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Type 97 CHI-HA

Malaya 1941



Step-by-Step Finishing Japanese Armor

By Glenn Bartolotti

A complete Step-by-Step guide to painting and finishing Armor Models and Figures

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Materials Used

The materials I use are very easy to obtain and simple to use. Most are inexpensive and found at most all art supply stores. Over the years I have learned to use these basic materials to obtain finishes that look very realistic. Consistency is very important and following each step is very important to obtain the desired finish. Other paints may be used but results may vary.

You will notice that in none of the steps will you see the method of dry-brushing. I do not like to use this method as some armor modelers do. I prefer a more subtle look in which I feel represents the look of a full scale armor vehicle.

The materials below were used to finish the 1 model in this volume.

Orderless Turpentine

Micro Sol Decal setting solution

1 each No. 3 round paint brush

1 each No. 0 round paint brush

1 can generic flat grey spray primer

1 can Testors Model Master gloss spray

1 can Testors Model Master lusterless flat spray

Testors Model Master flat enamel paints-*colors specified in text*

Testors Model Master airbrush thinner

Tamiya acrylic paint-*colors specified in text*

Artist oil paint

White

Raw Umber

Pastel Sticks

Yellow Ochre

Rust

Olive

Umber

No. 2 Pencil



**Note: Materials used for painting and weathering only.
The figures seen in some of the photos used more
paint colors than listed above.**

Type 97 CH-HA

The Type 97 had a low silhouette, asymmetric turret and complicated body front, which gave it a unique appearance. The hull was of riveted construction with the driver and bow gunner in the forward compartment, and the engine and transmission in the rear compartment. The commander's cupola was placed atop the turret. Internal communications were by 12 push buttons in the turret connected to 12 lights and a buzzer by the driver.

Power was provided by an air-cooled Mitsubishi "V-12 21.7 liter diesel Mitsubishi Type 97" engine which gave 170 hp (125 kW).

It also carried two 7.7 mm Type 97 machine guns, one on the front left of the hull and the other in a ball mount on the rear of the turret. The latter could be remounted on top of the top of turret for anti-aircraft use. The turret was capable of full 360-degree traverse but the main gun had a second pair of

trunnions internally allowing a maximum 10-degree traverse independently of the turret. The turret featured a small periscope for use when the tank was "buttoned up." On the front of the tank was a searchlight. The radio antenna (29' 6", reverse L shape) of Type 96 Mk 4 Bo (1941 model) communication device (0.6 miles of range and weight of 110 lb), mounted on the side of vehicle.

From December 8 1941 and in early 1942, during the Battle of Malaya and the Battle of Singapore, Type 97 tanks were used by the 3rd Tank Group's 1st, 6th and 14th Tank Regiments under Lieutenant-General Yamashita's Army. The 1st Tank Regiment was under IJA 5th Division, which was among the first to land at Songkhla in southern Thailand. One of its medium tank companies was the 3rd Tank Company under First Lieutenant Yamane (ten Type 97 medium tanks and two Ha-Go light tanks), forming part

of Saeki detachment. The company was in the vanguard of the attack. One key to the Japanese success in Malaya was the unexpected



presence of their tanks in areas where the British did not believe tanks could be used. The wet jungle terrain did not turn out to be an obstacle. The 3rd Tank Group's tanks were particularly effective at the Battle of Slim River on 7 January 1942, where a company 20 tanks under the command of Major Hajime Shimada, destroyed the

better part of the Indian 11th Infantry Division in about five hours. Later, the 2nd and 14th Tank Regiments participated in the Burma Campaign.



1. The kit used is the Tamiya 35075 Japanese Medium Tank Type 97 CHI-HA .

I wanted to show the sag in the **tracks** which is seen on these tanks in photos and the Tamiya box art.

To do this the tracks were put on the tank and then using a pin vice holes were drilled lower than the tracks into the hull.



2. With the pre-drilled holes shown in step 1, wire is now slipped through the holes and above the tracks creating the sag. Super glue the wire in place and snip off the excess. The wire is very thin and will be painted and weathered along with the tracks so it will be hidden for the most part blending into the tracks color.



3

3. *Upgrading the muffler.* The kit comes with molded on mess muffler guards that I wanted to make a littler better and add some detail as well.

The muffler is cut off using a razor saw as shown.



4

4. *I had some fine mesh screen in my spare parts box to use as a replacement.*

The mesh was cut to size and formed to the end piece of muffler and bonded using super glue. The end of the muffler part #'s 25 and 24 were glued to the ends under the mesh. The mesh is so small that you cannot see though it so no middle muffler piece was add.

Then strips of sheet styrene are used to trim off the mess and finish the muffler.



5. The completed model is given a **primer coat** to cover and protect the photo etch parts and give the model a good base to start the paint process. I use a basic spray can primer that can be purchased at the local home store. This primer coat makes painting the steps much easier because you get a smooth coat of color to allow you to see all the areas that will be needed to be painted in the steps used to shade and high light the model.



6. The first step in the painting process is the **pre-shade** this is the darkest shadow color. Burnt Umber is used in this step. What you are trying to achieve in this is to make sure any areas that your light source cannot hit is painted. You are for the most part adding artificial shadows. All the recesses, corners, tracks, and under objects that stand off the tank. It is also best achieved in some areas by painting the areas from under the tank as to just paint under the objects.

Note in this step you may wish to leave the tracks off and paint them separately. I like paint the whole model as a unit so it is your choice.



7. Next step in the painting process is the **base coat** this is the main color. I used Middlestone mixed about almost half with Flat white. What you are trying to achieve in this step is to make sure you cover the areas that were not painted in the pre-shade painting.

As you can see you don't have to worry about being perfect just make sure you can see the shadow for the most part and a blending effect is achieved.

Flat White

Available as:

→ Flat White FS37875 - 1/2 oz. Bottle
SKU# 1768 Price: USD\$ 3.29



RAF Middlestone

Available as:

→ RAF Middlestone (ANA615) (F) MM - 1/2 oz. Bottle
SKU# 2052 Price: USD\$ 3.29



8. Next step in the painting process is the **1st camo color**. After studying the kit instructions for the camo scheme I decided to do the yellow disruptive line first. I used L5RS2003 Tamiya Acrylic XF-3 Flat Yellow for this. I did this step first so the yellow would be painted over the light base coat and not over the dark camo colors. I use a #1 flat brush. In this step it is important that your base coat has dried for 24 hours minimum. **Acrylics brush on very smooth and will dry with a flat finish and for most are much easier to hand paint.**



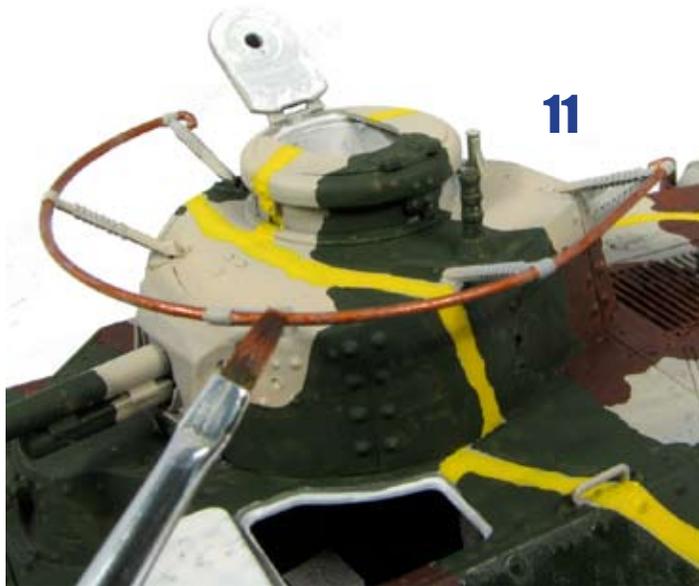


9. Next step in the painting process is the **2nd camo color**. The green shade of the camo pattern L5RR5903 Tamiya Acrylic XF-13 JA Green is used. I used the kit instructions as my guide.



10. Next step in the painting process is the **3rd camo color**. The brown shade of the camo pattern L5GR5503 Tamiya Acrylic XF-10 Flat Brown. I used the kit instructions as my guide.





11

11. Next step in the painting process is the **antenna**. Testors Enamel Paint, Copper (Item No: 69577) was used to paint the antenna.



12

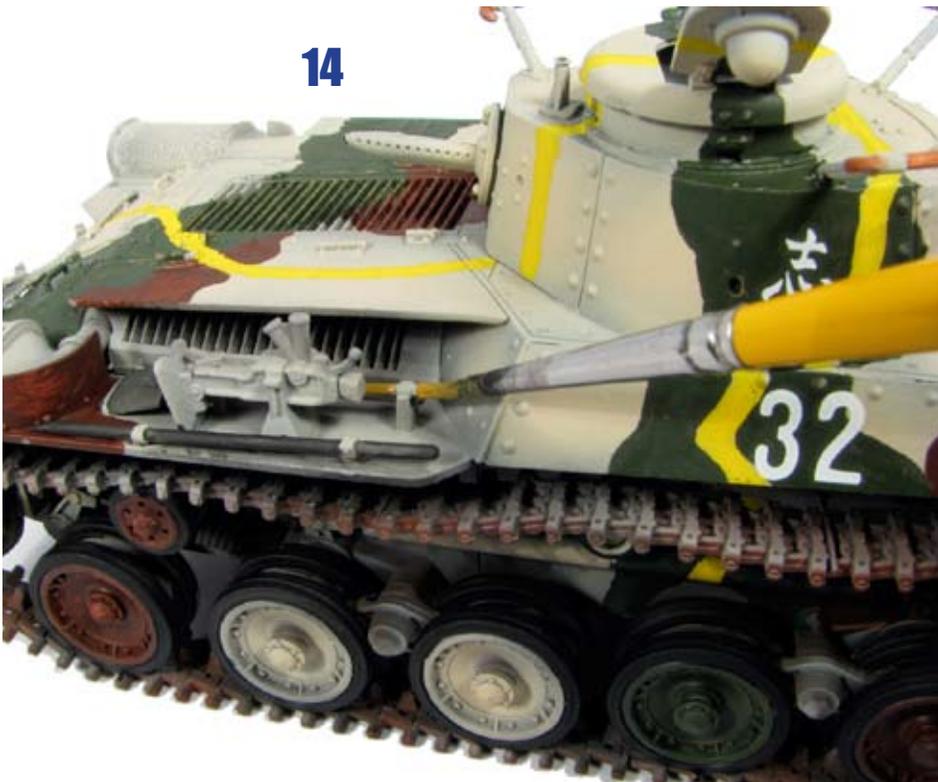
12. The model is now given a Testors clear gloss coat only in the areas that the **decals** will be applied. The decals used are from the Tamiya kit. Micro Sol is used to set and flatten the decals. When the decals dry you may have to puncture with a xacto knife blade tip any areas that don't set down and then reapply some Micro Sol.

When dry spray the tank with Testors lusterless flat.

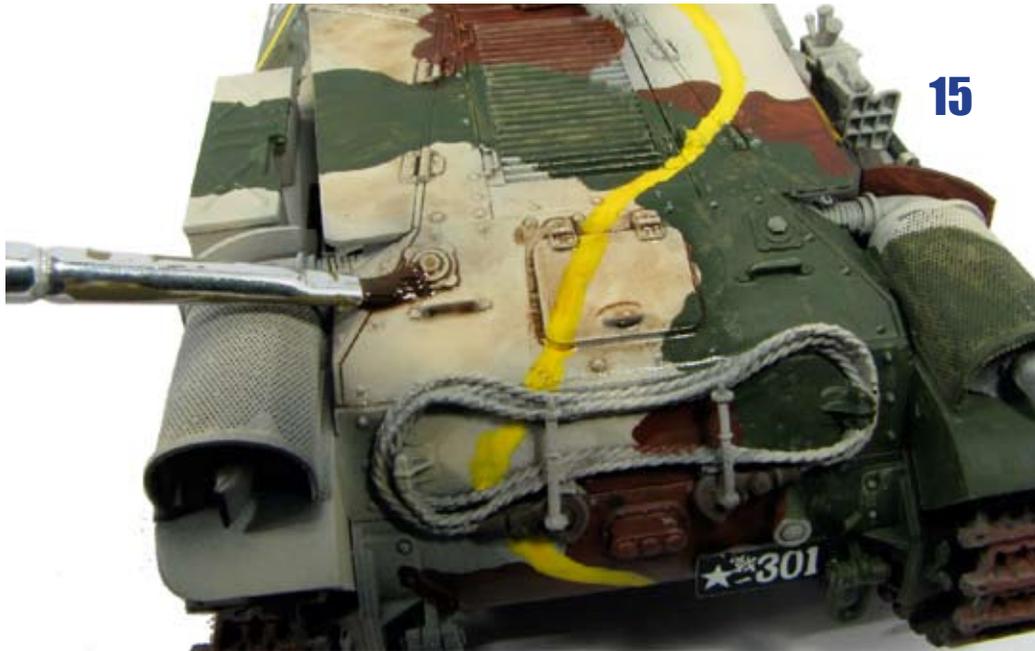


13. Next the **road wheels** are Painted with Tamiya TS-82 - Black Rubber.

Notice the wheel on the right has been painted. Yes I paint all the wheels on the model, if you can see it you can paint it and if you can't see it no one else can either, so you don't have to worry about behind the road wheels. Paint what you can see of the rear road wheels too. Take your time! The weathering washes will handle hiding any areas not touched or seen.



14. Next step in the painting process are the **tools and equipment** I paint all tools and equipment on the tank before final weathering. In painting these items study the way metal and wood looks in real life and add the colors into your paint to really get a good contrasting look and make sure you use various colors and shade as you can in each item. Most important don't paint items just one color or shade. I use acrylic paint but any paint you are comfortable with will work. The metal items are painted in dark shades, they will be treated with a metallic finish later. I use German Black Brown Acrylic paint for the metal items. If you miss a few tiny spots the raw umber wash will hide and blend the items together.



15

15. Next step is the **wash**.

First I brush the model with clean turpentine. I put a dab of raw umber oil paint on a pallet, the oil paint is thinned with turpentine on the pallet and then applied to the model with a small brush. I do not want the wash to coat the entire model, it is controlled just where I want it. This is called a pin wash, apply to all of the surface details to create false shadows around each one, and any excess wash is blended into the surrounding surface once dry. I streak it down the sides like it would naturally, but care should be taken not to overdo this...be subtle.



16

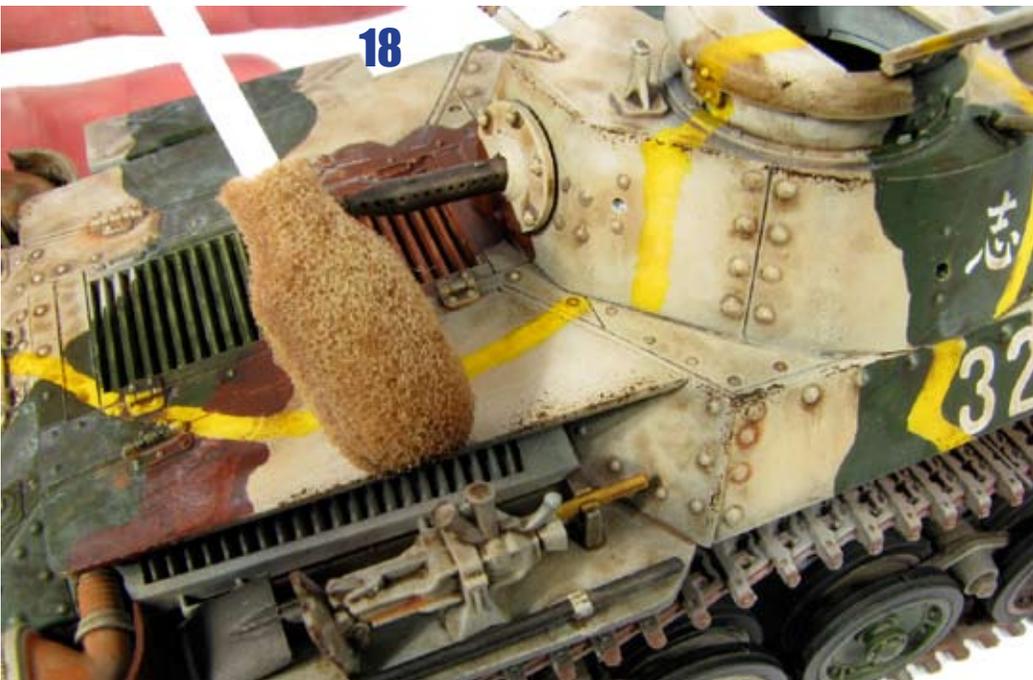
16. Once the body of the tank's wash has dried it is turned on its side and the road wheels and hull sides are given a wash. It is put on its side so the wash stays around the bolts and details not allowing the wash to drain down to the bottom of the wheels only. This gives all the wheels a even effect all around..



17. Next step is the **effects**. I use heavily thinned white artist oil paint to give flat areas of the tank a look as though water that has mixed with dust and dried on the surface.

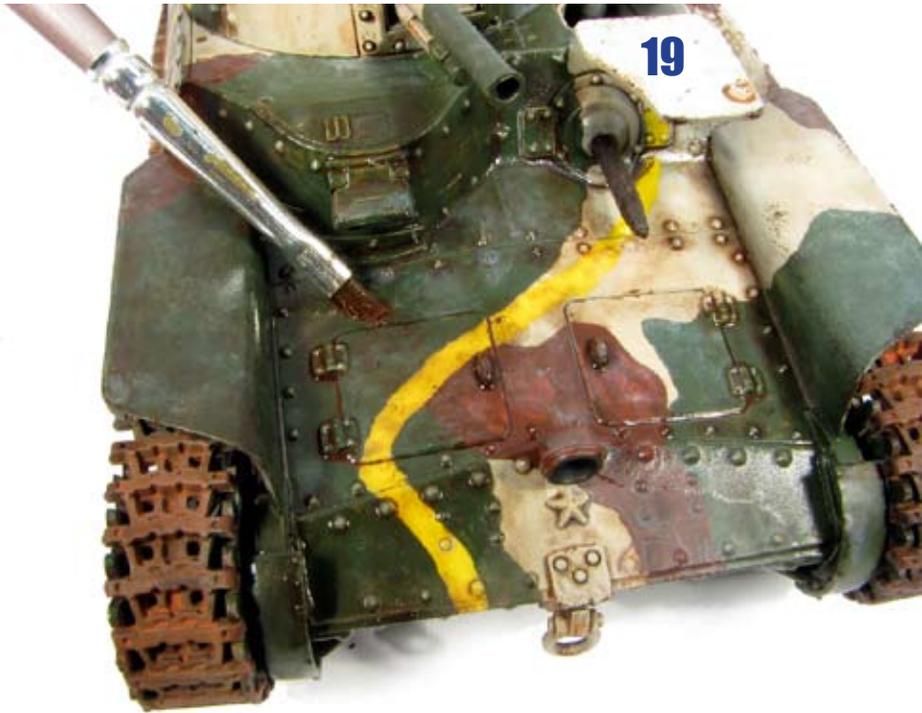
I paint the area with clean turpentine as before. I put a dab of white oil paint on a pallet, the oil paint is thinned with turpentine on the pallet and then applied to the model with a small brush. Blend well and be very subtle.

Other earth shade oil colors can be used in this step to add other transparent glaze weathering effects.



18. Next step in the weathering process is the **paint chips & scratches**. I add chipped paint with raw umber oil paint. A small sponge or make-up applicator is used to apply the chips. The sponge is press into raw umber oil paint then onto the armor surface lightly. The key to chips are make them **small** and without any pattern, keeping them on the most abused edges and damaged areas. Use common sense and remember that less is more with chipped/worn areas, and think very small!

19



19. Next step is **pastel pigment weathering**. I use pastels in the same way you use pigments, but I make my own powder. The pastels are \$1.00 a stick at the art store and come in a large variety of shades. I use a file to grind them into powder. I mix them with turpentine on a pallet and apply them with a brush. The tracks get a earth color thinned heavily with turpentine. Make sure you thin the powder heavily because if not it will dry and cover to much of the tracks, a little goes a long way! Apply this mixture to the road wheels as well.



The tow cable get pastel washes using shades of rust, brown, and olive green pastel powder. Apply the rust shade first and then add blotches of the brown and olive after. When the wash dries it is quite convincing giving a good representation of weathered iron. Add this same mixtures to the metal areas of the tools.

The muffler pipes get the same mixture of pastel powder as the tow cable but with more of the rust color added.



20



20. Next step is **metal accents**
I use a no. 2 graphite pencil to add the metal accents to the raised parts of the tracks.

Sprocket teeth and track teeth also receive the same treatment.



Use the pencil lead on the machine guns as well.



21. Next step is **head light**

The kit does not come with a clear cover for the head light, so I made my own by cutting a piece of aluminum foil out and gluing it into the light.

The final touch is to add a drop of Micro Crystal Cleat or even better 2 part epoxy.

21



When dry the foil shows behind the clear cover.



The figures

I wanted to use the figures supplied with the kit but knew their poses were stiff and lifeless.

To make them animated and add some life. I sculpted new arms on the commander, and turned his head downward and to his left so it looks as though he is talking to the tank driver, in which I turned his head up and to his right. I cut the heads with a razor saw. See more figure conversions in Step-by-Step Volume 6.



To make the new arms I added thin wire as armatures for posing and sculpting.

The wire is then bent to the desired pose, cut, and the hands are then glued on. It is important the hands look as though they are holding/ touching the tank and hatch and not floating or stiff.



The final touch was to wrap the wire with magic sculpt and create the new arms using the end of a tooth pic to sculpt the folds.

This minor conversion makes the old Tamiya figures look like a after market set!



Finished Model





Stay Tuned!

Be on the look out for more **Step-by-Step Armor Finishing!**



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