



THE SLIPSTREAM

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

PRESIDENTS COLUMN

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SPECIAL POINTS OF INTEREST:

Northwest Aviation Trade Show:
The 2019 NW Aviation trade Show
is scheduled for February 23-24,
2019

Presidents Column

Excerpted from February 2013

Winter's not over:

Winter flying in the Northwest is not always easy; and this year it seems the weather has not been kind at all. If you want to stay VFR and just fly around the Sound, that's usually possible, below a 2000 foot overcast, but we've had unusually long bouts with fog this year. Forget about trying to go anywhere, clear days (or at least days when we can see the tops of the mountains) are pretty few and far between. So then we're tempted to say "I'll get my instrument rating - then I can just file IFR and go anyway."

Well, Northwest weather holds some surprises for that, too. Usually in the form of ICE. That's short for "I Can't Escape". Remember that 2000 foot overcast? And that the lowest MEA East is 8000? And to the South it's more like 5000 (7000 up the gorge)? This time of year, the freezing level is typically 3000-4000 feet. Sure, some days it might be at 7000, but those are few like clear days are.

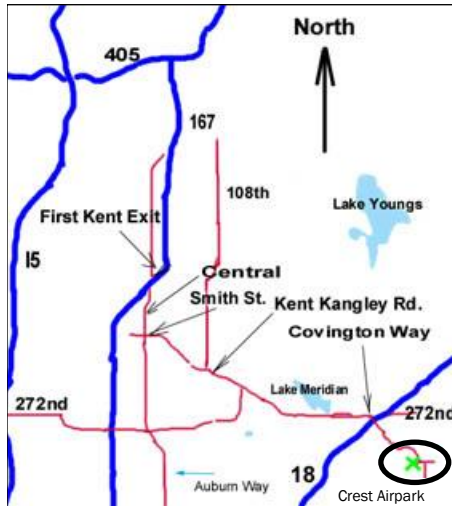
Our friends at FAA publish a great magazine called FAA Safety Briefing. I used to get a print copy each time they came out, but I think they charge for them now. Anyway, they're available on the web, and offer some really good reading (for those days when it's too icky to go flying). Figure 1 was borrowed from an issue of that publication from last

summer. It shows areas of most probable icing for the period from November-March of the year. Note the big red area over the Northwest (Cascades).

So you might say, "Well, I'll go South, stay VFR below the clouds, and go up the Columbia." Figure 2 shows in red, most favorable areas of freezing rain in Seattle Center's airspace. All those valleys (including the Columbia gorge), can trap cold air, and when the rain falls into that colder air, it can freeze. Not a pretty picture, particularly in terrain that's all "brown and wrinkly" on the chart.

One of the frustrations I've had in trying to get a good mental picture of the Northwest weather is the scale of the weather forecasts and the local nature of our weather (it's dominated by local geography). Another tidbit I picked up from that same FAA publication is a little known gem hiding in plain site on the ADDS web page. If you look on the left hand side of the page on the ADDS site (<http://adds.aviationweather.gov>), and just hover over the forecast item, "TAF/FA", another dropdown list will appear. At the bottom of that list is "TAF Forecast Discussions". This takes you to an Easter-egg colored map, seen in Figure 3. Clicking on any of the colored regions on that map will bring up a notes page written by the forecaster who generated the forecast for that particular region. These notes often explain WHY the forecaster wrote the forecast he did. This

WHERE DO WE MEET THIS MONTH?



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



JANUARY PROGRAM

Zevaaero A single person electric drone

Program

Steve Tibbitts from zevaaero

They are building the Zero. A single person electric drone and are based in Tacoma.

www.zevaaero.com

2019
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HOUSE FOR SALE ON CREST, PIETENPOL UPDATE

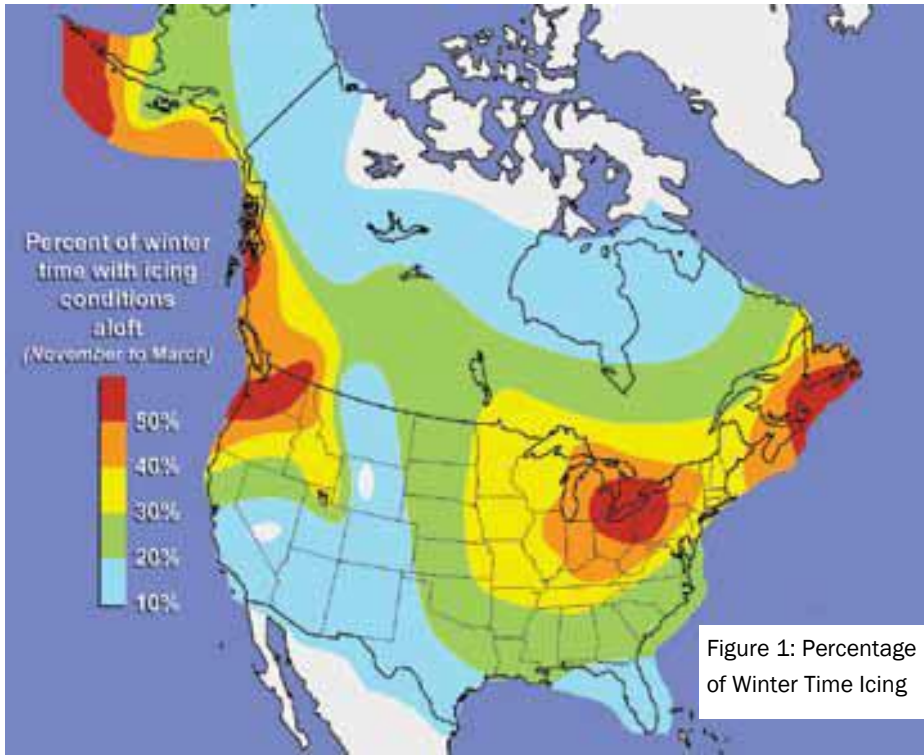


Figure 1: Percentage of Winter Time Icing

The late Norm Grier's house is for sale. BIG 2800sf hangar, big house too. To see the listing, [Click Here](#)

Pietenpol Update

Hello 441,

My wife Denise and I have been converting money into holes in the sky and we're enjoying every minute. Sunday we flew up to Friday Harbor on a BEAUTIFUL sunny day. (Gotta love the way a plane climbs on a winter day!)

Progress continues on the 1931 Pietenpol project with occasional setbacks. I had a buyer for the Rotec engine but the government shutdown killed his cash flow (he builds hot air balloons and cannot get them signed off by the

is often enlightening.

This weekend is busy: Don't forget the Northwest Aviation trade show on Saturday and Sunday (Editor insert February 23-24 2019), and of course, the Chapter meeting on Monday, 7:00. We've got a good program lined up.

Fly safe.

Brian

House for Sale on Crest Airpark:

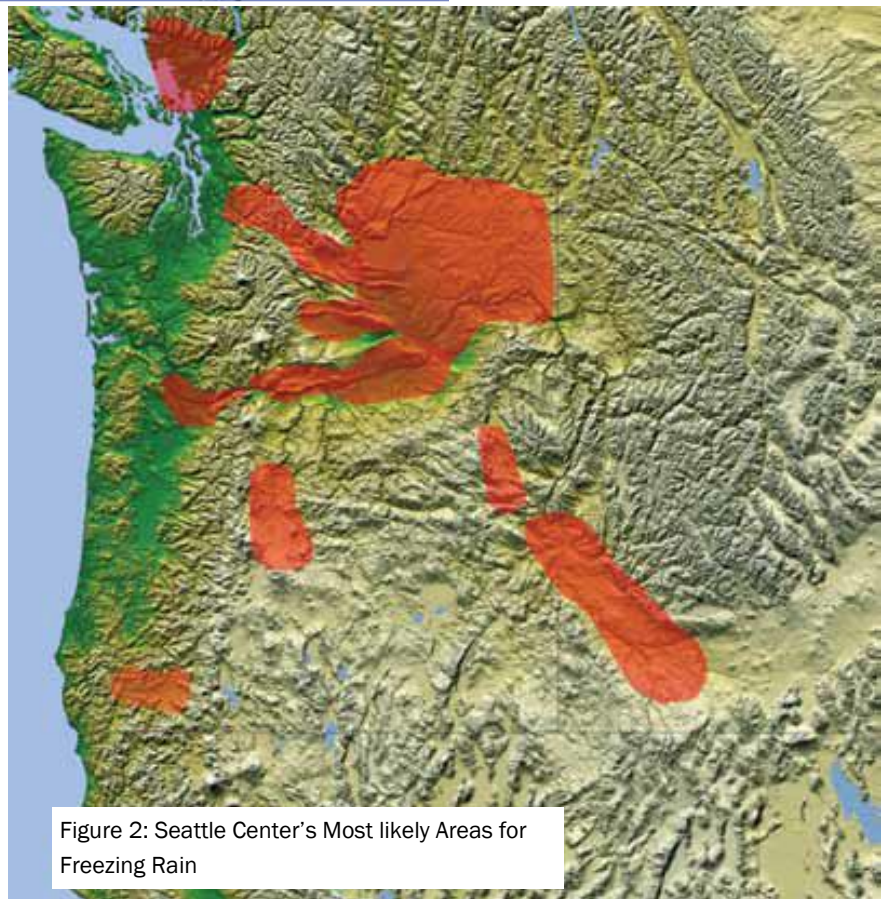


Figure 2: Seattle Center's Most likely Areas for Freezing Rain

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 month's entry:

Go to Page 10 for the December 2018 airplane

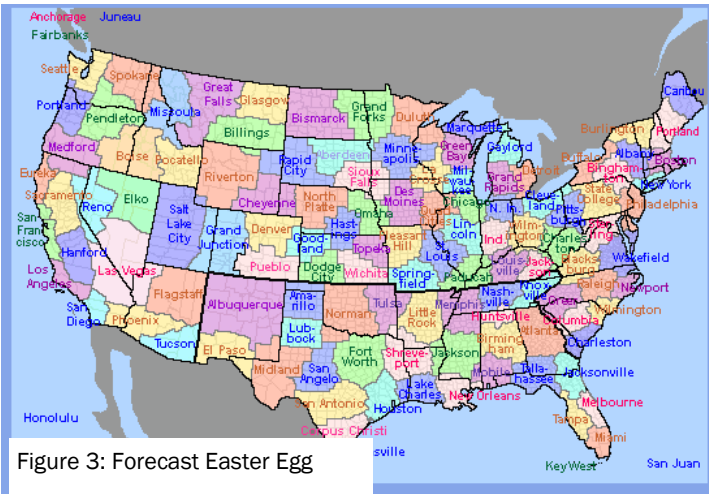
This month's entry:

Go to Page 11 for the December 2018 Engine



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PIETENPOL UPDATE, CONTINUED, ALEXANDER OSMUNDSON, KITFOX UPDATE:



Regards from the Newport Way Air Museum.....

Jake

Future pilot is born:

Alexander Theodore Osmundson was born 29 December 2018, 5# 14oz. Mom (Jennifer) and baby Alex doing well. Learning what sleep deprivation really is.

Tom Osmundson



FAA) so he can't complete the sale - so it's relisted on BARNSTORMERS and we'll see how it goes.



Steve Little Kitfox Update:

Back to doing a little work on the KitFox. Masking the doors and cowl for paint. One masked I'll set the paint area up, warm up the area, and paint the smaller items. By spring I hope to be ready to paint the remaining wing and flaperons.

Steve

Darin's RV Adventures

MONDAY, JANUARY 14, 2019



DARINS RV ADVENTURES, CONTINUED:



Out of band but fun

I did a little flying yesterday and thought I would post a few pictures of the flight that I think were pretty cool.



FRIDAY, JANUARY 11, 2019

Plodding along on Section 29

So far section 29 has been pretty fun. Nothing critical yet, just some therapeutic edge dressing, deburring, dimpling, clecoing, final drilling, bending, and a few parts that need to be fabricated. I've also started planning and purchasing parts I need to build the fuselage stand that will be the home of this part of the build for a while. Not much to report on that one yet but soon.

First iteration of design for the fuselage stand. High tech here!

Bending the left mid section side skin. That wooden brace is made out of solid oak and was a bit of a

pain to cut on my table saw. However it seems to have done the job nicely as these bends came out pretty good.

Left side mid fuselage skin as I was finishing up the bending process. You can see where the baggage door is if you look at the "dotted line".

I took this picture because these are the new stainless steel heater valves that I purchased from Aircraft spruce. There is supposed to be a round flange on the open hole you see there. I took this as proof for the replacement process. I decided to go with stainless steel instead of the aluminum version that Van's provides. In the unlikely event of an engine fire in flight this will help prevent that fire from coming in to the cabin.

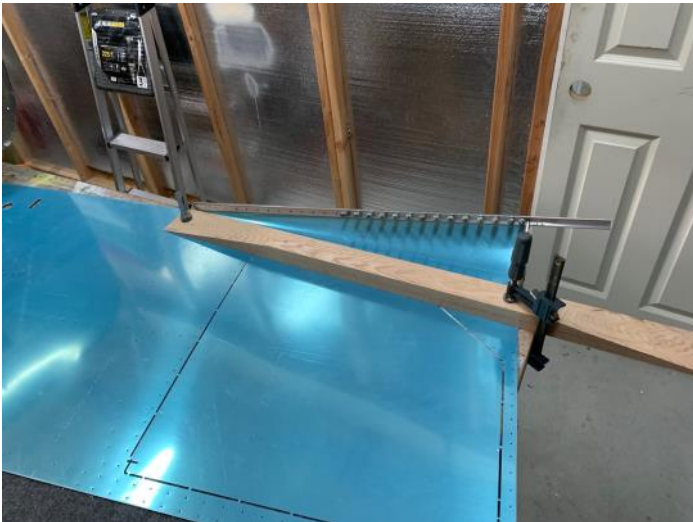
TUESDAY, JANUARY 1, 2019

Section 28 complete

Since Christmas and New Years is filled with distractions and family and lots of other good things I am



RV-8 SITE VISIT, AOPA SCHOLARSHIPS:



happy to say that I was able to finish Section 28 during this time. Now its on to section 29 which has been known to be a bit frustrating to some. I'm looking forward to it since at the end of this section I will have completed most of the major metal work on this airplane.

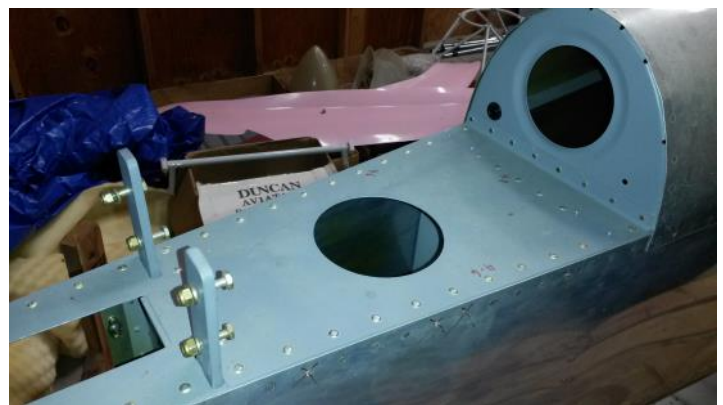
Christmas season is supposed to be about many things, one of which is giving and this year somebody decided that taking was more in their line of desires. Yes there is more to the story... As you will both remember I had to order some new parts to finish the engine install. Well those parts arrived on Christmas eve and sat for almost 5 minutes on our porch before some bitch drove up and decided she needed the 5 boxes on our porch more that we did. Got a great video of her helping herself to our packages but of course nothing identifiable is visible so this will just get chalked up to out of pocket expenses. Sometimes humanity really sucks.

Darin Anderson
RV 8 Tech Visit:
 1 Dec 2018



The chapter did a project visit of Casey Offord's RV-8 project that he bought partially assembled. He is assembling the airplane in a hangar at the Enumclaw Airport. Previous work seems to be done well. Has a good plan for wiring and fuel system work over the winter. Several RV builders showed up to provide advice

Tom Osmundson



APOA Scholarships available:

AOPA announces \$1 Million scholarships for High School Students and Teachers.

2019 Flight Training Scholarship Program gets boost from Ray Foundation.

AOPA will award 100 scholarships of \$10,000 each to 80 exceptional aviation-minded high school students ages 15 to 18, and to 20 teachers dedicated to



EAA NEWS, EDITORS CORNER:

advancing aviation education in their classrooms.

To Read More, [Click Here](#)

EAA News:**Celebrate EAA's 66th Birthday**

In the 1950s, no one could have guessed that a small group of aircraft homebuilders would change the future of personal aviation. Paul Poberezny conducted the first official meeting of what would become the Experimental Aircraft Association (EAA) on January 26, 1953. Over the past 66 years, EAA has become the community for all facets of aviation and has grown to more than 220,000 members worldwide.

Ray Aviation Scholarship - Chapter Application Now Available**Ray Aviation Scholarship**

January 16, 2019 - The time has finally arrived! The Ray Aviation Scholarship chapter application is now available at www.EAA.org/rayscholars, providing chapters the opportunity to apply to take part in the program. The application will be open through February 10. At the end of February, chapters that have been approved to participate in the program will be tasked with identifying and recommending local youths to apply for this scholarship. If selected, that chapter will also be tasked with mentoring and supporting the scholarship recipient throughout their flight training journey. To Read More, [Click Here](#)

Chapter Recognition Program:

In early 2019, EAA will be rolling out the Chapter Recognition Program. This program is designed to help chapters improve the experience for their local members, and to recognize our many outstanding chapters. More information on this program will be announced in early 2019, and reading this article will give your chapter a head start in understanding the Chapter Recognition Program. To Read More, [Click Here](#)

Loss of Control in Homebuilts Program Video

January 17, 2019 - In this special presentation from the Pilot Proficiency Center (PPC) at EAA AirVenture Oshkosh 2018, a panel of aviation safety experts discuss loss of control (LOC) accidents in homebuilts. LOC is the leading cause of fatalities across all of aviation, but is particularly prevalent in amateur

-built aircraft. Air show performer Michael Goulian, EAA Vice Chairman of the Board Charlie Precourt, Kitplanes magazine Editor-in-Chief Paul Dye, and Lancair Owners and Builders Organization President Jeff Edwards discuss why in a presentation hosted by EAA Safety Committee members Joe Brown and Wally Anderson.

To Read More and watch the video, [Click Here](#)

Editors Corner:

Welcome to 2019!

As Jake says, this is the building time of year. What projects do you have in mind for this year? Maybe you don't have an airplane project that is waiting to be accomplished, how about doing some flying and improving your flying skills?

My goals for this year are to get some work done on the Luscombe, do some flying and maybe get my ratings back to currency. Earlier this month I started to review the last year while preparing for this Newsletter. I went back through the years that I have been producing the Newsletter and looked at the Guess That Airplane to make sure that I was not repeating any of the airplanes and engines. I have started to compile each year that I have done the GTA. I plan to make them available on the Chapter website. So far I have gotten through 2012. It is hard for me to think that I have been producing the newsletter for six (6) years, the time has flown and it has been interesting to back through the newsletters. I saw the progress that Darin had made on his RV, Jakes progress on the Pietenpol and my flipping and flopping on what airplane to build. I also discovered that in the March 2018 Newsletter that I repeated the information for the Gotha airplane instead of the correct airplane, the French built Potez 540. So I am including a correction just before the December 2018 Guess that Airplane.

Congratulations to Tom and Jennifer Osmundson for the birth of Alexander Osmundson!

I trust that you will have a good year and do some building and flying.

Build Straight

Roger

CORRECTION TO MARCH 2018 GUESS THAT AIRPLANE:**Correction to the Guess that Airplane for February in the March 2018 Newsletter:****Potez 540**

The Potez 540 was a French multi-role aircraft of the 1930s. Designed and built by Potez, it served with the French Air Force as a reconnaissance bomber, also serving with the Spanish Republican Air Force during the Spanish Civil War. Although obsolete as a bomber, it remained in service in support roles and in France's overseas colonies at the start of World War II.

History

This two-engine aircraft was built by the French Potez company to fulfill a 1932 specification for a new reconnaissance bomber. Built as a private venture, this aircraft, designated the Potez 54, flew for the first time on 14 November 1933. Designed by Louis Coroller, it was intended as a four-seat aircraft capable of performing duties such as bomber, transport and long-range reconnaissance. The Potez 54 was a high-wing monoplane, of mixed wood and metal covering over a steel tube frame. The prototype had twin fins and rudders, and was powered by two 515 kW (690 hp) Hispano-Suiza 12Xbrs V-12 engines in streamlined nacelles, which were connected to the fuselage by stub wings. The main landing gear units retracted into the nacelles, and auxiliary bomb racks were mounted beneath the stub wings. There were manually operated turrets at the nose and dorsal positions, as well as a semi-retractable dustbin-style ventral turret. During development, the original tailplane was replaced by a single fin and rudder, and in this form, the type was re-designated the Potez 540 and delivered to the Armee de l'Air on 25 November 1934. A total of 192 Potez 540s were built.

To Read More:

Wikipedia: [Click Here](#)
 Aviastar.org: [Click Here](#)
 Military Factory: [Click Here](#)
 All Aero: [Click Here](#)

General characteristics

Crew: 4 to 7 (dependent on whether functioning as transport or bomber)

Length: 16.2 m (53 ft 2 in)

Wingspan: 22.1 m (72 ft 6 in)



Height: 3.88 m (12 ft 9 in)

Wing area: 76 m² (820 sq ft)

Empty weight: 3,785 kg (8,344 lb)

Gross weight: 5,950 kg (13,118 lb)

Powerplant: 2 × Hispano-Suiza 12Xirs V-12 liquid-cooled piston engines, 515 kW (691 hp) each (left hand rotation)

Performance

Maximum speed: 310 km/h (193 mph; 167 kn) at 3,962 m (12,999 ft)

Range: 1,250 km (777 mi; 675 nmi)

Service ceiling: 10,000 m (33,000 ft)

Armament

Guns: 3-5 × 7.5 mm (0.295 in) MAC 1934 machine guns in flexible nose, dorsal, and ventral positions

Bombs: 4 × 225 kg (496 lb) bombs on external racks or 10 × 55 kg (121 lbs)



GUESS THAT AIRPLANE:**Douglas XB-19**

Role Heavy bomber

National origin United States

Manufacturer Douglas Aircraft Company

First flight 27 June 1941

Retired 17 August 1946

Status Scrapped

Primary user United States Army Air Corps

Number built 1

The Douglas XB-19 was the largest bomber aircraft built for the United States Army Air Forces until 1946. It was originally given the designation XBLR-2 (XBLR denoting "Experimental Bomber Long Range").

Design and development

The XB-19 project was intended to test flight characteristics and design techniques for giant bombers. Despite advances in technology that made the XB-19 obsolete before it was completed, the Army Air Corps felt that the prototype would be useful for testing despite Douglas Aircraft wanting to cancel the expensive project. Its construction took so long that competition for the contracts to make the XB-35 and XB-36 occurred two months before its first flight.

The plane flew on 27 June 1941, more than three years after the construction contract was awarded. In 1943 the Wright R-3350 engines were replaced with Allison V-3420-11 V engines. After completion of testing the XB-19 was earmarked for conversion into a cargo aircraft, but modifications were not completed, and the aircraft flew for the last time on August 17, 1946. It was eventually scrapped at Tucson in June 1949.

To Read More:

Wikipedia, [Click Here](#)FoxTrot Alpha, [Click Here](#)First Flight Video, [Click Here](#)Worlds biggest Bomber in 1941, [Click Here](#)War History On line, [Click Here](#)**General characteristics**

Crew: 18

Length: 132 ft 2 in (40.2 m)



Wingspan: 212 ft 0 in (64.6 m)

Height: 42 ft 9 in (13.0 m)

Wing area: 4,492 ft² (417 m²)

Empty weight: 86,000 lb (39,000 kg)

Loaded weight: 158,930 lb (72,000 kg)

Max. takeoff weight: 164,000 lb (74,400 kg)

Powerplant: 4 × Allison V-3420-11 V24 engines, 2,600 hp (1,940 kW) each

Performance

Maximum speed: 265 mph (230 kn, 426 km/h)

Cruise speed: 165 mph (143 kn, 266 km/h)

Range: 4,200 mi (3,600 nmi, 6,800 km)

Ferry range: 7,750 mi (6,730 nmi, 12,500 km)

Service ceiling: 39,000 ft (12,000 m)

Rate of climb: 650 ft/min (3.3 m/s)

Wing loading: 35 lb/ft² (170 kg/m²)

Power/mass: 0.065 hp/lb (110 W/kg)

Armament

Guns:

5 × 0.50 in (12.7 mm) M2 Browning machine guns

6 × 0.30 in (7.62 mm) M1919 Browning machine guns

2 × 37 mm (1.42 in) autocannon

Bombs: 18,700 lb (8,480 kg) internal; maximum bomb load of 37,100 lb including external racks

GUESS THAT ENGINE:**Jendrassik Cs-1****Turboprop**

The Jendrassik Cs-1 was the world's first working turboprop engine. It was designed by Hungarian engineer György Jendrassik in 1937, and was intended to power a Hungarian twin-engine heavy fighter, the RMI-1.

Design and development

Following the running of an experimental gas turbine engine of 100 bhp output, in 1937 György Jendrassik began work on a turboprop engine, which would be produced and tested in the Ganz works in Budapest.

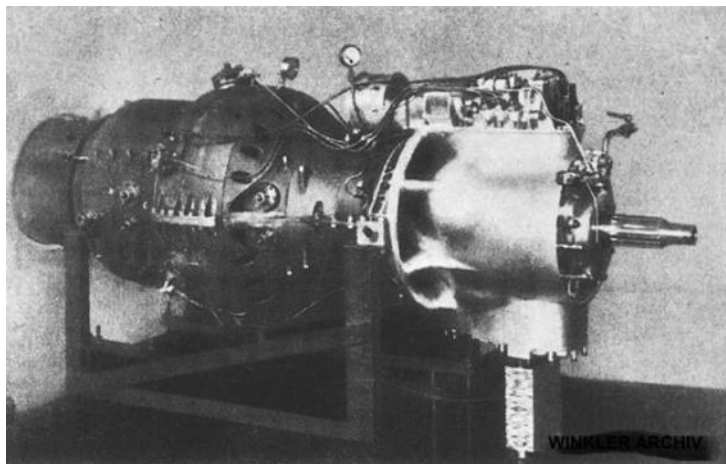
Of axial-flow design with 15-stage compressor and 7-stage turbine, it incorporated many modern features. These included a rigid compressor-turbine rotor assembly carried on front and rear bearings. There was a single annular combustion chamber, of reverse-flow configuration to shorten the engine, air cooling of the turbine discs and turbine blades with extended roots to reduce heat transfer to the disc. The annular air intake surrounded a reduction gear for propeller drive takeoff, and the exhaust duct was also annular.

With predicted output of 1,000 bhp at 13,500 rpm the Cs-1 stirred interest in the Hungarian aircraft industry with its potential to power a modern generation of high-performance aircraft, and construction was begun of a twin-engined fighter-bomber, the Varga RMI-1 X/H, to be powered by it.

The first bench run took place in 1940, becoming the world's first turboprop engine to run. However, although the design was inherently sound, combustion problems were experienced which limited the output to around 400 bhp. There was nothing inherently wrong with the design, however, and continued work on the flame cans should have allowed it to develop to full power.

Work on the engine stopped in 1941 when the Hungarian Air Force selected the Messerschmitt Me 210 for the heavy fighter role, and the engine factory converted over to the Daimler-Benz DB 605 to power it. The prototype RMI-1 was later fitted with these engines in 1944.

It should be noted that the first production turboprop engine was designed by Max Adolf Mueller in 1942.

**To Read More:**

Wikipedia, [Click Here](#) and [Here](#)
Tails through time, [Click Here](#)

