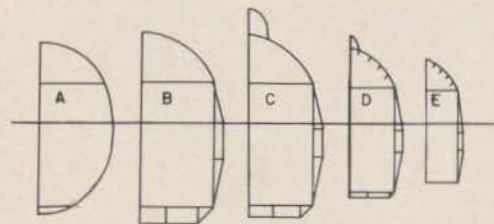
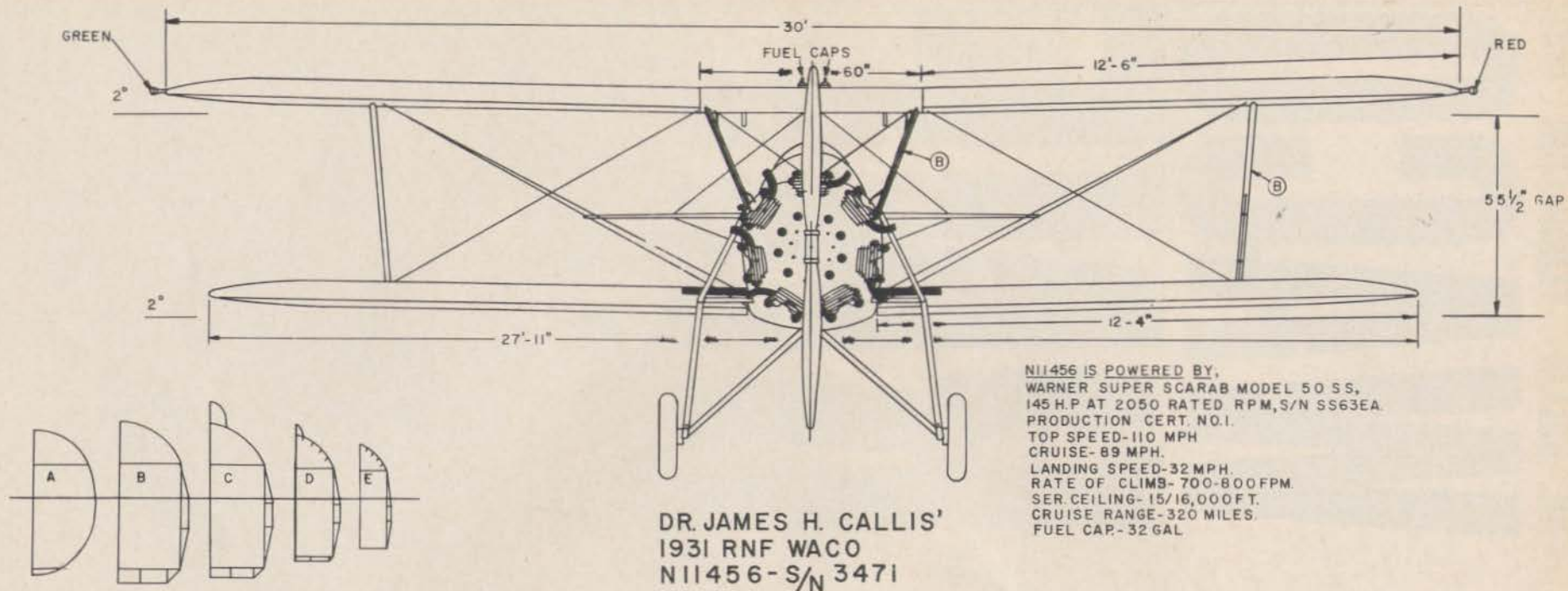


DR. CALLIS' VERMILLION 1931

WACO RNF

Jim Callis fell in love at the tender age of six . . . with a Waco RNF. A love affair that never waned and today Jim has his own RNF, and a handsome beauty she is. Sport Flying presents an indepth camera study of this outstanding machine. By KEN WILSON



83" DIA. GR. ADJ.
 HAMILTON
 STANDARD
 PROPELLER

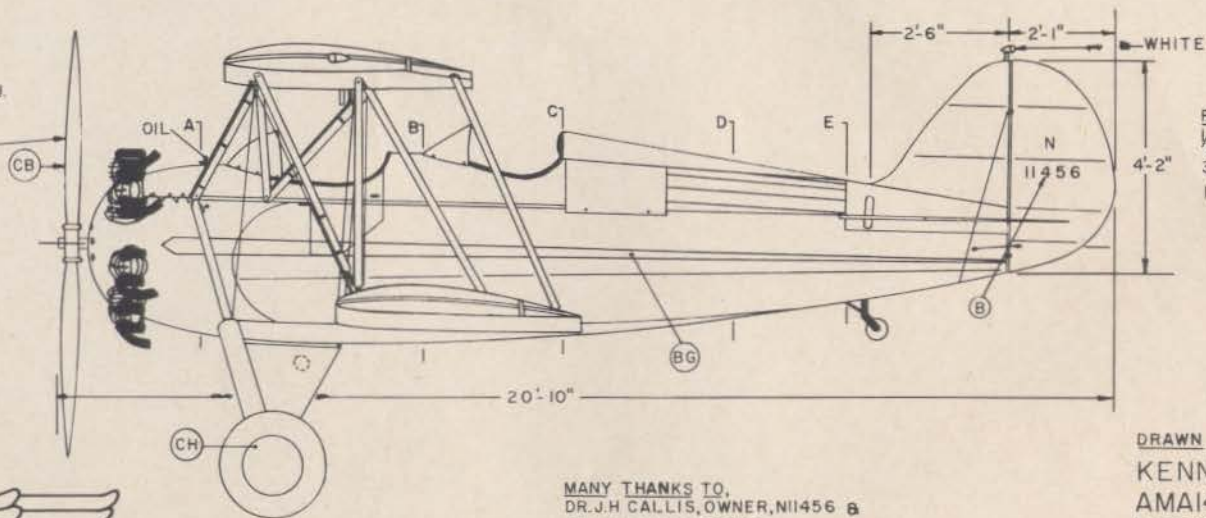
COLOR DETAIL;
 OVERALL COLOR IS HIGH
 GLOSS RED.

CB - CHROME FRONT, FLAT
 BLACK BACKSIDE.

CH - CHROME.

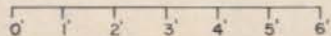
B - BLACK.

BG - BLACK WITH GOLD
 PINSTRIPE.

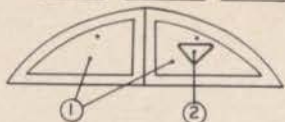


MANY THANKS TO,
 DR. J.H. CALLIS, OWNER, N11456 &
 MR. WILLIAM GOODE,
 OWNER & OPERATOR OF
 GOODE AIRPARKE.

DRAWN & INKED BY,
 KENNETH D. WILSON
 AMAI4065-EAA44170
 NATIONAL WACO CLUB
 DR NO-S.F.MKD-W-02-JCW
 PLATE NO 1 OF 2
 25 JAN. 1969



FRONT COCKPIT PANEL:

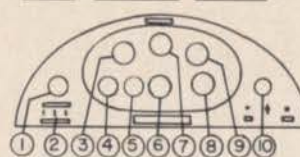


- ① GLOVE COMPARTMENT.
- ② BRASS NAMEPLATE READS
"WACO AIRCRAFT CO., SCARAB.,
3471, 1931."

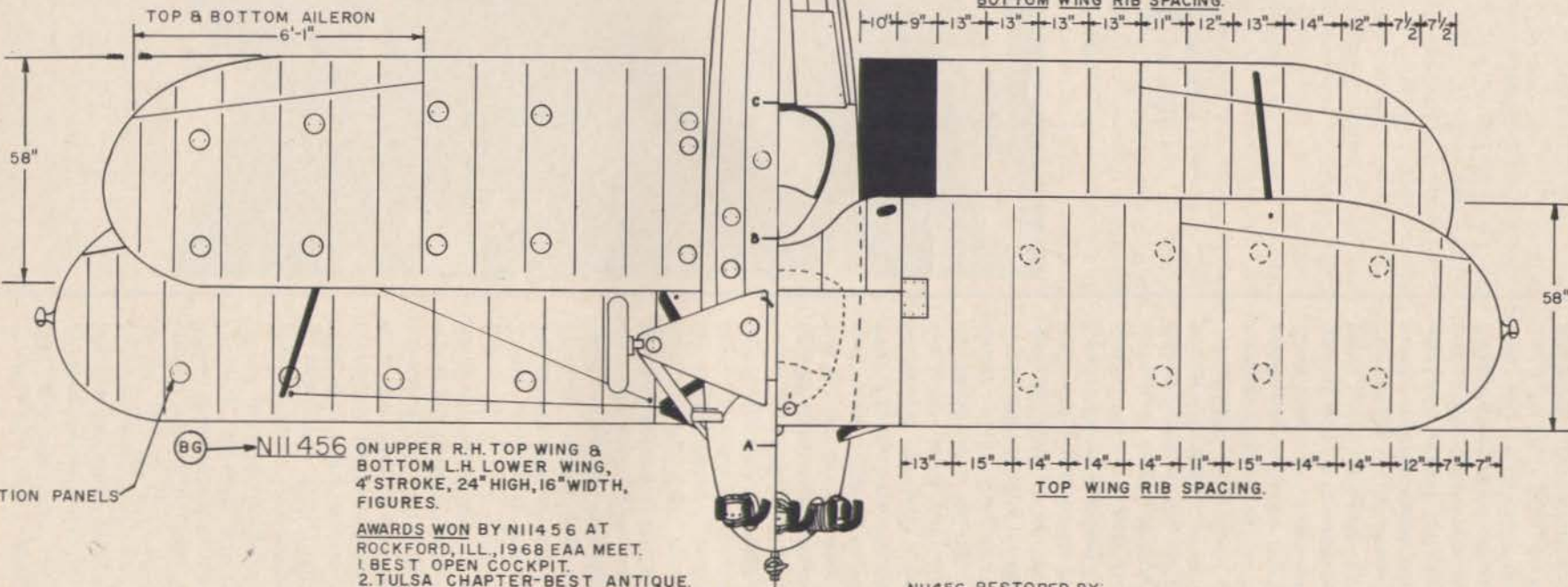
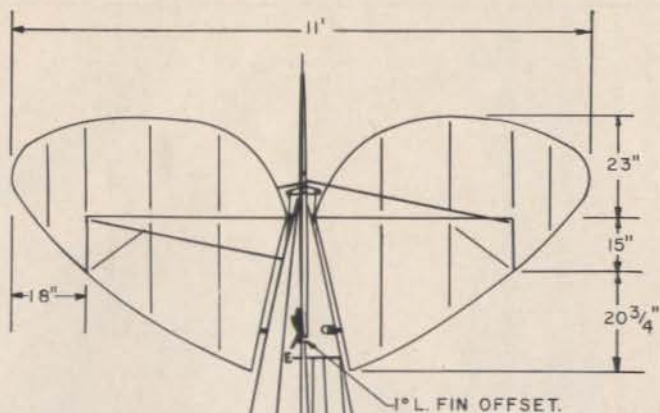
RESEARCH INFO:

- WACO FACTORY DRS - 7-21-1930.
- RNF OWNERS MANUAL.
- RNF MAINT. CHARTS.
- RNF ASSEMBLY CHART ON FUSELAGE PARTS & REFERENCE SYMBOLS.
- PHOTOS, MEASUREMENTS, OF N11456 TAKEN BY K.D. WILSON AT GOODE AIRPARKE.

REAR COCKPIT PANEL:



- ① SWITCH
- ② MASTER, GEN. & NAV. LTS. SWITCHES
- ③ R.P.M.
- ④ TEMP.
- ⑤ OIL.
- ⑥ TURN & BANK.
- ⑦ COMPASS
- ⑧ AIR SPEED.
- ⑨ ALTIMETER.
- ⑩ AMPS.



N11456 RESTORED BY:
DR. J.H. CALLIS
MR. W. GOODE
MR. G. WHEELER
MR. R. RICHARDSON

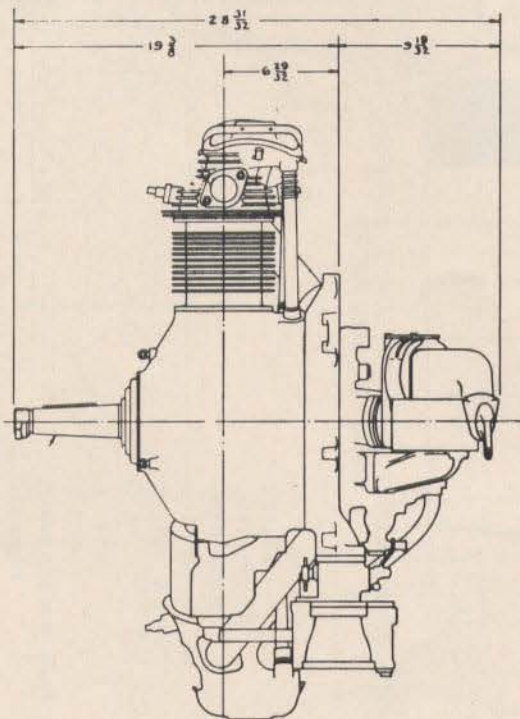
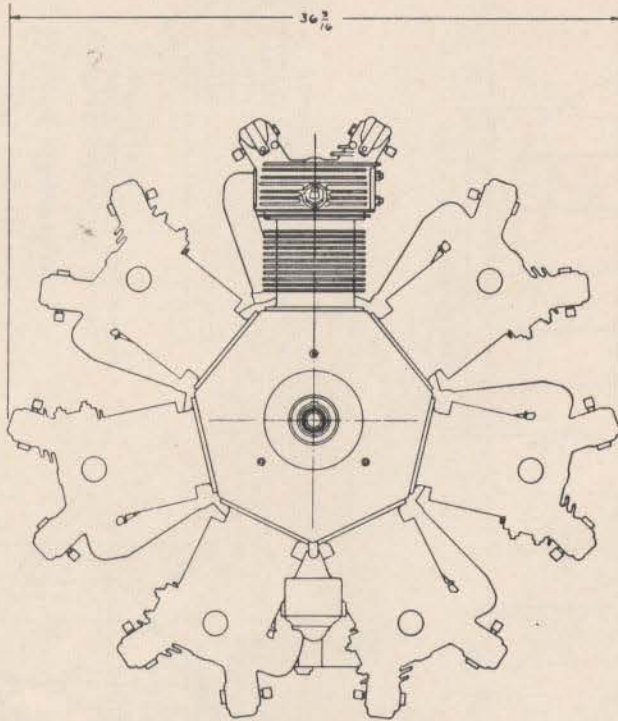
WACO RNF CONT'D.

As the sun started breaking over the Ohio River that 1967 summer Sunday morning, I guess the family noticed ole Pop was up kinda early, but this was to be expected, for I was making one of my two to three trips a year to another model airplane contest, this one at Owensboro, Kentucky.

Still, it was sorta early at 5 o'clock in the morning to make a 12 o'clock deadline entry at a model meet only 65 miles away. Well, I did have something else going around in the head besides scale-model aircraft—a beautiful 1931 WACO RNF—glass smooth Vermillion color, and I knew only that it was at Goode Airparke, a few miles south of Owensboro, or so I'd been told.

After arriving at the model circles and talking with ole buddies I see two or three times a year, I decided to head for Goode Airparke. After running up and down the highway—knocking on doors of sleeping households, asking at gas stations—I found the couple miles out of Owensboro was eight miles south of Owensboro, and while driving along a country road—Marksberry Lane—in the beautiful Bluegrass State, I rounded a curve and hit the brakes. What was before me looked like a right-out-of-the-1930's airport—two hangars, one all wood and one with corrugated roof—a grass runway with a hazy mist—a windsock on a tall once used telephone pole, hanging listlessly—all ready I knew I liked the place—Goode Airparke. About a half mile down the road was a house, the home of Bill Goode, owner-operator of Good Airparke. While I nosed around, trying to look in cracks of hangar doors, a pickup truck drove up and I made friends with Bill.

I told Bill of my interest in the Waco, reading about it in the Waco Pilot, and seeing it briefly out of a Cessna window at a fly-in (Bill and Jim Callis had to take it home because of too many poking fingers), so he opened the hangar doors. I was speechless; words wouldn't come. All I could do was walk around and lightly rub my fingers over the most brilliant Red (Waco Vermillion) aircraft I'd ever seen. Later that day I made another friend, Dr. Jim Callis, owner of N11456, S/N 3471, a 1931 Waco RNF, but more on that later.



Warner Scarab seven cylinder aircooled radial engine rated at 125 hp at 2,050 rpm.

N11456 rolled out of Waco's plant at Troy, Ohio in the summer of 1931 and was flown away by Mr. Shirley Lyon of Lexington, Kentucky, for the price of \$4250. Shirley sold it in 1944 to Hugh Ely of Middleboros, Kentucky. Hugh replaced the original 125-hp Warner with a 145 hp. Warner. The Spec. plate on S/N SS63EA Warner reads—Production Cert. No. 1. Also, at this time, a Hamilton Standard ground-adjustable 83 inch prop replaced the Fahain wood prop. L. W. McMinn, Jr., of Ashville, North Carolina, bought N11456 in 1954.

Dr. Jim Callis' romance with the WACOs never has grown cold since Jim took his first airplane ride in a RNF at the age of 6. While N11456 was being flown over North Carolina, Jim and Bill Goode became fast friends. Bill had a WACO RNF, but sold it in early 1960, and Jim started looking for another RNF. Spring of 1964 came around, McMinn decided to sell N11456, and Jim bought it for \$4,000

N11456 was flown from Ashville to Owensboro and as soon as this WACO's wheels touched down on Goode Airparke's 3200-foot grass strip, it was going to get nothing but "Tender Loving Care."

N11456 was flyable, but Jim wanted an RNF like the one he rode at the age of 6—mint condition.

George Wheeler, who barnstormed in a WACO RNF, NC609Y, in 1941-42 and was later a B-25 pilot, and R. O. Richardson, F.A.A.I.A. who had his first ride in a WACO E-Z in 1939, couldn't let their WACO interest, knowhow, and spare time go to waste, so they volunteered willing work, if Jim could use them. Of course, they were every bit as happy to get in on the project as Jim was to have them.

These four persons were to turn out one of the very best, Mint, Mint, Mint 1931 WACO RNF's ever. N11456 was completely disassembled and stripped of all fabric and metal. At this point, Jim decided all-new wings were to be built, exactly like the originals still on the craft. The fuselage and tail sections were sandblasted and chromated. The Warner 145 needed an overhaul and it was found to have a cracked jug. Problems really began there, along with finding just exactly how the RNF rolled out of the WACO factory that 1931 summer day.

Half the restoration costs went into phone calls. The Warner 145 jugs were



Sanitary engine installation is evident in this shot of Warner running without the cowl. Note battery box between engine mount.

found, plus another treasure among these WACO restorers — original 1931 WACO RNF blueprints! When WACO closed its hangar doors forever in 1946, a foreman was told by his boss to destroy all the WACO blueprints. But this far-sighted ex-WACO employee, instead of destroying these valuable prints, took them home, and today, thanks to him, WACOs again can fly in the original configuration.

The wings were covered with cotton, as were the rest of the fabric surfaces of N11456. The only sheet metal of the original N11456 used was the cowling. The cockpit is all new original and upholstered in black pure leather.

As extra safety items, not originally installed, Jim decided to install hy-

draulic toe brakes and a full electrical system. Otherwise, N11456 is just as the 1931 WACO blueprints show.

About 10 coats of clear butyrate dope were applied, followed by 35 coats of WACO Vermillion butyrate dope. The wings required about five hours of sanding between each coat, and by this time, all members of all four families were sanding. After the final coat of Vermillion was applied to the wings late one night, they were left on sawhorses in the hangar to dry. Overhead, in the ceiling of the hangar, the struts were suspended with tape to a rack; the hot morning sun loosened this tape and down they came.

Bill Goode came in the hangar later that morning to find a gaping two-foot

WACO RNF CONT'D.

hole and broken ribs in the right hand panel. This caused another 75 hours of work.

At last, two years and three months after Jim Callis bought N11456, it was again in the Bluegrass State's blue sky, and only minor rigging adjustments had to be made. In the inexperienced hands of the novice, the plane has an unsuspected ground looping tendency—however, in the able hands of its restorers, this has yet to happen to N11456.

On Sunday afternoon, crowds still come to Goode Airparke to see "Doc's" WACO. Pilots fly in who have only heard of this craft, to see it, only to return the next weekend to make sure it was for real. To those of a generation past, there is the joy of remembering—to the young, there is the thrill of discovery.

The highlight of N11456's career occurred when Jim and Bill and George took this Vermillion WACO to the 1968 Rockford EAA Airshow. From the time N11456 spun its last prop revolution until Jim started the Warner 145 up for the home trip, they were constantly questioned and admired, about N11456. Many an ole pilot was seen walking around N11456 and heard muttering, "Just like WACO built it, ask any pilot."

N11456 had a heavier load coming home, for the craft won three first places and trophies — 1—Best Open Cockpit, 2—Tulsa EAA Chapter's Best Antique, 3—Grand Champion, Vintage Aircraft.

At Goode Airparke, the same four persons, Callis, Goode, Wheeler and Richardson, are continuing in restoring another, soon-to-be-prizewinning antique aircraft, a 1932 WACO QCF-2, N11453.

Should you ever be in the Owensboro area, drop by Goode Airparke and see what a real 1931 WACO RNF should look like. Perhaps Jim Callis will give you the same first class treatment he extended the author that summer Sunday in 1967, when I got my first open cockpit flight, in the never-to-be-forgotten 1931 WACO RNF, N11456. ✈

A magnificent airplane from every view, truly an outstanding Waco.

