

RT Volume 38, No. 3 Fall 2016 article text

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Cover Comment: *Mark Ford of Port Angeles, WA, took the AFV Club Churchill Mk. III and a bunch of aftermarket parts to produce this stunning Canadian Army tank as used on the Dieppe Raid of 19 August 1942. tanks. See more Nats coverage on page 5. (Mark Heyendal photo)*

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Editorial

Steve Sauvé, C#0323 RT@ipmscanada.com

Getting involved...

As I wrote this part of the editorial towards the end of July the prospect of not having sufficient coverage of the US Nats to put together a proper article for **RT** was on my mind. Things happened and not as many of the 'usual gang of suspects' would be making the trip to Columbia in August. So we had to reach out for some help. A Facebook plea and a direct emailing to the entire membership with the last issue of *beaverRTales* brought forth no raised hands from volunteers. Thus our man in Columbia, Exec member **Mark Heyendal**, was left to improvise and call upon those he could reach on-site to help out with the work needed to produce the material I would need for **RT**. Fortunately a couple of members stepped up to help, but it wasn't enough to give the job the attention it needed.

Now, if we didn't have any members going down to Columbia, that's one thing. But if we did have members going down there and you didn't want to help, well, that's a little more troubling to me. In the same way that your local model clubs need your help to run the club, organize events and get things done, so does IPMS Canada occasionally need active assistance from the membership to help make IPMS Canada what we want it to be for all of us.

I don't want to make people feel bad about this; you're spending your money to go to the Nats, and you're entitled to spend your time there as you wish. Nevertheless I do want to use this as another reminder to all members that IPMS Canada lives or dies based on the active support the group receives from... the members. That's not just sending in your material for **RT**, **BT**, the website and Facebook, but sending in your ideas, opinions and feedback, and getting involved with making IPMS Canada work for all of us. Moving on...

"Better a diamond with a flaw than a pebble without."

- attributed to Confucius

"The perfect is the enemy of the good" - we might never complete a task if we have decided not to stop until it is perfect. In that sense, completing the project well ("the good") is made impossible by striving to complete it perfectly. Or, in some cases, to even start the task (or the model build) until we are certain that the result will be perfect.

The Pareto principle or 80–20 rule means that it commonly takes 20% of the full time to complete 80% of a task, while to complete the last 20% of a task takes 80% of the effort. Achieving absolute perfection may be impossible and so, as increasing effort results in diminishing returns, further activity becomes increasingly inefficient.

If we hold off on building until we are self-assured of perfection, then nothing will get built. There are concessions to be made in every build, and in every scale; accepting that can bring some much-needed perspective to your hobby. Think of a Russian 'matryoshka' nesting doll - each next-smaller scale doll has less detail than its larger neighbour and it has more than its next-smaller neighbour. But each level still looks good on its own merits. A 1/144 scale model cannot contain as much detail as a 1/32 kit, nor can the 1/32 model capture everything seen on a 1/1 scale prototype. We can't do it all, we can't know it all (*despite the online personalities who will try to convince the world that they do.*), and if you get hung up on trying to do that, nothing will get done. Build and enjoy, folks!

Judging vs. a constructive critique...

While putting in some time at our IPMS Ottawa building display at the Canada Aviation and Space Museum, I was talking with a fellow club member about the differences in how models are judged in contests, and how they are (*or should be, in my opinion*) constructively critiqued in person. Big difference. Serious model contest judging, as has been discussed online ad nauseam, is generally done under the concept of 'Find Faults First'. Judges certainly have to look at what was done well, but the winners are generally determined on whose model has the fewest basic modelling faults.

If a fellow modeller asks you for an opinion of his/her latest build, look first at what was done well and say so. Then, if you're invited to do so, offer helpful ideas on what could have been improved. Try to make a friend, not an enemy.

Cheers,

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National Director

Bob Migliardi, C#0490 box626@ipmscanada.com

Yes, Virginia... there is an **IPMS Canada Members' Forum**. It's just that no one seems to know it exists. If you're one of those who were unaware of the Forum, you can find it linked from the IPMS Canada website (ipmscanada.com). Just click on the FORUM button.

But actually, is the problem that no one knows it's there? Or is it that while people may know about it, nobody bothers visiting this Death Valley of forums? One thing for certain is that no one – well, hardly any one – uses it. Some threads have gone months, or more than a year without postings. Some people have posted questions long ago, which have never been answered. It's all a bit embarrassing. What might the problem be?

I think one reason for its lack of use may be that the online modelling world is saturated with forums. Some cater to narrow interests such as WWI aircraft, car models, sci-fi, etc., while others encompass the entire scope of plastic modelling. Some are vibrant, interesting, helpful, and considerate. Others seem to be full of self-appointed "experts", just waiting to impress people with their vast knowledge and perhaps humiliate a few less-experienced modellers while they're at it. (Don't these people have a life?) Most IPMS branches also seem to have their own Forums, and those of the larger branches such as IPMS USA or IPMS UK are fairly active and informative. So... what do we do with IPMS Canada's Forum?

My own personal view is that the **IPMS Canada Forum** is really no longer relevant, it's usefulness having now been supplanted by our e-newsletter, **beaveRTales**. I see **BT** having the advantage over the Forum in many respects. Members can pose questions, provide information, present their opinions, tell us what's going on in their local area, show us what they're building, and comment on the modelling world, just as they could on a forum (though admittedly it does take somewhat longer for a reply to appear in the next issue). And unlike the Forum, which no one seems to visit and use, every member receives **beaveRTales**. This means that a member presenting an idea or asking a question has full penetration of the IPMS Canada membership. As an example, the items on the naming of naval vessels, or projects at the Montreal Aviation Museum which appeared in recent issues of **beaveRTales** would probably have gone un-noticed had they just been posted in the Forum.

So... what to do? And here we ask for your input and opinions. Should we shut down the forum as being unnecessary and unloved? Or should we just ignore it and let it languish as it is? Or do you have some ideas on how to revitalize it and make it a useful part of the IPMS

Canada experience. It's your Forum, so please do let us know what you would like to do. Send your thoughts to:
box626@ipmscanada.com.

Chapter & Member Liaison

Kerry Traynor, C#4083 CML@ipmscanada.com

Full disclosure here; I wrote this while on holiday and the living is easy. So you won't be reading any mind blowing or life altering works of art here; more like ramblings. Thoughts that I jotted down over the last couple of months that I wanted to pass on. So here we go...

Summer Ramblings...

Summer is a curious time for modellers; as our hobby is for the most part done alone and exclusively indoors, it is the one season that has us looking out the window and wondering if perhaps, we should venture outdoors. For some, the answer is 'no thanks, I'm good' and with others, they leave the modelling desk in early June and won't return until September. And of course, I am sure there are those, who like me, split their leisure time between the gardens, bike riding and the model desk. All perfectly acceptable and of course, completely up to the individual.

Speaking of summer, the number of model shows has slowed to a trickle, and some chapters have closed shop for the summer months. But judging from the activity on the online forums and Facebook, people are still active in talking models, showing off the finished product and there are even some good "how to" videos being offered. I realize that not all of you are fans of the internet or Facebook, but I am going to suggest that you can focus your online time to some of the fine websites and Facebook pages currently in place by both IPMS Canada and the various IPMS Canada chapters. You won't be disappointed.

Speaking of the internet, I am continually amazed at how the modelling community has taken full advantage of the opportunities that the internet has provided. Along with the web pages noted above, some well-known model builders from around the world have created Youtube channels, while others have produced videos on their websites showcasing their progressive builds of the latest releases. Some very good stuff here. If you are looking for model kit reviews, simply Google the kit name with 'review' added to the search and you will be amazed at the in depth and balanced reviews, some including video, which you will find.

Of course, this is time that I could be model building, but hey, it is my time and I can use it as I see fit. Right?

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IPMS/USA 2016 National Convention

The IPMS/USA 2016 National Convention (the Nats) was hosted this year by the **Mid-Carolina Swamp Fox Modelers** and **IPMS/USA Piedmont Scale Modelers**.

Although this was the first time the Nats had been held in Columbus, the capital city of South Carolina, this was a smoothly-run convention. The venue was well-appointed, the rooms well set up and no glitches were evident to the shows' visitors. The show ran from noon on Wednesday, August 3 through to Saturday Aug 6 at 10:30 p.m.

There were 2102 entries in the model contest. As usual, the overall quality was excellent and gave plenty of inspiration for the viewer's own builds. Though the entry numbers were down a bit from previous years, the high standards seen on the tables left you with plenty to be impressed with. A very nice feature was that the contest tables were raised up from the normal level, giving many visitors a less-strained view of the entries.

There was a large vendors area catering to all tastes and interests, but at a US dollar exchange rate of 1.30, most Canadians needed to do the math carefully before deciding that they'd found a bargain.

The number of IPMS Canada attendees seemed to down this year, perhaps because of the unfavourable exchange rate.

Although all tours except the USS Yorktown were cancelled, there were lots of well-run seminars at the convention, covering modelling basics, aircraft and armour topics, construction techniques, airbrushing, new discoveries, history, the Vietnam War, the US Civil War, etc.

The size of the human resources pool for finding and judging the **IPMS Canada Best Canadian Subject award** was down this year, so **Mark Heyendal**, aided by **IPMS Ottawa's Mike Roy** and **Janyce Roy**) were only able to identify a nine Canadian content entries compared to the 37 found in 2015. Nevertheless these entries met the criteria for being considered as Canadian subjects. Only a few people took advantage of the sign-up sheets we had placed in the contest registration area, so consequently most of the entries were found by pure chance. If your model is not seen on these pages, all we can say is that we tried to find them, and we'd hope that you'd take advantage of the sign-up sheets for future US Nats.

At the Nats the question regularly comes up, "*Why don't we have an IPMS Canada National Convention?*" The National Director spoke to this question at length in **RT 36-3**, but we'll touch on it here again. The last time we had a Canadian 'Nats' was in Ottawa in 1992 and it was a successful event. A three- or four-day event is a lot of commitment, work and expense by whichever group wants to organize and run it, but we have not had any serious proposals being put forward to support a local group putting on another Canadian Nats. In **RT 36-3** Bob Migliardi had some interesting ideas for chapters to start moving towards larger events in the future, but we have yet to hear from any chapter that is interested in proceeding along this path.

Best Canadian Subject

Mark Ford of Port Angles, WA, built this model of a Canadian Army Churchill as used in the ill-fated Dieppe operation, codenamed **Operation JUBILLEE, which occurred on 19 August 1942.**

The model is a combination of the **AFV Club Dieppe Churchill** kit and a conversion set from **Inside the Armour**. The full build can be found in the Blog section on the web site **Track-Link** at www.track-link.com/blogs/23428.

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On the Home Front - The RCAF's Hawker Hurricanes

by Jim Bates
IPMS Canada C#6008
Seattle, WA

*(This is the second of what was to be a two-part **RT** article on Canada's home-based use of the Hurricane. The original plan was to publish all of Jim's material in one issue of **RT**, but there was simply too much great stuff to do it justice in one, or even, as it turns out, two issues. So the extra material that still didn't fit into this issue of **RT** will be published in an upcoming issue. Editor)*

Part 2 - Canadian Car and Foundry Hurricanes

The Hurricane Mk. XIIA

In 1943, the surviving RCAF Hurricanes and Sea Hurricanes, along with one Hawker-built Hurricane, were returned to **Canadian Car and Foundry** (CCF) at Port William, Ontario, for conversion to **Mk. XIIA** standard. This activity entailed the:

- ◇ fitting of a **Packard Merlin 29** engine to replace the original **Rolls-Royce Merlin III**,
- ◇ conversion of the fuselage to the **Mk. IIB**'s length by extending the forward fuselage by 4" ^{*}, and
- ◇ removal of all remaining naval-related gear (e.g., *tail hooks, catapult launch spools*) from the **Sea Hurricanes**.

Probably the easiest way to tell which is which is to determine where the vertical panel line just aft of the exhaust stacks lay. If it's a bit ahead of the leading edge, it's a **Mk. II**. If it's almost in line with the leading edge, it's a **Mk. I**. This four-inch extension was necessary to fit the slightly longer two-stage **Merlin 29**, but also helped ameliorate some of the centre of gravity issues that had arisen as more weight was added to the **Hurricane Mk. I**.

** - This extension is located in between the front windscreen and the panel line just behind the exhausts. On the Mk.I fuselage this distance was 41"; on the Mk.II fuselage this was extended to 45". It is not a very prominent change, and it is hard to determine by casual observation of photos. This extension also changed the shape of the forward part of the wing root fillet that is closest to the engine cowling. On Mk. I aircraft it is closer to being a half-circle shape, but on the Mk. XII and XIIA the fillet is closer to being a half-oval shape.*

The reworked aircraft were also fitted with American-manufactured **Hamilton Standard Hydromatic propellers**, and **exhaust glare shields** on the cowling flanks (*for night flying*). Oddly, they retained their original eight-gun wings (*i.e., they did not receive the 12-gun wings that were installed on CCF-produced Hurricane Mk. XII's*).

Once converted, most of these aircraft were operated by **1 Operation Training Unit (OTU)** at RCAF Stn. Bagotville, Quebec or with various RCAF Station Flights. The provenance and (*lack of*) paperwork trails of these upgraded aircraft appears to have tripped up many Hurricane researchers in the years since the war.

As shall be illustrated here, the RCAF had a surplus of Hurricanes on strength, so the reasoning behind such an extensive upgrade program is quite a mystery. It makes sense that the RCAF would want more-capable aircraft and the **Merlin 29** was certainly an improvement over the **Merlin III**. It also makes sense that the RCAF would want to standardize on one variant of the type, for, say, maintenance and training reasons. But with over 100 brand-new Hurricane MK. XII's sitting in storage, one wonders why the effort was made to upgrade all of the remaining earlier production machines.

The Hurricane Mk. XII

While the Hurricanes and Sea Hurricanes were diverted RAF and FAA aircraft that were adapted for RCAF use, the **Hurricane XII** was the definitive RCAF Home War Establishment (HWE) variant. In 1941, an order for 400 Hurricanes XII's was placed with CCF. Clearly this is more aircraft than were needed by the RCAF, and there is much speculation that the number was determined by Minister of Munitions and Supply, **C. D. Howe**, whose riding just happened to include Fort William (*known today as Thunder Bay, Ontario*). (*Could this also be the real reason the Hurricanes and Sea Hurricanes were re-manufactured?*) The Hurricane XII's were assigned the RCAF serials **5376 to 5775**.

Originally designated **Hurricane Mk. IIB (Can)**, later changed in 1943 to **Hurricane Mk. XII**, these aircraft were externally similar to **UK-built Hurricane Mk. IIB**'s but were fitted with **Packard Merlin 29** engines and an American **Hamilton Standard Hydromatic** propeller. (*The hub mechanism was a Hamilton Standard 23E50 fitted with No. 6353 blades. This was the same combination of Hamilton Standard propeller used on Cansos, which was another aircraft type built in Canada.*) As the large dome of the prop hub would not fit under a standard British Hurricane spinner, the aircraft were generally flown without a spinner. However, with time, CCF designed a conical 'Canadian' spinner (*of noticeably different shape than a British-built spinner*) that for the Hamilton Standard installation. It is interesting to note that most Hurricanes still in service late in the war had been fitted with the spinner. All RCAF Hurricane XII's were fitted with exhaust glare shields on the cowling flanks and sported twelve-gun wings. Many of the **Hurricanes XII's** retained the **early Mk. I tailwheel**, but the later **Dowty kinked tailwheel** fitted to **RAF Hurricane Mk. II's** can also be seen in some photos.

As described in **Part 1 (see RT Vol.36 No.2)**, much of the Canadian Hurricane story is indelibly linked to the Merlin engines that powered them. The reasoning for CCF's use of the Hamilton Standard propeller was tied to supply and demand of both the props as well as the Merlins. Packard built two versions of the two-stage Merlin which are germane to this story - the **Merlin 28 and 29**. Both versions of the Merlin V-1650, they were modified for British and Canadian use. (*Apparently, these modifications centred on the voltage of the electrical system.*) **Merlin 28's** were additionally modified

so that their propeller shaft splines and reduction gear ratios were compatible with British propellers. The **Merlin 29s**, however, maintained propeller shafts that were only compatible with U.S.-built propellers. Therefore, as the RCAF was able to acquire **Merlin 29's** for the Hurricanes, it was most efficient if a U.S. propeller was sourced to fit the engines. It can only be assumed that the Hamilton Standard propeller and blade combination was chosen as it was available in the numbers necessary to outfit the Hurricanes.

Note: For purposes of this article I have referred to all of the Packard-built Merlins with their Arabic numbers. RCAF record cards and accident cards record the engines both as **Merlin 29** and **Merlin XXIX**. It is very possible that the designation depended on the clerk typing up the form!

The first Hurricane XII's were taken on strength by the RCAF in mid-1942, and the type equipped:

six **Eastern Air Command (EAC)** fighter squadrons -

- ◇ **125 (F) Sqn**, RCAF Stns. Sydney and Torbay
- ◇ **126 (F) Sqn**, RCAF Stns. Dartmouth and Gander
- ◇ **127 (F) Sqn**, RCAF Stns. Dartmouth and Gander
- ◇ **128 (F) Sqn**, RCAF Stns. Sydney and Torbay
- ◇ **129 (F) Sqn**, RCAF Stns. Dartmouth, Goose Bay, Bagotville and Gander, and
- ◇ **130 (F) Sqn**, RCAF Stns. Bagotville and Goose Bay

and two **Western Air Command (WAC)** fighter squadrons -

- ◇ **133 (F) Sqn**, RCAF Stns. Lethbridge, Boundary Bay, Tofino, Sea Island and Patricia Bay, and
- ◇ **135 (F) Sqn**, RCAF Stns. Mossbank, Patricia Bay, Annette Island and Terrace.

In addition, it was operated by **123 (Army Co-operation Training) (AC) Sqn** in EAC at RCAF Stn Debert and Sydney, **163 (AC) Sqn** at **RCAF Stn. Sea Island** in WAC, **13 (Photographic) (P) Sqn** at RCAF Stn. Rockcliffe, **1 OTU** at **RCAF Stn. Bagotville** and its associated **1 Advanced Tactical Training Detachment (ATTD)** at **RCAF Stn. Greenwood, Nova Scotia. No. 163 Sqn** is an interesting unit as it was formed as an Army Co-operation Squadron, but within months of acquiring Hurricanes it was redesignated as a Fighter Squadron.

Besides air defence and fighter tactical training, the Hurricanes were also operated by **1 ATTD** as weapon trainers with **rockets**, and a few in EAC were converted to carry **depth charges and bombs** for coastal defence with **125 (F) Sqn** at Torbay. These repurposed Hurricanes did not claim any U-Boat kills! (*More coverage of these modifications will be presented in **Part 3** of this article. Ed*)

The WAC squadrons were rather nomadic during their Hurricane operations period. From August until November 1943, **135 (F) Sqn** even operated Hurricanes out of Annette Island, Alaska, as a part of '**Y' Wing** (*one of the two RCAF formations contributed to the continental defence of North America in Alaska.*) The squadron's patrols could be quite hazardous due to Alaskan weather conditions, no enemy aircraft were encountered.

As the war continued, the Hurricane was systematically replaced by various models of the **Curtiss P-40 Kittyhawk** and relegated to "**Stored Reserve**". As stated above, the RCAF ended up with more Hurricanes than required, so it was hoped that some could be sold abroad. In the end, a large number of the HWE Hurricanes were in storage at Souris, Manitoba, and 150 Hurricanes were transferred to the RAF as '**Free Issue**'. These free issue Hurricanes were returned to CCF where "certain RCAF equipment" was removed (*possibly including the Packard Merlins*) before they ended up in either **India** or **Russia** with RAF serial numbers in the **PJ-** serial range. Fifty of these free issue aircraft were considered repayment to the British for the **BW-** series **Sea Hurricanes** discussed in **Part 1** of this article (see **RT Vol. 38, No.2**).

The final operational activity of the Hurricane in HWE service involved the so-called "**Prairie Hurricanes**". In late 1944, the Japanese started launching balloon bombs that would drift along the upper atmospheric currents toward North America. There was much concern in U.S. and Canadian military and political circles not only that these bombs would drop on civilian populations and invoke terror, but that they would drop on unpopulated, but heavily wooded areas, and the small bomb load would ignite the surrounding vegetation which could result in large forest fires in western and central North America. To combat this threat, a number of Hurricanes were removed from storage, assigned to **No. 2 Air Command**, and based at BCATP stations in Alberta and Saskatchewan. The intent was to base one or two aircraft at

designated stations to intercept any balloons that drifted toward the prairies. Eight of these Hurricanes were modified by **8 Repair Depot (RD)** at RCAF Stn. Winnipeg. Here they “*were stripped of machine guns and camera guns. One machine gun being reinstalled and harmonized.*” This was done to lighten the aircraft and afford them the highest possible climb rate. These modifications certainly must have created quite a ‘hot-rod’ Hurricane. While many sightings and interceptions were carried out, it is unclear if any Hurricanes were successful in shooting down a balloon. (*There is an unconfirmed report that a balloon landing in Strathmore, Alberta, on March 28 1945, was shot down by an RCAF fighter. Logically this could only be one of the Prairie Hurricanes.*) By the summer of 1945, the balloon threat had lessened and the Hurricanes stood down from their watch.

Going Skiing and Getting Tanked

A variety of testing was done on Hurricanes by the RCAF, conducted for the most part by the **Test and Development Establishment** at RCAF Stn. Rockcliffe. This included, for example, the ground and flight testing of Canadian-designed wooden drop tanks and skis. Two RCAF Hurricanes, Mk. I **1363** and Mk. XII **5624**, were tested on Noorduynt-built fixed skis. Neither the tanks nor the skis were ever used operationally by the HWE Hurricanes. (*More coverage of these modifications will be presented in Part 3 of this article. Ed*)

Colours and Markings

There appears to be no official RCAF Engineering Order (EO) specifications for the painting of HWE Hurricanes. An RCAF Headquarters Letter File 938-5-7, dated September 16, 1941, instructs, “*where old camouflage existed, older undersurfaces will be altered from black or silver (aluminum) to Sky*”, and continues with, “*this instruction applies to Canso, Stranraer, Hudson, Digby, Bolingbroke, Goblin, and Lysander aircraft.*” At first it would appear odd that the Hurricanes would not be included until it is remembered that on that date there were no Hurricanes on RCAF strength in Canada.

As CCF was building Hurricanes on British contracts they were most probably painted in British Air Ministry promulgated schemes using locally-produced paints matched (*or accepted as equivalent to*) British **Directorate of Technical Development (DTD)** chemical and colour specifications. This means that all Hurricanes should have been delivered to the RCAF in the **Temperate Land Scheme*** of **Dark Earth** and **Dark Green**, with **Sky** undersides and all Sea Hurricanes should have been delivered to the RCAF in the **Temperate Sea Scheme** of **Dark Slate Grey** and **Extra Dark Sea Grey** upper surfaces, with **Sky** under surfaces. When the Sea Hurricanes were modified to **Hurricane Mk. XIIA** standard, they were most probably repainted in the **Temperate Land Scheme**.

** - RAF colour schemes, such as the Temperate Land Scheme and Temperate Sea Scheme described only the top surface colours. The undersurface colour was specified separately from the upper surface colour(s).*

According to **Ian Huntley**, in an article in the November 1984 issue of **Scale Aircraft Modelling** entitled “**RCAF Colours 1939-1945**”, sprayed out samples received by the British Air Ministry from CCF show that “**Canadian Dark Earth** was perhaps a fraction more red brown; **Dark Green** a little more of a blue green while the **RCAF-titled ‘Duck Egg Bluish-Green Sky’** a shade more on the blue side than its **Ministry of Aircraft Production (MAP)** counterpart.” It is believed that the CCF Hurricanes were painted with **Titanine** brand paints manufactured in Canada by **International Paints (Canada) Limited**. An extant Titanine Standard Colours chart lists **Camouflage Dark Earth**, **Camouflage Dark Green** and **Camouflage Duckegg Bluish Green**; the approximate FS-595 number match to each colour is as follows:

Camouflage Dark Earth = FS 30097

Camouflage Dark Green = FS 34052

Camouflage Duckegg Bluish Green = FS 34518

When comparing these FS-595 numbers with Mr. Huntley’s description of the colours, only the Dark Green does not appear to match, being substantially darker than expected.

It should be noted that, as with all colour issues, all of the above is open to interpretation. In discussions with **Terry Higgins** of **Aviaeology** (stores.ebay.ca/Aviaeology or stores.ebay.com/Aviaeology) he notes, “I maintain that these samples represent a single instance sample from one manufacturer, and as such, may, or may not, be representative of the entire gamut of acceptable tone/hue/intensity variations for each colour. I am of the mind that the tolerance gamut was much more wide open than modellers often care to admit.”

It appears that unlike UK Hurricane manufacturers, regardless of the serial number, CCF painted all **Hurricane XII** and **XIIA** aircraft in the standard **RAF the ‘A-scheme’ camouflage pattern***. Additionally, while CCF-applied aircraft serial numbers match the standard black RAF eight inch size, the letter and number style is slightly different from that seen on UK production.

*** - In the UK, an important Hurricane production change occurred in January, 1941. It was decided to abandon the alternating ‘A-scheme’ and ‘B-scheme’ camouflage patterns, which had been in use since 1937. All Hurricanes produced after this date were produced in the ‘A-scheme’ only.**

National markings on all of the Hurricanes delivered from CCF were:

- ◇ **49” Type B roundels** on top of the wings,
- ◇ **45” Type A roundels** below the wings,
- ◇ **35” Type A1 roundels** on the fuselage,
- ◇ **27” x 24” Fin flash** on the vertical fin.

(Some WAC Hurricanes were late refinished with **Type A** roundels above the wings. Others, however, carried the standard **Type B** roundels. There really is no explanation for these anomalies, as is usual with WAC markings.) It is alleged that all RCAF aircraft used the pre-war ‘bright’ shades for the roundel red and blue colours, not the dull markings colours used by the wartime RAF. RCAF EO outtake “**Markings - Identification of Operational Aircraft**, dated August 1, 1939, provides that fuselage markings consisted of “Roundel Blue / Red.” (Keep in mind, some early RCAF aircraft - for example, *Lysander Mk. II’s* - featured red and blue roundels with no white.) No order has been uncovered that noted a change to dull colours, extant photos appear to use the ‘brighter’ roundel colours, and even Mr. Huntley states “the roundel colours were of the ‘bright’ form.” Mr. Huntley does state, “The change to dull ident colours was only made on certain home-based operational units,” without providing any support for that statement as to which units and what aircraft.

Specifications say that the squadron codes were in **RCAF Light Grey** (equivalent to **British Medium Sea Grey**) but some, especially on WAC aircraft, look **white**. Squadron codes were applied to Hurricanes and Sea Hurricanes, but by the time the Hurricane Mk. XII was in service, the RCAF specification required only the single-letter, aircraft-in-squadron code.

For Hurricanes that were in service post-1943, an order was issued April 30, 1943, for the **Type A** and **Type A1** roundels were to be replaced with the **Type C** and **Type C1** roundels respectively*. While most Hurricanes carried the **Temperate Land Scheme** during their whole career during the RCAF, a few appear to have been repainted in the **Day Fighter Scheme** of **Dark Green** and **Ocean Grey** over **Medium Sea Grey**. The few aircraft repainted also had **Sky** bands applied around the rear fuselage and the yellow identification markings applied to the leading edges of the wings, reflecting British practice of that time period.

NOTE: Surviving **Hurricane XII 5389** (Now under restoration with the *Calgary Mosquito Society* at *Wetaskiwin, AB*) was repainted in service with a grey that matches **RCAF Light Grey** on the underside. It is unknown why this was done or how common it was fleet-wide. It is assumed the undersides were repainted by a contractor (Coates Limited) after a Category C accident on July 15, 1943.

(Editor’s note: space considerations prevented inclusion of some additional info and imagery that the author had amassed during his RCAF Hurricane research. These will be presented in **Part 3** of this article.)

Acknowledgments:

This article would not be possible without the help of **Jerry Vernon, Mark Peapell, Steve Sauv , Dr. Jon Leake, Nicholas Millman** and **Carl Vincent**. Also, I have to give thanks to **Terry Higgins** and **Tony O'Toole** for their assistance and enthusiasm, which gave me the strength to persevere with this project even when every answer appeared to open up 15 more questions.

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Sidebar Roundel Rant from the Editor:

*This makes me crazy, ever since I found out the truth about these markings. **NOBODY** (including me) uses the official RAF designations for the markings. The **Type A, B, C, etc.**, 'names' that we all use to identify British-style national markings was created post-war, not by the RAF, but by noted British aviation writer **Bruce Robertson**. Two of his seminal Harleyford books are:*

Aircraft Camouflage and Markings 1907-1954. London: Harleyford, 1959

Aircraft Markings of the World 1912-1967. London: Harleyford, 1967.

For late-war RAF roundels,

what Bruce called: *are actually:*

Type B	National Marking I
Type C	National Marking II
Type C1	National Marking III

*And the 'Fin Flash' was called the **Tail fin marking**.*

It appears that the early war RAF roundels were not given any particular way to identify them. They were merely described verbally, indicated the location, and given dimensions for each marking. Which apparently worked well enough for that time.

Later, from a historian's or modeller's point of view, people were looking at the whole range and timeline of RAF markings and needed a system whereby we could more easily describe them to others. Bruce must be applauded for his work in finding a relatively simple way of describing these markings, but he did produce a very useful legacy that we all erroneously think of as the gospel on this subject.

Okay, rant mode is 'OFF'; please go back to Jim's article, which is still in progress. Steve.

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An RCAF Hurricane Mk. XII in 1/48

By Vic Scheuerman

IPMS Canada C#2408

Edmonton, AB

Products used in this build:

- ◇ **FlightDecs** decal sheet FLD48-02

- ◇ **Testors Model Master** enamel paints - Dark Green, Dark Earth, Sky, RAF Interior Green
- ◇ **Monogram 1/48 B-17** - propeller blades
- ◇ **Aires Hurricane detail set** - etched map case and two control knobs
- ◇ **Cutting Edge CEC48 1 57** - British GM-2 Gunsight
- ◇ **Squadron Set SQ96J9** - Canopy sliding section
- ◇ **Ultracast 48019** - Hurricane Seat & Armour Plate
- ◇ **Ultracast 48043** - Hurricane Mk. I Exhausts
- ◇ **Ultracast 48076** - Hurricane 4-spoke Wheels
- ◇ **Ultracast 48079** - Hurricane Wheel Well
- ◇ **Airfix Hurricane Mk. I (old release)** - early tail wheel

Background

Canadian-built Hurricanes?

While this Allied aerial workhorse is well-known, the proboscis-challenged Canadian-built version is less so. What is externally unique about the **Canadian Car and Foundry** (CCF)-built **Hurricane Mk. XII** was the lack of a propeller spinner and backplate. The **Hurricane XII** also sported the Mk. I-style round exhaust stacks (*rather than the fishtail exhausts featured on UK-built Mk. IIBs*), exhaust glare shields, and, often, the early style tailwheel. As can be seen in the completed model, all of these features are present with the exception of the glare shields. This lack of the exhaust glare shields was confirmed by **Joe Osmulski**, of **FlightDecs** (flightdec.ca). The lack of glare shields is correct for some of **135 (Fighter) Squadron's ((F) Sqn)** Hurricanes while they were working up at Mossbank, Saskatchewan. By the time the aircraft made it to British Columbia, the glare shields would have been fitted.

Also unique to these Hurricanes was the slightly different shades of the Canadian versions of the British **Ministry of Aircraft Production** (MAP) camouflage colours - more anon.

Canadian Markings

FlightDecs decal sheet FLD48-02 treats us to three Hurricanes with a Canadian connection. Two are Canadian-built and based aircraft. The third option is an Mk. IIc Trop flown by **P/O Albert 'Bert' Houle**, RCAF, while serving with **RAF 213 Sqn** in North Africa. (*Jim Bates: Although **BE643** is often attributed to Bert Houle, he only flew it on three operational trips. He did, however, suffer an accident upon landing in this aircraft on April 27, 1942. Hurricane IIc **HL887 AK-W** was the Hurricane flown most often by Houle, who took it up on 21 missions.*)

The two Canada-based Mk. XII's used the same **RAF Temperate Land Scheme** camouflage colours (**Dark Green** and **Dark Earth** upper surfaces, with **Sky** undersides) but in different disruptive patterns. The subject of this article, a Hurricane XII of 135 (F) 'Bulldog' Sqn, sports a 'standard' pattern. The other Mk. XII is a modified reconnaissance version (drawings of camera locations are included on the sheet) that sports an upper camouflage pattern unique to **13 (Photo) Sqn's** Hurricanes and Spitfires. A nice 'plus' is that both of these aircraft sport colourful unit emblems on the engine cowling.

The decal sheet is printed by **Microscale** and is excellent. This comprehensive sheet offers a full selection of roundel and stencil variations for all three subjects, and also caters to the different shades of **Insignia Blue** and **Red** used - very nice indeed. The decals were excellent and went on faultlessly using the **Micro Set/Micro Sol** combination.

Canadian Camouflage Colours

Just as an interesting side note about the camouflage colours. Although the full-colour instruction sheet (*which includes four-views, plus colour squares matched to FS-595 numbers and RAF MAP colour titles*) mentions **RAF Sky**, **Dark Earth** and **Dark Green**, these machines feature a variation of the 'official' RAF/MAP colours.

There was a very interesting article about this paint variation the November 1984 issue of **Scale Aircraft Modelling**. It appeared in the 'The Ian Huntley Column' titled 'RCAF Colours 1939-1945'. Huntley said, "*Canadian Dark Earth was perhaps a fraction more red-brown; Dark Green a little more of a blue-green, while the RCAF-titled 'Duck Egg bluish-green Sky' a shade more on the blue side than its MAP counterpart*". (*Editor: see further discussion on this point in Jim Bates' article, elsewhere in this issue.*)

With this in mind, I took the stock **Testors Model Master (MM)** paints for these colours and added the colours mentioned by Mr. Huntley to produce slightly different-looking colours - well, for the **Sky** and **Dark Green** anyway. When I added a dollop of red to the **Dark Earth** it went maroon on me! So it was back to using 'standard' **MM Dark Earth** for this build.

A Conversion Project For The Novice

Hasegawa's 1/48 Hurricane has been well-covered in the past; this article will address the modifications required to produce a home-based 'Canadian' machine.

(Jim Bates: NOTE - Since Vic's article was written, Ultracast has produced a conversion set - Part 48148 - Canadian Hawker Hurricane Hamilton Standard Prop & Engine Face, which includes the correct propeller and the exposed portion of the Packard Merlin engine.)

We can turn our attention first to part K1 - the combination of the airscrew gear housing and constant speed unit. Additional detailing was simply adding a number of discs made using the **Waldron Sub-Miniature Punch & Die Set**.

The second bit of work was modifying **Monogram B-17** propeller blades to more closely resemble the ones used on the Hurricane. In this case I rounded the tips, and thinned the lower section. The hub detail closely matches the actual item and therefore can be left alone. Make sure to leave the seam in place on the housing as this reflects the joint in the actual unit.

Construction and Painting Notes

I was going to use the **Aires** detail set for this build, but after a careful check and comparison to the kit parts, very little was used. The great kit-supplied cockpit was enhanced simply with the **Aires** etched map case and two control knobs. Further aftermarket goodies were:

- ◇ Ultracast's excellent seat and armour plate set (48019)
- ◇ some fine wire (sidewall plumbing) and plastic rod (control linkage to the control column)
- ◇ Cutting Edge British GM-2 Gun sight (CEC48 1 57)
- ◇ the canopy sliding section is from **Squadron Set SQ96J9**.

The cockpit interior was mostly painted **Model Master RAF Interior Green** that was further enhanced with dry-brushing and a Coal Black oil wash application. (*Jim Bates: Note that while portions of the fabric and back armour were actually Interior Green, all of the tubular metal structure was painted in silver butrate dope. The silver dope was also used in the landing gear bays, the engine mounts, and interior cowling parts.*)

With the interior painted and fuselage joined, we are now faced with that poor fit between the bottom wing and aft fuselage. Having done a couple of **Hasegawa Hurricanes**, these are the standard steps that I follow:

1. Glue the wing into location and then fill the seam with super glue.
2. Sand the entire area smooth.
3. Restore the removed raised ribs with sections of 0.0010" strip.
4. When completely bonded, the strips can be gently sanded until they blend into the detail of the surrounding area.

For the rest of the build, some aftermarket sets or borrowed items were used to make an accurate **Hurricane Mk. XII**:

- ◇ the excellent **Ultracast Wheel Well set** (48079) that was further improved with some fine copper wire and plastic rod.
- ◇ **Ultracast 4-spoked Wheels** (48076).

◇ **Ultracast** also supplied the correct **early exhausts** (48043) that look great. These gems were pre-shaded with black, then misted with **Model Master Rust**. To further bring out the detail, a black oil wash was applied, followed by some careful brushing with dry pastel chalk.

Another thing that was noted during research was the occasional practice of writing '**LOADED**' in white letters (chalk or paint?) on the taped-over inner guns location, and I have replicated this. This was most common with **Eastern Air Command** squadrons, with some aircraft even being labelled '**GUNS LOADED**' !

One of the quirks of the Hurricane that is often overlooked is its 'pilot mounting system'. When the foot stirrup is lowered (*located on the port side lower fuselage, just aft of the wing trailing edge*), the upper hand-hold pops open (*located on the port side upper fuselage, just aft of and below the canopy*).

To replicate this feature, the kit's foot stirrup was thinned down and then the moulded hand grip was replaced with some fine brass wire that looks much more scale in appearance. Likewise, the moulded hand hold was cut out and the hole was backed with some card. A new 'cover' was then made from 0.010" thou card, painted and glued into location. The early tailwheel came from the **Airfix Hurricane Mk. I** kit.

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About the author:

Vic Scheuerman hails from Ontario but now lives in Edmonton since first serving there in the Canadian Airborne Regiment. After a stint as a Canada Post letter carrier, he became a firefighter for the next 30 years. A busy retirement revolves around mountain hiking, camping and road trips in the summer, balanced by model building and reading history for the rest of the year. Primary modelling subjects are 1/72 or 1/48 aircraft.

IPMS Canada 2016 Decal Sheet

RCAF HWE Hawker Hurricanes

Research and information by Jim Bates

IPMS Canada C#6008

Seattle, WA

Hurricane Mk. I 1380 / RA-S, 128 (Fighter) Squadron, RCAF Station Torbay, Newfoundland

This aircraft was built by Canadian Car and Foundry (CCF) as a Hurricane Mk. I for the RAF and diverted to the RCAF. The accident depicted in the two photos (at right) occurred on July 26, 1942. **Hurricane 1380** was later returned to Canadian Car and Foundry for conversion into a Hurricane Mk. XIIA in late 1943. After conversion, it was allocated to 1 (F) OTU and operated until an Category A accident (i.e., the aircraft was a write-off) in August 1943.

It was painted in the standard RCAF HWE scheme of Dark Green/Dark Earth over Sky undersides. The national markings were the standard **Type A1** roundels on fuselage, **Type B** on top of the wings and **Type A** below the wings. The squadron codes were painted in **RCAF Light Grey** (aka **RAF Medium Sea Grey**). Notice the squadron code placement variation on each fuselage side - **RA-S** on the left and **S-RA** on the right.

Hurricane Mk. XII 5398

133 (Fighter) Sqn

Western Air Command

"March of Dimes" was a Canadian Car and Foundry-built **Hurricane Mk. XII** (or, if we look at the record card, a **Mk. IIB(Can)**) **RCAF serial 5398**. Those nose art commemorates that this was a presentation aircraft paid for by "**Canada's March of Dimes**", which apparently is an odd coincidence, as the non-profit organization **March of Dimes Canada** did not exist until 1949. The nose art was applied at the factory and at least one photograph exists of this aircraft without the exhaust glare shields fitted. (The shields were in place by the time the Hurricane was operating at Lethbridge.) The aircraft was taken on strength with 133 (F) Sqn in July, 1942 while they were working up at RCAF Stn. Lethbridge, Alberta. The Squadron relocated to RCAF Stn. Boundary Bay, British Columbia in October, 1942. March of Dimes was written off on February 4, 1943 in a Category A crash near Pender Island, B.C., killing the pilot, Flying Officer Grover Stewart Sargent, Jr.

Hurricane 5398 was painted in the standard RCAF HWE scheme of **Dark Green/Dark Earth** over **Sky**. Upon arrival at Lethbridge the aircraft did not carry an aircraft code, but it was assigned the code '**L**' before arrival at Boundary Bay. The aircraft code is probably painted in white, though RCAF Light Grey (aka RAF Medium Sea Grey) is possible. (The E.O. Specs state codes were RCAF Light Grey.) March of Dimes wore the standard **Type A1** roundels on the fuselage, **Type B** on top of the wings and **Type A** below the wings.

RCAF specs required lettering on presentation aircraft to be in **white**, but the photos appears to show yellow lettering. Both are provided on the sheet and you have the option to use either. If the yellow is chosen, it is suggested to use the white as an underlay to the yellow lettering.

Some sources say the aircraft was assigned the code **FN*L**, but there is no photographic evidence to support that position. Additionally, there is almost no photographic evidence to illustrates any WAC Hurricane XII's with Squadron codes.

March of Dimes is a Hurricane XII fitted with a Merlin 29 engine and a Hamilton Standard propeller. While it features the longer fuselage and 12 gun wing of the Hurricane IIB, it is fitted with a Mk. I style tail wheel and the earlier round exhausts.

Hurricane Mk. XIIA BW870, No. 1 Central Flying School Trenton, RCAF Stn. Trenton, Ontario

BW870 was built as a Hurricane Mk. I for the RAF and diverted to the RCAF.

It was returned to Canadian Car and Foundry for conversion into a **Hurricane Mk. XIIA** in late 1943. After conversion, it was allocated to No. 1 Training Command and based at RCAF Stn. Trenton. It set an unofficial station altitude record at the hands of Station Commander Alan Bell-Irving. It suffered an accident on February 2, 1945, when it landed short, hit a snowbank and went over onto its nose. In the summer of 1945 it was displayed on the base nose-down in 'faux' Japanese markings. It was painted in the standard RCAF HWE scheme of **Dark Green/Dark Earth** over **Sky**. Unusually, it carries **Type A** roundels on the fuselage, **Type A** on top of the wings and **Type A** below the wings. The serial is present in a very non-standard format on the rear fuselage in **black**. The spinner is **Sky...** or **white**. A **Sky** spinner would have been normal for RAF aircraft in the UK, but not necessarily for the HWE RCAF. You'll have to flip a coin and decide.

Hurricane Mk. XIIA 1365 / 16, 1 (Fighter) Operational Training Unit, RCAF Stn. Bagotville, Quebec

Built as a Hurricane Mk. I for the RAF and then diverted to the RCAF. Returned to CCF for conversion into a Hurricane Mk. XIIA in late 1943. After conversion, it was allocated to 1 (F) OTU and operated as the '**Bouncer**'. As the name suggests, the aircraft was flown by an instructor and used to 'bounce' unsuspecting students during training.

Hurricane 1365 was painted in the standard RCAF HWE scheme of **Dark Green/Dark Earth** over **Sky**. Standard **Type A1** roundels on fuselage, **Type B** on top of the wings and **Type A** below the wings. The nose section and fuselage code 'buzz' number on the fuselage are in **yellow**. The spinner is **red**.

Page 30 I'm working on my Six-Pack... of Shermans

**By Barry Maddin
IPMS Canada C#6000
Truro NS**

Planning for a model competition in Berwick, Nova Scotia, with the theme of "Sherman Tanks", I looked over my stash and found that I had a number of Sherman kits. I decided to put together a collection of Sherman Tanks used by the Canadian Army during the Second World War. I had six kits that I could build as Canadian Shermans used by various Canadian Armoured Regiments. With what I had on hand I could build a **Sherman II**, **Sherman III**, **Sherman V**, **Sherman Firefly Ic Hybrid Hull**, **Sherman Firefly Vc** and, with some extra work, a **Sherman ARV Mk I**.

The Regiments

Research on Shermans used by the Canadian Army confirmed most of what I already knew, and proved that research is never wasted time in this hobby:

- ◇ The Sherman M4A1 or **Sherman II** was used by the **Governor General's Horse Guards (GGHG)**, 5th Canadian Armoured Division in Italy.
- ◇ The Sherman M4A2 or **Sherman III** was used by **The Fort Garry Horse (FGH)**, 2nd Canadian Armoured Brigade in North West Europe.
- ◇ The Sherman M4A4 or **Sherman V**, the most common Sherman used by Canadian armoured units, would be from **The Ontario Regiment (Ont R)**, 1st Canadian Armoured Brigade in Italy.
- ◇ The M4 Composite Sherman or **Sherman Firefly Ic**, also a common Sherman in many regiments, would be marked as a **South Alberta Regiment (SAR)** Sherman, 4th Canadian Armoured Division in North West Europe.
- ◇ The Sherman M4A4 Firefly or **Sherman Firefly Vc** would be an **8th Princess Louise's (New Brunswick) Hussars (8CH)** Sherman, 5th Canadian Armoured Division in North West Europe.
- ◇ The **Sherman Armoured Recovery Vehicle (ARV) Mk I** would be marked as a **Royal Canadian Electrical and Mechanical Engineers (RCEME)** Sherman, 2nd Canadian Armoured Brigade in North West Europe.

I made resin copies of the regimental hat badges from my collection to accompany the Shermans.

The Builds

Sherman II - GGHG

I started with the **M4A1 (76) Italeri kit**. The Sherman II's that the GGHG received from British stocks while in Italy were 75 mm gun tanks so I had to make changes to the Italeri kit.

I started with an Italeri M4A1 (75) turret which had the later loader's hatch. I glued the hatch in place, sanded down the details and puttied over the imperfections. I then assembled the turret with a 75 mm gun tube and M34A1 gun mount from my spare parts bin and then mounted two **Maple Leaf Models** smoke dischargers on the right side of the turret. I added a wire hatch handle and clear periscope and guard to the split hatches of the commander's cupola and mounted a 0.30" cal. MG with an anti-aircraft mount.

Building the suspension, I used the kit's bogie assemblies but substituted the kit parts with **Dragon** road wheels (spoked and solid), drive sprockets and idlers. I switched out the sharp-nose transmission cover for a round-nose cast transmission cover and older style bolt strip and replaced the front fenders and installed clear periscopes in the crew hatches and replaced the kit headlights with clear ones.

Based on a photo of a GGHG Sherman II in Italy I also glued a set of **Ultracast Ammo Boxes** to the bow (**Photo 1**). I also changed the rear engine deck with the earlier style M4A1 (75) deck, changed out the engine compartment vents for an older style and mounted a Commonwealth-style storage box and fire extinguisher on the rear hull. Using one of the excellent **Black Dog** stowage sets I added a small amount of stowage to the rear deck (**Photo 2**). On the sides of the tank's upper hull I drilled out the mounting holes where the sand shields would have been removed (**Photo 3**).

With the lenses of the periscopes and the headlights masked off the vehicle was primed with **Krylon Gray Primer**. I then mixed **Tamiya XF-62 Olive Drab** with some **Tamiya XF-79 Linoleum Deck Brown** until I had an approximation of **SCC** (Standard Camouflage Colour) **2 Brown** and painted the vehicle. I then went over the tracks with a heavy black/brown wash and detailed painted the hatch pads, stowage, tools and such. The road wheels were painted with **Vallejo 306 Dark Rubber**. Using wet transfers, I applied an air recognition roundel, unit markings, bridge classification and vehicle registry numbers by floating them in a pool of **Future Floor Finish** then pressing them down into the future and applying more **Future** over top. I had read about this method and had tried it out before and found that it completely eliminates silvering in one quick process. Then using **Cafe Mocha acrylic craft paint** I gave it an overall wash and

weathered it with **MIG European Dust pigments** and highlighted the wear points with a silver pencil. Everything was then sealed with a coat of **Testors Dullcote**. I added **Ultracast** figures in the crew commander's, co-driver's and driver's positions but substituting **Hornet** heads in US-style tanker helmets for the co-driver and driver (**Photo 4**).

Sherman III - FGH

Sherman III's were issued to 2nd Canadian Armoured Brigade prior to D-Day and I used the **Dragon Kit # 6231** to build a **Fort Garry Horse** (FGH) Sherman. The kit was built OOTB except I omitted the sand shields, rear deck bins and front fender stowage rack. I replaced the kit's WE 210 Rubber track with a DS Rubber Chevron track. I added a brass strip with sand shields mounting holes, replace the front fenders, installed a rear hull stowage rack and added some **Black Dog** stowage to the rack. I also replaced all the kit grab handles with wire ones and added a hasp to the turret storage bin (**Photo 5**). As was the practice of the FGH in North West Europe I added extra track to the hull front and turret sides (**Photo 6**). The mounting of extra track as additional armour protection was started by units of the 2nd Canadian Armoured Brigade during the Normandy campaign and other units soon followed. As before I masked off all the lenses and primed the vehicle with **Krylon Gray Primer**. I painted the vehicle overall with **Tamiya XF-62 Olive Drab**. Adding a little **Tamiya XF-4 Yellow Green** to the Olive Drab I hit the highlights on the turret and hull. I hand painted the road wheels and all the track rubber chevrons with **Vallejo 862 Black Gray**. The stowage and vehicle tools, MG barrels, periscopes and hatch pads were then painted. I applied the decals in the same manner as the Sherman II and gave the vehicle a wash of **Autumn Brown acrylic craft paint**. The wear points were given a rubbing from my silver pencil and the vehicle was then given a dusting of **MIG European Dust**. After shooting it with **Testors Dullcote** I placed an **Ultracast** figure in the commander's hatch (**Photo 7 & 8**).

Sherman V - Ont R

The Ontario Regiment of the 1st Canadian Armoured Brigade was one of the first units to receive the Sherman V just before their deployment to Sicily. Not having a Sherman V kit I used the **Dragon kit # 6182** which is a Firefly Vc kit. However, I only used the hull and substituted the kit turret for a Dragon M4A4 turret which I had in my spares box. The kit went together well except I had to add a styrene strip above the transmission cover bolt strip to cover a gap (**Photo 9**). I added track extensions from my spares box to the kit's tracks. I replaced the kit grab handles with wire and added hinges and a latch to the rear turret storage bin. I mounted a 0.50" cal MG on the turret as was the practice on Canadian Shermans in Italy (**Photo 10**). I primed the tank with **Krylon Gray Primer** and painted it with **Tamiya XF-62 Olive Drab**. I didn't tone down the Olive Drab as I wanted to represent a vehicle in the early stages of the Italian campaign. I painted the road wheels **Vallejo 306 Dark Rubber** and the 0.50" cal MG and the hull MG barrel **Vallejo 950 Black**. I added the air recognition roundel, red and white recognition panels, unit markings and vehicle registration numbers using the same method as the other vehicles. I gave the vehicle a wash of **Candy Bar Brown**, which has a reddish hue and applied silver to the wear points. I further weathered the vehicle with **MIG African Dust**, sealed it with **Testors Dullcote** and added an **Alpine Crew Commander** (**Photo 11**).

Sherman Firefly Ic - SAR

The next Sherman was built from the **Cyber-Hobby Kit # 9104** of a **Firefly Ic Hybrid Hull**. It would represent a South Alberta Regiment (SAR) Sherman in the 4th Canadian Armoured Division in Holland. The kit went together well except for the front fenders where I had to add spacers from the front edge of the hull so that the fenders would be in the correct position. I

installed a sand shield bolt strip to the hull sides and replaced the commander's copula with the correct split hatch design and added a hatch pad to one of the split hatches. I replaced all the grab handles with wire and added spare track to the hull and turret. Based on the reference picture I was using I replaced the kit track with track having track extensions and added a 'phoney' muzzle brake to the main gun barrel at the point where a normal 75 mm barrel would end. Fireflies were a priority target for German anti-tank gunners so efforts were made to disguise the long 17-pdr barrel on the Firefly tanks. I then added **Ultracast ammo boxes** and **Black Dog stowage** to the front and rear of the tank (**Photo 12 & 13**). I primed it with **Krylon Gray primer** and painted it **Tamiya XF -62 Olive Drab** with a touch of **Tamiya XF-26 Deep Green** added to slightly darken the **Olive Drab**. I hand painted all the track links **Vallejo 941 Burnt Umber** and the road wheels were painted **Vallejo 306 Dark Rubber**. I painted the stowage and commander's hatch pad and rubbed silver over the wear points on the track and hull. I painted a wavy line with **Vallejo 993 White Gray** as countershading under the gun barrel from the fake muzzle brake to the end of the barrel. For some inexplicable reason I abandoned the 'float the decal in **Future**' method and applied them in the regular fashion only to have some of the edges silver on me. I was able to touch up the edges with paint and released that I hadn't laid down a proper gloss coat; lesson learned. I gave the whole thing a wash of Burnt Umber acrylic paint and weathered it with **MIG European Dust** and finished it with **Testors Dullcote**. I then added an **Ultracast** figure in the commander's hatch (**Photo 14 & 15**).

Sherman Vc - 8CH

The 8th Canadian Hussars fought through Italy and in March 1945 were transferred to North West Europe. I wanted to depict a **Sherman Vc** of the 8th Hussars in Holland near the end of the war. I used the **Tasca Sherman Firefly Vc kit # 35-011**. It's a nice kit but a bit more work than the other ones. The suspension bogies are designed to spring so the instructions have you cut three rubber pads and add them to the top of the volute springs for a spring-like action. The hull consists of eight parts compared to the one-piece hull in the other kits. Assembly was straightforward with care taken to ensure the hull was nice and square. The instructions include a sheet of corrections for a number of steps which was nice to see. I did add handles to the commander's split hatch and etch guards to the turret periscopes. Based on a photo of a Canadian Firefly in Holland with Tiger and Panzer IV track welded to the hull and turret I installed **Friul Panzer IV track** to the hull front and Tiger tracks to the hull and turret sides. I mounted the spare vehicle track racks to the sides of the armoured radio box and added **Black Dog** stowage to the top of the turret stowage box and on the rear deck (**Photo 16**).

After masking the periscopes I primed the vehicle with **Krylon Gray Primer** (**Photo 17**) and painted it with **Tamiya XF-62 Olive Drab**. I painted the Panzer IV track **Vallejo 862 Black Gray** and the Tiger track **Vallejo 941 Burnt Umber**. I then painted the road wheels **Vallejo 995 German Gray** and painted the stowage, vehicle tools and spare track with suitable **Vallejo** paints. I applied the decals floating them on **Future** and hit the wear points with my silver pencil. I gave everything a wash of **Autumn Brown Acrylic paint** and weathered it with **MIG European Dust**. I airbrushed everything with **Testors Dullcote** then cut headlight lenses from clear acetate and after painting the insides of the headlights **Vallejo 997 Silver**, glued the lenses in place with **Gator Glue**. I painted and then glued two **Ultracast Ammo Boxes** onto the front fenders. I then added an **Ultracast Tank Commander** wearing a cold weather Pixie suit (**Photo 18 & 19**). I later added some netting to the main gun barrel to break up its stark outline.

Sherman ARV Mk. I - RCEME

The **Sherman Armoured Recovery Vehicle (ARV) Mk. I** of the **Royal Canadian Electrical and Mechanical Engineers (RCEME)** was next, and I used the **Tamiya Sherman Firefly Vc kit # 25174** as the donor kit. This kit is identical to the **Tasca Firefly** kit except for the instruction sheet and the five bonus Infantry figures from the **Tamiya Figure Set # 35223**. I built the suspension and hull as per the instructions but left off the vehicle tools and gun crutch.

After looking at wartime pictures of the **Sherman ARV Mk. I** and pictures of the components of the **Resicast** and **Legend Sherman ARV Mk. I** conversion kits I was ready to tackle the job. I first measured the turret ring and cut out a cover from 0.030" styrene sheet and cut out an access hatch opening. I added a strengthening rib to the middle of the cover from the access hatch opening to the edge of cover. I made and installed split hatches, mounted a spare road wheel, track adjuster spanner and a fire extinguisher to the cover. I added a radio antenna and glued a lifting ring with a D-ring to the front edge of the cover and drilled a hole for a 0.50" cal. MG mount (**Photo 20**). I made tow cables in two sizes and secured them around the outer edge of the cover and installed the 0.50" cal. MG.

The Web provided me with a list of equipment carried on a typical Sherman ARV; one item that stood out was the track grousers. I had several pictures of the grousers and scratch-built one, poorly I might add. I then I realized I had an M10 kit that had grousers. So, armed with these grousers, I built grouser racks and mounted three racks on the left and two on right side of the hull. With square **Evergreen** stock I made two arms for a lifting frame and with hangers made from strips of photo-etch brass I secured the lifting frame arms along the hull sides. With the grouser racks on the left side of the hull I also installed a drive sprocket hanger; scratch built 'A- frame' tow bar, spare road wheel and two track support rollers in a scratch built rack (**Photo 21**). With the grouser racks on the right side I mounted a track pad rack, storage bin, POL (petroleum, oil, lubricants) cans in a rack and a shovel (**Photo 22**).

Another item used on the ARV was ground anchors. These were steel bars with holes along their length through which ground stakes were set and driven into the ground. A series of these lashed together were used to anchor a pulley allowing the ARV, with a tow cable, to perform an extraction of a mired vehicle. I made the ground anchors using **Evergreen 0.080" rod** with 0.020" holes drilled along the length. I then made the ground stakes cut to size from **Evergreen 0.020" rod** with rings made from brass wire glued to the top. Then using **Evergreen U-channel** and strips of brass cut from used photo etch frets I made mounting racks for the ground anchors and stakes. On the bow of the ARV I mounted a parts bin, vise, single sheave pulley, three ground anchors and rack, spare track pad racks, communications wire roll and spare road wheel (**Photo 23**). Another item carried by the ARV's were Gun Planks which were used to keep the pulley and tow cables out of the mud and could be used as improvised ground anchors. Using bass wood I made two square timbers and two heavy planks and then four lighter planks using **Evergreen # 169 0.080" x 0.25" strips** on which I etched a wood-grain pattern. Based on my reference pictures I made mounting racks for the planks and installed them on the upper deck. I then installed two ground anchor racks with three anchors in each on the left side and two ground stake racks with 20 ground stakes in each rack on the right side of the upper hull. I also added a spare road wheel to the deck and installed the vehicle tools (**Photo 24**).

After masking the periscopes I primed the ARV with **Krylon Gray Primer** and painted it with **Tamiya XF-62 Olive Drab**. I then painted the road wheels **Vallejo 995 German Gray** and painted the ARV equipment, stowage, vehicle tools and spare track with Vallejo paints. I painted an **Ultracast Ammo Box**, a tent roll, oil can, funnel and a couple of jerry cans which I marked as water and anti-freeze cans. I glued them all on the rear deck and then applied the unit decals and vehicle registration numbers. Highlights were picked out with a silver pencil and the ARV was given a wash of **Autumn Brown Acrylic paint** and weathered with **MIG European Dust**. I then airbrushed a coat of **Testors Dullcote** to seal everything. I installed two **Resicast** figures in the driver's and co-driver's positions and painted a **Miniart** figure for the crew commander. I planned to install the crew commander after the ARV was mounted to the display board (**Photo 25-28**).

The Display

Using a pine shelf board I laid out the Shermans in an arc and marked the length I needed and drew the curved outline I wanted the display to have. I cut the board to length; jig sawed the curved shape and routed the edge. I had drilled a hole

in the bottom of each hull and with the Shermans in position I marked a spot for each and drilled a hole in the board and countersunk it on the bottom side of the board. I then stained the board and sealed it. I printed out a label and stuck it to a sheet of **0.020**" plastic, trimmed it and ran a sharpie around the edge. I then drilled holes in the corners and mounted the label to the board with brass nails (**Photo 29**). I then inserted # 10-2" bolts through the holes (**Photo 30**) and painted the lower portion of the bolt black (**Photo 31**). Without the turrets in place it was a simple matter to position the tank on a bolt and hand tighten a nut securing each Sherman on the board (**Photo 32 & 33**). With the hulls secured I placed the turrets on the correct hulls. I then glued the resin copies of the unit hat badges I had made and painted, in front of the applicable Sherman and added the ARV commander. The display was now complete (**Photo 33**).

Conclusion

This project was a fun build and although I feared I would get bored building Shermans, that was not the case. There was enough variety to maintain interest and I enjoy building Canadian vehicles. The display represents a very small selection of Shermans or Sherman variants used by the Canadian Army during WW II but it covers the main versions used by Canadian armoured units. I was happy with the results of my efforts and the display did well at the Berwick Show, winning the theme award.

References

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- ◇ the.shaddock.free.fr/sherman_minutia/
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About the author

Barry retired from the CF in 2009 after a 37-year career as a Navy Stoker, an Army Vehicle Technician, and finally as an Army EME officer. In 2009 he and his wife moved to Truro NS from Ottawa 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 WW II armour and military vehicles, although he does dabble in other areas. He is a member of AMPS and has been a member of IPMS Canada since 2000.

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