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# 2019 Ram Chassis Cab Delivers Segment's First Offering of Active Safety and Security Features

- 2019 Ram Chassis Cabs include 100 standard and optional active and passive safety features
- In the chassis cab segment, only the 2019 Ram Chassis Cab offers active safety systems, including adaptive cruise control, Forward Collision Warning, automatic emergency braking (AEB) and AEB with trailer brakes available on all trim levels
- Class-exclusive ParkSense Park Assist system provides visual and audible indications of the distance between stationary objects and the front and rear of the truck
- New class-exclusive 270-degree camera system with trailer reverse-guidance view gives greater field of vision
- Class-exclusive cargo-view camera allows owners to monitor the upfit and/or payload in the rear of the truck and aids hookup with fifth-wheel and gooseneck hitches
- Class-exclusive trailer reverse-guidance view provides a single display-screen view of both sides of an upfit
  and/or trailer to assist drivers while maneuvering in Reverse
- Class-leading Vehicle System Interface Module (VSIM) is capable of communicating between aftermarket modules and truck control modules on more than 70 inputs and outputs
- New trailer Tire Pressure Monitoring Systems (TPMS) accommodate up to six truck tires and 12 trailer tires with up to four trailer profiles
- New selectable tire-fill alert allows owner to check tire pressures and apply custom settings with audible alert once selected pressure is achieved
- Class-exclusive auxiliary, remote exterior camera improves visibility with custom positioning in and around
  upfits
- Class-leading advanced LED head lamp systems with Adaptive Front-lighting System (AFS), new Bi-LED headlamps and new Quad-LED projector headlamps for segment-leading light spread, pattern consistency, distance and more lumens
- · Exclusive automatic high-beam system adjusts to oncoming traffic to deliver maximum lighting
- New mirror-mounted rear spotlights help guide the Ram Chassis Cab when backing trailers in the dark and segment-leading power convex trailer-tow mirrors provide additional convenience and increase rearward field of vision

February 7, 2019, Auburn Hills, Mich. - Safety is an increasingly important factor in commercial truck purchases as businesses strive to protect their employees and investments while avoiding liability. The new 2019 Ram Chassis Cab is the only truck in the segment to offer an array of active AND passive systems to assist the driver and passengers. In the cab chassis segment, only the 2019 Ram Chassis Cab features active adaptive cruise control (ACC), Forward Collision Warning, automatic emergency braking (AEB) and AEB with trailer brakes available on all trim levels. Additional safety and security systems are geared toward a truck that will spend most of its life at the maximum duty cycle.

Many of the technologies are enhanced, making the 2019 Ram Chassis Cab the most technologically advanced in the segment. For example, a remote camera can be custom-located to view a specific area around an upfit. The new 2019 Chassis Cab also can monitor up to six tires on the truck plus trailer tire pressure monitoring for up to 12 trailer

tires. A class-leading Vehicle System Interface Module (VSIM) is capable of communicating between aftermarket modules and truck control modules on more than 70 inputs and outputs, including lighting controls, door position, and throttle and transmission position.

The new Ram Chassis Cab uses a variety of high-strength steels in the frame, body panels and core structure to maximize impact performance and reduce overall weight, including the A-, B- and C-pillars, front structure and door beams. Increased resistance spot welds reduce the heat exposure to surrounding metal to maintain strength and long-term durability.

#### Safety and Security Features on 2019 Ram Chassis Cab

- Automatic Emergency Braking (AEB): Monitors the closing distance and speed of objects in front when
  moving forward and objects in the rear when reversing. If the driver does not make an attempt to slow or
  stop on approach of objects, AEB intervenes and brings the truck and trailer to a stop
- Automatic Emergency Braking (AEB) for trailer brakes: The trailer brake controller functions with the ACC system to support vehicle and trailer operation, automatically applying the truck brakes and trailer brakes, while delivering selectable audible and visual warnings
- 3. Adaptive Cruise Control (ACC) with Stop: Helps maintain a driver-adjustable distance between the vehicle and the one in front of it, and can bring the vehicle to a controlled stop and momentarily hold it there. This system works by decreasing the vehicle's pre-set cruise-control speed when closing in on another vehicle in the same lane or when another vehicle moves into the same lane, including full-stop with truck and trailer brakes. ACC will accelerate the vehicle back to the pre-set rate once the vehicle in front speeds up or moves into another lane, including full stop with truck and trailer brakes
- 4. Adaptive Front-lighting System (AFS): Automatically directs headlamps in the planned direction the vehicle is traveling using steering wheel input to point light around turns, driveways and work sites
- Advanced Brake Assist: If inadequate force is applied to brakes in response to signal from Full-speed Forward Collision Warning-Plus, Advanced Brake Assist increases brake force automatically
- 6. All-speed traction control system: Part of the standard anti-lock brake system, helps keep driving wheels from spinning during acceleration from a stop or during all speeds by applying individual brakes alone or in combination with engine-torque limitation to prevent wheel slip
- Anti-lock brake system (ABS): Senses and prevents wheel lockup, offering improved steering control under extreme braking and/or slippery conditions
- 8. Anti-lock brake system with rough-road detection: Anti-lock brake system detects when the vehicle is driving on a rough road by the oscillations in the wheel-speed signals. When rough road is detected on off-road surfaces or trails, ABS enters a different pressure control where it will hold the brake pressure for longer pulses
- Auxiliary remote camera: The new Ram Chassis Cab also features an exclusive remote camera option
  to be placed in a location that best serves the operator can be installed on upfit or in and around
  trailers
- 10. **Backup camera:** Provides rear view off the rear of the vehicle in Reverse, plus the image can be accessed anytime through the Uconnect system
- 11. Brake assist: In an emergency brake situation, the system applies maximum braking power, minimizing the stopping distance
- 12. **Brake-throttle override:** Allows driver to stop the vehicle when throttle and brake inputs occur simultaneously; electronic throttle control reduces engine-power output until vehicle stops or pedal inputs

- Brake/park interlock: Prevents the transmission from being shifted out of Park unless the brake pedal is pushed
- 14. **Brake Traction Control System (BTCS):** Helps to keep driving wheels from spinning during acceleration from a stop or during slow speeds by applying individual brakes to the slipping wheel(s)
- Diesel Smart Exhaust Brake: Monitors driver input and applies the exhaust brake at a variable rate to maintain downhill speed
- 16. Electronic brake-force distribution: Assists the driver to optimize stopping distances and control under all vehicle loading conditions by regulating braking pressure front-to-rear
- 17. **Electronic Roll Mitigation (ERM):** An extension of Electronic Stability Control (ESC). Uses input from ESC sensors to anticipate if the vehicle is at risk of entering a potential roll situation, then applies the brakes individually and modulates the throttle position as needed
- 18. **Electronic Stability Control (ESC):** Enhances driver control and helps maintain directional stability under all conditions. Provides the benefit in critical driving situations, such as turns, and is valuable when driving on mixed-surface conditions, including snow, ice or gravel. If there is a discernible difference between driver input through the steering wheel and the vehicle's path, ESC applies selective braking and throttle input to guide the vehicle back onto the driver's intended path. The system is fully compatible with all compliant upfit weights and has automatic load sensing
- Anti-spin rear differential: In low-traction conditions, automatically transfers torque to the rear wheel with traction
- 20. Forward Collision Warning Plus: Utilizes radar and video sensors to detect whether the vehicle is approaching another vehicle or large obstacle in its path too rapidly, and warns or assists the driver in avoiding/mitigating the incident
- 21. **Hill Start Assist (HSA):** Assists drivers when starting a vehicle from a stop on a hill by maintaining the level of brake pressure applied for a short period of time after the driver's foot is removed from the brake pedal. If throttle is not applied within a short period of time after the driver's foot is removed from the brake pedal, brake pressure will be released
- 22. **ParkSense park assist:** The system utilizes ultrasonic sensors at low speeds to detect stationary objects in the front or rear. The system provides audio and visual feedback to the driver
- 23. Rain brake support: Uses the ESC pump to occasionally push brake pads lightly against brake rotors in rainy conditions to keep rotors dry
- 24. **Ready Alert Braking (RAB):** Anticipates situations when the driver may initiate an emergency brake stop and uses the ESC pump to set brake pads against rotors to decrease the time required for full brake application
- 25. 270-degree Camera: Uses three cameras positioned around the vehicle to provide a bird's-eye perspective of the vehicle and its immediate surroundings. Driver can also select views, including front, CHMSL camera, trailer reverse-guidance view or back camera view
- 26. Speed Limiter: Allows fleet operators to pre-set speed limit maximums on each truck
- 27. **Shut-down timer:** 5-minute auto shut down timer option reduces risk of unintended operation and saves fuel when vehicle is left at idle

- 28. Trailer Sway Control (TSC): Reduces trailer sway and improves handling in adverse towing conditions caused by crosswinds and traffic. The system monitors the vehicle's movement relative to the driver's intended path, then applies alternating brake pressure to slow the vehicle and then increases the pressure on one front wheel to counteract the sway induced by the trailer
- 29. **Trailer reverse-guidance view:** Provides a single display screen view of both sides of a trailer and helps drivers more safely tow, park and maneuver their long or short towing setups
- 30. **Upgraded mirror-mounted rear spotlights:** Provide improved visibility for nighttime trailer maneuvers or alongside the upfit
- 31. Class-exclusive power convex trailer-tow mirrors: Provide driver-adjusted convenience, increase rearward field of vision and feature memory return
- 32. **Vehicle System Interface Module (VSIM):** Class-leading system capable of communicating between aftermarket modules and truck control modules on more than 70 inputs and outputs, including lighting controls, door position, and throttle and transmission position

## **OCCUPANT RESTRAINT TECHNOLOGY**

- 1. Advanced multistage air bags: Inflate with a force appropriate to the severity of the impact
- Full-length side-curtain air bags: Extend protection to all outboard front- and rear-seat passengers.
   Each side air bag has its own impact sensor that autonomously triggers the air bag on the side where an impact occurs. This type of air bag is housed in the headliner just above side windows (3500 10k model)
- 3. **BeltAlert:** Activates a chime and/or illuminates an icon in the instrument cluster to remind the driver and front passenger to buckle up if a vehicle is driven without belted front-seat occupants
- Child seat anchor system: LATCH (Lower Anchors and Tethers for CHildren) designed to ease installation of compatible aftermarket child seats
- Front-passenger knee blockers: Located below the instrument panel, the knee blocker deploys when the air bag deploys and is designed to properly position the occupant during impact and offer additional lower leg protection
- Four-way head restraints: Designed to reduce injuries by minimizing gap between occupant's head and the head restraint
- Front seat-belt adaptive/active load limiters: Designed to optimize the chest loading in an impact event
- Front seat-belt pretensioners: During a collision, impact sensors initiate front seat-belt pretensioners to remove slack in the seat-belt system, thereby reducing the forward movement of the occupant's head and torso (3500 10k model)
- 9. Front-seat-mounted side pelvic thorax air bags: Provide enhanced protection to the driver and front outboard passenger in certain impacts. Each side air bag has its own impact sensor that autonomously triggers the air bag on the side where an impact occurs. Standard side air bags are housed within the outboard side of each front seat (3500 10k model only)
- 10. **Height-adjustable seat belts (front row):** Outboard seat belts feature height adjustment, allowing for the seat belt to be placed in the optimal position for any driver or passenger
- 11. Occupant Restraint Controller: Detects an impact and determines the severity of a crash

 Three-point seat belts: All three front seating positions and all three rear seating positions include lap and shoulder belts

#### STRUCTURAL SYSTEMS

- Energy-absorbing steering column: The manual-adjust steering column utilizes two hydroformed coaxial tubes that can move relative to each other to allow the column to move forward for enhanced energy absorption during a crash
- Energy management system: Three front load paths designed from high-strength steel help maintain structural integrity and minimize cabin intrusion
- 3. **Crumple zones:** Specially formed structural members that crumple and absorb energy in a collision, helping protect the occupant cabin
- Laminated glass: Plastic sandwiched between glass panes to provide added protection against breakins and acoustic benefits
- 5. **Safety cage body structure:** Protects occupants by managing and controlling energy in the event of an impact
- Side guard door beams: Reinforcement beams inside the doors that increase occupant protection in a side collision

## LIGHTING AND VISIBILITY SYSTEMS

- Active turn signals: Turn signal flashes three times when stalk is depressed for one second to indicate
  a lane change
- Auto-dimming rearview mirror: Auto-dimming mirror automatically reduces glare from bright light in the rearview mirror at night for a clearer view of the road ahead
- Automatic defog: Enables the Automatic Temperature Control (ATC) system to measure humidity inside
  the vehicle and provide a fog-free windshield automatically without driver intervention
- 4. **Automatic headlamps:** Headlamps turn on and off automatically depending on exterior light levels and when the windshield wipers are turned on or off
- Automatic high-beam headlamps: Headlamp system adjusts to oncoming traffic to deliver maximum lighting
- Center high-mount stop lamp: Illuminates when brakes are applied; makes the vehicle more visible in traffic
- Daytime Running Lamps (DRL): Lights that illuminate during daytime conditions, increasing the vehicle's visibility to other drivers
- 8. Enhanced Accident Response System (EARS): Makes it easier for emergency personnel to see and reach occupants in the event of an accident by turning on the interior lighting and unlocking doors after air bag deployment. Also shuts off flow of fuel to the engine
- 9. Heated side-view mirrors: Prevents buildup of snow or ice on side-view mirrors to maintain visibility
- 10. **LED bi-functional projector headlamps:** Provide twice the lumens when compared to previous headlamps and more controlled illumination for increased visibility

- 11. **LED fog lamps:** Provide improved illumination during inclement weather
- 12. LED taillamps: Provide improved illumination at the rear of the vehicle
- 13. **LED clearance lamps:** Help to outline the truck by providing illumination from the top of the cab and identify potential strike zones in low light conditions
- 14. Lit Signature forward lighting: Both mid and premium LED head lamps have "lit signature" elements along the top and bottom of the headlamps. The recognizable signature remains on during normal operation while the twin projectors (low and high beams) only come on at dusk/evening
- 15. **Rain-sensing wipers:** A driver convenience feature that automatically senses moisture on the windshield and activates wipers
- 16. **Supplemental turn signals:** Signal lamps built into the housing of exterior mirrors allow turn signals to be viewed from the front, sides and rear of the vehicle to alert oncoming traffic and pedestrians
- 17. **Rear-window electric defrost:** Automatically activates with remote start when ambient temperature is below prescribed threshold

#### **EMERGENCY CONNECTIVITY AND OTHER SAFETY AND SECURITY FEATURES**

- 1. **9-1-1 Call/Assist Call:** Rear-view mirror-mounted buttons for emergency services, roadside assistance, Uconnect Customer Care and non-collision related emergencies
- 2. Auto-reverse windows: The window automatically reverses when it senses an obstruction during closing
- 3. **Backup Alarm:** All Chassis Cabs offer a backup alarm system that provides audible feedback (steady alternating beep) when the vehicle is in Reverse
- Child-protection rear door locks: Disables the rear doors' inside release handle by adjusting a small lever on the door-shut face
- 5. Dual-note electric horn: Produces two different tones at the same time, to cut through ambient noise
- 6. **Driver Information Display (DID):** Provides the driver with trip, temperature, tire pressure and other vehicle information within the instrument cluster
- 7. **Express up/down windows:** One-touch powered express up/down window button located on the front driver and passenger-side doors
- 8. Global Position Sensor (GPS): Used for navigation guidance and electronic vehicle tracking
- Intelligent Battery Sensor (IBS): Continually measures flow of current into and out of battery; if battery
  is running low, system shuts off less-critical electrical systems to conserve power; icon in cluster denotes
  activation
- 10. Keyless Enter 'n Go: When an individual enters the vehicle, electronic sensors detect if the vehicle key fob is present. The vehicle will then allow the individual to push a button to start the vehicle without having to insert the key into the ignition
- 11. Mopar Electronic Vehicle Tracking System (EVTS): State-of-the-art GPS-enabled stolen vehicle recovery system. EVTS includes nationwide tracking including 24/7 emergency service dispatch, security fence, arrival/departure notification, excessive speed notification and trace maps of past locations (in selected markets)

- 12. **Remote keyless entry:** Locks and unlocks doors and turns on interior lamps. If the vehicle is equipped with a security alarm, the remote also arms and disarms that system
- 13. Remote start: Conveniently starts the engine by using the key fob while maintaining vehicle security
- 14. Security alarm: Deters vandalism and theft, frequently lowering insurance premiums. System protects the vehicle from theft by monitoring door-ajar switches and the ignition circuit for unauthorized entry
- 15. Selectable tire pressure: Allows the operator to choose from a range of tire pressure depending on the duty (reduced pressures for low speed off-road or increased pressures for high capability)
- 16. Sentry Key engine immobilizer: Utilizes an engine key that has an embedded transponder with a preprogrammed security code to discourage vehicle theft. When the ignition button is pressed, the controller sends a random number to the transponder and the engine is allowed to start. If an incorrect key is used, the vehicle will not respond to ignition change requests
- 17. **Siri Eyes Free:** Allows the user to use voice recognition to command a compatible Apple device without taking the hands off the wheel
- 18. SiriusXM Traffic: Works with the vehicle's navigation system to display traffic speed and flow information, along with accident information to assist drivers in routing around congested areas
- SiriusXM Travel Link: Real-time local fuel prices, weather conditions, sports scores and movie locations and times all featured in this subscription-based system provided by SiriusXM Radio
- Speed-sensitive door locks: System automatically locks doors when vehicle acceleration reaches prescribed threshold
- 21. **Thin Film Transistor (TFT) instrument cluster display:** Offers drivers a wide range of customization options, from a basic analog readout to a full digital display that clearly communicates vehicle information with easy-to-understand icons
- 22. **Tilt steering column:** Allows steering column to tilt toward or away from the driver to achieve a comfortable driving position
- 23. **Tire-fill alert:** When adding air pressure to tires, a new tire-fill alert system chirps the horn once you have reached the selected pressure
- 24. Tire Pressure Monitoring (TPM) system: Monitors up to six tires on the Ram Chassis Cab
- 25. **Trailer tire-pressure display:** Monitors up to 12 trailer tires and provides warning when pressure drops. Tire-pressure monitoring system also self-learns tire position after rotation or tire is moved to a new location
- Uconnect Access mobile hot spot: Turns vehicle into mobile internet hot spot; available to registered Uconnect Access subscribers
- 27. **Uconnect Access remote services:** Enables registered Uconnect Access subscribers with compatible cell phones to lock or unlock their vehicles or activate panic alarm; can also activate remote start
- 28. **Uconnect Access voice-to-text:** Enables cloud-based text-message dictation via compatible Bluetooth enabled cell phones; available to registered Uconnect Access subscribers
- 29. **Uconnect Access Stolen Vehicle Location Assistance:** Leverages GPS data-sending capability to help authorities find stolen vehicles

- 30. **Uconnect Drag and Drop menu bar:** Drivers can drag vehicle function buttons and move them to their Uconnect system's main menu bar for easier access
- 31. **Uconnect Voice Command with Bluetooth:** Voice-recognition technology enables handsfree navigation system inputs and the use of Bluetooth enabled phones while keeping drivers' hands on the wheel and eyes on the road
- 32. **Universal garage door opener:** Programmable radio frequency codes for garage door, security gate and security lighting
- 33. **Voltage monitoring idle up:** When the vehicle senses low battery voltage, the engine idle automatically increases to maintain appropriate voltage

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