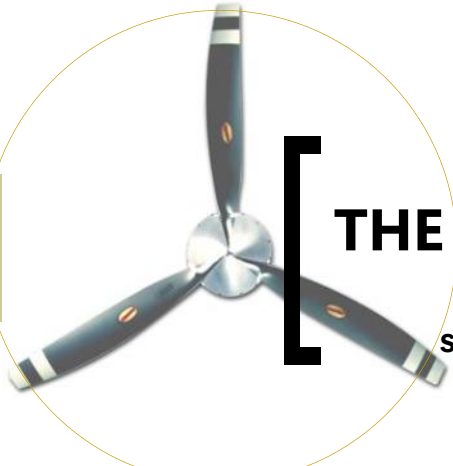


# THE SLIPSTREAM

THE NEWSLETTER OF GREEN RIVER EAA CHAPTER 441 KENT, WA  
**SEPTEMBER 2019**



## PRESIDENTS COLUMN

### INSIDE THIS ISSUE:

<b>PRESIDENTS COLUMN</b>	<b>1</b>
<b>PIETENPOL UPDATE</b>	<b>3</b>
<b>KITFOX UPDATE</b>	<b>3</b>
<b>GUESS THAT AIRPLANE</b>	<b>4</b>
<b>DARINS RV ADVENTURES</b>	<b>5</b>
<b>EAA NEWS</b>	<b>6</b>
<b>EDITORS CORNER</b>	<b>6</b>
<b>AUGUST CATHERING MINUTES</b>	<b>7</b>
<b>LAST MONTHS GUESS THAT AIRPLANES ANSWER</b>	<b>9</b>
<b>LAST MONTHS GUESS THAT ENGINE</b>	<b>10</b>

### Presidents Column:

#### Chapter Participation

As many of you might know, I'm a member of more than one chapter: 441, 26 in Seattle, and 252 in Oshkosh. I also know that many of our 441 members are also members of other chapters. Why? Because each chapter has its own personality, and its own personalities. Each has its own "draw". Each provides a particular perspective on aviation and homebuilding.

Chapter 441 has always been a bit of a "building" chapter. That is, the members who frequent 441 are often interested in the details of building. Other chapters might be all about flying Young Eagles, or flying in general, or social events, but 441 seems to be about building.

Last month, if you came out, we had a spectacular display of member enthusiasm for building techniques: Bill Jones talked to us about all things welding: melting steel with an electric arc and sticking steel things together in this way. Bill had a very well planned presentation, a well put-together plan for demonstrating the various steps in the process, and many members got to try it under Bill's expert mentorship.

The kind of enthusiasm Bill showed, the patience with members trying something for the first time is just what we all need to build enthusiasm. I'm sure more than one of went away from that thinking "I can

learn to do this, and it might even be kind of fun". Bill even offered to continue with "private lessons" for anyone interested.

Thank you, Bill for being willing to share your talent and your enthusiasm. We're all better off for it.

Fly safe,

Brian

September program: What we saw at OSH. Bring pictures (on a computer or memory stick), or just stories. Maybe we'll get to peek at the newest addition to Brian's fleet: a Schleicher Ka-7 glider.

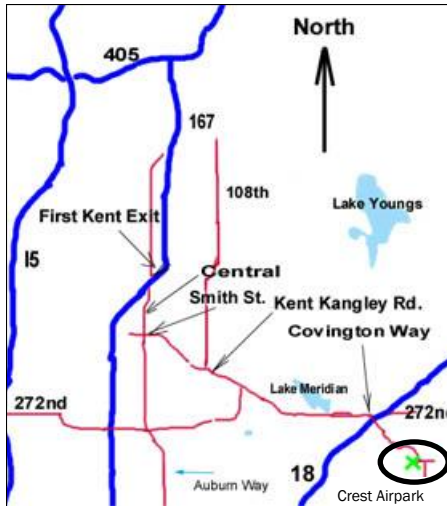
Bonus: Last week, Brian was in Norway for a business meeting. In the

### SPECIAL POINTS OF INTEREST:

ALL IFR FLIGHT PLANS WILL BE USING THE ICAO FORM STARTING 27 SEPTEMBER.



## WHERE DO WE MEET THIS MONTH?



Meets 4th Mondays 700 pm  
17605 SE 288th PL, Kent  
The Mellema Hanger



## SEPTEMBER

What we saw at Oshkosh

### Program

What we saw at OSH. Bring pictures (on a computer or memory stick), or just stories.

We are back to our usual 7:00 pm.

### 2019

#### OFFICERS

##### President:

Brian Lee

(253)-639-0489

##### Vice-President:

Mark Owens

##### Secretary:

Jake Schultz

##### Treasurer:

Steve Crider

##### Tech Counselors/ Flight Advisors:

Brian Lee

(253)-639-0489

Dave Nason

Jonathan Lee

(253) 508-1376

##### Newsletter Editor:

Roger Schert

(206) 713-9910

windridershaman@gmail.com

**PRESIDENTS COLUMN CONTINUED, PIETENPOL UPDATE, KITFOX UPDATE:**

process, he explored the flight characteristics of a true tail-dragger, a de Havilland Tiger Moth (No tailwheel, just a skid, and now brakes, high over Lillestom)

**Pietenpol Update:**

Hello 441,

Progress continues on my 1931 Pietenpol Air Camper project. This month that progress took the form of work on the tailwheel and main wheels. While I have been unable to locate the correct axle, hub and tire for the vintage Heath & Co. tailwheel bracket, I ordered a new assemble from Wag Aero that will do for now. It'll be an airworthy assembly until/if I can find the right vintage parts. I also dropped off the main wheel hubs to be painted. They will be shipped off soon to have the spokes laced up.

Really enjoyed seeing the welding demonstrations in Bill Jones hangar – great meeting, see photos.

I was also fortunate to travel to Arlington and watch John and Heather Norman's VERY authentic Spirit of St Louis replica fly. It was an overcast day but there was enough of a ceiling for the Spirit and the chase plane to make a few trips around the pattern. Watching it fly was a bucket-list item for sure. The sound of the Wright J-5



gress has been made on the KitFox. Both rear windows have been installed, transponder and antenna installed, com antenna installed, static system connected to the altimeter, encoder, air speed, and VSI, painted the right wing from silver through final finish, and am now painting the trim colors on rudder, horizontal stabilizer, and elevator.

Whirlwind was truly beautiful...!

Having fun and learning a lot.....

Jake

**Kitfox Update:**

Over the last few months some pro-





## TECH COUNSELORS AND FLIGHT ADVISORS



Chapter 441 is fortunate to have two tech counselors.

Feel free to call Brian (253)-369-0489 , or Dave Nason any time. You don't need to wait for some significant milestone in your project. Remember, this is not an "inspection".

The shop doesn't need to be cleaned for a visit. All are quite used to looking at pieces, parts, and assorted bits, and will be happy to answer questions, offer advice, and generally talk about projects, building, flying, or whatever.



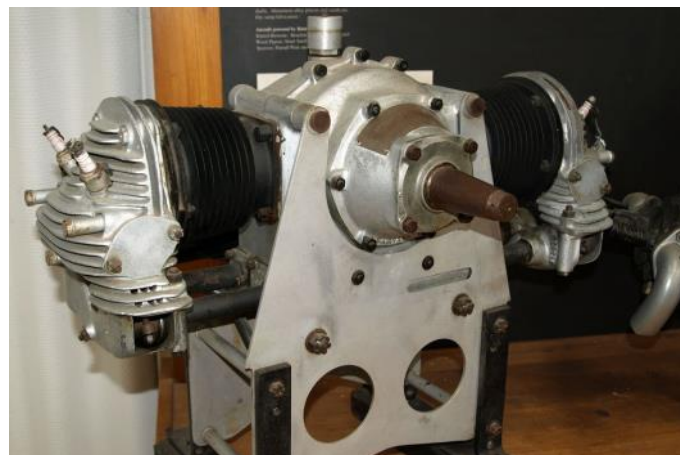
## GUESS THAT AIRPLANE; GUESS THAT ENGINE

This months entry:

Go to Page 9 for August's airplane

This months entry:

Go to Page 10 for August's Engine



**DISCLAIMER:** The "SLIPSTREAM" Newsletter is published as a clearing house for ideas, opinions, experiences and member information. No responsibility or liability is expressed or implied. Anyone using or purchasing parts or product is doing so at his or her own risk, and is

## KITFOX UPDATE CONTINUES, DARINS RV ADVENTURES:

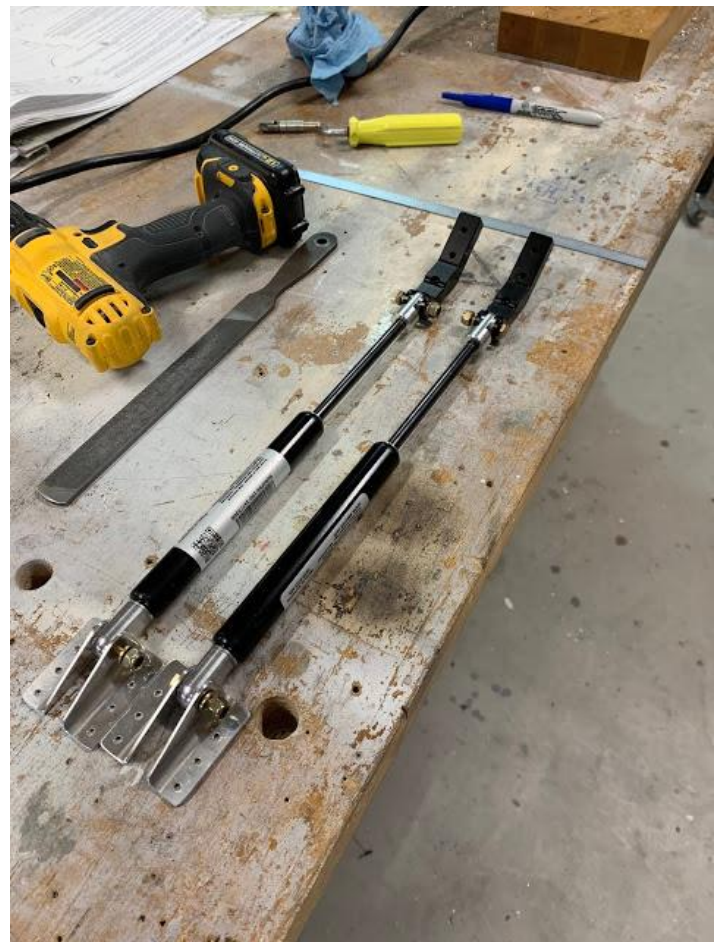
Steve Little



### Darin's RV Adventures:

More cabin top and door work

Its been a while since I posted a build update but not a lot has been photo worthy, nor have I spent my normal amount of time in the garage. The temps here have been pretty high lately and since I took down the temporary wall dividing my garage I can't cool it with the single floor AC unit I used last year. So...progress has slowed. Progress has not stopped though and there are a few pictures to show but really its been a mass effort of cut, sand, epoxy, rinse, repeat.



Since my last post I have completed the following:

Both doors fitted to the fuselage

Interior and low profile exterior handles installed and functioning

Center latch block installed (still need to install the brace that attaches to the fuselage)

Installed nut plates in the door side of the hinges so that I don't need to have nuts and washers on the back side. This will allow me to cover that area with fiberglass ensuring a seamless door seal.

Door strut brackets fitted to the cabin top.

LOTS AND LOTS of fiberglass work on the door frame to make the McMaster-Carr door seals attach properly.

Lots of time spent prepping the cabin top for installation. This includes a little more dimpling, some deburring, countersinking, rivet backing strip fabrica-



**DARINS RV ADVENTURES, CONTINUED, EAA NEWS, EDITORS CORNER:**

tion, cabin vent holes cut and flanges drilled, and the list goes on.

To Read More: [Click Here](#)

**EAA News:**

You Can Build an Aircraft – Here's How  
Seattle, WA

**Museum Of Flight Restoration Center—Paine Field - Everett**

**October 26-27, 2019**

Thinking about building or restoring an airplane? Here's the opportunity you need in an intensive two day workshop session that will guide you through the processes step by step and give you the confidence to successfully start – and more importantly finish your aircraft project.

EAA SportAir Workshop courses teach you how to do it right the first time with accomplished and expe-

rienced instructors. You'll get hands-on, in-depth training not available anywhere else that will save you time and money.

To Read More: [Click Here](#)

Electrical Systems & Avionics To Register: [Click Here](#)

Fabric Covering: To Register: [Click Here](#)

Composite Construction: To Register: [Click Here](#)

Sheet Metal: To Register: [Click Here](#)

**Wright Brothers Memorial Banquet:**

Father and son Steve and Steven Hinton, both national championship air racers, will be the keynote speakers at the 2019 Wright Brothers Memorial Banquet on Friday, December 13, at the EAA Aviation Museum.

To Read More: [Click Here](#)

**Safe Integration Affirmed by EAA in Response to UPS Petition:**

EAA expressed concerns in comments filed on Wednesday in response to a petition by UPS detailing the company's Forward Flight initiative, which contains plans for unmanned aircraft system (UAS) operation beyond visual line of sight without reliable sense-and-avoid systems.

"The visual observer principle established in Part 107, as well as the FAA's rules on model aircraft, is a well-proven strategy in avoiding conflicts with manned aircraft and other UAS," the comments state. "If UPS FF seeks to move away from this principle, some other means of actively detecting other aircraft must be employed — either through onboard sense-and-avoid as other petitioners have proposed or some type of ground-based sensing system along the route of flight. Flying a UAS in the NAS without any way to monitor other aircraft is not consistent with the concept of integration."

To Read More: [Click Here](#)

**Editors Corner:**

I hinted at the last Gathering that I was thinking about retiring from my IT Job. It is now official, as of September 27, 2019, I join the ranks of those who have left their jobs behind. I am planning to do some camping in the first week or two. I am working on getting re-certified as a Yoga instructor and I plan to

**EDITORS CORNER CONTINUED, AUGUST'S MEETING MINUTES:**

teach a couple of classes a week at a couple of Studios and then there is the house that needs a bunch of work (not really looking forward to the one).

I hope that Steve is right, that I will finally need a day planner.

See you on Monday at the normal time and place.

Build Straight

Roger

**August Meeting Minutes:**

Joe Owen: Marks older brother wants to get good progress on his house, building on A20 in Arizona  
Mixed feelings RV6 Second Choice Bearhawk 4 place. Afterward a Kitfox

Dale: RV6 in Hanger

Brian Handed out the information on the ICAO I Flight Plan requirement. Brian had an adventure with the FAA on trying to get more information. Common issues are going to be how to define the homebuilt. Equipment suffixes have changed

Mark: Flying his Glasair He and adjusted his trimtab after his flight to and from Oshkosh.

Bruce Working on his new panel

Doug building a Hodrod 33 Ford, been flying his airplane

Gerry Did flight Review.

Tom: Planning to go flying soon. Found that if the Taramac at Payne Field is hot enough and the airplane is big enough if you slam on the brakes it will tear up the asphalt.

Ron: Only Flybaby with ADSB out. Took about 15 minutes to install it on the wingtip, but 5 hours to get power to the ADSB on the wingtip. Went to the Cub's and Classics fly in. He had three aircraft takeoff while he was on final. Interesting experience...Was in Oshkosh for a class.

Jake working on the landing gear. Mounted the Honda Brake caliper Found he could put the gear up on the bench and still install the Brake Caliper.

Dave: Flew his airplane to Richland last year and found his nose gear flat. Found a tube the right size with the EAA on the field and they put it on, took another tube back to them this August.

**Program:**

Bill Jones gave a great presentation that interactive with the members. Most of the members got to try their welding skills. Bill started learning to weld on bicycles.

He also has Legal Eagle fuselage on his workbench that he is building. I found the magazines Flying and Glider Manual from 1932 and 1933 on the table very interesting. It is interesting to note the tone and "voice" that the writers used in their articles. Much





**AUGUST PROGRAM CONTINUED:**

different than today.

Photos of the shop and of the members trying to weld.





**GUESS THAT AIRPLANE:****Fernic T-9:**

The Fernic T-9, also called the Fernic F.T.9, (Fernic Tandem model 9) is an early three surface aircraft, having two lifting wings in tandem as well as a conventional tailplane. It was a light twin-engined craft intended for flight distance record setting.

Fernic-FT-9 tandem monoplane built by Gheorghe Fernic

Designer George Fernic was a Romanian aviator who developed the T-9 after emigrating to the United States from Germany. [

The Fernic T-9 can be seen as a conventional twin engined monoplane with the addition of a 22 ft (6.7 m) long nose mounted canard foreplane to provide two lifting surfaces in tandem. The canard was designed to stall ahead of the main wing, reducing the risk of stalling or spinning the entire aircraft. The plywood covered aircraft also featured tricycle landing gear with a castoring nose wheel. A spring steel tail skid was added to protect the tail.

Fernic tested the design with professor Alexander Klemin in the wind tunnels of the Guggenheim School of Aeronautics, New York University in 1926. [4] For the transatlantic effort, the upper engine nacelles were able to be removed and powered with a small outboard motor for water ditching.

To Read More:

Wikipedia: [Click Here](#)

The Critical Past: [Click Here](#)

Early Aviators.com: [Click Here](#)

Revoly: [Click Here](#)

Movietone collection: [Click Here](#) (T9 is about 3:47 minutes into the collection)

**General characteristics**

Length: 41 ft 6 in (12.65 m)

Wingspan: 59 ft (18 m)

Gross weight: 5,500 lb (2,495 kg)

Fuel capacity: 1,100 U.S. gallons (4,200 L; 920 imp gal)

Powerplant: 2 × Wright Whirlwind J-5 radial engine, 225 hp (168 kW) each

**Performance**

Maximum speed: 110 kn (130 mph, 210 km/h)

Cruise speed: 100 kn (120 mph, 190 km/h)

Stall speed: 43 kn (50 mph, 80 km/h)

Range: 4,300 nmi (5,000 mi, 8,000 km)



**GUESS THAT ENGINE:****The Warner Scarab:**

The Warner Scarab is an American seven-cylinder radial aircraft engine, that was manufactured by the Warner Aircraft Corporation of Detroit, Michigan in 1928 through to the early 1940s. In military service the engine was designated R-420.

**Variants****Scarab S-50**

A 7-cyl. air-cooled radial engine introduced in 1928. With a bore and stroke of 4.25 inches and a compression ratio of 5.2:1, the Scarab developed 125 hp (93 kW) at 2,050 rpm from 422 cu in (7 l) with a dry weight of 285 lb (129 kg).

**Scarab Junior**

A 5-cyl. version introduced in 1930 developing 90 hp (67 kW) at 2,125 rpm from 301 cu in (5 l) with a dry weight of 230 lb (104 kg).

The R-500-7 Super Scarab model 165 displayed at Museo dell'Aria e dello Spazio in San Pelagio, Due Carrare, Province of Padua.

**Super Scarab SS-50/50A**

Increased cylinder bore to 4.625 inches to develop 145 hp (108 kW) at 2,050 rpm from 499 cu in (8 l) with a dry weight of 303 lb (137 kg).

**Super Scarab SS-165**

Increased compression ratio from 5.2:1 to 6.4:1 to develop 165 hp (123 kW) at 2,100 rpm with a dry weight of 341 lb (155 kg).

**Super Scarab SS-185**

Increased cylinder bore to 4.875 inches, developing 185 hp (138 kW) at 2175 rpm from 555 cu in (9 l), with a dry weight of 344 lb (156 kg).

**R-420**

Military designation of the Scarab.

**R-500**

Military designation of the Super Scarab 165.

**R-550**

Military designation of the Super Scarab 185.

**145**

Alternative designation for the Warner Super Scarab SS-50/50A .

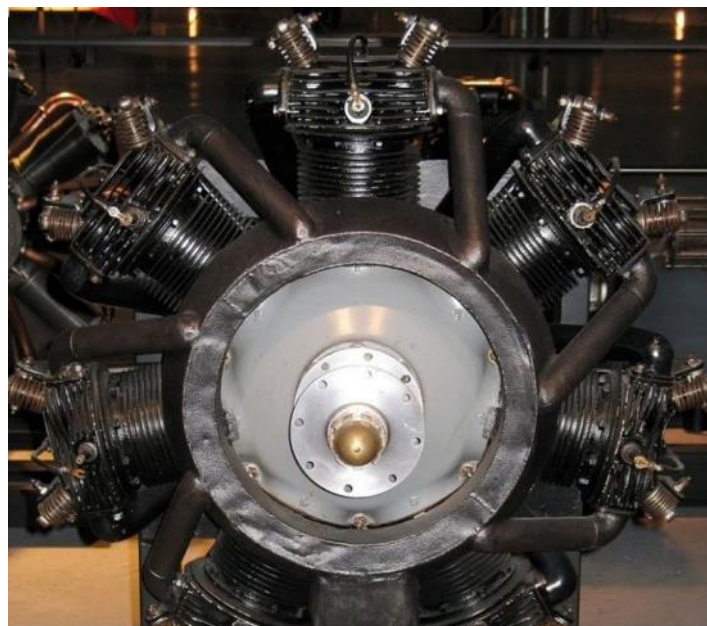
**165**

Alternative designation for the Warner Super Scarab 165 .

**185**

Alternative designation for the Warner Super Scarab 185 (Primarily a helicopter application).

To Read More:



Wikipedia: [Click Here](#)

Air And Space Museum: [Click Here](#)

**Specifications (Scarab 50)****General characteristics**

Type: Seven-cylinder, air-cooled, radial piston engine  
 Bore: 4.25 in (108 mm)  
 Stroke: 4.25 in (108 mm)  
 Displacement: 422 cu in (6.92 l)  
 Length: 29 in (740 mm)  
 Diameter: 36.5625 in (928.69 mm)  
 Height: 36.5 in (930 mm)  
 Dry weight: 292 lb (132 kg)

**Components**

Valvetrain: 1 inlet and 1 exhaust valve per cylinder  
 Fuel system: Stromberg NA-5SA carburetor or Holley equivalent  
 Fuel type: 67 octane Avgas  
 Oil system: Dry sump  
 Cooling system: Air-cooled

**Performance**

Power output: 125 hp (93 kW) at 2,050 rpm  
 Compression ratio: 5.15:1  
 Specific fuel consumption: 0.55 lb/(hp hr) [0.334 kg/(kW hr)]  
 Oil consumption: 0.025 lb/(hp hr) [0.015 kg/(kW hr)]  
 Power-to-weight ratio: 0.43 hp/lb