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# Rear-Wheel-Drive Architecture Combined with Technology Make Chrysler Group's Newest Vehicles Winners Year Round

Technology Gives the 2005 Chrysler 300 and Dodge Magnum Capability and Competence in Winter Driving Conditions without Compromising Comfort and Performance

March 8, 2004, Auburn Hills, Mich. -

#### **REAR-WHEEL-DRIVE SYSTEM**

Rear-wheel drive is standard on all 2005 Chrysler 300 and Dodge Magnum vehicles. Using rear-wheel-drive architecture for these vehicles gives them several advantages in the large-car market.

"Rear-wheel drive offers the best vehicle balance and handling, and a performance-car experience without any compromises in performance or luxury," said Eric Ridenour, Executive Vice President – Product Development, Chrysler Group. "It separates the steering and acceleration duties. This eliminates compromises and enables enhanced performance and handling."

Rear-wheel drive architecture allowed the design studio to significantly alter the overall profile of the vehicle for luxury and performance proportions. Most notable are a longer hood and front fenders, short front overhang, and improved ride, handling and impressive stance that comes with the tires pushed to the corners.

Advancements in technology in the last five years enables a rear-wheel-drive large car to perform with all-season capability. Electronic Stability Program (ESP), All-Speed Traction Control System (TCS), advanced Anti-Lock Brake Systems (ABS) and tire technologies have reached new levels of performance.

### ANTI-LOCK BRAKE SYSTEM (ABS) AND ALL-SPEED TRACTION CONTROL SYSTEM (TCS)

A combined Anti-Lock Brake System and All-Speed Traction Control System is standard with the 3.5- and 5.7-liter engines; it is optional with the 2.7-liter V-6. Chrysler 300 and Dodge Magnum are the first Chrysler Group vehicles to offer all-speed traction control.

ABS keeps the vehicle straight while retaining steering capability when braking on slippery surfaces by preventing wheel lock-up. It benefits from state-of-the-art electronics that provide faster system response than in the past.

All-Speed TCS enhances mobility and prevents wheel slip when accelerating on slippery surfaces. Depending on how slippery it is, an automatically activated "Winter Mode" feature will select lower transmission up-shift speeds on the five-speed automatic transmission. It also provides a measure of directional stability control – an advancement beyond prior traction control systems. Using the wheel-speed sensors, it can detect excessive yaw and help keep the car on the intended course as, for instance, when accelerating around a curve.

In addition to low traction braking situations, All-Speed TCS can use throttle control as well. This makes the vehicle less reliant on brake application alone to maintain traction, increases the operating speed range and more closely modulates speed, resulting in smoother operation. With All-Speed TCS reducing engine torque when accelerating, it is possible to achieve almost seamless torque application at the wheels. All-Speed TCS also benefits from state-of-the-art electronics that provide much faster system response than in the past.

## **ELECTRONIC STABILITY PROGRAM (ESP)**

Electronic Stability Program, which includes a Brake Assist feature, is standard on 3.5- and 5.7-liter engines. It is optional with the 2.7-liter V-6, and offered for the first time on a North American-built Chrysler Group automobile.

This system enhances driver control and helps maintain directional stability in turns, including uneven surface conditions and patchy snow, ice or gravel. If there's a discernible difference between what the driver asks through the steering and the vehicle's path, ESP applies selective braking and throttle input to put the car back onto the

driver's intended path.

The system is calibrated to offer safe control of the vehicle under a variety of conditions, and to operate in a manner that is not intrusive in normal or spirited driving.

#### **ALL-WHEEL-DRIVE SYSTEM**

All-wheel-drive provides the solution to those who require the best in passenger-car four-season traction. It is available with the 3.5-liter high-output engine, as well as the 5.7-liter HEMI V-8 engine.

The all-wheel-drive system adds a front differential and a transfer case compared to the rear-wheel drive configuration. The power is divided between the front and rear differentials and is transmitted to both axles at all times. The transfer case is a planetary center differential that delivers 62 percent of the engine torque to the rear axle and 38 percent to the front.

By driving continuously through all four wheels, the all-wheel-drive system provides excellent cornering balance under all driving conditions, and better traction in snow and wet-weather conditions. Combined with All-Speed TCS and ESP, performance and stability are outstanding under all traction conditions.

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