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2014 Ram ProMaster: Built on a Proven Platform with Best-in-class Fuel Economy, Cargo Capacity and Payload

- New 2014 Ram ProMaster van developed from the successful, long-standing Fiat Ducato: 30-plus years of reliable service and more than 4.5 million units sold
- Exceptional cargo capability, durability, a unique front-wheel-drive system and outstanding uptime
- Ram ProMaster is a purpose-built, highly customizable van designed to exceed the demands of commercial customers
- ProMaster best-in-class features — fuel economy, cargo capacity, payload, total cost of ownership, turning radius, interior ceiling height and step-in height

September 7, 2013, Auburn Hills, Mich. - The new 2014 Ram ProMaster comes from a strong background of successful cargo vans and chassis cab trucks produced by Fiat Professional. The new ProMaster is based on the Fiat Ducato, which has been in production for more than 30 years, with 2 million of the 4.5 million units sold still on the road today. ProMaster boasts numerous best-in-class features that will be appreciated by the hard-working customers of Ram's new van. Best-in-class fuel efficiency, cargo capacity, usability and, of course, total cost of ownership all combine to deliver an internationally respected and proven solution for businesses and fleets.

"Ram ProMaster is the qualified evolution of a van, delivering high efficiency and capability with low total cost of ownership," said Mike Cairns, Chief Engineer — Ram Truck, Chrysler Group LLC. "An exclusive and proven front-wheel-drive system, low step-in height and best-in-class cargo and payload capacity come together in a van which reflects a textbook mixture of engineering and commercial demand for the segment."

Designed for the North American market

The Fiat Ducato is a one of the world's most well-known and respected vans, but the North American customer differs from other markets. Conceived and developed in Italy, Ram's new van also spent quality time proving itself on this side of the Atlantic undergoing extensive, extreme-duty testing to prepare for its North American debut as the Ram ProMaster. Engineering the new ProMaster for the Ram Truck brand required a number of changes:

- Rougher roads and maximum payload handling objectives have led to specific reengineering of the chassis. The Ram ProMaster suspension features a unique tuning compared with its European counterpart with more aggressive shock tuning and improved braking performance. Also, additional corrosion protection is added for harsh environments, including salted roads
- The new ProMaster defeats extreme weather with improved heating and air-conditioning systems to keep the operator comfortable
- On the safety and security front, ProMaster features additional safety and security engineering, resulting in compliance of North American safety standards
- New powertrains and U.S. emission standards required a change in packaging and control systems
- The North American customer has different expectations for interior space, storage and usability. Adjustments to everything from cup holders to connectivity are made to meet or exceed those expectationsThe 2014 Ram ProMaster is equipped with a new front grille and lighting system, making it uniquely Ram Truck

Chassis

Frame

The 2014 ProMaster is available in two roof heights, three wheelbases, and four body lengths. Additionally, the

ProMaster offers both a chassis cab and cutaway from the factory.

The 2014 Ram ProMaster features a unibody frame architecture, making it significantly lighter than the competition. As a result, the ProMaster boasts an impressive payload capacity of 5,145 pounds and a maximum towing capacity up to 5,100 pounds. The gross combined weight rating (GCWR) for the 3.6-liter V-6 is 11,500 pounds and 12,500 pounds for the 3.0-liter I-4 diesel.

Unibody structural advantages:

- Frame rails ensure stiffness, stability and strength from front to rear, thanks to a fully boxed, welded construction
- A total of up to eight cross members in the integrated frame behind the cab ensure structural "ladder-frame" integrity, enhanced torsion stiffness, and long-term durability
- A welded-in-place floor panel – integrated with the rails and cross members – adds to structural stability and reduces weight
- A reinforced plenum area contributes lateral stiffness in the front portion of the vehicle and optimized engine packaging
- All components are joined via advanced welding techniques at all interfaces and reinforced with structural adhesives at strategic locations
- Enables optimal and "truer" tuning of chassis systems and related hardware when compared to more common body-on-frame applications

The cargo van application is a unibody design with an integrated reinforced sub-frame that extends the length of the van. The chassis cab model integrates the same unibody structure but stops at the back of the cab. A ladder bar frame extends to the rear of the vehicle, allowing for a variety of upfitter solutions. The ProMaster's integral construction – which includes upper and lower front cross members for enhanced lateral stiffness in the forward portion of the vehicle – is the primary enabler for providing a heightened sense of solidity, stability and confident road manners. It also enables optimal tuning of chassis systems and related hardware when compared to more common body-on-frame applications, thanks to inherently superior suspension component attachment points. Both the cargo van and chassis cab frame assemblies use high-strength steel, offering a significant weight reduction – contributing to efficiency and greater payload capacity as well as packaging advantages.

Suspension

Five suspension levels are available, each specifically tuned to meet the ride and handling characteristics of their class. Levels are determined by body model and gross vehicle weight. The ProMaster rear suspension incorporates a beam axle and Hotchkiss leaf spring system. The beam axle/leaf spring is unique in the marketplace. It's lighter, simpler and hard working. A tubular axle configuration ensures long-term quality, reliability and durability due to robust construction and little or no required maintenance (as opposed to a rear-drive differential). Position-dependent dampers take advantage of weight distribution and contribute to a best-in-class 21-inch step-in height. The front suspension features a proven and durable double A-arm, McPherson strut system. Large diameter (62 mm) twin-tube shocks at all four corners are tuned for harsh roads, commercial duty cycles and to support a best-in-class payload of 5,000 pounds (chassis cab) while maneuvering in traffic.

Brakes

Stopping power is handled by the segment's largest four-wheel disc brakes, and 16-inch rotors are standard front and rear. High-performance Brembo dual-piston calipers work with stability control and provide the clamping power at all four wheels. Advanced electronic lining wear sensors will notify the driver (via an icon in the cluster) when pad replacement is imminent. Additionally, a larger pad-to-disc swept area, combined with thicker linings results in unsurpassed pad life, durability, lower related maintenance costs and enhanced up-time qualities.

Steering

The 2014 Ram ProMaster features best in class curb-to-curb turning radius via a precise, hydraulic rack-and-pinion steering system. Ram ProMaster offers a turning diameter of 36 feet, comparable to a medium-size four-door sedan. The best-in-class turning diameter contributes to impressive maneuverability, useful in tight driving environments. The steering system also reduces driver fatigue with variable assist capability, further enhancing its maneuver-friendly traits, providing more power at low speeds and less power at high speeds for improved comfort and handling. Additionally, a unique steering gear enables packaging with low complexity for enhanced quality, reliability and dependability.

Front-wheel drive

The unibody system under the cab is an enabler for the ProMaster's segment exclusive front-wheel-drive system. The body-integral construction and multiple configurations allow Ram's new 2014 ProMaster to be upfitted for virtually every conceivable job. Without rear driveshafts or rear differentials, the proven drive system creates a number of advantages:

- Best-in-class fuel economy
- Best-in-class cargo capacity
- Best-in-class step-in height and lowest load floor
- Best-in-class standard ceiling height
- Lower maintenance costs

Ram Truck's new full-size van is the product of nearly 2,000 unique tests in the lab and real world conditions to punish the body, chassis and powertrain. The ProMaster features 10-year corrosion protection and has undergone durability testing in severe climate extremes of negative 40 degrees F on the icy roads of Sweden to 125 degrees F in the deserts of Nevada. Severe roads, aggressive driving and maximum payloads were used to imitate grueling drive cycles.

Cargo area

Thanks to its unique front-drive system, body-integral construction and the multiple configurations offered, Ram's new 2014 ProMaster can be upfitted for virtually every conceivable commercial need. Proportionally, the ProMaster brings a new standard to the large commercial van-based segment. The ProMaster is available in two roof heights – 90 or 101 inches with best-in-class standard roof height – and the most vertically oriented sidewalls in the cargo van category (nearly 90 degrees in relation to the cargo compartment floor). The cargo area also features the widest overall body width (82.7 inches) regardless of configuration. Both result in best-in-class cargo volume of 530 cubic feet. Also, enabled by an exclusive front-drive layout, the ProMaster delivers best-in-class step-in-height of 21 inches and the widest area between rear wheel wells. Lower and more vertical means more cargo space, efficient shelf space, wider center aisle in the cargo compartment, large side and rear door openings, and easy ingress and egress for users who are likely carrying something into or out of the vehicle.

All ProMaster configurations can be equipped with an array of floor finishes, including a resin-finished wooden load floor, painted floor or rubber mat. Side walls are available in painted and lower and/or upper composite finished side walls. Additionally, cargo vans have an optional cargo partition with window, segregating the cargo and cab. Ram's new full-size van features unsurpassed cargo floor of 105, 123, 146 or 160 inches, depending on configuration.

Additionally up to 17 cargo tie-down rings are available, depending on model. More configuration opportunities exist since the ProMaster roof structure is capable of carrying 400 pounds. Three roof-rail mounts per side and structurally integrated tapping plates assist for mounting roof racks.

The ProMaster features a standard sliding door on passenger side with optional sliding door on driver's side. The sliding door openings are based on roof height – 49 inch x 60 inch for the low roof model and 49 inch x 70 inch for high roof models. In the rear, an available two-position rear clamshell door swings open 180-degrees or 260-degrees, folding almost flat to the side of the van. Standard height rear doors measure 62 inch x 60 inch, high-roof doors measure 62 inch x 70 inch. All three door openings enable fork lift pallet loading and unloading, and spaciousness that leads the competitive set. Window applications also are available in the side sliding doors, rear quarter panels and rear doors.

Upfitter friendliness

Ram is well-known for being the most up-fitter-friendly brand in the truck market. The Ram ProMaster builds on that reputation and features an integrated cab configuration for unmatched up-fitter/conversion solutions. Adding to the ProMaster's design for adaptability, virtually all primary vehicle systems are packaged forward of the cargo area.

An upfitter interface block offers 15 outputs accessing 40 feature operations, if so equipped, and provides a secure gateway to select vehicle electrical systems. The feature enhances total cost of ownership and quality operation of upfit systems and components. The interface block is essentially the onboard power center between the factory and upfitters. This connection point can be easily accessed through a removable hatch in the interior B-pillar area.

Three-button key fobs for remote vehicle access include a three-button layout for locking all vehicle doors, unlocking all vehicle doors, and unlocking the side sliding and rear cargo doors.

To retain power, a battery-saver system provides automatic shutoff of all interior lighting after 15 minutes.

Low-rolling-resistance tires

The 2014 Ram ProMaster features 16 x 6-inch wheels with 225/75R16C all-season, low-rolling-resistance tires to minimize wasted energy and decrease required rolling effort. Tread patterns, advanced materials and millions of miles of testing result in greater fuel efficiency. A tire-pressure monitoring system includes pressure-sensor modules within the valve stems of all four road wheels and sends continuous radio-frequency signals to a receiver to inform the driver when tire pressure is too low.

Electronic stability control

The standard electronic stability control (ESC) system on the new Ram ProMaster is a sophisticated four-channel (independent control to all four corners of the vehicle) active handling system that links the vehicle's dynamic control systems to assist the driver in maintaining control under demanding or adverse conditions such as wet, snow-covered or icy roads, tight turns and evasive maneuvers.

In effect, the ESC determines the driver's intentions and optimizes overall vehicle control to keep the dynamic forces within select limits in any driving situation – nearly transparent so control seems almost intuitive.

ESC primarily integrates the anti-lock braking system (ABS) and traction-control systems to control all four corners of the vehicle in response to yaw and in relation to steering input. The system's algorithm determines when to activate the system based on data from an array of sensors: wheel speed, yaw rate, lateral acceleration, master cylinder pressure, steering-wheel angle and vehicle velocity.

Should the driver exceed the performance limits of the road surface or start to oversteer or understeer, the system instantly analyzes input from the sensors and corrects the pending loss of control by applying any one, several or all of the corner brakes to adjust the yaw rate, keeping the vehicle headed in the direction the driver intended.

The ESC system has been calibrated for each model's horsepower and torque. The system can be turned off via a button located on the center console. Elements of the system include (but are not limited to):

- Ready Alert Braking (RAB) — Anticipates situations when driver may initiate emergency stop; uses ESC pump to set brake pads against rotors to decrease time required for full brake application
- Brake assist — Applies maximum braking power, minimizing stopping distances in emergency braking situations
- Brake-lock differential system (BLDS) — Allows truck to maintain forward motion if one or two wheels lose traction by selectively and aggressively applying brakes to the spinning wheels
- Hydraulic Boost Compensation (HBC) — Senses if there's a failure in the vacuum brake booster or related lines. If a failure is detected, the brake controller will run the ABS pump full-time and brakes will perform as normal until serviced
- Trailer-sway control — Reduces trailer sway and improves handling while exposed to crosswinds or other adverse towing conditions; system monitors vehicle's movement relative to driver's intended path and activates brakes accordingly, counteracting sway induced by trailer and otherwise managing momentum
- Hill-start Assist (HSA) — Automatically holds the truck to avoid rollback when starting on an incline; maintains braking long enough for driver to reposition foot from brake pedal to accelerator
- Drift compensation technology — Detects road conditions, such as a crowned road surface or crosswinds, and adjusts the steering system to help the driver compensate for pulling and drifting
- Rollover Mitigation — Determines when a vehicle is experiencing extreme lateral tire force and activates (via selected braking forces at the corners of the vehicle) to reduce these forces and reduce the chance of rollover events
- Automatic brake lamp actuation — Senses emergency brake situations earlier than humanly possible (via brake pedal sensing and steering angle positioning) and actuates/flashes the tail lamps

Best practices

The Ram ProMaster test fleet has accumulated millions of miles, enabling the Ram Truck and Fiat teams access to

real-world data. This includes testing done in laboratories in Turin, Italy and Auburn Hills, Mich., at Fiat and Chrysler Group proving grounds, as well as reliability testing on public roads in many different climates in Europe and the United States.

The 3/36 Reliability Testing, appropriately named as each test car accumulates 36,000 miles (equivalent to three years of use) in about three months, is conducted day and night by teams of drivers. To reflect typical daily driver scenarios, the test drivers do not originate from the engineering ranks and are intentionally chosen from diverse backgrounds to represent customers of different ages, sizes and ethnicities. The test drivers scrutinize all the customer functional aspects of each vehicle as well as overall driving evaluations. This includes radio and navigation system checks, seat-belt buckling, heating and ventilation operation and opening and closing storage compartments and windows.

Quality was a key consideration for the planning of each manufacturing work station and operator, which includes more than 1,900 quality controls on the assembly line. Similar to investments at other Fiat and Chrysler Group plants launching all-new products, the Saltillo Van Assembly plant houses a high-tech Metrology Center. The Metrology Center allows engineers and technicians to find the sources of build variation – even when the components appear perfect to the naked eye – and resolve any fit and finish issues before customer vehicles are built.

Manufacturing

The 2014 Ram ProMaster is built at the Saltillo Van Assembly Plant in Saltillo, Mexico.

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