



Cat[®] 735

Articulated Truck

The Cat[®] 735 features a world-class cab, re-engineered using global operator feedback to advance comfort and ease of operation. Enhancements include class-leading levels of performance and new features, such as Advanced Automatic Traction Control (AATC) and assisted hoisting control, that keep a machine productive all day long.

Proven Reliability

- Cat C13 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.
- Minimized impact of emissions systems allows excellent response and ample power.
- 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.

Achieve Greater Productivity

- Advanced Automatic Traction Control (AATC) decreases wheel slippage, delivering maximum traction and productivity. Fully automatic, no operator action.
- Advanced Productivity Electronic Control Strategy (APECS) and Electronic Clutch Pressure Control (ECPC) deliver smooth gear changes with improved acceleration and increased productivity.
- Automatic Retarder Control (ARC) manages the retarder without any operator interaction. Fully automatic 100% of the time.
- New 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%.

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.



Cat® 735 Articulated Truck

Easy, Comfortable Operator Environment

- New cab has 20% more interior space and is designed to make all aspects of machine operation as simple as possible for every operator.
- Cab is 7 dB quieter for a more comfortable working environment.
- Increased glass area optimizes operator and trainer visibility.
- Newly styled and updated dash puts controls within easy reach and features LED-illuminated rocker switches.
- Simple, intuitive control and display layouts allow the operator to focus on safe machine operation while maintaining productivity.
- Updated touchscreen display allows for easy monitoring and adjustment of systems.
- Make and receive hands-free calls via the optional Bluetooth® equipped stereo.
- Improved automatic climate control system makes maintaining the desired temperature easier.
- Increased and improved storage prevents cabin clutter.

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.
- Payload technology allows operators to view real-time load weights on the integrated display.
- 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

- Cat Detect with Stability Assist provides audible and visual alerts to the operator if the machine approaches an unstable angle during operation to prevent body and cab rollover.
- Enter the machine safely with machine wakeup and new stairway lighting.
- Rear 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 emergency 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.
- Waiting 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.

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.

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			POWER TRAIN		
Air conditioning with R134a refrigerant	✓		Auto shift six-speed forward and single-speed reverse transmission	✓	
Combined gear selection and hoist control lever	✓		Cat C13 engine	✓	
Liquid Crystal Display (LCD)	✓		CX31 transmission	✓	
Mirrors: extensive arrangement for improved visibility	✓		Differentials: standard with automatic clutched inter- and cross-axle differential locks	✓	
Mirrors, heated motorized		✓	Dual circuit oil immersed, enclosed brakes – all wheels	✓	
Machine operation monitoring system	✓		Retarder: engine compression brake and hydraulic	✓	
Radio, Bluetooth stereo system		✓	Three axle, six-wheel drive	✓	
Seats: operator – fully adjustable, air suspension, retractable lap belt; trainer – padded with retractable lap belt	✓		SAFETY		
Seat, heated/cooled		✓	Reverse alarm	✓	
Seat belt, four-point		✓	Rearview camera	✓	
Secondary steering – electro hydraulic	✓		ROPS/FOPS cab	✓	
Sun visor	✓		GUARDS		
Tilt and telescopic steering wheel	✓		Axle	✓	
Touchscreen display incorporating the rearview camera video feed	✓		Crankcase	✓	
Windshield wiper and washer, two speed, intermittent (front)	✓		Radiator	✓	
TECHNOLOGY			Rear window	✓	
Cat Detect with Stability Assist	✓		OTHER		
Cat Production Measurement payload monitoring system		✓	Auto lube installation for automatic greasing of bearings		✓
Machine Security System (MSS)		✓	Bare chassis (no body) standard wheel base		✓
Product Link Elite: PLE631 (satellite)		✓	Bare chassis (no body) long wheel base		✓
Product Link Elite: PLE641 (cellular)	✓		Body liners		✓
ELECTRICAL AND LIGHTING			Cold weather coolant -51°C (-60°F)		✓
Batteries (two) maintenance free	✓		Exhaust heated body		✓
Cold weather start attachment		✓	Fast fuel fill		✓
Electrical system: 24-volt, 10A 24- to 12-volt converter	✓		Fuel additive – anti-waxing		✓
Engine block heater		✓	Mud flaps: wheel arch and body mounted with transportation tiebacks	✓	
Ether start		✓	Scissor tailgate		✓
Flashing LED beacon		✓	S-O-S SM sampling valves	✓	
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	✓		Sound suppression (optional outside EFTA*)		✓
Main disconnect switch	✓		Tires, six 750/65 R25	✓	
Roof mounted High Intensity Discharge (HID) work lights		✓	Vandalism protection: lockable caps	✓	
			Wheel chocks		✓

* EFTA countries are EU countries plus Iceland, Norway, Lichtenstein, and Switzerland.

Cat® 735 Articulated Truck

Technical Specifications

Engine

Engine Model	C13	
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 in ³

- The power ratings apply at an engine speed of 1,800 rpm when tested under the conditions for the specified standard in effect at the time of manufacture.
- The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, aftertreatment, and fan at minimum speed.
- Net power when the fan is at maximum speed is 254 kW (341 hp) per the SAE reference conditions.
- Emits equivalent to either U.S. EPA Tier 2/EU Stage II or Tier 3/Stage IIIA.

No Engine Derating Below	3810 m	12,500 ft
Peak Engine Torque Gross (SAE J1995)	2192 N·m	1,617 lbf·ft
Peak Engine Torque Net (SAE J1349)	2155 N·m	1,589 lbf·ft
Peak Engine Torque Speed	1,200 rpm	

Weights

Rated Payload	32 tonnes	35.3 tons
---------------	-----------	-----------

Body Capacities

Heaped SAE 2:1	20 m ³	26.2 yd ³
Struck	15.5 m ³	20.3 yd ³
Tailgate Heaped SAE 2:1	21.3 m ³	27.9 yd ³
Tailgate Struck	16.3 m ³	21.3 yd ³

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

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.1 kg of refrigerant which has a CO₂ equivalent of 1.716 metric tonnes.

Sound Levels

- | | |
|--------------|----------|
| Interior Cab | 72 dB(A) |
|--------------|----------|
- 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	14 960 kg	32,981 lb
Center Axle – Empty	5070 kg	11,177 lb
Rear Axle – Empty	4850 kg	10,692 lb
Total – Empty	24 880 kg	54,851 lb
Front Axle – Rated Load	4100 kg	9,039 lb
Center Axle – Rated Load	13 950 kg	30,754 lb
Rear Axle – Rated Load	13 950 kg	30,754 lb
Total – Rated Load	32 000 kg	70,548 lb
Front Axle – Loaded	19 060 kg	42,020 lb
Center Axle – Loaded	19 020 kg	41,932 lb
Rear Axle – Loaded	18 800 kg	41,447 lb
Total – Loaded	56 880 kg	125,399 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	412 L	108.8 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

AEXQ3059-00 (10-2020)
Build Number: 04A
(Afr-ME, Aus-NZ, CIS, Pacific
Islands, S Am, SE Asia, Turkey)