



Cat[®] 735

Articulated Truck

The Cat[®] 735 features a world-class cab design, based on operator feedback to advance comfort and ease of operation. Features include: hoist-assist system, advance automatic traction control system, automatic retarder control, stability-assist, dynamic rollover protection, height limiting feature, and auto wait brake.

Proven Reliability

- Cat C13A engine delivers proven reliability across a variety of applications.
- Terrain-based throttle control smooths throttle input over rough terrain to improve ride quality.
- Enhanced reliability through commonality and design simplicity with long life to overhaul.
- Combination of engine compression brake and hydraulic retarder improves response and increases retarding power for controlled descent of grades.

Durability

- All structures and components are proven through extensive testing and customer experience.
- Advanced suspension allows for greater speed over rough terrain, while softening impact loads.
- Front suspension oscillates ± 6 degrees for a smooth ride.
- Frames are designed to handle torque loads, decrease hitch area stress, and optimize suspension geometry.
- Frames are robot-welded for maximum durability.
- Redesigned dump body provides reinforced top edge on side rail.

Achieve Greater Productivity

- Advanced Automatic Traction Control (AATC) decreases wheel slippage, delivering maximum traction and productivity. Fully automatic, no operator action.
- Body Height Limiting allows operators to set upper and lower height parameters, helping to increase cycle efficiency and ensure the machine operates within jobsite constraints.
- Automatic Retarder Control (ARC) manages the retarder without any operator interaction. Fully automatic 100% of the time.
- Assisted Hoisting Control allows automatic tipping and lowering of the dump body at the flick of a switch.
- Combined hoist/transmission lever, exclusive to Caterpillar, places multiple controls on the transmission lever, incorporates park brake, and reduces operator interaction by as much as 50%.
- Optional body heat solution reduces carry back in specific applications.

Boost Fuel Efficiency

- Economy mode reduces fuel use without affecting productivity and can be engaged with a single button.
- Next-generation machine design improves fuel economy with minimized maintenance costs and the same great power and response.
- Innovative air-management systems optimize airflow and enhance power and fuel efficiency.
- Advanced Mechanically-Actuated Electronically Controlled Unit Injection (MEUI)[™]-C injector platforms deliver increased injection pressures and more precise fuel rates.



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Easy, Comfortable Operator Environment

- Interior space is designed to make all aspects of machine operation as simple as possible for every operator.
- A keytouch pad enhances the operator experience, while a jog dial provides intuitive control of the updated touchscreen interface.
- Touchscreen display allows for easy monitoring and adjustment of systems.
- An optional system uses four discrete cameras to enhance operator visibility around the machine, while an integrated detection system provides both visual and audible alerts to indicate the presence of nearby objects.
- Tilt and telescopic steering column designed for operator comfort and control. This adjustable column allows drivers to fine-tune the steering wheel position for optimal ergonomics, especially during long shifts or rough terrain operations.
- Simple, intuitive control and display layouts allow the operator to focus on safe machine operation while maintaining productivity.
- Make and receive hands-free calls via the optional Bluetooth® equipped stereo.
- The HVAC system is now managed through the primary display, with controls accessible via the jog dial or touchscreen for enhanced operator convenience.
- The cab features dedicated storage solutions for everyday items, ensuring convenience and organization for the operator, granting comfort and room for movements.

Technology That Gets Work Done

- Integrated systems give you the ability to make timely, fact-based decisions to maximize efficiency, improve productivity, and lower costs.
- Product Link™ system connects to each machine wirelessly, allowing you to monitor location, hours, fuel use, productivity, idle time, and diagnostic codes.
- Improved payload technology allows operators to view real-time load weights on the integrated display. Updated software and sensors provide accurate data.
- External payload indicator lights alert the loader when to stop, reducing the risk of machine overloading.
- Stability Assist software reports information via online VisionLink™, increasing awareness of machine history if a rollover has occurred.

Built-In Safety Features

- Unique safety feature Dynamic Roll Protection supports rollover prevention and works in parallel with the already successful Cat Detect with Stability Assist, reducing downtime and safety repairs from machine rollover events.
- Enter the machine safely with machine wakeup and new stairway lighting.
- Grab rail allows for easier and safer machine access.
- Operator-presence detection system applies parking brake if gear is engaged and operator is not seated.
- In-cab tertiary brake switch allows the operator to bring the machine to a safe stop in the unlikely event of both main and secondary brake circuits failing.
- Electro-hydraulic secondary steering activates automatically if low pressure is sensed in primary system.
- Hill Assist reduces potential roll-back on grades.
- Auto Wait Brake applies the service brakes when neutral is selected and button is pressed, allowing quick and easy control of the machine while dumping and loading.
- Ground-level fuel fill tank.

Reduced Maintenance Costs

- Durable design and easier servicing mean maximized uptime and reduced service costs.
- Universal joints are lubricated for life, eliminating any maintenance.
- Coolant formula improves component life by reducing corrosion.
- Entire machine is designed for greater ease of maintenance with side-tilting cab, electrically raised hood, access panels, and Cat Data Link connector.
- Extended service intervals for the engine and transmission: 1,000 and 2,000 hours, respectively. Doubled from previous models and industry leading, resulting in lower total cost of ownership.

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			POWERTRAIN		
10 in touchscreen display with Cat® rearview camera	✓		Auto shift six-speed forward and single-speed reverse transmission	✓	
Air conditioning	✓		Cat C13A engine	✓	
Auto Wait Brake	✓		CX31 transmission	✓	
Combined gear selection and hoist control lever	✓		Differentials: standard with automatic clutched inter- and cross-axle differential locks	✓	
Electronic OMM	✓		Dual circuit oil immersed, enclosed brakes – all wheels	✓	
Heater and defroster with four-speed fan	✓		Automatic Retarder: engine compression brake and hydraulic	✓	
Infrared glass, high ambient cab		✓	Three axle, six-wheel drive	✓	
Mirrors, exterior	✓		SAFETY		
Mirrors, heated motorized		✓	Body Height Limiting	✓	
Machine operation monitoring system	✓		Dynamic Rollover Protection	✓	
Operator seat belt, four-point		✓	Machine Speed Limiting	✓	
Radio, Bluetooth stereo system		✓	Multi-view camera with object detect		✓
Seats: operator – fully adjustable, air suspension, retractable lap belt; trainer – padded with retractable lap belt	✓		Reverse alarm	✓	
Secondary steering – electro hydraulic	✓		Rearview camera	✓	
Seat, heated/cooled		✓	Rollover protective structure (ROPS)/falling objects protective structure (FOPS) cab	✓	
Sun visor	✓		GUARDS		
Tilt and telescopic steering wheel	✓		Crankcase	✓	
Windshield wiper and washer, two speed, intermittent (front)	✓		Radiator	✓	
Window blinds		✓	Rear window	✓	
Windows (tinted) opening both sides	✓		OTHER		
Window wiper and washer, two-speed (rear)	✓		Auto lube installation for automatic greasing of bearings		✓
TECHNOLOGY			Bare chassis (no body) standard wheel base		✓
Cat Detect with Stability Assist	✓		Bare chassis (no body) long wheel base		✓
Cat Payload monitoring system		✓	Body liners		✓
Operator Coaching		✓	Cold weather coolant -51°C (-60°F)		✓
Push to Start with Operator ID	✓		Collision Avoidance Ready*		✓
Product Link Elite: Cellular PLE643		✓	Exhaust heated body		✓
Product Link Elite: Dual PLE683	✓		Fast fuel fill		✓
VisionLink™	✓		Fuel additive – anti-waxing		✓
ELECTRICAL AND LIGHTING			Mud flaps: wheel arch and body mounted with transportation tiebacks	✓	
Batteries (x2) maintenance free	✓		Scissor tailgate		✓
Cold weather start attachment (2 additional batteries)		✓	S-O-S SM sampling valves	✓	
Daylight Running Lights	✓		Tires, six 750/65 R25, radial	✓	
Electrical system: 24V, 10A 24V to 12V converter	✓		Vandalism protection: lockable caps	✓	
Engine block heater		✓	Wheel chocks		✓
Ether start		✓			
Flashing LED beacon		✓			
LED Rear Step Lights	✓				
LED Rear Work Lights		✓			
Lighting systems: cab interior, two head lamps, two width marker, two reversing, work light/cab access light, two stop/tail lights, front and rear direction indicators	✓				
Main disconnect switch	✓				
Roof-mounted LED work lights		✓			

*South Africa only.

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Technical Specifications

Engine		
Engine Model	C13A	
Gross Power (SAE J1995)	306 kW	410 hp
Net Power (SAE J1349)	298 kW	400 hp
Engine Power (ISO 14396)	301 kW	404 hp
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	736 in³
<ul style="list-style-type: none">Advertised power is tested per the specified standard in effect at the time of manufacture.Advertised power is tested at 1,800 rpm.Net power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler, and fan at minimum speed.Net power when the fan is at maximum speed is 298 kW (400 hp) per the SAE reference conditions.Two engine emission options are available:<ol style="list-style-type: none">Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.Noncertified configuration that is equivalent to U.S. EPA Tier 2 and EU Stage II.		
No Engine Derating Below	3810 m	12,500 ft
Peak Engine Torque Gross (SAE J1995:2014)	2192 N·m	1,617 lbf·ft
Peak Engine Torque Net (SAE J1349:2011)	2155 N·m	1,589 lbf·ft
Peak Engine Torque Speed	1,200 rpm	

Weights

Rated Payload	32 tonnes	35.3 tons
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Body Capacities

Heaped SAE 2:1	20.0 m³	26.2 yd³
Struck	16.0 m³	20.9 yd³
Tailgate Heaped SAE 2:1	21.7 m³	28.4 yd³
Tailgate Struck	17.0 m³	22.2 yd³

Transmission

Speed	km/h	mph
Forward 1	8	5
Forward 2	15	9
Forward 3	23	14
Forward 4	35	22
Forward 5	48	30
Forward 6	57	35
Reverse 1	9	6

Standards

Brakes	ISO 3450:2011
Cab/FOPS	ISO 3449:2005 Level II
Cab/ROPS	ISO 3471:2008
Steering	ISO 5010:2019

Sound Levels

Interior Cab	72 dB(A)
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- The declared dynamic operator sound pressure level is 72 dB(A) when ISO 6396:2008 is used to measure the value for an enclosed cab. The measurement was conducted at 70% of the cooling fan's maximum speed. The sound level may vary at different cooling fan speeds. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- Hearing protection may be needed when operating with an open operator station and cab or when not properly maintained or with doors/windows open for extended periods or in noisy environments.

Operating Weights

Front Axle – Empty	14 580 kg	32,143 lb
Center Axle – Empty	5110 kg	11,266 lb
Rear Axle – Empty	4890 kg	10,781 lb
Total – Empty	24 580 kg	54,190 lb
Front Axle – Rated Load	4054 kg	8,938 lb
Center Axle – Rated Load	13 973 kg	30,805 lb
Rear Axle – Rated Load	13 973 kg	30,805 lb
Total – Rated Load	32 000 kg	70,548 lb
Front Axle – Loaded	18 634 kg	41,081 lb
Center Axle – Loaded	19 083 kg	42,071 lb
Rear Axle – Loaded	18 863 kg	41,586 lb
Total – Loaded	56 580 kg	124,737 lb

Body Plate

High strength Brinell HB450 wear resistant steel

Body Plate Thickness

Front Plate	7 mm	0.28 in
Base Plate	13 mm	0.51 in
Side Plates	11 mm	0.43 in

Service Refill Capacities

Fuel Tank	400 L	106.0 gal
Cooling System	83 L	21.9 gal
Hydraulic System	110 L	29.1 gal
Engine Crankcase	38 L	10 gal
Transmission	56 L	12.3 gal
Final Drives/Differential	125 L	33 gal
Output Transfer Gear Box	25 L	5.5 gal

Body Hoist

Raise Time	12 seconds
Lower Time	11 seconds



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Build Number: 05A
(Afr-ME, Aus-NZ, Eurasia,
Indonesia, Pacific Islands, S Am)

