

SdKfz 234/4 Panzerspähwagen, Premium Edition – '39 – '45 Series

by Eric Christianson, IPMS # 42218

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dmlusa/welcome.asp](http://www.dragonmodelsusa.com/dmlusa/welcome.asp)

Dragon Models has released an updated version of their original (excellent) Sd.Kfz. 234/4 armored, anti-tank wheeled vehicle produced five years ago (#6221). This update replaces the eight large wheels and spare with newly engineered 'sandwich' style wheels that are magnificent. Each highly visible wheel is made up of eight thin disks that are assembled to produce accurate and stunning tread, with separate two-part hubs that simplify painting and weathering.

The only other change is that Dragon has replaced the aluminum barrel in the original kit with a slide-molded one in the update. For fit and finish, I prefer the latter, so that's also a welcome replacement.

The eight, well-designed and engineered jerry cans from the original kit are included, sporting separate racks and straps and PE centerline inserts. You only end up using two, leaving six of these beauties for the spares box. Unfortunately, unlike the original kit, the PE sheet included with the new kit only contains inserts for the two cans you will use.

There is quite a lot of interior provided; including two driver's compartments (one for each set of four wheels, fore and aft)



The contents of the box include:

- Main lower hull (two pieces), packaged separately.
- 20 sprues in soft, light grey plastic, packaged separately.
- 1 clear plastic sprue
- 8 pre-cut and pre-bent brake lines made of thin but sturdy metal wire.
- 1 small photo-etch sheet, including jerry can detail and a small front gun shield insert.
- 1 small sheet of decals with markings for four vehicles and instrument faces.
- 1 10-page blue and white instruction sheet with 28 steps.

The kit comes with four schemes represented using blue-and-white ink three-view drawings; and a small (but perfectly registered) sheet of decals from Cartograph of Italy. These include:

- Unidentified unit, Prague 1945
- Unidentified unit, Czechoslovakia 1945
- Unidentified unit, Western Front 1945
- Unidentified unit, 1945

and every hatch and view port on the vehicle can be modeled in the open or closed position. Still, with the large main weapon and the streamlined upper super-structure, precious little is visible on the completed model.

Flipping the hull over there is abundant detail offered in the gear, axles and other odds and ends underneath, including pre-bent wire brake lines. You can

position the sets of wheels and the fit of everything is near perfect. Near.

Opening the box

After building Dragon's recent excellent Japanese Light Tank (Type 95 Ha Go) which had relatively few parts, we are back to a Dragon-as-usual kit, with so many parts that it is difficult to get them back into the box once they've escaped. Make no mistake – I'm not complaining!

What you get besides a really great model are nine extra wheels and six extra jerry cans with separate racks and straps, as well as the ubiquitous spare pioneer tools, fire extinguishers, ammunition rounds, etc., etc. As I've said before – you gotta' love Dragon.

The Instructions

I always wish Dragon would provide more instructions and images since many of those included are busy and complex. That said, I found nothing significant as far as errors or omissions. As with all open-fighting compartment vehicles, assembly sequence varies by modeler and I found that I had to move steps around in order to get everything done, but I consider that a matter of personal choice, not a flaw in the instructions provided by Dragon.

Things to consider before starting:

If you want to articulate the wheels you will need to depart from the instructions only slightly. The -234 had three primary wheel positions; turning at slow speed, turning at higher speed; and in-line. For slower speeds, the forward two wheels on each side acted together but independently from the rearward two wheels. For example, when making a left turn, the two forward wheels on the left side are canted outward and the two rearward wheels are canted inward, their partners on the other ends of the axles following suit. For turning at medium speeds the two forward wheels on each side turned but the rearward wheels remained in-line. I chose to model the first position (slow turn) since it would expose and accentuate the beautiful tread on the wheels. Looking around the internet I found many examples of folks trying to do this, but most showed the wheels slightly askew and not lined up (and not very German!) – a result I wanted to avoid.



To do this, I only made two slight changes. First – the eight wheel hubs (Parts D18 and D19) would be left off temporarily and would receive no glue so they could be movable. This isn't what Dragon had in mind, so my second change was to make the clearances where these hubs slip in as tight as possible by manipulating them when they were glued to the lower hull (Part G). This opened up very small gaps above the leaf springs in places which could be filled with small plastic shims if desired, but I felt they would be sufficiently out of sight to require doing that. The only other consequence is that I had to bend four of the eight wire brake lines a tiny bit to reach all the way under the leaf springs – also a minor (and simple) adjustment.

I completed Steps 1-4, leaving the hubs off until everything had dried thoroughly overnight. In the morning when I went to snap them in, the hubs fit like a glove and were barely movable – exactly what I was after. This would make the positioning of the wheels on the final product (much later) simple and exact, before adding a drop of glue to fix each in place.

Otherwise, the only thing to keep in mind is that this is an open-topped vehicle, and as such, the build-it-all-and-then-paint-it approach might not be the best way to go. To do a good job you'll want to work this like an airplane model; build a little, paint a little, etc. It pays to plan ahead and proceed slowly. I interrupted assembly halfway through Step 16, then built the main weapon (Steps 22-26) and primed/painted everything built so far (see Steps 1-4 of the painting/finishing section below). I then glued the upper and lower hulls together, and continued with the rest of the build.

Poor Fit In Places

Unfortunately, the fit of the upper hull to the lower chassis is poor due to obstructions, or at least it was for me. I suggest that you test fit the upper hull often during Steps 6-8 and Steps 13-15 to make sure that all the detail you are adding doesn't interfere with the fit. I waited until Step 16 and broke several pieces off trying to sand down and clip what I needed to in order to proceed. I'm not sure the mistakes were self-inflicted or something inherent with the kit, but I

suspect the former. Fortunately none of this surgery is readily visible on the finished product – as I always say, such is the beauty of building armor!

The Build

The Wheels

I must confess. I did not look forward to assembling the 90 parts Dragon provided for the wheels. I have had some experience with the 'sandwich' design having built several kits from another manufacturer who uses this approach, and while the result was impressive, the process was tedious. My plan was to put a single wheel together, write about it, and then use eight (nearly) identical resin aftermarket wheels to complete the build.

After assembling that one wheel, however, I put the resin wheels back in the bag they came in. Dragon has produced a beautifully engineered design here. The sprue attachment points are simple to clean, the assembly will only fit one way, the fit is so perfect that I could not pull the un-glued pieces apart after pushing them together, and the detail, once assembled, is breathtaking. Dragon has set the bar here. Bravo.

In Step One, assemble the nine tires but leave the outer portion of the wheels (Parts B6 and B18) off for now.

Lower chassis and interior

The assembly of the lower chassis went together surprisingly well, and overall the fit is excellent.

Four of the eight bent wire brake lines (the ones that drape under the leaf springs) needed to be bent a little so they would 'bow' just a bit more, but the remaining four fit perfectly. All eight lines are a little over-scale, but I applaud Dragon's approach here.



Steps Ten through Twelve look a lot busier than they really are. I suggest assembling the parts in the following order:

Snap in the eight hubs (Parts D18 and D19) if you haven't already done so. I had to open some of the holes so the small male pegs would seat properly.

Attach parts D3, D4, D7, D8 from Steps Eleven and Twelve first, and let them dry. Attaching these parts later (after Step Ten) is more difficult and not necessary.

Glue Parts B10 to the brake drums (Parts B6 from Step One), and attach these eight assemblies to the wheel hubs. Take care not to get any glue where the movable hubs meet the axles so they will remain movable.

Glue the eight brake drums (Parts B6 from Step One) onto the inner wheel pieces (Parts B10).

Attach the lower section (Part G) to the 'upper' part of the lower hull (Part F).

Attach parts D16 and D17 now that you know where they can fit. These parts kind of 'chunk' in and are pretty sturdy – I used a strong pair of tweezers to do the job.

Push Parts Z1, Z2 and Z3 into the hull but do not glue these yet. You will need



to move them later, before fixing everything I place.

Once all of the above is dry, test fit the tires two at a time and move them into the arrangement that you are looking for on the finished model. I used a business card to help align each pair of wheels, placing the edge of the card against the brake drum of one wheel and eyeballing the angle of its partner.

Once you're satisfied, carefully remove the tires without disturbing anything and place a drop of glue where the ball joint of the hub meets the leaf spring/axle assembly. Set everything aside to dry.

Now swivel Parts Z1, Z2 and Z3 in such a way as to accept the linkage rods that connect everything together (Parts B5 and D5). Apply glue as you go, including Parts Z1, Z2 and Z3.



Upper hull

From here on out everything is upper hull and detail. As mentioned above, the fit of everything was mostly perfect but the upper and lower hulls didn't want to go together. Before joining them I wanted to paint all the bits you would be able to see, but I couldn't do that without first performing a little surgery here and there to get things to fit. Once I had everything fitting, I stopped mid-way through Step 16 to prime and paint (see the painting section below, Steps 1-4). Once everything was dry, I glued the two halves and continued on.

The rest of the build is pretty stress-free. The eight-part jerry cans are really nice and the design is a perfect marriage

between detail and ease of painting. I wish all Jerry cans came this way. I left the nine wheels, main weapon, the antenna, and the machine gun off, painting and finishing these separately.

In Step 18, the rear mounted spare wheel is fitted over a six-piece assembly that is a little fiddly, without any firm attachment points between the pieces. I used the side of a wooden box to line the parts up correctly.

In the last step you attach the antenna. I applaud Dragon for including an antenna in their kits, but they always seem (to me) to be too thick and out of scale. I cut the antenna shaft off at the base and replaced it with an excellent (and inexpensive!) after-market brass replacement offered by OrangeHobby.com.

7.5cm Pak 40/2

Dragon's German Pak 7.5cm AT gun is a gem and I'm glad they've included it in the kit. The entire assembly is a snap to put together and fits like a glove, which is important because all eyes will eventually lock on the intricate weapon in open hull vehicles like the -234. You are provided with three options for the gun muzzle, and Dragon has thoughtfully added a nub at the end of the barrel that will insure that whichever option you choose lines up right. You can assemble, paint and finish the entire weapon separately from the rest of the vehicle and pop it on at the very end.

Painting and Finish

Open hull AFV's are usually a real challenge to paint. I found I had to approach the task in stages. With my -234, I had an additional complication; the fit of the upper and lower halves requires some work, and to avoid damaging a lot of fragile external detail I found I had to prime and base coat the model in stages.

I decided to finish my vehicle using the 'Unidentified Unit, Czechoslovakia 1945' scheme because I wanted to use the German crosses and license plates. I saw a beautiful color scheme at an IPMS Nationals that I had a picture of, so I used that as a go-by for everything else. I would employ a 'hairspray' finish, so the three-color scheme would have to be sprayed in a single airbrush session, another new challenge.

After completing the main assemblies (see 'Things to consider before starting', above), painting and finishing followed these steps:

(Note: I thin all Tamiya paint and primer products 50:50 with Gunze Mr. Color Leveling Thinner, which has its own retarder for airbrushing. If you haven't tried this thinner with Tamiya paints, you really should. I use a Pasche-H Single-Action airbrush, Number #3 tip, at 20 lbs. pressure for everything. I use the same thinner for thinning Humbrol paints. I use Vallejo's own thinner for all Vallejo paints.)

I started by airbrushing a primer coat of Gunze Mr. Surfacer 1200 to the lower chassis, main weapon and the interior. This exposed several small gaps and other flaws that needed to be and fixed.

I followed this with a pre-shade coat Tamiya NATO Black on these three assemblies but not the main gun shield itself. That item, and the rest of the upper hull, would sport a different pre-shade color.

Next I created a mixture of Tamiya Desert Yellow (XF-59), Deck Tan (XF-55) and Flat White (XF-2) which results in a color that is close to Tamiya Buff, but a little more yellow than brown. I used this color for the interior.

With the hull still in two halves, I detailed everything that I thought would be

visible. I started with giving the entire interior a filter made of Mig Wash Brown heavily diluted with Mona Lisa Thinner. I followed this with a similar wash of Paynes Grey over the engine, steering wheels, grenade cases, etc. I finished with a pin wash using Mig Dark Wash straight from the bottle, adding depth to all the bolts and panel lines. Once satisfied, I completed the assembly of the model (see above - external hull).

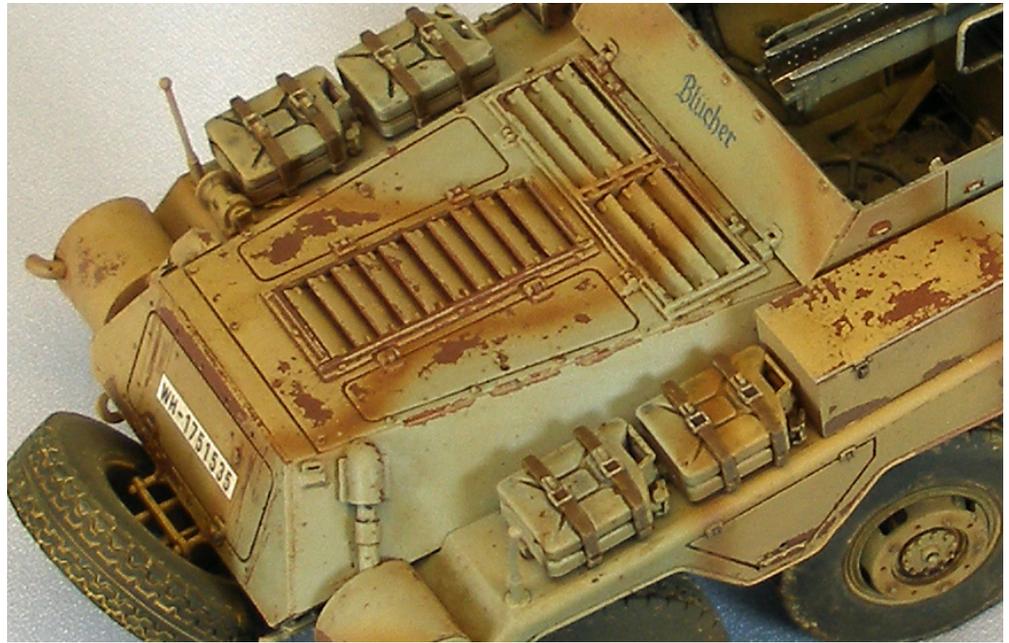
I then carefully masked off the openings to the interior with paper towel and sprayed everything that wasn't already primed with Gunze Mr. Surfacer 1200.

Once the primer had a chance to de-gass, I painted the entire vehicle (except for the areas that were NATO Black) with a pre-shade coat of NATO Brown, including the nine wheel covers. This is the color that I wanted to show through when I rubbed off the camouflage colors over the hairspray.

Now the interesting part. With the entire model painted in pre-shade colors, I was ready for the hairspray. Since my scheme would be somewhat complex, I would have to work rather quickly so I made sure that I had everything I needed prepared beforehand:

- My yellow mixture made up of Tamiya Desert Yellow (XF-59), Deck Tan (XF-55) and Flat White (XF-2)
- A blue-grey shade made up of Tamiya Light Blue (XF-23) and Flat White (XF-2).
- Tamiya Red-Brown (XF-64).
- My reference photo from the Nationals.

I started with a generous coat of hairspray on everything and let that dry, assisting it with clean air from the airbrush. I use TreSemme #4 Extra Hold I in a spray can, but I really don't think it matters. (I just like the small black can it comes in).



Next came the yellow base coat on everything. I sprayed it carefully, allowing some of the black and brown pre-shade coats to show through.

I waited a few minutes and then laid down the first camouflage coat of the light blue-white color, followed by a line of the red-brown color between the two to act as a demarcation line.

Before the paint had dried too much, I took a long-bristle red sable brush, dipped it in tap water, and wet the surfaces that would show 'chipped' paint. After letting the water sit for a few minutes, I used a wet, stiff, short horsehair brush to gently rub off the layers of paint along the edges of the metal surfaces and high-wear areas like hatches and clasps. I also rubbed some paint away from flat areas here and there to give the vehicle an overall worn appearance.

Once everything was dry, I hand-painted the areas that would receive decals with Future.

While the Future was drying, I painted the wooden portions of the pioneer tools

Vallejo Acrylics Old Wood (shovels) and New Wood (barrel cleaning rods) and all the steel parts Tamiya Metallic Grey (XF56). For the hand painting I mix a tiny bit of Vallejo Slow Dry and water with each Vallejo color until it flows smoothly off a red sable brush.

I hand-painted the MG34 and breech block of the Pak 7.5cm gun Tamiya Gun Metal (X-10). The shine would later get dulled by a flat coat.

To give the wooden parts of the tools more depth, I brushed on a little Mig Wash Brown Oil straight from the tube and let that set overnight. Don't let this paint leach out its oil beforehand, like you would when you are using oils for detailing. The oil helps it stay workable. In the morning I carefully removed most of the oil paint using a brush dampened with Mona Lisa, leaving the areas near the buckles and metal parts darker than the wooden shafts.

Using a fine brush, I hand-painted the small area around the inner rims of the wheels with the Yellow mixture, and then glued the wheel covers in place.

I applied the decals for my scheme next using the Red and Blue Micro Sol/Set system without any problems.

I followed this by adding several applications of a filter made of Paynes Gray to the rubber portions of the wheels and the spare tire in the back. I heavily thin all of my washes and filters with Mona Lisa White Spirit.

Once dry, I hand-brushed a coat of Future over the decals to seal them.

I then gave the vehicle a pin wash using Mig Dark Wash (aka Raw Umber) right out of the bottle.

For the wheels, I mixed a thin slurry of MIG Thinner for Washes (red bottle) and equal amounts of MIG Dry Mud and MIG Gulf War Sand pigments and brushed that liberally all over the (main) eight tires, and a slightly thinner mix over the spare tire which would receive less weathering. Once the pigments had dried completely, I brushed off the excess using a stiff horsehair brush and fingers

until I had what I wanted. This step makes a mess so prepare your work area accordingly. A while back I used to 'fix' the pigment using MIG Fixer (blue bottle) but I found that the solution darkens the color of the pigment and dries unevenly; making some parts darker than other parts, especially with light-colored pigments.

I attached the main weapon, wheels, antenna and machine gun. This little guy was starting to look military.

Once dry, I gave the entire vehicle a 'road-dusting' of Vallejo Model Air Light Brown and then shot the whole vehicle with Vallejo Flat Varnish to kill any remaining shine. I cut each of these 50/50 with Vallejo Airbrush Thinner to improve flow.

Finally, I applied a light dusting of various Mig pigments, light earth tones for the body and wheels, dark rust and black for the exhaust mufflers on each side and I was done. On to the next build (the Dragon PzKpfw IV Ausf. H # 6611)!

Conclusion

This kit was a challenge to build and finish, but not more so than any other open hull, self-propelled gun. Most parts fit perfectly, some not so much. I had expected a longer than usual build and Dragon didn't disappoint me in that respect. Still, I was more than satisfied with the end result, and those wheels look great!

Even though there are a lot of parts, and the open hull aspect of the model is a challenge to paint, I can recommend this kit to anyone who wants to delve into the series of late-war German wheeled reconnaissance and anti-tank vehicles. Go slow, pre-fit everything before gluing, and have fun.

I would like to thank Dragon Models and Dragon USA for providing this kit for review, and to IPMS USA for giving me the opportunity to build it.