

777

OFF-HIGHWAY TRUCK



Engine Maximum Power
Target Payload*
Target Gross Machine Weight

TIER 2/STAGE II EQUIVALENT¹

765 kW (1,025 hp)
91 087 kg (100.4 tons)
164 654 kg (363,000 lb)

TIER 4 FINAL/STAGE V²

765 kW (1,025 hp)
90 564 kg (99.8 tons)
164 654 kg (363,000 lb)

¹ Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2 and EU Stage II.
² Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

* Target payload is with Dual Slope full liner body configuration.



THE CAT® 777

The 777 raises the bar for performance, durability, operator comfort, and fuel economy in this class. With enhanced technologies, a new cab focused on operator comfort and efficiency, plus lower fuel costs, the Cat® 777 will set a new pace for productivity, comfort, and profit in your operation.



WORK SMARTER AND FASTER

Cat 777 trucks are engineered to be the most efficient 100-ton mechanical trucks in the industry. They offer:

- + IMPROVED PERFORMANCE AND DURABILITY
- + LOWER FUEL CONSUMPTION
- + ENHANCED OPERATOR COMFORT AND SAFETY FEATURES

Ready to help make your business stronger, Cat off-highway trucks give you new ways to get the most work done at the lowest cost.

UP TO 13% LOWER FUEL CONSUMPTION

BURN LESS FUEL & DO MORE



FUEL-SAVING SOLUTIONS

ECO MODES – Economy mode modifies engine maps to take advantage of steady grades and level ground, reducing power and fuel burn. Operators may choose an automatic adaptive Eco mode and driver-controlled configurable mode, where the power reduction can be from 0.5% to 15%.

TRANSMISSION CONTROLS – New APECS transmission controls increase fuel efficiency by maintaining momentum and speed on grade.

SAVE MORE WITH IDLE CONTROL

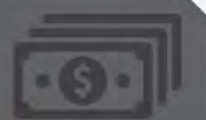
Engine Idle Shutdown identifies when the truck is in park and idles for more than a preset time, initiating engine shutdown to conserve fuel. The auto neutral idle system reduces torque load when the engine is idling, reducing fuel burn further.

SPEED LIMITING REDUCES WASTE

The Speed Limiting feature automatically and instantaneously selects the most fuel-efficient gear for the terrain based on the truck's laden/unladen weight.

ECONOMICAL SAVINGS

THE 777 IS THE SENSIBLE CHOICE FOR YOUR BUSINESS.



LOWER FUEL COSTS



IMPROVED PERFORMANCE

The Cat 777 will haul your material faster and efficiently with new transmission controls, increases in torque, and higher travel speeds.

ENVIRONMENTAL RESPONSIBILITY

Tier 2/Tier 4/Stage V emission controls are available which are simple, transparent to your operators, control emissions, and increase fuel efficiency. Control particulate matter (PM) with two engine-mounted diesel oxidation catalyst canisters. NRS technology replaces a portion of intake air with exhaust gas to control combustion temperatures and NOx production.

BODY & LINER OPTIONS

777 bodies are designed with the truck's center of gravity, load distribution targets, and power train in mind for performance, longevity, and value.

COAL BODY – The Coal body is made from 400 BHN steel for long life. Material density dictates the recommended body size. Choose from these capacities: 89 m³ (116 yd³), 106 m³ (139 yd³), 110 m³ (144 yd³), and 125 m³ (165 yd³).

DUAL SLOPE BODY – The Dual Slope body has excellent material retention with a heaped capacity of 60.1 m³ (78.6 yd³) standard. 400 BHN steel on interior surfaces provides excellent wear resistance. Material is carried low and centered for stability. Options: Four sizes of sideboards increase capacity for lighter weight materials. A single 16 mm (0.62 in) steel liner or a single rubber liner are available.

X BODY – For feeding crushers, the X Body's flat floor is an excellent choice for metering that also provides higher volume for lighter material densities, along with excellent material retention and stability. 400 BHN steel on internal surfaces provides wear protection. Options: Two different steel liners or a rubber liner are available, and an optional sideboard increases capacity (5.1m³) for lightweight material.

RUBBER LINER – This important option will protect your truck's body in high-impact, hard rock applications and suppress spectator and operator noise and vibration, while prolonging body life.

UP TO 3% INCREASE IN TRAVEL SPEED

The new 777 generates faster cycle times to haul your materials faster.

7% INCREASE IN TORQUE

Put more power to the ground with improved performance levels of the engine and transmission. APECS transmission controls carry more torque through the shifts, producing faster cycle times – most noticeably on grades. Quicker haul cycles and enhanced productivity result.

TRANSMISSION CONTROLS THAT BOOST EFFICIENCY

Second gear start helps to skip first gear engagement, improving cycle time, minimizing the number of shifts, and running the machine at an optimum speed from the starting point.

RESPONSIVE TRACTION CONTROL

The system is steering sensitive to determine slip vs. high speed turns and engages at slower speeds, returning traction sooner and potentially reducing tire wear. The system also modulates instantly between the two wheel groups, providing control using the hydraulic service brakes.

ENHANCED OPERATOR COMFORT

HELPING TO MAKE YOUR JOB EASIER AND MORE COMFORTABLE



SAFETY

Safety features include ground-level fuel access and fill, daily maintenance points, standard wet disc braking, automatic engine derate (on some events), audible warnings for events and fluid levels, speed limiting, and secondary steering for safe shutdown.



COMFORT

Operator comfort is achieved with the new cab and seat placement for greater visibility, four-point safety belt, and more storage. Sound suppression offers greater comfort. Visibility is excellent with extensive mirror options, large window areas, and object detection packages. Optional XQ package reduces spectator noise level to 112 dB(A).



CONTROLS

The ergonomic, intuitive controls provide solid steering performance, automatic temperature control, and throttle-lock for long, uphill climbs. The new next generation gearshift lever has integrated hoist and parking brake controls for ease of operation.



INSTRUMENTS

Performance and health information are available at a glance using well-lit gauges and the Advisor touchscreen display.



BEST-IN-CLASS LIGHTING

A new LED lighting package includes head, work, indicator, and backup lights for superior visibility and durability.



CONFIDENCE

Automatic Retarder Control (ARC) reduces operator effort and controls braking on downhill grades. Responsive traction control system performs better in wet conditions, engaging sooner at slower speeds and in the slip.

SAFETY

CONNECTING PEOPLE AND EQUIPMENT SAFELY



The 777 is designed to minimize slips and falls, providing firm footing and stability.

A CAB BUILT TO PROTECT

Rollover and Falling Object Protection (ROPS/FOPS) are part of the cab structure. Emergency egress is available through the right-side hinged window. A four-point harness provides visual and audio alerts for the operator, and a trainer seat with a lap belt allows for easy and safe on-the-job training.

GROUND LEVEL LOCKOUTS PROTECT PERSONNEL

Equipped with ground-level engine and machine (hoist, transmission, steering, brake release, and secondary steering switch) lockout controls, service technicians can perform maintenance work on the machine safely.

SAFE ENTRY AND EGRESS

Low-effort, integrated access system with handrails for three points of contact and aggressive tread plate on all step areas with lighted access for after dark keeps operators safe.

IMPROVED VISIBILITY

Mirror and LED lighting options offer excellent visibility. The new operator seat placement provides greater visibility, easier operation, and comfort to the operator. A combination of cameras and radar identify potential hazards.

FIRE SUPPRESSION SYSTEM

Cat 777s come fire suppression ready (FSR) as a standard attachment and with the complete fire suppression system as an optional attachment.

LONG TERM VALUE & DURABILITY

PROVEN COMPONENTS FOR RELIABLE PERFORMANCE



A PROTECTED & ENHANCED POWER TRAIN

New C32B core engine components have improved durability and structural robustness. The Integrated Fuel Lines (IFL) cylinder head improves temperature distribution via an optimized water jacket design. The Dual Sensor Coolant Protection System (DSCP) improves engine life. Smooth shifting, advanced APECS transmission controls with redesigned components and new software with updated clutch control and shift logic improve transmission life. Auto stall enables quick operating temperatures for best performance and life. Delayed Engine Shutdown prevents hot shutdowns that can reduce component life. Overload Speed Limiter, integrated with TPMS, provides automatic speed reduction and gear limiting (2nd gear) if overloaded, which improves component and tire life.



TOUGH STRUCTURES

The 777 continues the Caterpillar tradition of durability with a tough frame designed to deal with twisting loads. The rugged suspension not only reduces stress on the machine's structures, it's also highly durable itself. A mud protection package protects against mud and sticky materials, keeping power train components clean.



SERVICE CONVENIENCE

Simple, Cost-Effective Solutions

Service Centers – Fluid Fill

Save both time and money using the optional fluid fill service center. Fill and extraction for all fluids is done in one location. A keypad tells the operator current fluid levels and includes all oils, coolant, and fuel. Conveniently located at ground level, it is lighted for nighttime use.

Ground Level Access – Remote Switch Panel

Convenience of ground level access to Vital Information Management System (VIMS™) data, ET port, master disconnect switch, engine lockout switch, machine lockout switch, and breaker access.



COMFORT AND CONTROL

Front struts/king pin design provides absorption of haul-road shocks and tire alignment. Rear suspension cylinders are inverted to minimize contamination. Planetary powershift transmission with APECS controls delivers a smooth ride. New operator seat placement offers improved visibility and comfort. Steering is designed to give feedback to the operator, maintain steering tolerances, and tire alignment. New integrated hoist and transmission controls are of automotive shifting quality.



STRONG CONSTRUCTION

Castings and box section frame are designed for off-road integrity and more than one life cycle. New rear axle housing adds strength and enables axle filtration and lubrication.



UPDATED ENGINE

A new C32B engine has IFL in the heads, DSCP system, auto stall, and delayed engine shutdown for improved life. Ground level engine shutdown switch provides safe operation. Tier 2/Tier 4/Stage V emissions options are available with MEUI™ injectors for fuel efficiency and load response. Hydraulic oil filter life is extended to 1,000 hours under normal conditions.



HIGH PERFORMANCE

Traction control system (TCS) is more responsive and reduces tire wear in wet, sloped conditions. Fade resistant braking extends brake life. Brake wear indicator and wet disc braking are standard. Additional springs increase separation forces and brake life. Extend tire life by using the TKPH/TMPH feature that calculates tire loading. Road analysis control (RAC) monitors road conditions and impact to the frame. Auto lubrication option is available to lubricate the grease points. Oil renewal system helps improve the engine oil change intervals.

REAL-TIME INFORMATION WITH INTEGRATED TECHNOLOGIES

TAKES THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

Provide operators with vital machine information at the advisor display with software VIMS and MineStar™. Cat Link hardware (Product Link™) and VisionLink® software work together to put equipment information at your fingertips.*



PRODUCT LINK™/PRODUCT LINK ELITE HARDWARE

Track asset location, hours, fuel usage, diagnostic codes, idle time, and more to improve your productivity and lower your operating costs. Cellular connectivity comes standard.

New capabilities of the optional next generation Product Link Elite include expanded coverage with global GSM and CDMA 3G cellular support, lower latency satellite communication, and Cat Data Link integration.



VISIONLINK®

Using the online VisionLink interface, you can see a common, collective view of your information, making it easier to manage a mixed fleet and make informed decisions about your equipment.

HEALTH

Basic Health, when equipped with a Product Link radio, will report events, diagnostics, and equipment location through VisionLink. If the machine is equipped with Payload or Truck Production Management System, total daily production and cycles will also be reported. **Advance Health** provides historical trends, histograms, events, and more through a wired connection for off-board analysis in applications.



MY.CAT.COM

You can also access Caterpillar and Cat dealer information at my.cat.com. My.cat.com gives you access to PM schedules, parts and service records, warranty coverage, and more—with a single login. Plus, you can link directly to your VisionLink account.



MINESTAR™

Cat MineStar system is the industry's broadest, most comprehensively integrated mine operations and mobile equipment management system. Expanded capabilities cover surface and underground operations. All Cat 777 trucks are MineStar ready.

** Technology features are optional equipment. Refer to the standard/optional features segment or consult your Cat dealer for details.*

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENGINE – TIER 4 FINAL/STAGE V			
Engine Model	Cat® C32B		
Rated Engine Speed	1,800 rpm		
Gross Power – SAE J1995:2014	765 kW	1,025 hp	
Net Power – SAE J1349:2011, ISO 9249:2007	683 kW	916 hp	
Engine Power – ISO 14396:2002	752 kW	1,008 hp	
Net Torque @ 1,200 rpm	5044 N·m	3,720 lbf·ft	
Net Torque Rise	39%		
Cylinders	12		
Bore	145 mm	5.7 in	
Stroke	162 mm	6.4 in	
Displacement	32.1 L	1,959 in ³	

- Net power available at the flywheel when the engine is equipped with fan, air cleaner, aftertreatment, and alternator with engine speed at 1,800 rpm.
- Power rating applies at 1,800 rpm when tested under the specified condition for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- No engine derating required up to 2286 m (7,500 ft).
- Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

ENGINE – TIER 2 EQUIVALENT			
Engine Model	Cat C32B		
Rated Engine Speed	1,800 rpm		
Gross Power – SAE J1995:2014	765 kW	1,025 hp	
Net Power – SAE J1349:2011, ISO 9249:2007	704 kW	945 hp	
Engine Power – ISO 14396:2002	755 kW	1,012 hp	
Net Torque @ 1,200 rpm	5115 N·m	3,773 lbf·ft	
Net Torque Rise	37%		
Cylinders	12		
Bore	145 mm	5.7 in	
Stroke	162 mm	6.4 in	
Displacement	32.1 L	1,959 in ³	

- Net power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator with engine speed at 1,800 rpm.
- Power rating applies at 1,800 rpm when tested under the specified condition for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- No engine derating required up to 4572 m (15,000 ft).
- Equivalent to U.S. EPA Tier 2.

CAPACITY – 100% FILL FACTOR				
	Dual Slope		X Body	
Struck	41.9 m ³	54.8 yd ³	43.1 m ³	56.3 yd ³
Heaped (SAE 2:1)*	60.1 m ³	78.6 yd ³	64.1 m ³	83.8 yd ³

- Contact your local Cat dealer for body recommendation.
- * ISO 6483:1980

CAPACITY – COAL BODIES – 100% FILL FACTOR			
SAE 2:1 for use with material densities of 1160 kg/m ³ (1,950 lb/yd ³)	89.3 m ³	116.8 yd ³	
SAE 2:1 for use with material densities of 1040-1160 kg/m ³ (1,750-1,950 lb/yd ³)	106 m ³	139 yd ³	
SAE 2:1 for use with material densities of 950-1040 kg/m ³ (1,600-1,750 lb/yd ³)	110 m ³	144 yd ³	
SAE 2:1 for use with material densities less than 950 kg/m ³ (1,600 lb/yd ³)	125.9 m ³	164.6 yd ³	

TRANSMISSION					
Forward 1	10.7 km/h	6.6 mph	Forward 5	36.2 km/h	22.5 mph
Forward 2	14.6 km/h	9.1 mph	Forward 6	48.6 km/h	30.2 mph
Forward 3	19.2 km/h	11.9 mph	Forward 7	65.9 km/h	40.9 mph
Forward 4	26.7 km/h	16.6 mph	Reverse	12.1 km/h	7.5 mph

- Maximum travel speeds with standard 27.00R49 (E4) tires.

FINAL DRIVES	
Differential Ratio	2.736:1
Planetary Ratio	7.0:1
Total Reduction Ratio	19.1576:1

BRAKES			
Brake Surface – Front	40 846 cm ²	6,331 in ²	
Brake Surface – Rear	102 116 cm ²	15,828 in ²	
Brake Standards	ISO 3450:2011		

BODY HOISTS			
Pump Flow – High Idle	458 L/min	120.9 gal/min	
Relief Valve Setting – Raise	18 950 kPa	2,750 psi	
Relief Valve Setting – Lower	3450 kPa	500 psi	
Body Raise Time – High Idle	15.0 seconds		
Body Lower Time – Float	13.0 seconds		
Body Lower Time – High Idle	13.0 seconds		

SOUND	
Sound Standards	73 dB(A)

- The operator Equivalent Sound Pressure Level (Leq) is 73 dB(A) when SAE J1166:2008 is used to measure the value for an enclosed cab. This is a work cycle sound exposure level. The cab was properly installed and maintained. The test was conducted with the cab doors and the cab windows closed.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49 ft) according to the test procedures specified in SAE J88:2006, mid-gear moving operation is 83 dB(A).
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

STEERING		
Steering Standards	ISO 5010:2007	
Steer Angle	30.5°	
Turning Diameter – Front	25.3 m	83 ft
Turning Circle Clearance Diameter	28.4 m	93 ft

SERVICE REFILL CAPACITIES		
Fuel Tank	1136.0 L	300.0 gal
	1325.0 L	350.0 gal
Cooling System – Tier 4 Final	231.0 L	61.0 gal
Cooling System – Tier 2	219.0 L	57.9 gal
Crankcase	109.0 L	28.7 gal
Differentials	227.0 L	59.9 gal
Final Drives (each)	76.0 L	20.0 gal
Steering System (includes tank)	53.6 L	14.1 gal
Hoist and Brake Hydraulic System	444.0 L	117.0 gal
Front Wheels (each)	7.5 L	1.98 gal
Torque Converter/Transmission System	138.5 L	36.5 gal

STANDARD & OPTIONAL EQUIPMENT

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

POWER TRAIN	STANDARD	OPTIONAL
Air filter with precleaner (2)	•	
Air-to-Air Aftercooler (ATAAC)	•	
Automatic cold mode idle control	•	
Autostall	•	
Braking system: extended life brakes, brake wear indicator, Automatic Retarder Control (ARC) (utilizes oil-cooled, multiple disc brakes), brake release motor (towing), manual retarder (utilizes oil-cooled, multiple disc brakes), oil-cooled and multiple disc (front/rear), parking, secondary, service	•	
Cab precleaner		•
Cat® C32B engine (Tier 2/Tier 4/Stage V)	•	
Cat engine compression brake		•
Cold weather packages		•
Electric cold weather start (two starters and four batteries)	•	
Electric priming pump	•	
Engine Idle Shutdown	•	
Ether starting aid	•	
Transmission: 7-speed automatic powershift with Electronic Clutch Pressure Control (ECPC), Advanced Productivity Electronic Control Strategy (APECS software)	•	
Fan – variable speed (Tier 4)	•	
Fan – variable speed (Tier 2)		•
ELECTRICAL	STANDARD	OPTIONAL
Auxiliary jump start receptacle	•	
Batteries, maintenance-free, 12V (4), 200 amp-hour	•	
Electrical system, 25 amp, 24V to 12V converter	•	
LED lighting system	•	
TECHNOLOGY PRODUCTS	STANDARD	OPTIONAL
Adaptive Economy mode	•	
Advanced Health		•
Basic Health	•	
Object detection (2 cameras)	•	
Product Link™	•	
Road Analysis Control		•
Tons Kilometer Per Hour/Tons Mile Per Hour (TKPH/TMPH)		•

OPERATOR ENVIRONMENT	STANDARD	OPTIONAL
Advisor display (touchscreen)	•	
Air conditioning	•	
Auto temp control	•	
Diagnostic connection port, 24V	•	
Entertainment radio ready: 5 amp converter, speakers, antenna, wiring harness	•	
Gauges/indicators: brake oil temperature, coolant temperature, hour meter, tachometer, engine overspeed indicator, fuel level, speedometer with odometer, transmission gear indicator	•	
Load counter, automatic	•	
Mirrors, convex		•
Mirrors, heated	•	
Payload		•
ROPS cab, insulated/sound suppressed	•	
Seat, Cat Next Gen Deluxe – full air suspension, retractable 4-point seat belt with shoulder harness	•	
Truck Production Management System (TPMS)		•
Visibility package (meets ISO 5006:2017 requirements)		•
Wheel chocks		•
Window, right side, hinged access/egress	•	
Work Area Vision System (WAVS)		•
OTHER	STANDARD	OPTIONAL
Auto lube fittings		•
Body safety pin (secures body in up position)	•	
Body down indicator	•	
Body heat, liners, sideboards		•
Clustered grease fittings	•	
Engine sound suppression (XQ) – Tier 4 only		•
Fire suppression arrangement		•
Fluid fill service center		•
Fuel tank (1325 L)		•
Ground level: battery disconnect, engine shutdown, grease fittings	•	
Mud protection package		•
Oil renewal system		•
Rear Axle Filtration (RAX)		•
Traction Control System (TCS) (new version)		•
Wiggins fast fuel	•	

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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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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