



EDUCATE

INSPIRE

HONOR

“WHEN IT RAINS...”

It's an old saying, "When it rains, it pours." Of course, the subtle meaning is that sometimes more of something isn't necessarily a good thing – when it may be quite the opposite. But, in our case, maybe we should be saying, "When it rains, it pours, hails, floods, etc.

Our wrench wrangling maintenance crew is certainly feeling that way. Our recently returned engine seems to want to manifest one minor issue after another and another and.... It seems Cols Dick Maddock and Byron Huffman and wrench wrangling aids have been chasing one little "309" problem after another - some engine related, some others, i.e., the landing gear not retracting during a recent test flight.

That particular issue was quickly resolved when it was discovered that one of the cockpit controls associated with the hydraulic system was

not seated properly, which prevented the gear retraction from operating. Fortunately, that problem was a long-repressed memory for Col Bob Thompson that assuredly has more flying time in "309's" cockpit than any of our other pilots.

After jacking the airplane off the ground, and a fair amount of head-scratching by many troubleshooters, Bob hopped in the cockpit and pushed the Emergency Gear Retraction level in about 1/4-inch, and voila! 100% normal gear.

Unfortunately, a couple of remaining issues (one discovered during an engine run-up and another lingering one) are going to take significantly more wrench wrangler time to inspect and resolve. As a result, and to maintain the high level of safety we mandate in our organization, TBM "309" will be out of service while our wrench wranglers complete detailed inspections and maintenance.

Our maintenance team certainly understands the sometimes not so

subtle "When it rains, it pours." So be patient. Let our maintenance crew, Wing staff, and others work diligently to keep our wing functioning and complete the work necessary to get "309" back in the air ready to perform our mission as reliably and safely as possible.

We seem to have a fleet-wide infestation of Gremlins. The rest of our fleet (the J-3 Cub) suffered low compression on cylinder #3 due to a cracked intake valve. Following repair/reconditioning of the chrome cylinder, we had a relapse of spark plug oil-fouling. Looks like we will be back to break-in flights over the airport to seat the new piston rings in this cylinder for another 10 hours or so.

Attend the Wing's monthly staff meetings to get up-to-date reports and information regarding aircraft status, Wing functions, Air Show, and other venue activities.

See Wing Leader's Report and box in lower right hand corner of page 3.

The next Staff Meeting will be held at the Museum on September 11, starting at 10 AM.



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

Several "No-Go" entries this month. As Col Thompson reported a combination of no pilots, logistical issues and the expense involved for both Aircraft and support crew. Don't you just love Covid?

TB=Thunderbirds
BA=Blue Angles

RMW AIR SHOW SCHEDULE - 2021

MONTH	DAYS	LOCATION	SHOW	TBM	CUB	STATUS
Aug	23 - 29	Broomfield, CO	CAF B-29 & Others			NO-GO
Sep	1 - 6	Colorado Springs, CO	CAF B-29 & Others			NO-GO
	11 - 12	Cheyenne, WY	Wild West Airshow			NO-GO
	18 - 19	Montrose, CO	Tribute to Aviation			SCHEDULED
Oct	16 - 17	Loveland, CO	No. Colorado Airshow			NO-GO
Nov	6 - 7	Davis Monthan AFB, AZ	Thunder & Lightning TB			TENTATIVE
	13 - 14	Lake Havasu City, AZ	Airfest			TENTATIVE

A Family Thing

During the recent visit by the Arizona Wing's B-25, Maid in the Shade, to our airport, one of the engines failed. Our Wing provided all the assistance we could muster to help our fellow CAF flight and ground crews face their problem.

It's not as though we haven't faced similar issues (Duh) over the past few years.

First diagnosis indicated that their R2600 (the B-25s and the TBMs shared the same engines) was that Maid in the Shade's engine probably suffered the same failure as recently hit "309's" engine - that requires a complete engine tear-down to repair.

Fortunately the Arizona Wing had a spare engine at their facility in Arizona which they transported to GJT for an engine replacement.

During the down time, Maid in the Shade's flight and tour ground crew were hosted at our Cub hangar, Maintenance shop and Museum. After all the weeks and months our "309" was hosted by the Arizona wing during the rebuild, all our crew was ready, willing and able to help our family friends.

The replacement engine arrived, was swapped out for the ailing engine and test flown while our RMW monthly staff meeting was underway on Saturday, July 10th. All checked out well and Maid in the Shade was able to rejoin it's tour schedule.

Subsequently, our Wing received the letter shown here from Airbase Arizona.

We have a great family.

Keep 'em Flying



14 July 2021

From: Airbase Arizona Airbase Leader
To: CAF Rocky Mountain Wing
780 Heritage Way
Grand Junction, CO 81506
Attn: Fred Suevel / Dick Maddock

Subj: Letter of Appreciation to the CAF Rocky Mountain Wing

Airbase Arizona would like to thank the Rocky Mountain Wing for their outstanding support during both our summer tour visit and B-25 engine change.

Fred, thanks to you and the Rocky Mountain Wing for providing great hospitality and support over the past several weeks. Major maintenance efforts on the road are never easy and your folks were great in providing whatever support we requested.

Dick, thanks for the maintenance support during our B-25 engine change. Your direct involvement ensured that we could complete the required maintenance in a timely manner.

Again, thanks for all the great support from the Rocky Mountain Wing

Respectfully,

Travis Major
Airbase Arizona
Airbase Leader

2017 N Greenfield





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Keep 'em Flying

WING LEADER'S REPORT

By Fred Suevel
RMW Wing Leader

Where do we begin . . . or probably a better question is when will it ever end? A couple of days after Barry took the plane through its paces while flying over the airport for about an hour, Dick opened the hanger doors to let the sunlight on the plane. What he discovered on the left side of the plane both shocked and angered him. One of the problems we'd had before the "IRAN", done last winter, was excessive oil coming out of the breather tube and coming out of the two exhaust manifolds. Based on visual reports on other TBMs, they don't have this problem. Dick and Byron did a pressure leak down test on the #4 cylinder and found that it was not only a little low, but we could clearly hear air escaping up



the exhaust valve's stem. A decision was quickly reached that the cylinder needed to come off and be replaced with one we have in stock. One step in removing that cylinder was to also remove the full right side exhaust manifold. Once it was off, Dick looked inside of the exhaust port on the cylinder and could, with his flashlight, see oil sliding down the valve stem onto the exhaust port and onto the floor. The valve guide was not tight enough. After the

cylinder was off of the crankcase, the valve was removed, and the valve guide was found to be far out of tolerance.

A quick look at the other exhaust ports on the other right side cylinders revealed several other cylinders were also leaking oil down the valve stems.

Needless to say, we still have a big problem, and the TBM will probably not go to any shows the rest of this year.

On the plus side, Kent feels that we may have finally solved the engine problem on the Piper Cub and once it's finished with the break-in flights, it will be brought back to Grand Junction, and we should have a working plane back.

Kent & Tom have met with a new group, Western

Slope Falcon Aero Lab. This group of home-school students and parents are excited to come to the museum to be introduced to the growth of aviation due to the wars. They have planned to come to the museum to hear stories about planes and those who've flown in them. If you have an interesting flying story, maybe you should talk with Tom and see if he can fit you into tof their heir afternoon at the museum.

RMWCAF may be hosting the first RMW Museum Western Slope Aerolab class on Thursday afternoon, September 9th. If so, stand by for a call from your staff to help support this effort.

PHOTO OF THE MONTH



This LEGO TBM doesn't need vortex generators. The airflow over the wings isn't in much danger of losing lift due to laminar flow. In fact, creating lift may be an issue. Anyway, the creation of this model is pretty impressive. The real thing is more fun. However, right now, Colonels Maddock, Huffman, and crew would probably rather work on this TBM, than "309."

TORPEDO BOMBING

How Did This Get Started?

By Col Tom Howe
 RMW Newsletter Editor
 & Education Officer

“...the word ‘torpedo’ was first used by David Bushnell, an American in the Eighteenth Century. The word ‘Torpedo’ is from a family of fish - the *Torpedinidae*,....”[1] The first “torpedo” weapon was carried to and then attached to the hull of the target. Several attempts to design a method to put an explosive charge against a vessel’s hull to sink the vessel came about. The first cylindrical device to self-propel a charge through the water to the target vessel

arrived early as 1870. The 18 inch Lay Weapon (J.L. Lay, a US Naval Officer) was one of the early versions.

“The Lay torpedo (pictured



above), was powered by a gas engine driven by compressed carbon dioxide, and steered by impulses transmitted down a wire, operating electromagnetic relays on the rudder. Unreliable majority of the time, two Lay torpedoes were sold to the Peruvian Government in the war with Chile. A Lay’ was fired from the *Huascar*

(Peruvian Ironclad ship) at a Chilean ship - half-way there the Lay’ turned about and came back to the mother ship at 15 knots - despite frantic efforts of the operator. The ship was saved by an officer swimming out to the torpedo and deflecting it! The captain took the two weapons to the local graveyard to be buried, only for the Chilean rebels to rescue them!”[2]

Torpedoing was off to a rough start, even way before “bombing” had been thought about. But as torpedo’s were

have been the initial impetus to think about having an aircraft designed *specifically* to drop torpedoes. That luxury was still a few years off because aircraft of the day had to serve multiple roles.

In 1915 the British Naval Air Service took its first delivery of the Short type 184, “...often called the Short 225 after the power rating of the engine first fitted, was a British two-seat reconnaissance, bombing and torpedo carrying folding-wing seaplane.... Torpedo-dropping trials had been undertaken using a 160 hp (120 kW) Gnome powered Short Admiralty Type



166 but this had proved insufficiently powerful, and so in September 1914 a new specification was formulated for an

improved, the airplane arrived at the turn of the 20th Century, when “Britannia Ruled The Waves” - so the British interest in delivering a torpedo by aircraft was understandable.

aircraft to be powered by the 225 hp (168 kW) Sunbeam Mohawk engine currently being developed.” [4] Short delivered, in total, 936 of these versatile aircraft.

According to author Barnes, *Shorts Aircraft since 1900*, The first torpedo drop from an aircraft in the world was by the Italian Captain Guidoni from a Farman in 1911. There’s arguments that one day earlier a drop was made by British test pilot Gordon Bell. In 1913 “The RNAS [Royal Naval Air Service] took delivery of the Sopwith Special floatplane which was specifically designed to drop a 14 inch torpedo in early July 1914, but it proved unable to take-off while carrying the planned weapon (or initially at all.)”[3] That might

The Short 184 is documented as the first “Torpedo Bomber” to sink a ship.

The US Navy had its first thoughts of an aircraft with the capability of dropping torpedoes in 1915 when it took first delivery of the Curtiss Model R. The Model R-3 version was a “...floatplane [that] had extended-span, three-bay wings, and was intended for use as a torpedo bomber.” [5] Only two R-3s were built.

In 1916 the RNAS took delivery of the prototype Short 320.

(Continued on Page 6)



MAINTENANCE

Come to the next staff meeting and get a maintenance update in real time - from real Rocky Mountain Wing Wrench Wranglers - in real time!! It’s a real deal!



WWII QUIZ

ANSWERS ON PAGE 5

Naval Operations and Sea Battles

Identify the first German ship sunk in the war.

Messages and Quotations

Who said, “Fighter planes win battles, but photo reconnaissance wins wars”?

Thanks to author Timothy B. Bensford

NEXT STAFF MEETING
9/11/2021
RMWCAF HANGAR
SUPPORT YOUR CAF WING.



Aug. 14th Staff Meeting Bullets

Compiled monthly from RMW Staff Meeting Notes.

Wing Leaders Comments:
TBM flew for about an hour on 7/31.

Movie crew filmed with the TBM for over a period of two full days! (8/2) The name of the Movie is called the Dead Zone.

available to give rides. We had 11 rides booked. We had to cancel because of too many logistical problems and expenses as well.

The Montrose show is still a go. although we may only show up with the PX tent.

Executive Officer: The cub #1 cylinder is back from the rebuilders. Kent and Charlie are in the process of putting it back together and may fly it by Monday, August 16th. There are 3 or 4 people who want to be checked out as cub pilots. Bob wanted to know if we will be able to bring the Cub to Glenwood Springs.

Old Business:

- Spot Landing contest Sunday October 3rd. TBM will be on display and PX for T-shirts and Hats. Mostly for publicity.
- RMW will once again host the "Men in Heels" race on our ramp this fall.

Operations Officer: our participation the Rocky MT Metro and Colo Springs Air Power Tour is cancelled because of logistical problems in that we don't have pilots

New Business:

Possible "Rise Above" type partnership with local home-school group. This effort is an expansion of the Falcon Aerolab, a Colorado Springs non-profit that provides aviation industry familiarization training for middle/high school students. A meeting is scheduled with the local group on Monday, 8/16.

Maintenance Officer Col Dick Maddock and crew are going to begin a thorough engine examination and possibly replace a suspected bad cylinder. They will be documenting their findings and will report to Col Jim Lasche at CAF HQ.

A plan to move ahead with whatever work is necessary to insure the engine is in proper operating condition (no seeps, leaks, or unknowns) will then be initiated.

WWII QUIZ (SEE PAGE 4)
ANSWERS

Naval Operations and Sea Battles

A submarine, U-39, sunk in the Gulf of Siam on December 10, 1939.

Messages and Quotations

U.S. General Hap Arnold.

Rocky Mountain Wing Staff Officers		
Names in ALL CAPS are voting members		
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TBM Aircraft Coordinator	Bob Thompson	
Cub Aircraft Coordinator	Charlie Huff	
Facilities Manager	Kay Johnson	
Recruiting Officer	Open	
Grants Officer	Tom Dennis	

4/26/2021

Keep 'em Flying



TORPEDO BOMBING

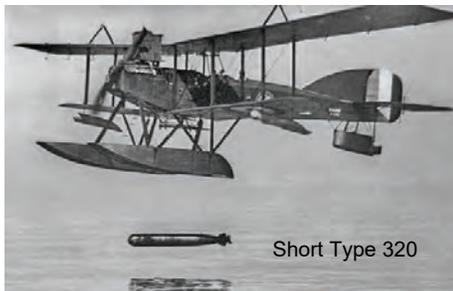
How Did This Get Started? (continued)



Curtiss Model R

(Continued from Page 2)

“The Short Type 320 was designed to meet an official requirement for a seaplane to carry a Mark IX torpedo. It was larger than the earlier Short 184 and was a typical Short folder design of the time, with two-bay uneven span wings. Two prototypes were built, powered by a 310 hp Sunbeam Cossack engine, and initially known as the **Short 310 Type A** from the engine fitted to the prototypes.



Short Type 320

When the torpedo bomber went into production, it was powered by a 320 hp (238 kW) Cossack engine which was the origin of the name, *Type 320*.[6] “The first order placed with Shorts was for 30 aircraft, followed by orders for a further 24 and 20 aircraft, together with orders for a further 30 and 20 placed at Sunbeam. Together with the three prototypes, this gave a total production of 127 Short Type 320s”[7]

Also, in late 1916, “...Commodore Murray Sueter, the [RNAS] Air Department’s Superintendent of Aircraft Construction, solicited Sopwith for a single-seat aircraft capable of carrying a 1,000 lb torpedo and sufficient fuel to provide an endurance of four hours. The resulting air-

craft, designated T.1 by Sopwith, was a large, three-bay biplane. Because the T.1 was designed to operate from carrier decks, its wings were hinged to fold backwards. The T.1 could take off from a carrier deck in four seconds, but it was not capable of making a carrier landing and no arresting gear was fitted....” After redesigning

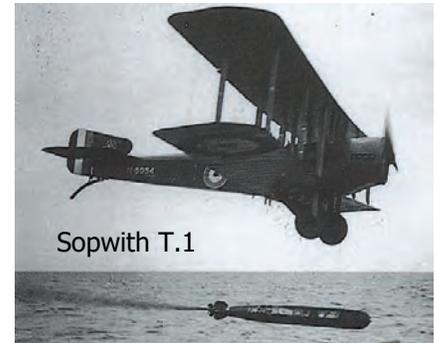
the undercarriage [duh] and resolving other design issues, the RNAS ordered 300 T.1s. Only 90 had been delivered by the end of WWI. Production continued, and a total of 232 aircraft built by three different manufacturers had been delivered at the end of production in 1919.

France joined the effort to develop a torpedo-carrying aircraft in 1916 when it ordered 91 Borel-Odier Bo-T (also known as the Borel-Odier torpedo floatplane or B.O.2.) Deliveries didn’t start until 1917, and by the time the WWI Armistice was signed, not all were delivered.



Borel-Odier Bo-T

Germany seriously entered into the torpedo bomber race with no less than five different aircraft in the role (One Albatros W.3, Five Albatros W.5, One Friedrichshaver FF.35, Twelve Gotha WD.11, and finally Sixty-nine Gotha WD.14.) As seemed to be the normal of the day, the 69 WD.14s “were found to be ineffective in their intended role of torpedo bomber since their low speed made them extremely vulnerable to defensive fire. Many were subsequently converted into mine layers, and some were even used as transports, landing machine gun detachments during Operation Albion in October 1917.”[8]



Sopwith T.1

WWI certainly provided a Petrie dish for the development of “torpedo bomber” like aircraft but none of the total of nearly 2000 aircraft built as prototypes, development trials, or production units of 21 different types of aircraft used or planned to be used as “Torpedo Bombers” really adapted to the task.



Gotha WD.14

We’ll visit the 1920’s and early WWII Torpedo Bomber development in next month’s Propwash Gazette.

- [1] http://www.hansonclan.co.uk/Royal%20Navy/tor_his.htm
- [2] [2] ibid
- [3] Mason, Francis K. *The British Bomber since 1914*. London:Putnam, 1994.
- [4] <https://www.bing.com/search?form=MOZSBR&pc=MOZI&q=Short+Admiralty+Type+184>
- [5] https://en.wikipedia.org/wiki/Curtiss_Model_R
- [6] Bruce *Flight* 28 December 1956, p. 1002
- [7] Barnes, C.H. (1967). *Shorts Aircraft since 1900*. London
- [8] https://en.wikipedia.org/wiki/Gotha_WD.14