



Jeep Hurricane Concept

Some Boys (and Girls)
Never Grow Up

by Richard Truesdell

Manufacturers like to tease the media by unveiling thrilling concepts, some of which will never see the light of day. Two exciting examples from DCX were the Dodge Tomahawk in 2003 (a Viper-powered motorcycle) and the Chrysler ME Four-Twelve supercar from last year. This year, it's Jeep's turn: the dual-Hemi-powered, four-wheel-steered Hurricane—a vehicle DaimlerChrysler hopes has every other OE engineer scratching his head and raises the off-road bar to new heights.

If one Hemi is good, two must be better, right? With one 5.7-liter engine at each end of the 151.8-inch Hurricane, with a combined 670 horsepower and 740 pound-feet of torque, this Jeep is



equipped to overcome any obstacle. With 16 cylinders of power on tap (able to move the Hurricane from zero to 60 in less than five seconds), Chrysler's Multi-Displacement System gives the driver the option of deactivating four, eight, or 12 cylinders, depending on need. (Current production 5.7-liter MDS engines deactivate four cylinders at a time; the ability to deactivate six out of eight cylinders indicates that an advanced form of MDS might be on the horizon). While no fuel-economy numbers were issued on the Hurricane, we'd expect them to be better than any other 16-cylinder, 600-plus-horsepower exotic on the market.

The Hurricane's power is delivered through a central transfer case, called the T-Box, to innovative split axles (combin-

ing the advantages of solid axles with those of an independent suspension) with a mechanically controlled four-wheel torque-distribution system. Suspension is a short/long-arm independent design front and rear, with 20 inches of suspension travel, controlled by coilover shocks with remote reservoirs. The rotational direction of each of the four prop shafts allows the Hurricane to apply downward force at each wheel for traction in any circumstance.

The Hurricane may stray from Jeep's traditional solid-axle setup, but purists probably won't complain about 14.3 inches of ground clearance, near-vertical approach/departure angles, and 37-inch tires.

Some sports cars claim that they can turn on a dime—the Hurricane goes one

better. With four-wheel steering, the Hurricane can turn within its own length of 151.8 inches. This is due to the unique skid-steer capability and toe steer: the ability to turn the front and rear tires inward. In addition, the vehicle features two modes of automated four-wheel steering. The first is traditional: the rear tires turn in the opposite direction of the front to reduce the turning circle. With the second, the vehicle can turn all four wheels in the same direction for nimble crablike steering. The vehicle can move sideways without changing the direction in which it's pointing.

While currently conceptual, the multimode four-wheel steering (for which DaimlerChrysler was awarded multiple patents) illustrates to off-road enthusiasts that Jeep's designers and engineers



are looking at ways to make Jeep SUVs more maneuverable, on and off-highway. With a new Wrangler on the horizon and Grand Cherokee attacking a more expensive part of the ultra-competitive SUV market, a new type of four-wheel steering might be a way for Jeep to differentiate either or both models from those of its direct competitors.

The Hurricane's innovative one-piece body is shaped of structural carbon fiber, meaning the body is the chassis, taking the place of a conventional frame. The suspension and powertrain are mounted directly to the body. Although this high-tech approach is unlikely, all current Jeeps, except the Wrangler, use a unitized body structure. To complete the package, an aluminum spine runs under the body to connect the underside and to act as a skidplate system, protecting the drivetrain from damage.

The interior offers the ultimate vantage point to survey terrain. A high central tunnel dominates the cockpit, with the transmission of each Hemi pointed at the other. This means the design and engineering team needed to be clever about efficient use of space. And they also had to make room for the T-Box case, which offers 1:1, 2:1, and 4:1 gearing ratios.

The interior details are what you'd expect to find in a multimillion-dollar concept vehicle. The exposed carbon-fiber accents are combined with Black Thunder and Titanium accents to give the Hurricane a high-tech look. Jewel-like gauges impart precision and minimalist ruggedness. About the only concession is the PDA-based satellite navigation system. If any element of the Hurricane is likely to make it to production, it's the interior.

At the Hurricane's premiere in Detroit, Jeep ran a video presentation showing children playing with a variety of mechanized toys. It seems that childhood imaginations were unleashed and exercised with the Hurricane—grownup kids combined the best mechanical hardware to create the ultimate 4x4. We can imagine traversing the Rubicon Trail in this vehicle and being asked, "Does that thing have a Hemi?" With a smile, we can say, "No. It has two." **TR**

Staying Focused

Although an extreme vehicle like the Hurricane will never roll down Jeep's Toledo production lines, it's clear Chrysler Group CEO Dieter Zetsche knows Jeep's place in the off-road hierarchy and intends to keep it there: "This vehicle is the ultimate proof of Jeep's absolute dominance off-road," he says. "Watching Hurricane in action, it's hard not to imagine all the potential applications, for the military, for extreme off-roading applications, and so much more. The fact is we will do whatever it takes to ensure that there's only one SUV at the top of the mountain." —R.T.

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Engine	Two 5.7L/325-hp Hemi engines
Transmission	5-speed automatic
Transfer case	Custom T-Box
T-Box gearing	1:1, 2:1, 4:1
Wheelbase, in	108.1
Length, in	151.8
Width, in	80.0
Height, in	68.2
Track, f/r, in	67.5/67.5
Overhang, f/r, in	25.0/18.7
Ground clearance, in	14.3
Approach/departure angles, deg	64.0/86.7
Breakover angle, deg	31.5
Weight, lb	3850 (est)
Suspension, f/r	Short- and long-arm independent/short- and long-arm independent
Tire size	305/70R20
Wheel size	20x10