



# THE SLIPSTREAM

APRIL 2020

THE NEWSLETTER OF GREEN RIVER EAA CHAPTER 441 KENT, WA

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## PRESIDENTS COLUMN, PIETENPOL UPDATE:

### President's column:

#### Preflight Inspection

Most of you know I have a good friend in Chapter 486 in Syracuse, NY. This article starts with input from Chuck:

Sport Aviation March 2020, page 30 has a great article on "Inspection and Troubleshooting." It relates a story of a partnership owned Piper Tri-Pacer. They bought the airplane at a good deal because it was about ready for a recover. One of the owners went out to fly one evening. He started up, taxied out and took off. Once in the air he had control problems and crashed off the end of the runway. No serious injuries but a bent Piper with a perfectly undamaged rudder in his partner's shop. He had removed it for recovering. Now, you could say a communication breakdown. A sign taped to the control wheel or a phone call. You could also say a proper pre-flight would have revealed the missing rudder. Think about it!!! On a personal note, I have found grounding defects on other folks' airplanes on pre-flights. It is really more than check gas, oil and kick the tires.

Now for the personal connection: Many years ago, I bought into a Piper Arrow with Gil Gilbert. It was a really great partnership. One day, I opened the hangar door to go flying, and the nose of the airplane was sitting on blocks. The nose gear was completely missing. Gone. Of course, there was no chance I might

accidentally try to taxi away, but it made me wonder: What's this about? I called Gil. He had removed the nose gear strut and taken it home to paint it. It does help to do a complete pre-flight.

As we observe our social distancing, please use the opportunity to go to the shop or the hangar (BY YOURSELF) and get lots done, so we're all ready to fly together, when it's safe to do so.

Brian

### Pietenpol Update:



Hello 441,

Well life put the brakes on most activities and I put the brakes on my Pietenpol – disc brakes to be specific.

Work continues on the brackets that will position the Honda ATV calipers on the landing gear. The calipers are held in place with temporary wooden brake disks and the brackets will be welded to the landing gear legs. After welding, the calipers will float in the exact point in space where they need to be.

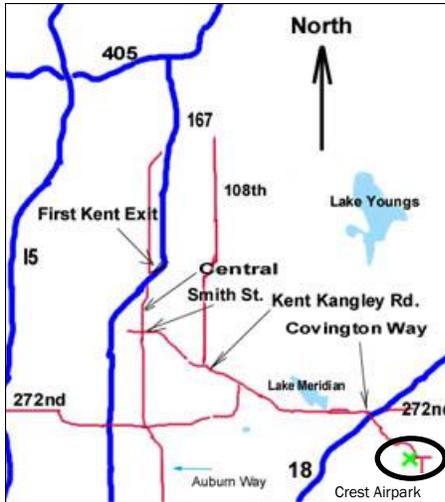
Because the automotive world and

## SPECIAL POINTS OF INTEREST:

PHYSICAL GATHERINGS TEMPORARILY ON HOLD UNTIL FURTHER NOTICE

WE ARE GOING TO A VIRTUAL GATHERING THIS MONTH

## WHERE DO WE MEET THIS MONTH?



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



## APRIL PROGRAM

Virtual meeting with a round table discussion and sharing of photo's and ideas

### Program

Virtual Meeting

### 2020

#### 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

**PITENPOL UPDATE CONTINUED, DARINS RV ADVENTURES:**

the aviation world use fundamentally different brake fluids, I sent my brand-new aviation MATCO brake cylinders back to MATCO for them to rebuild with seals that are compatible with DOT 4 brake fluid. They did a beautiful job.

I now have the cylinders ready to go, the brake lines fabricated/completed, and the brackets ready for the welder. The waterjet brake discs (still to be fabricated) will mount to the Harley Davidson wheels. The only other brake system item is to figure a way to hold the brake lines to the landing gear legs with Adel clamps.

Having fun and happy that our chosen hobby lets us enjoy afternoons in the workshop.....

Regards,

Jake Schultz

**Darin's RV Adventures:**

**Tail feathers**

Wow, has it really been almost a month? With this covid thing it feels like time both flies and crawls depending on what I'm doing. Since I'm still working from home (which means more than normal hours) I feel like I get less time to work on the 10. Combine that with the annual inspection on the 9 and that leave precious little progress.



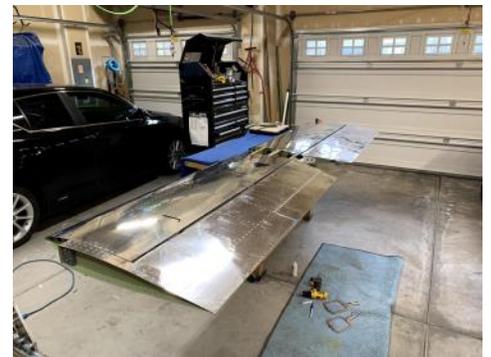
clamp the elevator horns together while drilling. This worked out wonderfully! You can see the 3D printed block with the bolt installed after drilling.

To Read More: [Click Here](#)



Oh well, I'm still making progress and its still a lot of fun!

So this past few weeks have been dedicated to working on the tail. Assembling the horizontal stabilizer, elevators, vertical stabilizer and the rudder and then finishing the fiberglass work that they all have is the theme of the past few weeks.



Drilling the hole that aligns and secures the elevators is critical and one area that is easily messed up. I know a lot of people end up pulling the elevator back off, welding the hole closed, and then re-drilling. I had to do that with the 9 because my elevators were not perfectly in sync. With the 10 I decided to use my 3D printer to print up a perfectly sized block with the appropriate hole in the middle so that I could



## 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 INSTRUMENT PANEL

This months entry:

Go to Page 8 for March's airplane

This months entry:

Go to Page 9 for March's Instrument Panel



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## EAA NEWS, WOMEN AVIATION PIONEERS; YEKATERINA BUDANOVA:

### EAA News:

EAA AirVenture is still on schedule. To Read More: [Click Here](#)

### Airport and Airways Trust Fund in Danger of Depletion Due to CARES Act:

The leaders of the House Committee on Transportation and Infrastructure and Subcommittee on Aviation sent a letter to Speaker Nancy Pelosi and Minority Leader Kevin McCarthy concerning a provision of the Coronavirus Aid, Relief, and Economic Security (CARES) Act that suspends the payment of excise/ticket taxes by airlines to the Airport and Airways Trust Fund (AATF) through the end of 2020.

This provision in the CARES Act will result in a very low balance in the AATF by the end of the year and would lead to an insufficient balance to fund 2021 FAA programs and airport improvements.

"We must act before the AATF's uncommitted or cash balance hits zero," the letter states. "A dwindling or negative uncommitted balance in the AATF will restrict the FAA's ability to enter into new obligations from the AATF, to which it is currently directed by current appropriations law. At a time when we can least afford it, this will also create a tremendous distraction to the professionals at the FAA with important, safety critical jobs, and undermine confidence in the stability of the air transportation system."

To Read More: [Click Here](#)

### The Technical Counselor Visit: Human Factors:

By Lisa Turner, EAA Lifetime 509911

In the last article we talked about planning and goal-setting. Even though these activities are common sense and logical, there are things that affect, and even upset, our rigorous planning. These things are called human factors. This includes our level of preparation, things that we have no control over that upset the schedule, and our interaction with others. Here are some things to keep in mind as you make visits to builder projects.

You:

Your actions as a technical counselor are critical. The builder will see you as a mentor and coach. They may hang on your every word. We tread a narrow path between advice and taking responsibility. If

we go too far and tell the builder that everything looks perfect, they may misconstrue our words as an approval that causes them to not do the review themselves. On the other hand, we must provide the positive feedback that keeps the builder on track and pleased with progress.

To Read More: [Click Here](#)

### Questions Linger on Medicals During Pandemic

Late last week, the FAA announced it would not be enforcing the requirement to hold a medical certificate for airmen with first-, second-, and third-class medical certificates that expired on or after March 31, for a period ending June 30. The directive, effectively extending medical certificates for the three-month window, was welcome news to many pilots who have difficulty scheduling time with AMEs during the COVID-19 pandemic. However, many questions remain unanswered, and EAA is working to better understand the implications of this rapidly evolving issue.

The chief concern about the FAA's medical policy revolves around insurance. Is your insurance contract still valid if it requires you to have a medical and your medical is expired? EAA has received informal indications from at least one insurer that it plans to honor the policies held by owners and pilots who operate under the FAA's discretionary enforcement statement, but we encourage all members who are concerned to seek written confirmation that their policies are valid if the aircraft is operated without a valid medical but with the FAA's consent.

To Read More: [Click Here](#)

### Webinars

These live multimedia presentations are informative and interactive, allowing the presenter to use slides and audio, while audience members can ask questions and be polled for their opinion.

To Visit the Webinars site: [Click Here](#)

### Women Pioneers in Aviation:

#### Yekaterina Budanova

Yekaterina Vasilyevna Budanova (Russian: Екатерина Васильевна Буданова), nicknamed Katya (Катя), (6 December 1916 – 19 July 1943), was a fighter pilot in the Soviet Air Force during World War II. With five air victories, along with Lydia

**YEKATERINA BUDANOVA, CONTINUED:**

Litvyak, she was one of the world's two female fighter aces. She was shot down by either Luftwaffe ace Georg Schwientek of JG 52 or ace Emil Bitsch, of JG 3.

**Early life**

Budanova was born into a peasant family in Konoplanka village in Smolensk Oblast. After leaving elementary school with the highest grades, she had to abandon her studies due to her father's death, and began working as a nanny. At the age of thirteen her mother sent her to join her sister in Moscow, where she began working as a carpenter in an aircraft factory. It was there that she began an interest in aviation, and she joined an aeroclub's parachutist section, obtaining her flying license in 1934 and graduating to flight instructor in 1937. She took part in several air parades, flying the single-seater Yakovlev UT-1.

After the German attack on the USSR in June 1941, she enlisted in military aviation and was assigned to the 586th Fighter Aviation Regiment, formed by Marina Raskova. This unit consisted entirely of female pilots and was equipped with Yak-1. Initially, all women pilots were placed into three all-women units; the 586th Fighter Aviation Regiment, the 587th Dive Bomber Regiment and the 588th Night Bomber Regiment. The 500 designations were originally meant to signify defense reserves. These units were originally made up women who were flight instructors or members of pre-war flying clubs. The 586th (under Major Tamara Kazarinova) saw combat action in the spring of 1942 in the rear. In May 1942 the 586th Fighter Aviation Regiment redeployed to Anisovka where it was assigned to the 144th Fighter Aviation Division covering the railway installations near Saratov, and it was here Budanova flew her first combat missions. But, as the Battle of Stalingrad raged, the supply of replacement male pilots was drying up and thus, seeing the skill of these women, the Soviet High Command began dispersing selected female pilots to existing male units. On 10 September, Budanova was assigned with Lydia Litvyak, Mariya Kuznetsova and Raisa Belyayeva to the 437th Fighter Aviation Regiment, based in Verkhnanian Akhtuba on the east bank of the Volga river engaged in the fighting over Stalingrad. The 437th was a LaGG-3 regiment, under Major Khvostikov, who was initially skeptical of the ability of women pilots. But in a short time Budanova became known for her aggressive attacking

and high piloting skill.

**To Read More:**

Wikipedia: [Click Here](#)

World War II Database: [Click Here](#)

Smithsonian Magazine: [Click Here](#)

Medal Identifier: [Click Here](#)



Yekaterina Budanova:

Photo Source: World War II Database

**EDITORS CORNER, MARCH GATHERING MINUTES:****Editor's Corner:**

This month we are attempting a virtual meeting so that we can still meet and share our experiences. I have a little tutorial set up for PC users and Mac users should be able to adapt to the Mac/iPad platform.

**To Set up for the meeting:****If you want to have the free client:**

Open a browser, go to Zoom.us

Select Sign up for free:

Enter your date of birth, select continue

Enter your email:

Select Sign up

Or if you have an isso, google or Facebook account select one of those and log in. Verify that you can log in

Go to zoom.us/download

Select zoom client for meetings, download you will see in the bottom left a download zoom installer.exe Mine has a (1) in the name because I had downloaded it a month ago. Select the ^ and select show in folder. Browse to it and launch it.

Then on Monday April 27th at 7 PM launch zoom and select Join. I will have a password and meeting number emailed out by then

Enter the name you want people to see and the meeting number from that email.

Select join and it may ask for a password, I will have provided it in a separate email

**If you don't want the client:**

If you do not want to download the client you can go directly to the link provided which has the password embedded. It may still want to load a small web based install.

We had two practice runs on Monday and Wednesday of this week. A couple of people did have some issues, but they seem to be managed now.

I look forward to seeing you on Monday April 27th. I would like to thank Jason for his assistance in helping resolve some of the technical issues.

**Monday April 27th Information:**

Here is the URL for Mondays Gathering:

Monday April 27, 7pm - 9pm

<https://gettyimages.zoom.us/j/91785533083>

Andy says no password.

**The phone Number if you want to join by phone:**

Phone Dial:

US: +1 669 900 6833 or +1 346 248 7799 or +1 301 715 8592 or +1 312 626 6799 or +1 646 876 9923 or +1 253 215 8782

877 853 5247 (Toll Free) or 877 369 0926 (Toll Free)

Meeting ID: 917 8553 3083

**Are you interested in aviation history?**

Here is a video that a friend sent to me about Pan American Airlines. the url is: [Click Here](#)

We had our April meeting this last Monday (Apr27) and those that joined seemed to have a good time. It was an open conversation with sharing of photos and ideas and a lot of questions. I will write more for the meeting minutes for the May Newsletter.

I dropped the ball on getting the newsletter completed this month. Last week, as I was preparing the last edits and additions, I ended going into the hospital for several days and then had a follow-up urgent care visit on Monday. Something in my diet or life has started another ulcer that was bleeding. Fortunately, I think I have caught it in time to prevent the nasty experience I had in 2017. So, my apologies to the membership for not getting the Newsletter out before the actual meeting.

Next months meeting is a wait and see, if we can gather then we will with caution. Otherwise, we will continue to have the virtual meetings. I hope that everyone is doing well and if you didn't make the meeting, please try next time.

Build Straight.

Roger

**March meeting Minutes:**

Cancelled due to the pandemic.



YAK-1

## GUESS THAT AIRPLANE:

### Beriev MBR-2

The Beriev MBR-2 was a Soviet multi-purpose (including reconnaissance) flying boat which entered service with the Soviet Navy in 1935. Out of 1,365 built, 9 were used by foreign countries including Finland and North Korea. In Soviet Union it sometimes carried the nickname of "Корова" (cow) and "Амбар" (barn).

The MBR-2 was designed by Georgy Mikhailovich Beriev and first flew in 1931, powered by an imported 373 kW (500 hp) BMW VI.Z engine. Production models, which arrived in 1934, used a license-built version of this engine, the Mikulin M-17 of 508 kW (680 hp), and could be fitted with a fixed wheel or ski undercarriage.

Beriev also designed a commercial airliner derivation, the MP-1, which entered airline service in 1934, and a freighter version, which followed in 1936.

In 1935, an improved version was developed, the MBR-2bis, powered by the Mikulin AM-34N engine, and fitted with an enclosed cockpit, dorsal gun-turret and enlarged vertical tail. In this configuration, the machine remained in production until 1941. As with the MBR-2, the bis spawned a commercial derivative and the MP-1bis entered service in 1937.

To Read More:

Wikipedia: [Click Here](#)

Aeroflight: [Click Here](#)

Video: [Click Here](#)

Avistar: [Click Here](#)

ram-home: [Click Here](#)

#### General characteristics

Crew: 4-5

Length: 13.5 m (44 ft 3 in)

Wingspan: 19 m (62 ft 4 in)

Height: 4.4 m (14 ft 5 in)

Airfoil: root: MOS-27 (18%) ; tip: MOS-27 (10%)[3]

Empty weight: 2,718 kg (5,992 lb)

Max takeoff weight: 4,245 kg (9,359 lb)

Powerplant: 1 × Mikulin AM-34N V-12 liquid-cooled piston engine, 559 kW (750 hp)

#### Performance

Maximum speed: 275 km/h (171 mph, 148 kn)

Range: 1,500 km (930 mi, 810 nmi)

Service ceiling: 4,900 m (16,100 ft)



#### Armament

##### Guns:

1 × 7.62 mm (0.30 in) PV-1 machine gun in bow

1 × 7.62 mm ShKAS machine gun in dorsal turret

##### Bombs:

300 kg (660 lb) of bombs, mines, and depth charges carried underwing



**GUESS THAT INSTRUMENT PANEL:**

**P-47D**

The P-47 Instrument panel that was used in the P-47 C, D, G models was last months Guess that Instrument Panel. Here are the panels descriptions from the Flight Manual T.O. No.01-65BC-1. The P-47 B model panel is below and the D model panel is to the right.

The URLs provided below will lead to places where the manuals can be purchased, but a couple have downloadable manuals without apparent cost.

368th Fighter Group: [Click Here](#)

WW2Aircraft.net: [Click Here](#)

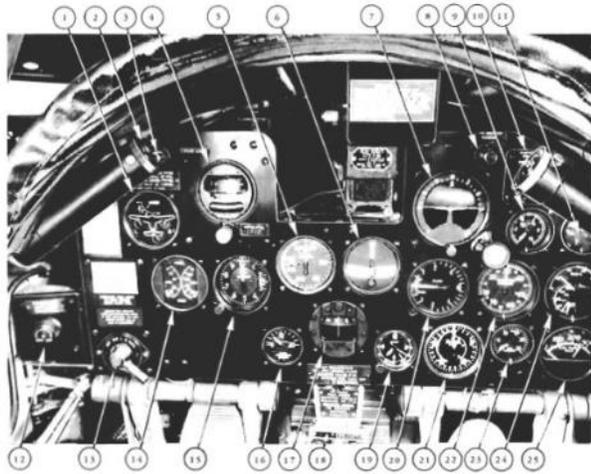
Flight Manuals on-line: [Click Here](#)

Archive.org: [Click Here](#)

AirCorpsLibrary: [Click Here](#)



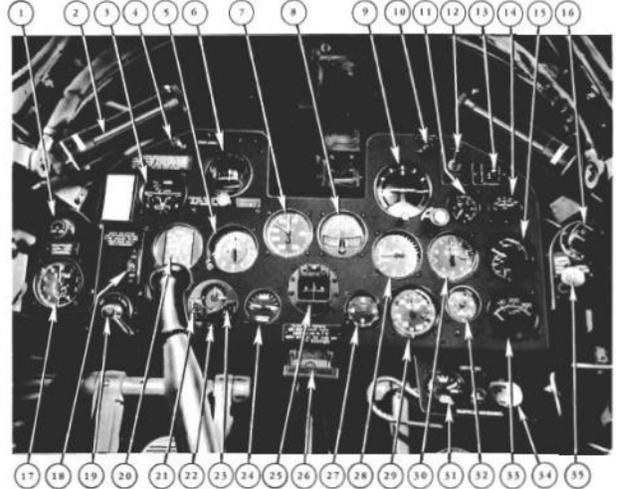
RESTRICTED T. O. No. 01-65BC-1 Section I



- |   |                                       |
|---|---------------------------------------|
| 1. Landing Gear, Tail Wheel and Flap Position Indicator | 13. Ignition Switch                   |
| 2. Fluorescent Light                                    | 14. Fuel Quantity Gage                |
| 3. Fuel Level Warning Lamp                              | 15. Kollsman Altimeter                |
| 4. Turn Indicator                                       | 16. Hydraulic Pressure Gage           |
| 5. Air-Speed Indicator                                  | 17. Compass                           |
| 6. Bank and Turn Indicator                              | 18. Parking Brake                     |
| 7. Artificial Horizon                                   | 19. Clock                             |
| 8. Fuel Pressure Warning Light                          | 20. Rate of Climb Indicator           |
| 9. Section Gage   | 21. Tachometer                        |
| 10. Vacuum Gage Selector Valve                          | 22. Manifold Pressure Gage            |
| 11. Carburetor Air Temperature Gage                     | 23. Fuel Pressure Gage                |
| 12. Propeller Anti-Icer Control                         | 24. Oil Temperature and Pressure Gage |
|   | 25. Cylinder Head Temperature Gage    |

Figure 30—Instrument Panel—P-47B

RESTRICTED T. O. No. 01-65BC-1 Section I



- |  |                                       |                                    |
|--|---------------------------------------|------------------------------------|
| 1. Propeller Anti-Icer Control                         | 12. Vacuum Gage Selector Valve        | 24. Hydraulic Pressure Gage        |
| 2. Fluorescent Light                                   | 13. Starter Switch                    | 25. Compass                        |
| 3. Landing Gear Tail Wheel and Flap Position Indicator | 14. Carburetor Air Temperature Gage   | 26. Parking Brake Handle           |
| 4. Fuel Level  | 15. Oil Temperature and Pressure Gage | 27. Clock                          |
| 5. Altimeter   | 16. Engine Primer                     | 28. Rate of Climb Indicator        |
| 6. Turn Indicator                                      | 17. Turbo Tachometer                  | 29. Manifold Pressure Gage         |
| 7. Air-Speed Indicator                                 | 18. Master Battery Switch             | 30. Tachometer                     |
| 8. Bank and Turn Indicator                             | 19. Ignition Switch                   | 31. Oxygen Cylinder Pressure Gage  |
| 9. Artificial Horizon                                  | 20. Fuel Quantity Gage                | 32. Fuel Pressure Gage             |
| 10. Fuel Pressure Warning Lamp                         | 21. Contactor Switch                  | 33. Cylinder Head Temperature Gage |
| 11. Suction Gage                                       | 22. Contactor (Pip Squeak)            | 34. Oxygen Flow Indicator          |
|  | 23. Contactor Clock Switch            | 35. Cowl Flap Control              |

Figure 31—Instrument Panel—P-47C, P-47D, and P-47G