

Cat® 775

Off-Highway Truck

The next-generation Cat® 775 08 features an innovative frame design that enhances efficiency, performance, and operator comfort. Its advanced hybrid space frame structure increases durability and reduces empty machine weight, resulting in superior efficiency. The proven 07 Series driveline components are retained, ensuring ongoing reliability. The new chassis frame, combined with a rolled-form body, provides greater payload volume and a lower center of gravity. Enhanced operator comfort, machine ride, and handling are achieved through the addition of a double A-type front suspension and a state-of-the-art operator cabin design, leading to faster and safer operational cycles. Additionally, the truck incorporates several service upgrades to reduce service times. Its onboard technology and electronic architecture ensure readiness in autonomy, automation, and advanced powertrain solutions. Overall, the next-generation Cat 775 offers improved fuel efficiency, enhanced productivity, and lower service costs, positioning itself as a platform prepared for future technological updates.

Achieve Greater Productivity

- Haul more material per cycle, faster, and burn less fuel per cycle.
- Industry first frame design reduces empty weight, delivering potential for larger payloads and lower fuel burn.
- Rolled form body with 10% more body volume to optimize target payload.
- Double A type front suspension design highly impacts operator comfort with far superior ride and handling for faster cycles.
- Proven high mechanical uptime with a robust carry over of high value driveline components of the proven generation of 775 Series machines, allowing for more operating hours per year.

Boost Fuel Efficiency

- Reducing the empty weight of the machine enhances payload capacity per liter/gallon of fuel during loaded cycles and decreases fuel consumption during empty cycles, improving overall fuel efficiency.
- Enhanced ride and handling allow for higher speeds on curves and driving in higher gears, which directly reduces fuel consumption during the cycle.
- Advanced Productivity Electronic Control Strategy (APECS) enables high-level communication between the engine and transmission, optimizing power and torque utilization.
- Optimize fuel use with adaptive economy mode, reducing consumption while maintaining productivity, activated by a single button.
- Achieve enhancements in fuel efficiency with automatic neutral idle.
- Operate your truck at an engine speed and gear selection that maximizes fuel efficiency, incorporating speed limiting measures.
- The integrated engine idle shutdown feature conserves fuel by automatically activating when the truck is parked and has been idling for a predetermined period.

Designed for Safety

- Improvements in accessibility with safe ground-level access to fuel fill and daily maintenance points.
- Ensure three points of contact when entering and exiting the machine with strategically placed walkways and grab rails.
- Superior brake performance meets the latest brake standards – ISO 3450:2011.
- The ground-level engine shutoff switch stops all fuel to the engine when activated and shuts down the machine safely.
- Sturdy four-point mounted cabin meets rollover protective structure/falling objects protective structure (ROPS/FOPS) standard.
- Four-point seat belt provides enhanced safety to the operator.
- The seat belt indicator provides visual and audible alerts when the seat belt is unfastened and is also equipped with an external seatbelt beacon.
- Lockout features help the service technician to perform maintenance work on the machine with safe mode.
- Secondary steering activates automatically in case of primary system failure.
- Overload speed limiter works with truck payload system to reduce machine speed automatically when the truck is overloaded.
- Hill Start Assist with Anti Roll Back keeps the truck from moving on slopes. It stops the truck from rolling the wrong way when you change gears and helps reduce potential accidents.

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Work in Comfort

- Improvements in visibility gain enlarged views of the work area and its surroundings.
- Access connectivity and decrease clutter with more storage areas with the newly designed cab.
- Enjoy easy automotive-quality shifting with the new transmission controls.
- Automatic cab temperature controls.
- The Cat next-generation deluxe seat is designed to enhance operator comfort. An optional premium leather seat with heating and cooling functions is also available as an attachment.

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.
- Gain valuable insight into how your machine is performing by continuously monitoring and collecting vital machine data via the advisor display with the software Vital Information Management System (VIMS™). Applicable to both U.S. EPA Tier 4 Final/EU Stage V and U.S. EPA Tier 2 equivalent.
- The Cat payload system records reliable material weights, stores up to 2,400 payload cycles, and generates reports on weight, haul cycle time, and distance with date and time stamps.
- Optional external payload indicator lights and external scoreboard provide clear alerts to the loader regarding when to halt loading, reducing the likelihood of machine overloading.
- Product Link™ system connects to each machine wirelessly, allowing you to monitor location, hours, fuel use, productivity, idle time, and diagnostic codes.
- VisionLink™ wirelessly connects you to your equipment, giving you access to essential information you need to know to run your business.
- The Cat 775 is MineStar™ ready and includes Cat Product Link Elite and VIMS to help optimize equipment management, remote monitoring capabilities, machine availability, and component life while reducing both repair costs and the risk of catastrophic failure.
- The tire management system, which measures tons kilometers per hour or tons miles per hour (TKPH/TMPH), operates alongside the tire pressure monitoring system (TPMS) to help maintain tire longevity.

Reduced Maintenance Costs and Other Costs

- Grouped service points.
- Control particulate matter with two engine-mounted diesel oxidation catalyst canisters. (Tier 4)
- NOx reduction system (NRS) technology replaces a portion of intake air with exhaust gas to control combustion temperatures and NOx production. (Tier 4)
- Parts commonality with other Cat equipment.
- Resolve problems before failure occurs with VIMS notifications.
- Torque converter stall (auto stall) enables quick operating temperatures. This improves system component life and reduces performance losses during cold operation.
- All LED lights provide longer life and brighter illumination, consume less power, and are more resistant to vibration or water damage.

The Platform for the Future

- This machine is engineered with future autonomy solutions as a primary consideration.
- Integrated components with an optimized electronics architecture, including from wheel speed sensors and designated space for the GPS mast, facilitate future installation of Cat MineStar command for hauler autonomy kits.
- The newly designed frame provides additional space for batteries, while the OEA supports the ongoing advancements in electrification.

Standard and Optional Equipment

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

	Standard	Optional
POWERTRAIN		
C27 U.S. EPA Tier 4 Final/EU Stage V or noncertified U.S. EPA Tier 2 equivalent diesel engine: air filters with precleaner (2), air-to-air aftercooler (ATAAC), electric start, engine idle shutdown, ether starting aid, exhaust muffler, next generation modular radiator (NGMR)	✓	
Braking system: extended life brakes, automatic retarder control (ARC), manual retarder (utilizes rear oil-cooled, multiple disc brakes), brake release motor (towing), dry disc brakes (front), brake disconnect switch (front), oil-cooled multiple disc brakes (rear), brake wear indicator (rear), parking brake, secondary brake, service brake	✓	
Cat® engine brake		✓
Aftertreatment system – NOx reduction system (NRS), diesel oxidation catalyst (DOC); demand fan; Mechanically Actuated Electronic Unit Injection (MEUI™)-C fuel system (Tier 4 Final/ Stage V only.)	✓	
Transmission: 7-speed automatic powershift with electronic clutch pressure control (ECPC), advanced productivity electronic control strategy (APECS); automatic neutral idle, autostall, second gear start	✓	
ELECTRICAL		
Alarm, backup	✓	
Batteries, maintenance-free, 12V (2), 1,400 CCA combined	✓	
Lighting system: all LED backup lights, directional signals/hazard warning, engine compartment light, headlights with dimmer, operator access courtesy lights, side profile lights, stop/tail lights	✓	
Service center containing: battery jump start, breakers with spare fuses, lockout switch, ports – electronic technician (ET) and Vital Information Management System (VIMS™), service lockout switch (power without engine start)	✓	
OPERATOR ENVIRONMENT		
Advisor display: monitors real time machine performance and operating data, displays languages (market based)	✓	
Air conditioning/heat	✓	
Automatic temperature control	✓	
Cab precleaner		✓
Diagnostic connection port, 24V	✓	
Entertainment radio ready: 5-amp converter, speakers, antenna, wiring harness	✓	
Gauges/indicators: brake oil temperature gauge, coolant temperature gauge, engine overspeed indicator, fuel level, hour meter, speedometer with odometer, tachometer, transmission gear indicator	✓	

	Standard	Optional
OPERATOR ENVIRONMENT (CONTINUED)		
Mirrors: convex, heated	✓	
Power port, 24V and 12V (2)	✓	
Rollover protective structure (ROPS)/ falling object protective structure (FOPS)	✓	
Seat, next generation deluxe, full air suspension, retractable 4-point seat belt with shoulder harness	✓	
Premium Seat heated and actively cooled, leather upholstery and air adjustable bolsters and lumbar		✓
Steering wheel, padded, tilt and telescopic	✓	
Throttle lock	✓	
Visibility package (meets ISO 5006:2017 requirements)		✓
Cat Detect		✓
Window, hinged, right side (emergency exit)	✓	
Window, powered, left side	✓	
Windshield wiper, intermittent, and washer	✓	
TECHNOLOGY PRODUCTS		
Economy modes, standard and adaptive	✓	
Product Link™	✓	
Traction control system (TCS)		✓
Truck production management system (TPMS)		✓
Advanced health	✓	
Tons kilometers per hour/tons miles per hour (TKPH/TMPH) tire management system		✓
Body angle limiter		✓
Overload speed limiter	✓	
OTHER		
Body: heat, liner, sideboards		✓
Body down indicator	✓	
Single lubrication point grease fittings	✓	
Cold weather packages	✓	
Extended life coolant to -34°C (-30°F)	✓	
Fuel/grease remote fill center		✓
Fuel tank, 795 L (210 gal)	✓	
Ground-level battery disconnect	✓	
Ground-level engine shutdown	✓	
Rock ejectors	✓	
Secondary steering (electric)	✓	
Suspension, front and rear (EU compliant)	✓	
Tow hooks, front/tow pin, rear	✓	
Wheel chocks		✓
Autolube		✓
Spare rim		✓
Tail extension		✓

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Technical Specifications

Engine (U.S. EPA Tier 4 Final and EU Stage V)

Engine Model	C27	
Rated Power	1,800 rpm	
Gross Power – SAE J1995:2014	617 kW	838 hp
Engine Power – ISO 14396:2002	605 kW	828 hp
Net Power – SAE J1349:2011	557 kW	757 hp
Net Power – ISO 9249:2007	557 kW	757 hp
Net Torque Speed	1,200 rpm	
Net Torque – SAE J1349:2011	4234 N·m	3,122 lb-ft
Net Torque Rise – SAE J1349:2011	42%	
Bore	137 mm	5.3 in
Stroke	152 mm	6.0 in
Displacement	27 L	1,647 in³

Engine (U.S. EPA Tier 2 Equivalent)

Engine Model	C27	
Rated Power	2,000 rpm	
Gross Power – SAE J1995:2014	615 kW	838 hp
Engine Power – ISO 14396:2002	607 kW	825 hp
Net Power – SAE J1349:2011	551 kW	749 hp
Net Power – ISO 9249:2007	551 kW	749 hp
Net Torque Speed	1,300 rpm	
Net Torque – SAE J1349:2011	3781 N·m	2,788 lb-ft
Net Torque Rise – SAE J1349:2011	44%	
Bore	137 mm	5.3 in
Stroke	152 mm	6.0 in
Displacement	27 L	1,647 in³

- The power ratings are tested at the reference conditions for the specified standard.
- Net power advertised is the power available at the rated speed, measured at the flywheel when the engine is equipped with alternator, air cleaner, muffler, and fan.
- MIN NET SAE J1349:2011/ISO 9249:2007 Net power advertised is the power available at the flywheel when the engine is equipped with fan at maximum speed, air intake system, exhaust system, and alternator.
- Net torque rise meets SAE J1349.

Transmission

Speed	km/h	mph	Speed	km/h	mph
Forward 7			Forward 7		
Tier 4/Stage V	67.0	41.6	Tier 2	67.6	42.0

- Maximum travel speeds with standard 24.00R35 (E4) tires.

Brakes

Brake Surface OD – Front	655 mm	25.7 in
Brake Surface – Rear	61 269 cm²	9,497 in²
Brake Standards	ISO 3450:2011	

Weight Distributions – Approximate

Front Axle	Loaded 34%	Empty 52%
Rear Axle	Loaded 66%	Empty 48%

Service Refill Capacities

Fuel Tank	795 L	210.0 gal
Cooling System	192 L	50.7 gal
Differentials and Final Drives	278 L	73.4 gal

Operating Weights 100% Fill Factor

Struck, HP Quarry	35.4 m³	46.3 yd³
Heaped (SAE 2:1)*	45.0 m³	58.9 yd³

- Contact your local Cat dealer for body recommendation.

Suspension

Cylinder Stroke Front	225 mm	9.2 in
Cylinder Stroke Rear	149 mm	5.8 in
Rear Axle Oscillation	±8.1°	
Front axle wheel travel	248 mm	9.8 in

Sound

Operator Sound Level (ISO 6396:2008)	75 dB(A)
Machine Sound Level (ISO 6395:2008)	118 dB(A)

- The operator sound pressure level is 75 dB(A), measured according to the test procedures and conditions specified in ISO 6396:2008 for the standard machine configuration. The measurement was conducted at 70% of the maximum engine cooling fan speed.
- Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
- The machine sound power level is 118 dB(A), measured according to the test procedures and conditions specified in ISO 6395:2008 for the standard machine configuration. The measurement was conducted at 70% of the maximum engine cooling fan speed.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. Refer to the machine labeling for identification of the gas.

- If equipped with R134a (Global Warming Potential = 1430), the system contains 1.9 kg (4.2 lb) of refrigerant which has a CO_2 equvalent of 2.71 metric tonnes (2.99 tons).
- If equipped with R1234yf (Global Warming Potential = 0.501), the system contains 1.85 kg (4.1 lb) of refrigerant which has a CO_2 equivalent of 0.001 metric tonnes (0.001 tons)

Steering

Steering Standards	ISO 5010:2019	
Steer Angle	36°	
Turning Diameter – Front	17.7 m	58 ft
Turning Circle Clearance Diameter	20.2 m	66 ft

ROPS/FOPS

ROPS/FOPS Standards

- Rollover protective structure (ROPS) for cab offered by Caterpillar meets ISO 3471:2008 for operator and ISO 13459:2012 for trainer ROPS criteria.
- Falling objects protective structure (FOPS) meets ISO 3449:2005 Level II for operator and ISO 13459:2012 Level II for trainer FOPS criteria.

Tires

Standard Tire	24.00R35 (E4)

- Productive capabilities of the 775 truck are such that, under certain job conditions, tons kilometers per hour (TKPH)/tons miles per hour (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.
- Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.

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Replaces AEXQ3433-01
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(Global)

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com.**
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