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2006 Jeep® Grand Cherokee SRT8: The Quickest, Most Powerful Jeep Vehicle Ever

- With a 6.1-liter SRT HEMI® V-8, Jeep® Grand Cherokee SRT8 offers ultimate SUV performance
- 0-60 mph in less than 5 seconds — quicker than Porsche Cayenne Turbo, BMW X5
- Proven Jeep capability with SRT performance provides astonishing on-road and all-weather ability and power
- Jeep Grand Cherokee SRT8 — the first four-wheel-drive SRT vehicle, the first Jeep branded SRT vehicle

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Jeep® vehicles are known worldwide for their capability, utility and distinctive style.

The all-new 2006 Jeep Grand Cherokee SRT8 combines those qualities with Street and Racing Technology's (SRT) balanced approach to performance, resulting in the quickest, most powerful Jeep vehicle ever created, and the ultimate performance sport-utility vehicle.

"Jeep vehicles lead the way in capability, performance and versatility," said Jeff Bell, Vice President – Jeep, Chrysler Group. "The all-new 2006 Jeep Grand Cherokee SRT8 marries Jeep capability with SRT performance to create a vehicle that will leave in its dust competitors that cost twice as much."

Powered by a 6.1-liter HEMI® V-8 producing 420 horsepower (313 kW) and 420 lb.-ft. of torque (569 N•m), which adds 90 more horses and 25 percent more power than the 5.7-liter HEMI-equipped 2006 Jeep Grand Cherokee, the all-new 2006 Jeep Grand Cherokee SRT8's performance numbers include 0-60 mph in less than 5 seconds, 0-100-0 mph in the low 19-second range, and 60-0 mph braking distance of less than 125 feet.

"When we set out to create the quickest, most powerful Jeep vehicle ever, the 2006 Jeep Grand Cherokee presented us with an incredibly capable starting point," said Dan Knott, Director – Street and Racing Technology, Chrysler Group. "With an infusion of SRT DNA, the 2006 Jeep Grand Cherokee SRT8 is the new benchmark performance SUV. It has the raw power to outperform the Porsche Cayenne Turbo, while providing exceptional ride and handling, world-class braking, race-inspired interior appointments and functional, performance-oriented exterior enhancements."

Four-wheel-drive System

To create the first SRT vehicle with full-time four-wheel drive, SRT engineers developed a drive system that was lightweight, yet robust and reliable enough to handle massive amounts of horsepower and torque from the 2006 Jeep Grand Cherokee SRT8's powertrain. One part of the equation was to create a new transfer case, combining housing components from two existing units with the upgrades needed to make it SRT-capable.

SRT engineers opted to use the front half of a Jeep transfer case chosen for its capability and light weight. It was mated to the rear half of a heavier-duty case, chosen for its ruggedness and ability to house the electronic full-time four-wheel-drive system components. The transfer case output shaft was upgraded to handle high torque generated by the SRT 6.1-liter HEMI.

The result is the all-new 2006 Jeep Grand Cherokee SRT8's unique transfer case, which provides the necessary power-handling capabilities for the Jeep Grand Cherokee SRT8 while weighing 60 pounds less than a Jeep heavy-duty case.

Under normal driving conditions, five percent to 10 percent of torque is directed to the front wheels, but as much of

the 6.1-liter HEMI's torque as needed can be directed forward when additional traction or stability is required. Remaining torque is sent via a heavy-duty driveshaft designed for the European Jeep Grand Cherokee diesel model, to a Dana 44 rear differential upgraded with a larger ring gear within a new axle housing.

"We wanted acceleration characteristics that only four-wheel drive can provide," said Knott. "Our goal for the 2006 Jeep Grand Cherokee SRT8 was to have a well-balanced vehicle with a high fun-to-drive quotient. The SRT-developed electronic four-wheel-drive system is perfectly suited to this."

Powertrain

Providing horsepower and torque to the unique SRT four-wheel-drive system is a specially tuned version of the new 6.1-liter SRT HEMI engine. Inspired by the original family of HEMI engines, the SRT 6.1-liter HEMI employs the namesake hemispherical combustion chambers that provide power and efficiency, while retaining classic HEMI visual cues, including the orange-painted cylinder block and black valve covers.

SRT engineers who developed the Jeep Grand Cherokee SRT8's engine achieved more horsepower by adding more cubic inches, increasing the compression ratio, and redesigning the cylinder head, intake and exhaust systems for better flow and increased engine speed.

For more displacement, SRT engineers bored out the diameter of the cylinders in the HEMI by 3.5 millimeters each in order to increase the total displacement to 6.1 liters from 5.7 liters.

Compression ratio was also increased to 10.3:1 from 9.6:1, increasing engine efficiency and power.

Engine breathing was increased with new higher-flow cylinder heads, a specially designed intake manifold and fresh air induction system, and exhaust headers with individual tubes encased in a stainless steel shell. All are unique to the 6.1-liter HEMI engine. Larger-diameter valves and reshaped ports in the heads allow for maximized air flow. The intake manifold was designed with larger-diameter and shorter runners for higher-speed tuning. Exhaust is routed through a large-diameter (2.75-inch vs. 2.5-inch) exhaust system with four-inch chrome tips.

To further increase horsepower, performance-oriented camshaft profiles were developed to allow more air in and out of the cylinders, as well as manage a higher engine speed. SRT engineers increased the HEMI's peak power output engine speed nearly 20 percent to 6,000 revolutions per minute (rpm) from 5,000 rpm. Intake and exhaust valve stems are hollow, and the exhaust valve stems are filled with sodium to help dissipate heat more efficiently.

The high-performance SRT 6.1-liter HEMI is strengthened with redesigned components, including a reinforced engine block, forged steel crankshaft, high-strength powdered-metal connecting rods, floating-pin pistons (cooled by oil squirters), and an oil pan modified to manage oil return to the pan sump at high engine speeds.

Power from the SRT 6.1-liter HEMI is sent through a special torque converter to an SRT-upgraded five-speed automatic transmission. Torque is then sent to front and rear differentials through a specially designed transfer case.

Ride and Handling

The all-new 2006 Jeep Grand Cherokee SRT8 is endowed with the signature SRT characteristic of world-class ride and handling across a dynamic range.

Chassis setup is aimed at balanced performance with SRT-tuned dampers, unique sway bars and specially tailored spring rates and suspension bushings. New front suspension knuckles feature a camber angle calibrated for optimum suspension performance. The ride height of the 2006 Jeep Grand Cherokee SRT8 is one inch lower than the Jeep Grand Cherokee, which lowers aerodynamic drag, as well as the center of gravity, and contributes to the vehicle's stability and aggressive stance.

To meet or exceed handling and safety criteria, the Electronic Stability Program (ESP) was specially calibrated for the 2006 Jeep Grand Cherokee SRT8.

Further contributing to its aggressive stance, the all-new 2006 Jeep Grand Cherokee SRT8 is fitted with unique forged 20-inch five-spoke aluminum wheels shod with high-performance Goodyear W-rated four-season tires with run-flat capability. Tire dimensions are 255/45/20 in the front, and a massive 285/40/20 in the rear, which also contribute to the Jeep Grand Cherokee SRT8's stability.

With an optional hitch package available from Mopar, the all-new 2006 Jeep Grand Cherokee SRT8 is capable of

towing up to 3,500 pounds.

Braking

The braking system of the all-new 2006 Jeep Grand Cherokee SRT8 is designed to provide outstanding capability as a counterpoint to the vehicle's awesome launch and acceleration.

All four wheels feature four-piston performance brake calipers developed by Brembo, finished in gloss black. While braking, these calipers clamp down on 360 x 32 mm vented rotors up front, with 350 x 28 mm vented rotors in the rear.

Exterior

SRT's credo demands functional exterior enhancements that contribute to performance and resonate with the brand character. The all-new 2006 Jeep Grand Cherokee SRT8's lowered, aggressive stance shows its unmistakable Jeep identity endowed with SRT DNA.

An all-new front fascia makes use of aero improvements to reduce lift and drag, while providing sufficient air flow to cool the 6.1-liter HEMI engine. The front fascia also helps increase brake-system cooling through integrated air ducts.

In the rear, an all-new fascia incorporates an aggressive center cutout to accommodate dual four-inch exhaust tips.

Another functional enhancement is sill extensions, which help create downforce.

Three exterior colors are available: Bright Silver, Brilliant Black and Inferno Red.

Interior

The all-new 2006 Jeep Grand Cherokee SRT8 cabin is distinguished by power-adjustable, deeply sculpted performance front seats complete with uniquely patterned performance suede inserts to hold occupants during aggressive maneuvering.

Interior accents include a "carbon-fiber" technical finish on the leather-wrapped steering wheel, instrument-panel brow and shift knob, complemented by a "refined aluminum" finishing on the center stack, shifter and door-switch bezels.

Full instrumentation includes a 180-mph (300 kph) speedometer, tachometer and temperature gauges, all trimmed with a unique blue accent and located within a carbon fiber-trimmed binnacle. Oil pressure and temperature may be monitored through a specially configured display unit centrally located in the instrument panel.

Available options on the 2006 Jeep Grand Cherokee SRT8 include a DVD-based navigation system with turn-by-turn directions and voice prompts, SIRIUS Satellite Radio and a UConnect™ hands-free communication system with Bluetooth™ technology. This system recognizes up to seven different Bluetooth-equipped cellular phones and responds to voice commands, utilizing a microphone in the rearview mirror and the stereo system's speakers for hands-free conversations.

The all-new 2006 Jeep Grand Cherokee SRT8 interior is offered in Medium Slate.

The 2006 Jeep Grand Cherokee SRT8 is assembled at Jefferson North Assembly Plant in Detroit, Mich.

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