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Cover Comment: *Perhaps it's fitting to start the first RT of our 60th year with a subject that's even older than IPMS Canada. John Lumley did his usual fine job on creating a 1:48 CAF CC-129 Dakota from the Monogram kit. See page 9 for the build article.*

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Editorial

Steve Sauvé, C#0323 RT@ipmscanada.com

Since our last episode...

We've had several departures and staff changes since the last RT. Kim Elliott departed from his MWOP slot, Mark Heyendal retired as our Secretary/Consigliere, Kerry Traynor handed over the CML reins to Alan Luciuk (IPMS Saskatoon), Tim Utton (IPMS Ottawa) is taking on Industry Liaison, and Frank Donati (IPMS London) stepped into the big shoes and took on the National Director (ND) role from the semi-retiring Bob Migliardi. I want to express my gratitude to the outgoing members and good friends who have given a lot of time and energy into helping to keep IPMS Canada running over the years of their tenures.

I'd also like to welcome the new guys that are coming in to help out. It's been gratifying to see a few people answering the call to help out at the national level, and I wish them the very best in their new roles. I look forward to working with all of them.

New guy on the R-Team

I'd also like to welcome Alin Charriere (IPMS Ottawa) to the editorial staff of RT, which effectively doubles the size of the team. Alin also answered the recent call in RT for volunteers to help with filling vacant positions on the executive. He is helping with editing and preparing of articles submitted prior to them being finalized for layout by me. He's getting straight A's at the rigorous RT Training Academy (which is, effectively, paying attention to guidance like, "*Here's how I do it*" and "*Oh geez, don't do that!*") So if you're submitting articles for RT you'll be seeing Alin's work and interacting with him in our Google Docs environment.

ND Departure

At our January National Executive committee Zoom meeting Bob Migliardi handed over the keys to the ND's office to Frank Donati. No coup, no fanfare, just an announcement, collective expressions of thanks, and then we carried on with the rest of the meeting. Typical of IPMS Canada's casual executive style.

My first real recollection of meeting Bob was as an IPMS Ottawa member in, I believe, early 1972. Somehow I had won a special award in a large-ish model contest and Bob presented me with a book on the Australian Air Force (I still have it in my library). A very cool moment for a young modeller.

In doing research related to our 60th anniversary I further reflected on Bob's IPMS time in IPMS Canada. I believe that his first mention and first article was in the August 1969 issue of RT. After that he became a major contributor of articles, took on being Assistant Editor, then RT Editor, and then became ND in early 1976. He left that role after 16+ years in 1992, but stayed on as an adviser and our decal artist. He once again assumed the ND role in the spring of 2012 and served for almost 12 more years. Bob is staying on as the BT Editor, which has become an important part of your IPMS Canada membership benefits, and will continue to help out with our periodic free decal sheets.

Acting as ND for over 29 of our 60 years, Bob kept the IPMS Canada ship moving for nearly half of the organization's life. We all owe him our thanks for giving so much time, energy and dedication.

P-38 Lightning & DUKW Ferry Test

John Robinson, C#3811
Simcoe Scale Modellers
Midland, ON

Project Inspiration and Background

I had originally come across this photo (**Fig. 1**) in a magazine and was intrigued with the idea of building a diorama of it.

The idea was that if P-38s and other aircraft were going to be shipped into islands in the Pacific theatre of WWII, not all of them would be able to be flown in. Some would have arrived by ship and a suitable means was needed to remove them from the deck of a freighter and get them ashore.

The Test

Two DUKWs were linked together in parallel. They had a steel trough attached to one side of each hull; one had it on the left/port side the other on the right/starboard side. These were to roll the aircraft main wheels onto and then the trough would help hold them in position side-to-side. To space the DUKWs apart three sections of steel tube on (I am assuming) flexible joints were attached to the hulls under the troughs. This arrangement also allowed for placement of a flat plank for the P-38 nosewheel to run on. In the book, *The Complete DUKW* by David Doyle (pages 82 to 91) there are numerous photographs of ferry techniques used to carry trucks, jeeps and other vehicles. The method used for the P-38 tests was known as dry ferry testing and can be seen on pages 169 to 171. In some of these tests when using cranes to load the aircraft the outer wing panels were removed. Unfortunately there are no close up photographs of the attachment points for the tubing to the DUKW's so I felt justified in using some artistic licence. In some photographs it appears that it was a rigid joint and in others the two hulls do not appear to be exactly in line. (*I'm sure there is someone out there in the world that knows the answer to this?*)

A single DUKW's cargo capacity was normally rated at 2.5 tons (5,000 lbs). However, I've read that a P-38D's empty weight was around 12,000 lbs. That empty weight was with the removal of all fluids. (fuel, coolants, oil, etc.) which brought it down closer to the pair of DUKWs' rated combined load limit of 10,000 lbs. Consequently, the testing also necessitated the removal of the guns and ammunition storage from the nose and all ammunition attachment points. It still seems that the P-38 was quite heavy but I cannot find any documentation that states just how they got the weight closer to the DUKWs' load limit. I think we can assume that they were only going to do this on calm weather days. One interesting thing I have read is that the particular P-38D used for these tests, 40-751, was never an operational aircraft and was only ever used for testing purposes.

I was not sure of the details when I found the photos online but with no description I went ahead with the build regardless. There are a few photographs of Lightnings being lifted onto DUKWs with their wings removed outboard of the nacelles, which I believe became the norm.

Thanks to David Doyle's book, *The Complete DUKW*, I now know that this trial took place in Charleston Harbor, South Carolina, in November of 1943. In this particular case I believe it is possibly the first test, which used P-38D 40-751.

I seriously thought of doing this build in a larger scale but unfortunately the differences between a 1:32 P-38 and 1:35 DUKWs were too great. At that time I could not source a 1:48 DUKW nor a P-38D/E so I opted to do it in 1:72 scale. I located two Italeri DUKW kits and a P-38D from RS Models.

P-38 kit

Sorry RS, but that P-38 was not a fun build. There were quite a few issues with parts fit and placement but with perseverance and patience things gradually came together. It was pretty much built straight from the box but with the guns left out. The decals were from a Hobby Boss kit.

DUKW kits



The Italeri DUKWs went together well but, just like their 1/35th scale version, the spare wheel and the rear hatch are on the wrong side, compared to the reference photo at the beginning of this article. First I checked to see if the image was reversed but going by letters and numbers on the aircraft, it wasn't. Now, for those people out there who know a lot more about armour than I do, and that's most people, I have noticed that sometimes the DUKW's spare wheel is on the right and sometimes the left and, consequently, so is the hatch. I did think for a long time that maybe there are two hatches and the spare covered one of them, but some years ago after building a 1:10 scale radio-controlled DUKW I had the opportunity to meet someone who actually owned a real one and he informed me that there is only one hatch and it's either on the left or the right depending on the manufacturer. (which was Yellow Truck and Coach in Pontiac MI, or GMC in St. Louis, MO and Pontiac, MI.)

So as to match the photograph that I was working from, the moulded hatch covers were removed by filing and sanding and new covers made up from sheet styrene. (Fig. 2)

Using 1/8" diameter brass tubing I first tried cutting it in half lengthwise which proved disastrous. I then decided it would be easier to just grind half of it away. Grinding away half of the diameter of most of a 12" length of tube provided me with the two pieces of half-round that I sanded smooth and then glued to the inboard sides of the two vehicles with CA glue.

(Fig. 3)

As I had been assembling the two DUKWs I realized that I was going to have a bit of a problem lining everything up.

Firstly I measured the track of the P-38's main gear, which is the distance between the centres of the main wheels. These wheels would be sitting in the troughs on either side of the two DUKWs. See Fig. 4 - I then drew two lines  that distance apart on a piece of foam board, marked a centre line  and then placed the half-completed DUKWs on the board with the Lightning sitting in the brass troughs.

The first plan seemed a bit sloppy and after some thought I found it easier and more precise to finish off the work on the DUKW's and then take a sheet of .080" styrene the same size of the finished base, marked it out as in Fig. 4 and then placed the DUKWs in position. I placed the P-38 temporarily in its final position just to check alignment and then ran liquid cement between the wheels and the styrene sheet. Now that the DUKWs were firmly attached in their correct final position it was just a matter of gluing the 1/2" foam board pieces around them and then building up the water level (*discussed on next page*) to the correct height.

One nice thing about the Italeri 1:72 DUKW is that the wheel assemblies come in two versions. One fully equipped for traditional scale modelling and a simpler subassembly for those using them for wargaming. I chose the latter as I'd never see them on the final diorama, but I did need them on to get the waterline at the right point in the foam core base. (Fig. 5)

Brass wire was shaped and used to make the framework for the tarpaulin covers over the cargo area. The rear cargo bulkheads were made up from sheet styrene. (Fig. 6)

A special thanks to Thachweave Products (thachweave.tripod.com) for those beautiful fenders. They also supplied enough line that I could use it elsewhere in the diorama.

The tarps over the cargo areas were made from good old facial tissue soaked in white glue and water.

In Fig. 7 the windshield has been assembled, painted and then cut-and-glued in the fully-folded position as they are seen in Fig. 1.

Nowhere could I find any photos or drawings of how the tubes attached across between the two vehicles but I surmised that logically they would have to be able to pivot somewhat to allow for any movement with the water swells. I then realized that in this scale we wouldn't see the attachment points anyway. Using the photo as reference I drilled small holes in the inboard side of the DUKWs to slide in a piece of aluminum tubing just under the half-round brass main wheel trough sections. There are three visible and using the photo as a reference I managed to align them. These would have to be fitted after the models were put into the base. Hmmm! It was at this point I had one of those "why did I do this?!"

moments. I now realized that I was going to have to put everything together, glue it in place and then finish the base water work! (Fig. 8)

It did occur to me once it was all finished that if I had done the water “between” the vehicles and then mounted it to the base all in one piece I could have done the outer section of water later. But who thinks that far ahead? Besides, I like a challenge!

Anyhow, it was too late now. Once the vehicles were painted and weathered they were glued into place in the base. Once in place the three aluminum tubes were slipped into their respective mounting holes and glued with CA glue while test fitting the P-38 at the same time making sure they all fit together. A thin basswood strip was used to make the centre plank for the nose wheel. This was drilled and fine wire put through and around the tubes to clamp it into place. (Fig. 9)

The water was built up in multiple layers (ever so carefully!) using Tri-Art gel medium (other brands such as Liquitex work equally well) and acrylic paints that are available at most any art or craft store.

The first layers are brushed on just to give depth. These can be thinned with water a bit to make it flow easier. I always mix some up and try it on a piece of scrap board just to test it first. Artist’s acrylic paint can be added to colour the gel. Not always blue’s. Alone that is too much. I find I like to mix in greens and browns as well as Payne’s Grey. As we get towards the surface more gel is added in the areas where you want ripples or waves. These you don’t thin as you want the gel to get thicker so it will keep some height. Keep shaping with a brush or small palette knife as it dries, particularly towards where it sets will give more texture and heights to the waves. The crew figures coming out of the spare parts box and are a mix of Airfix and Prieser products. (Fig. 10)

Conclusion

All in all a very satisfying build once it was done. I tend to be one of those that when it comes to dioramas, it’s not about the absolute finest detail but the overall picture and in this particular diorama I was quite pleased that I got pretty close.

About the author:

John Robinson was born in Birkenhead, England and immigrated to Canada in 1969, now residing in Midland, Ont., Modelling since age 8 when he put together an Airfix Gladiator and he hasn’t stopped building since. His main interest is aviation but will build anything - “If there’s a story, build a model of it.” He worked in construction-related fields and managed a concrete supplier in Toronto for 28 years before retiring in 2005. He has volunteered with Special Olympics Ontario for 30 years. He dabbles in RC boats and trucks and has built a flight simulator cockpit for when he doesn’t want to sit at the bench. Camping, canoeing, hiking, reading and photography make up a few other interests.

CC-129 - A Douglas 'Swept Wing Racer'

By John Lumley, C#1000
IPMS Winnipeg, MB

Of all the aircraft that I have flown, the only completed model of one is that of 12937, a 429 Squadron (Sqn) CC-129 Dakota. There is no Chipmunk, no Tutor, no T-Bird, no Hercules, no King Air and no Dash Eight in my collection (yet).

After pilot training, I was posted to the Canadian Forces Flying Training Standards Unit (CFFTSU) in Winnipeg to fly their CC-129s (the unit also had some CT-133 Silver Stars on strength). For those not familiar with the Canadian Forces (CF) aircraft designation system, the CC-129 was a C-47 otherwise known as a Dakota, Skytrain, Gooney Bird, Douglas Swept Wing Racer and other less complimentary names. For most of us, though, it was simply a 'Dak.' Training was simple. We did a couple of weeks of ground school after which we got in the left seat, with an instructor in the right seat, and learned how to fly it. There were no simulators to first hone your (lack of?) skills. After some 14 hours 'stick' time spent in the left seat, plus a lesser amount in the right seat, we were given the appropriate blessing, baptised with a frosty refreshment at the mess, declared to be qualified CC-129 first officers and put to work. Should you wonder why, as a first officer, we were trained for and flew in both the left and right seats, unlike many operators that restrict first officers to the right seat. Simply put, whether pilot (aircraft captain) or co-pilot, our time was split between both seats. The same was true in the other multi-engined aircraft that I flew with the CAF.

In mid 1972, CFFTSU became 429 (Composite) Sqn flying the same aircraft out of the same hangars but with a new unit name. Then in 1975, after plans were announced to retire the CF's CC-129 fleet, 429 Sqn and yours truly converted over to flying the CC-130E Hercules. As it turned out, not all Dakotas were retired and a handful (*ultimately totaling nine aircraft*) continued on with 402 Sqn until the fleet retirement on 31 March, 1989. As I indicated, my Dakota flying ended in July '75 with 2066 hours logged on type, and having flown at least 24 different aircraft during that time.

When compared to current aircraft or even most other aircraft flying back then, the Dak was primitive. The cockpit, navigator's station and radio officer's station were largely unchanged from what they were when the aircraft was built in the early 1940s, albeit we pilots now had a UHF radio, a very limited VHF radio, ADF, TACAN and a transponder. Full main and auxiliary fuel tanks provided eight hours of usable fuel at a cruise speed of 150 knots, with most flights conducted at or below 10,000 feet. Being unpressurized, going higher than that meant donning oxygen masks. This normally only occurred when transiting over the Rockies, but then weight and single-engine service ceiling became a point of concern should an engine possibly fail. Fortunately, in my 2000 plus hours, I never had to shut an engine down in anger.

The Dak was actually very reliable despite its age. Conversely, it lacked creature comforts. It was noisy, controlling the cockpit and cabin temperature was a mysterious art of manipulating six plungers behind the co-pilot. In winter, it was generally cold and when it rained, you got wet. Yes, the cockpit leaked! In fact, if encountering heavy rain, we pilots would cut three holes in the bottom of green garbage bags and slip them over our heads as 'wet weather gear' to help us stay somewhat dry. Despite all that, it was an enjoyable first tour and I learned a lot about flying in what should have been a museum piece.

The 1:48 Monogram C-47 Skytrain model was first produced in 1978 and, while no longer in production, kits are readily available online and in hobby shops that sell previously-owned kits. While not up to the standard of currently produced model kits, it certainly captures the essence of the aircraft perfectly and, as of its last offering, was less expensive than the more recent Trumpeter kit. Make a few detail changes, apply a careful paint job and Leading Edge decals and you can end up with an excellent representation. While I modelled '937, should you wish to model a different airframe, I suggest you pay particular attention to the antenna configuration as they differed from one aircraft to the other. Lastly, as you will find, I used parts from Monogram's DC-3 kit as an expedient.

As noted, I decided to build a model of 12937 (**Fig. 1**), an aircraft that I flew while with CFFTSU/429 Sqn. Why 937? While the aircraft was unique in that it was the only one of the over 20 assigned to our unit to have had its instrument panel upgraded to somewhat modern standards, the choice was simply my goal to build a freighter/ passenger version. 937 was a prime example.

To start the build, I opened up the three small rectangular fuselage windows – one over the navigator's station, one over the radio operator's station and one in the rear over the toilet. (these are indicated again later in **Fig. 11**) Next, I glued the upper wing halves to the fuselage halves, as is my common practice, as this invariably eliminates any wing root unsightly joints and greatly reduces the need for putty and sanding. (**Fig. 2**) Again, my technique worked perfectly (**Fig. 3**). Should you wonder why there is a difference in plastic colour between the fuselage and wings, I screwed up my C-47 wings and stole some replacements from a DC-3 kit.

I then turned my attention to the interior. The rear cargo doors in the aircraft and the kit are actually made up of three parts, the aft door and the forward door which includes an insert which could be removed in-flight for air cargo drops or paratroopers. During my four years flying the C-47, I never saw the aft door opened, other than for maintenance, so it was glued closed on my model. The airdrop/parachutist door insert for the forward door was glued in place and this door assembly was set aside to be later glued in the open position. Regarding the smaller door, located forward of the wing on the port side of the nose, I should also note that in all those years and hours flying the Dak - like the aft cargo door, I've never seen it open either, other than for maintenance. (**Fig. 4**)

Moving on, I first decided to fill in the interior side of the wing root area in order to have a continuous representation of the interior cabin walls. This was done with plastic card, Milliput and Testors putty followed by lots of sanding. (**Fig. 5**)

Next was the cockpit and cabin floor. The various components for the cockpit up to and including the forward cabin bulkhead were assembled.

Next, a rear cabin bulkhead with an open door was made with .030" plastic card followed by a layer of .010" styrene card covering the corrugated floor of the cargo area. (**Fig. 6**)

With the easy part over, I then turned my attention to creating the cabin's troop seats, along with the survival gear and stowage locker located by the rear entrance.

The starting point for creating the CC-129's troop seats was to use just the horizontal portion (i.e., where your butt would rest) of that provided in the kit with the added engraved seat belts. The solid vertical front support is not applicable to our postwar Daks. The troop seats in the CC129 had aluminum support legs and tubular framework, plus a red fabric seat and red web back support for the passengers.

The kit's troop seats have a solid front which locates them directly into slots on the floor. Since I planned on removing the solid front in favour of installing the visible individual seat legs found on the CC-129, and I had resurfaced the cabin floor with plastic card, I now needed a guide to locate the seats on both sides of the cabin. (*I later revised this plan and ended up adding legs only to the starboard seats, which would be the only ones visible through the cargo door.*)

The starboard seat legs were fashioned using Evergreen plastic rod and the web back support for both sets of seats with strips of .010" x .040" Evergreen strip. (**Fig. 7a and 7b**)

Attaching the seats to the floor by drilling support leg holes along the length of the floor seemed overly complex. I therefore decided to simply run a piece of Evergreen square strip along the inside of the fuselage at the required height as a locating ledge/attachment point for the back edge of the seats that fit against the fuselage walls. (**see again Fig. 5 and 6**) After removing the locating tabs I attached the port side troop seats and webbing to the port fuselage half/floor assembly, using the horizontal strip as a guide for the seats. For the starboard seats, I added similarly-positioned shorter strips on the front and rear bulkheads which were aligned with the long horizontal strip on the starboard fuselage and glued the starboard seats to the port fuselage/wing assembly between the bulkheads (**Fig. 8**)

The survival gear cage and contents were made from a variety of bits and pieces and painted the required colours. The stowage box I simply made from Evergreen plastic card stock. (**Fig. 9 10**, plus see the **Dak Door Details** discussion on **page 20**)

Before painting the fuselage interior, I moved ahead to painting the exterior. Why? Well, I dreaded the thought of carefully masking all the side windows before painting so I opted to spray the fuselage exterior first before adding the window clear parts. For that I used Alclad II 102 Duraluminium and Tamiya rattle can white primer. (**Fig. 11**)

Once dry, I glued the side windows in place and roughly masked the interior of the windows. Precision in this latter task was not required as little can be seen once the fuselage is closed up. I should note that the side windows are from the DC-3 kit as they, like those on our CC-129s, don't have the circular ports engraved in the centre of each window. Yes, I could have sanded and polished the feature off those in the C-47 kit but stealing them from the DC-3 kit was considerably easier.

The fuselage interior was painted Testors Model Master Euro Dark Green, FS34092, the floor with Tamiya NATO Black to represent the anti-skid surface, the troop seats in red fabric and silver framing and the instrument panel in black. The truth be told, no additional detail was added to the cockpit, nav station or radio operator's station as little to nothing of those areas can be seen in the completed model. (**Fig. 12**)

Should you wish to add seat belts for those intrepid pilots, add lap belts only as we didn't have shoulder straps in the Dak. Conversely, much can be seen in and around the rear entrance so attention to detail there is of value. (see again **Fig. 9 10**, plus the **Dak Door Details** discussion at end of article)

With the interior done, I now glued the lower wing to the port fuselage/upper wing assembly (**Fig. 11 again**) after which I added the starboard fuselage/upper wing assembly. The top and bottom fuselage seams were puttied and cleaned up and the navigator's astrodome bubble opening was covered over with .010" sheet styrene. (**Fig. 13**)

De-icer boots. The simple way would have been to paint the black rubber boots on the leading edge of the wings and tailplanes but that would have missed a noticeable feature – the metal retaining strip that ran the length of each boot on each side of the flight surface. These I fashioned with Evergreen .040" half-round styrene which I sanded down slightly after the glue had set. (**Fig. 14**)

Carrying on, I also separated the elevators from the horizontal stabilizers which I later glued in their 'relaxed' natural 'down' position as would normally be found when the aircraft was on the ground with the gust locks removed.

Next was to correct the kit's tail cone to the C-47 configuration. The streamlined tail cone provided in the kit is more appropriate for a DC-3 rather than a C-47. True, you will find some Canadian C-47s with the kit's style of tail cone but most didn't have it. The C-47 had a glider towing capability and the attachment point for the cable was there at the tail. Accordingly, the tail is blunt with an opening to access the tow rope release clamp, which in the case of our aircraft was covered with a red triangular fabric patch. In keeping with that detail, I made the appropriate modification to the kit's tail. (**Fig. 15 and 16**)

The various resin fuselage vents and anti-collision lights included with the Leading Edge decals were added to the fuselage. The cockpit windscreen and the horizontal stabilizers were added, as well as the two engine mount portions (parts 10 and 92) of the engine nacelles aft of the firewall. To the latter, I added the two smaller carburetor intakes, parts number 12, provided in the kit.

The kit actually provides three types of intakes, parts 12, 20 and 21. (**Fig. 17**) Of the three offered in the kit, only 12 and 21 are appropriate for the aircraft assigned to the CFFTSU/429 Sqn and later 402 Sqn at the time I was flying them.

So why parts number 12? Most aircraft at CFFTSU/429 Sqn were powered by Pratt and Whitney R-1830-92 single-stage supercharged engines and those aircraft all had the smaller intakes, part number 12. There were, however, a few aircraft that had R-1830-90C two-speed supercharged engines which offered greater performance at altitude and I am almost certain that they all had the extended dust filter intakes as represented by part 21. Unfortunately, I can't state positively such was the case nor can I find documentation confirming this. As for 937, I know it had -92 engines and the smaller intakes as confirmed in photos of the cockpit and exterior. So..... if modelling a different aircraft, and you want accuracy, have a look at the nacelles and carburetor intakes and pick the one that's appropriate for your model. (see discussion on **C-47/CC-129 air intakes** on **page 19**)

And no, I hadn't forgotten the three small rectangular windows that I made earlier (**Fig. 11**). These I filled with Micro Krystal Klear towards the project's end.

Back to painting. With the seam on the fuselage spine and belly cleaned up, I painted the model as follows:

- I completed painting the upper half of the fuselage cabin with Tamiya's White Primer
- The upper surface of the wings, forward nacelles and wheel wells were painted with Alclad II Duraluminium
- The wing root walkways were painted with Tamiya NATO Black with a light grey overspray to represent wear
- The underside was painted with my own mix (don't ask me the formula) for the 501-109 'speed grey' (vaguely similar to FS16473 but with a distinct blue/green tint) (**Fig. 18**) (see discussion on **501-109 colour mix** on the next page of this article)
- the wing tips, horizontal stabs and forward nacelles (in preparation for the nacelle decals) Testors Ford Engine Red,
- All fabric control surfaces (elevators, rudder and ailerons) were sprayed with Alclad II 101 Aluminium
- The de-icer boots were done in Tamiya NATO Black and over sprayed with clear semi-matte
- The nose anti-glare panel was done in Tamiya NATO Black
- The landing gear was painted Alclad II 101 Aluminium with Tamiya NATO Black tires.
- All that was left were the two engines and propellers. The engines were treated with Alclad II Dark Aluminium with Tamiya # 66 Grey on the crankcases. The propellers were semi-gloss black with Alclad II Aluminium hubs.

Regarding the props, I should actually take a step back here. Our Daks had paddle blade props which were not of the DC-3 type provided in the kit. I searched through my spares box and found two, three-bladed propellers with the correct style of blades. (**Fig. 19**)

Unfortunately, they didn't have the correct hubs. The fix wasn't rocket science but simply had me remove the kit blades from their hubs and attach the replacement paddle blades found in my spares box to the hubs with a little reinforcement provided by embedded piano wire. (**Fig. 20**)

(Editor's note: if you happen to have them available as spares, the Monogram B-17 kit contains the correct type of prop and hub (the Hamilton Standard 23E50 hub with blade # 6477) for the C-47/CC-129. Ultracast also sells them (ultracast.ca), as does Aires (aires.cz) in their Quickboost set of aftermarket replacement props for the B-17 which will work for a CC-129)

All the decals used were obtained from Leading Edge's (lemdecal.com) Canadian Armed Forces C-47 #48.2 decal sheet, all of which went on without any fuss or silvering. (**Fig. 21**)

As a final touch, I scratch built the passenger boarding stairs using plastic card, wire and a pair of wheels scavenged from my spares box. I painted it white with black anti-slip step surfaces and added a spare pair of CAF roundels I had to the sides of the handrail walls. (**Figs. 22 and 23**).

Should you not wish to scratch build the stairs, Aircraft in Miniature Limited (aim72.co.uk) offers a choice of DC-3 passenger utility steps, like the one I made, and the C-47's less-genteel portable steps (**see sidebar on Dak Door Details**), which were the type we used on a daily basis when not carrying passengers.

Done! The Monogram C-47 Skytrain is certainly not a complex kit and the build was fairly straightforward with the more challenging aspects being related to the addition of the troop seats and survival gear rather than the kit itself. Yes, I could have rescribed all the raised panel lines but, truth be told, after a coat of paint and the application of the Leading Edge decals, that feature isn't noticeable (to my eyes).

Now that I have one of the aircraft that I flew in my collection, I might now tackle Zvezda's C-130E and see if the late Tony Stachiw's Flight Colour CC-130 decals are still usable. While the Leading Edge CF C-47 decal sheet was not available at the time of writing, it was learned that a reprint including resin detail components is planned for future release. Maybe Airfix will produce a 1:48 Canadian DHC Chipmunk as that too would be a nice addition. Time will tell.

☐ rwwalker.ca/CAF_Dakota_detailed_list.htm

☐ silverhawkauthor.com/post/canadian-warplanes-4-douglas-cc-129-dakota

About the author:

(left) A younger Lt. John Lumley, recently graduated from pilot training and a new candidate at the CFFTSU Dakota OTU. John believes that his first model was an Airfix polybag Gloster Gladiator which he 'sort of' assembled, minus the upper wing, and with no paint. In his youthful, less than critical eyes, it was his Spitfire. That was over 60 years ago in Bonnie Scotland. Since then, he adopted Canada as home, served with the RCAF and CAF for some 41 years, logging almost 9500 hours and never strayed from building models. His subjects of choice are invariably aircraft which usually have a Canadian connection.

C-47/CC-129 Air Intakes

(Editor)

C-47 / CC-129 air intakes

RCAF and CAF Dakotas can be seen with several different styles of carburetor air intake fittings which are discussed below. It should be noted that the two types of dust filter fittings were eventually removed over to the long service life of the Canadian fleet and they don't necessarily correspond the engine type installed on a particular airframe.

The standard air intake

This photo illustrates the smaller carb air intake with no dust filter system attached. By the end of the CAF fleet's life in 1989 all nine of the remaining CC-129's used this type of intake or had it retro-fitted.

This is the type of air intake seen on the late service CC-129s, whether they were powered by -90 or -92 engines. It is known to the author that aircraft previously fitted with the nacelle-mounted dust filter (see below) were converted at CFB Winnipeg to have the filter system removed and the small intake fitted instead.

Cowling-mounted dust filters

This is the older style of dust filter mounted on the C-47A engine cowling. It is fitted directly ahead of the small air intake, but not physically connected to it. It is seen on older postwar RCAF Dakotas, and appears to have been removed from aircraft that remained in longer service after WW II, leaving just the small air intake in place on the nacelle. These dust filters do not appear to have lasted past the 1950's on RCAF Dakotas.

Nacelle-mounted dust filters

This later-production dust filter system is more sophisticated than the cowling-mounted system and allowed the pilot to control the airflow path to either pass through the filter or to be channelled directly to the engine. This system was fitted to C-47B's/Dakota Mk. IV's which comprised many of Canada's postwar CC-129 fleet.

(Now, the problem is that there are photos of RCAF C-47A's with these long intake housings, so it may not be just a 'C-47B's and later' type of fitting.)

It is easily identified by the extended carb air intake sitting atop the engine nacelle.

By the end of the CAF CC-129 fleet life in 1989 this type of extended carb air/dust filter housing had been converted over to the small air intake seen at the top of this page.

Building a Canadian M113 Fitter

Barry Maddin
C#6000
Truro NS

The M113 Fitter is a converted M113A1 Armoured Personnel Carrier fitted with a HIAB hydraulic crane. It was used to lift heavy components, like engines, power packs, etc., while conducting repairs on light armoured and wheeled vehicles in the field.

In 1975, while serving with 1 Service Battalion, Maintenance Company, Forward Repair Group (FRG), I got my dream vehicle. Not a Ferrari or Lamborghini, but an M113A1 Fitter. Now this baby was powered by a 6V53 naturally-aspirated Detroit Diesel engine with a select shift automatic transmission that could reach a blistering 60 km/h on a flat road. She could also bash her way through a copse of small trees or brush and swim rivers. Together we roamed the wilds of the CFB Wainwright, Alberta, training area, seeking out broken-down armoured and wheeled vehicles to facilitate repairs.

Heeding the call from our esteemed editor for builds using older kits I realized I had safely nestled in my stash the Tamiya # 35040 kit of an M113 Armoured Personnel Carrier (APC), along with the Verlinden conversion kit # 506 for an Israeli Defence Force M113 Fitter that would have almost all the parts needed to build a Canadian vehicle. I also had the Academy kit # 13211 of a M113A3 which had extra parts that I could use to correct some of the shortcomings of the Tamiya kit.

The Build

I first selected the items from the Verlinden kit that I would use on the build (**Fig. 1**) and started to remove the casting plugs. The biggest casting plug was on the roof access door assembly where I used a series of rasps to chew through the thick plug, while wearing gloves and an N95 mask to minimize the health hazard from the resin dust particles. When done I washed down my work area then washed all the resin parts to remove any casting residue.

I then started on the basic build of the Tamiya M113 chassis. I left out the power pack, steering differential, and drive shafts as I planned to have the front end of the vehicle closed up. Even for its age the fit of the parts was typical of the high standard one expects from Tamiya.

Interior decorating I shortened the forward portion of the right-side passenger bench seat assembly to allow for a heater hot air hose and hot air floor manifold to be added. I omitted the left side passenger seat assembly, as it's not used in the normal layout of the Fitter vehicle. I then glued the steering levers, driver's and crew commander's seat assemblies in place on the floor. I mounted the battery box, instrument panel and the crane's hydraulic tank with slewing cylinder in place and substituted the kit fuel tank for the correct one from the Academy kit. (**Fig. 2**)

I installed the internal bulkheads and added the heater with a fuel line and a hot air hose going to the scratch-built floor manifold. I needed an IR (Infrared) periscope and fashioned one from a periscope in my spares box. Additionally I fashioned up a RT-524/VRC radio set and shelf and added them to the hull. I used the rear access ramp from the Academy kit, as it was more detailed than the Tamiya kit ramp and installed a bilge pump discharge pipe, made from copper wire, to the rear wall by the battery box. Using #74 and #66 drill bits I drilled out the hydraulic tank and slewing cylinders then added hydraulic lines with a filter using .020" and .030" lead wire. I then added power and antenna cables to the radio, along with a headset which I mounted on the driver's seat post. I also made the two pivot steering master cylinders and lines and attached them to the plate in front of the driver's position (**Fig. 3**).

The interior needed to be painted as I would have the driver's and commander's hatches, plus the door in the rear ramp opened up.

The metal deck and the centre seat assembly was painted with Vallejo 865 Oily Steel. The rest of the M113 interior surfaces were painted with what we called "seafoam green", with AK RC 078 APC Interior Green being a very good match. I painted the rest of the interior with the green and with Vallejo 861 Glossy Black I picked out the seats, driver's seat mount top, steering levers and all the cabling. The heater, radio, storage bin and ramp, including the inside of the ramp cargo door, were painted with Vallejo 975 Military Green.

I noted something was missing and realized that the kit's passenger seats had no pads. The M113 passenger seats were simply concave-shaped metal shelves that used a canvas, horsehair-filled pad to make sitting on them somewhat more tolerable. I fashioned the pads out of folded heavy tissue paper soaked in white glue. Once dry, I painted them with Vallejo 941 Burnt Umber and dry brushed with Panzer Aces 314 Canvas and then glued them in place on the passenger seats.

I dug out a CO₂ fire extinguisher from my spares box, painted it up and added it to the hull by the battery box and then applied all the warning signs, gauge faces and info panels to the interior, using Archer fine transfers (**Fig. 4 & 5**).

The next step was modifying the Tamiya APC roof to fit the Verlinden Fitter roof access door. If I had closed all the hatches I simply would have glued the Verlinden roof to the Tamiya one. However with the hatches open I had to open up the roof and fit the Verlinden access door in place. Opening the Tamiya roof entailed ensuring the correct placement of the Verlinden access door (**Fig. 6**) and carefully marking the outline. The Verlinden Fitter access door had a lip along the outer edge so I only had to make the hole large enough to set the access door into the new opening with the door lip resting on the Tamiya roof. I drilled out the landmarked corners for the roof access door, and with a razor saw I then cut the segment out of the Tamiya roof. I fine tuned the opening with files, being careful not to make it too large. I also removed some superfluous fittings on the Tamiya roof and filled the holes with Squadron Green Putty (**Fig. 7**).

Using five-minute epoxy I glued the Verlinden access door in place, being careful to get it properly aligned with the front hinges on the Tamiya roof. The commander's cupola received the weapons mount from the Academy kit and the hatch received a grab handle and had the sink hole in the centre of the hatch filled. The driver's hatch also had a small sink hole that was filled and a grab handle added. I glued all the photo etch from the Verlinden kit applicable to the Canadian Fitter in place. I added an antenna mount, fire extinguisher handle and guard by the driver's hatch and a spotlight and cable to the right rear of the roof. I drilled five holes for the hydraulic lines and made an engine hood securing bar found on the right side of the commander's cupola. I then detailed the photo-etch crane rest with a bit of .020" rod and two bolt heads. The main thing missing was the turnbuckle used to secure the crane in the folded position. I fashioned one using tow cable ends glued to a length of evergreen strip and made a mount from spare bits and glued the finished turnbuckle in place. Around the inside edge of the driver's hatch of any M113 is a foam pad. When I drove one I would brace my shoulders against the pad, keeping my face above the hatch edge. Why? Well, a number of drivers lost teeth when their M113 bucked over an obstacle and their face slammed into the hatch edge. To replicate the pad I took a length of Frog tape, folded it with the sticky sides together and cut it to the length and width I needed and then glued it in place. I also made the crane controls, located at the left rear of the driver's hatch, by creating a hydraulic manifold using Evergreen strips with brass rods, with the small beads from a Brita water filter glued to the ends, as the operating levers. Lastly I added a couple of tent rolls from Black Dog to the roof (**Fig. 8**).

Crane I tackled the crane next and at this point had to decide how I wanted it posed. I wanted to show the crane in a working position and determined that I would have to shorten the hydraulic cylinder of the inner boom to achieve the angle I wanted. After measuring twice my razor saw made an almost-straight cut which a sanding stick fixed. I glued the cylinder end in place and drilled out all the hinge points. Because of rough casting in the Verlinden part, in order to mount the crane winch I had to smooth out the area and glue in a shim, made from plastic card, which was positioned under the winch body. I also had to make the centre drum for the winch using a length of sprue of the correct diameter. The kit came with a length of cord to use as the winch cable but cord never looks right so instead I used .019" (.48 mm) Soft Touch stainless steel nylon coated wire by Soft Flex Company. I drilled a hole in the winch drum, glued the wire end in the hole and wound the wire around the drum in enough layers to look right. I glued each wrap in place so it would not unwind or go slack. I assembled the outer boom and added grab handles using 26-gauge steel wire. At this point my thought process went into neutral and I painted the hydraulic cylinders with a silver Sharpie. (*It looked good but it was done too early in the process*) I put the crane together using .030" Evergreen rod at the hinge points, trimmed off the ends of the rods and sanded them flush. I also added a short length of rod on the inner boom which is used to connect the crane to the turnbuckle (**Fig. 9**).

I modified the engine compartment hood by adding a lifting eye, filling in the holes for the shovel bracket, adding screen over the radiator grills and changing the exhaust pipe. The regular exhaust pipe on the Fitter was different from the standard M113. The Fitter used a straight pipe with a flapper cap and a brush guard. I trimmed off the top of the kit's pipe and made a flapper cap from plastic card, then made the guard from a piece of a photo etch fret bent into shape. At this point I also drilled out the headlights and IR lights (**Fig. 10**).

The trim vane (located at the front end of the M113 family, and used for swimming) on the Fitter incorporates an additional flotation cell to help compensate for the forward weight of the crane. The Tamiya kit just had the standard flat board trim vane but the Academy kit had a spare flotation cell which I was able to fit onto the kit's trim vane (**Fig. 11**).

The hull front required a few changes as well. I installed the headlight assembly and had to fill in around the guard. I replaced the trim vane control lever with one from the Academy kit as it was far more detailed and added a work vise from Dio Park Factory Tools Set #1 to the hull where they were normally be found on a Fitter (**Fig. 12**).

On the inside of the hull front I added pivot steering levers, along with their actuating rods and return springs. Hard to see but looking through the rear cargo door they are visible.

Back with the crane I drilled out the fittings for the hydraulic hoses and positioned the crane base on the Fitter roof, aligned with the slewing cylinder inside, then glued it in position. I added the hydraulic hoses, using .020" lead wire and made a canvas wrap from glue-soaked tissue paper that was wrapped around the hydraulic lines leading up to the winch. The wrap protected the lines when moving through the bush. I was now able to determine the winch cable length I wanted and added an eyelet to the end of the cable with a connecting and D-ring to the hook. I painted the underside of the roof with the AK RC 078 APC Interior Green and picked out the periscopes with Vallejo 936 Transparent Green. All the parts were now ready to come together (**Fig. 13**).

Final Assembly Before putting everything together I realized I had missed a small detail. There is a drain plug for the final drive housing that is recessed on the underside of the housing. The housing extends forward of the front of the hull and is subject to impacts when travelling cross-country. Quite often the recessed hole for the plug would become damaged making it impossible to remove the drain plug. A modification order was distributed to weld two aluminum wear strips on either side of the recess, thus protecting it from damage. I cut small Evergreen strips #113 to length and glued them in the correct position on the final drive housings. (**Fig. 13A**)

The Tamiya track is not usable because it's moulded with the track shoe end connectors on the track shoe, not between the shoes as they should be. Fortunately the Academy kit had two sets of tracks; a set of rubber band and a set comprised of individual links. I got lazy and went with the rubber band track which looks all right once in place and painted. I glued the track skirts in place and assembled the components having just a little alignment problem with the roof. With a little gentle persuasion everything popped into place and the Fitter was ready for some paint (**Fig. 14**).

Finishing

I had left off the rear ramp cargo door so I taped over the opening and plugged the hatch openings with cotton batting and used Humbrol Masking Fluid on the hydraulic cylinders that I had coloured previously, in preparation for painting. Using Tamiya Fine Gray primer I primed the Fitter, ensuring good coverage, particularly of the photo etch fittings (**Fig. 15**).

Vehicles out west in 1 Canadian Mechanized Brigade Group (1 CMBG) in the mid-1970's had interesting camouflage consisting of olive drab, black and a sand grey. I selected Tamiya XF-69 NATO Black, XF-62 Olive Drab and after some experiments I went with XF-76 Grey Green (IJN) for the sand grey colour. I like to work from darkest to lightest so I sprayed on the black first followed by the olive drab and sand grey. I used Silly Putty to mask out the camouflage pattern, being very careful not to pull off any of the photo etch when I removed the putty (**Fig. 16**).

I then painted the tracks with Panzer Aces 304 Track Primer and the track pads and road wheel tires with Panzer Aces 306 Dark Rubber.

The Display

I just can't seem to display a build 'naked', so to speak, so I rummaged through my goodies and found another old gem. This was the Verlinden # 524 GMC Engine & Case from 1990 (**Fig. 17**).

What was great about this was that the CAF's old series of GMC M135 2½ ton trucks (militarytrader.com/military-vehicles/military-vehicle-spotlight-gmc-m135) were powered by the 302 GMC engine (en.wikipedia.org/wiki/GMC_straight-

[6 engine](#).) and my Fitter pulled many a 302 in the field. The engine was all-resin with the case sides made from photo-etch brass with resin slates along with the engine mount in the case. I assembled the case and the engine adding a couple of lifting eyes, D-rings and chain to the engine. I left off the fan which I glued to the case lid, along with a couple of tools from my spares bin (**Fig. 18**).

I decided not to leave the engine in the case so I made an engine stand with Evergreen .080" L-channel, some lifting eyes and D-rings. I painted the engine with Vallejo 962 Field Blue with other details picked out with Vallejo 950 Black. The engine stand and a tool box, which I also dug up from my spares box, were painted in Vallejo 975 Military Green. The wooden case I painted in Vallejo 914 Green Ochre and gave it a wash with Tamiya Panel Line Accent Colour Black. I then positioned everything on a wood plaque to get a better feel for the final layout (**Fig. 19**).

Final Details At this point I went back to the Fitter to finish up some small details. I painted the drilled-out headlights and spotlight with Vallejo 997 Silver and the IR Lights with Vallejo 861 Glossy Black and filled them in with Kristal Clear. I cut out clear green acetate for the periscope lens and glued them in place with Gator Glue. I weathered the Fitter with a light wash using Charcoal Gray acrylic craft paint and a mix of MIG pigments. I also went over some of the common wear spots with a silver pencil. No rust, as the M113 is made from an aluminum magnesium alloy and we looked after our vehicles. We used to individualize our tool boxes so I added a Snap-on Tools decal, along with a RCEME insignia and Mobile Command decal to the top of the tool box. I painted the edge of the plaque with black craft paint and marked out where the Fitter and engine with case would sit on the plaque. I applied a good coat of PVA glue into which I stuck the engine assembly and case along with some GamersGrass Tufts and static grass. I then used five-minute epoxy and glued the Fitter in place. With everything correctly in place it was easy to set the lifting chain on the engine into the crane's hook (**Fig. 20**)

Conclusion

It was great putting life into old kits. I found it a very refreshing change from building some of the current kits with 800 or more parts. I was also lucky to have the Academy kit to steal parts from, which reduced the need to modify or scratch build a number of items. Even for its age the Tamiya kit went together easily and was a joy to build and by itself would be a good starter kit for someone new to modelling.

The lack of markings on the Fitter is because I had painted it for a commander's inspection and the markings were not reapplied when I took a picture of it. I don't recall why or what the Canadian Forces Registration (CFR) number (found on the vehicle's licence plates) was so I just left it as it was.

Overall I'm happy with the result and it is a good representation of the M113 Fitter that I operated for a couple of years, a long time ago.

References:

- Personal photos
- Fading memory

About the Author

Barry retired from the CAF in 2009 after a 37-year career as a Navy Stoker, an Army Vehicle Technician and finally as an Army EME Officer. He and his wife moved to Truro NS from Ottawa in 2009 where they built their retirement home, including a hobby workshop, which is strictly off limits to the cats. Barry started building models before he could spell 'plastic' and currently builds mostly 1/35 WWII armour and military vehicles although he does dabble in other areas. He has been a member of IPMS Canada since 2000.

A Shadow Box Aircraft Repair Diorama

Quick Fix at -40°C

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Back in 2009 I found a book on early 1930's bush flying entitled "*Bent Props and Blow Pots*", by Rex Terpening. I was intrigued by the title as I knew what a bent prop was but had no idea what a "blow pot" was*. The book is a wonderful history of the early days of civil aviation in Northern Canada from the late-1920's to the late-30's as seen through the eyes of the author. Rex was an Air Engineer, a mechanic. He was a young lad who took to the skies in whatever plane they had to fly on some interesting adventures, sometimes in the worst of weather. He was the guy that went along to fix the aircraft when things went wrong. One particular tale in the book inspired me to build a diorama which I named after the chapter "*A Mid-Winter's Tale*." (Fig. 1)

It was a day-by-day diary account of a Noorduyn Norseman that had crashed into a shoreline on a remote frozen lake in the Northwest Territories and which had to be repaired and flown out before the spring thaw. The damaged engine mount, skis and undercarriage legs all had to be attended to before it was airworthy enough for a flight out.

Rex, along with another mechanic, spent a month in the wilderness at temperatures often getting below -40°C to repair the aircraft and replace the damaged engine mount. His day-by-day diary account makes it all sound like a vacation but it was far from it. After a year of taking that particular diorama to a few model shows it was donated to the Bushplane Heritage Museum in Sault Ste. Marie, Ont. (bushplane.com)

From a vendor at a Torcan model show, I picked up what turned out to be 1¾ kits in one box of Monogram's 1:12 scale Pratt & Whitney radial engine. Now, when I see such things my mind immediately goes into overdrive on the possibilities of what could be done with it. In this case, as soon as I saw it I knew exactly what I wanted to do with it. I could envision the damaged motor and the mechanic working on it, but I knew it would not work in an open diorama. It was going to have to be in a shadow box. There are particular dioramas that lend themselves better to shadow boxes, particularly when you need to force the visual perspective or hide what cannot be built because of size limitations. This was one of those cases, as it was out of the question to build a 1/12th scale Norseman.

Building Monogram's 1:12 scale Wright R-1820 nine-cylinder radial was pretty straightforward. It's an old kit without a lot of flash; there were some fit issues to deal with, particularly around the cylinders and heads, but nothing too drastic. It was nothing that a bit of patience couldn't take care of. The instructions were easy to follow, which is very typical of the older Monogram kits; they are more visual than written, so there was a lot of trial-fitting and taping of parts to see how it all went together. One cylinder from the second kit was used to place on the tarp on the ground, along with a piston, connecting rod and other assorted parts to represent the removed damaged cylinder and piston, etc. Holes were drilled out in the cylinder mounting flange and the spark plug hole was also drilled out. Mounted on the engine, the ignition wiring and coils is a one-piece vinyl moulding which, although nice and flexible, makes it difficult to paint and attach without the paint cracking and peeling due to the inherent slick nature of the vinyl. (Fig. 2)

Thankfully pre-painting and then touching-up after attaching it with cyanoacrylate worked. Before fixing the vinyl ignition leads, indents were drilled in the plastic and the vinyl was sanded to rough up the bonding surface and cleaned with rubbing alcohol, then attached with cyanoacrylate gel glue. This took a while as they had to be held firmly in place for a few minutes for each one. I also found warming up the vinyl in hot water for a few minutes before attaching made it more flexible and go a lot easier.

The engine came with a prop hub and partial blades which I did not want to use. The shaft was just a solid piece whereas the actual engine shaft is hollow and threaded. So after looking at some detail photos of the actual engine it was just the small task of drilling it out and cutting a thread on the outside of it. For that I dug into my tools and used a trusty die from a tap & die set that fit the shaft perfectly and was a fine enough thread to make it look right. The kit was pretty much painted in individual pieces before final assembly: the cylinders, heads, exhausts, pushrod tubes and crankcase.

Even though it couldn't be seen in the finished diorama, I built and painted up everything at the back of the engine. I'd totally forgotten the old Shep Paine maxim, *"If you can't see it, don't bother to paint it!"* (Fig. 3)

Alclad and Tamiya acrylics were the paints of choice, with some AK, Humbrol and oils being used for weathering and touching up the fine details. The new cylinder was not weathered but the cylinders around it had a more liberal coating of AK oil wash and staining to represent the resulting overspray from the blown cylinder.

The engine has its challenges to build and paint but it certainly does make up into a really nice looking display piece when completed.

The motor was mounted on a frame to give it the approximate height of a cribbed and levelled aircraft. (Cribbing is putting the aircraft on wooden blocks) This was something that was always necessary to do with an aircraft, primarily to bring the engine down to a more ground-accessible height, but also to enable a check of the engine mount and all flying surfaces for alignment before attempting to fly it out. (Fig. 4)

To build the tent inside the shadow box I created A-frame "poles" taken from real tree branches tied with rope taken from my model boat parts, just as the full-sized repair would have been done in the bush. These had to be cut, attached and set up at the same time that the engine was mounted on its frame. The tenting was going to have to follow and I set the whole thing aside for a few days while I thought through the next step.

Light artist canvas, (usually sold off a roll from an art supply store such as Curry's) was used to form the tent. It looks real and has a very nice scale texture. I planned on doing it in two pieces, left side and right side, as it was going to prove difficult to get it to fit snugly around the engine frame.

First, after cutting it to an oversized rough shape, I "tea-dyed" it overnight. Hot tea was made with four tea bags in a bowl, steeped and then the canvas put into it to soak. The next day the canvas pieces were taken out and dried flat. To stiffen the canvas I mixed up a solution of white glue and water. I usually mix it to the approximate consistency of skim milk. Once soaked and dried the canvas is stiff enough to hold the shape yet pliable enough to allow for adjustment. (Fig. 5)

Plastic Saran Wrap (also called *cling wrap* or *cling film*) was put over the engine to protect it, then the canvas was draped over the tent frames, shaped and then left to dry. I used some handy "third hands" to hold the two pieces of canvas together below the engine and to keep certain folds in place while drying. Once dried, I decided that the tea dye was perhaps a bit pale and plain looking. (Fig. 6)

Also, the white glue solution had left it a tad glossy so I toned it down by airbrushing Tamiya flat varnish over it and then sprayed medium and light browns for shading and tan for highlights on top of the creases. Again keeping the engine covered with cling wrap to avoid overspray.

The snow is home repair sheetrock joint compound. It is easy to handle, has a fine consistency that is white and doesn't yellow over time. You can put it down on a moist surface, wet it in place and form it; there are several different ways of applying it. After that you can sift a dusting of the powder over the finished base and then brush away any excess. In a closed shadow box it's not necessary to apply a fixative as you would on an open diorama.

I had started out building the diorama in a box that was crudely made from foam board but I wanted something for the exterior that would be more eye-catching than just a plain box and also something unusual.

In my 1:1 real world I had an old crate which was the perfect size to use as a display cabinet. The crate had gaps between the boards so I blanked these out by wrapping the inside with black bristol board. Rare earth magnets were set into the front sides of the box to allow the front reveal frame to be easily removed. It was while preparing this that I decided to copy the crate in 1:12 scale as it would have been the ideal size to represent the container that the new cylinder and head had been delivered in. I scratch built a 1/12 crate from basswood to match the large one and then I made up shipping labels that were glued with white glue to the small crate and larger copies which I put on the outside of the shadow box crate (**Fig. 7**) This visually tied the outside cabinet with what was on the inside.

The tools and other assorted paraphernalia in the scene were either scratch-built or came from the trusty spare parts box that every modeller has. The front reveal was a picture frame and mat from a Michaels art store. The scene lighting is four LEDs aiming down from above, covered with a piece of blue tinted acetate. The light is actually an old camping headlight that the strap had broken on and I, never being one to throw anything away, stripped it down to its bare parts and found that it worked fine.

The mechanic's lantern was a last-minute something that I found in a dollhouse store just about the time that I was finishing the diorama and decided that I had to have it in there. It was actually a polished brass finish when I bought it, but a coat of primer and some paint and weathering helped it fit right in.

#

The figure was, as usual for me, a bit of a challenge. The only figures I had that would be suitable to use in 1:12 scale were the old Tamiya race car drivers and mechanics.

I chose the driver, assembled it and then started building up the parka, hat and boots with strips of plastic to act as a base for the Milliput. The Milliput was layered on quite wet so as to be able to mould it better around the body. As it was drying and starting to firm up it was shaped and sculpted until I got the desired contours and folds, which actually worked well. For the coat another thin layer of Milliput was added which, before it dried, I pressed some fine cotton onto to add texture. A piece of mink from a thrift store hat was used to make the fur on the front of the cap. It was cut and shaved (literally with a razor!) just to give it a more realistic look.

To get the tools to fit into the hands I cut the fingers off the Tamiya hands and filed into the palm to get the tool to sit and then, after gluing it in place with cyanoacrylate I added Milliput fingers sculpted around the tool so it was "gripped." (**Fig. 8**)

It was the first time I tried doing something like this in a large scale and I thought it worked really well and was definitely pleased with the result. It was a tad finicky when it came to sculpting the knuckles and fingernails but I was pleased with the result once it was finished. (**Fig. 9**) The figure was undercoated with sprayed primer, then base colour acrylics and then finally finished off in oils. (**Fig. 10**)

I was quite pleased with it when it was done. Yet I still consider it a simple subject but with an interesting story to it so I was quite astounded and dumbfounded when in 2018 in Phoenix for the IPMS/USA Nationals it took Best Diorama. You just never know?

** Oh! Yes, a blow pot was the name given to the kerosene heaters used to keep engines warm at sub-zero temperatures while the aircraft was on turn-around being loaded or unloaded at its destination.*

About the author:

John Robinson was born in Birkenhead, England and immigrated to Canada in 1969, now residing in Midland, Ont., Modelling since age 8 when he put together an Airfix Gladiator and he hasn't stopped building since. His main interest is aviation but will build anything - "If there's a story, build a model of it." He worked in construction-related fields and managed a concrete supplier in Toronto for 28 years before retiring in 2005. He has volunteered with Special Olympics Ontario for 30 years. He dabbles in RC boats and trucks and has built a flight simulator cockpit for when he doesn't want to sit at the bench. Camping, canoeing, hiking, reading and photography make up a few other interests.

An RAF SEAC P-47D Thunderbolt Mk. II

by Jose L. Gonzalez
IPMS/USA #44457
Chelsea, AL, USA
IPMS Phantom Phlashers, Birmingham, AL

Editor's note - I saw this model on the contest table at the IPMS/USA 2019 National Convention in Chattanooga, TN. The paint job really caught my eye and I am grateful that Jose took the time to write it up for RT.

Background

I have read a lot of good things about the Tamiya P-47D. I wanted to build one but I also wanted a different paint scheme. Looking on Ebay I came upon the Xtradecals "Yanks with Roundels Part 4", sheet # X48-115. I found a picture of the specific aircraft I liked and started building. It was as simple as that to get me going on this build.

The Kit

Typical of Tamiya, the quality of the parts results in a very easy build. I wanted a pain-free build and this was a great kit to do that. It has a great fit with no need for any filler. I felt that no modifications were needed as this kit closely resembled the RAF Thunderbolt Mk. II. The only aftermarket used was some Eduard photo-etch, which added a bit more detail to the already nice cockpit.

The Build – Interior Details

For the cockpit colour I used Tamiya XF-70 with a few drops of XF-2 and XF-3 added to match it closer to the reference photos. This colour is typical of Republic's P-47s. The Eduard Zoom interior set includes the seat belts, instrument panel and some handles and knobs, and these were added in at this step.

Painting

I used Vallejo Model Air paints from their set "RAF colours SEAC 1942-45."

Prime time. After masking up the various openings and clear parts I used Tamiya spray primer (Fine) straight from the can. When dry, I rubbed a paper towel across the surfaces to remove any rough spots.

Conclusion

This was a quick and fun build. The Tamiya P-47D is a fine kit with perfect fit and great details. I am definitely going to build another one soon.

Reference

☐ P-47 Thunderbolt in Detail & Scale by Bert Kinzey

About the author:

Canadian Jugs -

RCAF airmen in P-47s

(Editor)

Although there were no RCAF P-47 squadrons, Canadians did serve in RAF Thunderbolt units in the Far East, flying aircraft with camouflage and markings similar to that seen in this build. By no means an exhaustive list, Canadians are known or believed to have flown with the following RAF Thunderbolt squadrons: 30 (coded **RS**), 79 (**NV**), 123 (**XE**), 134 (**GQ**), 146 (**YZ**), 261 (**FJ**), and possibly others that need some dedicated researching.

Online digging provides clues about Canadians serving and flying the P-47, but there's not much to help a modeller tie a specific airplane to a Canadian pilot. From the builder's point of view, likely the best you can do is pick a known aircraft and live with the comfort of knowing that a Canadian may have flown it at some point in his tour in Burma. If you've done any research on this topic and found more concrete detail please consider sharing your findings with the rest of IPMS Canada.

A bit of online reading on this topic:

☐ ascalecanadian.com/2012/06/canadians-on-thunderbolts.html?m=1&fbclid=IwAR2h1enk4zy_zqH3sBf2fOtpCNPU9rSZL-8DOAAJjI9rG181HYEe0qtBvZc

☐ rafcommands.com/reference/p-47-thunderbolt-with-the-raf/

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