

MENG



AFV

81

MARCH/APR. 2015 · £6.50 UK \$15.99
www.mengafvmodeller.com

modeller



Living Leopard

Bringing to life the new Leopard 1 A5

GERMAN MAIN BATTLE TANK

LEOPARD 2 A4



**1/35
SCALE**



1/35 TYRANNOSAURUS SERIES TS-016

EXTERIOR FEATURES OF A FIFTH BATCH TANK ARE PRECISELY REPRESENTED. +

OPTIONS OF TANKS OF DIFFERENT BATCHES ARE AVAILABLE WITH OPTIONAL PARTS IN THE KIT. +

SIDE SKIRTS CAN BE BUILT IN THE RAIL TRANSPORT OPTION. +

EASY-TO-ASSEMBLE CEMENT-FREE WORKABLE TRACKS AND MOVABLE SUSPENSION ARE PROVIDED. +

CLEAR LIGHTS, PERISCOPES AND OPTICAL EQUIPMENT ARE PROVIDED. +

PRECISION PE PARTS AND MIRROR FILM ARE INCLUDED. +



FIND US ON FACEBOOK & TWITTER

MENG

WWW.MENG-MODEL.COM

CONTENTS

2	Leopard 1 A5 The Editor gets to grips with Meng's new 1:35 Leopard 1A5
10	Leopard Details Photos of the real vehicle by Zak Sex
18	Big Bang Theory Chris Leeman describes building his Famo Flakwagon with the Tiger Models conversion.
26	Cooler Shilka Inside the Armour's Chris Meddings reworks the veteran Dragon kit to model a neglected Gulf War relic.
34	Argyll Law Mark Neville builds the new Accurate Armour 1:35 Scaracen Armoured Car
44	Keeping Track More new releases
56	T-90 with TBS-86 Tank Dozer Chris Jerrett test drives the latest version of the T-90 from Meng.

Meng AFV Modeller is published Bimonthly by
AFV Modeller Ltd
Old Stables
East Moor
Stannington
Northumberland
NE61 6ES
Tel: 01670 823648
Fax: 01670 820274

Editor and Designer: David Parker
email: david@mengafvmodeller.com
Deputy Editor: Mark Neville
email: mark@mengafvmodeller.com
Sales Director: Keith Smith
email: keith@mengafvmodeller.com

ISSN 1747-4183



We are now on Facebook, 'Like' us to follow what we are doing and follow our build projects.

AFV Modeller welcomes contributions from interested parties, but cannot accept any responsibility for unsolicited material.

The contents of this publication including all articles, drawings and photographs originated by AFV Modeller Ltd become the publishers copyright under copyright law. Reproduction in any form requires the written consent of the publisher. Whilst every care is taken to avoid mistakes AFV Modeller Ltd. cannot be liable in any way for errors or omissions.



LEOPARD 1A5

MENG MODELS NEW 1:35 KIT
MODELLLED BY DAVID PARKER

After thoroughly enjoying myself when I built my Canadian C2 Leopard in Issue 78 I was delighted to see Meng Models release the forerunner of the C2, the Leopard 1A5. The 1A5 represents the pinnacle of the Leopard 1's development with its distinctive spaced turret armour and was still in service with the Bundeswehr up until the early 2000's and with variants like the C2 seeing service with other armies too. The new Meng kit focusses on the Bundeswehr vehicle which offers plenty of interesting possibilities and I could not wait to get stuck in.

The kit contains a mix of entirely new parts and some elements which have been carried over from the previous Leopard 1A3/A4 kit. The main hull components are therefore familiar complete with the working torsion bar suspension still with the missing weld detail from the rear hull. The kit roadwheels and idler wheels have been re-tooled for improved accuracy but still lack detail on their inner faces and the choice of rubber band or single link tracks from the 1A3/A4 kit has now been replaced with the superb new multipart working tracks. These can be frustratingly fiddly to assemble when you first get to





grips with them but once you have the first section of links assembled on the jig that is provided the remainder is assembled surprisingly easily and the resulting track is well worth the effort.

Another new feature is the early pattern cast model exhaust louvres and the kit has also provided the later welded version from the 1A3/A4 which has also been retooled so the openings have a more realistic depth making it a welcome addition to the spares box. The brand new turret is quite superb and Meng have gone to the trouble of replicating the complete set of mounting points for the stand off armour along the sides of the turret and have even replicated the small lip around the lower edge of the turret bustle, all of which are mostly hidden on the finished model. There is the option to open the small ammo loading hatch in the side of the turret too which is a nice touch. The complex turret basket has been cleverly designed for a stunning finished effect and the spaced armour is moulded in a flexible styrene, an approach which I found worked perfectly.



Getting it Together

Assembly is surprisingly fast and I found that I very quickly had the main components together as you can see here. Polycaps in the wheels mean that you can easily remove these for painting but be aware that with the skirts installed the sprocket and idler cannot be removed. On the turret the mounting lugs for the spaced armour are all moulded separately and you need to take care to get the right parts in the right positions. The finished effect with the weld beads around the bigger lugs is excellent. Clear moulded periscopes are provided and it is worth taking the time to mask these before you fit the photoetched periscope guards, something I did with Mr Masking Sol. The turret basket is designed to be assembled with small bridging pips to keep the parts aligned which should then be trimmed off. Cleaning them up in position is not easy and I found that it was better to clean off the pips first and then to



carefully add the individual rails. The precision fit of the parts makes this possible and it is worth fitting the side rails before you add the back ones. There are a few small improvements that I decided to make to my model like adding the chains

to the smoke grenades but because my model was going to have foliage camouflage I did not upgrade the tool stowage clasps and fittings and the tools actually looked excellent under paint even without photoetched clasps.



The basic parts of the turret assembled showing the location points for the spaced armour attachment points.



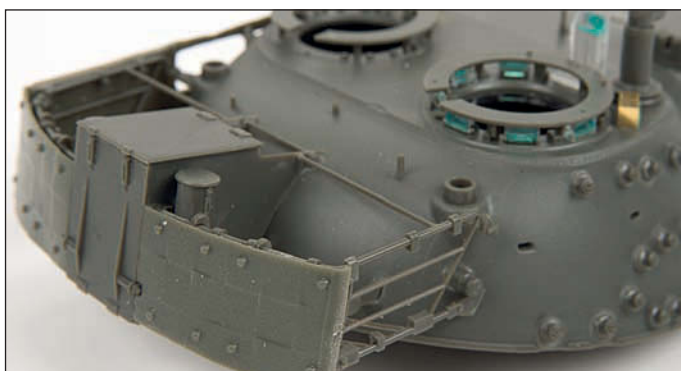
The spaced armour fittings in place and you can see the great handling of the mantlet cover - a choice of two is provided for different gun elevations.



Assembling the basket and you can see the pips that are designed to be removed once the parts are in place.



I found it was better to remove the pips first, install the side of the basket and then the rear parts align perfectly between it and the central bin.



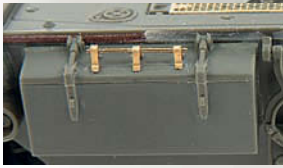
The instructions show the main side sections of the spaced armour fitted first. I found it better to fit the rear parts first as seen here. Your regular styrene adhesive can be used to glue these flexible parts.



You can then work from the back corner of the turret basket to the front of the turret. You can see that there are a few location holes on the inside of the spaced armour but they are necessarily quite shallow.



Tiny etched chain by Hauler is an easy way to improve the detail on the smoke grenades.



I replaced the moulded tool box handle with my own version made from spare photoetch strip and brass rod.



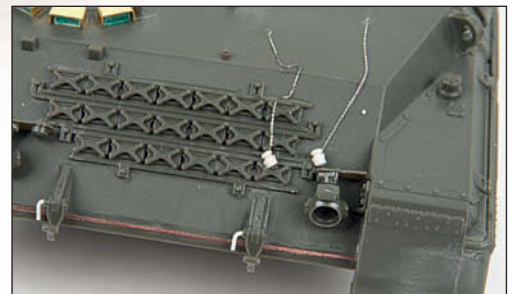
A quick way to improve the look of the tool clasps is to drill them out.

Note that if you leave the skirts separate until after painting you will need to hide this joint seam. The fit is good so that a little sanding was enough to hide it on my model.

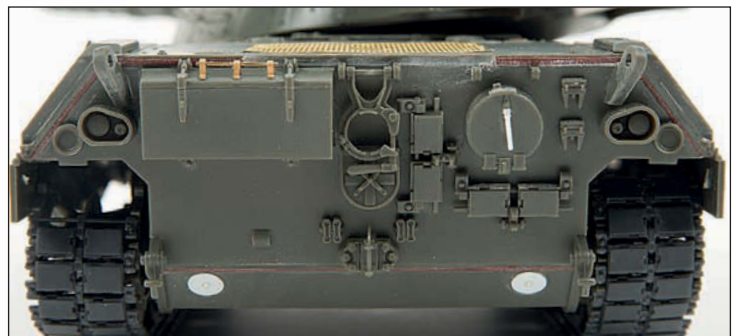
Weld beads on the rear hull are easily added using Slaters fine plastic rod. When saturated in liquid glue it naturally distorts to adopt a realistic weld bead texture.



The self-adhesive reflectors for the wing mirrors provided in the kit are a nice touch.



I used the excellent Leopard Workshop set for the mantlet plugs and I added handles to the tow hooks using plastic rod.



The same plastic rod technique was used to add the weld beads to the rear of the hull using a double row for the thicker top welds. I replaced the handle on the telephone box and the handle on top of the tool box.

Painting



No priming for me but straight onto the base green colour which I mixed myself using Gunze water based acrylics.



The camouflage colours were sprayed freehand and my Iwata Custom Micron was ideal for replicating the very tight edge of the sprayed finish.



With all three colours applied the Leopard was really looking the part. I followed the colour guide in the instructions for the patterns of the camouflage.



I applied the decals directly to the paint and I used the set of markings which is not mentioned in the instructions but which is featured on page 33 & 34 of the Tankograd Special No.5014. I hand painted the helmet symbols on the mantlet instead of the decals and the whole model was then sealed with satin varnish.

Looking pristine, the model is seen here with the running gear in place, and tool stowage painted along with the tarpaulin mantlet cover.



The kit provides the main stencils for the engine deck but I added the smaller ones on the filler ports by brush painting an impression of the lettering.



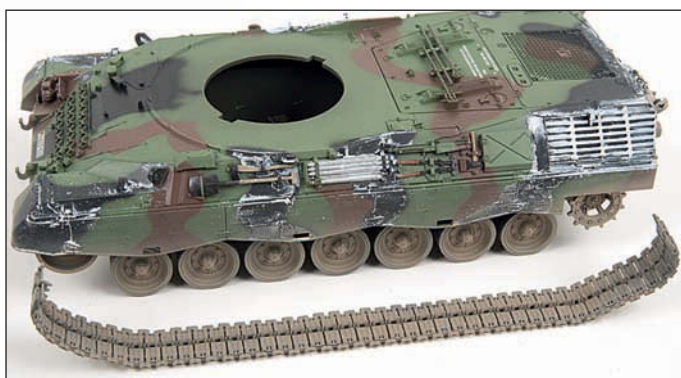
Painting the tools was next, with my plans for the model I kept this quite straight forward.



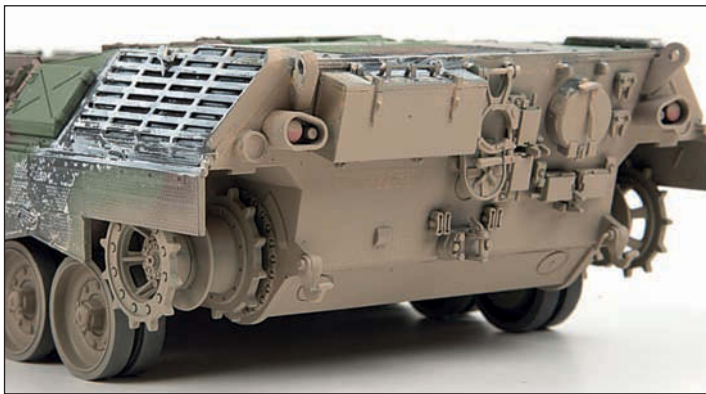
To replicate the worn winter camo shown in the Tankograd photos I applied hairspray to the black camo on the hull before brush painting white Lifecolor acrylic over it, giving the look below.



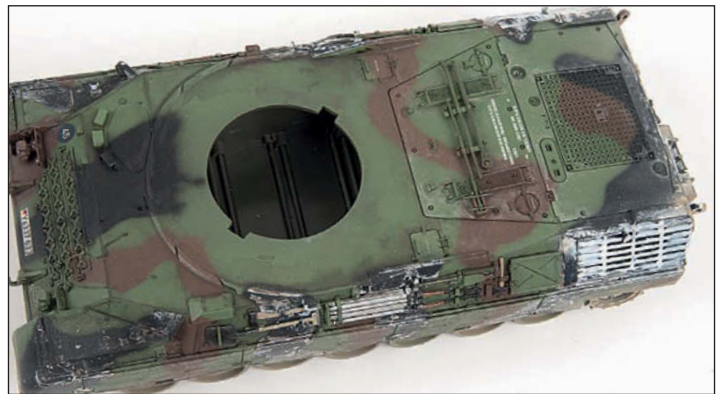
6 Using warm water and a stiff brush I scrubbed off the white areas to just leave traces of the paint which matched the Tankograd photos.



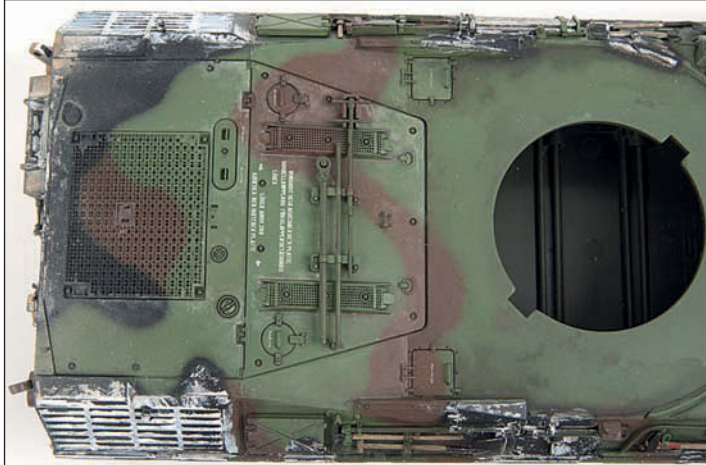
The next stage was to add the heavy mud finish to the running gear and I mixed an appropriate dry mud colour with Lifecolor paints, matching it to the photos. This was applied to the wheels and tracks with a slight overspray on the skirts.



The Tankograd photos also showed the rear plates of the Leopards completely covered in mud so this was treated in the same way.



Washes came next and I kept these as mostly very dark washes as befits a winter vehicle. Oil and then acrylic washes were used for this.



On the engine decks I moved towards lighter tones with the washes where the heat of the engine would dry out the muddy deposits.



Streaks and stains were applied to the verticle surfaces with a build up of cover along the bottom edge of the turret armour.



I used Gunze soot to spray the exhaust stains and copying the uneven appearance.



For the areas of wet mud I used Tamiya Soil Effect texture paint which worked perfectly.



Again I followed the pattern of the wet mud from the photos of the real vehicle



The wet mud was applied to the rims of the roadwheels and to the tacks but I wiped off the excess mud from the rubber track pads.



An intermediate shade of brown was sprayed to blend the areas of wet mud on the back of the hull.

Foliage and finishing touches



Again working from the photos I added bits of grass and dirt that had collected behind the fittings on the bow.



The natural moss I used for the pine tree camouflage was sprayed with dark green tones to give it the correct look.



Part of the challenge of trying to model a particular vehicle was adding the pine tree camouflage which my subject vehicle was carrying. This is something that I have wanted to try to replicate for many years but had never tried before now. To achieve this look I chose some natural woodland moss which grows prolifically in this region of Northumberland. I harvested a suitable quantity and left it to dry out naturally. The vivid bright green of the moss was then disguised by spraying shades of dark green acrylics and some satin varnish to both fix the delicate fronds and give a realistic finish. I positioned suitably sized pieces on the model following the methods of the crew of the real vehicle with branches shoved through lifting loops and even a few small bits wedged in the clasps on the gun barrel.



The Gunners sight is provided in clear plastic which allowed me to mount a pair of reflector lenses behind it during construction.



The headlamp lenses were enhanced by using Resicast's 3.5mm reflective lenses.





Swapping faces, Hornet heads are adapted to fit Tamiya tank helmets.



Alpine Panther crew figures are easily amended to become Bundeswehr crew with just a few new pockets and other details.



The finished crew with boom mics and headphone cables added.

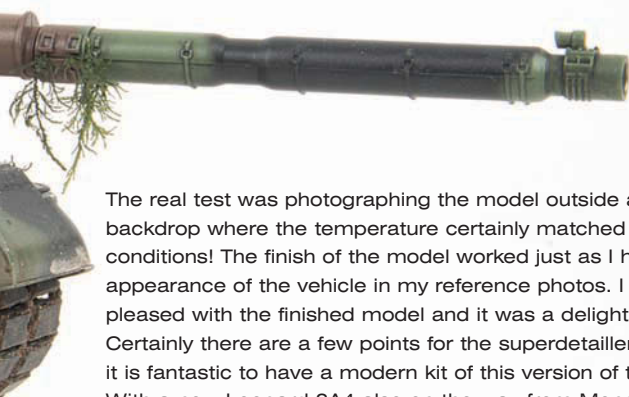
Crewing my Leopard looked like it would be tricky as there are not very many Bundeswehr crew sets available. I decided instead to see if I could make my own by modifying another set. I chose a WWII Alpine set 35132 of Panther crew in winter uniforms mainly because I liked the poses and they fitted easily into the Leopard turret. I was

also pleased to find that the differences in the design of the uniforms were very small, some pockets, epaulettes and cuff bands to add using Magic Sculp. The tank helmets were more of a problem and sadly missing from the Hornet range at present. Instead I took the heads from the

Tamiya Leopard 2A5 kit and used a motor tool to grind out the poorly defined faces so that I could insert some adapted Hornet heads. It takes a bit of trial and error but the finished result was just what I hoped for. The figures were painted in Lifecolor acrylics and I hope this might inspire you think about how effective a simple adaptation can be.



As the vehicle is operating in wet winter conditions I added some areas of wetness using Ammo Wet Effects to the top of the turret and the flat surfaces of the hull, concentrating on the bow. I was quite apprehensive about this because glossy finishes can impart a toy-like appearance very easily. Diluting the Wet Effects helped to control this and I think I am happy with the finished look.



The real test was photographing the model outside against a real backdrop where the temperature certainly matched the winter conditions! The finish of the model worked just as I hoped giving the appearance of the vehicle in my reference photos. I was very pleased with the finished model and it was a delight to assemble. Certainly there are a few points for the superdetailer to address but it is fantastic to have a modern kit of this version of the Leopard. With a new Leopard 2A4 also on the way from Meng it looks like fans of the Leopard will have plenty get excited about!



IN
DETAIL



A Belgian Leopard 1A5BE tackles a concrete obstacle allowing us to see the key features of this version of the Leopard, the new Gunner's firing direction system with thermal imaging and laser range finder fitted to the top of the turret, extended turret basket and hull mounted stowage

LEOPARD ONE

photographed by Patrick
Winnepenninckx & David Parker

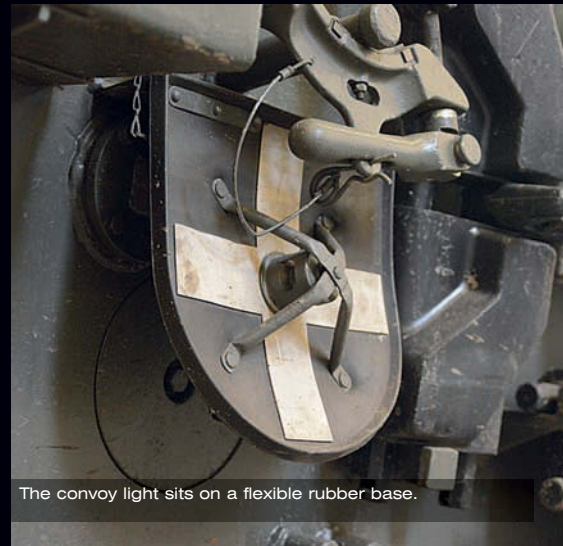


This Dutch Leopard 1V is still in good running order as can be seen from the fresh mud on its running gear and carries the distinctive bolt-on lexan armour panels on the turret.





The rear hull of this Dutch vehicle is only missing the spare track connectors and has its mudflaps folded.



The convoy light sits on a flexible rubber base.



The spaced armour on the mantlet with the Driver's tank helmet wedged under it.



The subtle texture of the spaced armour and behind it is the circular cover for the telescopic gun sights which were deleted on later models and plated over.



The tail light fittings and the weld seam along the edge of the exhaust grille.



The rear tool box hinges down as seen here.



The headlamp mounting and horn.

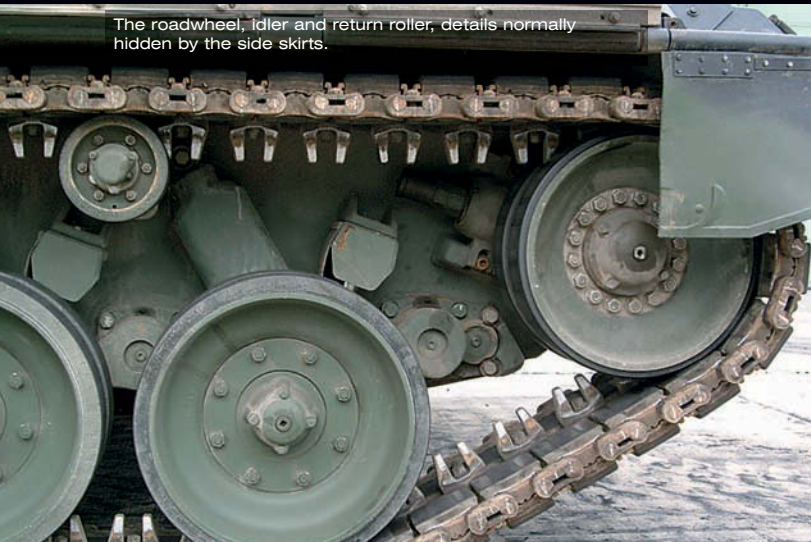


The opposite headlamp and we can see the pair of chains holding the rubber stoppers for the mantlet.

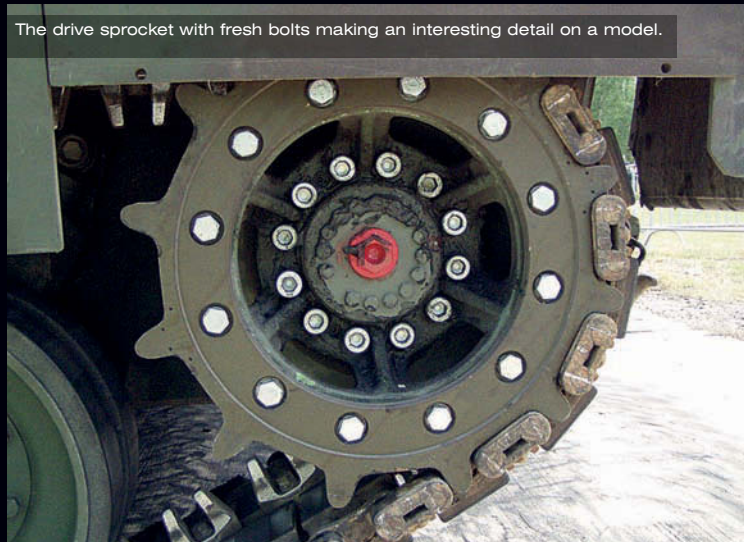


Dutch vehicles feature a different design of smoke grenades as seen here. The surface mounted tool stowage has also been replaced by lockers on the hull side.

The roadwheel, idler and return roller, details normally hidden by the side skirts.



The drive sprocket with fresh bolts making an interesting detail on a model.



The front mudguard with anti-slip panel.



The Driver's position shaded by the reversed turret in this picture



One of the pair of rearview mirrors

The rear of the Belgian Leopard 1A5BE with open toolbox (left) and telephone box (right).





The front mudflaps wrap around the bow to link into the side skirts.



Late pattern welded exhaust grilles on the Dutch vehicle.



The exhaust grilles and skirts on the Belgian Leopard 1A5BE.



The Driver's periscopes.



The underside of the mantlet showing the clamps to secure the barrel thermal shrouds.



A great front view of the Dutch vehicle which features early style tracks and lacks the grouser stowage rails on the glacis.



A good view of the engine deck showing the various filler ports and the Belgian fittings for stowing the tow ropes.



Another view of the deck on this stripped down vehicle.



Tool stowage bins on the Belgian vehicles provide a useful step for the crew as indicated by the worn paint.



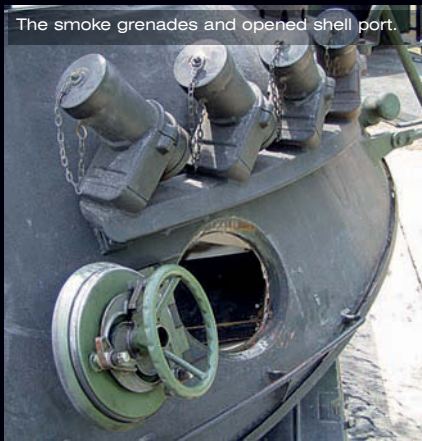
The rather ugly gunner's sighting system distinguishes the Belgian turret and we can see the loopss and cable used to secure the waterproof cover to the mantlet.



On the other side of the turret the old rangefinder aperture has been blanked off.



The sight housing seen from the front.



The smoke grenades and opened shell port.



The same detail but with the port closed and the covers removed from the grenade launchers.



The turret basket features an additional extension rack that is another feature of the Belgian Leopard 1A5BE.



Looking down on the basket, the folded spring-mounted fixture is the crosswind sensor.



The cast mantlet with its protective rubber stopper.



A detail of the clasps on the barrel that secure the thermal sleeves.



Turret hatches looking towards the front of the turret.



The hatches seen in their open positions.



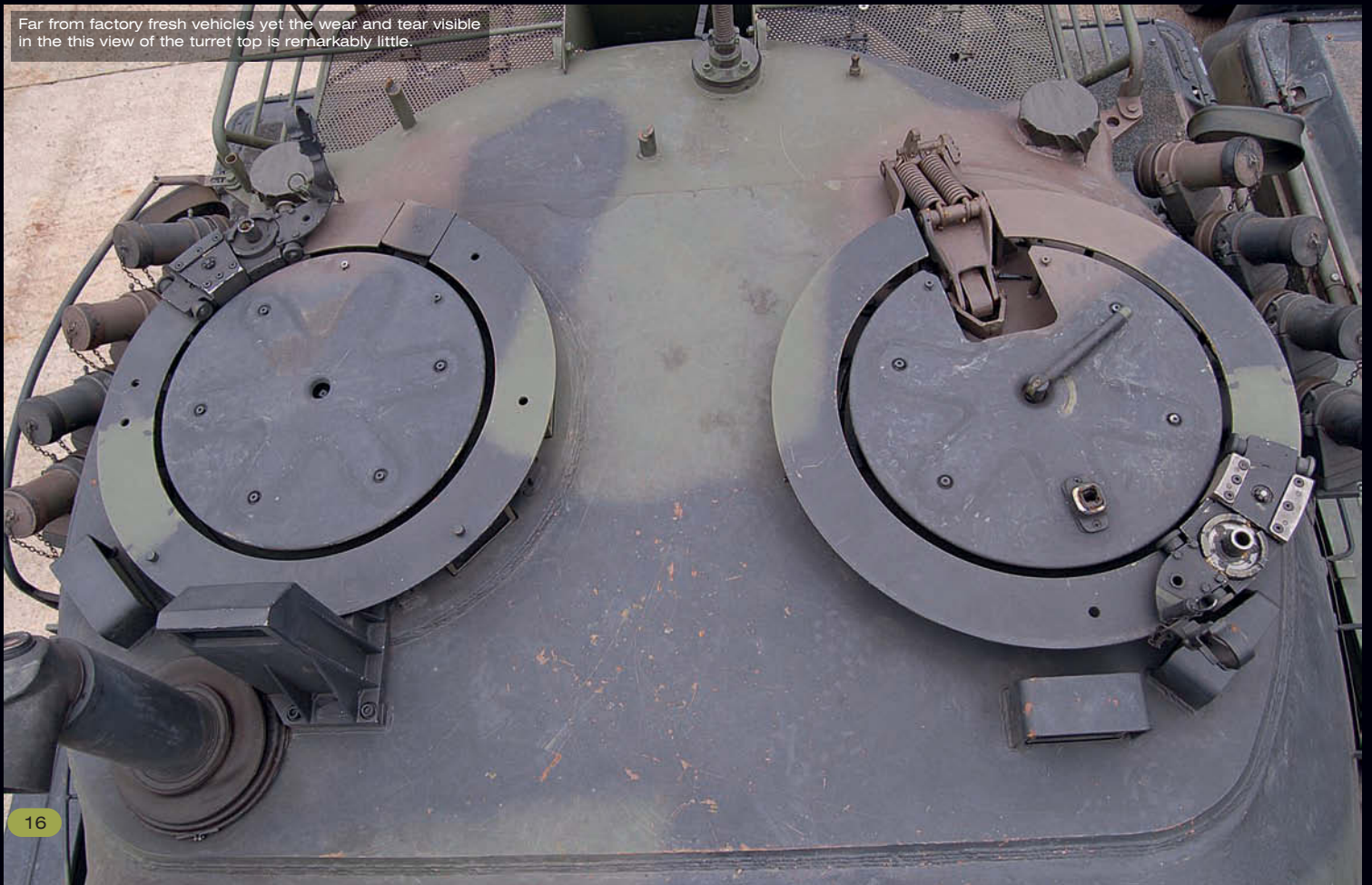
The barrel clamp on the rear of the hull doing its job.



The combat simulation system mounted atop the gun barrel.



Far from factory fresh vehicles yet the wear and tear visible in the this view of the turret top is remarkably little.



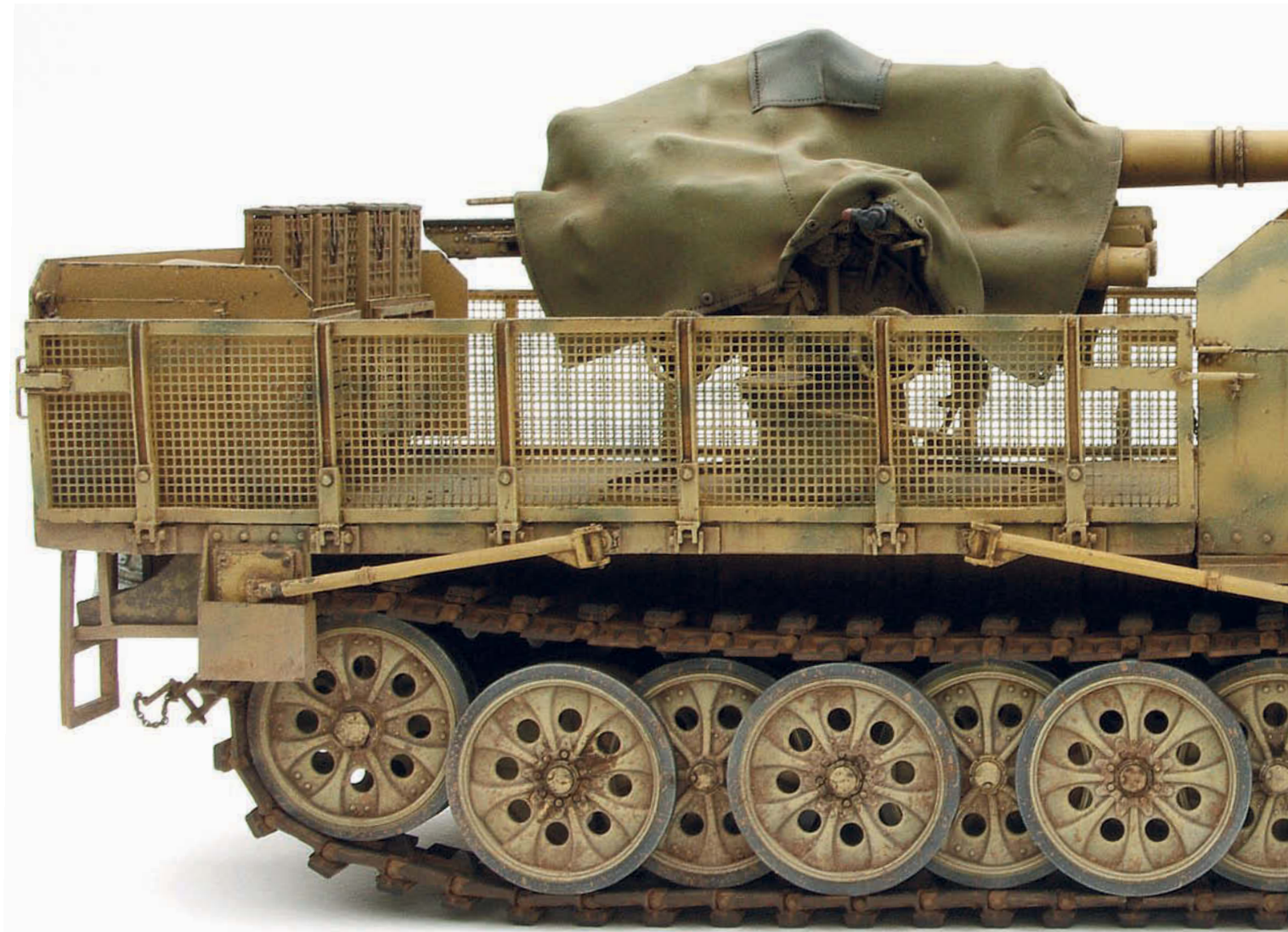
Another good overall view of the turret, notice the camo overspray on the mantlet cover.



The muzzle reference system collimator clamped to the muzzle.

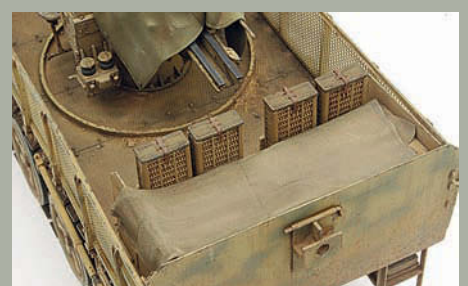


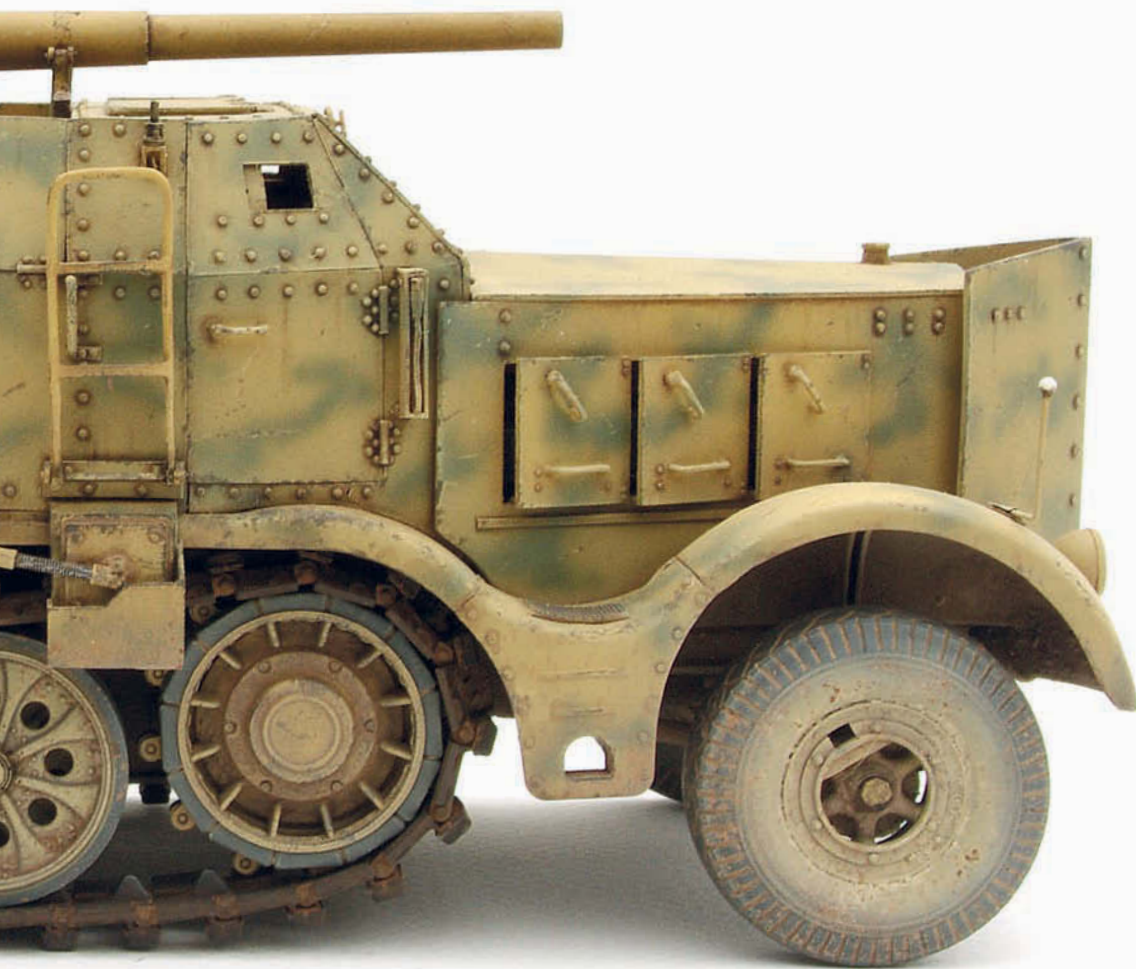
Belgian Leopards mount the GPMG instead of the MG 3



BIG BANG

Chris Leeman Builds Tiger Models Conversion for Tamiya's Famo





THEORY



Back in the late 1980's or early 90's I was flicking through a copy of Hobby Japan when I came across a great article of a scratch build someone had done of the Sd.Kfz 9 Famo mounting an 88cm Flak 36 on the rear. It was an amazing article, both from the point of view of the skill that went into the build and also because it was the first time I'd seen this particular vehicle. It was love at first sight and I hoped that one day I could model of this vehicle myself. Jump forward 20 odd years and my wish was answered by the release of the Tiger Models resin & etched brass conversion kit for the Tamiya Famo. This was a limited edition release model and I quickly ordered one for myself so I didn't miss out. The box arrived a few weeks later and while comparatively small it was jam packed with resin goodness! It should be noted that to complete this model, not only do you require a Tamiya Famo, you also require a DML 88cm Flak 36 kit so as you can see with the conversion set costing around \$160 Australian plus the cost of the other kits needed, this was not going to be a cheap model to make. But blinded by love, I said "hang the expense" and dove on in.

The Build

As I mentioned, the conversion is a box full of resin and I have to say it was very impressive. The quality of the castings was first rate, with little flash and only a few air holes and blemishes. The instructions come on a supplied CD and are very comprehensive. Not only do you get the build stages depicted in clear photographs, you also get written words from the kits designer/builder (Joe Bakanovic) with tips for putting the various assemblies together as well as his thoughts on why he did what he did in regards to the design of the kit. He clearly explains that some of what he has done is guess work, simply because there is very little information for this vehicle. (what photos are known of the vehicle are

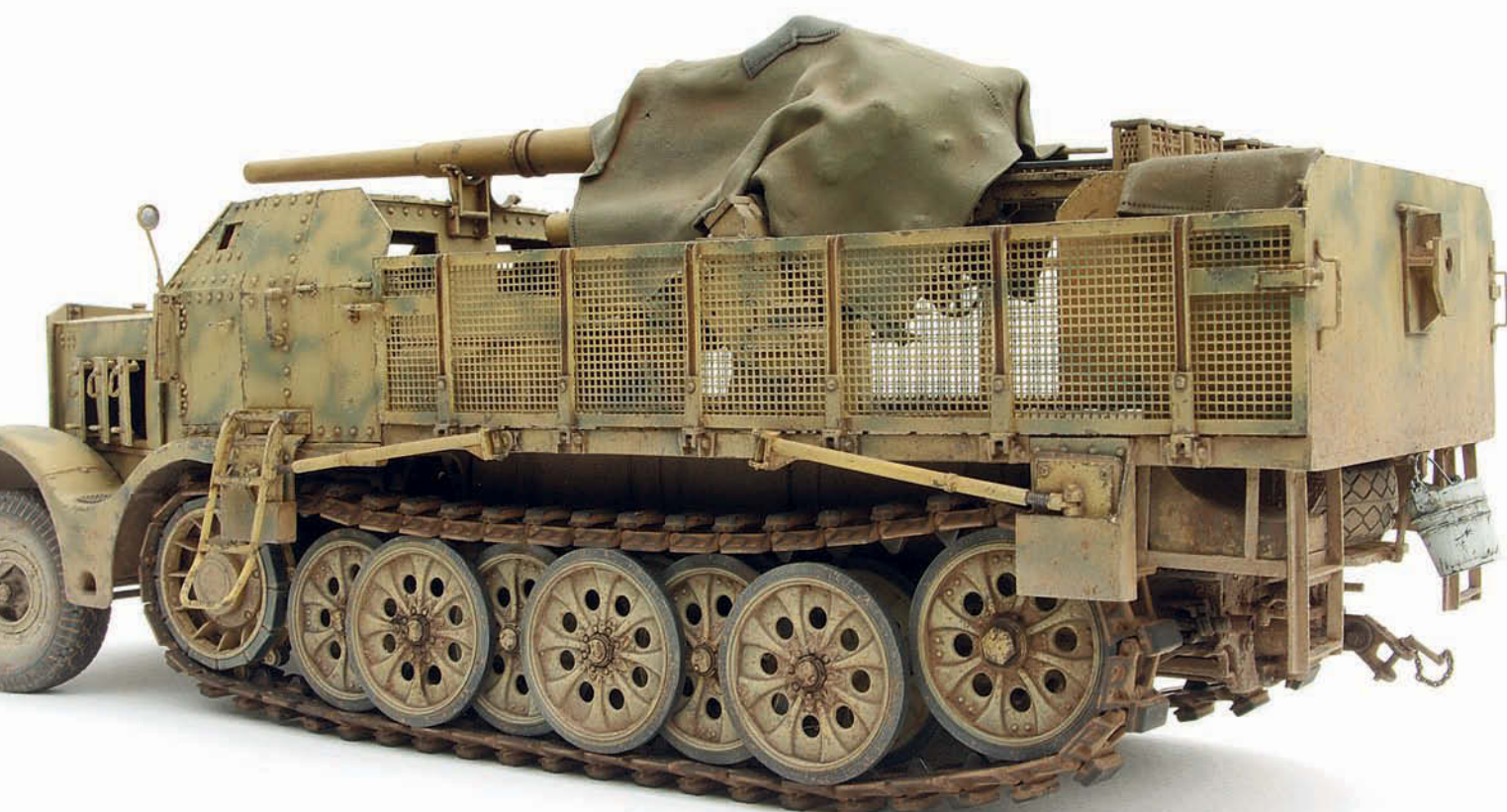
supplied on the CD). Where details in some areas are very vague, TM has included multiple options so you can choose which way you wish to go which I think is admirable.

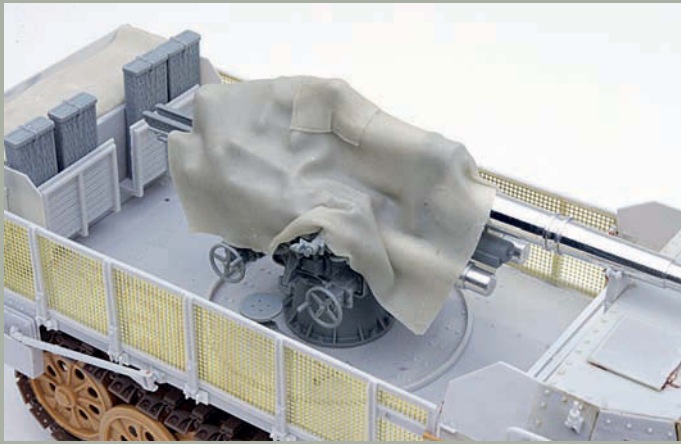
However with the excellent design and quest for detail and finesse, the kit does hit a few snags. I encountered quite a few parts that were warped due to how thin and delicate they were. Most could be fixed simply by applying a bit of heat on them or just flexing them in to position, but some, like the rear deck (an impressive single large casting) had a lot of warping and caused me a lot of headaches trying to straighten it out. I got it close but not entirely correct which caused me a few problems.

The Tamiya kit instructions are followed up

to step 12 of the Tamiya instruction sheet which deal with the lower chassis. I added in some airlines for the brakes from wire and also added a cross member brace at the rear as well as some U-shaped brackets on the track tensioners with plastic card. I started detailing the engine, adding various wiring and plumbing but realised it would be invisible on the finished model so I did not take this any further. I did paint and weather the engine and surrounding chassis at this stage before I closed it all up.

I had to do a bit of cutting and sanding to get the cabin and bonnet parts to fit properly to the chassis and I replaced some bolts detail around the fender joints which was destroyed when sanding this area to make it fit. I added a few details





from the Aber Famo etched set to the interior of the cabin, as well as some plumbing but once again not a lot would be visible in the finished product so I didn't go overboard. A fair bit of work was needed to get the cabin doors to fit, requiring filling, sanding and dry-fitting to get it all to fit. I think this was partly my fault and partly as a result of the warped parts. Before I fitted the roof I painted and weathered the interior as some of this would be visible through the openings in the rear panel. I also added instruments and placards to the dashboard from the Archer Fine Decals range.

The vehicle width indicators on the front fenders are nice little items from Voyager and the front wheels were replacement resin items by Armorscale.

Next came the rear deck, and this is where I encountered the most problems. As discussed already this part was warped and I had to heat it and place 2 or 3 heavy books on it in an effort to try and straighten it out and I had to repeat this process a few times. However I was still having issues with front area of the deck, and I ended up cutting a section out along a panel joint line, sanding and test fitting it to the cabin and chassis until I achieved a reasonable fit.

I originally wanted to have the drop sides down and the rear ammo lockers opened, but a combination of warped parts, and the knock-on effect of slight alignment issues brought on from fit issues and I am sure, mistakes I made meant I needed to

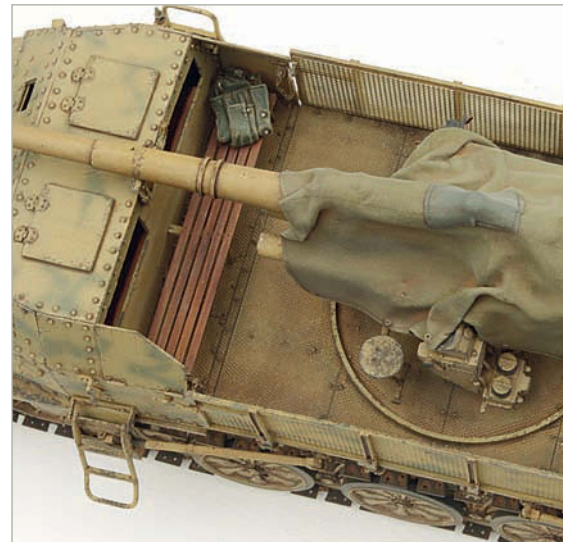
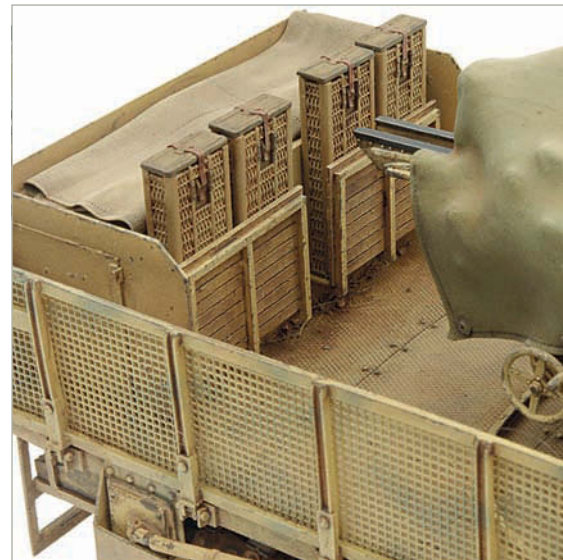
have this all closed up or it would of made some of these problems more obvious.

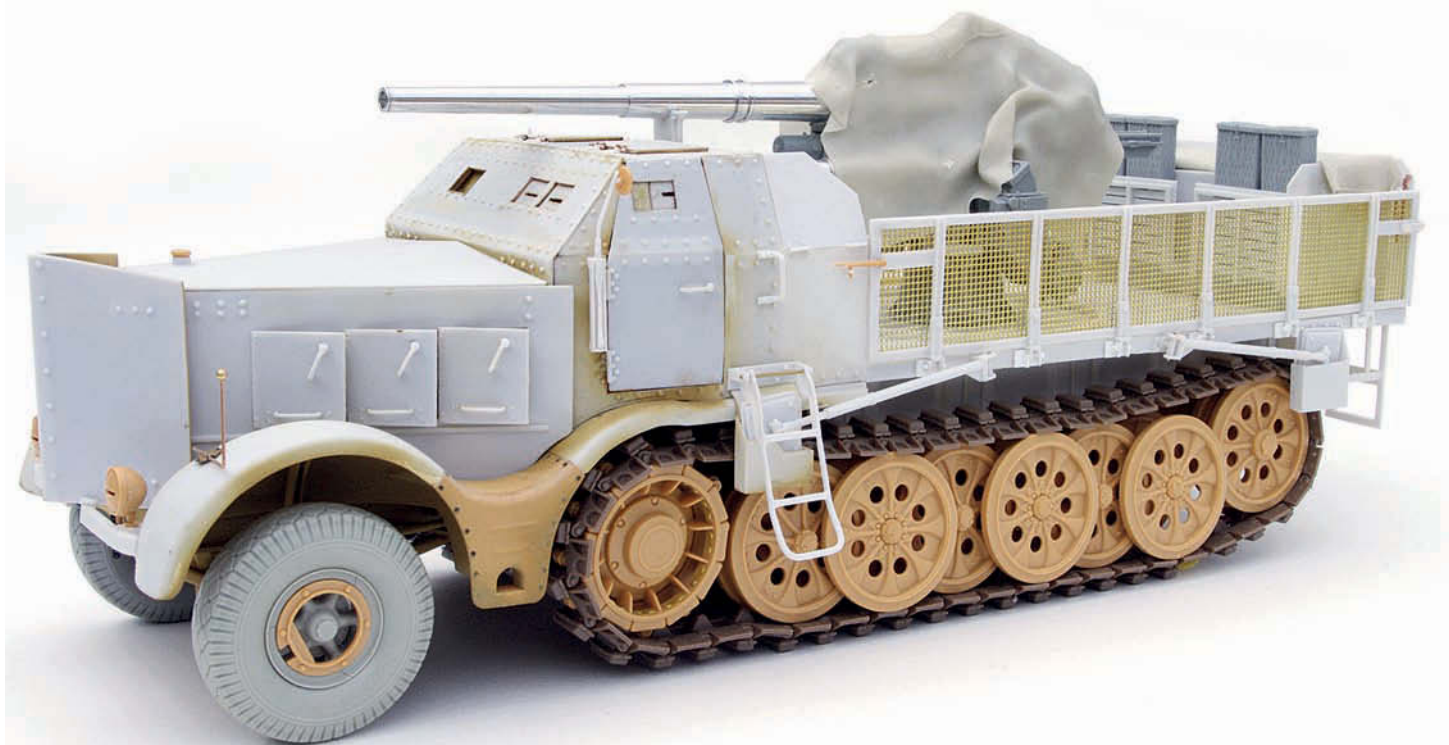
This was a shame as the parts given for the ammo lockers and shells were beautifully rendered. There were some blemishes in the rear panel that needed sanding, and the lost details replaced with plastic card and lead foil bolt heads.

I decided to add a bench seat behind the crew cab. I reasoned that there is no way all the crew for the gun would fit into cab so they would need somewhere to sit.

There are no known pictures of this area so I based my design on a similar seat found on armoured Sd.Kfz. 7 flak halftracks. I made this from plastic card and strip. I put brass wire pins through the crew access ladders so these could be folded up or down, to make painting easier.

The gun itself was virtually assembled straight from the box. As the picture I was basing my model on showed the gun covered by a tarpaulin so there was little point in adding extra detail. The tarpaulin was made from 2 part epoxy rolled into a thin sheet and cut to shape. I added brass grommets for the tie down points from an etched nuts and bolt set by Aber. The gun shield was left off as per my picture reference which I liked, as it gives a different look to the model. Finally I drilled out the brackets for the support arms and added brass wire pins to allow these parts to be moved more making it easier to put them into place on the finished model.



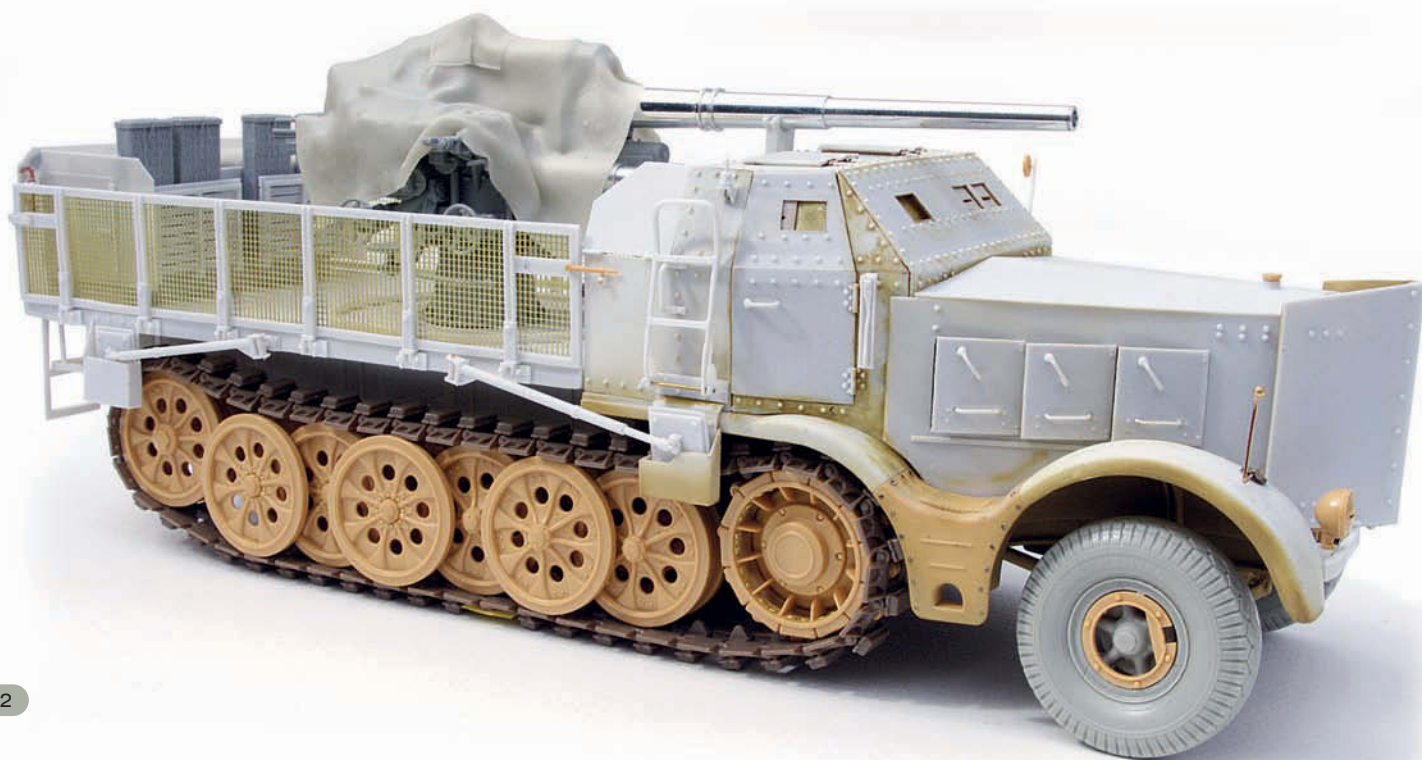


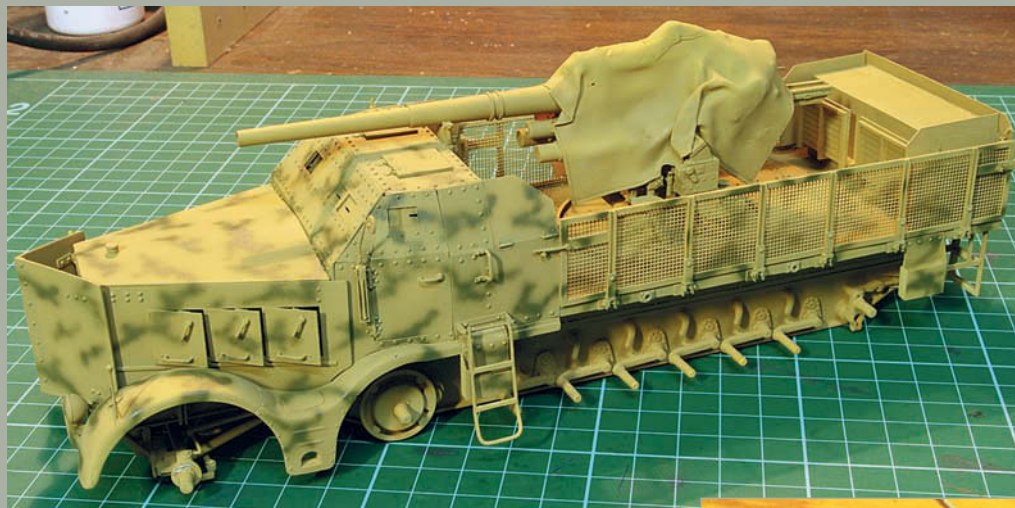
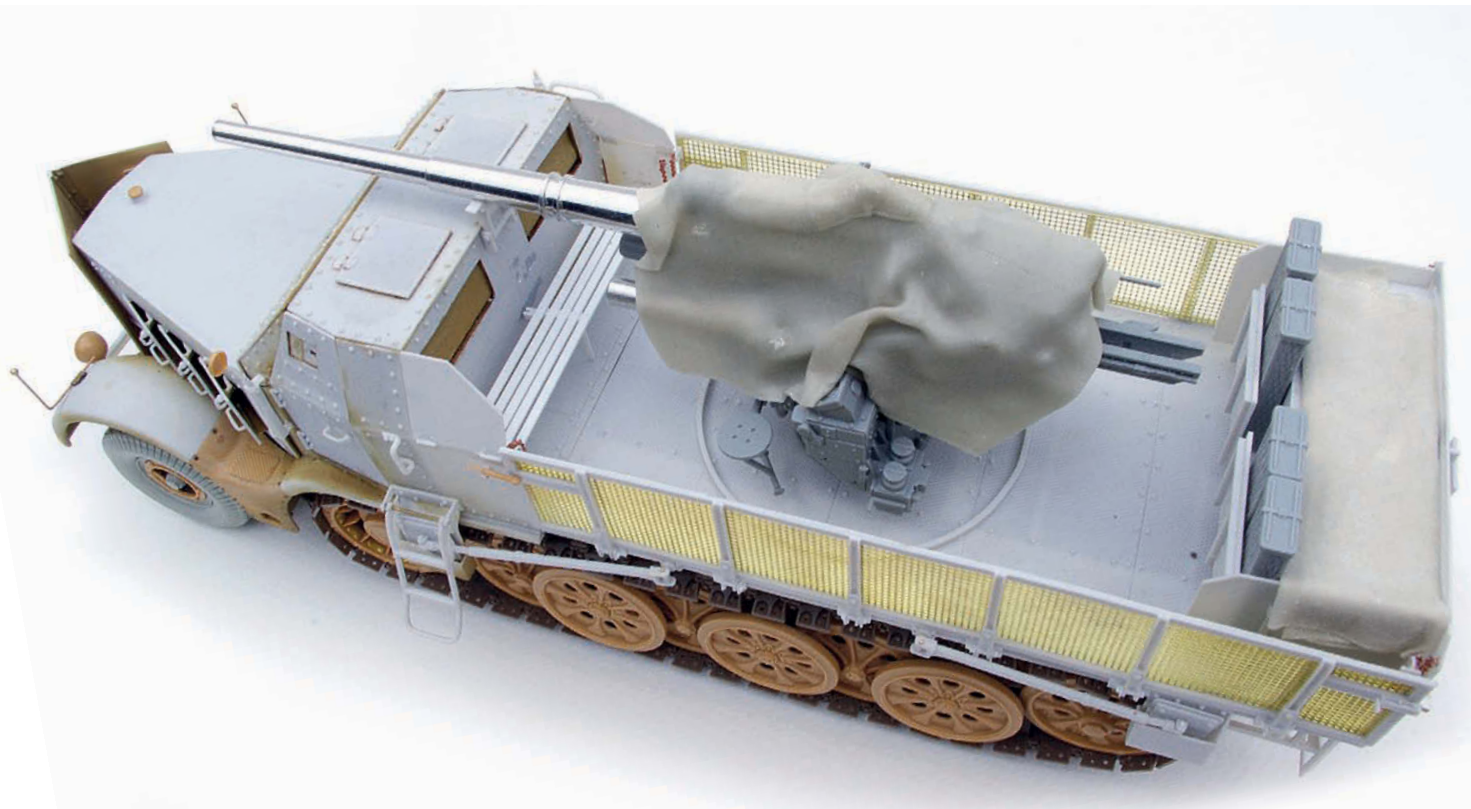
Painting

Now I have to admit that the scheme I painted this model in is a result of guess work and artistic licence. The picture I was using to base my model on was not good quality and a bit over exposed. It could show dark yellow with an overspray of camouflage but it could also quite easily be just dirty plain dark grey. As I liked the idea of the dark yellow scheme I decided on this. To begin I primed the model with Gunze Primer due to all the different materials used on the model. I then gave it a coat of Tamiya XF-60 Dark Yellow, mixed 50/50 with Tamiya XF-57 Buff just to tone the base colour down. Over this I sprayed

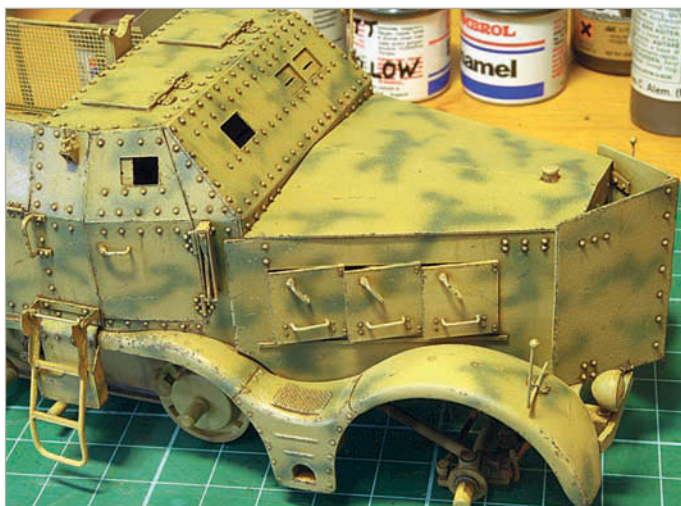
a heavily thinned colour of Gunze H-73 dark green for the camo colour. Once dry I gave it a wash using oils. I generally kept this local, working into areas of detail to help define it. The whole model then received an old school treatment of dry brushing, using a combination of Humbrol 83 ochre and Windsor & Newton soft mixture white oil. This process I feel still has a place in our hobby and helps bring out more of the detail on the model. It is important when doing this though to make sure there isn't a big contrast between light and dark. Subtlety is definitely better here. The obligatory chipping and scratching process is next. I created light coloured marks and scratches using

Humbrol 121 pale stone applied with a combination of a small piece of sponge and a 000 paintbrush. I kept these to a minimum and as random as possible, mainly concentrating on areas of high wear and activity. Next came the darker chipping, using Vallejo Panzer Aces 337 Highlight German Black. I like this paint as it's a black/brown colour and it seems to look right to my eyes for this process. Once again application was with a combination of a small piece of sponge and a fine brush. Once again the application was kept random but it was a little more extensive than the application of the lighter colour. I now moved to the lower chassis and I





used AK Interactive OIF & OEF Streaking Effects to add a bit contrast and streaking to the lower surfaces. I did this to try and break up the plain look of these areas and to create a dirty and grimy appearance to the lower chassis. Using various shades of pigments, dirt & dust was added to the lower chassis. Some of these were applied as a paste, left to dry and then the excess removed with a stiff brush. Some were applied dry and some were fixed into place with pigment fixer to help create different tones and textures.





The gun was painted in a similar manner to the halftrack. I did give the barrel a heavier wash of thinned oils to try and give the impression of discolouring and staining from heat when it was fired. The tarpaulins were painted with Humbrol 159 Khaki Drab then given a light oil wash and once again lightly dry brushed. To help blend them to the rest of the vehicle I also applied a light dusting of pigments.

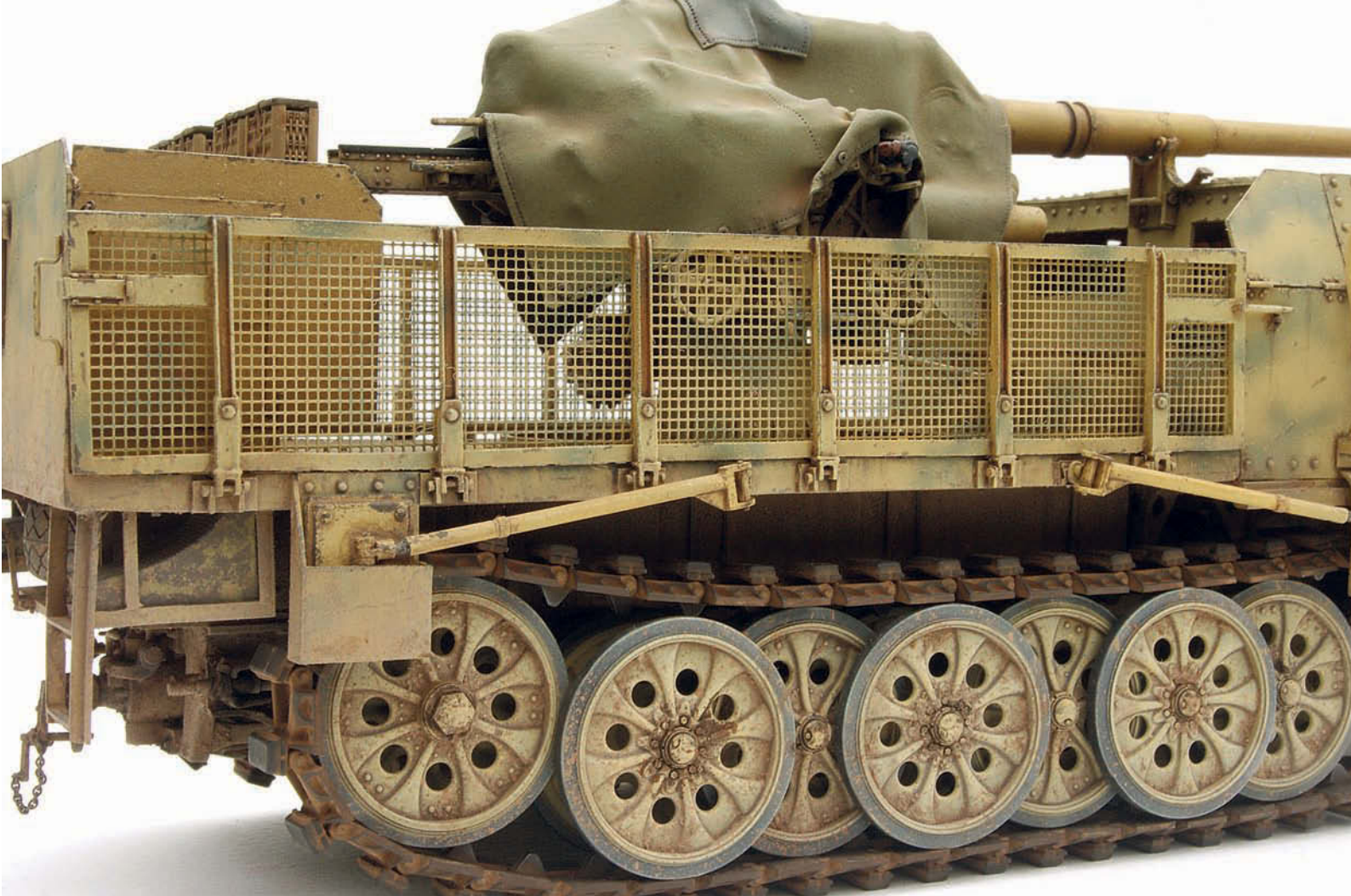
The tracks were painted a

mixture of 50/50 Tamiya XF-1 flat black & XF-10 brown, with the track pads picked out in straight Humbrol 33 flat black. The tires (both front and rear) were also painted Gunze H77 tire black using the Quick Wheels wheel masks. When dry they all received a complete covering of a slurry made from the same shades of pigments used on the lower chassis. When dry the excess was removed with a stiff brush. Using thinned oils, I added areas of

darker mud and oil stains and leaks around the wheels and lower chassis.

On the rear deck I added combination of pigments, and chopped up summer grass from Joefix Studios (141 dark brown grass) to try and show dirt and rubbish that would be kicked up from the firing of the gun and had settled on the deck. This was fixed into place with AK Interactive pigment fixer. I also added some random staining around the rear deck to create some interest. The



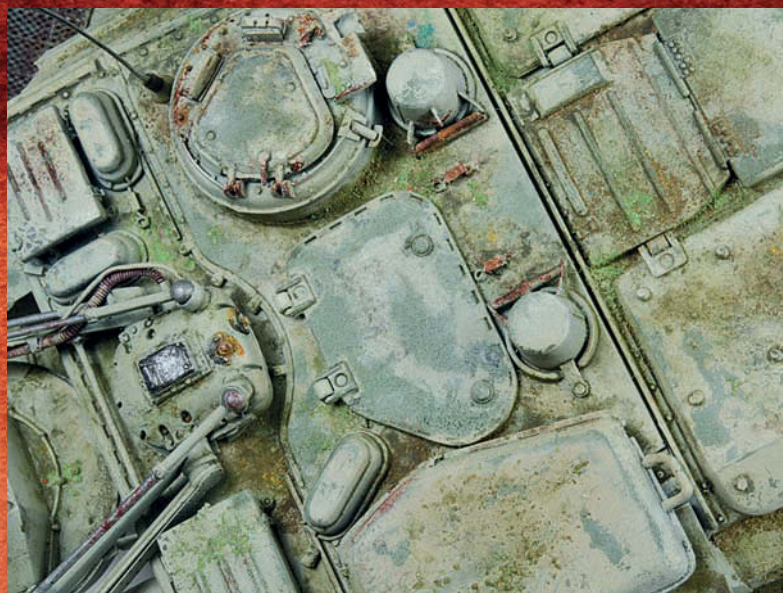
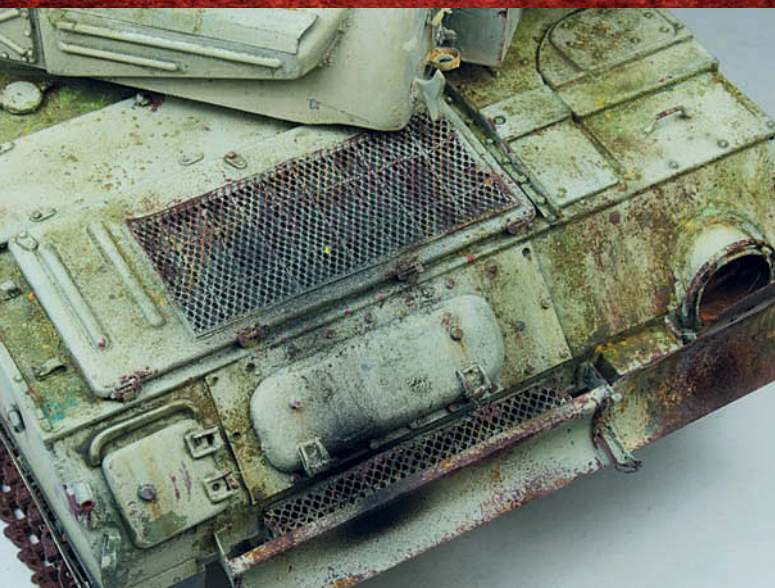


ammo boxes came from the AFV Club German 8.8cm/L56 ammo set and were painted with a combination of enamels and oils. The bench seat was painted Humbrol 93 desert yellow and then received a heavy wash of Burnt Sienna oils, with the excess light wiped off with a cotton rag, dragged length ways down the bench to add some woodgrain texture. Finally the model received a light spray of Tamiya Buff, to add dust effects, concentrating

more on the lower chassis.

This was one of the toughest models I have worked on for a while, with the fit and warping issues. But I am glad I stuck it out as it makes a great addition to the model shelf. Hopefully one day one of the major manufactures might release this in an all plastic affair and save us all a lot of work.





Chris Meddings shakes the dust off Dragon's SZU23-4 and brings it up to scratch



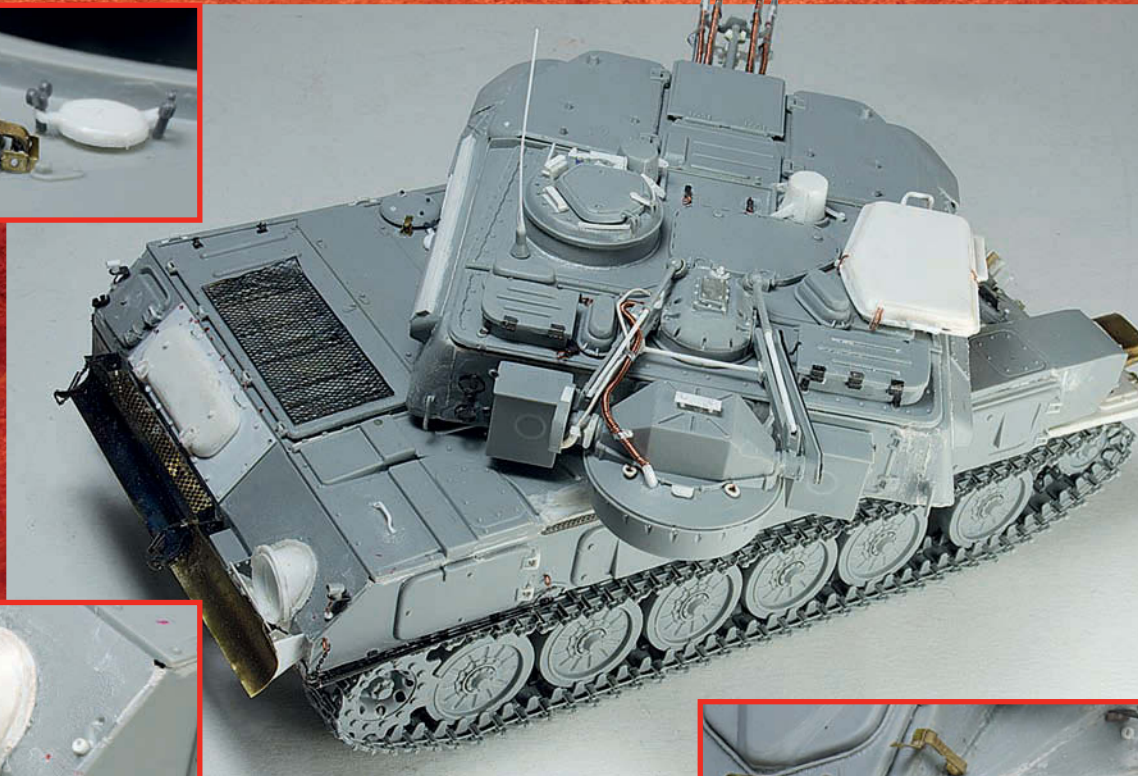
cooler Shilka

The ZSU 23-4 is a lightly armoured, radar directed, self-propelled anti-aircraft cannon of Soviet design, which entered service in 1965. It is designed to cover the blind spot inside a perimeter of SAM anti-aircraft defences and is used to defend mobile units and columns. Its effectiveness against low-level targets has been proven over the subsequent decades and despite many cannon AA systems becoming obsolete it has remained popular and continues to be manufactured in the Russian Federation for export and remains in service with over 40 countries around the world. It has served in conflicts from the Vietnam and Yom Kippur Wars to the current conflicts in Iraq and Syria. Although now largely ineffective against modern fixed-wing aircraft, it remains useful in defending against helicopters

and is often deployed against ground targets. The Imperial War Museum Duxford owns two ZSU 23-4 Shilkas. One is restored and runs, the other is a wreck. Both were captured from Iraqi forces in the first Gulf War in 1991. I am told that the wreck had a fatally damaged engine and cannot be restored without a new block. It currently rests behind the land warfare hall, somewhat forlorn and unloved. During a visit earlier in 2014 I was given the opportunity to access the vehicle and take as many pictures as I wanted.

I have never had any real interest in modern Soviet armour but the dilapidated state of this little shilka and especially the moss and grime that had accumulated on its desert sand scheme in the English climate made me want to give it a go.

The hull



The only kits available of the ZSU 23-4 in 1:35 scale are the Dragon Models ZSU 23-4M (3518) and ZSU 23-4V1 (3521). Both of these are older kits as the numbers suggest, and date from around 1993. The kit was re-released under the 'Orange Value' label by Dragon, bundled with an old set of 'Soviet Motor Rifle Troops' in 2011.

The kit is, to be frank, not great. It shows its age with poor to moderate (at best) fit, warping, soft detail and numerous omissions, but it is basically dimensionally sound; and as long as a kit is dimensionally correct, the rest is a matter of detailing.

I chose to use the Eduard PE set (35017) and also added the RB models Barrel set (35B29) both with mixed results as we will see later. Other than that, most of the work would involve white styrene!

The instructions, for some reason best known to Dragon, start with the radome, control box and a few associated parts. I ignored this and went straight to the hull in

a more traditional manner and I started by putting together the basic hull parts and removing the various details I planned to replace. The hull was not easy to put together and a few braces were needed to straighten out the warped upper hull and keep it all straight. Plenty of filler also made an appearance, particularly in the poor joint between upper and lower hull along the sponsons.

I then focussed on detailing and finishing the front of the hull. Immediately I came up against something that I think is a glaring omission on the Eduard set; the front fenders. The Eduard set does provide very nice PE mud flaps but the DML fenders themselves are very thick in the kit, around 2mm. On the Shilka at the IWM, these are bent, which seems common on vehicles in service so I made new ones from white styrene and bent them as desired. I also added the clips for the boxes on the fenders which are another Eduard omission with parts from the PE spares box.

The wooden bow splash guards on the vehicle I was modelling were partially missing and rotten where present. So I ignored the kit parts and made a new one from a piece of wood which I picked at with metal tools to 'distress' and made new metal brackets for the guards from white styrene. I also added rain guards for the driver's hatch from the thinnest white styrene I could find.

I filled the holes for the shovel location points and made a new blade bracket and clips for the tow cable from brass sheet. I also added mounts and bolts for the spare track links using Grandt Line bolts with washers. Eduard provided excellent tool clamps and items for the drivers periscope and episcopes rain guard. The right side light guard in the Eduard set is an incorrect shape so I made a new one from brass sheet.



The cover/ ventilator on the left side are also over-thick in the kit so I replaced it with styrene sheet, adding stretched sprue welds. The ventilator on the driver's compartment roof is missing bolt detail so I added that with Masterclub bolts.

Once the front of the hull was finished I considered the work needed on the rear which was quite a lot! I started with the cooling vent and grille on the oil cooler. I removed the moulded grille from the kit hatch and used it as a template to scribe the deck underneath then removed the same portion, or slightly larger. Using styrene strip I made the slats under the grill, then added the wire supports from brass rod. I then added the Eduard grill on top pushing it down to get the right shape and lifting one edge to match the real vehicle. I also added the missing halves of the hatch hinges. Between the cooling cover and the engine outlet cover there is a strip with securing bolts. I shaped the irregular strip from Styrene rod and added

Masterclub bolts.

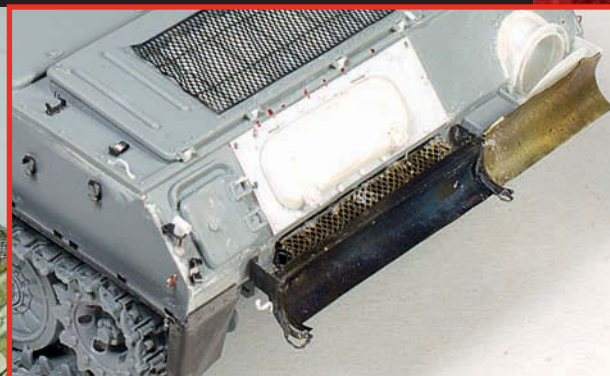
Below the oil cooling grille on the rear sloping wall is a panel with an access hatch. In the kit this is missing all detail, including the hatch securing locks, hinges and all the bolts securing the panel to the rear wall. I thought about just adding the bolts and detailing the hatch, but the hatch was slightly open on the real vehicle, which is a nice touch so I decided the simplest solution was to remove the whole panel and hatch and replace them with scratch built replacements.

Below this hatch is the exhaust outlet. Eduard gives a good item for the finned outlet, but fails to supply the mesh cover for it. I added this from Inside the Armour 1/72 diamond mesh (72005). The circular vent outlet for the fan is very very thick on the kit. Eduard provides a hatch for it in thin PE, but it is incorrectly shaped and really only serves to highlight the thickness of the kit tube if used in an open position. I cut out the blanking off behind the tube and made a new one from thin styrene



sheet. Inside I used a piece of styrene tube thinned out and added the mounting plate with weld seem. The kit is missing mounting brackets and hinges for the flap so I made new ones using my photos, and the strip bracket on top of the tube outlet. The Eduard set provides half of the log holder, but only half, so I fitted the one they supply and made the second half from brass sheet, and a new bracket from styrene sheet. I also added conduit and wires for the rear lights.

On the engine deck there are three caps for the snorkel, and for filling water and fuel. One of these is missing from the DML kit and all three are poorly detailed. I started on one of the smaller caps supplied and cut off the moulded on bracket 'blobs' Made new brackets from styrene sheet and added securing wingnuts. I made the missing cover from styrene sheet, and added the missing bolts on the snorkel cover, plus the missing hinge, again from spare PE.



On the hull sides I added a missing access panel, various Eduard PE pieces and my own new hinges for all the access panels. I also added the two missing shovel brackets and the brackets for their spades. Behind these there appears to have been something screwed or bolted to the side. There is a square of less faded paint and four holes. The paint would add some interest to the model so I drilled the holes to add the detail at the paint stage.

I moved on to the wheels and tracks. The kit wheels are missing the inner faces, but as I planned to show the model in long grass, I wasn't worried about them. The tracks are OK, so I used them. However the sprocket did need some work as they were missing the lightning holes so these were drilled out.

The turret



I started innocently enough by attempting to assemble the top, base and rear parts of the turret. In all honesty I have to say I have never tried to assemble a worse fitting kit. I spent considerable time test fitting, and test fitting over again, but there simply was no solution to the cavernous gaps the kit presented me with. In the end I went for the fairest option of sharing the gaps around and ended up with a 2mm gap at the front of the turret, and 1mm each on the sides and sides of the rear panel. Everything else fitted later so this must have been close to true for the positions of the parts. I certainly got plenty of opportunity to practice my filling and sanding skills!

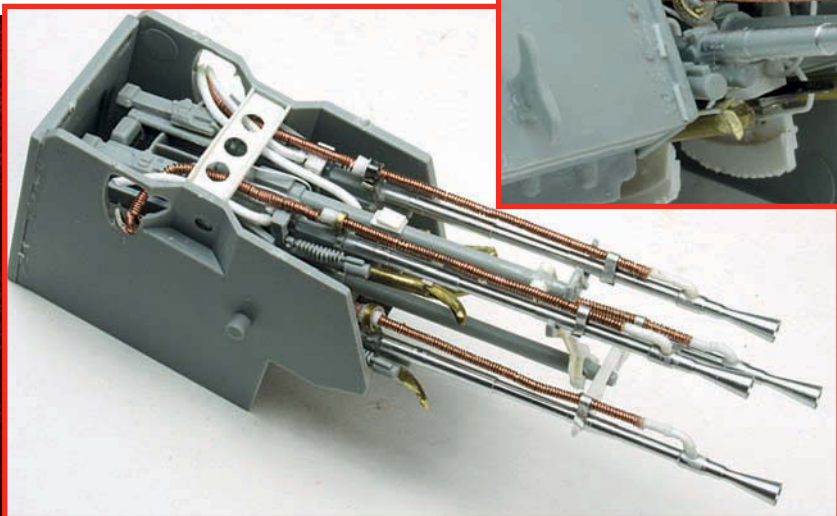
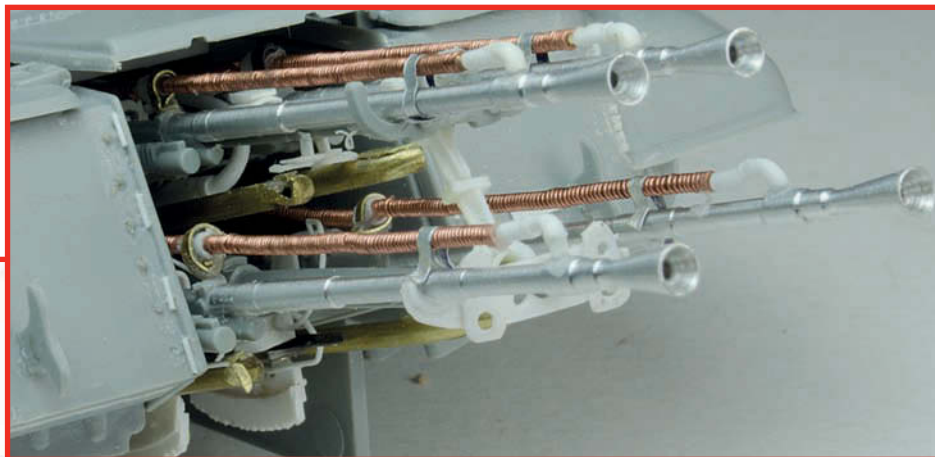
I then set about converting the right turret side to an 'M' as my kit was a 'V'. On the left side I shaved off a long ventilation channel and replaced it with styrene to show it hollow. Missing welds were added and all the poor kit rivets replaced with Masterclub versions. My 'V' kit was missing the roof box, so I made this by shaping laminated styrene. The covers for the Gunner's stereoscopic sights needed their own details. I removed the clunky and inaccurate hinge arms and replaced them

with new ones from thinner styrene bent to the correct shapes and added the locking latches to hold them closed. I used pairs of the Eduard latches for locking the covers open, but not the ring pins as these should be round and of course the etched ones are flat, so I made new ones from fine wire. I wish now I had added springs inside the latches as they would be just about visible and could have been easily done by stretching sprue and winding it around the pin; something to remember next time.

A note when looking at the pictures; I lost one of the covers during construction so had to make a replacement. A good proportion of my scratchbuilding practice comes from replacing lost parts!

The commander's cupola needed a fair bit of work. I started with the guard strips by the hatch hinges. These are faint raised lines on the kit, being both too low and too

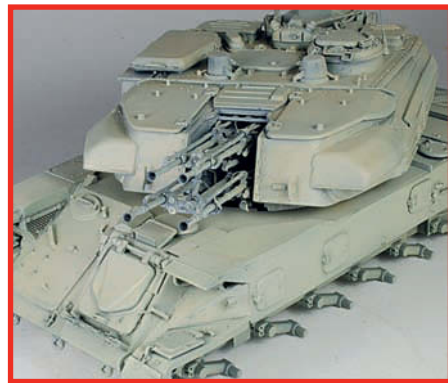
thick. I replaced them with strips of thin plastic sheet. Next I looked at the brackets and clips used for the Commander's auxiliary night sight system. The large shelf-like bracket is very thick in the kit so I measured the kit one and replaced it with plastic card which is about half the kit part's thickness. The two periscopes were very softly moulded so I made new ones, the stowage boxes, top and rear were easier to deal with, I simply shaved off the brackets, hinges and latches and added the ones from the Eduard set. The radar control box needed re-shaping and detailing of the conduit outlets and sockets. The braces of the radome arms were rebuilt and cables added. The wire wrapped conduit to the radar itself was plastic rod wrapped in 0.5mm copper wire. Once it is wrapped in wire plastic rod is pretty easy to bend as desired.



Time then for the final part of the build, the fun bit! The cannons on the kit are pretty soft. The hoses are incorrect, the hose joints are incorrect; the muzzles (despite being very large) are solid, the breech detail is soft, brackets are over-scale; the mounting arms are missing

details and so on and on. I started with the barrels and replaced them with RB models barrels (RB 35B29). These come with four aluminium barrels and four brass hoses. I didn't like the hoses so again made my own from brass rod wrapped in 0.3mm brass wire.

The real vehicle has covers over the muzzles which can be removed automatically from inside the vehicle. I made the creative decision to this time depart from total fidelity to realism by leaving these off. I added the missing detail to the support arms and made new cradle brackets for the barrels. New straps were added from foil and a new pivot arm was made to replace the 'grey blob' in the kit. I made new gear quadrants from styrene and new brackets and wiring for the breaches. Finally I finished the guns with new shell ejection hoses. These were formed from brass tube, heated then gently bent to avoid kinks. I used round and oval files to cut the ends to shape then added the small plates welded on top to deflect the spent shells. The guns were fitted to the turret and hoses fed through the relevant holes, then finally the build was ready for paint.



The paint

I started as usually with priming. I love priming; it shows me all the areas that need a little extra finesse and finally makes everything look like it belongs together. My new favourite primer is Alclad black, mainly because it bonds better with the plastic and provides a stronger key for the rest of the paint. I followed this with a thin basecoat of AMMO Green Khaki (A.MIG056) from their Soviet Camo Colours set. This was sealed and a coat of AMMO heavy chipping fluid (A.MIG2011). I added more in areas I wanted to show more wear. As soon as this was dry I added an all over coat of AMMO Oil Ochre (A.MIG055) lightened with a little Vallejo white. As soon as this was dry I moistened a brush with warm water and started to

work on the chipping. Now and then I used other tools such as a sharpened cocktail stick, to make different size and shaped chips, but not using metal tools to avoid scratching the paint under the layer of chipping fluid. All along I referred constantly to my photographs to keep the chipping realistic. I then left it to dry thoroughly overnight to give the top layer chance to properly settle.

At some time it seems some sort of grey was used on the tank, before the sand/ochre was added in Iraq perhaps. This was added on top of the sand aiming for the illusion of it being under. I painted larger patches with a brush and smaller parts with sponge chipping. Again, regular reference to the pictures from the real

vehicle were essential, I did not want it to look random. I finished the basic painting work painting in a number of details, such as the red 'B' on the nose, and spraying the oily spatter on the rear using a very dark grey. I always avoid black if I can as it looks too flat. I painted the mud flaps a dark grey and mixed black with gloss varnish for the infra-red lights, and I did the same with red and gloss for the appropriate convoy lights.

The wheels were treated in much the same way, I used a lighter grey to show the faded rubber of the tyres, and a reddish brown for the tracks, then dry-brushed them with a very dark grey.

There were things I wanted to do with this that I had never done before in terms of weathering, so I had to throw out my usual weathering methods. I started with something I do always use; a filter. Usually I go darker on this with a mix of Black and Burnt Umber. This time though I decided to go with a mix of Dark Green and Ochre oils. Next I used AMMO light rust wash (A.MIG1004), mixed with a little Raw Sienna oil and used a sponge to add it in to areas I wanted to show rust. The vehicle is mostly free of rust so I was very careful again to only add it lightly and in the right areas. Some highlighting was done with a creamy-coloured enamel mix, un-thinned, applied in small amounts and carefully blended. The next stage then was general grime. This meant using something to get a greenish organic gunge. I could have mixed something

up but again I had an AMMO product to hand. I have mentioned AMMO a lot in this article, but as I have said, other products are available. It really is about looking at what you already have and using something from a bottle or mixing your own. The effect achieved is more important than the source. In this case I used AMMO Dark Streaking Grime (AMIG1206) but instead of using it for streaking, I used it as a heavy wash in recesses and areas where grime might collect. Pigments and homemade powders formed perhaps the major part of the final effect on the vehicle. I wanted to replicate the mossy build up on the horizontal surfaces and more grime. So I used some powders from AMMO and Pinnacle, and a lot of self-mixed stuff from chalk pastels, especially some of the greens and brighter colours.

The weathering



I started with browns using the Pinnacle darker earth colours and mixed with some black AMMO pigment. It was applied by shaving a small flat area on the tip of a cocktail stick for a little scoop and dropping small amounts at a time where they were needed and then letting enamel thinners into them on the model then moving them around with a fine brush. They were fixed with AMMO pigment fixer which seems not to affect the colour like some fixers do. This was then supplemented with dark greens, lighter greens and a range of other colours as required. In some places I wanted a drier look and wanted to preserve the powdery appearance of the powders to look more like scale lichen and moss. Here I didn't use the enamel thinner, but fixed it with very small amounts of fixer at a time, to ensure the moisture did not 'collapse' the height of them. In some areas I used pigments to streak, adding a small amount the streaking them away with enamel thinners, really just playing it by ear until the

effects looked how I wanted.

All of this was built up slowly in layers to ensure control as I was worried dumping too much pigment on the model at once might take it further than I could control accurately. Finally I added small dots of brighter colour for the yellow and blue mosses and fixed them. These added a little colour and life to an otherwise very earthy pallet. The last things I weathered were the tracks. These are surprisingly clean, certainly clean of the 'claggy' mud most models favour, so I followed the real thing and used Pinnacle light earth in the recesses of the track link exteriors, and rubbed a little into areas of the wheels and the hull behind the tracks.

For the base I used a plastic card rectangle to seal the wooden base from the moisture in the filler I used on top. I mixed household filler with pigment and paint and ladled this on and waited for it to semi-dry before

stippling it with an old brush cut down to get some texture. While this was still wet I started pushing in longer grasses, using three different sources for different sizes and textures. I supplemented this with bought shorter grass tufts (I'm afraid I forgot the make) and finally took long grass strands and dipped them in PVA then green pigments to get the look of long British grasses gone to seed for a late summer look. Finally I dusted it all with a light dust pigment to blend it in and to get the look of the grasses in that location, next to the tank arena where they are frequently covered in clouds of dust churned up by the Museum's tracked vehicles.

After some final trimming of the grass I was finished. An absorbing and enjoyable project which has resulted in a much cooler Shilka than a one built straight from the box!

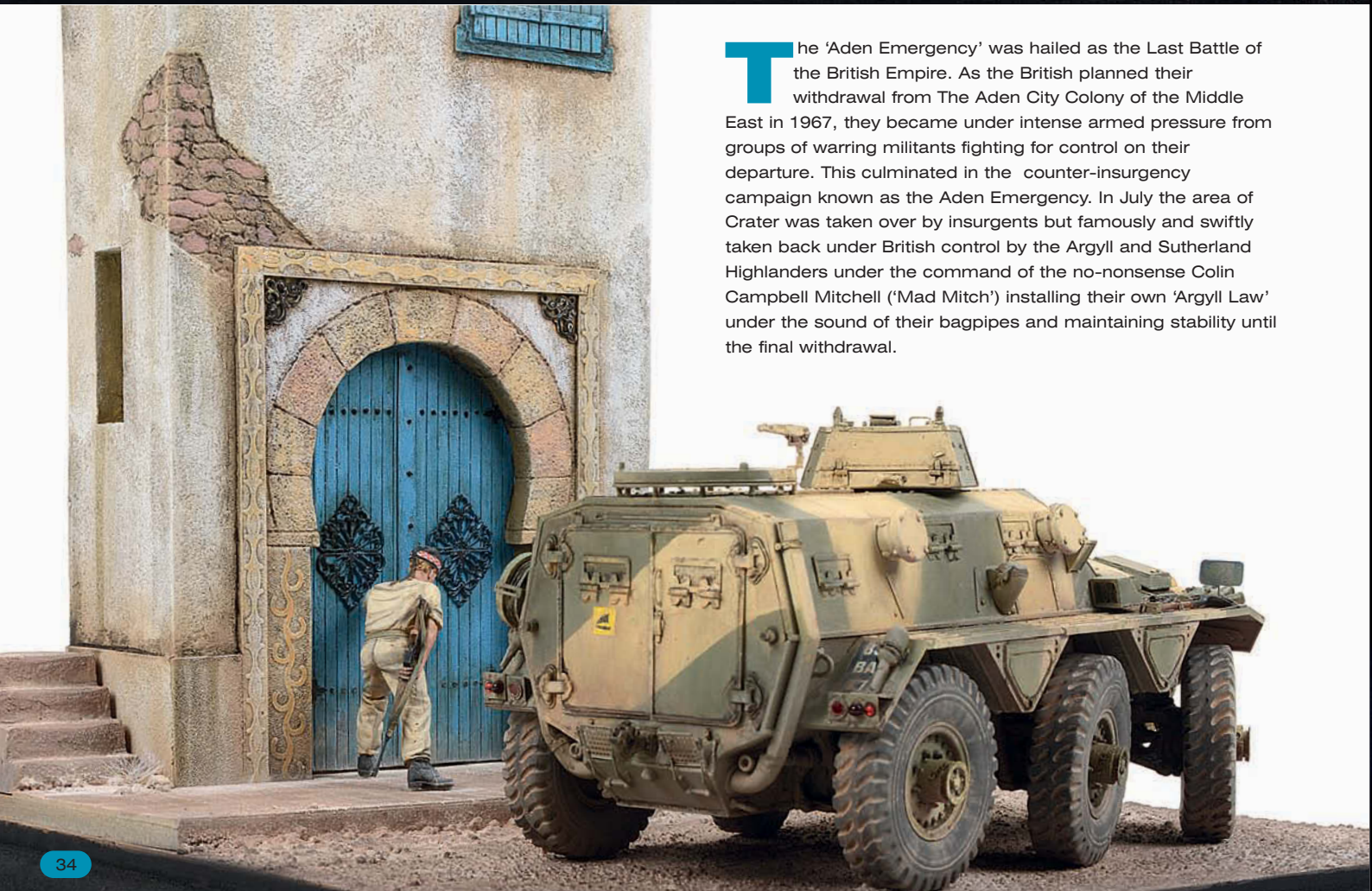


cooler
Shilka



IWM Duxford's non-running Shilka, photographs by Chris Meedings

ARGYLL LAW



The 'Aden Emergency' was hailed as the Last Battle of the British Empire. As the British planned their withdrawal from The Aden City Colony of the Middle East in 1967, they became under intense armed pressure from groups of warring militants fighting for control on their departure. This culminated in the counter-insurgency campaign known as the Aden Emergency. In July the area of Crater was taken over by insurgents but famously and swiftly taken back under British control by the Argyll and Sutherland Highlanders under the command of the no-nonsense Colin Campbell Mitchell ('Mad Mitch') installing their own 'Argyll Law' under the sound of their bagpipes and maintaining stability until the final withdrawal.

When we were asked if we'd like to take a closer look at their new Saracen kit, it seemed fitting that Glasgow's Accurate Armour should have the armoured car shown working for the Argyll's in Crater. Long-time saviors of Modellers of post-war British subjects, Accurate Armour continue to hit on the right subjects with their multi-media kits and 2014 saw them release several versions of the Saracen, this being the FV603B/C APC Mk2 / Mk3 complete with interior and engine detail.

With plastic kits being released at such an alarming rate, and in some cases such obscure subjects, are the days of the smaller 'cottage' manufacturers numbered? Well we think, and sincerely hope, not. The smaller kit producers working in resin have made our hobby rich with diverse subjects and conversions allowing very personal work where the modeller can be proud of something very unique with their own touches.



ACCURATE ARMOUR'S 1:35 SARACEN IN THE LAST BATTLE OF THE BRITISH EMPIRE modelled by **Mark Neville**

Anyone who builds resin kits knows what to expect. Resin kits rarely fall together like some modern injection moulded productions so expect to use filler, and a bit of 'fettling' traditional skills but then are we not modellers?

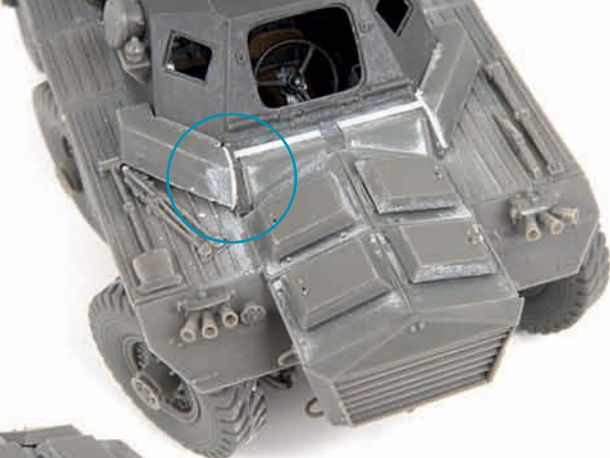
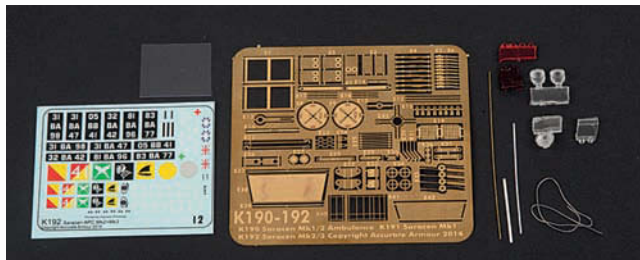
AA instruction booklets stick to their established approach consisting of photos of the kit in progress with part numbers added (part numbers are cast into the resin mould runners) and detailed text of

areas requiring extra attention. The bulk of the kit is cast in grey resin with impressive large upper and lower hull parts forming a good base to work onto. The suspension is quite complex but with some trial and error we managed to get the lovely chunky wheels all hitting the ground at once.

The wheels are nicely done with a flat-spot and 'bulge' where they make contact. Clear and coloured resin is supplied for the glazing and lamps, various brass and

plastic rod and a set of decals to mark a wide variety of vehicles. I'll be the first to admit, I'm pretty ignorant about British vehicles of the period, so my apologies if I've added any wrong options of some of the smaller fittings and markings for a vehicle specific to Aden operations, the instructions are comprehensive but a little confusing in places for a Saracen novice.





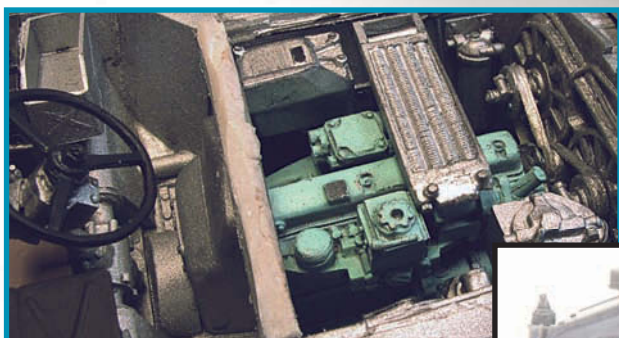
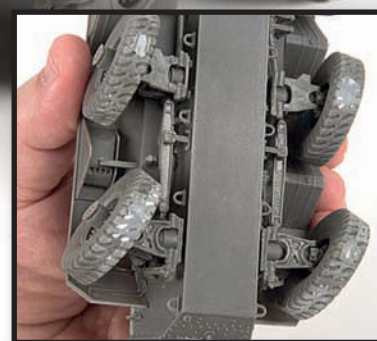
A full resin kit with interior is bound to require a few tweaks to ensure a good fit. Lots of dry fitting tests and eventually a little filler on the joint of the NFC vents and some plastic card in front of the driver's hatch smoothed the area easily. Options for reverse cooling ducts and front armour plate are included in the kit along with optional light fittings.

Rear ducting required a little filler piece to join the top and bottom sections which we couldn't quite get to meet. Rifle ports can be assembled open and a Bren is included to mount on the roof ring position.

Rear doors have detail on either side should you wish to show the interior and the rear steps (a frustrating little assembly!) can be posed folded up or down. To detail our .30 Browning barrel we added an Aber turned brass version.

The photoetch was added after general fit and finish was checked to avoid any frustrating breakages from handling.

assembly



As very little of the interior was to be seen on the finished 'buttoned-up' model but if you plan to open up the back doors its all there. The main elements were installed and given some base colours. Both the engine bay and the interior are well detailed. Solder wire and instructions are supplied for ignition cables and two options of early and late Larkspur radios provided. We may not have left much on show but it's proof you can make it all fit!

paint



After a coat of Mr. Surfacer primer was dried I began to look at suitable base colours. Working from some colour images supplied by modeller (and Scot!) Brian Murdoch, I decided on deliberately light shades from AK Interactive's range:

Bronze green; RAL 6011 Resedagrün
AK 715 + 20% Red Primer light base
AK 128

Light Stone; RAL 8031 German Sand
Beige AK 728

As you can see, subsequent weathering and effects changes the tones considerably, certainly something to bear in mind if you're not representing a factory fresh vehicle. Tyres were brush painted with Lifecolor 'rubber track' from their 'black' set.



The majority of vehicles used in Aden appear with a light stone brush painted disruptive pattern over the bronze green. To achieve the hard-edge I used Blu-Tak, specific masking putties are now available for modellers, beware of lifting smaller details when you remove the mask!

An obvious feature of Aden vehicles is a build-up of dust. I like to use water-based designers gouache for dust effects due to its chalky finish and the ability to keep working the colour with water. It's first applied very dilute by airbrush...

...then moved around a lot like a colour wash with a damp brush. The dust colour collects as dust would and helps also to harmonise and tone down the two contrasting colours. It also works well on the tyres moving the brush from the rim outwards.



Here is the effect overall of the gouache dust colours.

Next came applications of filter colours. The main one used is a ready to use 'Filter' from the AK range for Afrika Korps vehicles. It's quite an orangy - ochre hue which I needed to bring the bronze green back out and add some tone to chosen panels to emphasize the shapes, the Saracen is an ideal candidate for this treatment with all of the large angular plates.

To enhance the detail the usual dark washes were added and various strengths depending how deep the shadow. The new range from 'Wilder' includes 'Dark Wash' which is excellent for those deeper tones around wheel bolts and suspension parts.



Selective areas of detail were lifted by carefully brush painting lighter tones of the base colours, time consuming but it adds to the dimensional effect. Tool stowage was painted in acrylics with subsequent washes and pencil buffing. The gun barrel was

painted in Vallejo 'Air Black' and treated to a buff with the 'Steel' polishing powder from Ushi Van Der Rosten's new range. Decals and light lenses were added last along with some selective pigment powders to the chassis and tyre treads.



The vehicles operating in Aden appear mostly in good order. Bearing this in mind I kept damage to a minimum concentrating on some areas of the overpainted beige being scuffed through to the green. Some edges were tapped with a soft pencil to indicate some polishing and abrasion of paintwork

the scene

Trawling the internet for images of the Aden Emergency I'd decided to try and give a sense of the region and action of the time with as few elements as possible. I remembered a sample we had from the excellent range of Reality In Scale, it was boxed as a 'North African House' but resembled many of the older buildings in Crater. The building and pavement section are beautifully cast in a pleasing lightweight resin and simply need painting. A base sand colour was worked onto first by sponging

white acrylic giving an aged texture to the rendering. Next to be applied was airbrushed tone-work and shading with dark washes lifting the detail. Detail painting of the door surrounds and damp streaking added further realism and character. A final touch, and also a lift of colour to the whole vignette, the turquoise blue doors and shutters. The base blue was lightened to add the highlights and fading, green and dark brown washes giving further depth with a little flaking paint to the base of the doors.



The mdf base came from Pete Watson while visiting his stand at a UK model show, this was kept as compact as possible. With the pavement section glued in place I decided to try some of the Wilder texture paints to replicate the road finish in keeping with the photo reference I had. The colour looked right so I started with the roughest, stoney texture followed by the finer grit. Using a cheap stiff bristled brush the texture is easily manipulated and the finish dries quite quickly. To get the dusty look I used two colours from the Wilder 'Gunpowder' pigment powder range, Dark European Terrain was applied in one direction and Road Dust from the other, this gave a pleasing shaded effect to the texture. More Road Dust pigment was applied around the steps and base of the building to blend the colours together.

A few clumps of Joefix dried grass was added around the base of the building for a touch of interest and finesse. Because of the ready-to-paint nature of the building and base it was all completed in a very short space of time and a lot of fun.



the figure

As you'd expect, I couldn't turn up anything remotely close to suit the scene I had pictured. Internet photo-searches of the Argylls involved in the action showed some very stocky Scots enforcing order in their own unique style...wanting to avoid anything political we decided on a pose giving a purposeful knock on the door as the Argylls quickly weed-out any insurgents in the swift action. I wanted the figure to have a look of urgency and intent but not 'all guns blazing' hence the SLR pointing away and to the ground.

With a desk covered in resin and plastic torsos, arms and heads I came up with something close to what I had visualised: body and left arm from a Warriors Afrika Korps gun crew (suitable shirt and trousers), right arm from a Verlinden Vietnam figure which was holding an M16 and the clenched left hand from Verlinden spares. The M16 was re-shaped with a brass rod barrel, not perfect as a British SLR, but reasonable.

The famous Argyll head-gear was sculpted onto a Hornet 'snarling' head! Painting was all done in acrylics from Lifecolor.



Whilst not perfect, the SLR's appearance is pretty good, a re-worked M16.

I find myself shunning the traditional oil colours when painting figures recently, acrylics make for much faster progress, to get to these base colours and initial shading took no more than an hour.



Accurate Armour produce several high quality kits of vehicles used in Aden, the Stalwart and Bedford truck look excellent in the overpainted sand camo. Their website or trade stands at the shows are a honey pot for modellers of British subjects.

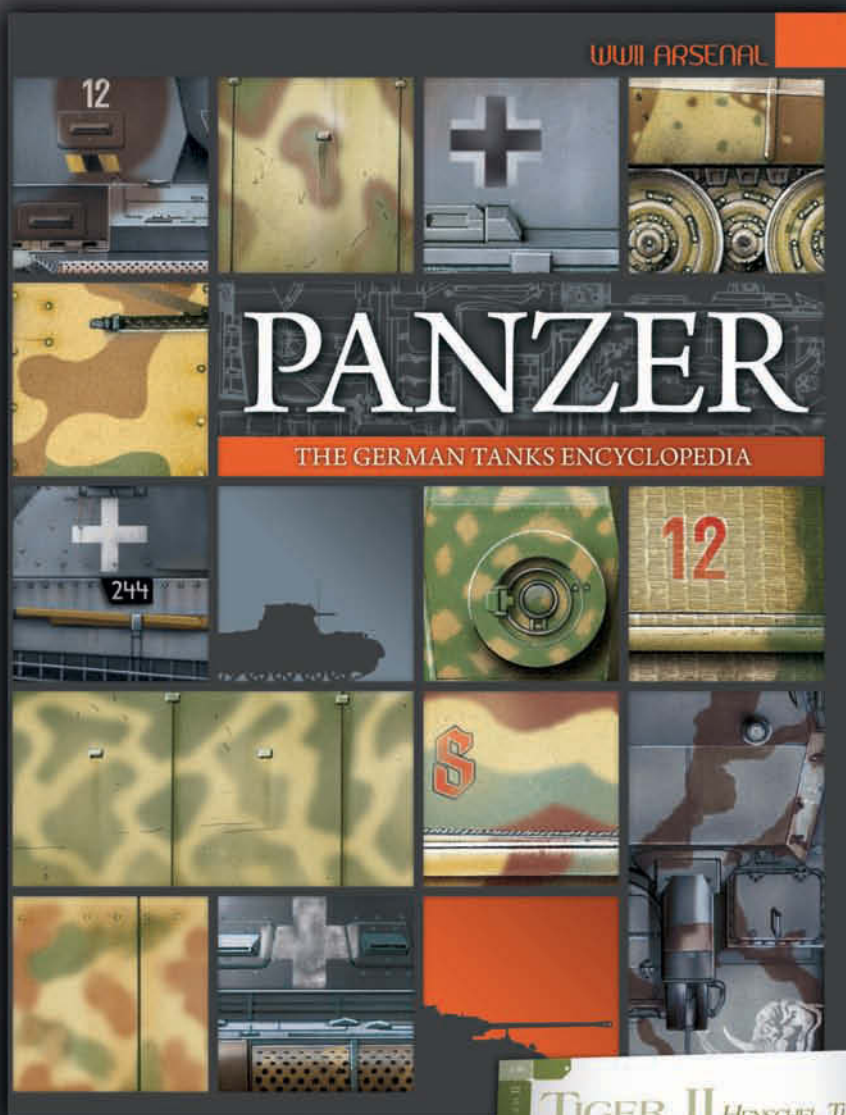


So very contrasting chunks of resin! AA's Saracen, as all resin vehicle kits, takes time and care especially when they're as detailed as this. The work involved is certainly worth it. Reality In Scale's scenery takes nothing more than a few hours painting. I hope you agree they complement each other well.

www.accurate-armour.com



CARAKTÈRE PUBLISHING IS PLEASED TO ANNOUNCE THE LAUNCH OF ITS BRAND NEW BOOK COLLECTION IN ENGLISH, DEDICATED TO TANKS AND MECHANIZED WARFARE.



THE FIRST VOLUME, TO BE PUBLISHED IN MARCH 2015, PROVIDES THROUGHOUT ITS 196 PAGES AN EXHAUSTIVE OVERVIEW OF THE GERMAN TANKS PRODUCTION DURING WORLD WAR II.

EXTENSIVELY ILLUSTRATED WITH MORE THAN 200 UNPUBLISHED AND RARELY SEEN PHOTOGRAPHS, 4-VIEW COLOR DRAWINGS AND OVER 60 COLOR PLATES, THIS FIRST PART OF THE WW2 ARSENAL ENCYCLOPEDIA, PRESENTS YOU AN EXCEPTIONAL REVIEW OF GERMAN BATTLE TANKS FROM 1933 TO 1945.

NOW ON PRE-ORDER
AT WWW.CARAKTERE.COM
OR FROM OUR SALES DEPARTMENT
AT +33 (0)4 42 21 06 76
SALES@CARAKTERE.COM.

SOON

WW2 ARSENAL ENCYCLOPEDIA PART 2
PANZERJÄGER & JAGDPANZER
(SUMMER 2015)



caraKtère
publishing

Historex Agents



HISTOREX AGENTS, Wellington House,
157 Snargate Street, Dover, Kent, CT17 9BZ, ENGLAND.
Telephone 01304 206720 Fax 01304 204528



Telephone Sales Line 01304 206720

REALITY IN SCALE DIORAMA STUDIO

RISACC009 1/35th Diamond Shaped Wire Mesh - Ultra	£3.80
RISACC010 1/35th Soft Metal Foil - Thickness 0,05mm	£3.20
RISACC011 1/35th Diamond Shaped Wire Mesh - Fine	£3.45
RISACC012 1/35th Wire Mesh - Large - 10x15cm	£3.20
RISACC013 1/35th Aluminium Sheet - Thickness 0,1mm	£6.50
RISACC014 1/35th Aluminium Sheet - Thickness 0,2mm	£6.50
RISACC015 1/35th Cork Sheet Set - Thickness 1 - 2 - 3	£5.30
RISFLOW06 1/35th Small White/Red Natural Flowers	£5.45
RISFLOW07 1/35th Dark Red Natural Flowers - 250ml box	£5.45
RISFOR01 40ml Dark Forest Scatter 40ml.	£5.45
RISFOR02 40ml Green Forest Scatter 40ml. -	£5.45
RISFOR03 40ml Mossy Forest Scatter 40ml.	£5.45
RISFOR04 50ml Autumn Forest 50ml.	£5.45
RISFOR05 50ml Dark Conifer Forest 50ml.	£5.45
RISMUD01 1/35th Dry Mud - Light Brown	£4.60
RISMUD02 1/35th Dry Mud - Medium Brown	£4.60
RISMUD03 1/35th Dry Mud - Dark Brown	£4.60
RISMUD04 1/35th Dry Mud - Extra Light Brown	£4.60
RISSCAT04 All Pine Forest Scatter 50ml	£4.60
RISSCAT05 All General Green Scatter 50ml.	£4.60
RISSCAT06 ALL Fine Dark Forest Scatter 50ml	£4.60
RISTREE01 1/35th Trees/Tree Branches - natural bonsai	£6.90
RISTREE02 1/35th Natural Trees / Bushes (Sea Foam)	£6.90
RISTREE03 1/35th Green Natural Bamboo	£5.45
RISTURF01 1/35th Super Turf Foliage Set	£6.90

VERLINDEN PRODUCTIONS

2795 1/35th Hamburger Hill Vietnam	£13.55
2796 120mm German Inf. France May 1940	£26.40
2797 1/35th US Tunnel Rat Vietnam	£12.80
2798 1/4th Erwin Rommel "The Desert Fox"	£30.15
2799 1/35th Flame Thrower Turret for M113	£9.75
2800 1/35th US Mechanics (3) WWII	£17.35
2801 54mm Roman Army Centurion	£12.05
2802 1/35th Lone Survivor Vignette	£30.15
2803 1/35th Wounded & Medic WWII	£13.55
2804 1:1 F16 Control Stick Full Scale 1:1	£64.25
2805 54mm Charging Viking	£11.25
2806 120mm 1/16th Afrika Korps Officer	£26.40
2807 1/35th Ruined Factory Corner	£26.40
2808 1/35th SuperValue Foods	£11.25
2809 1/35th 100 Resin Bricks (unpainted)	£9.75
2810 54mm Celtic Warrior	£11.25
2811 120mm Luftwaffe Fieldmarshal Herman Goering	£26.40
2812 1/35th Panzernest Vignette WWII	£30.15
2813 1/35th 100 Nuts 100 Bolts Small 2 sizes	£11.25
2814 1/35th German Trench Raiders WWII	£13.55
2815 54mm Roman Javelin Thrower	£11.25
2816 1/35th Blacksmith Workshop	£22.45
2817 1/35th 100 Nuts 100 Bolts Large	£12.05
2818 1/35th Street Transformer Station	£30.15
2819 1/35th Modern Steel Cable Reels	£17.00

Add On parts

AOP350095 1/35th German Jerry Can set, Empty	£8.65
AOP350096 1/35th Allied Jerry Can set	£8.65
AOP350097 1/35th Persian Carpet, type 1	£8.65
AOP350098 1/35th Garbage Bins, Type 2	£8.65
AOP350099 1/35th Modern Plastic Drums, Type 2	£8.65
AOP350100 1/35th Razor Wire	£8.65
AOP350101 1/35th Precolored Roof Tiles	£8.65
AOP350102 1/35th Assortment Shutters, type 1 (10 pcs.)	£8.65
AOP350103 1/35th Assortment Wooden Doors, type 1	£6.90
AOP350104 1/35th Manholes	£6.00
AOP350105 1/35th Iron Wrought Fence, Type 1	£11.25
AOP350106 1/35th Chains 1/35th	£0.00 0.00p
AOP350108 1/35th Old Metal Wall Supports	£6.00
AOP350109 1/35th Industrial Doors & Gates Set	£13.00
AOP350110 1/35th IDF Jerry Can set	£8.65
AOP350111 1/35th US Bags and Rucksacks, WWII	£6.00
AOP350112 1/35th Wooden Pallets, 2 pcs.	£6.00
AOP350113 1/35th Modern British Water Canisters, 12	£8.65
AOP350114 1/35th Cobblestone Road Large, Type 3	£13.00
AOP350116 1/35th Boys AT Rifle Ammo Boxes	£0.00 0.00p
AOP350117 1/35th British POW Cans (North Africa/Italy)	£0.00 0.00p
AOP350118 1/35th Grass Tufts, Spring/Summer 4,5-6 mm	£0.00 0.00p
AOP350119 1/35th Grass Tufts, Autumn, 4,5-6 mm.	£0.00 0.00p
AOP350120 1/35th Grass Tufts, Desert, 4,5-6 mm	£0.00 0.00p
AOP350121 1/35th Grass Tufts, Winter, 4,5-6 mm.	£0.00 0.00p

www.YouTube.com/HistorexAgents

**Visit Our New You Tube Channel
Over 30 New Videos To Watch
Unboxings, Demos, How To Guides
Just Hit "Play" & Subscribe Today**

**Sales@HistorexAgents.com
www.HistorexAgents.com**

SCALE MODELS, ACCESSORIES & VIDEOS

Historex Agents

TELEPHONE SALES LINE +44 (0) 1304 206720
WEBSITE: WWW.HISTOREXAGENTS.COM
FAST DESPATCH - WORLDWIDE DELIVERY - UK NEXT DAY



**Tools, Books, Brushes, Punch & Dies, Magazines, Military Figures,
Military Vehicles, Busts, Paints, AFV & Armour Conversions, Metal
Tracks, Groundworks, Diorama Accessories & much more!**

You Tube

VISIT US & CLICK

SUBSCRIBE!

FOR REGULAR PRODUCT DEMOS, HOW TO GUIDES,
UNBOXINGS & MODELLING TIPS
OVER 30 VIDEOS & MORE TO COME. HOURS OF
CONTENT TO ENJOY.
STAY UP TO DATE BY SUBSCRIBING!



FACEBOOK



STAY UP TO DATE BY CLICKING LIKE !
THEN CLICK LIKE AGAIN AND TICK
GET NOTIFICATIONS, TO GET UPDATES

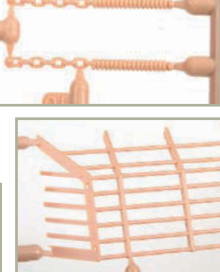
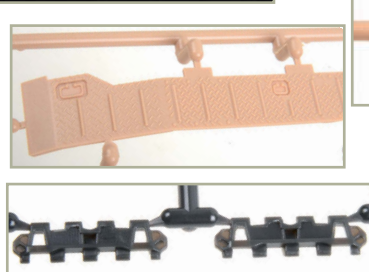
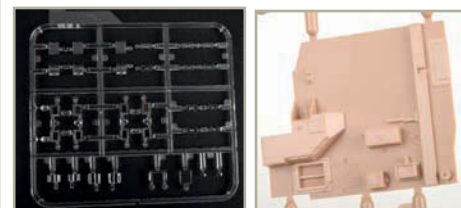
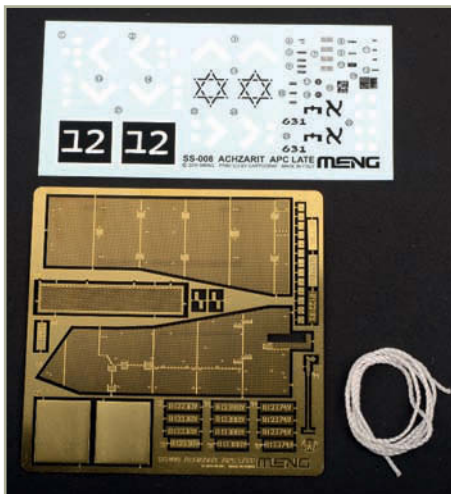
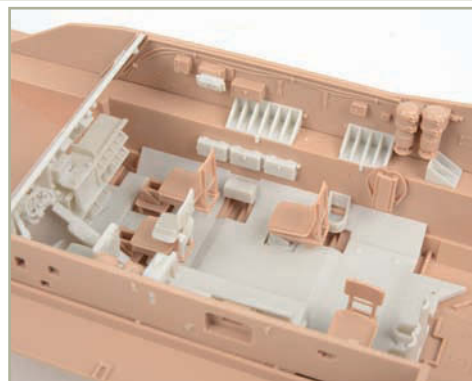
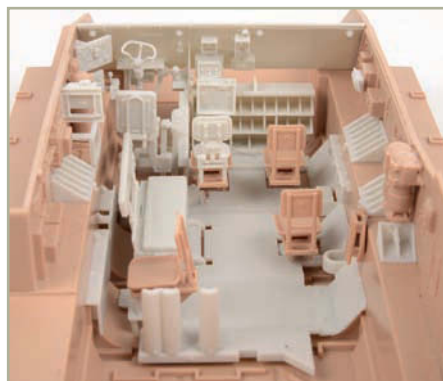


TWITTER



GET TWEETS STRAIGHT TO YOUR
MOBILE OR COMPUTER,
JUST CLICK TO FOLLOW US

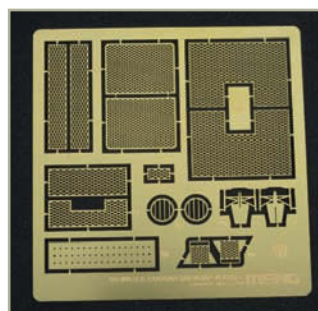
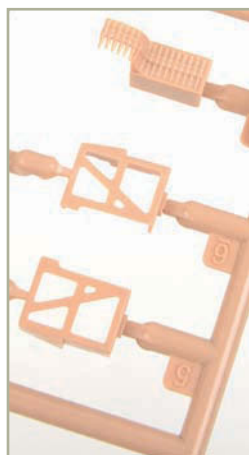
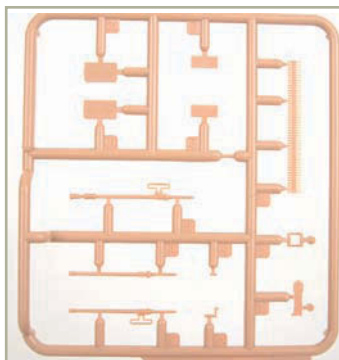
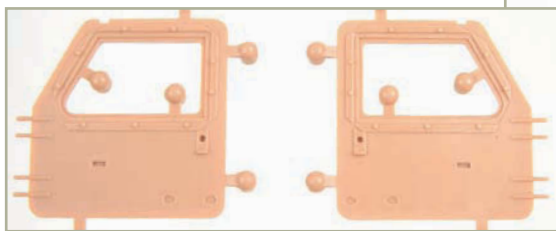
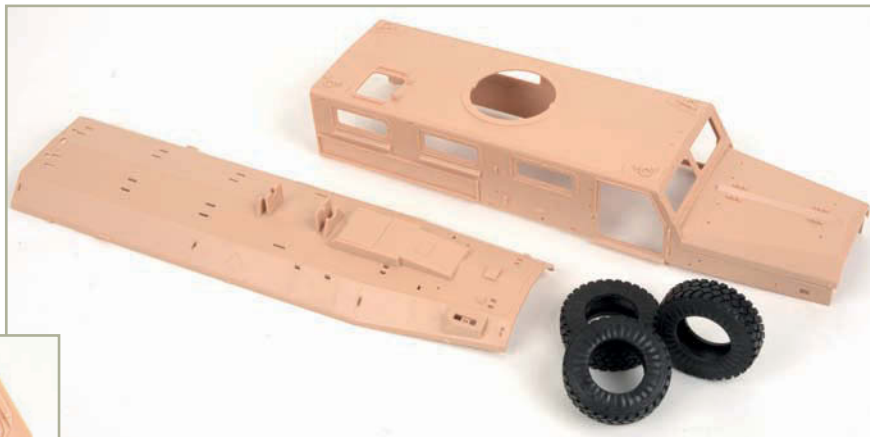
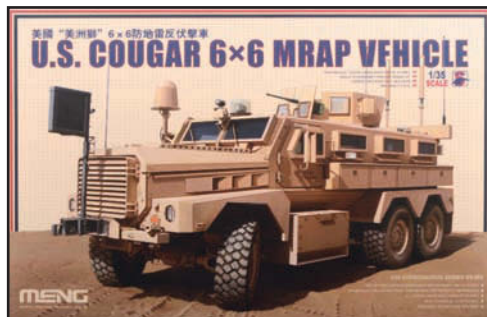




MING 1:35 Achzarit (Late)

Hot on the heels of their acclaimed kit of the early 'Cruel Woman' here's the late version with the welcome added bonus of a detailed interior. The main visual difference with the late APC is the use of more readily available Centurion roadwheels (but still retaining the lower hull structure of the T-55) and the hexagon-shaped cupola with armoured glass. Therefore brand new parts are the multi-part road wheels, the separate tyre and hub ensuring very sharp definition and fine detail. Poly caps are the norm with MING kits allowing removal and rotation of the wheels to help when painting. Tracks are provided as individual links, the sprue runners attach at points where they'll be hidden and there's some ejector pin marks to remove off the inner face although most are hidden by the tyres.

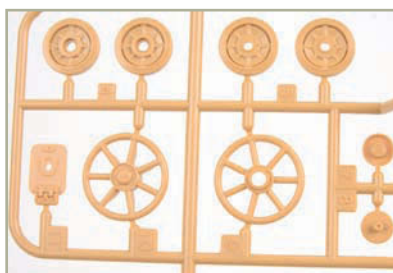
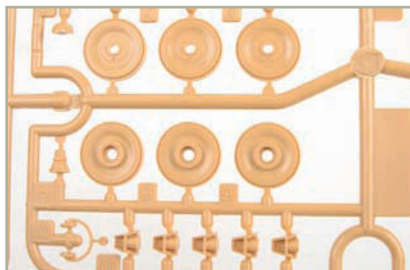
Being a purpose built troop carrier the interior is quite simple but comprehensive in the kit, the only thing some modellers may want to add are ammo boxes to the storage. Interior parts are moulded in a very pale grey which will help at the painting stage. We still have a posable exit / entry ramp and superb external detail, the single piece upper hull is a tremendous piece of moulding which will be a joy to paint. Photoetched parts are included, the largest being the rear sections of the side 'TOGA' armour which look very nice. Four sets of markings include two options from recent security operations in the Gaza strip. Another very inviting, high quality kit from MING with a sensible amount of parts considering the interior is included.



MENG 1:35 U.S. Cougar 6X6

After MENG's stunning Bradley kits there's just been enough time for modern U.S. subject modellers to catch their breath and along comes the Cougar! In a beautiful chunky box not dissimilar to the M2 and M3, this kit smacks you straight away as being another high quality production with a detailed crew compartment. The box is packed to the gills, around twenty five sprues, a photo etched fret, decals, excellent soft plastic tyres, flexible seat belts and instruction booklet. There's some really impressive moulding and incredible fine detail on show throughout, all ultra sharp without any signs of flash. A large single piece body shell gives an immediate impression of the size of the finished model- huge! Assembly starts with the angled and armoured underbody with full suspension and axle detail producing a full rolling chassis to drop the assembled interior onto which should help with the painting

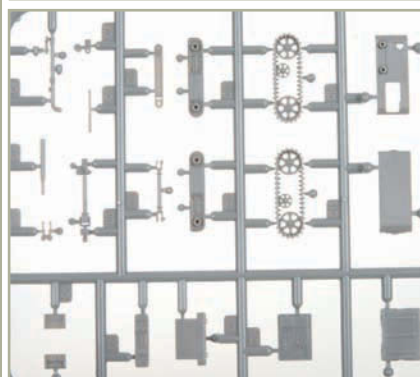
process. The interior is a simple enough construction consisting mainly of two rows of seating and the dash. The body is bristling with detail, some beautifully rendered parts of note are the slatted bonnet inserts and the massive flexible exhaust and a full quoter of anti-IED equipment and lighting. The gunner's position has the most delicate toothed ring and the best M2 .50 cal we've seen in any material with a choice of separately moulded gun barrels - very commendable in injection moulded plastic. A great touch to the finished piece will be the tinted green armoured glass which features heavily throughout and will add interest to the overall sand scheme, the only paint option. A superb etched fret provides anti-slip tread plate for the various steps capturing the three dimensional effect of the real thing. Like the Bradley, this is another mega MENG kit which will build beautifully straight from the box.



Tamiya 1:35 Jagdpanzer IV/70 (V) Lang

There was a time when if you wanted to model this vehicle the Tamiya version was the only choice. Times have changed and the Jagdpanzer IV has been attended to by other manufacturers so it is unexpected to find Tamiya revisiting the Lang. This is happily a completely newly tooled kit doing what Tamiya does best with straight forward precision assembly without all the whistles and bells. The kit represents a mid production vehicle (manufactured after September 1944) with three return rollers, flamedamping exhausts and treadplate-free fenders. The bogies have the missing bolts from the top of the flange and the steel pattern roadwheels are exquisitely handled. The hull roof is moulded separately and the bow MG position is fully detailed if you want to model the conical cover in the open position. The gun barrel is a single piece moulding with separate muzzle section and there is a

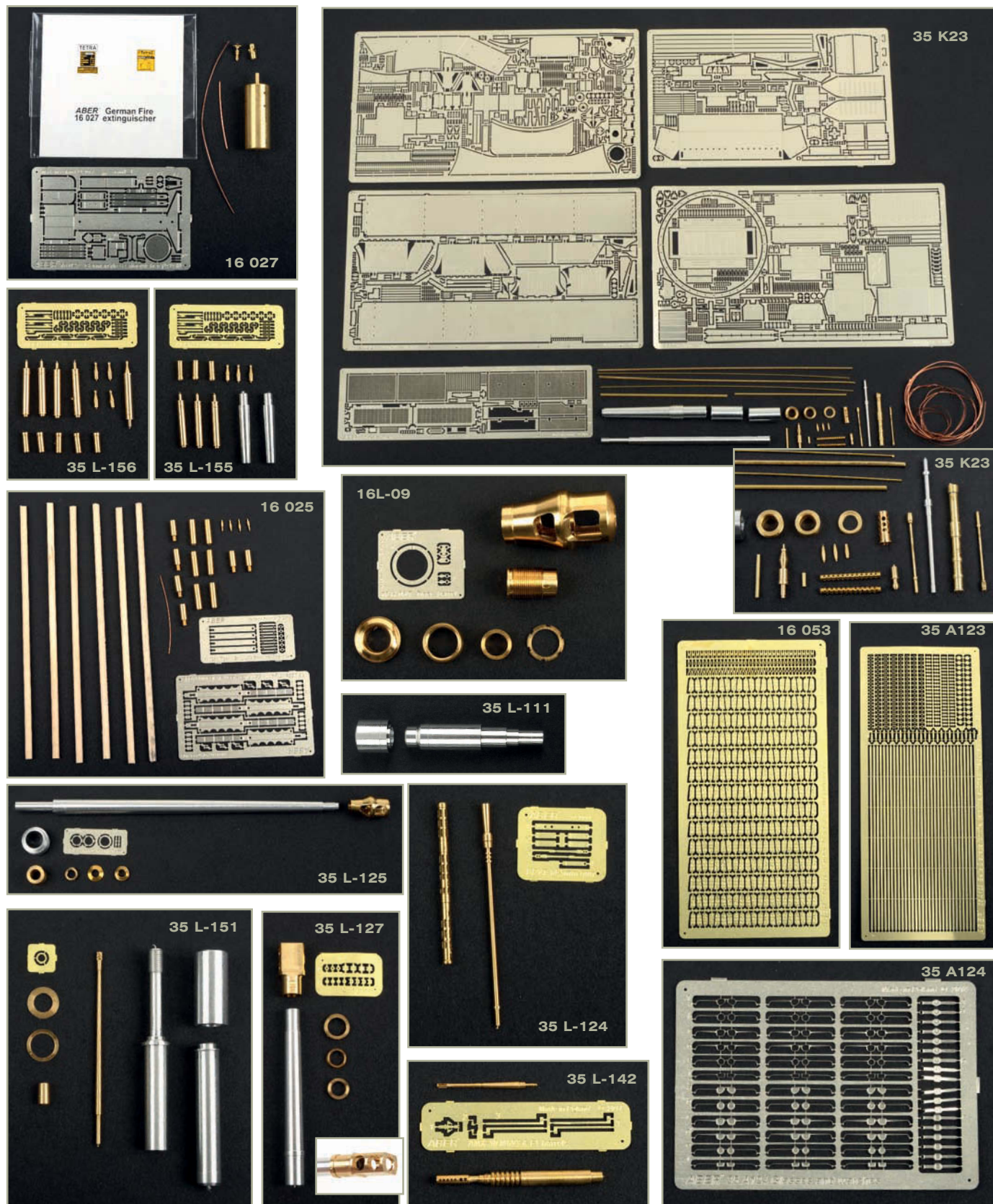
partial internal gun mount designed to accept a detail set (sold separately) which offers the rest of the gun breech and a metal gun barrel. The Saukopf mantlet is delicately textured with casting numbers but the outer mantlet lacks any numbers. Tracks are traditional rubber band type which will make track sag tricky to achieve. Side skirt brackets are provided but the skirts themselves are not but they are only rarely seen fitted to the vehicle. A couple of half crew figures in winter uniform are provided along with a set of scissors telescopes for the Commander's hatch. Decals provide a choice of three schemes and there is a colour leaflet provided to illustrate these. I spent a couple of evenings putting this kit together and it really is a delight to assemble, builds quickly and looks great without resorting to thousands of tiny parts, which makes a refreshing change. Top quality all the way!



Meng 1:35 U.S. Explosive Ordnance Disposal Specialists & Robots

A cracking little set here to create a diorama with any of the range of modern vehicles we've been treated to lately. Reminiscent of the acclaimed movie 'Hurt Locker' these two disposal guys take on a space-man look in their heavy protective gear. The sculpting and moulding is sharp with some really fine detail and clear parts

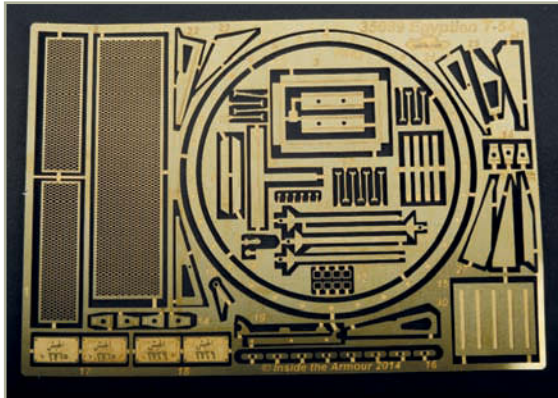
provided for the helmet visors. The Irobot 510 Packbot and Talon EOD Robot are simple assemblies with some fine delicate detail, as are the control units and laptop right down to the miniature video games controller. The box art is a good reference to add any wiring if you wish and a good colour reference for painting.



Aber

Poland's pioneers of all things detail, Aber, are back in form with a whole bunch of tempting enhancements. Starting with one of their Exclusive Edition boxed set, 35 K23 is an extremely comprehensive set for Tamiya's Tiran 5. Five etched frets and a full set of brass MG barrels and main gun give you everything you might want to add and more! The photoetched parts provide full fenders and all tool/stowage boxes, fuel tank details, engine deck screens, hatch details, turned brass mortar, replacement stowage basket and bins and fully detailed MG mounts. It is quite something! In 1:35 there is an excellent selection of gun barrels, the quality is as good as gets. 35L-125 is the big Kw.K43 L/71 for the Porsche Kingtiger (Hobbyboss or Dragon), 35L-127 is a late 25pdr to suit all kits with a stunning muzzle brake. 35L-151 is a set of main 152mm cannon and the 20mm barrel for the Dragon Black Label kit of the experimental MBT-70 released recently and 35L-111 is the chunky 15cm StuH 43 for Tristar's early Brummbar (should adapt to the Dragon kits also). A couple of superb heavy

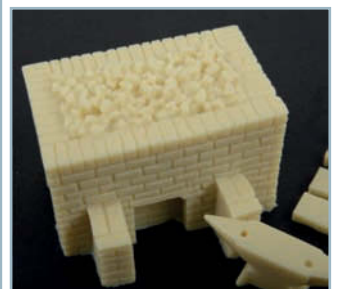
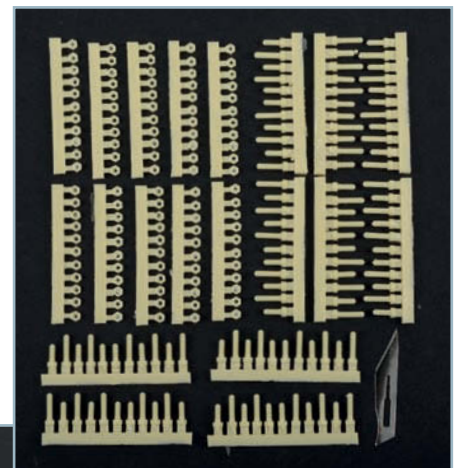
MG sets with 35L-124 to suit any kit mounting a 14.5 Russian KPVT and 35L-142 is a pair of barrels for MENG's AMX-30 kits. Keeping right up to date with WWI subjects 35L-155 contains 6pdr and Lewis guns for the MkIV Male and 35L-156 contains Lewis guns for the Female, both will suit any kit of your choice. Two sets of generic details now with 35A123 rifle slings and buckles and 35A124 a set of spectacles and watches. Moving up to 1:16 with some excellent enhancements for the Tiger 1 with 16025 offering a full set of brackets and gun cleaning rods beautifully done in turned brass and real wood. For the late Tiger I and Tiger II (Henschel turret) is a superb boxed set providing the ultimate muzzle brake, 16L-09. 16027 will suit a wide range of 1:16 German subjects, a fire extinguisher and brackets complete with manufacturer's labels. Finally a subtle touch for the Panda 38T kit with a set of casting numbers to enhance the track links. Thanks to Aber for sharing these with us, www.aber.net.pl has all the details of their massive range.



Inside the Armour 1:35 Egyptian T-54 Conversion

Mastered by T-55 maestro Andy Taylor, this extensive resin and photoetch conversion is designed to suit the ever-popular Tamiya T-55 to backdate it to an Egyptian operated T-54. Some of the main features are a full replacement turret with turned aluminium gun barrel, new square pattern fender mounted fuel tanks, delicately detailed 'spider' wheels and engine deck. Smaller details include pretty much everything you'd want to detail-up the kit such as tool boxes and plenty of photoetch including exhaust shroud,

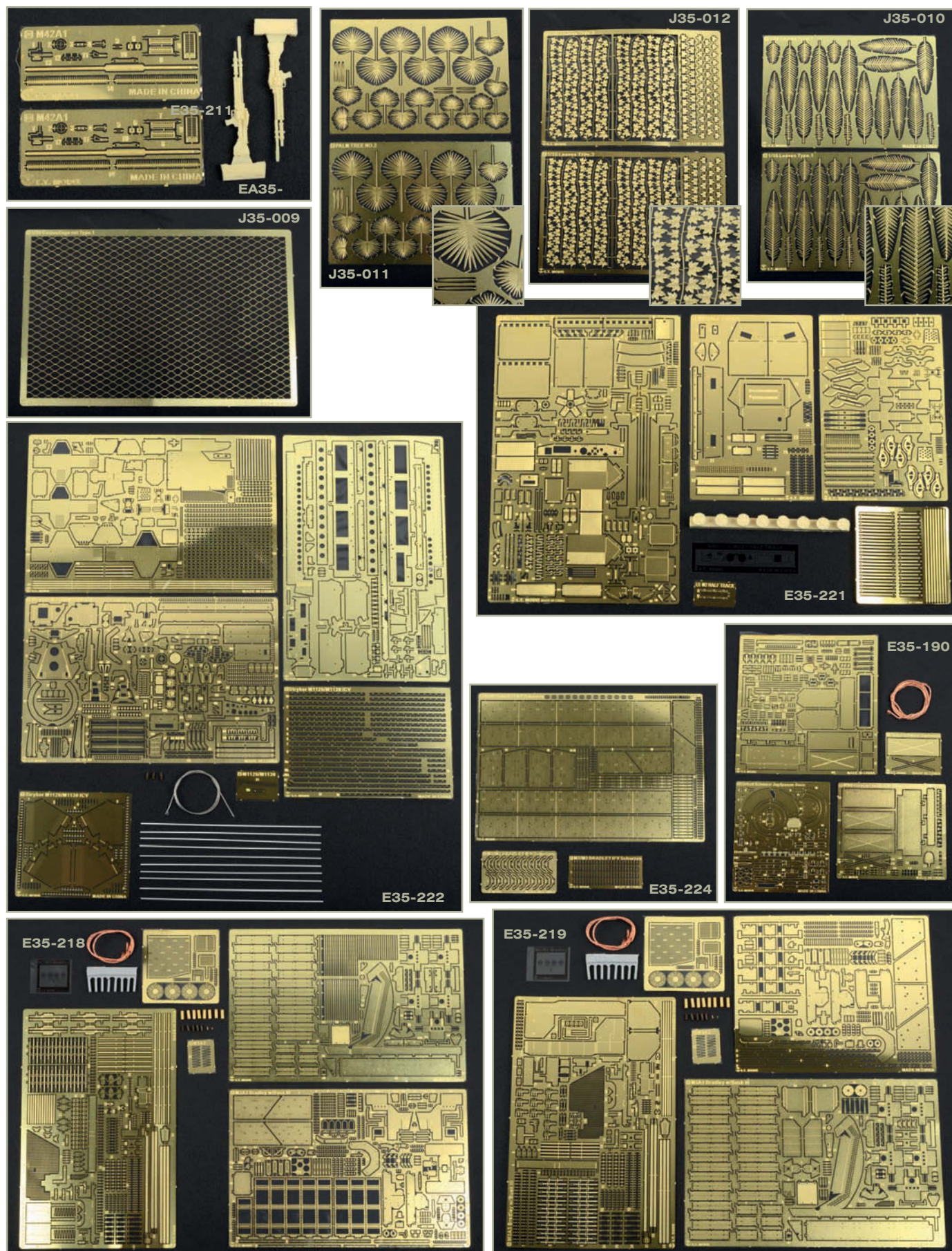
turret ring, registration plates and engine deck mesh. The impressive aluminium gun barrel completes a very comprehensive conversion, and there is even a photoetched stencil for markings is included. Nicely drawn diagrammatic instructions should make this a very pleasurable project, you'll only need a set of tracks if you're not happy with the Tamiya rubber bands. www.insidethearmour.com has all the details and secure shopping.



Verlinden Productions

One of the longest established aftermarket companies, Verlinden Productions, are still going strong and have kindly sent some new diorama accessories in 1:35. 2816 provides all the elements of a blacksmiths workshop very nicely cast in resin with some copper and plastic rod. 2817 provides 100 each of nuts and bolts, detail is excellent but the size will restrict to use on a diorama for industrial applications (or of course if you're working in a larger scale such as

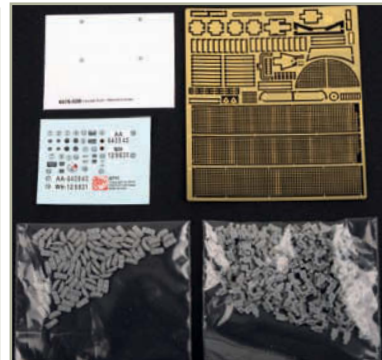
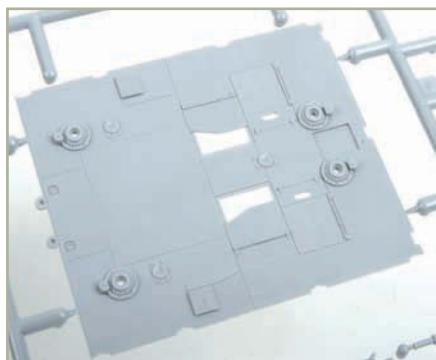
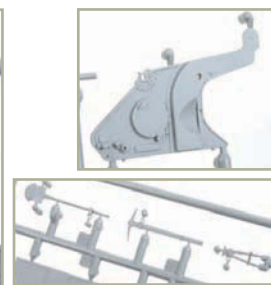
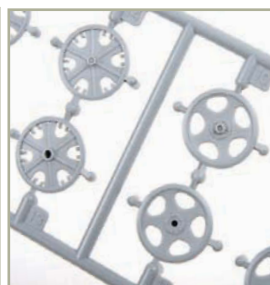
1:16 multiple uses). 2819 features two huge modern steel cable reels and finally a really nice set which has a post-war look to it, a street transformer station. The tall concrete posts would add to nice height to a diorama, particularly a middle-eastern scene. 2818 is the code and Verlinden's website is the best place to browse their massive range www.verlindenonline.com or visit their Facebook page.



ET Model

E.T. keep on coming with the quality upgrade sets covering a wide range of subjects. First up are three sets covering MENG's recent Bradley kits, E35-224 is generic giving you the IFV armour skirts and brackets for both the M2 and M3 versions. E35-218 is a detail set for the M2A3 with four etched frets, turned brass and resin smoke candles, copper tow cable and turned antennae bases. The same goes for E35-219 for the M3A3 Cavalry vehicle, some parts are common to both sets with some challenging detail! A kit we're always surprised we don't see built much are Dragon's M2 and M3 halftracks, E35-221 should look superb on the M2 kit with full cab doors and screen armour along with loads of finer parts and resin mines to sit in the side racks. More for Dragon kits with

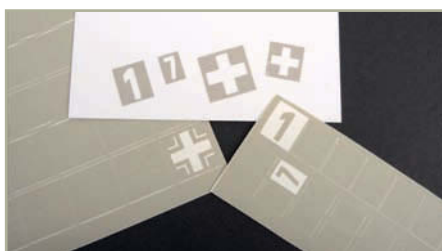
E35-190 for the Ferdinand with a full set of fender-mounted stowage boxes, good finer details and a tow cable and fender springs. AFV Club's Stryker gets a make over with E35-222 containing five frets, some ABS rod, tow cable and antennae bases. The complex side racks should look superb (whilst testing your skills no doubt!). EA35-106 is a very detailed pair of M60 MGs to suit any vehicle, complete with ammo belts. Some generic sets of leaves are nicely done, J35-010 and 011 have the appearance of palm fonds while 012 resemble various sizes of maple leaf and finally J35-009 is a woven camo net with a large diamond pattern. E.T. as always can be found at www.etmodeller.com.



Dragon Sd.Kfz.10/4 für 2cm FlaK 30 1940 production with ammo trailer

Dragon's little Demag continues to provide options, here the early war Sd.Kfz.10 is offered with previously released DML sprues in the shape of the FlaK 30 (minus the brass parts from the stand-alone kit) and the ammo trailer from the Flakpanzer I kit which is very nicely done. New parts are included for the rear deck and hinged sides depicting the early version, the early style roadwheels are also present as you'd expect. We're reminded of the exceptional moulding and detail of this kit, the open louvres of the engine cover are superb and the delicate little 'Magic' tracks

better than most aftermarket parts available (although very testing to assemble!) Having built a later version of this kit some time ago I can still remember what a demanding build this is, but the results are a beautifully detailed model straight out of the box. Although dunkelgrau is the only colour option in town, the added interest of the ammo trailer and the front-mounted ramps (to allow the crew to dismount the gun) will make for a very interesting display piece and is sure to be popular with early war enthusiasts.



DN Models

A new name with some new products now, Mitko Nikitov working under the brand 'DN Models' has some mask sets on the market. The samples we have are a generic German set of balkencruz and turret numbers in 1:35, a generic Allied stars and ambulance red crosses, a set of Hebrew numerals and chevrons for Achzarit and more IDF markings for MENG's DR9 Doobi. The quality of the film and cutting is first rate and with care these can also be reused, if



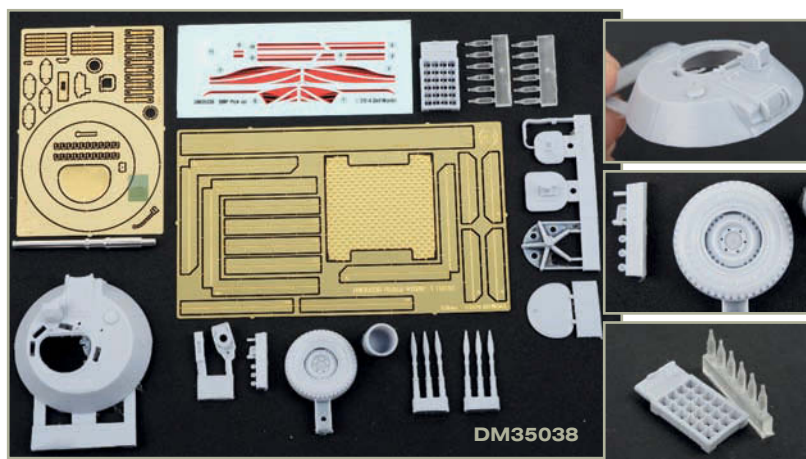
you're looking for that 'painted-on' finish to your markings then airbrushing with masks is the way to go. For IDF builders there's a set of Merkava ball / chain turret parts in metal, the sizes look decent but no instructions are included. A couple of sizes of chain are available in 500mm lengths, these would suit many applications and would probably be best treated in a blackening solution first. Find out more at www.dnmodels.com / twitter.com/MitkoNikitov



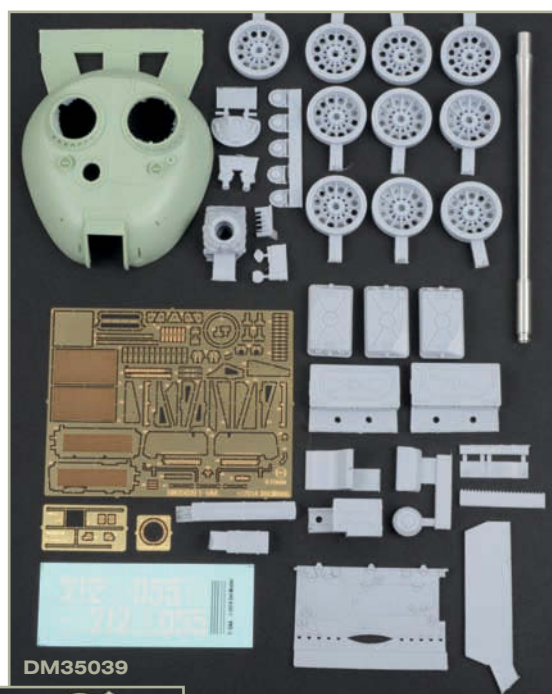
Stalingrad 1:35 Resin Figures

The Stalingrad production continues apace with more additions to their excellent range of 1:35 resin figures. The first two sets are Russian subjects in Winter uniforms, designed to work as a small group if you want or as stand alone subjects, the sculpting and anatomy is to the usual high standards that we expect from Stalingrad. The second boxed set is a group of five German WWII AFV crewmen enjoying a meal together in a break from vehicle maintenance. The relaxed poses will suit a wide variety of vehicles and there is an interesting mix of uniform types too which should appeal. Casual poses and the excellent sculpting make these some of the very best figures around and it is good to see some variations from the more usual action poses. Full details can be found at: www.stalingrad.diorama.ru

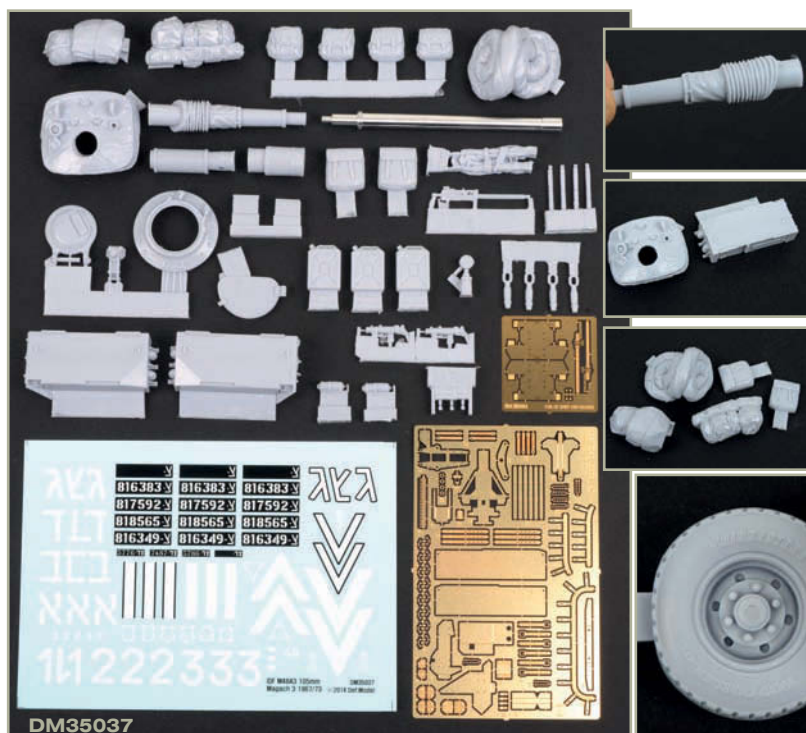




DM35038



DM35039



DM35037



DW35059



DW35066



DEF Model

Producers of some of the finest resin upgrades on the market, Korean Republic's DEF, have some excellent wheel set samples to share. No less than six sets to choose from if you have the classic Tamiya Schwimmwagen or Kubel. Two sets of wide off road wheels and tyres for the Schwimmer, one with sealed hub style wheels. Three styles of balloon tyres for the Kubel are offered, all with the sealed sand hubs and one set of standard-style wheels to suit either vehicle from Tamiya or AFV Club. Italeri's Horch kfz.15 contains alternative hubs and more delicate detail DW30033. Each set includes reduction boxes on the rear hubs, a spare wheel and a set of pre-cut painting masks- superb! One vehicle which will be improved no-end from some DEF wheels is the big old ZIL-131, this set DW35067 for the ICM kit also includes wheel masks and a replacement bonnet grille. Staying on a Soviet theme a set of T-54 'spider' road-wheels DW35059 are incredibly detailed and cast, inner and outer wheels with separate hubs have detail to all sides. Finally the Finemolds HMV of the JSDGF gets a set of four wheels

and tyres DW35066, again beautifully done. Three conversions sets to look over from DEF, the first an exciting T-54 conversion DM35039 for the venerable Tamiya T-55 where you can build specifically two of the tanks involved in the Prague 1968 uprising (anyone remember our issue 20 cover?) five spider wheels, a full turret, engine deck and a wealth of photoetch add up to an excellent conversion set which also includes decals for the Prague tanks. Dragon's M48A3 gets treatment to adapt it into an IDF Magach 3 DM35037 with another nice conversion including an aluminium gun barrel, new mantlet, cupola, MG mounts and a whole host of excellent stowage- very tasty! Something a little off-the-wall with a conversion for MENG's pick-ups DM35038 - how about a fully operating BMP-1 turret? these actually exist and were used in conflicts recently. A photoetch framework mounts the fully detailed resin turret with metal barrel, a set of authentic decals for the pick-up and accessories are also included. www.defmodel.com has details of the full range, some of our favourite upgrades



Sturmgeschütz IV

Lukasz Gladysiak, Grzegorz Okonski and Jacek Szafranski
Published by Kagero
Softback A4 format, 86 pages
ISBN 978 83 64596 20 9
www.kagero.pl
www.casematepublishing.co.uk

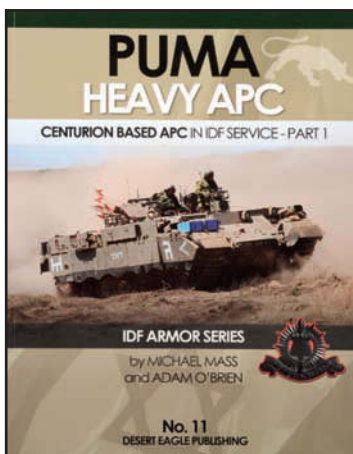
This is an excellent reference for anyone looking to take on a project of the Panzer IV based StuG with a comprehensive look at the vehicle pulled from the bed of the Rgilewka river in Poland, 2006. Being untouched and in original condition what better reference could there be? The story unfolds from the initial removal of the StuG from its slumber and subsequent disassembly for restoration providing some unique images of components. The finished restoration certainly looks superb and a full gallery of large-format walk around images provides the ultimate modelling reference with this being such an untouched example, including a detailed look at the interior and smaller fixtures. Some quality colour plates of colour schemes and 3D renders are a nice finish to a handy concise reference on the StuG IV



Königstiger

Lukasz Gladysiak, Mike Koenig and Jacek Szafranski
Published by Kagero
Softback A4 format, 84 pages
ISBN 978 83 64596 23 0
www.kagero.pl
www.casematepublishing.co.uk

Following the same format as the Sturmgeschütz IV this concise study of the King Tiger aims to provide a bit of everything for the modeller with a selection of archive images, colour profiles, plans and walkaround photos. The drawing in the book are well handled but they have some strangely proportioned isometric views which look wrong. They also fail to show the production changes like the dropping of the vehicle jack, the armoured cover for the rear turret hatch, fuel tank vent lines or the changes to the hull hatches meaning that these drawings are not a reliable reference. The walkaround section is all taken from ground level meaning that there are no views of the top of the turrets for example. The book includes some nice quality colour profiles but perpetuates the myth that all PzAbt.505 were painted in red brown camo when archive pictures clearly show two tones of camouflage. Overall it is a reference which falls short and could easily confuse the unwary King Tiger novice.



Puma Heavy APC

Michael Mass and Adam O'Brien
Published by Desert Eagle
Softback A4 format, 83 pages
ISBN 978 965 91635 7 1
www.desert eagle-publishing.com
www.aviationbookcentre.com

Just in from The Aviation and Military Book Centre is this latest in the IDF Armour Series from Desert Eagle (No.11) detailing the Centurion based APC. The usual format of the series is most welcome and great modelling reference with an abundance of quality large images with detailed captions. Starting with some background information and development of these fascinating vehicles the photographs are grouped as 'In Action', 'Man and Machine' and 'In Detail'. The detailed walk around images focus on exactly what you'd want to see inside and outside the vehicle with some great maintenance photographs with excellent reference of the crews and equipment. One thing that does stand out throughout is how filthy these hard-worked beasts get! Great news if you'd like to get heavy with the weathering. Another 'must' for the IDF modellers reference library, recommended as usual and we look forward to part two of the Puma story.

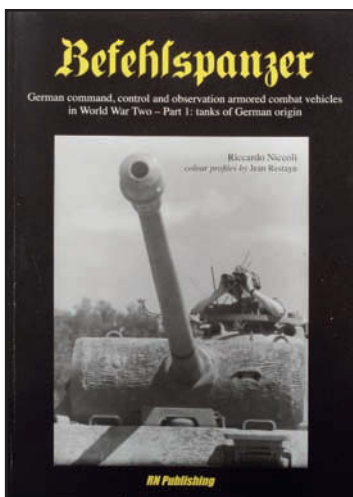


Panzerwrecks 18

By Lee Archer and William Auerbach
Published by Panzerwrecks
Softback landscape format, 97 pages
ISBN 978 1 908032 10 2
www.panzerwrecks.com

We find ourselves repeating ourselves when thumbing through a new Panzerwrecks release, this is no bad thing as you just can't praise this series highly enough if you're a fan of German armour of WWII. Again the team have unearthed some photographic gems, this is an un-themed volume and the free rambling covers a wide range of vehicles from the 'big cat' Tigers and Panthers back through to captured French vehicles and Panzer I and II.

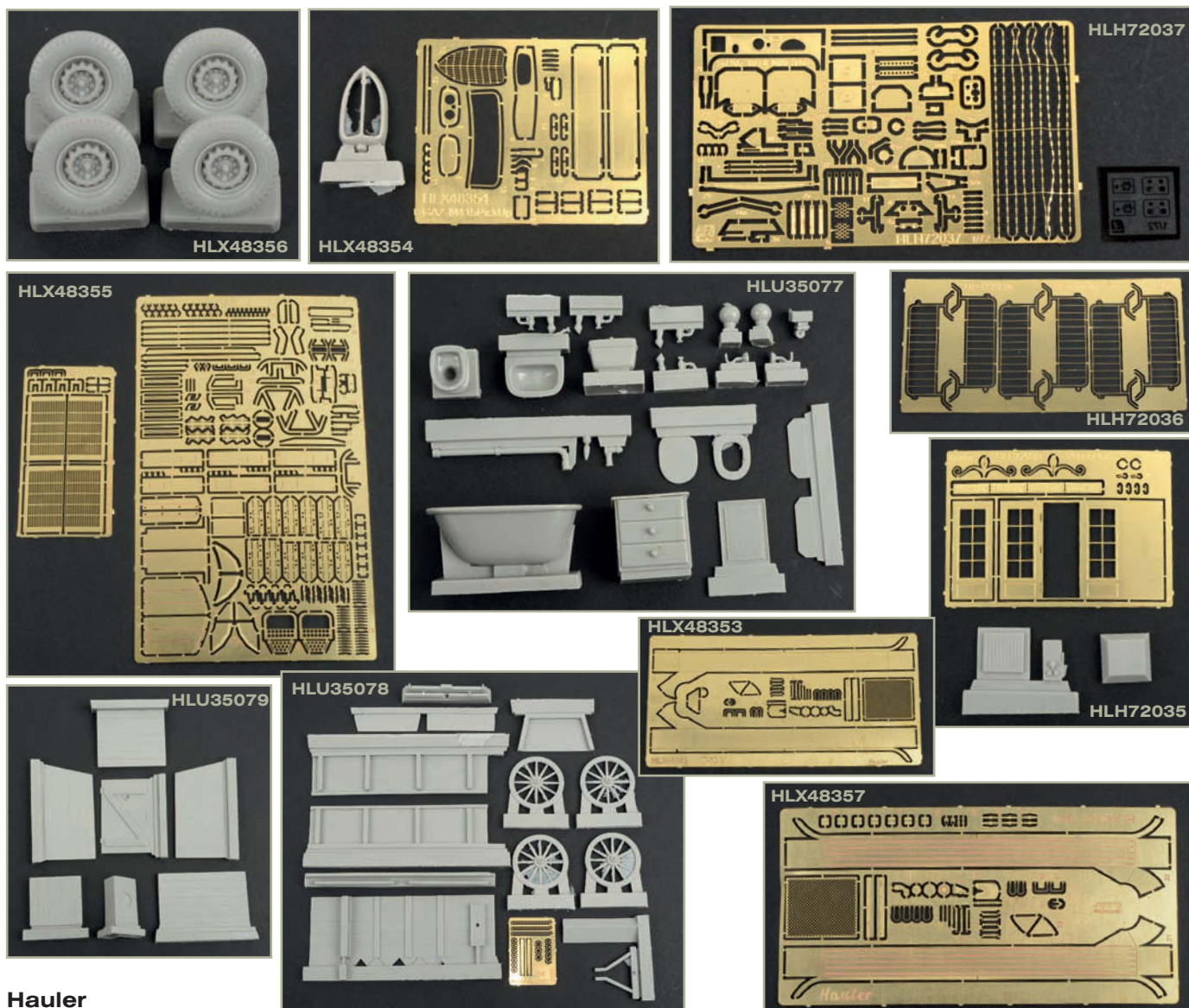
Some rare coverage is given to the 8t Zugkraftwagen with its wooden construction and the modified Jagdpanters of Pz-Lehr. Rgt. 130. A couple of post-combat aftermath images are presented, Ambush at St-Amand and Raamsdonk (Holland) in October 1944 providing some superb images. It's impossible to look through Panzerwrecks and not think of at least half-a-dozen 'must do' projects, collect them all; it would be rude not to!



Befehlspanzer

By Riccardo Niccoli
Published by RN Publishing
Softback A4 format, 88 pages
ISBN 978 88 95011 08 0
www.rnpublishing.com
www.casematepublishing.co.uk

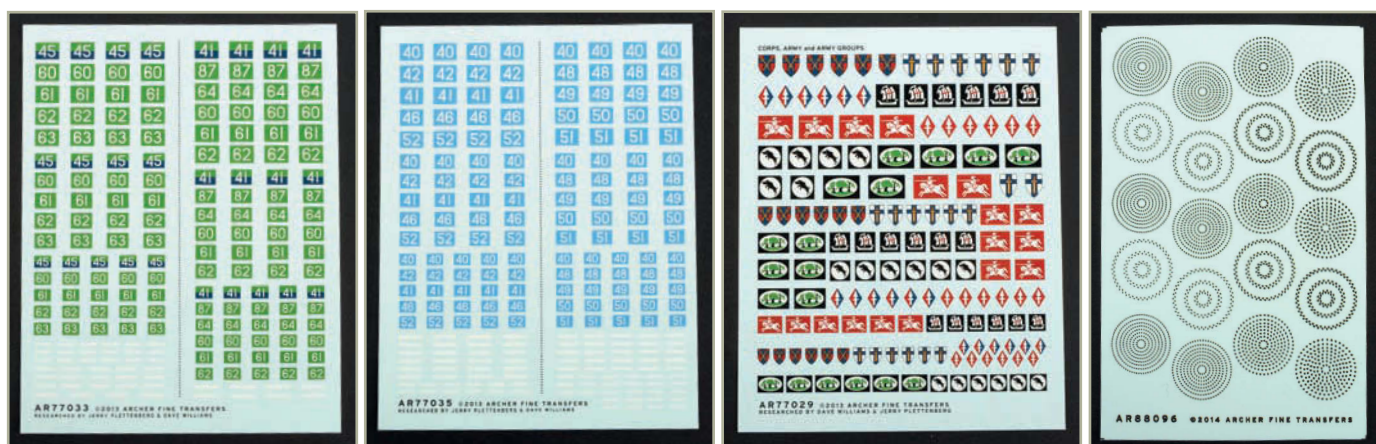
Starting with the Panzer I, this book takes us through the full range of wartime German command panzers II, III, IV, Panther and Tigers. The main focus of the project are the superb colour profiles by Jean Restayn with some great modelling inspiration- around one hundred in total across all variants. Some archive images in black and white (with one notable colour shot) are mostly familiar and included for their explanation of the development of the command vehicles. Each colour plate is coupled with detailed text of the subject vehicle's operation and markings. An accompanying volume will concentrate on captured vehicles pressed into German service as befehlspanzers. A nice idea and nicely presented, recommended reading.



Hauler

Our Czech mates hauler have their usual varied topics amongst some new releases. Starting small in seventy-second are a couple of diorama accessories, HLH72036 are a set of modern mobile metal barriers and HLH72035 is a phone box in resin and etch which appears suitable for Europe from 1930s to date. HLH72037 is a detail set for the MK72 Demag D7 which will really add some finesse. In Hauler's favourite, 1:48, is HLX48353 providing Mikromir's T-70M with a set of mudguards, engine intake mesh and details, HLX48354 is an etched fret and radiator grille housing

in resin for the Ace GAZ pick-up, HLX48355 is for Tamiya's recent M10 with a couple of busy frets to 'up' the detail, HLX48356 is a beautiful set of four resin wheels for all Ace GAZ vehicles and finally HLX48357 is a set of fenders and details for Micromir's T-90. Some excellent diorama items in 1:35 now with HLU35077 providing bathroom fittings and furniture, HLU35078 is a farm cart and HLU35079 an outside 'Latrine' (think I'll stick with the indoor bathroom thanks...) www.hauler.cz has all the details of their top-quality ranges.



Archer Fine Transfers

Archer Fine Transfers have been adding to their growing range of waterslide decals with additional AOS signs and British Armoured Brigade unit signs - a system as complex as the enigma code but beautifully replicated here in these ultra-crisp decals. The AOS signs come with a guide to explain the system and they are printed in a choice of sizes. The real stars here are the Brigade Unit Signs which are stunning and are provided in

a variety of sizes for maximum modelling flexibility. In the surface detail range there is a new set of circular pattern rivets suitable for making your own manhole covers and finally in dry rub there is a set of US Army and Corps uniform patches, certainly easier than trying to paint them yourself! Full details of these and the rest of the range can be found at: www.archertransfers.com



**New
for 2015**
Connecto pieces allow you to make complex structures easily and efficiently with our Micro Tube.

Precision construction & finishing materials for the modeller

ALBION ALLOYS

Model makers, precision engineering companies, TV and film production companies and prototype manufacturers the world over now use our range of metals to create all manner of items.

Create your own metal stock facility on your workbench – all micro tube and rod is designed to slide fit enabling previously unachievable detail on your next project.

Probably the widest range available of precision abrasives for the modeller

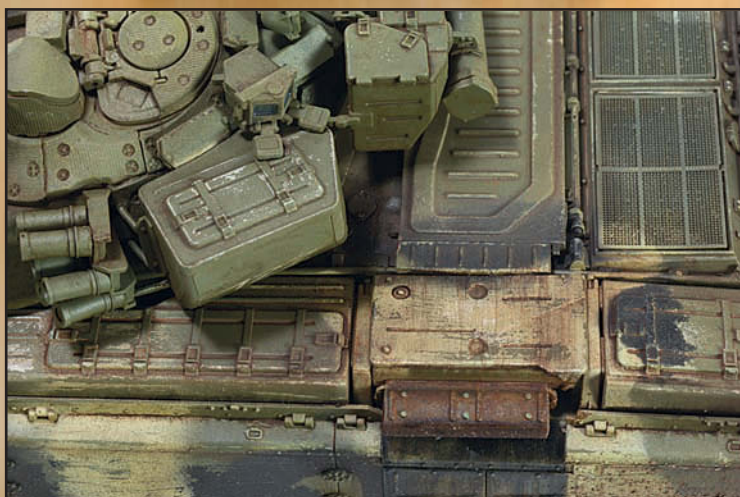
The well known and well loved Flex-i-file range is complemented by our range of own brand abrasives and applicators meaning there is a product for every task.



Visit www.albionalloys.co.uk for down-loadable PDFs, Youtube links etc.
Contact us on sales@albionalloys for details of your nearest dealer.

Albion Alloys, Spacemaker House, 518 Wallisdown Road, Bournemouth, Dorset, UK, BH11 8PT

Telephone: 01202 511232 Fax: 01202 539967



Meng Models 1:35 kit modelled by **Chris Jerrett**

Recently I have taken an increasing interest in modern Russian Armour, moving away from the subjects I've traditionally been attracted too and exploring the evolution of the Russian main battle tank. This brings me to the pinnacle of this development, the T-90. The T-90 is the modernised development of the T-72B MBT, the program started in the mid 1980s, incorporating many features of the T-80u. It is currently the most modern tank in service with the Russian forces. The T-90 uses a 125mm

smoothbore 1G46 gunner sights, a new engine, and thermal sight. Standard protective measures include a blend of steel, and composite armour, smoke mortars, Kontakt-5 explosive-reactive armour, among many other improvements.

Meng have quickly become a key player with their ambitious 1:35 modern armour kits and the T-90 is no exception. With its complex array of external feature it would seem to be a challenging tank to create in

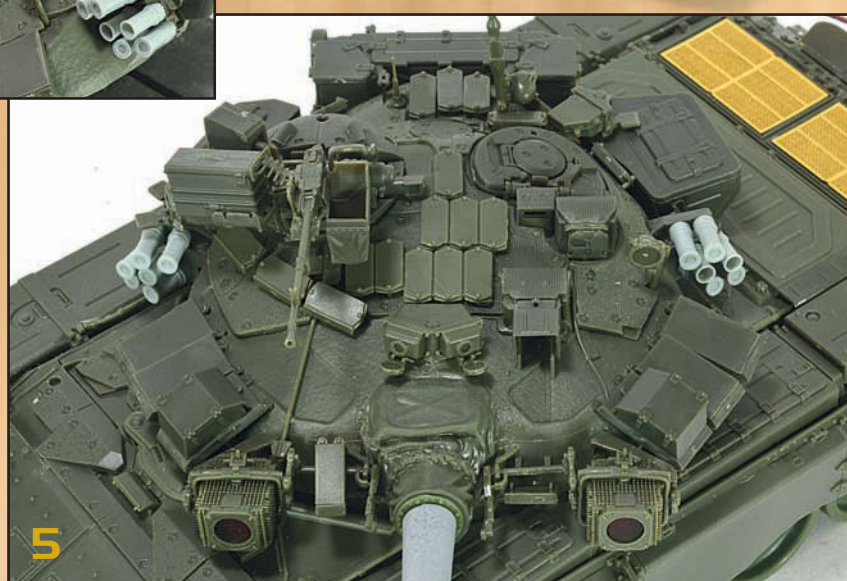
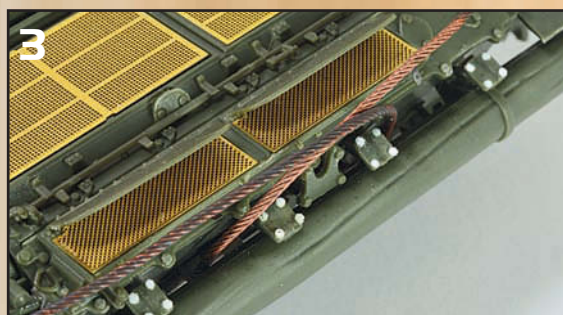
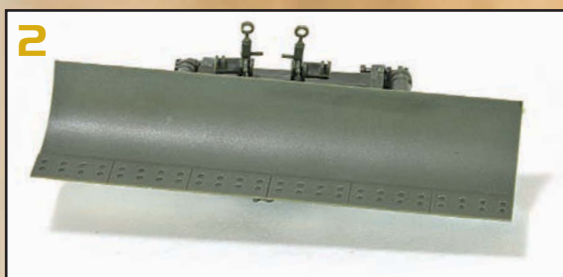
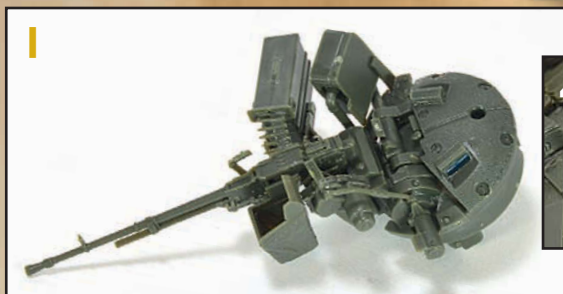
kit form. This kits represents the high point of contemporary armour modelling and it is simply the best kit I have ever built. I was looking for flaws or areas to improve on but they just did not exist. If there was one thing I would add it would be some proper copper wire to reproduce accurate tow cables. I will admit that for this build I used metal tracks, the kit tracks are very accurate, but for me Fruiils are much easier to handle. That being said I would not expect Meng to add metal track to their kit, although it would be nice!



T-90

WITH TBS-86 TANK DOZER



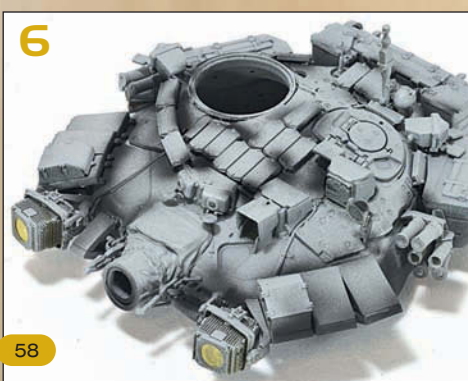


only difficult part. (Picture 1). I moved to the end of the instruction sheet to assemble the dozer blade so I could dry fit the blade to the hull before all the small parts were added. I

recommend this if you plan to use the blade. (Picture 2). I had decided to remove the rear fuel drums so I needed to add bolts to the mounting arms for this I used styrene hex shaped rod. (Picture 3). I wanted to create some subtle details for my model so it did not have a complete 'out of the box' look. I wanted some of the smoke grenades to be cover-less so I swapped the kit ones for resin

replacements from Mini Arm. The kit parts were not far off the resin detail to Meng's credit. (Picture 4). At the point when I opened the box to build this model I was almost put off from starting by the flexible plastic anti-radiation cladding for the turret which I felt certain would be a problem to bond to the rest of the kit based on past experiences with similar materials. However knowing Meng's quality I proceeded and pleasingly the bonding was surprisingly strong. (Picture 5). Other great features of this kit are the perfectly clear and moulded lens for the scopes and sighting device.

The detail on this model is what I would describe as intense! While you are cleaning up of the parts and starting the assembly it feels like an endless task and then something good happens and it all goes together very smoothly and then suddenly you are done. The plastic is a little softer than Tamiya even though the crispness is there, I found myself doubting it. The AA gun and hatch mount was the



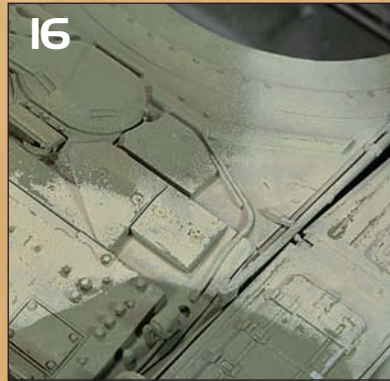
Painting

I knew from the start there was going to be a lot of masking with this model, the camouflage pattern was just the beginning. For my masking I like Tamiya tape the best, and combined with blu tack I was ready to go. I started the paint with a primer coat this helps hold all the small parts in place and fills in any small gaps. For the pair of sighting devices either side of the gun I had pre-painted these red when I assembled the parts. Between coats of paint I like to change the mask to avoid shrinkage and paint getting on to the clear parts. I used a common hole punch to cut round Pieces of tape to cover the red lens. (Picture 6). There are many parts that are raised from the surface on the model so to fill in the shadows I sprayed in the recess' with black paint and once the model is finished these areas will look like dark shadows. Meng has provided a great wheel mask made of brass for painting the wheels, and while some of the paint coats dried I took the time to prepare the wheels, painting the tires black and then I used the mask to paint the camouflage

colour on the rims. Very simple! (Picture 7). Planing ahead for the chipping using hair spray or chipping fluids I researched pictures of the real vehicle for the colours of the areas where the paint has be rubbed off or scratched. Modelling worn paint has evolved in the last few years from painting the chips on top of the base colour into incorporating the chips into the airbrushing phase of the finishing process. Hairspray is a light thin glue substance that can be sprayed on in light layers, and can washed away with water. Using these characteristics for chipping has been adopted by modellers to create irregular worn paint effects. The process is simple, you paint the areas where you want to show chips with the colour underlying the top coat. Then a coat of hairspray followed by the paint you want chipped. The paint adheres to the hairspray layer and once dry water is applied to remove the hairspray along with the top coat of paint resting on it. Careful research is a key component to the process. To get started I painted an undercoat of a light brown on

the turret top. This colour represents a previous camouflage or maybe a primer. (Picture 8). You can also use the hairspray method to reveal areas worn right to the base materials, for example the fuel tanks on the fenders of the T-90 are made of aluminium. I used Tamiya Aluminium for the base colour. (Picture 9). all the colours are in place, and I took several photos of model with my i Phone to help me remember where the underlying colours are located (Picture 10). After 2 coats of chipping fluid (or hairspray) I painted the first colour of the camouflage. For this colour I mixed Tamiya XF62 XF63 and X2 to achieve the green tone. Once dry I gently wetted the areas I wanted to reveal the under coat with water (Picture 11). I repeated the process on all the areas where I had painted the underlying tones. I set the model aside for a day or two so the paints will completely harden. For the next colour of the camouflage I used Tamiya XF 55, Deck Tan. For the pattern I noticed a finer edge to the paint on the T-90 so to replicate that I used a sticky tack putty to





outline the areas I then further outline this with Tamiya mask tape to avoid overspray. I then gave these masked areas a shot of hairspray sprayed from the can before adding the camouflage tan. (Picture 12-14).

Once again I lifted the paint off with water to reveal both the green layer and the alloy layer, (picture 15). The process was repeated all over the model with all the camouflage including the black. You can

also use the hairspray to control over spray. (Picture 16). this entire process is done over several days due to the necessity of the paint drying. The finished top coat has a very convincing look. (Picture 17).

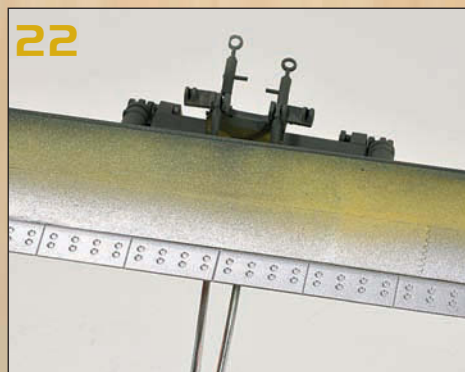
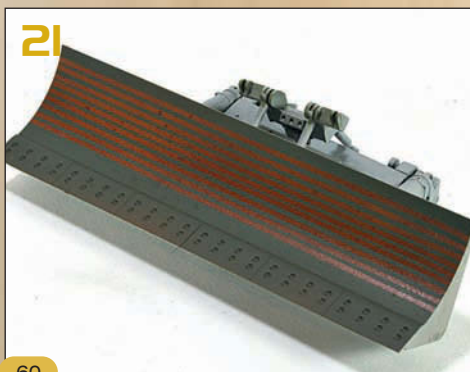
Bladed Weapon

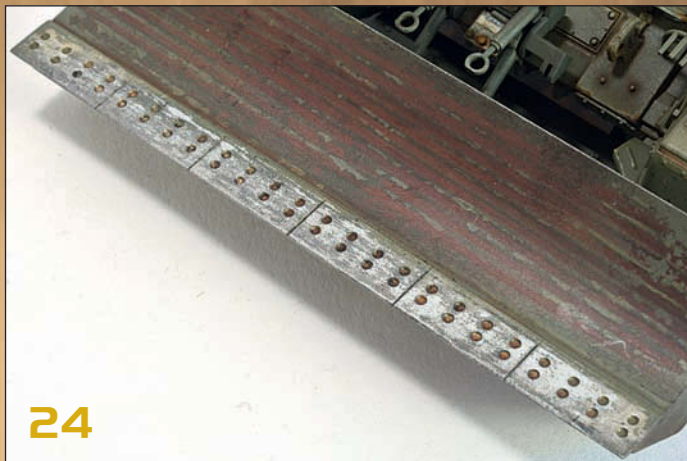


For the dozer blade I wanted to show worn away paint and rust on the blade. I covered the blade in hull red then 2 light layers of hairspray. A layer of orange/red/brown mix is painted over the hairspray layer (Picture 18). To further enhance the rust look I flicked some rust colour enamels onto the surface (Picture 19).

Once again another layer of hairspray then I masked out lines on the blade representing slight shallows on the metal where the paint did not wear (Picture 20). I sprayed the base green on and at this point it is very uniform as you can see (Picture 21). With a moist brush I gently removed the hard edges of the painted

lines. To further break up the uniformity I paint different greens tones on the lines with a fine brush and Vallejo acrylics. The bottom edge of the blade is made with a harder steel and often appears polished from use, to replicate that look I first painted a layer of Alclad Lacquer Aluminium (Picture 22). When that is dry I





rubbed on a metallic pigment from AK Interactive. I used masking tape to gently lift off portions of the pigment (Picture 23-24). To finish I added some wet streaks and some dirt. To fix the dirt I used Tamiya thinners. (Picture 25). Dirt accumulation on a fast-moving tank such as the T-90 happens in all shapes and forms. For the caked on Dirt I used a product in development with A small United States based company called Armour Farm. This is a paste-like substance that dries solid and you can mix both water-based and enamels with it. I also mixed real dirt with the paste and it is further darkened with a wash (Picture 26).

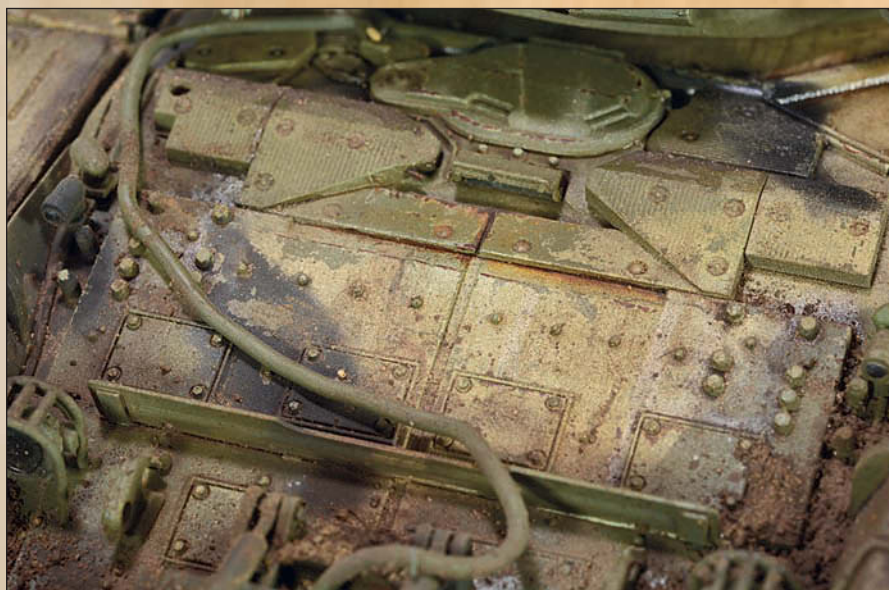




Oil paints in dark tones are laid in the creases to simulate wet dirt and grime it is then washed across the surface away from the recessed areas with a wide brush slightly moistened with a artist thinner. (Picture 27). A similar process is used to simulate the oily soot that comes from the

exhaust (Picture 32). Onto the finishing touches and I added a wet look to various parts of the model using Wet Effects from Mig productions (Picture 29). Some pigments matching the tone of the mud and dirt of the lower hull were dry brushed on to the turret top surface (picture 30).

Finally I went around the entire model doing touch ups, pin washes, generally enhancing any effects that may have been lost in the weathering process for example I add back a little brightness to the worn aluminium areas (Picture 31).





Looking the part - the low stance of the completed T-90 is enhanced by the strong shape of the dozer blade and it offers modellers the chance to employ some interesting weathering techniques on the blade in contrast with the more familiar finishes of the tank.

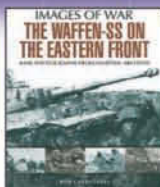
Aviation & Military Book Centre

Military & Civil Aviation – Military Weapons & Equipment – Naval Vessels

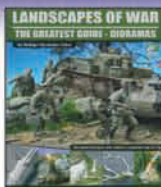
WWW.AVIATIONBOOKCENTRE.COM



Lightning 1954-2014
I Black A photographic tribute to the most well known British Fighter of the past 50 years this book covers the later years of operations including the flying of this iconic fighter in civilian hands. Hundreds of colour photos.
HB 140pp £42.00



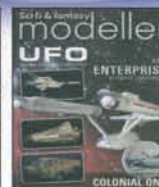
Images of War The Waffen SS on the Eastern Front
B Carruthers Illustrates the combat history of the Waffen-SS in the East from the optimism of the opening stages of the war.
SB 160pp £14.99



Landscapes of War The Greatest Guide - Diorama. Vol.1
R Cabos In depth book devoted to the art of making dioramas with simple and effective advice on how to recreate landscapes.
SB 110pp £17.99



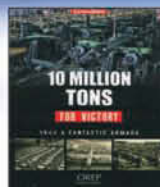
The Victorious First Consul. The Battle of Marengo
O Lapray A gripping account of the battle of Marengo during Napoleon's second Italian campaign. Colour illustrations and paintings.
HB 128pp £29.95



Sci-fi & Fantasy Modeller Volume 36
M Reccia AMT Enterprise ultimate conversion, UFO original miniatures unearthed; Moebius Colonial One Plus much more. Colour photos.
SB 98pp £14.95



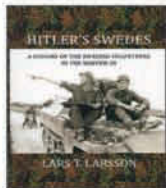
The Aviation Historian Issue 10
Content includes: The AV-8A story; Italy's series 5 fighters; Vickers vespa altitude record; Mustangs in Korea and supplying the RFC in WW1 Egypt.
SB 130pp £13.50



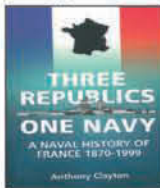
10 Million Tons for Victory 1944 A Fantastic Armada
J Benamou This book presents an impressive inventory of the gigantic efforts employed by the workshops of the Allies. B&W photos.
SB 94pp £12.99



SS12055 Stuart-Light Tank in Action
R Ervin A study of the M5A1. With a top speed of 45 miles per hour, armour protection, and fire-power, the M5A1 provided powerful support for mobile reconnaissance. Includes those supplied to Britain and France. Colour photos.
SB 80pp £14.99



Hitler's Swedes A History of the Swedish Volunteers in the Waffen-SS
L Larsson Lavishly illustrated account of the hidden history of Swedish volunteers in the Waffen-SS. The book includes over 150 photos, everything from civilian photos and portraits and maps.
HB 336pp £34.95



Three Republics One Navy A Naval History of France 1870-1999
A Clayton The author has weaved together strands of successive radical changes over the past 100+ years to give a history of a navy whose nation's priorities have been more about land frontier defence.
HB 288pp £29.95



Heinrich Himmler A Photo History of the Reichsfuhrer-SS
M Williams With 1000 digitally enhanced B&W photos, this book is full of astonishing photographic material which follows Himmler on his day to day routine. The camera allows us into his world, albeit temporarily.
HB 750pp £40.00



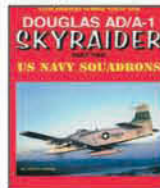
The Ship of the Line: A History in Ship Models
B Lavery The National Maritime Museum in Greenwich houses the largest collection of scale ship models in the world, many of which are official, contemporary artefacts made by the craftsmen of the navy or the shipbuilders.
HB 128pp £25.00



Alpha Jet 40 ans, 1973-2013
X Capy French Text. Lavishly illustrated guide covering the history and development of the Alpha Jet from the flight of the first prototype in October 1973 through to its use around the world today. Lavishly illustrated. 600 Colour photos and profiles.
HB 288pp £50.00



Tiger Ausf.B Königstiger
W Troja Lavishly illustrated, this book describes the development, technical details and combat history of the Königstiger Heavy Tank. Includes a detailed description of the tank's construction.
HB 720pp £87.00



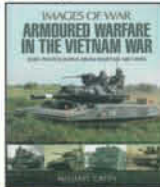
Douglas AD/A-1 Skyraider
S Ginter Looks at the Skyraider Fleet and Utility squadrons and includes detail of each squadron alongside photos of aircraft and squadron patches. 580 B&W photos and 138 patches.
SB 272pp £41.99



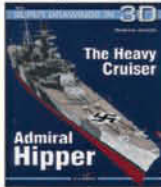
The Oder Front 1945 Volume 2 Documents, Reports and Personal Accounts
A Hamilton A comprehensive reference on Hitler's Heeresgruppe Weichsel, its formation, command and key military operations. Includes the formation and Operations of the Heeresgruppe, 21.
HB 526+48pp £69.95



Panzerkampfwagen Pz.Kpfw 38(t) in Wehrmacht Photo Album 7th and 8th Panzer Division
P Broja Black and white photos album containing 220 period photos with English and Czech captions. 220 period photos.
SB 112pp £19.99



Images of War Armoured Warfare in the Vietnam War
M Green Approx 200 B&W or colour photos from WarTime Archives. Describes in detail the armed conflicts that raged in South-East Asia between 1945 and 1975.
SB 192pp £14.99



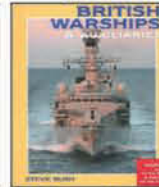
Super Drawings in 3D The Heavy Cruiser Admiral Hipper
W Goraliski Contains technical specifications and operational history and some 120 colour graphical illustrations showing close-up and walkaround views.
SB 80pp £16.99



Warship Pictorial 42 Round Bridge Fletcher
R Davis Pictorial history of the round bridge Fletcher incorporating dozens of official Navy Department photos and also includes technical drawings. Contains pages of refits, camouflage and repairs. Black and white photos throughout.
SB 72pp £15.99



The Third Reich Bravery and Merit Decoration for Eastern Peoples
R Michaelis In depth look at this little known Third Reich badge awarded to volunteers from the occupied eastern territories who served Germany.
HB 56pp £16.50



British Warships & Auxiliaries 2015/2016
S Bush A complete guide to the ships and aircraft of the fleet. Fully updated and revised. Content includes Pennant Numbers, Submarines, Frigates, MCM Vessels and much more. Colour Photos.
SB 120pp £8.99



Modulation & Light Techniques
A complete guide with 4 techniques to create light effects and volume in military vehicles and dioramas
J Soler In-depth explanation of how to apply various light effects to models.
SB 104pp £22.99



Super King Building Trumpeter's 1:16 Scale King Tiger
The step by step story of David Parker's remarkable award winning 1:16 scale replica. Bringing together the three and a half year coverage from AFV Modeller.
SB 452pp £55.00



MMR62MIL Military Miniatures in Review 62
Includes a special Great War Commemorative Feature - Napoleon Complex: plus much more.
SB 80pp £8.99



Tank & Military Vehicles No.21
FRENCH TEXT. Liberation of Thionville; Renault FT; Morris LRC Mk 2; Borne Sulnowo plus much more.
SB 84pp £6.99



The War Archives Women at War 1939/45
P Ware A reference of archive photos documenting the role of women in the services, in agriculture and industry.
SB 94pp £7.95



Militaria Magazine Hors-Serie 93 Ardennes 1944
Y Buffetaut FRENCH TEXT. Ardennes 1944 Les Raisons de La Victoire Alliee plus much more.
SB 82pp £10.99



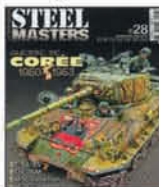
Art of Modelling 07 Jan/Feb 2015
Includes E-100 Ausf.C diorama Das Letzte Gecicht; The Enemy at Home France 1943; Honda CR250R by Tamiya plus much more.
SB 66pp £7.99



Histoires de Guerre Blindes et Materiel 111 Jan-Mars 2015
FRENCH TEXT. Les derniers Chars B; 1915 l'infanterie; Les camions La Buire plus much more.
SB 96pp £11.99



RAIDS Hors-Serie 54 L'Armee Francaise en Afrique 1978-2014
FRENCH TEXT. Operation Gadoria Djibouti; Operation Oryx Somalia plus much more.
SB 82pp £10.99



Le Thematique Steel Masters No.28 Guerre de Corée 1950-1953
FRENCH TEXT. Content includes 1:35 T-34/85; SU-76M; M24 Chaffee; 1:48 M36 Jackson plus much more.
SB 82pp £10.99

order via our secure website:

WWW.AVIATIONBOOKCENTRE.COM

T: 01530 231407 (+44 1530 231407) E: sales@aviationbookcentre.com

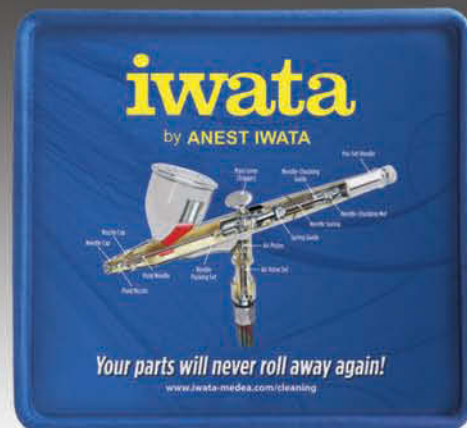
Post: Aviation & Military Book Centre, PO Box 10159, Coalville, Leics LE67 1WB

We accept: Mastercard, Visa, Visa Delta, Maestro (Switch), Solo, Postal Orders, F. Sterling Cheque drawn on a UK Bank. Cheques made payable to Aviation Book Centre Ltd.

Delivery charges UK: Order value below £20 = £3.50, £20+above = £5.50
Overseas: Standard Airmail please add 15% of order value. Minimum £5.50. Priority Airmail please add 20% of order value. Minimum £7.50.

The Airbrush Company Ltd

AIRBRUSH EQUIPMENT, PAINTS, ACCESSORIES

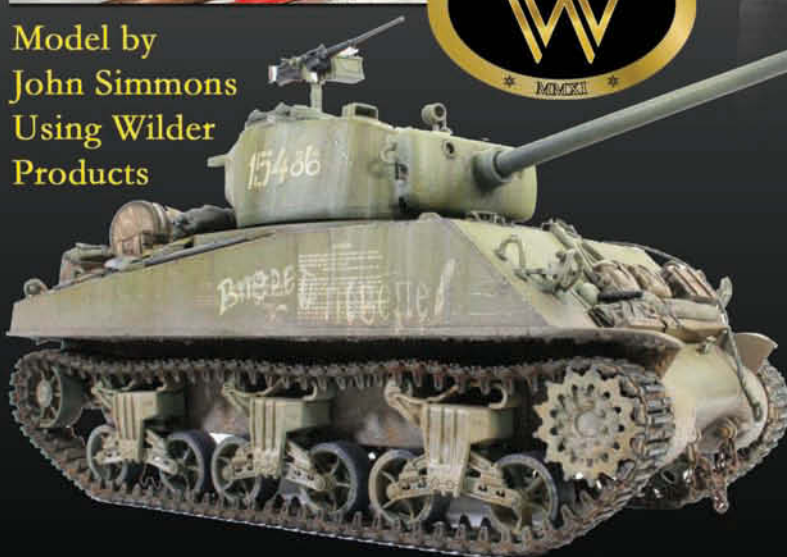


iwata

CLEAN YOUR AIRBRUSH LIKE A PRO!



Model by
John Simmons
Using Wilder
Products



*Airbrush Training for all modelling
applications - call us for more info*



www.Airbrushes.com

01903 767800

sales@airbrushes.com

Since 1995, HobbyLink Japan has been providing quality model kits and accessories, worldwide.



Scan this QR code to go directly to a great selection of scale model kits.



Our greatest service upgrade yet!
Shipping now cheaper than ever!



TAM35344 1/35 MM France Medium Tank SOMUA S35
by Tamiya



hlj.com/afv



HobbyLink Japan



@hobbylink



hobbylink.tv