

Matrix Ducati 996
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Introduction:

I've always enjoyed the *Matrix* series of movies and was always intrigued with the great chase scene in *Matrix Reloaded* with Trinity riding a Ducati and carrying the key maker on the back. It turns out that Ducati actually made a special version of a Ducati 998 painted the dark green colour of the movie bike.



Ducati introduced the 916 in 1994 and was selected number 2 in Discovery Channel's 10 Ultimate Motorcycles. The 996 was introduced in 2000, with a larger engine and five spoked wheels.

The basic kit is the Tamiya Ducati 916. Besides the paint and different logos, there are three main differences between the 916 and 996 bikes:

- the 996 had a passenger seat and seat pegs, which the 916 did not.
- the wheels were a different spoke pattern on the 996, compared with the 916
- the front brake disks had a different design, but this was not incorporated into this model

The model was built pretty much out of the box, with the figure taken from a vinyl N2 Toys Trinity figure, from which a mold was made and resin pieces cast. Not a lot of extra detailing was done, partly due to the fact that you can't see the engine very well underneath the fairing.

Most of the details came from photographs taken from the Internet, as well as screen captures of the DVD version of the movie.

Build Notes:

These notes are organized into various components of the bike. The starting kit was the Tamiya 1/12 scale 14068 Ducati 916 model.

Frame/Bodywork:

There were only a couple of minor modifications done to the frame and bodywork. Since the 996 carries a passenger, footpegs and seat needed to be added.

The footpegs were built using styrene strip 0.5 mm (0.020") x 3.2 mm (0.125") and cutting the pegs from a second Ducati 916 kit.

There was a airflow duct on the rear part of the bodywork that was filled in with Tamiya polyester putty. After sanding and doing minor touch-ups, it was ready to accept a new seat. The seat was formed by first covering the bodywork with wax paper. Then Milliput putty was mixed and flattened out to about 2 mm thick. This was then spread over the bodywork and worked into shape. Once dry, quite a bit of sanding was done to shape the seat. The rider's seat had to be shortened to accommodate the new passenger seat. Both seats were painted acrylic semi gloss black shot through an airbrush.



Figure 1 Bodywork modifications



Figure 2 - Passenger footpegs



Figure 3 - Building the seats

Wheels and Tires:

The wheels and tires were taken from a Maisto Ducati 996 diecast model kit. The tires were slightly narrower than the ones in the Tamiya kit, but fit quite easily. The inner wheel hub of the rear wheel was ground down using a Dremel tool so that it did not stick

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out too far to the right. The front wheel hub needed to be made a bit wider with the addition of 0.5 mm (0.020") circular spacers made using a hole punch. Both wheels were left with no paint, as the gray finish looked to be a very good match to the actual bike wheels. The tires were sanded down to remove the mold line and valve stems were added using styrene rod (hex and round).

Suspension:

No modifications were done to the front forks or rear suspension. The rear suspension parts were painted as per the Tamiya instructions, with two exceptions:

- the rear spring was painted lemon yellow
- the shaft of the shock was covered in chrome foil.

The front fork was painted with Alclad chrome and burnt metal.

Engine and Drive Train:

The engine was built basically stock and painted as per the instructions. The Tamiya acrylic 'metallic' paints (X-10 gun metal, X-11 silver, X-12 gold, XF-16 aluminum and XF-56 metallic grey) seem to have very large-sized particles in them. This is quite noticeable when the paints are sprayed through an airbrush. This can give some interesting effects – like an unfinished aluminum engine case. However, choosing Alclad or Testors Metalizer paints gives a smoother finish.



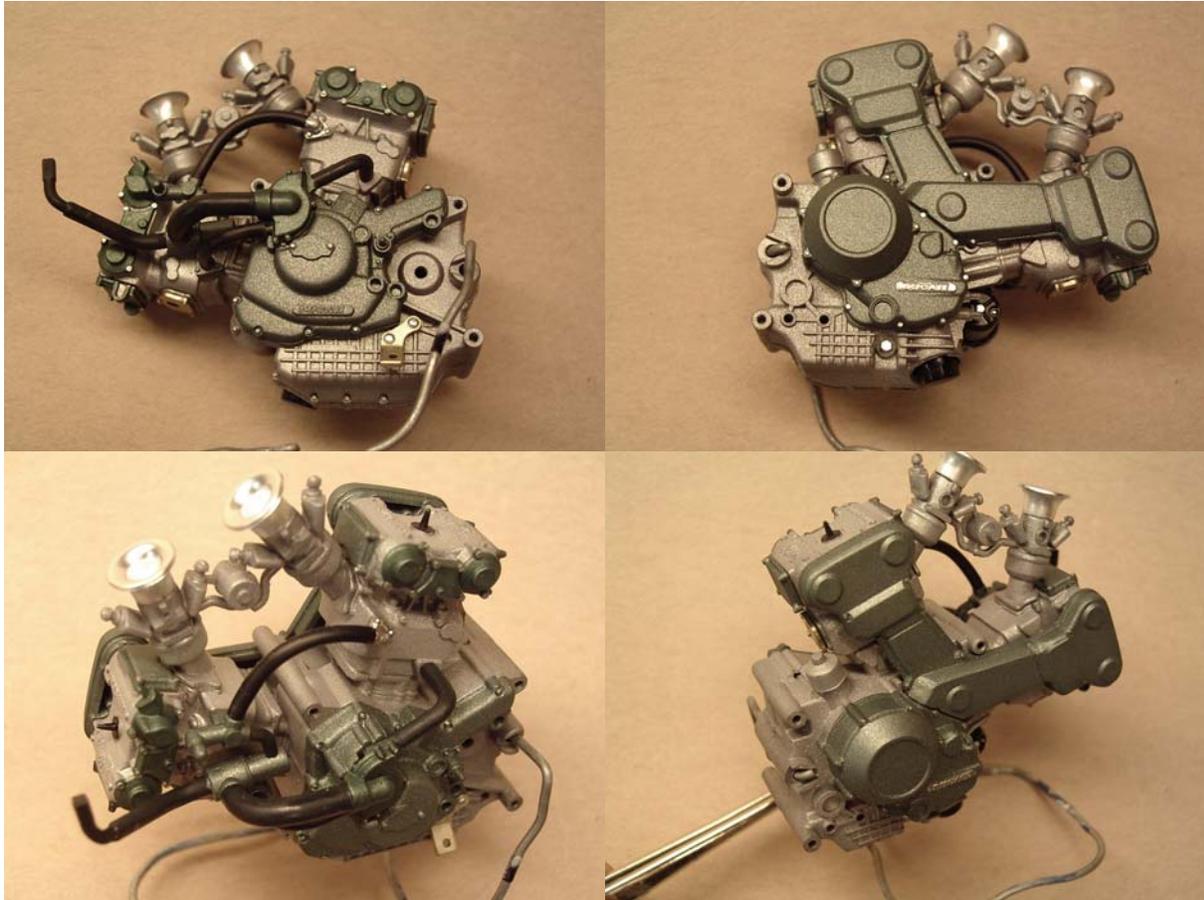


Figure 4 - Engine photos

It's such a shame to hide such a great looking engine under a fairing. The idea of a 'naked' version of this bike, exposing a well detailed engine, certainly seems appealing.

The exhaust pipe parts were all built together first, which differed from the instructions. Otherwise, there would be a noticeable joint showing on the left side of the model. The mounting bracket was then removed from the frame and was later attached with a 00-90 nut and bolt. Five exhaust springs were added to the pipes as per the photos found on the internet. The only one missing is the connection of the front cylinder pipe, because it can't be seen under the bodywork. The exhaust pipes were painted with Alclad burnt metal.

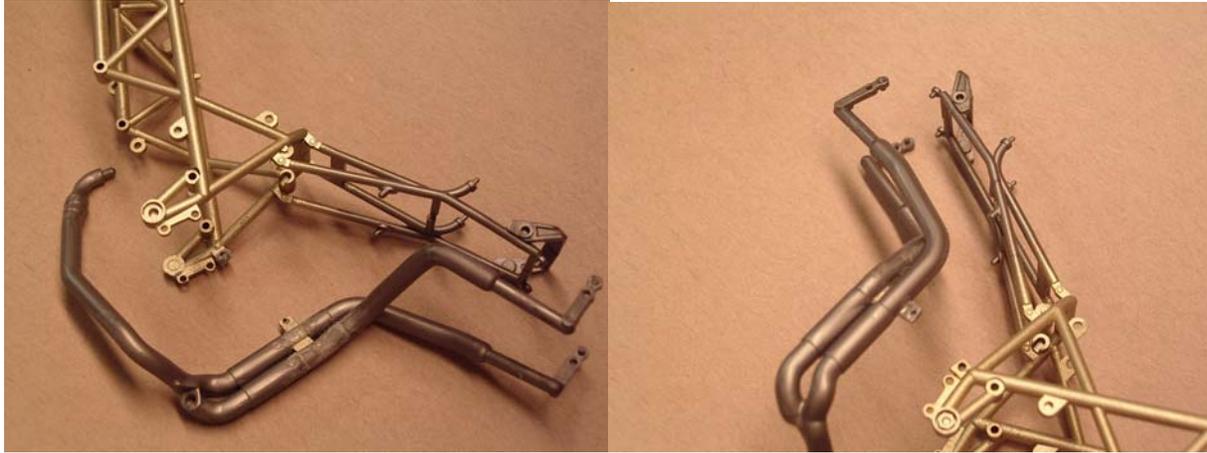


Figure 5 - Exhaust pipe assembly

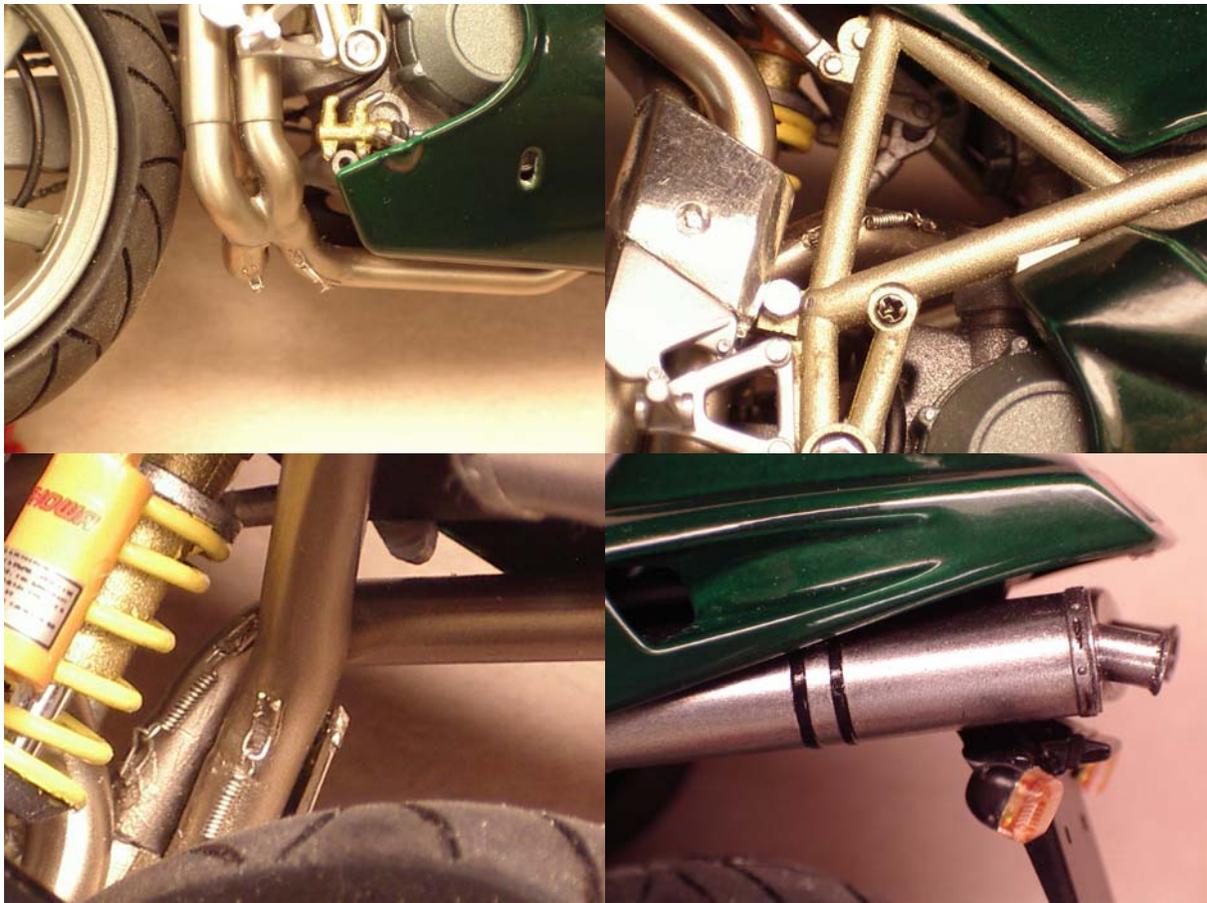


Figure 6 - Exhaust springs and muffler

The mufflers were also built differently than the instructions indicated. The two halves were first joined together. The mounting bracket was then cut from the exhaust pipe and forced into the muffler. This allowed the muffler to be sanded smooth and painted as one piece, instead of assembling with the pipes. The mufflers were painted with Alclad chrome and then Bare Metal Foil black chrome was used for the small clamps.

Other:

A piece of thin diameter tubing was split lengthwise to give a U-shaped piece. This was fitted on the front windscreen trailing edge and some microdrops of CA glue held it in place. It looks much more effective than trying to paint the edge of the windscreen.

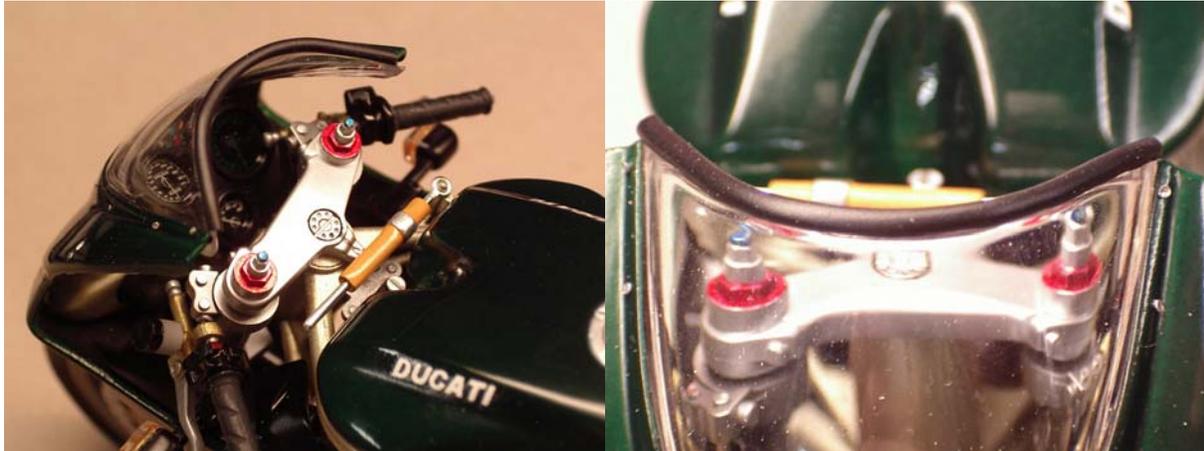


Figure 7 - Windscreen with vinyl edging

The rivets around the windscreen and on the joint in the fairing were made from adhesive backed aluminum tape using Jim Drew's mechanical pencil method.



Figure 8 - Rivets around windscreen

Trinity Figure:

N2 Toys made a Trinity action figure that was 6 inches in height, an almost perfect 1:12 scale. The arms, head and legs were soft vinyl, but the torso was hard plastic. The figure was originally intended to be standing. Since the figure had to be posed on the bike, copies of vinyl pieces were thought to be the best method of constructing her. A two part mold of the legs, head and arms were made. This yielded new resin legs and head. The arms proved more difficult, and the vinyl arms were used, with some modifications.

The right leg was cut at the knee and bent into the correct angle. The right arm was straightened by cutting at the elbow and inserting some styrene rod. Both arms were cut off at the forearm and twisted to a better position. The left ankle had a small pie section removed so that it could be bent and keep the foot flat on the ground. The head was repositioned on a new neck made of styrene rod.

The original figure had a vest, and Trinity had a leather jacket on during the motorcycle chase scenes. Tissue paper used for wrapping gifts was used to make the jacket. The paper was cut into shape for the front, back and both arms of the jacket. Thick white glue was used to drape the paper around the body. Thinned down glue was used in various spots to smooth down the seams. A collar was also added.

The joints and gaps were filled with Milliput, Tamiya Polyester putty and Tamiya putty, sanded and repaired a number of times. Trinity had slightly longer hair in the *Matrix Reloaded* movie and this was done using Milliput and scoring it with a number 10 blade.



Figure 9 - Original Trinity figure and cast pieces



Figure 10 - First stage of construction



Figure 11 - Second stage of construction

The figure was painted with Plasti-Kote white sandable primer a number of times, sanding minor imperfections each time. The final painting was three coats of Krylon gloss black. Since the jacket part was made of tissue paper and the hands of vinyl, the paint was absorbed and gave a matt/semi-gloss finish. The contrast with the very glossy pants and boots was an interesting combination and so it was left.

The face was painted with Tamiya acrylic flesh. Using techniques from one of our club members, Brian Wildfong, the face was detail painted with oils. The hair used a combination of dark brown and black oils as well.

Paint and Markings:

The body was primed with Tamiya sandable primer. This was followed by a number of coats (maybe 7) of Testors Colors by Boyd Dark Green metallic paint via a Badger 350 airbrush. This paint did not cover very well (maybe it was thinned too much) and there are a couple of spots where the paint pooled. However, you can see the metal flakes in the paint and they seem to be in scale. Two coats of Testors GlossCote were applied. The parts were then wet sanded with 3200 polishing pads and cloths, followed by Novus number 3, 2 and then 1 polishing liquids.

The white markings are dry transfer lettering and were made by All-Out Graphics of Vancouver BC from graphics file. The letters were first rubbed onto a clear decal sheet, covered with one coat of Krylon Crystal Clear and then added to the body.

A base was made of some MDF board, painted black on the edges. A *Matrix* screensaver program provided the image of the symbols scrolling down. This was printed out onto matt photo paper and glued to the base.



Figure 12 - Finished model