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Cover Comment: *Frank Cuden of Albert Lea, MN created a very nice 1:72 RCAF C-45 Expeditor, based on the Pioneer kit, upon which he applied some of IPMS Canada's free decals for the same subject. Frank's article starts on page 23.*

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Editorial

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The IPMS/USA Nats

This issue of **RT** is off to the printer in mid-August, so I'm writing this even before the IPMS/USA National Convention ("the Nats") gets rolling in Las Vegas. All I can say at this point is that I hope it's a safe and successful event. This has been a tough couple of years for our modelling friends to the south. San Marcos in Texas didn't happen in 2020 and it's rescheduled for 2023. With COVID still being a real thing for many folks to deal with in 2021, moving forward this year has got to be getting a lot of serious soul-searching for IPMS/USA, the Nats organizers, along with those modellers who are thinking of attending.

The final piece of news that nailed it for me was that the border was still closed for non-essential travel (*no matter what we think of our hobby, it ain't really saving the world*), right up to the week of the Nats, so that's when I and a few of my Canadian buddies finally declared that Vegas wasn't happening for us this year and we cancelled our room reservations. I was wistfully imagining the little happy dances that each cancellation produced for US modellers on the Rio's waiting list for a room at the main hotel. Of course we're now looking forward to Omaha in 2022 and I think that all IPMS Canada members who have enjoyed and still plan on going to the US Nats would extend their best wishes for the Nats in Vegas, baby.

The #3 issue of **RT** in a volume year is intentionally delayed by a few weeks and normally contains our US Nats coverage. But with the travel restrictions still weighing heavily on Canadians (*which forms the bulk of the small crew that*

gets dragooned into helping out each year) the national executive committee thought it prudent to not proceed with the IPMS Canada 'Best Canadian Subject' award again for 2021. Hopefully the event can be run again in Omaha in 2022. We'll be looking for your help, folks, so please consider stepping up next year. We'll remind you on the national web site and on our Facebook page.

Increase your hobby's local stock value...

A little hobby self-promotion around the house can be a good thing. A recent item came up on the 'honey-do' list where an acrylic/fibreglass bathroom fixture developed a small hairline crack. I dutifully went and fetched all the implements needed to repair said crack - my riffler files to carve a tidy V-wedge in the crack, nice masking tape to dam in the repair, some very nice high-end epoxy to do the job, and some fine grades of sandpaper to smooth out and polish down the repair. I made a point of telling SWMBO that all of this came off my hobby bench, and wasn't it great that I had prepared for just this moment? Yeah, she didn't buy it, either, but it was worth a shot, guys...

Looking forward...

The world feels like it's moving towards whatever normal is going to be following COVID-19. I'm certainly looking forward to it and I hope you're all doing your part to keep yourself and all those around you safe.

Final Stand - An 'Indian Wars' diorama

Barry Maddin

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Historical background

The Indian Wars is one of the terms given to a long period of violent conflict between 1540 and 1924. There were numerous armed conflicts between colonists and later, settlers and the indigenous people of the Americas in the lands that became Mexico, America and Canada. These conflicts resulted from competition for resources and land ownership as the colonists and settlers encroached into territory which had been traditionally inhabited by Native Americans. The years of warfare and raiding cost the lives of many on both sides of the conflict.

The Kits

Master Box released a series of 1:35 scale figures they call "Indian Wars Series". The first kit is titled "Apache Attack" (MB 35188) consisting of two figures: a mounted Apache Warrior and a running Apache Warrior (**Fig. 1**). The second kit is titled "Tomahawk Charge" (MB 35192) also with a mounted Warrior and a charging Warrior on foot (**Fig. 2**). The third kit is "Final Stand" (MB 35191) which consists of a Calvary Sergeant kneeling behind his horse and a Scout engaging a foe (**Fig. 3**).

The instructions are printed on the reverse of the boxes with the part numbers indicated on a diagram of the figures and sprue. Painting details are called out on the assembly diagrams with a colour chart identifying the colours using Vallejo and Lifecolor paints (**Fig. 4**). There are no part numbers on the sprues so you will need to compare the sprue with the box diagram. The figures are cast in grey styrene that is easy to cut and sand, with the figures fine detail well rendered with minimal mould lines (**Fig. 5**).

The Build

I started the build with the "Final Stand" kit. As I normally do with figures I used the back of a # 11 knife blade to undercut the clothing edges and re-scribe the detail to increase the sharpness of the moulded detail. I assembled the Calvary Sergeant with his 1873 Trapdoor Springfield, a breech-loading rifle carbine and a sabre, adding a scabbard strap made from paper card stock. The overall fit was very good with only a little filler needed around the shoulders and on the two-part shoulder strap. The figure had an unusual arm configuration with the forearms provided as separate parts. The instructions mix up the numbers 46 & 47 but I am sure that most modellers can distinguish between an arm and sabre. To get the Sergeant's rifle posed correctly I glued the rifle in place in his hand, then dry-fitted the forearm and then glued the rifle butt to the shoulder. I used Squadron Green Putty to fill the gap at the elbow giving the arm a natural look supporting the rifle (**Fig. 6**). The instructions give you the choice of using the Kepi Forage cap or the Slouch Hat. My research indicated that the Kepi was generally worn while in garrison but the Slouch hat was preferred while on campaign. So I assembled the slouch hat and placed it on the head which I glued to a cocktail stick to facilitate painting (**Fig. 7**).

The Scout figure was next and as well as undercutting the clothes I carefully etched the hair and beard to accent that detail and re-scribed the fringe work detail on the Scout's jacket. I glued his head in place, as nothing would interfere with the face painting and added his rifle and his field kit (**Fig. 8**). Care should be taken while handling these figures as the Sergeant and Scout have spurs moulded on their boots and they are easily broken off, trust me; I know.

The Cavalryman's horse comes in two halves with the head, ears, mane and tail added separately. The two halves went together well with no gaps and the head fit with just a little putty needed at the neck joint and around the ears. The hair of the mane and tail are nicely detailed (**Fig. 9**) but I re-scribed them to bring out sharper detail (**Fig. 10**).

I undercut the saddle and saddle blanket, re-scribed the tack detail, glued on the saddle bags and bedding, and then added reins cut from paper card stock. The bed roll, ground sheet and saddle bags fit very well to the body contours and I put a little bend on the stirrup strap to get it laying over the curve of the horse's belly (**Fig. 11**).

I then tackled the Warrior figures following the same procedure of undercutting and re-scribing to enhance the detail, paying particular attention to the Warrior's hair and the fringe work on their clothing. I positioned their arms with weapons in place and mounted three of the heads on cocktail sticks for painting. The Warriors' rifles in the kit are Trapdoor Springfield rifles and not the Winchester style rifles pictured on the box art. The fourth Warrior was like the Sergeant and had his forearms joined at the elbow. The fit of the forearms was great and no putty was needed to get the correct pose and, like the Scout, I glued his head in place (**Fig. 12**). Three of the warrior figures followed the Apache style of hair with headbands and the Apache style of clothing with breechcloths. One figure is dressed in buckskin with his hair done in braids, something according to the references the Apache never did, so perhaps he is an ally from another tribe. With this figure you get a choice of which weapon he carries, either a Tomahawk or a Ball-headed War Club so I selected the Tomahawk. With the mounted Apache Warrior I glued the stirrups and straps in place on his feet to get the correct fitting for when he is mounted on his horse. The Warriors horses both went together well with minimum putty work and like the Calvary horse I undercut and re-scribed the details molded on them. I added paper reins to one and drilled through the bit area to insert a fine wire to simulate a rope rein on the other. Although the instructions call out specific Vallejo colours I wanted a wider range of colours since all the figures would be together in a diorama and I didn't want them looking too similar.

Painting

I primed all the figures, horses and heads with Krylon Grey primer. I then undercoated all the flesh areas on the figures with Vallejo 927 Dark Flesh. Using my normal method of painting flesh tones with Winsor & Newton oil I painted the figures flesh tones with the only differences being that on the Warrior figures I used Raw Sienna instead of Yellow Ochre and omitted the Flesh Tone. I painted the Warriors hair Panzer Aces 333 German Tanker Black which I found to be a better colour for the hair than straight black.

The Sergeant's jacket and hat was painted Vallejo 899 Dark Prussian Blue with his trousers painted Vallejo 809 Royal Blue. I then dry brushed the hat, jacket and trousers with Vallejo 962 Flat Blue and picked out the uniform trim with Vallejo 953 Flat Yellow. I used Vallejo 950 Black on the belts, straps, holster, boots, ammo pouch and sword handle and dry brushed them with Vallejo 870 Medium Sea Grey. The scabbard and spurs were painted Vallejo 854 Natural Steel with the rifle wood painted Vallejo 822 German Cam Black Brown and the metal parts of the rifle Vallejo 862 Black Grey (**Fig. 13**).

The Scout's hair and beard were painted Panzer Aces 333 German Tanker Black and his trousers were painted Vallejo 872 Chocolate Brown, dry brushed with Vallejo 875 Beige Brown. His boot tops, belts, shoulder strap and hat band were painted Vallejo 846 Mahogany Brown and the gun belt, holster, knife sheath, ammo pouch and boots in Vallejo 871 Leather Brown. The neck scarf was painted Vallejo 817 Scarlet, his hat Vallejo 983 Flat Earth with his jacket done in Vallejo 981 Orange Brown and dry brushed with Vallejo 824 German Cam Orange Ochre. The Scouts weapons were painted the same as the Sergeants with his canteen strap painted Vallejo 940 Saddle Brown and the canteen done in Vallejo 859 Black Red. His spurs, belt buckle and canteen top were painted with Vallejo 854 Natural Steel and Vallejo 998 Bronze respectively (**Fig. 14**).

I painted the mounted Apache Warriors head and neck scarves and uniform jacket trim Vallejo 957 Flat Red with his boots painted Vallejo 983 Flat Earth and dry brushed with Vallejo 976 Buff. His jacket was painted with Vallejo 962 Flat Blue, then dry brushed with Vallejo 841 Andrea Blue. The trousers were painted Vallejo 988 Khaki with his undershirt painted Vallejo 871 Green Brown and the breech cloth done in Vallejo 801 Oxford Blue, all dry brushed with Vallejo 976 Buff. Since the stirrups were probably made of wood I painted the stirrups Vallejo 822 German Cam Black Brown with the straps picked out with Vallejo 940 Saddle Brown. His ammo belt was painted Vallejo 862 Black Grey with the ammo and jacket buttons painted Vallejo 998 Bronze. His rifle was painted like the others (**Fig. 15**).

The running Apache Warrior had his neck and head scarves painted Vallejo 817 Scarlet with his boots done in Vallejo 879 Green Brown. The ammo belt was painted 871 Leather Brown and his trousers were painted Vallejo 983 Flat Earth and dry brushed with Vallejo 976 Buff. I painted the Warrior's under shirt Vallejo 884 Stone Grey and the vest Vallejo 862 Black Grey. The breech cloth was painted Vallejo 841 Andrea Blue. The shirt and breech cloth was dry brushed with Vallejo 976 Buff and the vest dry brushed with Vallejo 870 Medium Sea Grey. His rifle was painted like the others (**Fig. 16**).

With the mounted Warrior I painted the ties on his hair brads Vallejo 957 Flat Red with his arrow quiver and shoulder strap painted Vallejo 897 Green Brown and his bow quiver Vallejo 983 Flat Earth. I painted his moccasins Vallejo 871 Leather

Brown and the trousers, jacket deer skin trim and bow quiver trim Vallejo 876 Sand Brown. His jacket was painted Vallejo 843 Cork Brown and I dry brushed the pants, trim and jacket with Vallejo 976 Buff which helped blend everything together. The tomahawk head was painted Vallejo 862 Black Grey with the handle painted Vallejo 822 German Cam Black Brown (Fig. 17).

I painted the charging Warriors headscarf with Vallejo 817 Scarlet and his moccasins Vallejo 897 Green Brown. His leggings were painted Vallejo 988 Khaki and his breech cloth with 859 Black Red, all of which was dry brushed with Vallejo 976 Buff. The Warriors belt, throat strap, club strap, bow quiver and shoulder strap were painted with Vallejo 876 Brown Sand. I painted the arrow quiver Vallejo 871 Leather Brown with the trim on both quivers done with Vallejo 879 Green Brown. The Warrior is brandishing a Gunstock War Club with steel spikes which I painted Vallejo 862 Black Grey with the wooden portion done in Vallejo 822 German Cam Black Brown. On the Warriors neck strap and waist belt there were small discs which I painted Vallejo 999 Copper along with his metal arm bands. I then added a small dot of Vallejo 841 Andrea Blue to the neck strap and waist belt discs to represent pieces of turquoise (Fig. 18).

The horses were next. I started with the Cavalryman's horse painting the stirrup strap, saddle and saddle straps Vallejo 940 Saddle Brown. The belly band, saddle bags, bridles and reins were painted with Vallejo 871 Leather Brown and dry brushed with Vallejo 940 Saddle Brown. I painted the saddle blanket with Vallejo 899 Dark Prussian Blue and the bed roll at the rear of the saddle with Vallejo 809 Royal Blue with the ground sheet at the front of the saddle with Vallejo 962 Flat Blue. I dry brushed the two blankets with Vallejo 841 Andrea Blue. I then painted the stirrup, horse shoes and mouth bit with Vallejo 854 Natural Steel. I painted the horses' mane, tail and hoofs with Vallejo 941 Burnt Umber dry brushed with Vallejo 984 Flat Brown, and the horse's body with Vallejo 872 Chocolate Brown then dry brushed with Vallejo 875 Beige Brown (Fig. 19).

The Apaches' horse bridle, saddle and belly strap were painted Vallejo 940 Saddle Brown with the saddle pad and reins painted Vallejo 871 Leather Brown. I painted the saddle blanket with 929 Light Brown and the blanket at the rear of the saddle 981 Orange Brown was dry brushed 824 German Cam Orange Ochre. The mane, tail and hoofs were painted with Vallejo 941 Burnt Umber and dry brushed with Vallejo 825 German Cam Pale Brown. The horse itself was done with Vallejo 826 German Cam Medium Brown and dry brushed Vallejo 825 German Cam Pale Brown (Fig. 20).

The other Warrior's horse doesn't have a conventional saddle but has a blanket skin with a buffalo robe and no stirrups. There was no bridle but a simple bit arrangement. I started by painting the blanket skin Vallejo 843 Cork Brown dry brushed with Vallejo 976 Buff. The buffalo robe was then painted Vallejo 941 Burnt Umber and dry brushed with Vallejo 825 German Cam Pale Brown. I painted the horses' hoofs, mane and tail Vallejo 825 German Cam Pale Brown and dry brushed the mane and tail Vallejo 976 Buff. I then painted the body Vallejo 993 White Grey and, looking at many pictures of spotted horses, I used Tamiya tape to mask off areas I wanted to remain white. Using Vallejo 873 US Field Drab I painted the unmasked areas taking care not to build up a paint ridge along the masking tape. I then dry brushed Vallejo 875 Beige Brown on the Field Drab. I found some interesting information on markings used on warriors prized war horses and the specific markings they decorated their horses with. The yellow eye circles are to enable the horse to see danger and the nose stripes are a count of war honours. The leg strips indicate wounds from other battles and the horse shoe marks on the right side indicate the number of mounts captured. The hand symbol on the rear flank recognizes a mission accomplished and the hand on the front flank is a symbol of a death oath of vengeance (Fig. 21).

The Setting

I had a bit of a dilemma determining the size of the setting I wanted to make for the figures. On one hand I wanted to portray the open space of the South West but didn't want a lot of dead space in the setting. Nor did I want to have a space so small that the figures were crowded but I needed to keep it small enough to give the scene a sense of drama. I cut and shaped a block of insulating foam and positioned the figures on it to get a feeling for the space and the interaction between the warriors and the cavalymen (Fig. 22). I took the foam block and sanded the sides smoothing out the cut marks. Then using .030" styrene sheet I traced and cut out pieces to cover the blocks sides to give it a finished look. Using UHU Contact Power Glue in stick form I glued the styrene pieces to the foam block and finished the corners with my sanding sticks (Fig. 23).

I then glued the mounted Warriors onto their horses and using Testors Dull Cote applied a flat coat to all the figures. I took the block and painted it with Tamiya XF-64 Red Brown and verified the position of the figures on the landscape (Fig. 24).

I repositioned one figure and inserted fine finishing nails in the figures mounting holes to preserve them. I stuck on some grass turfs then using white glue I applied a generous coat to the surface of the block except the area representing the

rock surface I wanted left bare and sifted fine sand onto the glue. I used a flat brush to press the sand into the glue and when the glue was set up I knocked off the excess sand and removed the nails (**Fig. 25**).

I masked off the blocks edges and using Tamiya XF-59 Desert Yellow painted the sandy areas dusting over the bare rock areas and applying heavier coats to specific spots to provide some contrast on the sandy areas (**Fig. 26**).

I then dry brushed the rock areas with Vallejo 929 Light Brown and the sandy areas with Vallejo 847 Dark Sand (**Fig. 27**) and, using MIG Pigment 037 Gulf War Sand, I dusted the entire area adding extra texture to the sand and among the rock crevasses. Using Gorilla Thick Gel super glue I secured the figures to the base and dusted the MIG Pigment on the lower legs of the figures and horses (**Figs. 28 & 29**).

Conclusion

These kits make an interesting modelling subject each on their own or together. They were a nice change of venue from the regular figures I do and I was very pleased with the quality of the Master Box figures. The detail was well rendered and the body proportions were very well done without the big hand syndrome found with so many kit figures. Research is important if you want to accurately depict the figures, then the subject matter is certainly worth studying. If anyone is wants to do something different in 1:35 scale figures, then these are the kits for you. Additionally Master Box has released four new figure kits in this series which will look great in dioramas.

References

- u-s-history.com
- warpaths2peacepipes.com
- history.com

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.

Creating a Pitted Chrome Finish

Glenn Cauley

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Kemptville, Ontario

Introduction

While building a large scale rotary engine (a Hasegawa 1:8 Le Rhone for WWI aircraft), I was not satisfied with the plain finish on the large, prominent front plate. So I thought up a new (to me) technique to create a pitted chrome finish. This technique should work for other applications and scales.

Materials

- Flat black primer, not satin or gloss
- Chrome or silver paint
- Gloss clear finish (bottle, not spray)
- Chrome polishing powder
- Open-cell sponge
- Old, flat paintbrush
- Cotton swabs

Steps (keyed to photos)

1. Spray the model part with a FLAT black primer (not satin or gloss). I prefer to use an airbrush to spray Mr. Finishing Surfacer 1500 Black thinned with Mr. Color Leveling Thinner.
 2. After the primer has dried, paint the part with chrome or silver paint. The result will be a rough chrome silver base finish. **(Fig. Step 2)**
 3. Using a small piece of sponge (open-cell foam), apply random patches of GLOSS clear to the part atop the silver paint. It is important to use GLOSS clear, not flat or satin. I prefer MM Acryl Gloss Clear. The more patches that you apply, the less pitting there will be. **(Fig. Step 3)**
 4. Before the gloss clear is fully dry – it should be slightly tacky – brush on chrome metal polishing powder with an old brush. I prefer chrome polishing powder from Uschi van der Rosten. **(Fig. Step 4)**
 5. Use a cotton swab or an old cotton T-shirt to buff the powder. The chrome polishing powder will adhere to the patches of gloss clear. When you buff the powder, you will get random patches of smooth chrome atop the rougher silver finish beneath.
 6. The overall result simulates a pitted chrome finish. **(Fig. Step 6)**
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Northrop's YF-23 ...the other ATF contender

By Richard Clairoux
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Background

While I was studying engineering in 1990, the USAF Advanced Tactical Fighter (ATF) competition was going on between the Lockheed YF-22 and the Northrop YF-23. I was in love with the YF-23 sleek looks and its unusual butterfly tail! Unfortunately, the USAF picked the other guy. The YF-23 flew better and faster, but the YF-22 had a better production plan. I had been waiting for a mainstream release of the plane in 1:48 scale for years and then...

Photo Captions

HobbyBoss 'imagineered' the area behind the seat and this was replaced. First I made a new aft bulkhead using Evergreen styrene sheet. The ACES II resin ejection seat came from an Avionix F-16 set, and I added video camera mounts made from Evergreen strip styrene. The instrument panel was detailed using an old Reheat photo-etch set.

A lot of scratch-building was necessary behind the seat! It was created with Evergreen sheet, tubing and beams of various sizes. The cabling is made from copper wire of different gauges, which was AC-glued into place. All that is needed to make all these details is a lot of patience and Tamiya extra-thin cement (with the translucent light green cap).

This is the other side of the cockpit with quilted side insulation (made from Evergreen brick-pattern sheet) and coaming details, again using Evergreen strips. The bent cable beside the seat is .030" lead wire. The aft Environmental Control System (ECS) exhaust is made of Scale Scenics brass micro-mesh glued underneath the drilled-hole (I previously thinned down the plastic to a more-scale thickness).

The canopy was lacking a rear panel and that was scratchbuilt, again using Evergreen products. Parts were fitted by trial and error. The hinges' height was adjusted to get the correct canopy-open angle of 25°. The canopy's inner sides include added rivets and the actuator was made of K&S Engineering brass tubing.

Switching to the landing gear, for which HobbyBoss did a very good job. Tire ribs were added using thin Evergreen strips; the trick is to attach one small section at a time using Tamiya extra-thin glue. Hydraulic piping is made-up of copper wire that was carefully bent to shape and AC-glued in place.

The two main gear bays are very accurate. I simply added a few cylinders here and there using Evergreen tubing. One side of each bay was not glued at this point to facilitate the detail painting later.

HobbyBoss impressed me with the level of detail of the nose gear bay. The nose tire also received new ribs. The YF-23 had a 'shimmy weight' to dampen vibrations during take-off: this looks like a torque link and is made up of Evergreen strip. A tie-down ring and cable are added using copper wire.

HobbyBoss represented well the 'S'- shaped engine air inlet ducts. This hides the engines in front-view and therefore reduces the YF-23's radar signature. But HobbyBoss 'forgot' to provide the engine compressor faces! These were added using airliner engines from the spares-box that were trimmed to shape.

Now to the jet exhausts. The supplied afterburner flame holders lacked details and they were replaced by old 1:32 Revell CF-18 parts! Evergreen half-round strips are used for the exhaust floor corrugations. Finally, the two types of exhaust flaps needed stiffeners added; once again Evergreen strips were used here.

Ah, the air intakes... First, the bottom of both intakes is not flat but has a curved 'bump'; this was built-up using Evergreen strips and AC glue to fill the voids, followed by lots of sanding! Then the inner lips had to be extended by .20". Note the triangular vortex generator added inside the 'S' ducts.

Underside view showing the reworked air intakes. Additional details were added; from left to right - refuelling ports in gear bays, air turbine starter outlets (brass micro-mesh), ECS cooling air inlet with hexagonal door and finally the Auxiliary Power Unit (APU) inlet grille. Some panel lines were corrected and some fasteners were drilled-in.

The YF-23 exhaust troughs used air-cooled tiles to reduce the overall infrared signature. The kit's exhaust tiles are provided in a staggered building brick pattern but the real thing has square tiles. This required re-scribing lines in the confined area of the troughs, using Dymo-Tape to get straight lines. Four aft doublers were added (of course with Evergreen strip!). Note at left the engine bay venting grilles, again created using the brass micro-mesh technique.

The main landing gear components were airbrushed with Tamiya White X-2 and Flat Black XF-1, with Vallejo 71.065 Steel side beams. The black composite panels required careful masking using Tamiya tape. A homemade wash using Rembrandt artist oil paints diluted with Pébéo mineral spirit highlights the details.

The nose landing gear gets the same treatment. The 'shimmy weight' and some bay wiring were painted Testors Model Master International Orange, as is customary with experimental equipment.

The jet exhausts and flaps were airbrushed Vallejo Metal Color 77.703 Dark Aluminum and the afterburner flame holders were done in Vallejo 71.065 Steel. Previously I had painted the exhaust floor corrugations with Tamiya White X-2. Everything was then weathered using the same artist paint wash recipe that I described earlier.

The painted cockpit: Tamiya Flat Black XF-1 was used for the seat, instruments and horizontal surfaces; Tamiya Sky Grey XF-19 for the sidewalls; Tamiya Yellow Green XF-4 for the aft area; Humbrol Matt Brown 26 for the seat cushions. Various details are painted yellow, green, white, silver, International Orange and red.

The exhaust troughs were painted before the overall camouflage painting was done, as the detail masking was not easy in this area. First, a base of Vallejo Metal Color 77.703 Dark Aluminum was applied. Carefully studying references, I masked the desired tile pattern over a period of two hours! Then the lighter tiles were airbrushed Vallejo 71.065 Steel.

The top and bottom fuselage halves and the wings were joined together without difficulty. The nacelles top contours were corrected to get a smooth curve that removes the kit's flat spot (Evergreen strips were used to build up the area). The air intake ejectors got the brass micro-mesh treatment. All panel lines and fasteners were re-scribed to match references.

Here's my panel line scribing kit! From top to bottom: cleaning toothbrush, X-Acto handle holding a needle, Bare Metal Foil scribing tool, pin-vise holding Flex-I-File needle #6115 (excellent for doing fasteners) and a 1990's-vintage Trimaster template. At the right is a roll of Dymo-Tape which is used for curved or confined surfaces.

The cockpit, exhausts and gear bays were masked off and the model was then primed using Tamiya Sky Grey XF-19. The paint was smoothed out using 3000 to 6000 grit sanding and an old T-shirt for a final rubbing and buffing! The base camouflage colour FS36375 Light Ghost Gray (Vallejo 70.990) was applied.

Silly Putty (the orange bundles) was used for masking the camouflage demarcations. Be careful: some bundles can move when others are applied! Paint touch-ups were required. For the Dark Ghost Gray FS36320 patches, I first used Vallejo's 71.120. But I was unhappy with the result, so I prepared a Tamiya mix of 40% XF-18 Medium Blue with 60% XF-19 Sky Grey.

The model then received a clear coat of Tamiya X-22 clear gloss acrylic. Weathering was next, using the artist paint wash 'recipe' of Rembrandt Cold Grey for the darker stains and Titanium White for the lighter spots. I was looking for a mottled

effect and I added spots in a random pattern. Cotton swabs were used to clean up the excess wash, using a circular motion to get the desired effect. Hydraulic leaks were also added using Sienna Earth colour.

PAV-2 Caracal decals were applied using MicroScale products. The model was then rattle-can sprayed with Pébéo matt picture varnish. The final bits were then carefully attached: pitot probes, canopies, antennas and lights (which were made from scratch), landing gear doors, exhaust flaps and the two large stabilators. My YF-23 model was complete!

The Kit

In 2013, HobbyBoss made my day when they issued their YF-23 kit. However, HobbyBoss made a few shape errors and the decal sheet is awful (for a hypothetical F-23?). But I did not care, as I would finally be able to make my YF-23.

For the markings, Caracal came to the rescue with their excellent sheet CD48048 covering both PAVs (Prototype Air Vehicle). I decided to build PAV-2 simply because I preferred the "F-15 style" air superiority paint scheme. Documentation improved when YF-23 test pilot Paul Metz issued the detail-packed book, "Air Force Legends 220 – Northrop YF-23 ATF". This was crucial for the various corrections and detailing that I will describe in the following pages.

Conclusion

Much work was needed to bring the HobbyBoss YF-23 kit to an acceptable standard, and I am happy with the results. Along the way, new modelling techniques were developed and this is what makes our hobby so interesting!

About the author

Richard Clairoux has been building aircraft models since boyhood with 1/48 scale fighter jets as a preference. He works in the aerospace industry as an aircraft performance engineer. He learns new tricks and gets good tips at his monthly IPMS Montréal meetings. He enjoys travelling to Canadian and American modelling shows with his fellow modelling buddies. He lives in Laval, Québec with his wife and two daughters.

An *RT*-bred Expeditor

Frank Cuden
IPMS Canada C3476
IPMS/USA 4311
IPMS (UK) X55047
Albert Lea, MN, USA

Project Background

When I received my copy of Random Thoughts, Vol. 40, No. 2, I was pleasantly surprised to see the inclusion of a free decal sheet that included markings for what was titled, "An Oddball Expeditor." The aircraft flew with The RCAF's Central Experimental and Proving Establishment (CEPE, pronounced 'See-Pee') during 1947-48. I immediately thought that building the model would be a nice project, courtesy of the decal sheet, but what of the availability of 1:72 scale kits?

The Kit(s)

Some years ago, I had a couple of Hobbycraft C-45 kits in my stash and on my "to-do" list; however there was something about the shape of the kits in the forward nose and windshield areas that just didn't look right to me and so I donated them to our club raffle. Seeing built-up's of the model on the Internet confirmed my suspicions about the shape problems. After receiving the *RT* issue with the decals, I began to do some research. Through a modelling friend I was able to acquire the Pioneer 2 1:72 scale kit #4 4003 of the Beech C-45 Expeditor and its shape looked lots better to me.

The Build starts

Looking at the kit parts, I made a list of the changes I wanted to perform to make it into a more detailed model:

- extending the nacelles,
- detailing the engines,
- cutting out the flaps and re-positioning them,
- cutting out and re-positioning the elevator,
- cutting out and re-positioning the rudders,
- detailing the wheel wells.

Nacelles. Unfortunately, the RCAF Expeditor I was modelling had the extended nacelles and, of course, the Pioneer kit was of the earlier version with the short nacelles. Had I known at the time, perhaps I could have kept the Hobbycraft later version kit and mated the wings with the longer nacelles with the Pioneer fuselage. With necessity being the Mother of Invention, I began lengthening the nacelles in **Fig. 1**, as well as making a few other changes. I found two drop tanks in my spare parts box that had the proper shape to them and one has been cut to fit as shown in the photo. A little grinding on the short nacelles made for a better fit and some filling and sanding finished the extensions.

Engines. Photos revealed the uniquely-shaped exhaust pipes for the C-45 and in **Fig. 2** I've come up with them, using the rubberized plastic coating from a piece of copper wire. I had to drill two angled holes into the outer sides of the nacelles and after a little post-drilling clean up, the new pipes fit well.

Fig. 3 shows the plain vanilla engine fronts provided in the Pioneer kit as well as my additions of a collector ring, spark plug wires and push rods to spruce them up a bit. I used very thin solder for the plug wires and .010" plastic rod for the push rods. A little extra work went a long way to enhance the radial engines. To further detail the engines, I added two circular plastic tube intake sections in the bottom of the cowlings as well as a red wire that I saw in photos of the real aircraft.

Flaps. I removed the flaps from the wing to ultimately show them in the dropped position. In **Fig. 4**, once the top and bottom flap sections were glued together, I used plastic half-round material to provide a curved leading edge to the flaps. After trimming, sanding and filling, they were set aside until later in the build.

Fuselage and Interior. Using plastic sheet, I made cushions for the kit seats and added masking tape lap and shoulder belts. A crew passage door was also made and glued partially-opened to the bulkhead behind the cockpit. Finally, I added a section of plastic half-round along the bottom of the instrument panel to depict a switch console.

Also visible in **Fig. 4** is an instrument panel decal that I found in my stash. Cut to fit, it would serve as a reasonable facsimile, as not much would be visible once the windshield was installed; however I wanted something that could still be seen nonetheless.

I made a small fire extinguisher and hung it on the bulkhead behind the pilot's seat, **Fig. 5**. The instrument panel, added centre console with propeller and mixture controls, finished nacelle extensions, control wheels and engines are in place and the seat lap and shoulder belts have been painted.

Wheel Wells. Before gluing the wings on, I took time to add a little detail to the wheel wells just to busy them up a bit and **Fig. 6** shows how I made a couple of rear-nacelle bulkheads, using a circle punch and a little re-shaping with the finished product shown immediately below the singleedged razor blade. Final construction of the model's airframe components could now take place and in **Fig. 7**, one can see the primed fuselage and nacelles with the wings and horizontal tail ready for attachment.

Other stuff. The desktop clutter of modelling is shown in **Fig. 8**, as after gluing the wings to the fuselage, I used a small circular file to deepen the trailing edge of the stabilizer, making it concave after I rounded the leading edge of the elevator so it would fit and look the part when in the down position. While I was at it, I thinned the wing trailing edge openings to accommodate the flaps that would be shown in the down position. The resulting dust and dustfilled tools and sanding sticks were the product of some intense modelling.

To the Paint Booth

With all of the modifications completed, **Fig. 9** shows the basic airframe primed, masked and ready for paint. I had removed the rudders from the fins to later show them offset, gluing the fins on before priming the model. Note that the main gear legs and tail wheel have been glued in place, and the opened wing trailing edges have been sufficiently thinned. An extra window, visible in the photos on each side of the fuselage, aft of the entry door, had to be eliminated so a circular plastic plug was glued into both holes, filled and sanded smooth. Wheel well detail "imagineering" shows up well in the photo. The two under-wing holes would later hold the landing light lenses. Before coating the model with Floquil Old Silver, **Fig. 10**, I drilled and carved out the small "eyebrow" windows over the cockpit and after spraying the model, I masked and sprayed the de-icer boots. At that point, a slight detour was needed to repair both an inadvertent paint smudge on the right cowling and to re-attach left fin which had broken off the model during rough handling **Fig. 11**. That's just one of the pitfalls of modelling and I'm sure we all make those kinds of mistakes from time to time. I sanded off the smudge and re-connected the fin to the stabilizer and just like that, after a touch-up spray, it was time to move on once more.

I next masked and sprayed the black anti-glare panels on the upper inboard quarters of the nacelles and proceeded to mask and spray the anti-glare panel on the nose, **Fig. 12** and **Fig. 13** shows the end result.

Final Steps

Pencil panel lines were added to the model after I glued the elevator and ADF antenna in place on the dorsal spine, **Fig. 14**.

I then proceeded to apply the decals to the model; following that I glued in the flaps, **Fig. 15**. The C-45 flaps separated a bit from the trailing edge of the wing when deployed, which revealed a flat spot on the exposed surfaces and which is visible in the photo.

I painted the wheels and glued them in place. At that time I discovered that the aircraft had a retractable tail wheel... so I simulated a wheel well, using black decal stock, **Fig. 16**. I would later make and add the two tail wheel doors.

Minus the clear “glass”, the model is all but complete in **Fig. 17**. Note the small black decal strip on the lower side of the cowling in the photo. Appearing on both sides of the cowling, they would show depth behind the still-to-be-added cowl flaps that I would make and add, three per side. Using Future Floor Finish, I dipped the windshield in that product and let it dry before I masked and hand-painted the frames using Floquil Platinum Mist, **Fig. 18**.

Propellers and Spinners. Two short propeller spinners were visible in the photo of the actual aircraft and in **Fig. 19**, after finding a matching pair in my spares box they were glued to the props. The prop blades and tips themselves were thinned by wet-sanding. The propeller blades were sprayed with Alclad II's Aluminum and the spinners were sprayed with Alclad II's Polished Aluminum. When they were dry I glued the spinners to the props and then attached the props to the model.

The shiny spinners and detailed engines show up well in **Fig. 20**. and the cowl flaps are readily visible in **Fig. 21**.

I applied short black decal strips to the rudders and glued them in place and in **Fig. 22** I've also added two actuator support struts to the travel area of the flaps.

Landing Lights. Using a simple office hole punch, **Fig. 23**, I made two landing light “housings” from aluminum foil. I applied a little Gator Grip glue to the punched foil circles prior to gluing them in place to secure those housings and the kit's landing lights on the wing. A small dollop of Micro Kristal Klear and a coat of clear acrylic formed the lenses. To complete the build I used MicroScale's Kristal Klear for both the cabin and eyebrow windows and slipped the kit windshield in place, using thinned white glue to secure it.

Conclusion

Although not quite the easiest model I've built, a little extra work and repair produced a reasonably accurate end result that capture the look of the old Twin Beech C-45. My only fault with the kit was the depth of the indented panel lines which are a little out of scale, however in the end I had an Expeditor in my collection. My thanks go out to IPMS Canada for producing the interesting decals so that this model could be built. Although there were some builder-induced trying moments, I feel the model is a good representation of the entitled “An Oddball Expeditor”, as depicted in the **RT** article.

About the author:

With the completion of his first model in the early 1950's, Frank Cuden has continued in the hobby over the years. 1:48, 1:72 and 1:144 are his scales of choice and he enjoys adding extra detail to each kit. He also enjoys e-correspondence with modellers world-wide, and enjoys improving his writing skills with each article he writes. Since retirement in 1999, he's enjoyed modelling at will, and becoming more fun as time goes by. Wife Marilyn, three children and six grandchildren complete the circle.

Trumpeter's 1:35 Hetzer

Frank Donati

IPMS Canada # 3941

St. Thomas ON

Introduction

With a production run of over 2,800 vehicles, the Hetzer proved to be one of the more successful tank destroyer designs of the Second World War (WWII), effective enough to be used by the Swiss until 1972. Based on the Czech LT vz. 38 chassis (and known by the Germans as the Panzer 38(t)) this light AFV was an effective ambush tank killer.

The version we're looking at here is the Hetzer Starr - Starr being German for rigid to describe the mount for the 7.5 cm Pak 39 L/48. This eliminated the need for a recoil system, which simplified and sped up production. Recoil was absorbed by the vehicle's mass and the suspension - with the side effect that the gun targeting optics either lost alignment after a shot or became damaged. The Starr also came with a few other modifications - better sights, and the prototype came with a Tatra diesel engine. Only 14 of these vehicles were made, with most later being converted back to normal Jagdpanzer 38(t)s. There is conflicting data on whether any Starrs saw combat - some stating some did in Czechoslovakia in 1945.

The Kit

Trumpeter's German Jagdpanzer 38(t) Hetzer-Starr (Kit No.05524) is based on the prototype model, which included the diesel engine, so the rear engine deck and muffler are modelled to reflect this. This variant also has a slightly larger fighting compartment and vision scopes consistent for the Starr.

The kit comes with four sprues and the upper and lower hull sections, all moulded in light tan plastic. There is also a set of Modelkasten tracks moulded in dark brown (tracks and both outer and inner pins), a small sheet of photo-etch, a length of copper wire and a small decal sheet with a pair of generic Balkan crosses and numbers. There is a 12-page instruction manual and a colour painting guide.

Project Background

I've never built a Hetzer, so I was pretty excited to tackle this one. The vehicle is a popular modeller's choice and would also be my first German vehicle kit from Trumpeter (I've only built their Russian vehicles before this). Also, I hadn't made a hard-edged camo pattern in a few years and wanted to try that again too. This was made out-of-the-box and was not modified. As the diesel-powered Starr did not, as far as I could find, actually see combat, I am going to make this Hetzer an "unknown unit, Eastern Front, March 1945."

The Assembly

As with all my builds, I did a quick review of the instructions to ensure I've got all the tools I'll need and figure out my own order for building the kit. I noted that in Step 3 it shows the removal of rivets on the wheels. The kit comes with the Hetzer's older 32-rivet wheels, as opposed to the newer 16-rivet wheels with which the Starr was equipped.

I did a quick test with a chisel blade on the backside of a wheel and then decided that my Starr would be fitted with the older-style wheels. I was putting too many divots and cuts into the wheels, and it wasn't worth testing my patience for the next 'x' hours I would be squinting away trying to remove 16 rivets from each wheel...

So, this is a relatively simple kit, with a low part count and all the sprues checked out - no damaged or missing pieces. Flash is minimal, and mould ejector pin marks are, for the most part, NOT in visible locations.

Lower Hull

Steps 1-3 cover the lower hull assembly and attaching of the wheels. I like to start off with a small piece to get a feel for the plastic, so I built the drive sprocket first. Typical of Trumpeter's kits, the plastic is not too hard (think old Tamiya) and has some give under the knife and doesn't need aggressive sanding when cleaning up. The lugs (the connections to the sprue) are on the thick side for some parts which does make cutting and cleanup a chore.

The fit was good, and the clean-up of parts was minimal, except for the wheels which required a lot of sanding. The tow hook attachments are a very tight fit, and the holes on the hull needed a bit of widening to take them. Note that in Step 1, parts A19 and A20 should be labelled C19 and C20, respectively.

The wheels have four sprue connection points, all of them thick and all which require a significant amount of sanding and cleaning up.

After cleaning up the wheels the rest of the lower hull came together quickly. All told, I took three hours to complete the first three steps - the majority of the time spent on cleaning up the wheels. Imagine if I had tried to remove half the rivets as instructed?

Engine Compartment

Steps 4-6 are the engine and engine compartment assembly. It's too bad there is no further interior detail and that the engine hatch is so small that most of the engine detail will be lost. This is a shame as Trumpeter provided a lot of detail - from the engine to the battery bank, filters and wiring. This is supposed to be the Tatra engine, and I used a reference image from a G13 engine (used in the Swiss Hetzer) for painting guidance. The reference image is a gas engine, and it's very similar to the kit engine, so I don't think this is the diesel the Starr had.

As with the lower hull, this was another quick assembly requiring less clean up but with some errors and fit/finish issues. In Step 4, part C47 has a pin that needs to be cut off for it to fit onto the engine block correctly. In Step 5 - part C15 has ejector pin marks on it - not visible in final assembly but in need of clean up. Also, in Step 5, Part C42 isn't labelled in substep 3, as is Part C38 (air filters?) in substep 5.

Once all the parts were assembled, I dry-fitted the engine compartment to ensure proper fit and that the upper hull will adequately close over the top of it. Everything fit easily and no adjustments needed to be made.

Vehicle Rear

Steps 7 and 8 deal with the rear hull and fenders and is also the first time we see photo-etch being used. Fit for this section was good overall with parts A5 (the tow loops) needing some help in fitting their placement holes - nothing a little pin-vise and drill bit couldn't fix. Parts A5, B1 and B27 all need some significant clean up from either substantial sprue connections or in the case of B1 - ejector pin marks that needed sanding down.

The rear deck access door also has photo-etch hinges - the easiest of the photo-etch to assemble. There are two sets of spare tracks on the rear deck - an excellent detail - so I attached the supports using white glue so I could have them in place for painting and easy removal to install the tracks.

In Step 7 - I had difficulty dry fitting the rear deck with the engine in place because of part C1. I ended up just leaving it off as it's on the engine floor and won't be seen.

In Step 8 - the fenders attach with mounting pins, but the hull holes were on the small side, so instead of forcing them, I once again used a pin-vise and drill bit to open them a bit for a cleaner fit.

Upper Hull

I jumped over track assembly to work on the Upper Hull, so Step 9 will be covered later in this article.

Steps 10 to 12 cover the upper hull assembly and include the lion's share of photo-etch for the kit. This includes fender braces, vision block guard, hatch rest, camouflage loops and engine intake screen. The fender braces and guard are scored, so bending them was easy. The hatch rest has a unique shape, and some scoring of the part would have helped, to say the least. I managed to pull off a reasonable facsimile of the piece - good enough for me!

All the plastic components went on fine, though the hatch handles are just a wee bit smaller than the guide holes, so watch that yours don't fly off... as mine did. The rear engine deck handles don't have guides; they rest flush on slight dimples on the vehicle hull, so be warned that any handling will require paying attention.

The hatches have excellent detail on both sides and thankfully don't have any ejector pin marks on the interior, so posing them open would look great, but, unfortunately, there's no interior detail. Part C8, the pry bar fits very tightly and bows out in the middle and the centre mounting just sort of hangs there and doesn't touch the side. Also, as a concession to my need to deviate from plans - I used a piece of nylon broom strand to make an antenna.

The Hetzer had camouflage loops welded on the sides, front and rear. Wire or rope was strung through these to hold up foliage, same as my last completed kit, the Meng Jagdpanther G1. Unfortunately, these tiny pieces of photo-etch are to be glued directly onto the hull at dimple points on the armour. Silly me, an out-of-the-box man, decided I would follow the instructions. If I made this kit again, I would drill out all the dimples and use copper wire to make more secure loops. As such, I followed instructions, lost about half the loops during construction and then again during painting. The fret comes with extra loops, which helped, but I ended up having to make four replacement loops out of 28-gauge copper wire. Being pig-headed I didn't drill open the hull, but surface-mounted them also. So take note, drill the holes and make your own, or skip them altogether. In the end, one of the loops ended up glued flat to the side, so this became "battle damage."

Step 13 and 14 finish off the upper hull. Step 13 has the subassemblies for the tow cable, engine cover, remote machine gun and side skirts. The tow cable is to be 120 mm long, and my supplied wire was 122 mm long, so no trimming was required. The engine cover photo-etch was bent along the score lines and ended up being off a bit - I would bend the part on the cover instead of before assembly as I did. Some tapping fixed the fit.

The machine gun mount has the option for either a plastic or photo-etch shield - I opted for the plastic as it had mounting points, and I found the photo-etch too thin.

The muffler is made up of three pieces, and I ended up stippling it using Bondo thinned with acetone since I didn't have any Mr. Surfacer or other such products. It looks okay-ish, a bit chunky but I am hoping that once painted it will look reasonably realistic.

Tracks

Step 9 is the track installation. I was pretty excited about this step as I'd never assembled Modelkasten tracks before and had heard a lot of positive feedback about them. Apparently, what I read did not include the tracks that came with this kit. The tracks come in pairs, and the pins come 'handed' - one side has a bolt, and the other hand has the rivet, so you need to pay attention to the instructions and to when you install the tracks - bolt side out. The kit included an assembly board for the tracks, typical of Modelkasten, that allowed for ten links to be assembled at a time.

Now, if you've never made these types of tracks before, they are a challenge though I imagine King Tiger or KV tracks will be easier as they would be larger than what we have here on the Starr.

My method was to clean up the tracks in groups of ten, cutting, sanding and cleaning. More than 80% of the tracks had flash and needed a clean up with a sharp blade and the occasional pass with a sanding stick. I would place the ten tracks in the assembly board, remove nine interior and nine exterior pins and then start installing them. I did one side at a time, alternate tracks due to my fat fingers. Some of the tracks didn't align; using a small drill, I was able to line them up. Some of the pins are under tension, so a few of them shot out and disappeared. Thankfully the kit has extras.

Once the pin was in, I dabbed a small amount of Tamiya Extra Thin cement and let the row set while I cleaned another ten tracks. I then removed them from the assembly jig and manipulated them, so they didn't set and remained pliable.

When I had nine sets done, I connected them all and then dry-fitted the tracks to the lower hull. The instructions say 97 links per side. I read reviews that went as little as 93 per side. I ended up with 95 on one side and 94 on the other with just a bit of sag to look realistic.

And with that, the Hetzer construction was done, and it only took about 14 hours.

Painting

The kit-supplied colour guide was excellent, and I decided to make a hard-edge camo pattern, which is how many Hetzers came from the factory. Knowing that by the late period of the war the colours were not always exact, I figure I had some leeway on painting the Hetzer. I wanted to maintain the usual tri-colour camouflage but also wanted to darken or bring it down a bit. All paints are Tamiya unless otherwise noted.

I pre-shaded the kit in black and white - with high points and high traffic areas in white, and the recessed areas and angles with black. Once pre-shaded, I tackled the engine and engine compartment first.

Engine

I primed the engine and engine bay area in Flat White (XF-2) and then shot it with Hull Red (XF-9) that I lightened a bit with more white. I painted the engine in Metallic Grey (XF-56), didn't like it, so I coated it with Dark Iron (XF-84) to bring it down and then washed that with Vallejo Dark Brown Wash.

I picked out details using a set of Games Workshop and Tamiya paints - Abaddon Black, Skrag Brown, Testors Rust and Tamiya Dark Green (XF-61). I then hit it with some pigments at the manifold - Doc O'Briens Muddy and Rusty Browns.

I did the same with the engine compartment - using the same blacks, browns and greens and then hitting it with some dry brushed GW Necron Compound and then washed everything in GW Nuln Oil.

Exterior Paint

I went with the following for my tri-colour pattern; Desert Yellow (XF-59), Red Brown (XF-64) and Dark Green 2 (XF-89) and used Blue Tac to create the demarcations between colours. Remember when I said I hadn't done a hard edge in years? Well, the Blue Tac was that old, so when it came time to remove it - a lot of tac and oily residue remained on the model... it was a mess. What removes leftover Blue Tac? More Blue Tac or, in my case Yellow Tac (I found some good stuff stashed in a drawer). I had to touch up the pattern here and there, but it worked out well.

I painted the drive sprockets Desert Yellow, idler wheels Red Brown and then two wheels Desert Yellow, two Dark Green and then four in Red Brown. I painted the tracks with Flat Brown (XF-10). Once painted, the idler and drives were hit with pencil lead where they contact the tracks.

The tools and machine gun were painted with GW Corvus Black and highlighted with Tamiya Weathering Powder Blue. The wire cutter was done with Kislev Flesh and then washed with AK Wood stain. The tow cable was primed black and then painted German Grey XF-63 (loops) and Vallejo Metal Color Steel. The jack block was done in Mournfang Brown with AK Wood filter.

Vision blocks were all coloured using a Prismacolor Pencil - Metallic Silver and then covered with a dab of Tamiya Smoke (X-19). I like the look this achieves for them. I did use Clear Green (X-25) for the periscope, just for some contrast. The exhaust was painted red-brown and then covered in MIG and Doc O'Brien's pigments - reds and browns with MIG Black Smoke on the tip.

Markings

I did have a decal meltdown. I did not use the supplied decals, wanting to use smaller numbers and the edged Balkenkreuz instead. The crosses worked, but the numbers went completely silvered even after Solvaset and Micro Sol was used. I had to scrape them off, which damaged the paint and I repaired that. I shot the kit with Future to lock everything in.

Weathering

When it came time to detail, I dot filtered the entire Hetzer using oils. I used Cream, Yellow Ochre, Sap Green, Burnt Umber and Black. I then used Vandyke Brown to create some different wear areas around hatches, the barrel and the engine deck.

Once filtered, I used AK Wash for NATO Brown/Green to bring out highlights. The tracks were washed with AK Track Wash and then Doc O'Briens Muddy Brown. Chipping was done using the sponge technique with Desert Yellow (XF-59) and German Grey (XF-63). I then added some streaks of AK Streaking Grime and AK Rust Streaks to the loops, figuring that welded-on loops would be more susceptible to corrosion and wear. Finally, Tamiya Clear Flat was applied.

I go a little batty at the end with the detailing, using whatever I can find, and as I waited for each coat of oils to dry, my OCD kicked in, and I made a quick display base for the Hetzer at the same time.

Conclusion

Overall, I really enjoyed this kit and would build another in a heartbeat. If I changed anything about the build, I would have replaced the camouflage loops by drilling in wire myself, and I would like to add texture to the gun mantlet - the Saukopf. Other than that - some stowage perhaps but otherwise leave it alone. Now I'd like to get my hands on a couple of other Hetzer kits to build. I highly recommend this kit for most modellers - it's easy to build with great fit for beginners and for the more experienced modeller, a solid base to expand on for a truly unique vehicle.

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Frank Donati was born in West Germany and spent his formative years as a Canadian Army brat bouncing between Europe and Canada. Frank is a professor at Fanshawe College in London ON teaching Fire and Life Safety. He has spent the last 25 years in the industry, both with municipal fire services and in the private sector. An avid modeller since 1978 when his father bought him a Matchbox 1/72 Bf 109, Frank models armour and military vehicles from any era, but if provided with a kit - he would give anything a go! Frank is married to Chantal, and they have two grown sons, plus a son and daughter still in the nest.

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