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## **All-new 2015 Jeep® Renegade Combines Best-in-class Off-road Capability with World-class On-road Driving Dynamics**

- Jeep® Renegade is the first to use the all-new “small-wide 4x4 architecture” for best-in-class off-road capability and superior on-road performance
- Designed for Trail Rated adventures, the small-wide 4x4 architecture features an all-new four-wheel independent suspension with up to 205 mm (8.1 inches) of wheel articulation and 220 mm (8.7 inches) of ground clearance
- Segment-exclusive Koni frequency selective damping (FSD) front strut and rear shock absorber system provides Renegade with world-class driving dynamics
- Precise electric power steering (EPS) combined with driving steering torque (DST) system improves handling and performance feel
- Advanced engineering and high-strength steel deliver exceptional interior quietness and crashworthiness

March 4, 2014, Auburn Hills, Mich. - Designed and engineered to deliver legendary Jeep® capability, the all-new 2015 Renegade is the first small SUV to use the all-new “small-wide 4x4 architecture.” With its fully independent suspension, Renegade raises the bar in the small SUV segment with best-in-class off-road capability, along with world-class on-road driving dynamics and passenger safety.

“First and foremost, we had to deliver a Jeep SUV, and to get there, we’ve engineered the all-new ‘small-wide 4x4 architecture’ to set benchmark levels of off-road capability in the small SUV segment,” said Phil Jansen, B/C-segment Vehicle Line Executive — Chrysler Group LLC. “Additionally, we designed the Renegade with superior driving dynamics, and integrated frequency selective damping shocks and a world-class brake system within our four-wheel independent suspension to deliver for on-road precision.”

### **All-new small-wide 4x4 architecture**

As the first vehicle to use the small-wide 4x4 architecture, the Jeep Renegade’s modular architecture means many models can be built using the same basic underpinnings. The result is better quality and reliability, less development time and improved tooling. The architecture that the Renegade is built on is comprised of common modular and interchangeable components, and allows for modularity of the wheelbase, front track, rear track, front overhang, and length and width across vehicle lines.

### **Designed for Trail Rated adventures**

With extensive use of advanced steels, composites and advanced computer-impact simulations, the all-new 2015 Jeep Renegade’s architecture delivers world-class torsional stiffness for optimum control of body geometry. For its passengers, the new architecture enables Jeep Renegade to deliver off-road durability and up to 205 mm (8.1 inches) of rear wheel articulation and 220 mm (8.7 inches) of ground clearance – all while feeling tighter and stiffer, with an added sense of confidence and control during high speed on-road maneuvers.

As the first vehicle to use the small-wide 4x4 architecture, the Jeep Renegade is designed to be competitive in all aspects of crashworthiness in the small SUV segment. Designed and engineered for government regulations and third-party ratings around the world, this five-passenger Jeep is capable of achieving results at the top of its class.

## **Rigid body structure**

The 2015 Jeep Renegade features a unibody structure based on the all-new small-wide 4x4 architecture, with the upper body structure and frame engineered as a single unit for a stiff and more mass-efficient structure.

Jeep Renegade's rigid foundation can be credited to the extensive use of high-strength steel and liberal use of structural adhesives. This new small SUV utilizes approximately 70 percent high-strength steel for maximizing vehicle dynamics and crash performance while optimizing weight efficiency – the first Jeep SUV to use high-strength steel to this extent.

For additional weight and strength optimization, Jeep Renegade features an aluminum hood, front-cross beam and hybrid rear crash box.

One of the most notable body structure features is the application of advance high-strength and “hot-stamped” steels in the upper- and under-body, A- and B-pillars, front header, sills and rails. Combined, these structural attributes enable the Jeep Renegade aid in roof strength, as well as enhanced visibility via thinner pillar sections.

Enhanced chassis-to-body structure interfaces, including suspension brackets and cradle attachments, are designed to ensure high stiffness at those points and minimize low-frequency noise into the cabin. Additionally, this rigid body structure enabled engineers to dial-in the Jeep Renegade's chassis tuning. The overall result is Jeep Renegade's solid, confident and refined feel on the road or trail.

## **Go anywhere Jeep capability with on-road performance**

To deliver best-in-class off-road performance with the dynamics and comfort expected in a world-class small SUV, the all-new 2015 Jeep Renegade features a MacPherson front-suspension design with exceptional rigidity for up to 170 mm (6.7 inches) of articulation, increased cornering performance and reduced weight. A specially designed front cross member serves two roles by providing rigidity to achieve greater acoustic comfort and to integrate a third-load line to improve energy absorption in the event of a crash. A new innovation is the adoption of a “split” type shock absorber mounting that transmits road vibrations to the body structure through two different routes for improved acoustics and better efficiency of the shock absorber.

Designed to dampen unwanted harshness into the cabin, and help handle up to 100 percent of the driveline's torque to any single rear wheel when necessary, the Renegade's chassis architecture features an isolated rear cradle. Additionally, the rear cradle provides the attachment points for Jeep Renegade's lightweight Chapman suspension design's two lateral links and half-shafts. With its high-mounted strut-type shock absorbers and coil springs, this rear suspension design enables Jeep Renegade to maximize spring rates, improve its roll-steer for on-road performance and offer up to 205 mm (8.1 inches) of rear-wheel articulation for off-road adventures.

## **Premium Koni frequency selective damping system**

The all-new 2015 Renegade is the first Jeep to integrate Koni's frequency selective damping (FSD) front strut and rear shock absorber system. This damping system enables the Jeep Renegade to deliver world-class road-holding and handling characteristics. In addition, the Koni FSD system actively filters out high-frequency suspension inputs from uneven road surfaces and adjusts for comfort and smoothness while maintaining excellent ride control.

## **Advanced electric power steering system**

The 2015 Jeep Renegade features precise steering thanks to its electric power steering (EPS) and driving steering torque (DST) systems that improve both handling and performance.

The all-new Jeep Renegade features an advanced steering-column-mounted EPS system. The vehicle utilizes the latest EPS system technology available, which delivers sporty handling by managing significant loads at all steering wheel operating speeds, power assist curves modulated according to driving conditions, and up to a 3 percent improvement in fuel efficiency, when compared with a conventional hydraulic system. All of the power boost, or assist, is provided via an electric motor, and because the system is fully electronic, the driver experiences optimal steering effort at all vehicle speeds with improved fuel efficiency, since there is no parasitic loss from a power steering pump.

The all-new Jeep Renegade's DST system improves both driving safety and handling performance by actively carrying out corrections and automatically controls oversteer over surfaces with low grip in all driving conditions. Moreover, the steering system is fully integrated with the vehicle's electronic stability control (ESC) system to help

compensate in split-traction, torque steer and pull-drift (crowned road) situations.

#### **Quiet interior environment**

For the all-new 2015 Jeep Renegade to deliver a quiet interior cabin, engineers maximized the vehicle's structural design and tuned the interior environment for sound quality and sound level by isolating powertrain, wind and road noise.

This city-friendly sized Jeep features a noise, vibration and harshness (NVH) package that includes laminated acoustic windshield glass, body-cavity silencing foam, under-flush rolled-framed doors with triple seals and acoustic wheel-well liners to absorb road noise and quiet the cabin. Combined, these design improvements provide the Renegade with world-class interior sound quality.

#### **Customer-focused vehicle development**

The all-new 2015 Jeep Renegade was developed and engineered to exceed expectations for customer satisfaction, quality and reliability. Jeep Renegade's engineers used Design for Six Sigma (DFSS) to ensure the voice of the customer was captured during the vehicle development process. DFSS folds in voice of the customer data along with lessons learned to ensure every vehicle is of the highest quality possible.

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