Cat® 775

Off-Highway Truck

The Cat® 775 is expertly built with advanced quality control processes – both digital and hands-on – so it's ready to tackle tough jobs right out of the gate. Powered by the Cat C27 diesel engine, this truck not only boosts horsepower, but also helps you aim to get more out of every gallon of fuel. Bringing the 775 into your fleet can help you move more material, cut down on maintenance, and operate in a more environmentally friendly way.

Achieve Greater Productivity

- Haul your materials faster with an accelerated travel speed.
- Put more power to the ground with increased torque.
- Enjoy greater productivity while using a more responsive traction control system (TCS).
- Reduce tire wear with maximum traction by engaging TCS early in the slip.
- Strong, predictable performance helps customers achieve the lowest cost per ton.
- Automatic retarding control (ARC) maintains consistent engine speed for greater productivity and up to 15% faster downhill speeds as compared to a manual retarding system.

Boost Fuel Efficiency

- Advanced productivity electronic control strategy (APECS) allows the engine and transmission to communicate on a high level. This communication allows the machine to better utilize the power and torque the engine is producing.
- Automatically optimize fuel consumption with the adaptive economy mode, which reduces fuel use without affecting productivity and can be engaged with a single button.
- Gain improvements in fuel efficiency with auto neutral idle.
- Haul your truck at a more fuel-efficient engine speed and gear selection with speed limiting.
- Conserve fuel with integrated engine idle shutdown by the engine automatically initiating when the truck is in park and idle for a preset amount of time.

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 4-point mounted cabin meets rollover protective structure/ falling objects protective structure (ROPS/FOPS) standard.
- 4-point seat belt provides enhanced safety to the operator.
- Seat belt indicator implements both visual and audible alerts to the operator when seat belt is not fastened.
- 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.

Work in Comfort

- Completely redesigned cab for a whole new standard in visibility, comfort, and productivity.
- The new operator seat placement provides easier operation and comfort to the operator.
- 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 the easy automotive-quality shifting with the new transmission controls.
- Automatic cab temperature controls.
- Cat next generation deluxe seat for better operator comfort.

CAT®

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.
- Truck production management system (TPMS) provides accurate weighing of the materials, stores 2,400 payload cycles, and reports on weights, haul cycle times, and distances with date and time stamps.
- External payload indicator lights/display alert the loader when to stop, reducing the risk 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.
- Tons kilometers per hour/tons miles per hour (TKPH/TMPH) tire management system works with TPMS for improved tire life.

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, brighter illumination, consume less power, and are more resistant to vibration or water damage.

Application Versatility

- Get the right body option – dual slope, flat floor, or quarry – for your material and jobsite needs.
- For haul profiles including steep slopes, an optional dual slope body is available – offering excellent material retention.
- The X body's flat floor is perfect for metering material, especially when feeding the crusher.
- Protect your truck's body life in high-impact, hard rock applications with the optional rubber liner – available for dual slope and X bodies.
- Optional sideboards are available for flat floor, dual slope, and quarry bodies. Applicable for both Tier 4 and Tier 2 models.

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 noncertifed and 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)		
Lights: halogen		✓
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	✓	
Steering wheel, padded, tilt and telescopic	✓	
Throttle lock	✓	
Visibility package (meets ISO 5006:2017 requirements)		✓
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		✓
Overload speed limiter	✓	
OTHER		
Body: heat, liner, sideboards		✓
Body down indicator	✓	
Clustered grease fittings	✓	
Cold weather packages	✓	
Extended life coolant to -34°C (-30°F)	✓	
Fluid fill service 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		✓

Cat® 775 Off-Highway Truck

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	615 kW	825 hp
Engine Power – ISO 14396:2002	605 kW	812 hp
Net Power – SAE J1349:2011	572 kW	768 hp
Net Power – ISO 9249:2007	578 kW	775 hp
Net Torque Speed	1,200 rpm	
Net Torque – SAE J1349:2011	4269 N·m	3,148 lb-ft
Net Torque Rise – SAE J1349:2011	40%	
Bore	137 mm	5.4 in
Stroke	152 mm	6.0 in
Displacement	27 L	1,648 in³

Engine (U.S. EPA Tier 2 Equivalent)

Engine Model	C27	
Rated Power	2,000 rpm	
Gross Power – SAE J1995:2014	615 kW	825 hp
Engine Power – ISO 14396:2002	607 kW	813 hp
Net Power – SAE J1349:2011	584 kW	783 hp
Net Power – ISO 9249:2007	590 kW	791 hp
Net Torque Speed	1,300 rpm	
Net Torque – SAE J1349:2011	3896 N·m	2,874 lb-ft
Net Torque Rise – SAE J1349:2011	40%	
Bore	137 mm	5.4 in
Stroke	152 mm	6.0 in
Displacement	27 L	1,648 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

Forward 7 Tier 4/Stage V	67.0 km/h	41.6 mph
Forward 7 Tier 2	67.6 km/h	42.0 mph
Forward 7 (Vietnam)*	59.0 km/h	36.6 mph

- Maximum travel speeds with standard 24.00R35 (E4) tires.
  *Maximum travel speed limited to 59 km/h for Vietnam arrangement.

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	171 L	45.0 gal
Differentials and Final Drives	140 L	37.0 gal

Operating Weights 100% Fill Factor

Struck, Dual Slope	32.6 m³	42.7 yd³
Struck, Flat Floor	32.3 m³	42.2 yd³
Heaped (SAE 2:1)*, Dual Slope	42.2 m³	55.2 yd³
Heaped (SAE 2:1)*, Flat Floor	42.2 m³	55.2 yd³

- Contact your local Cat dealer for body recommendation.

* ISO 6483:1980.

Suspension

Empty Loaded Cylinder Stroke Front	234 mm	9.2 in
Empty Loaded Cylinder Stroke Rear	149 mm	5.8 in
Rear Axle Oscillation	±8.1°	

Sound - Tier 4 Final/Stage V

Operator Sound Level (ISO 6396:2008)	74 dB(A)
Machine Sound Level (ISO 6395:2008)	115 dB(A)

Sound - U.S. EPA Tier 2 Equivalent

Operator Sound Level (ISO 6396:2008)	77 dB(A)
Machine Sound Level (ISO 6395:2008)	119 dB(A)

- The operator sound pressure level is 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 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 or 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 equivalent 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	31°	
Turning Diameter – Front	22 m	72 ft 2 in
Turning Circle Clearance Diameter	25 m	82 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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