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## **New 2009 Chrysler Aspen HEMI® Hybrid and Dodge Durango HEMI Hybrid**

Chrysler LLC's First Production Hybrid Vehicles

- Hybrid fuel efficiency combined with full-size SUV performance, capability and utility
- HEMI® Hybrid delivers more than 25 percent overall fuel economy improvement
- Full-size SUVs boast nearly 40 percent fuel economy improvement in the city
- HEMI Hybrid features Chrysler's Multi-displacement System (MDS)

November 13, 2007, Auburn Hills, Mich. - Chrysler and Dodge are bursting onto the hybrid scene in a big way.

With the introduction of the new 2009 Chrysler Aspen HEMI® Hybrid and 2009 Dodge Durango HEMI Hybrid, Chrysler LLC delivers two hybrid-electric vehicles that combine fuel-efficient advanced-hybrid technology with full-size sport-utility vehicle (SUV) performance and capability.

"The new 2009 Chrysler Aspen and Dodge Durango HEMI Hybrid vehicles will offer our customers the sought-after blend of performance, utility, capability and vastly improved fuel economy — all in one package," said Frank Klegon, Executive Vice President – Product Development, Chrysler LLC. "Combined with Chrysler's Multi-displacement System (MDS), our advanced, two-mode hybrid technology immediately delivers a more than 25 percent fuel economy improvement to our full-size SUVs — and up to a 40 percent improvement in the city."

The 2009 Chrysler Aspen and Dodge Durango HEMI Hybrid vehicles are Chrysler's first entries in the hybrid market.

Capable of towing 6,000 lbs., the 2009 Chrysler Aspen and Dodge Durango HEMI Hybrid vehicles deliver 385 horsepower — seamless, dependable power and performance on demand, in an efficient package. With an electrically variable transmission (featuring the best characteristics of an automatic transmission and hybrid drive) and two different hybrid modes of operation, the drive system dramatically improves fuel economy around town and at highway speeds.

The new 5.7-liter HEMI Hybrid is expected to deliver an overall fuel economy improvement of more than 25 percent, including an improvement of nearly 40 percent in the city. For customers who desire the performance and capability of a large SUV, the Chrysler Aspen and Dodge Durango Hybrid vehicles will reduce fuel consumption by several hundreds of gallons of gas per year.

The renowned HEMI powerplant, in hybrid form, will continue to feature Chrysler's MDS, which allows the engine to seamlessly alternate between four-cylinder mode when less power is needed and V-8 mode when more power is in demand. The two-mode hybrid system provides assistance from electric motors allowing the HEMI V-8 to remain in four-cylinder mode more often than without a hybrid powertrain, improving overall fuel economy.

Built at the Newark Assembly Plant in Delaware, the new 2009 Chrysler Aspen and Dodge Durango HEMI Hybrid vehicles arrive in showrooms in mid-2008.

### **The Advanced Two-mode Hybrid System**

Chrysler's advanced, state-of-the-art two-mode full hybrid system — developed in partnership with General Motors, Mercedes-Benz and The BMW Group — integrates proven automatic-transmission technology with a patented hybrid-electric drive system to deliver the world's first two-mode full hybrid.

As a result of low- and high-speed electric continuously variable transmission (ECVT) modes, the system is defined as a "two-mode hybrid." In addition, the sophisticated fuel-saving system incorporates four fixed-gear ratios for high efficiency and power-handling capabilities. During the two ECVT modes, the system can use the electric motors for

acceleration, improving fuel economy, or for regenerative braking to utilize energy that would normally be lost during braking or deceleration. The energy is stored in the batteries for later use.

The system's two modes are optimized for city and highway driving.

In the first mode — at low speed and with light loads — the vehicle can operate in three ways:

- Electric power only
- Engine power only
- Any combination of engine and electric power

The two-mode hybrid provides all of the fuel-saving benefits of a full-hybrid system, including electric-only operation. In this mode, the engine is "shut off," with the vehicle moving under electric-only power at low speed. The result is a significant reduction in fuel consumption in heavy stop-and-go traffic.

The second mode is used primarily at highway speeds. In addition to electric assist, the second mode provides full power from the 5.7-liter HEMI® V-8 when conditions demand it, such as when passing, pulling a trailer or climbing a steep grade.

The two-mode programming integrates a host of technologies to improve efficiency, including Chrysler's patented Multi-displacement System (MDS), standard on the 5.7-liter HEMI V-8.

An elegantly complex design, the two-mode system also allows for more proliferate packaging via compact and powerful electric motors designed to fit within a conventional automatic transmission space—a clear efficiency advantage compared with today's typical single-mode systems that rely on much larger electric motors.

A sophisticated controller determines when the vehicle should operate in the first or second mode. Input from the controller determines the necessary torque for the driving conditions and sends a corresponding command to the engine and electric motors. The engine and electric motors transfer torque to a series of gears in the transmission, which multiply torque similar to a conventional automatic transmission to propel the vehicle. Unlike conventional continuously variable transmissions, however, the two-mode full hybrid's electrically controlled system uses no mechanical belts or bands. Shifts between the two modes are synchronous — meaning no engine speed changes are necessary for the mode shift to occur — resulting in seamless accelerations.

The 300-volt battery pack provides electric power for the system, and is designed to fit in the vehicle without compromising passenger space. A rectifier located under the vehicle's hood converts AC to DC, to power conventional 12-volt accessories, such as interior lighting, climate control and the audio system. The vehicle's internal-combustion engine efficiently maintains the battery pack.

### **Hybrid Development Center**

Located in Troy, Mich., the Hybrid Development Center (General Motors, Chrysler, Mercedes-Benz and The BMW Group) jointly developed the overall modular two-mode hybrid system and the individual components: electric motors, transmission, high-voltage battery, high-performance electronics, wiring, safety systems, energy management and hybrid-system control units. In addition, the Hybrid Development Center is responsible for system integration and project management.

### **Chrysler Aspen**

Chrysler Aspen is a premium SUV that offers elegant styling, premium amenities and innovative engineering with the room and capability of a sport-utility vehicle. Bigger than its full-size SUV competitors, yet smaller than large SUV competitors, Chrysler Aspen offers unique benefits as a luxury SUV in a class all its own.

Chrysler Aspen exudes styling elegance, with clean, angular front and rear fenders, rear doors and rear-quarter panels creating a seamless profile. Individual chromed "Chrysler" lettering adorns the bodyside on each of the front doors. Premium touches also include chromed accents on bodyside moldings, door handles, side mirrors and roof rack, as well as 18-inch chrome-clad aluminum wheels. Chrysler Aspen's broad, chromed grille is crowned by a sculpted hood, a signature of Chrysler vehicles.

Standard interior appointments include wood-accented door panels and instrument-panel center stack, air conditioning, overhead console with HomeLink® Universal Transceiver and Electronic Vehicle Information Center, front and rear LED lamps that can be individually aimed, MyGIG Entertainment System with navigation, floor console

with rear power accessory outlet, and 60/40 third-row bench seat.

Standard equipment also includes leather-trimmed bucket seats, eight-way power driver's seat with memory, four-way power passenger seat, heated front-row seats, and a second-row bench seat, providing seating for eight.

Chrysler Aspen rides on a torsionally stiff, hydroformed frame with an independent torsion-bar front suspension setup featuring rack-and-pinion steering that helps provide a smooth and quiet ride and precise handling. An isolated torsion bar crossmember helps minimize road noise. Suspension and steering are tuned to deliver optimum comfort and driveability.

In the rear is a unique suspension setup with coil springs and a solid rear axle that delivers durability and strength. A Watt's linkage system is fitted to the rear axle, centering the axle and reducing rear-end skate over rough surfaces. Standard safety features include Chrysler's exclusive Trailer Sway Control, Electronic Stability Program, Anti-lock Brake System and next-generation front air bags, ParkSense® Rear Park Assist System, ParkView™ Rear Back-up Camera System, Tire Pressure Monitoring System and three-row side-curtain air bags with roll sensing.

### **Dodge Durango**

Dodge Durango offers style, comfort, convenience and superior versatility in a real SUV, with three rows of seating and room for eight.

The Dodge Durango's styling is enhanced with a high beltline emphasizing its bold appearance, while short front and rear overhangs contribute to the vehicle's expression of concentrated power. Crisp angles and chiseled surfaces highlight a strong and confident front-end design. The Durango's signature crosshair grille stands out prominently, flanked by rectangular headlamps with dual-halogen bulbs wrapped around the corners of the fenders. The rear design of the Dodge Durango is marked by "afterburner" taillamps, and a chrome appliqué accentuating the rear liftgate.

Standard interior appointments include wood-accented door panels and instrument-panel center stack, air conditioning, overhead console with HomeLink® Universal Transceiver and Electronic Vehicle Information Center, front and rear LED lamps that can be individually aimed, MyGIG Entertainment System with navigation, floor console with rear power accessory outlet, and 60/40 third-row bench seat.

Standard equipment also includes leather-trimmed bucket seats, eight-way power driver's seat with memory, four-way power passenger seat, heated front-row seats, and a second-row bench seat, providing seating for eight.

Dodge Durango rides on a torsionally stiff, fully hydroformed frame with independent front suspension and rack-and-pinion steering, providing a turning radius of 37.5 ft. — shorter than a Honda Pilot. Suspension and steering are finely tuned to deliver superior ride and precise steering. Dodge Durango's rear suspension features coil springs and a solid rear axle secured with a Watt's linkage system, resulting in refined ride and handling characteristics.

Advanced safety and security features include standard Anti-lock Brake System (ABS), Electronic Stability Program with Electronic Roll Mitigation and Trailer Sway Control, side-curtain air bags for all three rows, ParkSense® Rear Park Assist System, Tire Pressure Monitoring system, Sentry Key® engine immobilizer, and ParkView™ Rear Back-up Camera System.

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