The Smoking Hole

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www.avg-ipms.org avg_ipms@yahoo.com

2022 Club Officers

President William Kelly v1rotate@verizon.net yatesaircraftco@gmail.com niiloj7@verizon.net

Co-Vice Presidents D.J. "Rowdy" Yates

Treasurer Niilo Lund

Secretary Matt Graham flighttester64@gmail.com

Club News and Business

JULY MEETING 1:00 - 4:00 pm JULY 16, AT DESERT CHRISTIAN HIGH SCHOOL, LANCASTER

June Meeting General Meeting Notes:

In June, we were back at Desert Christian. Meeting was mostly focused on contest discussion, we formed the Contest Committee and we viewed the school gymnasium contest venue. We also had our "Personal and Professional Experience" in-house contest.

July Meeting

Meeting will be at our usual Desert Christian location.

2022 Desert Classic

Veep Rowdy conducted our contest discussion.

The previous club executive board had discussed the idea of forming a "Contest Committee" to take some of the prep load off the Vice President, and the membership agreed.

We started formation of the committee. Here are the assignments:

Chair: Rowdy

Registration – Niilo

"Opportunity Drawing" - Luis

Vendors - Curtis

Setup (including table rental research) - John S.

PA system - Mike S.

Trophy assembly/setup - Mike O., Matt, Rich (and maybe Prez Emeritus Tracy!)

Table cards - Bill K.

Nillo would like to finalize the category sponsorships and collect the money by this meeting. There may still categories available for sponsorship – cost is \$45 per category

We were able to view the gymnasium. It is large and a very nice facility, with excellent lighting and should be perfect for the contest. There is a large, open hallway and alcove outside the gym where we can set up the vendors and registration.

There are only a small number of tables available which we will likely use mostly for registration, so we will definitely need to rent tables. There are plenty of chairs (and the gym bleachers), so shouldn't need additional chairs.

John and Rowdy have looked into table rentel. Prices seem to be all over the place. We will likely discuss at the meeting.

Prez Bill reports that the contest is now in the Events section of the IPMS website. He's working on getting the ¼ page add submitted.

Upcoming In-House Contests

We have one more in-house contest remaining for the year, "Jurassic Plastic" in August. You know the rules by now: build a kit that was originally released prior to 1970 OOB.

June Meeting

I believe Mike S. has shown this before. It's "Slappy the Fabulasaurus"!:



John based the model on a 1/32-or-so Airfix Corythosaurus. He added Minnie Mouse hands and shoes, Slappy's Mohawk is from a with brush and some feathers Mike found. Paint is Tamiya, and construction time was 2 hours. Mike says: "I built this to demonstrate "blended" vs "dominant and recessive" genetics for a 7th grade life-science class (A course I was woefully unqualified to teach.). Fabulasaurus can have blue, red or purple backs, blue, yellow or green bellies, and may or may not have pink polka-dots (a recessive gene)"

Mike O. brought his 1/12th Tamiya Ducati 1199 sportbike. Mike uses the Tamiya aftermarket turned metal anodized forks.



The kit is assembled using 27 tiny screws of varying lengths. Paint is Tamiya rattlecan Italian Red

John S. brought his 1/48th Ryan M-1.





John was involved in transporting the actual airframe to the Museum of Flight, where it is now on display. This is from a Lone Star kit (shudder!)

Rowdy produced another nice model from something of a sow's ear of a kit. It's the ancient 1/48th Lindberg F7U-1 Cutlass



The Lindberg is the only 1/48th mainstream kit of an early Cutlass (the other F7U-1 is the Collect-Aire resin kit)

Jay had a couple kits. a 1/35th Italeri Semovente 75/18 M40 and his 1/25 Lindberg Chevy police car



The Chevy was Jay's "Personal and Professional" entry and uses a lightbar from Cop Models, and LASD decals from an un-remembered source. The model was built as a tribute to fallen deputy Steve Owen

Alex brought his 1/35th Ryefield Panzerkampfwagen IV Ausf. H. WIP



Niilo had an aircraft this time, from his "Personal and Professional Experience" an Academy 1/72nd KC-97L Jet-Boosted Tanker





It took Niilo 160 hours over a year to construct the model. He used a large selection of Tamiya and Testors brush paints, with rattle cans for the large surfaces. There is no aftermarket in this kit. Niilo tells us about his KC-97: "The KC-97L was an upgraded KC-97G with 2 GE J-47 jet engines added outboard of the #1 and #4 Prat & Whitney 4360's. Maintenance officers from the 126th Air Refueling Squadron proposed the modification to improve the then dangerous refueling tactic called "tobogganing", refueling in a dive profile to accommodate the new series of fighter jets that were coming into service. The modification increased the refueling altitude by 10,000 feet and airspeed by 50 knots. A byproduct advantage was a 50% decrease in take-off and landing distances. The modification costs were only \$38,000 per aircraft. The kit itself was a rather simple build with reasonable fit and minimum gap fill and sanding. Once painted and assembled all the small appendages made decal application difficult. Many pieces were accidentally broken and had to be repairs. The decals were difficult as usual because of age which resulted in tearing and some misplacement. Even with these frustrations, the overall project was fun. Interesting build with unique qualities. Build if you like a challenge."

Primary	Activities	Refreshments	Demo	Review	
15 Jan	Physical meeting at Prez Bill K's house, Palmdale 1 – pm				
19 Feb	Physical meeting at Admin Amateur Matt's house, Palmdale 1 – 4 pm				
19 Mar	Physical meeting at Desert Christian High School, Lancaster 1 – 4 pm				
16 Apr	Meeting at Desert Christian High School, Lancaster, 1 – 4pm				
28 May	Meeting at Rich R.'s house, Rosamond, 1 – 4pm				
18 June	Meeting at Desert Christian High School, Lancaster, 1 – 4pm. "Your Personal or Professional Experience" in-house contest				
16 July	Meeting at Desert Christian High School, Lancaster, 1 – 4pm				
20 Aug	Meeting at Desert Christian High School, Lancaster, 1 – 4pm. "Jurassic Plastic" in-house contest.				
17 Sept	Meeting at Desert Christian High School, Lancaster, 1 – 4pm				
15 Oct	Meeting at Desert Christian High School, Lancaster, 1 – 4pm				
29 Oct	2022 Desert Classic, Desert Christian High School Gym				
19 Nov	Meeting at Desert Christian High School, Lancaster, 1 – 4pm, 2023 Club Officer Nominations				
17 Dec	Meeting at Desert Christian High School, Lancaster, 1 – 4pm , 2023 Club Officer Elections, Gift Exchange				

2022 Meeting Schedule (Tentative)

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The Tool Crib

Rich R. had a couple things:

Here's the writeup on the electric screwdriver from last month.

Reviewer: Rich Ribaudo **Product:** Wowstick 1F+ Precision Power Screwdriver Set **Source(s):** Amazon, eBay Price: \$ 52.98 (on Amazon)

I'm currently building a large scale "subscription" kit. That is to say each month I receive a box with 4 "modules"; small parts of the larger model that are built as individual subassemblies. Since the majority of these parts are metal, they are fastened with miniature self-tapping screws and even smaller machine screws. The kit supplies hand screwdrivers of the type used in electronics assembly. But after a while these narrow-barreled screwdrivers become difficult to hold and, at least for me, cause excessive hand cramping.

I turned to You Tube for some miniature power screwdriver reviews and found one that offers features that made sense and were important to me. The Wowstick Precision Screwdriver offers a great balance of power, comfort, smooth operation and durability. It is rechargeable, comfortable and comes with all the accessories one could want.

Included with the tool are:

Charging cord Weighted stand LED Lighted tip Magnetizer/demagnetizer block 56 bits of every fastener head type imaginable Miniature prying tool Magnetic work mat Plastic storage case

The tool purports a three-hour running time. I charged it before the first use and have reached at least 90 minutes time on condition on the first charge. It's just as fast and powerful as the first operation and doesn't show signs of running down. Its lithium battery is guaranteed for 6 hours of uninterrupted work; continuous empty load for 2 hours and will hold a charge for 180 days. A really nice feature that other similar tools do not have is a brake. That means you can use the tool as a manual screwdriver without the motor spinning. That's especially helpful when starting a screw in an awkward spot or applying extra torque that the motor isn't able to deliver.

This tool is a bit pricey, but the quality is definitely high. The most impressive feature (and the one that clinched it for me) is that the tool has zero end play and zero back lash. Other tools I considered buying had some "slop" in them, which becomes a real issue in a miniature tool. The power switch is a thin rocker bar on the body that has a very smooth and positive action.

The included magnetic mat is worth its weight in gold. The screws in my project are about the size of a grain of rice and more than once one would hit the floor. That caused a major search effort every

time, and having to close the door during the search to keep nosey canines out! Once I started working over the mat any dropped screw simply stayed put under the project where it fell.

I bought this tool to make my subscription kit build easier and it did; all the features were just what I needed for this particular project. There are other similar, less expensive tools on the market. I recommend to anyone considering a tool like this that they visit You Tube and watch the demonstration videos. Several of them that I watched had direct comparisons of different tools rating the features and drawbacks of each. You'll be able to pick one that's just right for your needs.

I recommend this tool highly. Its quality and performance exceeded my expectations, and the included useful accessories make it an excellent value. Anyone of us who builds models is guaranteed to be plying their skills in other areas like radio control models, model trains, electronic devises and other household tasks. The Wowstick Miniature Power Screwdriver will lend itself to all those jobs and more.



And another interesting item: **Reviewer:** Rich Ribaudo **Product:** Mike Lane Mini Cable Ties **Source(s):** Spot Model

The 1/8 scale Porsche 917 I'm currently building has some unruly ignition wires. And since it's an air cooled flat 12-cylinder engine, that means there are 24 ignition leads to tame. I considered using thin tape but the idea of wrapping so many wires with tape quickly became unpleasant. Add to that the tape would have to be so thin to be in scale, it wouldn't be strong enough to do the job.

There are a few fellows on YouTube building this same 927 model and one of them used Mike Lane Mini Cable Ties to do exactly what I wanted to do with my ignition leads. His model got tidied up in a hurry and I'm hoping mine will, too.

Mike Lane Mini Cable Ties come 40 in a pack (at least the 1/8 scale ones do) and are presented on a die cut sheet. Each plastic tie is easily removed from the sheet with a tweezer and are surprisingly tough. They work just like the real full-size article, the length of the strap having "teeth" that lock the tie in place when passed through the hole in the head of the tie. Tiny as these are they are unexpectedly tough.

Since real zip ties come in a variety of lengths and widths scale doesn't mean much with this product. I think a modeler could get away with using these across several scales depending on the subject. Lots of vehicles besides cars use zip ties and I think these could be used in the Sci-Fi, Armor and Diorama categories.

Check out all the products Mike Lane offers (need a 1/8 scale resin Twinkie?) at https://mikelanemods.com. One caveat is worth mentioning. I had to wait a while for my cable ties; not because they come from the UK, but because they sell out quickly. But Mike Lane is excellent about keeping you on the list and advising when things are back in stock.





Kit Reviews

Takom / Snowman Model 1/350th DDG-1000 Zumwalt Class Destroyer



The *Zumwal*t-class destroyer eventually emerged from the DD-21 "21st Century Destroyer" program, which envisioned a land-attack destroyer 'arsenal ship' that leveraged vertical launched missiles and advanced guns to provide firepower approaching that of a battleship. Changes in requirement led to the restructuring of the program as DD(X), a configurable multi-mission littoral fire support ship, a larger complement to the ill-fated LCS.

Designed for low-observability, the emerging DDG design employed 80 vertical-launch missiles and a new gun system using a guided projectile, the Advanced Gun System (AGS). The Navy originally planned to purchase 32 ships, but as development costs mounted on the complex design, the procurement was cut to

7, then finally 3 ships, resulting in the staggering cost of \$4.42 billion per ship, with the Navy procuring additional older *"Arliegh-Burk"*-class ships instead.

The flagship, DDG-1000 was christened *Zumwalt* after former Chief of Naval Operations, Admiral Elmo Zumwalt. Construction was begun in 2011, with completion in 2013, the second ship, DDG-1001 *Michael Monsoor*, was completed in 2019, and the 3rd ship, DDG-1002 *Lyndon B. Johnson* is currently under construction.

The *Zumwalt*, both the class and the ship itself have been troubled. The *Zumwalt* uses turbo-electric propulsion, and the ship experience propulsion failure while transitioning the Panama Canal when water leaked into the drive system. The only guided projectile, the Long Range Land Attack Projectile or LRLAP, was canceled when cutbacks in the number of projectiles to be procured caused the cost to increase to nearly \$1M per round. As the AGS cannot fire any other round, it leaves the system with no viable ammunition and the gun to be essentially dead weight. The current plan is to remove the AGS and replace it with the Common Hypersonic Glide Body missile system.

Snowman Model is an offshoot of Takom in Hong Kong, primarily focused on maritime models. This is, I believe the first mainstream kit of the *Zumwalt* class.

The kit is contained in the expected long box with a painting of the *Zumwalt* firing a vertical—launch missile with SH-60 and MQ-8 helicopters flying near buy.



The kit consists of mostly finely molded gray pieces, but it quite comprehensive, with clear, photo etch and even a few brass and 3-D printed parts. The upper main hull is molded in one piece, with the lower hull a separate part, with the split between the two at the waterline. Two different style of rudders are provided.



A clear sprue contains parts for the deckhouse windows and the SH-60 helicopter. There are 2 etch sheets, which provide parts such as railings, helipad nets and helicopter rotors. The various antenna

domes are 3-d printed. Turned brass barrels are also included for the AGS, which can be built deployed in firing position. Two helicopters are provided, an SH-60 and MQ-8B Firescout UAV. My one quibble is that the Firescout should probably be the MQ-8C, as the MQ-8B is no longer in service. The decal sheet provides markings for the helicopter deck and for all three ships in the class.



The instruction booklet is unusual in that it quite small, about 4"x6". It is relatively clear and includes a decal guide, but my one complaint is that I could not find any paint color callouts.

The model appears accurate compared to the photos I could find online. Retail is \$91, but it can be found much cheaper, typically in the \$70 range. I got mine on sale from Sprue Brothers for \$55.

Cool model of an unusual ship.

Club Demos

None this month.

Member Show and Tell, 31th COVID Edition

Once again, no new builds on the group email thread, but Rich R. has a writeup on one of his latest builds

Builder: Rich Ribaudo
Kits: ICM 1/48 BQM-34A (Kit # 48401) and KDA-1 (Kit # 48400) Firebee Drones
Construction Time: Appx 12 hours for both
Finish: MRP 002 Red, MRP 299 Insignia Red, MRP 005 Black, Model Master 1708
FS33538 Insignia Yellow
Aftermarket: Ancient Verlinden 1/48 printed aviation tarmac

Wikipedia tells us...

The **Ryan Firebee** is a series of target drones developed by the Ryan Aeronautical Company beginning in 1951. It was one of the first jet-propelled drones and remains one of the most widely used target drones ever built.

KDA-1 Firebee

The Firebee I was the result of a 1948 U.S. Air Force request and contract to Ryan for a jet-powered gunnery target. The first flight of the **XQ-2 Firebee** prototype took place in early 1951. The drone featured swept flight surfaces and a circular nose inlet. The initial models had distinctive "arrowhead" shaped endplates on the tailplane. The Firebee could be air-launched from a specially modified launch aircraft (Douglas A-26 Invader was first

to be used for this), or ground-launched with a single RATO booster. The U.S. Navy bought the Firebee as the **KDA-1** which was mostly similar to the Q-2A, differing mainly in its powerplant: a <u>Fairchild J44-R-20B</u> turbojet with 1,000 lb_f thrust. The KDA-1 and Q-2A could be distinguished by the KDA-1's protruding inlet center body and wider, steeply raked inlet. The U.S. Army also obtained a KDA-1 version designated the **XM21** that differed only in minor details.

BQM-34A

In the late 1950s, the USAF awarded Ryan a contract for a substantially improved "second generation" Firebee, the **Model 124**, originally with the designation **Q-2C**. The initial prototype performed its first flight in late 1958 and went into production in 1960. In 1963, it was redesignated the **BQM-34A**. The old first-generation KDA-1 and KDA-4 targets then still flying with the Navy were (somewhat confusingly) given the respective redesignations **AQM-34B** and **AQM-34C**. The BQM-34A emerged as the Firebee as it is recognized today, with a bigger airframe, longer wings, and a particular "chin"-type inlet under a pointed nose (in contrast to the circular intake of the first-generation Firebees). It was powered by a Continental J69-T-29A turbojet, a copy of the improved Turbomeca Gourdon derivative of the Marbore, with 1,700 lb_f thrust. The U.S. Navy also adopted the BQM-34A, while the Army obtained a ground-launched version designated **MQM-34D** with longer wings and a heavier JATO booster.

The Firebee target drone has proven successful and remains in operation with the U.S. Navy and Air Force. Firebees have also served with the Canadian Armed Forces and Japan Self-Defense Forces, with Japanese Firebees built by Fuji Heavy Industries. A small number were also supplied to NATO programs. More than 7,000 Firebees have been built, with 1,280 of these being first generation variants.

THE BUILD

I built both of these drones concurrently since there were so few pieces to each. With no cockpit or landing gear to deal with the assembly took all of about 90 minutes for both articles, with another hours for seam treatment and polishing. The fit was excellent, requiring just a few drops of filler on one of the drones. The fit of the wings and horizontal stabilizers was rather snug and the overlapping joints at the root of these surfaces made for near perfect alignment. Just a little tweak was required to get them perfect.

Constructing the trailers actually took a bit more time than the drones themselves as they required careful alignment and parting line cleanup of the fragile tubular parts. Even with the extra caution observed for the fragile trailer parts the entire build was trouble free and enjoyable. For the KDA-1 trailer I added a pair of adjustable attachment lugs on the top hoop. I made them from styrene rod and tiny discs cut with a Waldron punch and die set. The BQM-34A trailer got a pair of hold-down rings, again made with the punch and die set, and some Tamiya tape for the hold-down strap. These trailer mods were the only deviation to the kit's contents.

FINISH

Everything got a coat of Tamiya Fine White Primer prior to painting. I elected to use white primer instead of gray so the final colors of red, orange, and yellow would look more vivid. Model Master Insignia Yellow was used for the trailers with Alclad Aluminum for the bare metal rails on the BQM-34 trailer. A light pin wash was applied to the trailers just to define the corners and bolts a bit. I

avoided any real weathering or wear as these vehicles were kept indoors and well maintained by their crews.

ICM offers four different paint schemes and corresponding decals for each of these drones. My KDA-1/Q2A was painted in MRP 299 FS11136 Insignia Red and Model Master FS33538 Insignia Yellow to depict an article tested at China Lake Naval Air Station in 1960. The BQM-34 was painted MRP-2 Insignia Red: US Navy Training and Arctic Camouflage. Masking was tedious and time consuming given that these are tiny models with tight, confined spaces where colors change directions. I spent about 4 hours of the total build time on the masking and then going back and re-masking to get crisper lines.

I opted to go with the most colorful schemes ICM offered. The decals were more involved than a standard drone, but I felt the most interesting. Besides, I'm a big fan of nose art of any kind. ICM's decals were the thinnest I think I've ever used but they behaved absolutely horribly! They didn't want to come off the backing paper, refused to slide on the model (even with a gloss surface and Micro Set) and had a propensity to double-over on themselves no matter how carefully I moved them. Almost every decal went back into the water to re-float them so I could unpeel them from themselves. In the end, after much struggle and colorful metaphors, it worked.

Both models sit atop a base made from scraps I had laying around the shop. I used an old pine board repurposed from a chair for the base and dressed the sides with iron-on oak veneer, stained ebony. The tarmac is an ancient (1980s!) printed piece of cardstock from Verlinden. The nameplate was made on my computer and printed on glossy photo paper.

This was a fairly quick project, and it was gratifying to build. I was looking for something simple compared to some of the monstrosities I take on and, except for the decals, it was a pleasant build. I especially liked the opportunity to build something so colorful. These are the first and only drones/targets in my display case.

I recommend these kits to anyone not discouraged by some small pieces. The painting and decal angst I had can be avoided by choosing one of the other simpler but attractive paint schemes offered by ICM.

A nice touch from ICM is an included pylon to hang your drone beneath the wing of a carrier aircraft. And if you want, but do not have, something to hang your KDA-1 Drones beneath you can get their DB-26B/C (kit # 48286) which includes a pair of the Firebees.





KDA Firebee under the wing of a JD-1 Invader



Lockheed DC-130 carrying two BQM-34 Firebee target drones under its wing



The ICM Firebee Drones







Calendar

7/20-23/2022	IPMS/USA National Convention	La Vista Conference Center 12520 Wesport Parkway La Vista, NE
8/27/2022	Best of the West Region 8 Convention and Contest	Orleans Hotel & Casino 4500 W. Tropicana Ave. Las Vegas, NV
9/10/2022	The Silicon Valley Classic VII	Napredak Hall 770 Montauge Expressway San Jose CA
10/8/2022	IPMS Reno "High Rollers" 21 st Invitational Contest	Reno Elk's Lodge #597 597 Kumle Ln Reno, NV
10/2/2022	OrangeCon	Double Tree by Hilton 7000 Beach Boulevard Buena Park, CA
10/22/2022	Fresno Scale Modelers Fall Contest	Clovis Memorial District 808 4 th St. Clovis, CA
10/29/2022	Desert Classic XXII	Desert Christian High School 2340 W Ave J-8 Lancaster, CA
11/5/2022	ModelZona 2022	Red Mountain Community Church 6101 East Virginia Street Mesa, AZ

Postcards from Hawaii



I just returned from a two-week work deployment to Hawaii. Whenever I tell people that I'm going to Hawaii for work, I get responses like "oh, poor baby" and "must be rough duty", but trust me, it's no vacation. I am the Operations Lead, responsible for coordination of all the flight ops, and conducting the mission, too, so time to hang out at the beach is severely limited. And this was truly the "Deployment from Hell". Technical problems with the jets, extreme schedule pressure, "drama" between my Ops team members that I had to wade in the middle of, and even a "personal drama" with a team member that left me kind of freaked out. Getting a hotel room that looked like it belonged in the Motel 6 didn't help.



My "room"

My jets in the hangar at K-Bay

Unfortunately, our mission overlapped with the start of RIMPAC (Rim of the Pacific). For those not familiar, RIMPAC is a huge, multi-national naval exercise that takes place every year. Participants include the US, Canada, the UK, Australia, New Zealand, Japan, South Korea, Peru, Columbia, Taiwan and others. The sheer number of participants compounded our lodging and operational problems. But for military hardware enthusiasts, there was some really cool hardware to see. So without further ado:



Interesting jet. Kawasaki P-1. Japan's answer to the Boeing P-8. Japan has offered these for export, but so far, no takers. Everyone's buying P-8's



Marine KC-130J



Atmospheric shot of an MV-22. Lots of V-22's. They are VERY noisy in VTOL mode. Shook our ground control trailer.



V-22 in the phase dock. I believe there is a decal sheet of these markings. There are those who say simply surviving a flight in a V-22 is the definition of "lucky".

Boeing C-40A Clipper. A Navy 737-BBJ. This one was from San Diego



MH-60S



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We couldn't get the jets out of Hawaii prior to 4th of July weekend, Edwards seems to have become a "part time" Air Force base, and was closed from the 1st to the 6th. So I took advantage of the breather to go out to Pearl Harbor and the Pacific Air Museum, which I hadn't visited in a number of years. The museum has recently opened the old control tower in the last couple months for tours. The view is spectacular (that's where the photos were taken from), and I had the great pleasure of having the entire tower to myself with the tour guide for 45 minutes.



The famed B-17E "Swamp Ghost"





Ford Island Tower with (what the Museum claims is) a C-47. But it has Cyclone engines, so is probably really a C-53



Museum outdoor display from the tower



Australian *Canberra*-class carrier. Similar to a US LHD. Only carries helicopters at this time, but has a 'ski jump' to accommodate STOVL in the future. F-35?



The "*Mighty Mo*", with the *Abraham Lincoln* and the South Korean *Marado* in the background



The controversial *Zumwalt*. Also note LCS 16 *USS Tulsa* in the foreground, behind *Canberra* My guide said the *Tulsa* has been in port, broken for 6 more than months



The Abraham Lincoln is looking a little rough...



...in contrast to the *Marado*. The *Marado* is LHP-6112 and is a 'Landing Transport, Helicopter'. It was commissioned just last year

Visited my favorite Aloha shirt shop (Bailey's) and got some more aviation-themed shirts, but I can't say I was sorry to leave before I had a nervous breakdown. But, of course, there is always a solution:





Aloha

This month marks the start of a new section:

President's Historical Snippets #1

B-24 Liberator Notables – Beneath Haunted Waters, Peter Stekel, Lyons Press 2017

B-24's were produced in greater numbers than any other U.S. WWII aircraft. It was built by Consolidated, Douglas, and Ford (47% of total).

Ford's press dies scratched aluminum parts, making them prone to corrosion. Charles Lindbergh said Ford aircraft construction was "worst...I have ever seen".

B-24 was touted for its efficient high aspect ratio "Davis Wing" ... butThe Davis wing was sensitive to ice accumulation.The Davis wing was structurally less tolerant to combat damage.B-24's had both less wing area and a higher wing loading than the B-17.

AAF judged B-24 to be 30 % more difficult to fly for new pilots than the B-17.

B-24 controls were especially "heavy" and stiff.

Due to heavy controls and higher wing loading it was harder to fly in formation. The B-24 struggled performing at 25K feet, while the B-17 was comfortable at 30K. Wingtips could not be seen from the cockpit, hazardous on ground and in flight. One engine out could require reducing power on opposite wing's engine(s).

The nose landing gear was weak and prone to failure.

The instrument panel layout was overly complicated.

Fuel from the "wet wing" seeped into the bomb bay, causing fumes & fire hazard. High wing threatened the fuselage structure and crew during wheels up landings. High wing and fragile bomb bay doors made ditching exceptionally risky.

B-17 accident rates were about equal, but B-24 casualty rates were 2 times higher.

In spite of the B-24's shortcomings, most sources claim the B-24 was faster, possessed a longer range, and could carry more bombload for a given situation than the B-17.