the Swanson estate. Dr Roberson initiated and completed a complete rebuild of the aircraft. This included all items, complete airframe rebuild, overhauled engine, new propeller and more. What emerged after the rebuild was beautiful aircraft.

Aviation can be an odd industry in many ways. Aircraft ownership, no doubt then and now for a private individual was likely a luxury. Writing this, I wondered, why were there so many owners in such short intervals. Was it financially related, was it possibly due to the war during many of these years, was it a dream that each owner had of aircraft ownership, or maybe possibly, this aircraft served as the basis for many of these owners to earn their pilots license, using the Great Lakes as their aircraft of choice to learn in.



Photograph, taken during the time the aircraft was owned by Russell Swanson

Circa Late 1940s



Hand Written on the Backside Of the Photo

“Taken while I was with a white helmet on and you can’t see much of me just before take off. Notice the windmill spinning. NC11333”

Photograph, taken during the time the aircraft was owned by Russell Swanson
Circa Late 1940s



Hand Written on the Backside Of the Photo

“A very good shot of the “Trainer” taken from the ground up “

Photograph, taken during the time the aircraft was owned by Russell Swanson
Circa Late 1940s



Hand Written on the Backside Of the Photo
“Just a little dark but you can tell it’s one of those fly machines.
Really is a honey.”

Photograph, taken during the time the aircraft was owned by Russell Swanson
Circa Late 1940s



Photograph, taken during the time the aircraft was owned by Russell Swanson

Circa Late 1940s

Beyond the American Cirrus engine, Russell Swanson knew his Great Lakes, N11333, was not going to be Cirrus powered. Russell sent many letters to many different people, constantly focused on how to re-engine the Great Lakes. Consider, this was a time of written letters, there was no email or internet searches. Instant replies or answer just did not happen.

N11333 was partially re-engined in March of 1950. The records indicate the original engine mount was removed from the fuselage, and a new mount, one for the Menasco D4 engine was welded on. The aircraft records indicate the change, however, the Menasco was never installed.

Years later, we find the records of the engine mount again being changed. This time, for the Warner R500 Super Scarab radial. Much of the written correspondence by Russell Swanson was inquiries regarding the Warner conversion.

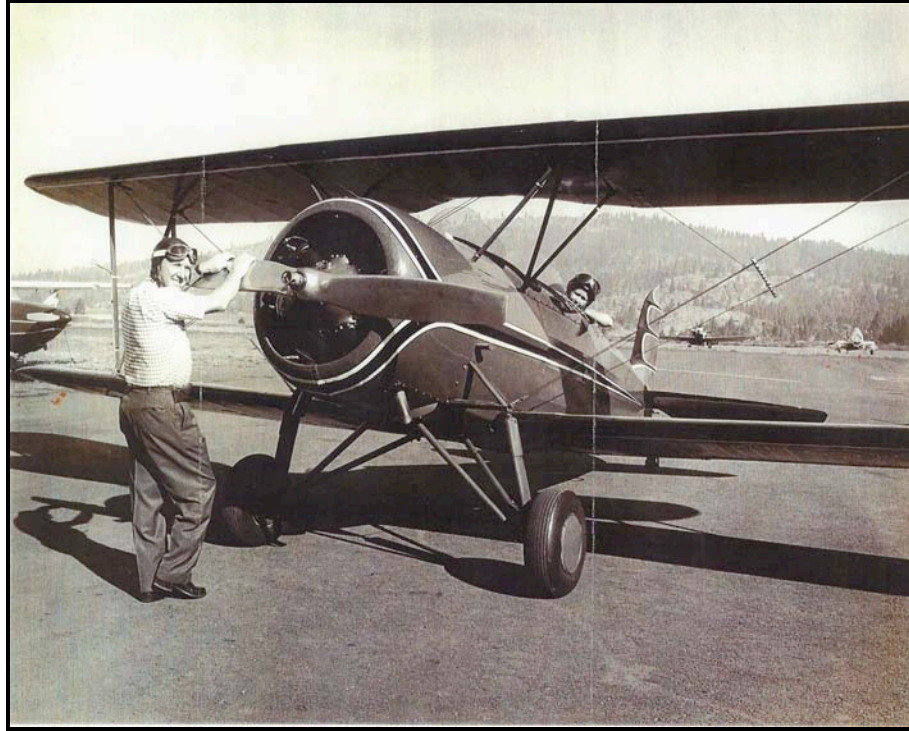


Warner Aircraft Corporation Advertisement

Others had done it previously, so the information existed to install the Warner radial engine. With previous approvals in hand Russell set out to complete the conversion to the Warner engine. Details of the engine mount points were sketched and photographed. The additional items such as oil tank, cowling and more were also considered. Ultimately, in 1964, after approximately a 16 years of not flying, N11333 reemerged with the Warner conversion.



A Color Photo Of Russell Swansons Great Lakes, With The Warner Powerplant
Circa 1964 / 1965



Russell Swanson and His Son, Hand Propping For a Flight In The Great Lakes Circa
1964 / 1965

The aircraft flew only a couple of years with the Warner conversion, until something grounded it. I suspect, based on damage to the cowling, the aircraft was put up onto its prop.

As a baseline, it is known and approved that Russell Swanson had done the modifications to install the Warner radial engine. From the aircrafts records, he was able to fly the aircraft with the conversion, however it appears the aircraft last flew with him in 1965.

Sadly, even though Russell Swanson did continue to work on his baby, he was never able to enjoy flying it again. Many years passed, and while the registration was kept current, the aircraft sat, disassembled, in a barn.

Dr Roberson purchased the aircraft in 2004. Approximately 40 years had passed since the aircraft had flown. He initiated and completed a complete rebuild of the aircraft. This included all items, airframe rebuild and overhauled engine, a new propeller and more. What emerged after the rebuild was beautiful aircraft. Impeccably done and completed by renowned aircraft restoration specialist Jerry Stadtmiller of the company called Bipe.

The aircraft was rebuilt in West Palm Beach Florida. At the time Bipe was located there, on Lantana Airport (Palm Beach County Airpark). This was the last aircraft completed at the Bipe / Lantana facility, as they later moved their operations to the gorgeous North Carolina mountains.

The finished aircraft, while gorgeous, took a long path to what it is today. Dr Roberson is a lifetime aviator, having owned a multitude of various types of aircraft over many years of flying. He decided a Great lakes was needed, and with the assistance of Harvey Swack, N11333 was located and a deal to purchase the aircraft from the Swanson estate was completed. The aircraft at the time was located in the Pacific Northwest. A well known aircraft rebuilder, Stu Mitzell was contracted to go through the aircraft, accomplish needed repairs and return the aircraft to service for Dr Roberson. Sadly, Stu passed away prior to completing the task. Not wanting to relocate the aircraft at this time, another Pacific Northwest aircraft rebuilder was contracted. This was John Pike of Big Sky Stearman. John and his crew spent many hours working on the Great Lakes, including fabrication of new wing spars and more.

Ultimately though, progress slowed and it was decided to relocate the aircraft to South Florida, near the home of the owner, Dr Roberson. Longtime aircraft restorer Jerry Stadtmiller of Bipe, known for his Waco and Stearman restorations, was the one that brought the aircraft back to flyable condition. No expense was spared. The airframe, with its previous work accomplishments from the other shops was inspected and double checked. Details of the correct paperwork and documents needed to return the aircraft to service were sorted and compiled.

The engine underwent a complete overhaul by Alan Holloway of Holloway Engineering, a shop that specializes in radial and antique aircraft engine overhaul and repair.

The exhaust system was completely rebuilt and polished.



Photo of Engine Exhaust Collector

A new Sensenich propeller was purchased and installed onto a Warner hub, after, of course, the hub was Magnafluxed and cadmium plated by a local propeller repair station.



The New Sensenich Propeller With Warner Hub After Inspection And Cadmium Plating,
and the rebuilt engine and cowling

The damaged cowling and other items were rebuilt as needed.

Ultimately, in 2009, some 44 years since last flown the aircraft was ready to fly again. What emerged from the Bipe shop after the talented hands of Jerrys crew got done with her, was a rebuilt N11333, 1931 Great Lakes 2T-1A, SN246 with a Warner Powerplant. Finished in a gorgeous Red with White scallops, outlined in metallic gold paint scheme, the aircraft is stunning.

As can be expected from any high quality rebuild, the test flights were uneventful and done by a local pilot with many thousands of hours of experience. Adding more to his credentials, the pilot that accomplished the maintenance test flights has many hours flying Great Lakes aircraft and ensured the aircraft performed as well as it looked.



Current Day Photo of 2T-1A, SN246, N11333



Current Day Photo of 2T-1A, SN246, N11333