

2003 Dodge Viper SRT10 Design Keeps "Viperness;" Brings 21st Century Look to American Icon

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Ever since its launch in 1992, the Dodge Viper has generally been accepted to be the most iconic American car of its era, not in the least because of its design.

As the time came to redesign Viper, the project from the onset centered around keeping the vehicle's "Viperness," the brute and honest American power and style the vehicle oozes.

In fact, the 2003 Dodge Viper SRT10 started as a project to develop a true convertible top for the existing Dodge Viper RT/10 roadster. But when designers first found out they would need to stretch the wheelbase and then learned that more than 50 percent of the body panels would be new, the decision was made to develop a brand new car.

The all-new Viper was developed at the Chrysler Group Design Studios by a team of designers under direction of Trevor Creed, Senior Vice President - Design. Osamu Shikado had the lead on the final exterior design, while Ralph Gilles lead the interior design efforts.

Biography

Osamu Shikado, Design Manager, Advance Product Design

Credited with the exterior of both the 1998 Chrysler Chronos and 1999 Chrysler Citadel concept vehicles, Osamu Shikado debuted his first-ever, two-door car just two years ago. It was the 2000 Dodge Viper GTS/R concept car. At the same time Shikado was in the middle of the development of the 2003 Dodge Viper SRT10.

Osaka, Japan - born Shikado (47) has been with the Chrysler Group Design Studios since 1994. He is married, has two children and now holds the job of Design Manager in Chrysler Group's Advance Product Design Studio in Auburn Hills, Mich.

2003 Dodge Viper SRT10 Exterior Design,

as told by Osamu Shikado

"When I look at the original Viper, the most important design cues are the two massive elements which interlocked at the middle of the body. The original Viper has distinctive characteristics, but from some angles it looks cartoonish.

"I added some crease lines on the body surface. It is the strongest departure from the very rounded original one. My intention was to make it appear to have been sculpted out of solid metal, representing strength and power.

"To enhance the new Viper's muscular form, we gave the body a strong profile with higher belt line, dramatic side gill and a 'bump-up' rear fender shape.

"A lower hood incorporates a larger grille opening - boasting an even bolder version of the Dodge-signature cross-hair design - and adds integrated engine louvers for effective airflow in the engine compartment.

"The rear wheels were moved back 2.6 inches and the A-pillar was pulled three inches forward to allow for bigger doors and for improved ingress and egress.

"I like the rear three-quarter view. It looks like some kind of predator set to capture the prey."

The Design Process

"In the beginning, there were 20 or more designers involved in the sketching process. Six of the sketches were picked and turned into scale models.

"The sketches were picked two weeks after the assignment, so we quickly could look at scale models. After several weeks we debuted these to (then DaimlerChrysler Executive Vice President - Product Development and Design) Tom Gale and Trevor Creed. The decision was made to narrow down the themes to two full-size clay models which were fabricated into full-size fiberglass models.

"My model had an evolutionary Viper look, similar to what you see in the 2003 Dodge Viper SRT10. The other model still had 'Viperiness', but was a radical departure from the original Viper. Ultimately, we decided against this over-the-top change."

Aerodynamic Tuning

"We were challenged several times to change some design details for aerodynamics. We spent a lot of time in the DC-Auburn Hills wind tunnel with a 3/8-scale model. Next we took the full-scale model to a place near Stuttgart called FKFS (Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren Stuttgart) where they have a full-scale wind tunnel.

"We tried to figure out what was the best design for the floorpan, and also what the optimum rear decklid height was. We looked at several other elements, such as a separate rear spoiler and the diffuser on the rear fascia.

"The rear end is the thing we had to work on and change the most. The front of the body required very little tuning for engineering feasibility. For example, headlamps were packaged into a tight and very short front overhang. Also the rear fenders, rear decklid and rear fascia were optimized a couple of times for aerodynamic reasons such as the reduction of Cd (coefficient of drag) and the increase of downforce on the rear wheels.

"The reason we picked the FKFS wind tunnel is that it has a rolling road bed - a moving belt - so we could see the effect of aerodynamics on a driving vehicle. We could see the airflow over and under the body. We found out that the new aerodynamics were very effective, with a seven percent reduction in drag over the previous Viper roadster."

Biography

Ralph Gilles, Director of Design & Product Identification

Chrysler Group Design Studios Director of Design & Product Identification since 2001, Ralph Gilles is known for his work on the interior of the recently introduced 2002 Jeep® Liberty and concept vehicles such as the 1998 Dodge Intrepid ESX2, 1998 Jeep Jeepster and 2000 Dodge Viper GTS/R.

American-born Gilles (32) grew up in Montreal. He started at the Chrysler Group Design Studios in 1992, is married and has two children.

2003 Dodge Viper SRT10 Interior Design,

as told by Ralph Gilles

"The interior is all about the driver - a performance environment. There is a huge emphasis on knowing what the machine is doing, focusing on the tachometer. The other gauges are secondary. And we found space for a dead pedal.

"For me personally, simplicity was another point. I didn't want the interior to be too gimmicky. Just straightforward, with basic shapes.

"The overall impression when someone gets in the car is every bit as good as any of the other supercars in fit and finish. In addition, the interior is very authentic, very honest.

"There are now some authentic metal pieces in the interior. The ring around the shifter is a die-cast metal piece. The door pulls are real metal. And we have a lot of exposed hardware, which is true to the functional mission.

"The starter switch is an exception - it's tongue-in-cheek. We had it in the 2000 Viper GTS/R concept. And we said to ourselves, 'Wouldn't it be cool?' And it never went away. We kept showing it, and showing it. People talked about it: 'You're not really going to do that, are you?' We just never took it out. And low and behold, it got engineered and it's there. That was fun.

"Overall, the interior works, it's snug. It makes you feel contained. You feel like you're very secure in there. You can't

help but feel like this was built for you."

New Interior Design Features

"What's new about this interior is the overall quality. The tachometer has a different placement from past models and is the largest of all the gauges. That's something that we researched. The tachometer is the only thing that most performance-oriented people care about. On the track, the rest - such as the speed - is irrelevant. And with this much power on tap, revs are very important. Performance as a theme is reinforced by all the elements of the interior.

"Similar to the starter switch, it has been a dream of our team to put exposed precision fasteners in a vehicle. We're glad we got to do it in this new Viper. And they are all functional. Every single one of them is actually attached to something. They hold the bezel together. They are not molded-in plastic dummies.

"The carbon fiber surface on the steering wheel leather is cool, too. That's a great idea that Margaret (Hackstedde, Director - Color, Fabric and Mastering Design) had. We used it in the Dodge Charger concept car years ago. It kind of went unnoticed, but we thought it was a unique design feature, and couldn't wait to find a place to use it.

"There are myriad little design elements that surprise and delight. You'll sit in your new Viper and say 'Wow, look at that. Someone really thought about that.'"

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