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WHAT'S BEEN HAPPENING

BEHIND THE MUSEUM?

Ed Note: Thanks to Wing Leader Fred Suevel's input, the Warbird Digest has been following our re-birth of "309" over the past many, many months. This condensed photo essay is reprinted with permission from the April issue of Warbird Digest. Many thanks to our Wing Leader for providing the photos and Warbird Digest, its staff, and writers for helping us all "Keep 'em Flying!"

[Back in February](#), we reported on progress which the Commemorative Air Force's Rocky Mountain Wing has made with the effort to return their TBM-3E Avenger (Bu.53503) back to airworthy condition following her engine problems last year. In February's article, we showed the rebuild team re-installing the Wright R-2600 engine, which had just returned from overhaul at [Anderson Aero-motive](#) in Grangeville. For this article, the Rocky Mountain Wing's Fred Suevel takes us through the process of re-installing the various engine ducting, along with the propeller, which has just undergone an inspection and Airworthiness Directive (AD)

compliance with Westpac Aviation in Colorado Springs, Colorado. It is an arduous endeavor, and requires real dedication from all involved...



The picture above was taken back on July 16th, 2020, when we took the engine off the plane for rebuild, but it's a good reference for some of the following images. You'll note at the top of the yellow nose cowling is an oval shaped opening. That's the air intake for the engine. The next picture will show the air intake bridge which connects this opening across the top of the engine and into the curved air intake feeding the carburetor. This bridge also has the top skin of the plane over the engine.

At the bottom of the nose cowling you can see another smile shaped opening. This feeds the air into the oil cooler. There is also, like the air intake bridge mentioned

above, a piece which connects between the front cowlings to the face of the oil cooler. You'll see the oil cooler being installed in a subsequent image...

The Air Intake Bridge connects the top of the front nose cowling, just behind the propeller, to the air intake for the carburetor.

Byron is getting ready to install the carburetor on the engine. It is sitting on the lift in a position very close to the way it will be once installed.



(Continued on Page 7)



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WE'RE BUSY! BUT, WE'RE NEVER BUSY ENOUGH!!

RMW AIR SHOW SCHEDULE - 2021

MONTH	DAYS	LOCATION	SHOW	TBM	CUB	STATUS
May	15 -16	Peru, IL	Gathering of Avengers			TENTATIVE
Jun	19	Boulder, CO	Open House / 40's Dance			CANCELLED
	21 - 28	Grand Junction, CO	ABAZ B-17 & B-25			SCHEDULED
Aug	23 - 29	Broomfield, CO	CAF B-29 & Others			SCHEDULED
Sep	1 - 6	Colorado Springs, CO	CAF B-29 & Others			SCHEDULED
	11 - 12	Cheyenne, WY	Wild West Airshow			SCHEDULED
	18 - 19	Montrose, CO	Tribute to Aviation			SCHEDULED
	25	Wendover, UT	Wheels & Wings			CANCELLED
Oct	16 - 17	Loveland, CO	No. Colorado Airshow			TENTATIVE
Nov	6 - 7	Davis Monthan AFB, AZ	Thunder & Lightning TB			TENTATIVE
	13 - 14	Lake Havasu City, AZ	Airfest			TENTATIVE

There's a big hole to fill in July and early August. Any ideas? Be creative - we have a good show - where can we take it? Contact Col Thompson and volunteer to support our TBM at the Aug and Sept B-29 appearances.

TB=Thunderbirds
BA=Blue Angles

**GROUND SCHOOL
APRIL 17, 2021**

Saturday, April 17th twenty-three Rocky Mountain Wing Colonels and guests gathered at the Wing Museum for the 2021 Operations Ground School. This all day affair is considered mandatory for Colonels that support operations of the TBM and Cub for travel to air shows and other off-site events, preparing for,

setting up the TBM wing walk stairs and PX, then manning the PX and arranging the sale, administration and supporting both TBM and Cub Living History Rides. Operations Officer Bob Thompson and Executive



Officer Kent Taylor prepared the training syllabus and conducted the class with the assistance of Cols Dick Maddock,, Byron Huffman and Tom Howe.

marshaling, stairs and PX unpacking and repacking filled out the day.

For sure, as we work our way into an unknown air show environment for 2021, our crews will be ready to operate in a safe, efficient, and professional manner when called upon to represent our Wing, our Mission and the Commemorative Air Force.

Keep 'em Flying



Wing Leader Fred Suevel arranged for a well prepared buffet lunch. Hands on work with the TBM pre-flight, start-up procedures,



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Keep 'em Flying

PHOTOS OF THE MONTH



"Unfortunate" is the first thing that comes to mind when our WWII Warbird community has the misfortune to have an incident with one of our precious aircraft. When it is a member of the TBM community it hurts worse.

Shown here is the TBM belonging to the Valiant Air Command Museum in Titusville, FL having to ditch just off shore of Cocoa Beach Florida on April 17th.

See page 4 for "...the rest of the story."

WING LEADER'S REPORT

*By Fred Suevel
RMW Wing Leader*

April was a busy month for our wing. On three separate Saturdays we held our monthly meeting (4/10), our yearly ground school for members who wish to help at airshows (4/17), and a member's open house (4/24). This was both good and bad. Good because it got many of our members back, many of which we haven't seen in at least a year. Also, good because it brought in a couple of new members. Bad because it limited the time our maintenance crew had to work on the plane and thus lost us the opportunity to fly to Peru, IL, for the big Flight of Avengers show.



The engine seems to be running well. We've, however, have hit a couple of snags in testing it. The biggest problem was we didn't seem to be able to get "real" readings on the manifold pressure gage. A couple theories were tested and it was determined that the gage itself and not the connections nor the engine were at fault. The gage was sent for repair. It returned just before our open house and has been reinstalled. Another nagging

but not flight limiting problem is the exhaust gas temperature sensor is not working. That little problem is still being worked on. The plane will also be put through the 300-hour check-out before the maintenance team signs off the plane ready to fly.

There are several people to whom we owe a big thanks. The first is Dale Beede for his introduction of the Hall family to our RMW. k

We have two local events, here at GJ airport, where we will have our plane on display and be able to sell rides and merchandise. The first on Saturday, May 22. Colorado Mesa University flight school will hold their inaugural spot

landing contest. Our TBM will be on display for the audience. The second will be June 21-28. The Arizona wing will bring their B-17 & B-25 here for display and selling rides. We have been invited to have our TBM on display with them. We're going to need help at these two shows. Contact Bob Thompson if you can help.

Let's:

Keep 'em Flying



“TB” & “Jay”



TB and Jay are the creation of RMW member Ernie Stech

TB groaned.

“What’s the matter TB?” asked his little friend Jay.

“I’m frustrated again.”

“What is it this time?” Jay answered with a bit of sarcasm in his voice.

“Well, I’m getting really tired

of standing here in this hangar with my wings folded all the time. The only time I get to spread them is when we’re outside. I need a bigger hangar!” TB was almost defiant.

“But TB, when you were on an aircraft carrier, you had your wings folded a lot.”

“Not really. When we got ready to fly, we rode the elevator up to the flight deck. Then I got my wings unfolded.”

“You got up on deck and then went flying, right?”

“Yep. Then, after we landed, I would fold my wings and ride the elevator down to the hangar deck.”

“So, you did have your wings folded a lot of the time?”

“Not really. We flew every other day or so. There was a lot of the time my wings were spread.”

“I can see that living here could be frustrating.”

“See, not only do I have to sit here with folded wings, but my ground crew come and work around me. Every once

in a while, they will stand up and stretch their arms. But I can’t do that,” came the plaintive statement from the big torpedo bomber.

“Sorry about that, big buddy. Not much we can do, right?”

“Guess not.”

Ed. Note: This is the last of the “TB & Jay” series by member Col Ernie Stech. It’s been fun over the past years following Ernie’s two characters through their time with the Rocky Mountain Wing. Maybe we’ll be fortunate to TB & Jay come our way again. It’s fitting that this last episode highlights TB’s long desire to have a new, bigger, more fitting hangar for himself and maybe another hangar mate or two.



MAINTENANCE REPORT

Our maintenance operation, that continuously works “Behind the Museum,” is highlighted this month on the “Front Page” - where they should be honored every month!



WWII QUIZ

ANSWERS ON PAGE 5

The War on Land

Identify the medical equipment that was taken everywhere Hitler went.

The Air War

What was necessary to become a member of the Goldfish Club?

Thanks to author Timothy B. Bensford

Thanks to a heads up reaction by Valiant Air Command’s TBM pilot at the April 17th Cocoa Beach, Florida Air Show, what could have been a real blow to the WWII Warbird Community and irreplaceable family of aircraft was averted. The ditching of the Valiant TBM due to engine problems may not result in the total loss of one of the few remaining TBMs. The damage, considering the circumstances, seems to be as minimal as possible.

Whether the aircraft is again restorable to flying condition remains to be seen.

NEXT STAFF MEETING
4/10/2021
RMWCAF HANGAR
SUPPORT YOUR CAF WING.



Mar 13th Staff Meeting Bullets

Compiled monthly from RMW Staff Meeting Notes.

Engine ran first time on April 1st - ran again April 7th. Ran very well!
Ground school next Saturday April 17th at 10:00 a.m. \$10 fee per person.
Open House on Saturday, April 24th.

Rocky Mountain Metro August 23-29th and Colorado Springs September 1-6th would need lots of ground support from CAF RMW Members, but could be a good revenue event.

Final Paperwork is done for the sale of the Queen Air. Bemidji Corporation is ready to write the check!

TBM Maintenance Notes: [
✓Biggest problem with the engine is the manifold pressure. Working on getting that straightened out.

Ian Wayman is going to be a pilot of the TBM. From Colorado Springs. Pilot for Frontier Airlines. He would be the 5th Pilot available.

✓Working on other minor tweaks.
✓300 hour and RTS Inspections in Process.

First Show is the Gathering of Avengers in Peru Illinois, May 15-16. Questionable we can make this show due to a variety of factors. 50/50 chance right now.

✓Emergency wheel drop inspection will be done soon as well.

Dale presented that he would like to set up a New Hangar Fund for a 20,000 square foot Museum building. Dale may talk to Carol Clark to help us market a capital campaign to support this idea.

WWII QUIZ (SEE PAGE 4)
ANSWERS

The War on Land
A complete set of dental tools and supplies. He had taken poor care of his teeth in his younger days.

The Air War
An Allied airman who was picked out of the sea after being shot down qualified.

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Names in ALL CAPS are voting members

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Colorado Mesa University is sponsoring a Spot Landing Contest - Saturday May 22nd. CMU would like the TBM on Display. Possible to open the Museum, sell rides and hats/shirts.

The CAF 66-1 course and test needs to be done if you will be involved in maintenance on the TBM or Cub. Anyone who helps at an airshow should take the course and test. Online Course and test is available at cafoptions.org.

Keep 'em Flying



Carrier Aviation Meets the Leviathan, Part One (b)

By Jim Sawruk, Anthony Tully and Sander Kingsepp

Ed. Note: The second part of this article. The remaining parts will appear in future issues of the Propwash Gazette. This article is reprinted with permission from "The Hook", the Newsletter of the Tailhook Association, an independent, fraternal, nonprofit organization internationally recognized as the premier supporter of the aircraft carrier and other sea-based aviation.

VB-82 and VB-17 went in quickly while VT-17 deployed to attack from the east. Leading VT-17, LCDR W.M. Romberger directed the change in depth settings of torpedoes from 10 to 20 feet to attack *Yamato*. This was a difficult procedure requiring the radioman or gunner to climb down into the TBM's tunnel to adjust the weapon. Only eight of the fish received the deeper setting. Romberger led these eight against *Yamato*, while the other five attacked the screening ships. *Yamato's* radar tracked the approaching aircraft. The ship conformed her torpedo evasions as much as possible to the direction of the wind by heading into it in the belief that wind pushing on the broad quarter would help accelerate a turning movement. During the action that followed *Yamato* was observed to make S-turn evasions that were generally south-westerly or starboard turns.

As VT-17 bore in on *Yamato* from the east, she turned hard starboard to a southerly course, then began evasive action. At the same time, dive bombers from *Bennington* plunged from the north and astern while others from *Hornet* swept over from starboard to port. The groups intersected so closely that VB-82's flight lead said *Hornet's* planes cut at right angles in front of the last SB2C *Helldiver* in his group.

The first damage to *Yamato* came at 1241 from two 500-lb. general-purpose bombs from *Bennington* SB2Cs, which hit and destroyed the important radar room shack at the mainmast, killing all within. Barely a minute or so later, two 1,000-lb. bombs from *Hornet Helldivers* struck just a bit aft of this, blasting a 6-in. turret and leaving it a gutted ruin and starting a stubborn fire in a storeroom above the armored deck. Though these bomb hits caused considerable havoc among personnel, they did not endanger the ship in any way.

Meanwhile *Hornet's* eight *Avengers* came gunning for *Yamato's* port side. Almost immediately one of them took a flak hit and went down. Another found itself out of position and broke off to attack the screen. The remaining six dropped their torpedoes. *Yamato* responded with a sharp high-speed series of S-turns, but managed to avoid the bulk of them.

The first torpedo hit on *Yamato* came at 1245 with an impact in the prow area at frame 10 that apparently blew a hole through the narrow hull, but caused no appreciable damage. Japanese reports conflict whether two more torpedoes struck

home near this first one. *Yamato's* wreck shows port side damage at frames 10, 42 and 52, and the simple probability is that *Yamato* Executive Officer CAPT Nomura Jiro's assessment that there were three hits that did not cause considerable damage was correct. Furthermore, destroyers reported three torpedo hits on *Yamato* at this time, indicating *Hornet's* VT-17 scored between one and three.

While *Yamato* endured her first impacts in this battle, VT-82 attacked the screen. A torpedo hit in the starboard beam completely immobilized *Yahagi* at 1246 and another in the port quarter smashed her rudder and propellers.

Moments later, a direct bomb hit from a VMF-112

Corsair off *Bennington* put the No. 1 turret out of action. Except for the stern damage, she appeared otherwise intact, and her AA battery remained operational.

At nearly the same time, disaster overtook the veteran destroyer *Hamakaze*. Steaming off *Yamato's* port beam, two bombs from VB-17 exploded in crew spaces and severed the fantail aft of No. 2 turret. *Hamakaze* veered out of control and spun out of formation, only to be hit squarely amidships by a torpedo from a *Hornet* TBM flown by LTJG Robert L. Mini, who opted to attack the destroyer instead of *Yamato* when he found himself out of position. *Hamakaze* exploded, snapped in two between the stacks. The stern sank at once, and the bow half rolled over to port and stood up to the sky before plunging below at 1248.

As USS *Belleau Wood* (CVL 24) planes made brazen attacks on *Yahagi* and *Yamato*, the battleship's gunners shot down a VT-30 TBM flown by LTJG William E. Delaney.

Delaney and his two crewmen bailed out before their *Avenger* hit the water, and Delaney ended up floating near the crippled *Yahagi*. In the hours that followed, Delaney would become for the *Yamato* strike, a survivor with a ringside seat to events.

Meanwhile, *Asashimo* had nearly rejoined the *Yamato* formation, and at that time was not far west of *Hamakaze*. Whether her port engine was partially operable is unknown, but she opened fire on the aircraft of TG 58.3 waiting their turn overhead. Believing *Asashimo* to be either a picket or cruiser, VB-84 from *Bunker Hill* pounced on her around 1245-1250. They stopped *Asashimo* dead in the water with three direct hits along the starboard rail amidships aft, which would have and apparently did put the one definite good engine out of action.

Moments later VF-82 Commanding Officer LCDR. E.W. Hessel attacked *Asashimo*, his bomb landing close alongside, but failing to explode. The end soon came. USS *San Jacinto's* (CVL 30) entire Air Group 45 had been assigned by Utter to attack the "picket," not knowing that VB-84 had already done so. *San Jacinto's* planes found *Asashimo* looking deceptively intact on even keel and trim, but moving slowly. Two torpedoes hit the starboard side, one amidships and one under the bridge. She broke up, upended and sank by 1310.

What happens next?? This detailed coverage of the naval battle at the end of World War II will continue in subsequent issues of the Propwash Gazette. Many thanks to the Tailhook Association and its newsletter "The Hook" for granting the RMW permission to reprint this article covering the last use of the TBM *Avenger* to torpedo attack enemy targets.

CVG-17, its aircraft pictured spotted on board USS Hornet (CV 12), were among the waves of carrier-based aircraft sent to attack Yamato.



Behind The Museum? (cont. from Page 1)

The carburetor will be placed on posts through the mounting flanges on the bottom. A curved washer and a nut will be placed on the posts to hold the carburetor in place

The Carburetor is in place and the nuts are being tightened. Byron is working on the close side and Dick is working on the far side. The nuts closest to the engine are a bear to get to, even with the special



wrenches designed for this! Shortly after it was installed, we mounted a cardboard cover on the air intake to prevent anything accidentally falling into the carburetor. Dick moves onto the propellor pitch control cable which goes through the left side firewall.

The exhaust manifold breaks down into four pieces plus seven extension



pipes to reach the front cylinders. The front pipes are installed loosely first. Then the upper manifold is pushed into place and again loosely bolted in place. The lower manifold is then put in place and, finally, the upper and lower pieces are pushed together. The last part is to go back and properly torque each of the nuts holding the exhaust manifold onto the engine. In this picture you can also



see the actuator rods for right side cowl flaps.

The next step [shown top right above] is to install the firewall between the hot engine parts and the accessory bay. The cowl flap actuator rods come through the firewall getting ready to connect with the cowl flaps. On the back side of the firewall is the generator, oil pump, fuel pump, hydraulic pump, vacuum pump, oil filters and oil tank. The opening on the firewall is where the air intake will come to the carburetor from the nose of the plane

As shown center right, from the backside of the firewall, you can see the air intake sitting on top of the carburetor getting ready to be bolted into place .

The air intake [shown lower right] is now installed and the area below the intake is filled with a flat piece of aluminum to complete the sealing of the engine from the accessory area. There is another piece of rectangular pipe which goes from the front cowling to inside the flanged area of the air intake.



And now we come to the propeller installation

(Continued on Page 8)

Behind The Museum?
(cont. from Page 7)

The propeller returned from Westpac and the Rocky Mountain Wing soon got to work re-installing the massive 13 foot 1 inch diameter unit.



The propeller suspended on an overhead winch is moved into position in front of the drive shaft. The splines on the drive shaft will be aligned with teeth in the center of the propeller hub.



Dick and Byron are aligning the hub splines with the shaft teeth.

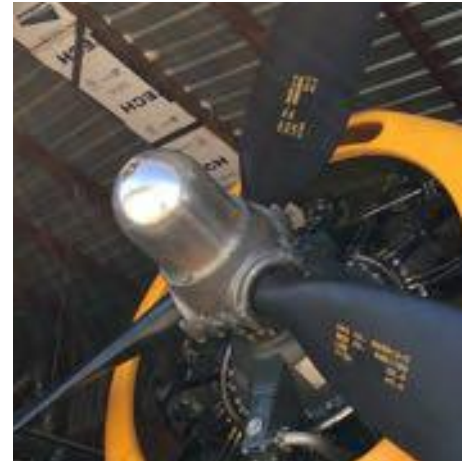
Once aligned they pushed the propeller. The propeller is now properly sitting on the shaft.



The next part is the dome. Inside the dome are gears which will mesh with the individual propeller gears which can be seen in the hub. These gears control the pitch of the propellers. They are driven by high pressure oil inside the dome.



The propeller is finally installed. At the bottom of the dome, you can see a small tab that appears to be coming out of the hub. There is also one at about the 90 degree which is harder to see. These are two of four tabs which lock into that special wrench used to tighten the lock nut holding the dome in place.



And that's all for now from the Rocky Mountain Wing... We thank them greatly, especially Fred Suevel and Kevin McNulty, for sending us these fascinating, detailed images describing just a small aspect of the hard work which goes into maintaining one of these precious vintage aircraft. We hope you've enjoyed seeing a little of what it takes to

"keep 'em flying!"

Ed. Note: this link which appears at the beginning of this reprint:

[Back in February](#)

will take you to the Warbird Digest's website and the first installment of TBM "309's" engine removal and repair as necessary. The Warbird Digest also has earlier articles about what has become quite an overall restoration of "309" since the mishap a few years ago. It's quite a story - something that our "wrench wranglers" should be very, very proud.

Our organization has been shouldering quite a load over these past few years all exacerbated big time by the Covid Pa (nic)demic and all the show and appearance cancelations.

But survive we have, and so we will...

"keep 'em flying!"