



THE SLIPSTREAM

APRIL 2019

THE NEWSLETTER OF GREEN RIVER EAA CHAPTER 441 KENT, WA

PRESIDENTS COLUMN, PIETENPOL UPDATE

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SPECIAL POINTS OF INTEREST:

Wings and Wheels
Fly and Drive in
Saturday August 17, 2019
Richland, Washington
See Poster on Page 7

EAA 292 From Independence
Oregon Fly-In and STOL Expo
August 16-18 2019
See Poster on Page 9

Presidents Corner:

Bale Hooks

You all may recall that in December, I went to Florida and got my glider ratings (commercial and CFI-G). It was a wonderful experience. One thing I observed in the operation in Florida was the job of the "wing runners". One of the very important jobs of wing runners is to check the rope when the tow plane pulls into position. It is very important to ensure that there are no knots in the rope (knots reduce the strength of the rope).

Typically, the wing runner will pick up the rope near the tow plane and as the tow plane pulls forward into position, the runner has the opportunity to examine the whole length of the rope. At the school in Florida, the wing runners had hooks - "bale hooks", sometimes referred to as "hay hooks" or "hay bale hooks". They look similar to hooks used to pick up bales of hay, but are much smaller, usually with a wood handle. By picking up the rope with a hook, as the tow plane pulls forward, the rope runs through the steel hook, and the runner will be able to feel any knot that goes through the hook.

A couple of weeks ago, I went to Bergseth field near Enumclaw to check out the glider operation there. I noticed that the wing runners were running the rope through their hands (risking rope burns). So I decided this group (Puget Sound Soaring Association) needed some bale



hooks. I made some hooks with oak handles, and asked Mark if we could use his CNC router to engrave them with "PSSA", to personalize them. Mark had a good idea: on the opposite side of the handle, we engraved "EAA441" so that the Soaring Association will know where they came from.

I shared one with a PSSA member. He was impressed...and he noticed the engraving on the back side, too. Very nice. It was the right thing to do.

Fly safe.

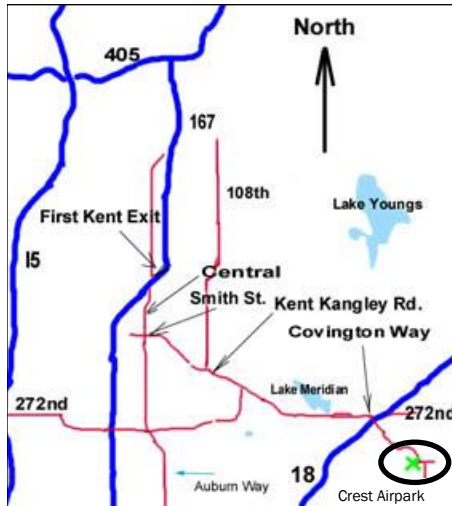
Brian

Pietenpol Update:

Hello 441,

Progress continues on my 1931 Pietenpol. This month I had a business trip to South Carolina and therefore didn't make as much progress as some periods of time but I did get a detour to the USS Yorktown. It is the ship that recovered the Apollo 8 crew and they had a "boilerplate capsule"

WHERE DO WE MEET THIS MONTH?



Meets 4th Mondays 7:00 pm
17605 SE 288th PL, Kent
The Mellema Hanger



APRIL PROGRAM

Casey Offord has connected the GRT avionics to his flight simulator. He will talk about how he did it and demonstrate flying his simulator.

Program

April Program

Our program this month will be provided by Casey Offord. Casey is building and RV8 and for avionics is using the GRT system. He has connected the GRT avionics to his flight simulator. He will talk about how he did it and demonstrate flying his simulator with real avionics.

2019

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PIETENPOL UPDATE CONTINUED, EAA NEWS:

as a display. Enjoy a few shots of the carrier.

Enjoying these longer days...!

Jake



EAA News:

EAA Reinforces the Priority of Manned Flight in sUAS ANPRM Comments



April 18, 2019 - EAA submitted comments to the FAA on Monday in response to an advance notice of proposed rulemaking (ANPRM) the

Agency released regarding the integration of small unmanned aerial systems (sUAS), commonly known as drones, into the national airspace system (NAS).



EAA's position is and has always been that manned flight must have priority to safely navigate the NAS, must face no new airspace restrictions, and must be subject to no new equipment mandates. The comments submitted to the FAA reflect those beliefs.

EAA's comments support mandatory stand-off distances from manned aircraft and the use of traffic avoidance and management technology by the sUAS community to ensure that drones are deconflicted from all manned aircraft – from ultralights to airliners. The comments also address concerns around hazardous cargo, performance limitations, and redundancy in system architecture.

To Read More, [Click Here](#)

Dorinda Morpeth 300th Young Eagle Milestone:

EAA Chapter 677 member Dorin-

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".

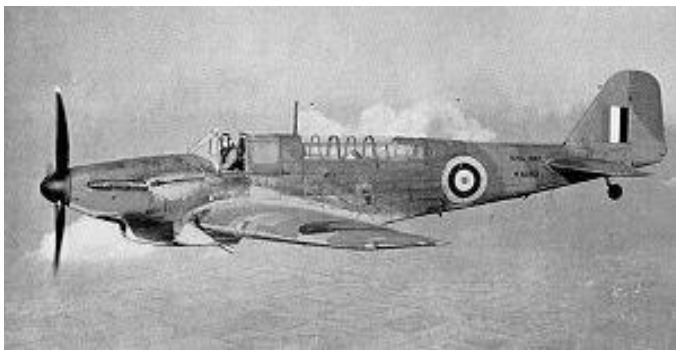
The shop doesn't need to be cleaned for a visit. All are quite used to looking at pieces, parts, and assorted bits, and will be happy to answer questions, offer advice, and generally talk about projects, building, flying, or whatever.



GUESS THAT AIRPLANE; GUESS THAT ENGINE

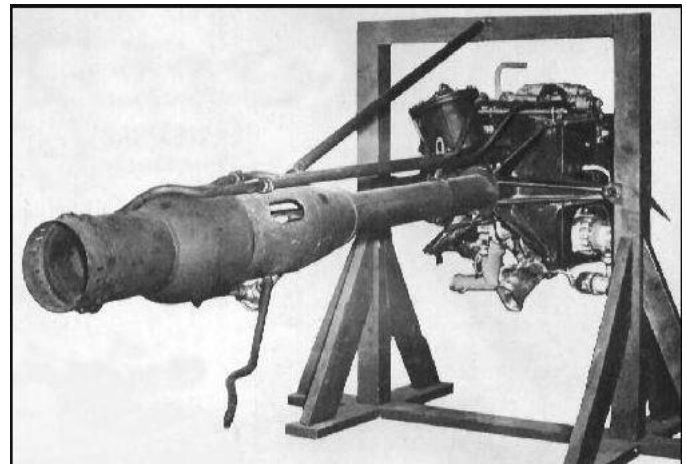
This months entry:

Go to Page 10 for the March airplane



This months entry:

Go to Page 11 for the March Engine



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EAA NEWS CONTINUED, DARINS RV ADVENTURES:

da Morpeth, EAA 637600, flew her 300th Young Eagle on March 30. Dorinda is a longtime Young Eagles volunteer and only the fourth Chapter 677 pilot to achieve this milestone. Her first 150 missions were in her Piper Colt carrying one Young Eagle at a time. Today, she flies a beautiful 1952 C-170B and has volunteered at 28 of the past 46 chapter rallies.

To Read More, [Click Here](#)



Personal Minimums:

Go or No Go

By Steve Krog, EAA 173799

This story first appeared in the March 2019 issue of EAA Sport Aviation.

Several months ago, an incident occurred near our airport that created a good deal of weekend coffee drinking and hangar flying discussion. An aircraft bound for Hartford, Wisconsin, encountered some difficult icing conditions and was forced down a couple miles short of the airport. Thankfully, the pilot was unharmed, but the airplane was totaled. The discussion led to questioning all present if they had personal minimums by which they determined a go or no-go decision to fly.

Some of the participating pilots were familiar with and had established personal minimums, while others really didn't pay much attention to establishing flight parameters. Since that Saturday afternoon discussion, I've taken the opportunity to ask several pilots about personal minimums. The responses caused me to delve into this subject further.

What exactly are personal minimums? According to the FAA, personal minimums are an individual's set of operating criteria, procedures, rules, or guidelines used to assist that individual in making personal flight decisions.

To Read More, [Click Here](#)

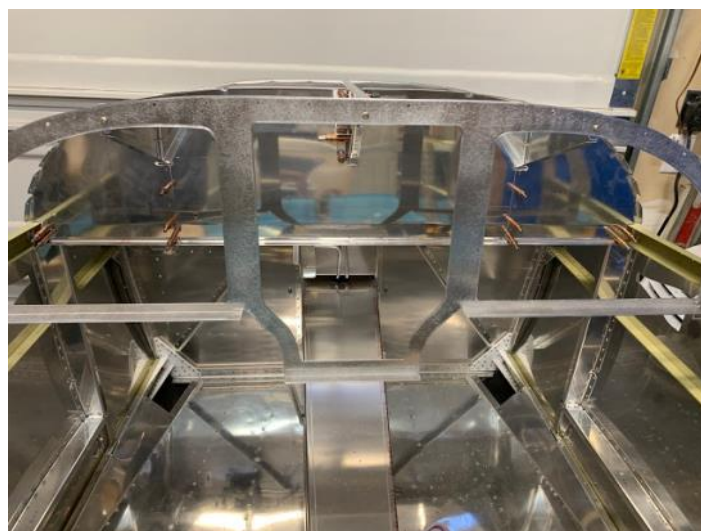
Darins RV Adventures:



Section 31 - part two

This past couple of weeks I was able to finish this section. As I mentioned last time there are several modifications that need to be done and here are a few of them.

The first modification is the use of the Aerosport 310 instrument panel. This is a beautiful carbon fiber panel that is designed to support 3 10" screens (hence the name). I did run into a small issue in that the frame I received is actually backward with the flanges pointing aft instead of forward. I contacted Geoff at Aerosport and he said its no big deal, just drill the center hole in the proper location as the rest of the panel is symmetrical. Easy enough to do by laying the van's provided instrument panel on top of the support frame and using the pre-drilled hose as a drill guide.



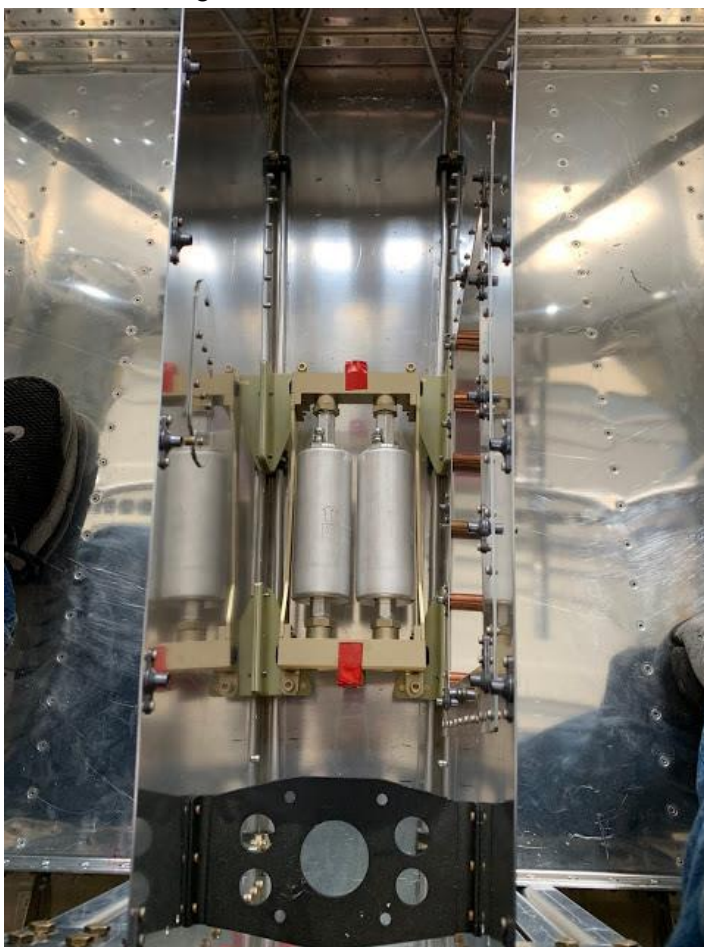
I'm also installing nut plates so I can just bolt on my avionics and wire supports.

Oh, since I had to do some priming for some non

DARINS RV ADVENTURES, CONTINUED, KITFOX UPDATE, EDITORS CORNER

alclad parts I went ahead and finished the fuel pump brackets so I could install them as well. See below for more.

Section 31 Begins



After a rather busy work week that included some travel I got a chance to start working on section 31. This is the forward top skin and the instrument panel assembly. There are a few modifications to this section simply because this is where most of the avionics will be installed.

Oh, and I did finally finish riveting the last parts for section 29 so I can officially close the book on that chapter.

To Read More, [Click Here](#)

Kitfox Update:

Over the last few weeks I've been working on small things. Installed altitude encoder, connected static system to instruments, and installed transponder and

com antennas. Built VOR antenna, installed two windows in the fuselage, and built two braided fuel lines connecting gascolator to fuel pump and pump to engine.

Steve

Editors Corner:

Hi all, I hope April has been a good month for everyone. I was not able to attend last months meeting due to famiy coming to visit and the need to restore a house that was abused to accomodate some new carpet. My brother and his wife arrived on the first of April, and only had a coluple of days to put a couple of weeks of activity into. We went to Ocean Shores as his wife wanted to feel the Pacific Ocean. We were fortunate in the day selection as it was warm enough and the rain held off until we were leaving. Anyway, to describe the first week of April as a whirlwind, is as close to truth as I can get.

This last week I went to Oakland/Pleasanton California for work. The weather was warm and nice but maybe a touch too dry. The unfortunate part is that I didn't have enough time to visit the Oakland Air Museum like I had hoped to do. I did see the Short Solent Mk III and an A6 Intruder as we passed on the way in and out of the airport. I hope to make it back and spend a little time there in the near future. If you get the oppoportunity to visit an Air Museum, please share some photos and your thoughts about the museum.



I can see that April is going to be a month of no progress on building or re-construction. I hope that you are making progress on your projects and I look for-

WINGS AND WHEELS FLYER:



WINGS & WHEELS

2019

**FLY AND DRIVE IN DAY
SATURDAY AUGUST 17TH
7:00AM TO 2:00PM**

STAGING STARTS AT 7:00AM
AT THE RICHLAND AIRPORT (KRLD)
1903 TERMINAL DR., RICHLAND WA.

EAA BREAKFAST 7:00 - 9:30AM - ALL ARE WELCOME
WAR BIRDS & EXPERIMENTAL & ANTIQUE AIRPLANES
HOTRODS & CLASSICS CARS
MOTORCYCLES & MILITARY VEHICLES
FOOD VENDORS & NO ENTRY FEE
FREE TO THE PUBLIC

PORT OF  BENTON

For More Information Contact: Scott Urban 509.551.0432 or John Haakenson 509.375.3060

EDITORS CORNER, CONTINUED HISTORY TID-BITS:

ward to hearing about both your success and failures. Both are important to our growth as builders. Please do not be afraid to succeed or to fail and have to re-make something. just find a way to share it with us. It is always surprising to me just how much collectively we have at our finger tips. We just need to share. Tempus fugit: Time Flies.



Brian announced the westward flight of another EAA 441 Member: Steve Craigle: (Excerpt of Brian's announcement)

I first met Steve in Wichita when we both worked for Learjet. The BD-5 in my garage came from Steve's house in North Wichita in April, 1980. Steve was an exemplary innovator with a very sharp wit.

Brian

Since I missed the March meeting, I do not have any meeting minutes. If I can gather them, I will add them in the future.

See you on Monday night.

Build Straight

Roger

History Tid-Bits:

Tuesday, August 1, 1933:The first practical variable-pitch propeller, developed by Frank W. Caldwell of Hamilton Standard Propeller Company in 1930, was introduced into airline service, on a Curtiss Condor biplane. The new propeller improved the propulsive efficiency of modern aircraft with highly super-charged engines, giving them more thrust than a fixed-pitch propeller when taking off and permitting adjustment to a more efficient setting for flight at different altitudes and speeds.

Tuesday, June 19, 1934:An amendment to the Air

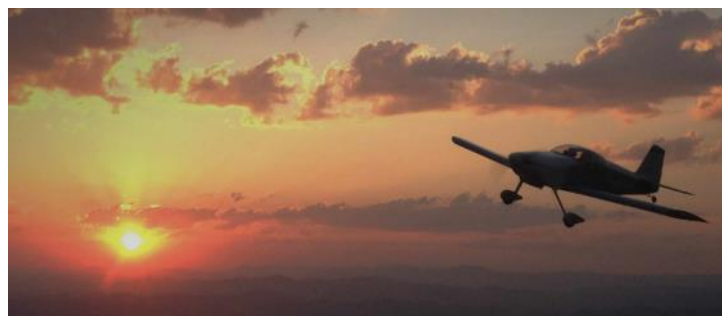
Commerce Act of 1926 gave the Aeronautics Branch stronger authority to investigate civil aircraft accidents. The amendment empowered the Secretary of Commerce or his representative to subpoena witnesses to testify or produce documentary evidence at public hearings into the causes of such accidents. If the accident involved a fatality or serious injury, the Secretary was required to issue a statement of the probable cause. In other cases, issuance of such a statement was left to the Secretary's discretion. The amendment also gave the Secretary additional safety-rulemaking powers. (See October 1, 1934.)

Thursday, July 19, 1934:The Bureau of Air Commerce announced the creation of a Development Section to conduct and promote work on new types of aircraft, engines, and accessories, with specialization in the development of a low-priced airplane for general public use (see November 8, 1933). The new section reported directly to the Director of Air Commerce.

Wednesday, September 5, 1934:Wiley Post, the first pilot to use a successful pressure suit, reached about 40,000 feet over Chicago. Although this flight did not set a new altitude record, Post demonstrated the future of pressurized flying with this and later stratospheric operations.

January 11-12, 1935:Amelia Earhart took off in a Lockheed Vega from Honolulu and landed in Oakland, CA, 18 hours 15 minutes later — making the first solo flight from Hawaii to the U.S. mainland.

To Read More: about Aviation Tid-Bits [Click Here](#)



WINGS OVER WILLAMETTE FLYIN AND STOL EXPO:

Wings Over the Willamette

Fly-in & STOL Expo

Aug 16-18 *Van's Homecoming*



Independence, OR 7S5

EAA 292 for info go to: eaa292.org/fly-in

©rockerr

GUESS THAT AIRPLANE:**Arrow Model F:**

The Arrow Model F or the Arrow Sport V-8 was a two-seat low-wing braced monoplane aircraft built in the United States between 1934 and 1938. It was built originally to a request by the US Bureau of Air Commerce to investigate the feasibility of using automobile engines to power aircraft. Accordingly, the Model F was fitted with a modified Ford V8 engine. Like the Arrow Sport before it, the Model F seated its pilot and passenger side-by-side in an open cockpit and was marketed for \$1500.

A preserved example is on display at San Francisco International Airport.

Development

The Arrow Sport F was specifically built to accommodate the low-cost, yet heavy Arrow F V-8 engine, an aircraft modification of the Ford V-8. The engine was designed by Ford Engineer David E. Anderson with an aluminum oil pan, aluminum cylinders, and a 2:1 gear reduction to drive the prop at reasonable rpm ranges. The engine weighed 402 lbs for 85 hp vrs 182 lbs for an equivalent Continental aircraft engine.

To Read More,

Wikipedia: [Click Here](#)

General Aviation News: [Click Here](#)

DM Airfield: [Click Here](#)

SFO's Terminal 3: [Click Here](#)

Specifications

Data from American Airplanes and Engines for 1938

General characteristics

Crew: 1

Capacity: 1 passenger

Length: 21 ft 4 in (6.50 m)

Wingspan: 36 ft 7 in (11.15 m)

Height: 8 ft 10 in (2.69 m)

Wing area: 180.5 sq ft (16.77 m²)

Empty weight: 1,097 lb (498 kg)

Gross weight: 1,675 lb (760 kg)

Fuel capacity: 20 US gal (17 imp gal; 76 L)

Powerplant: 1 × Ford V-8 water-cooled converted automobile engine, 82 hp (61 kW)

Performance

Maximum speed: 100 mph (161 km/h; 87 kn) at sea



level

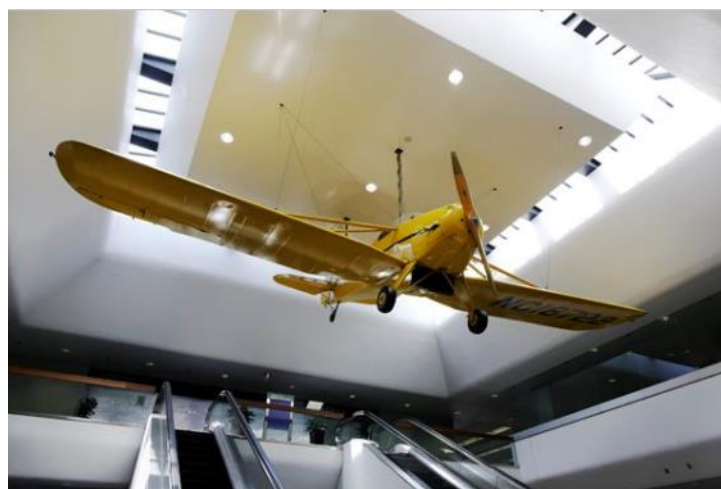
Cruise speed: 90 mph (145 km/h; 78 kn)

Stall speed: 40 mph (64 km/h; 35 kn)

Range: 300 mi (261 nmi; 483 km)

Service ceiling: 12,000 ft (3,700 m)

Rate of climb: 800 ft/min (4.1 m/s)



GUESS THAT ENGINE:

Ford Flat Head V-8:

This was a conversion of the Flat Head V8 to an aircraft engine for the Arrow Model F.

The Air Commerce Board in the 1930's held several committees and proposals along with recommendations to the Aviation world to find an inexpensive general aviation airplane that lead used existing automotive engines. Several of their bills were defeated.

The Ford flathead V8 (often called simply the Ford flathead, flathead Ford, or flatty when the context is implicit, such as in hot-rodding) is a V8 engine of the valve-in-block type designed by the Ford Motor Company and built by Ford and various licensees. During the engine's first decade of production, when overhead-valve engines were rare, it was usually known simply as the Ford V8, and the first car model in which it was installed, the Model 18, was (and still is) often called simply the "Ford V8", after its new engine. Although the V8 configuration was not new when the Ford V8 was introduced in 1932, the latter was a market first in the respect that it made an 8-cylinder affordable and a V engine affordable to the emerging mass market consumer for the first time. It was the first independently designed and built V8 engine produced by Ford for mass production, and it ranks as one of the company's most important developments.[1] A fascination with ever-more-powerful engines was perhaps the most salient aspect of the American car and truck market for a half century, from 1923 until 1973. The engine was intended to be used for big passenger cars and trucks;[2] it was installed in such (with minor, incremental changes)[3] until 1953, making the engine's 21-year production run for the U.S. consumer market longer than the 19-year run of the Ford Model T engine[3] for that market. The engine was on Ward's list of the 10 best engines of the 20th century. It was a staple of hot rodders in the 1950s, and it remains famous in the classic car hobbies even today, despite the huge variety of other popular V8s that followed.

To Read more about the Ford Flat Head V8

Wikipedia: [Click Here](#)

Flat Head V8 Specifications: [Click Here](#)

Engine Labs: [Click Here](#)

