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New 2021 Ram 1500 TRX Offers More Than 100 Safety and Security Features

- New Head-up Display (HUD) debuts on a Ram truck with a full-color unit that provides the driver with up to five different areas of interest
- 360-degree Surround View Camera with bird's-eye perspective of vehicle and its surroundings, including forward, side and rear views, independently or split screen
- Digital rearview mirror is available on Ram 1500 TRX and improves driver rearward visibility
- Adaptive Cruise Control with Stop, Go and Hold maintains distance between the vehicle and the one in front of it; can bring vehicle to a controlled stop under certain circumstances and return to set speed when traffic clears
- Ram TRX offers Blind-spot Monitoring, including easy-to-use trailer coverage
- Full-speed Forward Collision Warning-Plus warns the driver if impact appears imminent and assists with driver response by deploying brakes
- Ready Alert Braking and Trailer-sway Dampening control available
- LaneSense Lane Departure Warning-Plus leverages electronic power steering (EPS) by delivering a torque input to alert and assist the driver with corrective action
- Full LED Adaptive Front-lighting System (AFS) includes twin bi-functional projector headlamps, fog lamps and taillamps
- ParkSense Parallel/Perpendicular Park Assist uses ultrasonic sensors to guide driver into parking spaces
- Hill-start Assist aids drivers when starting a vehicle from a stop on a hill
- Ram TRX offers the largest brakes in the segment at 15 inches
- Adaptive Bi-LED projector headlamps provide improved range of up to 150 additional lumens
- Ram TRX includes six air bags, including full-cab side-curtain and seat-mounted side
- Core body structure includes 54-percent high-strength steel

August 17, 2020, Auburn Hills, Mich. - Safety and security were primary drivers in the development of the new 2021 Ram 1500 TRX, which offers more than 100 available active and passive safety and security features. Standard features include ParkView rear backup camera with dynamic grid lines, electronic stability control (ESC) with electronic roll mitigation and six standard air bags. Available features include Blind-spot Monitoring, adaptive cruise control and Ready Alert Braking.

Driver warning and assist, chassis control and brake systems

Available systems featuring ultrasonic, radar, camera and other technologies combine to offer the driver 360-degree awareness and, when circumstances dictate, course-correction assistance:

- **Adaptive Cruise Control (ACC) with Stop, Go and Hold:** Helps maintain driver-adjustable distance between the vehicle and the one in front of it; can bring vehicle to controlled stop and hold it there; system works by decreasing vehicle's pre-set cruise-control speed when closing in on another vehicle in same lane or when another vehicle moves into same lane; ACC will accelerate vehicle back to the pre-set rate once vehicle in front speeds up or moves into another lane
- **Adaptive Front-lighting System (AFS):** Uses steering wheel inputs to point headlamps in direction of travel

- **Advance Brake Assist:** If inadequate force is applied to brakes in response to signal from Full-speed Forward Collision Warning-Plus, Advance Brake Assist increases brake force automatically
- **All-speed traction control system:** Works with standard anti-lock brake system; helps prevent wheel slip during acceleration by applying individual brakes alone or in combination with engine torque limitation
- **Anti-lock brake system (ABS):** Senses and prevents wheel lockup, offering improved steering control under extreme braking and/or slippery conditions
- **Anti-lock brake system (ABS) with rough-road detection:** Detects rough roads by oscillations in wheel speed signals; when detected on off-road surfaces or trails, ABS function is altered to hold brake pressure for longer pulses
- **Anti-spin differential:** Creates a limited amount of differentiation between rear wheels to provide additional traction in low-speed, low-traction conditions
- **Blind-spot Monitoring (BSM):** Notifies driver of vehicle(s) in their blind spot via illuminated icons in the side-view mirror; BSM also includes easy-to-use trailer coverage
- **Brake assist:** In an emergency braking situation, system applies maximum braking power to help minimize stopping distance
- **Brake traction-control system (BTCS):** Helps keep drive wheels from spinning during acceleration from a stop or during slow speeds by applying brakes to slipping wheel(s)
- **Brake/park interlock:** Prevents transmission from being shifted out of "Park" unless brake pedal is pushed
- **Brakes (front):** Largest in segment – 15 inches – to optimize stopping performance
- **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 until accelerator-pedal inputs cease
- **Electric parking brake (EPB):** Uses parking brake switch mounted in instrument panel, a motor on caliper (MoC) at each rear wheel and electronic control module; modes of operation – static apply and release, dynamic apply, drive-away release and safe hold
- **Electronic brake-force distribution:** Assists driver to optimize stopping distances and control under various vehicle loading conditions by regulating braking pressure, front to rear
- **Electronic locking axle:** Locks both rear wheels to the driveline to provide maximum traction in low-speed, low-traction conditions
- **Electronic roll mitigation (ERM):** An extension of electronic stability control (ESC); uses input from ESC sensors to anticipate if vehicle is at risk of entering potential roll situation; if situation detected, system applies brakes individually and modulates throttle input position, as needed
- **Electronic stability control (ESC):** Enhances driver control and helps maintain directional stability under various conditions; benefits critical driving situations such as turns; helpful also when driving on mixed surface conditions, including snow, ice or gravel; disparity between steering inputs and vehicle's path will trigger selective braking and throttle pullback to help driver guide vehicle back to its intended path
- **Frequency Response Damping (FRD):** New shock design features two-valve system to properly adjust wheel movement according to road input; two valves afford additional tuning to help maintain contact between tires and surface under rough conditions
- **Full-speed Forward Collision Warning-Plus:** Uses radar and video sensors; if conditions for certain frontal impacts are detected, system warns or assists the driver in avoiding/mitigating collision
- **Hill-start Assist (HSA):** Assists drivers when starting a vehicle from a stop on a hill by maintaining brake pressure applied for a short period after driver's foot is removed from brake pedal; if throttle is not applied within that short period, brake pressure will be released
- **LaneSense Lane Departure Warning-Plus:** Leverages electronic power steering (EPS) to deliver torque input to steering wheel, alerting and assisting driver with corrective action
- **ParkSense Parallel/Perpendicular Park Assist:** Ultrasonic parking sensors on bumper guide driver into parking space; system automatically controls steering-wheel angle while driver controls gear position, brake and accelerator; parallel parking possible on either side of vehicle by selecting direction with turn signals; for perpendicular parking, vehicle backs itself into space
- **ParkSense park assist with reverse stop:** Uses ultrasonic sensors at low speeds to detect stationary objects while in reverse; system provides haptic feedback to driver, applying brake before releasing if collision deemed imminent; at speeds below 4 mph, system will bring vehicle to a stop before releasing; forward system uses ultrasonic sensors at low speeds to detect stationary objects in front of vehicle

- **ParkView rear backup camera:** Provides wide-angle view of area immediately behind vehicle with zoom-in capability, offering driver greater peace of mind before reversing at low speeds; display features dynamic grid lines to aid driver when maneuvering into parking spaces or narrow areas; image displayed on navigation screen when reverse gear selected
- **Rain brake support:** Uses the ESC pump to occasionally push brake pads lightly against brake rotors to help keep them dry in rainy conditions
- **Ready Alert Braking (RAB):** Anticipates certain situations when driver may initiate an emergency braking maneuver and uses the ESC pump to set brake pads against rotors, decreasing time required for full brake application
- **Rear Cross Path (RCP) detection:** Warns drivers of traffic when backing out of parking spaces; activated when vehicle is put in Reverse; driver is alerted to vehicle(s) crossing behind with an audible chime and illuminated icons on the side-view mirrors
- **SafeHold:** Automatically applies electric parking brake if driver's door is opened without shifting into Park and when other potential inadvertent movement conditions are met
- **Surround View Camera:** Uses four cameras positioned around the vehicle to provide bird's-eye perspective of vehicle and its immediate surroundings; driver can also select other views, including front or rear cross path
- **Trailer-sway control (TSC):** Reduces trailer sway and improves handling in adverse towing conditions caused by crosswinds and traffic; system monitors vehicle's movement relative to driver's intended path, then applies alternating brake pressure to slow vehicle, increasing pressure on one front wheel to counteract sway induced by trailer

Occupant restraint technology:

- **Advanced multi-stage air bags:** Inflate with forces appropriate to severity of impact; meet FMVSS 208 advanced air bag requirements for smaller, out-of-position occupants
- **BeltAlert:** Activates a chime and/or illuminates an icon in the instrument cluster to remind 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
- **Constant-force retractors (CFR):** Regulate force exerted on occupants by seat belts and then gradually releases seat-belt webbing in controlled manner
- **Driver-side knee blocker:** Located below instrument panel, it deploys when driver air bag deploys; designed to properly position driver during impact and offer additional lower-leg protection
- **Four-way head restraints:** Designed to reduce injuries by minimizing gap between occupant's head and head restraint
- **Front seat-belt adaptive/active load limiters:** Designed to optimize chest-loading when an impact occurs
- **Front seat-belt pretensioners:** During a collision, impact sensors initiate front seat-belt pretensioners to remove slack in the seat belt system, thereby reducing forward movement of occupant's head and torso
- **Front seat-mounted side pelvic-thorax air bags:** Help provide enhanced protection to driver and front outboard occupant in certain impacts; each side air bag has its own impact sensor that autonomously deploys the device on the side where an impact occurs; housed within outboard side of each front seat
- **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; housed in headliner, just above side windows
- **Height-adjustable seat belts (front row):** Outboard seat belts offer height adjustment, enabling optimal positioning based on occupant stature
- **Occupant Restraint Controller:** Detects impact and determines whether a crash is severe enough to warrant air bag deployment, and whether primary or secondary stage inflation is required; the controller further determines whether side-curtain and side seat-mounted (thorax protection) air bags should deploy; manages engagement of front seat-belt pretensioners
- **Passenger-side knee blocker:** Located below the instrument panel, deploys when passenger air bag deploys and is designed to properly position occupant during impact and offer additional lower-leg protection
- **Three-point seat belts:** All three front seating positions and all three rear seating positions include lap

and shoulder belts (Quad and Crew cabs)

Structural systems:

- **Energy management system:** Three front load-paths constructed with high-strength steel help maintain structural integrity and minimize cabin intrusion
- **Energy-absorbing steering column:** Manual-adjust steering column uses two hydroformed coaxial tubes that can move relative to each other for enhanced energy absorption during a crash
- **Exclusive splayed frame rails:** Patented technology creates efficient energy-absorbing front frame rail structure for frontal impact modes
- **Front and rear crumple zones:** Specially formed structural members that crumple to absorb energy in a collision, helping protect the occupant cabin
- **Laminated glass:** Plastic sandwiched between glass panes to provide added protection against break-ins
- **Safety cage body structure:** Helps protect occupants by managing and controlling energy in event of an impact
- **Side-guard door beams:** Reinforcement beams inside doors increase occupant protection in a side collision
- **Tire blockers:** Frame-mounted high-strength steel tire blockers placed at front cab location to redirect tires outbound in a front-offset impact

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
- **Automatic defog:** Enables automatic temperature control (ATC) system to measure humidity inside the vehicle and accommodate a fog-free windshield without driver intervention
- **Automatic headlamps:** Headlamps turn on and off automatically depending on exterior light levels and activation/deactivation of windshield wipers
- **Automatic high-beam headlamps:** Automatically adjusts headlamp settings according to oncoming traffic
- **Center high-mount stop lamp:** Illuminates when brakes are applied; makes vehicle more visible in traffic
- **Daytime running lamps (DRL):** Lights that illuminate during daytime conditions, increasing vehicle's visibility to other drivers
- **Enhanced Accident Response System (EARS):** Makes it easier for emergency personnel to see and reach occupants in event of an accident by automatically turning on interior lighting and unlocking doors after air bag deployment; also shuts off flow of fuel to the engine
- **Heated side-view mirrors:** Prevents buildup of snow or ice on side-view mirrors to help maintain visibility
- **LED bi-functional projector headlights:** Featuring LED technology, they provide twice the visible light, as measured in lumens, compared with conventional headlights; illumination more controlled for increased visibility
- **LED fog lamps:** Featuring LED technology, they provide improved illumination during inclement weather
- **LED taillamps:** Featuring LED technology, they provide brake, stop, turn and running-light functions; LED technology ensures light output is consistent throughout the taillamp
- **Lit Signature forward lighting:** Two linear "lit signature" elements along the top and bottom of the headlamps; recognizable signature remains on during normal operation, while the twin projectors (low and high beams) only come on at dusk/evening
- **Rain-sensing wipers:** A convenience feature that automatically senses moisture on vehicle windshield and activates wipers
- **Rear-window electric defrost:** Automatically activates with remote start when ambient temperature is below prescribed threshold
- **Supplemental turn signals:** Signal lamps built into housing of exterior mirrors help alert oncoming traffic and pedestrians by allowing turn signals to be viewed from front, sides and rear of vehicle

Emergency connectivity and other safety and security features

The new 2021 Ram TRX benefits from unique and widely acclaimed Uconnect technology:

- **9-1-1 Call/Assist Call:** Mirror-mounted buttons for emergency services, roadside assistance, Uconnect Customer Care and non-collision related emergencies
- **Auto-reverse sunroof:** Power sunroof automatically reverses when it senses an obstruction during closing
- **Auto-reverse windows:** Automatically reverse when they sense an obstruction during closing
- **Capless fuel-filler door:** Provides fuel-filling simplicity and helps eliminate contact with fuel when refueling
- **Child-protection rear door locks:** Disables rear doors' inside-release handle by adjusting small lever on the door-shut face
- **Digital rearview mirror:** Replaces conventional rearview mirror with 9.2-inch-wide Liquid Crystal Display (LCD) monitor to help improve driver rearward visibility; displays real-time video from rear-facing camera; can be turned off to revert back to reflective mirror
- **Driver information display (DID):** Provides driver with trip, temperature, tire pressure and other vehicle information within the instrument cluster
- **Dual-note electric horn:** Helps cut through ambient noise by producing two different tones simultaneously
- **Express up/down windows:** One-touch powered express up/down window button located on driver and front passenger doors
- **Global position sensor (GPS):** Used for navigation guidance and electronic vehicle tracking
- **Head-up Display (HUD):** Provides the driver with up to five different areas of interest, including Lane Departure, Lane Keep Assist, adaptive cruise control, turn-by-turn navigation, current speed, current gear and speed limit; features full-color display
- **Intelligent battery sensor (IBS):** Continually measures current flow 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
- **Keyless Enter 'n Go:** Detects fob presence upon vehicle entry; if fob detected, system enables operation of push-button ignition
- **Mopar Electronic Vehicle Tracking System (EVTS):** State-of-the-art, GPS-enabled, stolen-vehicle recovery system; EVTS enables nationwide tracking, 24/7 emergency service dispatch, security fence, arrival/departure notification, excessive speed notification and trace maps of past locations (in select markets)
- **Remote keyless entry:** Locks and unlocks doors and turns on interior lamps; also activates and deactivates security alarm system, if vehicle is so-equipped
- **Remote start:** Conveniently starts engine by using the key fob, while helping to maintain vehicle security
- **Security alarm:** Deters vandalism and theft, frequently lowering insurance premiums; system helps protect vehicle from theft by monitoring door-ajar switches and ignition circuit for unauthorized entry
- **Sentry Key engine immobilizer:** Uses embedded transponder with a preprogrammed security code to discourage vehicle theft; when the ignition button is pressed, controller sends random number to the transponder and the engine is allowed to start; if incorrect key is used, the vehicle will not respond to push-button ignition
- **Siri Eyes Free:** Allows driver to keep hands on the steering while by enabling voice recognition to interact with compatible Apple device
- **SiriusXM Traffic:** Works with 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
- **Tailgate ajar notification:** Notifies operator tailgate is not fully closed via warning light in gauge cluster
- **Tailgate power release and Passive Entry:** Allows operator to release tailgate using key fob, or unlock automatically with combination of key fob presence and hand motion under tailgate handle
- **Thin-film transistor (TFT) instrument cluster display:** Offers wide range of customization options, from a basic analog read-out to a full digital display that clearly communicates vehicle information with easy-to-

understand icons

- **Tilt-and-telescoping steering column:** Allows steering column to tilt and move toward or away from driver to help achieve a safe and comfortable distance from the advanced multistage driver front air bag, if deployed
- **Tire-fill alert:** When adding air pressure to tires, a new tire-fill alert system chirps the horn once you have reached the recommended pressure
- **Tire-pressure monitoring (TPM) system:** Informs driver when tire pressure is too low; pressure-sensor modules within valve stems of all four wheels send continuous radio-frequency signals to a receiver
- **Uconnect Access mobile hotspot:** Turns vehicle into mobile internet hotspot; available to registered Uconnect Access subscribers
- **Uconnect Access remote services:** Enables registered Uconnect Access subscribers with compatible cell phones to lock or unlock their vehicles or to activate panic alarm; can also activate remote start
- **Uconnect Access Stolen Vehicle Location Assistance:** Leverages GPS data-sending capability to help authorities find stolen vehicles
- **Uconnect Access voice-to-text:** Enables cloud-based text-message dictation via compatible Bluetooth-enabled cell phones; available to registered Uconnect Access subscribers
- **Uconnect Drag and Drop menu bar:** Drivers can drag key usage buttons and move them to their Uconnect system's main menu bar for easier access
- **Uconnect Voice Command with Bluetooth:** Voice-recognition technology enables hands-free navigation system inputs and the use of Bluetooth-enabled phones while keeping drivers' hands on the wheel and eyes on the road
- **Universal garage door opener:** Programmable radio frequency codes for garage door, security gate and security lighting

Ram Brand

In 2009, the Ram brand launched as a stand-alone division, focused on meeting the demands of truck buyers and delivering benchmark-quality vehicles. With a full lineup of trucks, the Ram 1500, 2500/3500 Heavy Duty, 3500/4500/5500 Chassis Cab and ProMaster vans. Ram builds trucks that get the job done and families where they need to go.

Ram continues to outperform the competition, setting the benchmark in the most important areas for truck buyers:

- Segment-first 1,000 lb.-ft of torque with Cummins Turbo Diesel
- Most luxurious: Ram 1500 Tungsten with air suspension, 24-way massage seats and 540 horsepower
- Best ride and handling with a double wishbone front suspension and five-link solid rear axle with available, segment-exclusive, active-level air suspension
- Best-in-class available rear leg room
- The most cargo space available in any traditional full size cargo van
- Most capable full-size off-road pickup – Ram Power Wagon
- Most awarded light-duty truck in America
- Highest owner loyalty of any half-ton pickup

The latest [J.D. Power APEAL study](#), which rates the emotional bond between customers and their vehicles, named the 2023 Ram 1500 as the best full-size light-duty pickup.

Ram is part of the portfolio of brands offered by leading global automaker and mobility provider Stellantis. For more information regarding Stellantis (NYSE: STLA), please visit www.stellantis.com.

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