

# 777

## OFF-HIGHWAY TRUCK



**Target Payload (100%)**  
**Engine Model**  
**Top Speed - Loaded**

98.2 t (108.3 ton (US))  
Cat® C32B  
67.1 km/h (41.7 mile/h)



# THE CAT<sup>®</sup> 777

The Cat<sup>®</sup> 777 Off-Highway Truck delivers exceptional performance, increased fuel efficiency, advanced transmission controls, and enhanced cabin comfort. It is engineered for durability and designed to minimize total ownership costs.



## ENHANCED OPERATOR COMFORT

Integrated hoist and transmission controls, expanded rear visibility to the work area, and simplified operator interface with touchscreen display.

## INCREASED FUEL EFFICIENCY

Partial throttle shifting, adjustable economy mode/adaptive economy mode, and auto neutral idle.

## IMPROVED PERFORMANCE AND DURABILITY

Increased torque, hydraulic actuated brakes, and responsive Advanced Productivity Control System (APECS) Transmission controls.

# BOOST FUEL EFFICIENCY



## FUEL-SAVING ADAPTIVE MODES

Adaptive economy mode optimizes engine efficiency on steady grades, level ground, and steady state conditions, reducing power and fuel consumption. Operators can choose automatic adaptive Eco mode or driver-controlled configurable mode. Forced Economy mode configuration is available based on application needs.

## SAVE MORE WITH IDLE CONTROL AND AUTO STALL

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. Auto stall automatically warms up the system to bring the machine to operating temperature soon, reducing fuel consumption/emissions.

## 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

# ACHIEVE GREATER PRODUCTIVITY



Smart new design features increase the productivity of the 777.

## INCREASE IN TORQUE

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APECS allows the engine and transmission to communicate on a high level. This allows the machine to better utilize engine power and increased torque. The net result? You move more material.

## BETTER BRAKE ACTUATION FOR SUPERIOR PERFORMANCE

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A hydraulically actuated brake system delivers superior braking, improves brake component life, and reduces maintenance costs.

## TRANSMISSION CONTROLS THAT BOOST EFFICIENCY

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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. A machine speed limit feature runs the machine at an optimal gear for the selected speed.

## VARIOUS BODY OPTIONS FOR PAYLOAD EFFICIENCY

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Different body options with liners and sideboard combinations provides the versatility for moving various types of materials, while maintaining payload efficiency.

## INTEGRATED SHIFTER FOR EASIER CONTROL

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The new next generation gearshift lever has integrated hoist and parking brake controls for ease of operation.

## EXPANDED REAR VISIBILITY

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A redesigned interior gives you better visibility, including expanded rear visibility with a new, improved mirror package on both sides of the machine.

## SMOOTH RIDE

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The Cat comfort seat uses full air suspension to smooth rough rides. A visual and audio warning is provided to the operator when the retractable four-point seat belt with a shoulder harness is not in use. The 777's suspension system is also designed for a superior ride.

## SIMPLIFIED TOUCHSCREEN

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The operator interface has been simplified and now features an improved touchscreen display. This upgraded feature enables smooth navigation through machine control systems during both operation and maintenance tasks.

## SUPERIOR LIGHTING

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

## REDUCE FATIGUE

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The operator station interior is ergonomically designed for total machine control in a comfortable, productive, and safe environment. All controls, levers, switches, and gauges are positioned to maximize productivity and minimize operator fatigue.



## BUILT WITH SAFETY IN MIND SAFETY FEATURES



### A CAB BUILT TO PROTECT

The sturdy four-point mounted cabin features laminated safety glass, four-point harness with visual and audio alerts, and emergency egress through the right side door. Rollover and falling object protection is an extension of the truck frame. A trainer seat with a lap belt allows for easy and safe on-the-job training.

### GROUND LEVEL LOCKOUTS PROTECT PERSONNEL

The 777 is equipped with ground-level engine and machine lockout controls, helping service technicians perform maintenance work on the machine safely.

### SAFE ENTRY AND EGRESS

The integrated access ladder system and all access platforms are equipped with handrails designed for three points of contact at all times. Aggressive tread plate is installed on all step areas with illuminated access for night operation.

### TECHNOLOGY ENSURES SAFE OPERATION

Transmission controls impose gear limiting during body up operations. If the primary hydraulic steering fails, a secondary battery-powered system automatically gets activated to ensure safe operation. If the truck is overloaded, an automatic overspeed limiter reduces the machine speed.

LOWERING OPERATING COSTS

# DURABILITY AND LONG LIFE

## A PROTECTED AND ENHANCED POWERTRAIN

New C32B engine with integrated fuel lines (IFL) cylinder heads, dual sensor coolant protection (DSCP) system, delayed engine shutdown (DES), and engine low oil level sensor features improve the engine life. The APECS transmission system, with its smoother shifting and advanced controls, and transmission/torque converter low oil level sensor improve powertrain component 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, but it's also highly durable itself, with solid steel spindles and other components engineered for long life.

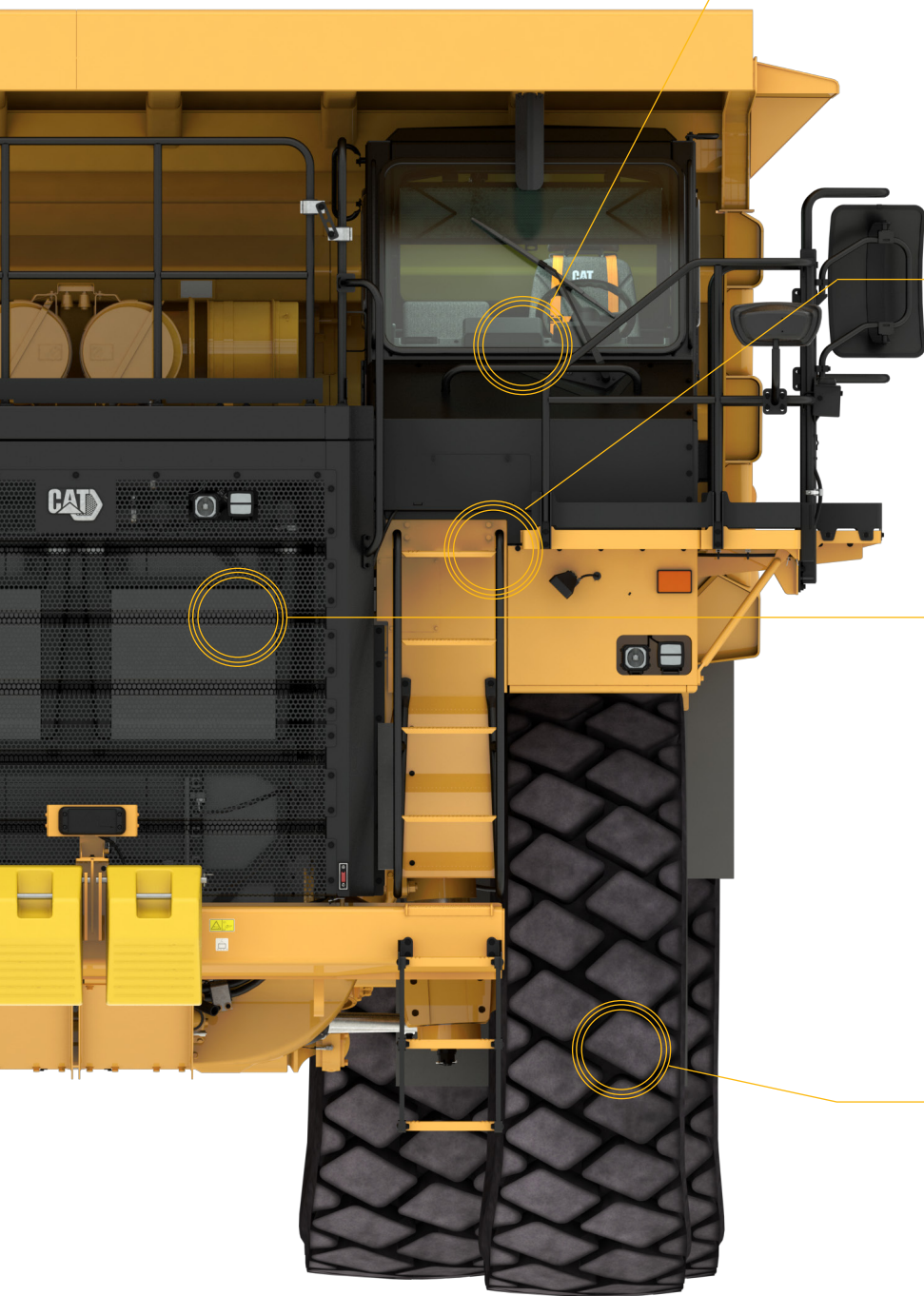
## CAT TECHNOLOGIES

Integrated technologies such as Product Link™, Vital Information Management System (VIMS™), and truck payload management system (TPMS) give you all the data you need to make the most of your investment. Easily monitor location, hours, fuel use, cycle times, diagnostic codes, and more.

## EASIER SERVICE

Easy access to daily service points, convenient filters, and fluid refill reduce time spent on regular maintenance procedures. Ground-level lockouts and breaker access make pre-service safety procedures quick and easy. The open frame design reduces removal and replacement time for major components.





## COMFORT AND CONTROL

Kingpin front suspension absorbs shocks and maintains steering tolerances and tire alignment. Ride is improved with smoother APECS powershift transmission. Front and rear visibility is increased by an improved cab and redesigned mirror package. Air suspension seat adjusts to operator weight. Four-point seat belt has six adjustment points for optimum fit and comfort.



## STRONG CONSTRUCTION

Castings and box section frame are designed for off-road integrity and more than one lifecycle. Inverted rear suspension cylinders minimize contamination, and solid steel spindles have longer life.



## UPDATED ENGINE

Improved Cat C32B engine delivers 10 hp more power and 7% more torque, which provides better rim-pull and speed on grades. Equipped with ground-level engine shutdown switch and Mechanically Actuated Electronic Unit Injection (MEUI™) for greater fuel efficiency and load response. Emits equivalent to U.S. EPA Tier 2 and saves fuel with dual economy modes. B30 bio-diesel compatible.



## HIGH PERFORMANCE

Improved traction control system (TCS) is more responsive and reduces tire wear in wet, sloped conditions. New hydraulic brakes improve braking performance and require less maintenance. Automatic retarder control and speed limiting reduce brake wear and cycle time while increasing fuel efficiency. Tonne kilometer per hour/ton miles per hour (KPH/TMPH) feature calculates tire loading and helps extend tire life (optional equipment).

# REAL-TIME INFORMATION WITH INTEGRATED TECHNOLOGIES

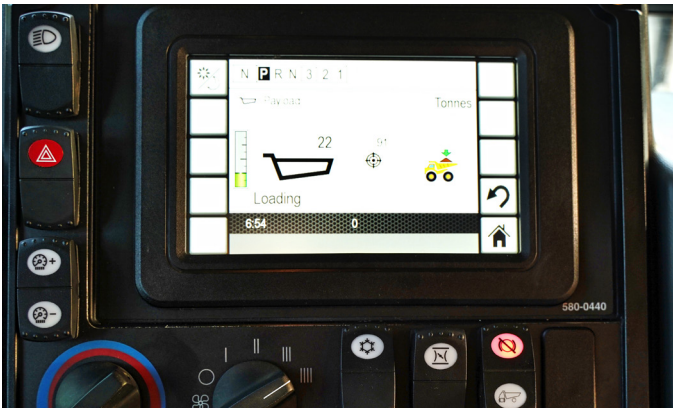
## TAKES THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

The Cat truck production management system (TPMS), Vital Information Management System (VIMS™), Cat Link hardware (Product Link) and my.cat.com put vital equipment information at your fingertips.\*



### **PRODUCT LINK™/PRODUCT LINK ELITE HARDWARE**

Remotely 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. Satellite connectivity is available.



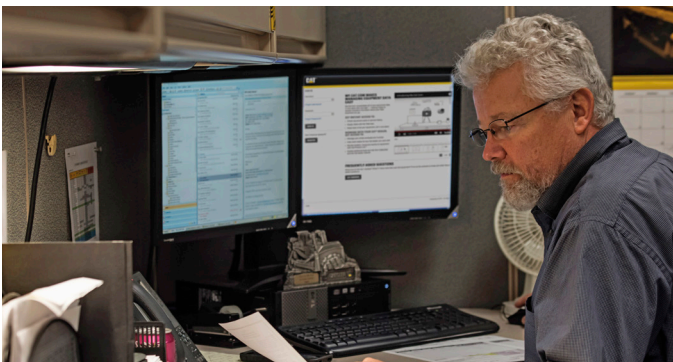
### **VITAL INFORMATION MANAGEMENT SYSTEM (VIMS™)**

Proactively manage machine health and production. This user-friendly interface monitor is available in the cabin and allows operators to monitor real-time machine performance and operating data. Access diagnostics, prognostic trends, and production information such as payload, haul cycle times, segment times, and fuel usage.

### **TRUCK PRODUCTION MANAGEMENT SYSTEM (TPMS)**

Using onboard sensors, the TPMS clearly indicates overloading/underloading to the operator. Carry out a detailed analysis on payload carried, cycle segment times, and fuel burned to improve overall efficiency.

In addition, the tonne kilometer per hour/ton miles per hour (TKPH/TMPH) monitoring system monitors payload, speed, and ambient temperature to calculate the best operating conditions for the truck's tires and warns the operator when those parameters are exceeded.



### **MY.CAT.COM**

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

# TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENGINE		
Engine Model	Cat® C32B	
Gross Power – SAE J1995	765 kW	1,026 hp
Net Power – SAE J1349	711 kW	953 hp
Peak Torque @ 1,200 rpm	5130 N·m	3,784 lbf·ft
Net Torque Rise	36%	
Number of Cylinders	12	
Bore	145 mm	5.7 in
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in³
Emissions Option 1	Noncertified configuration that is equivalent to U.S. EPA Tier 2. Meets China Nonroad Stage III emission standards.	
Emissions Option 2		

- 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 J1995:2011 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 3048 m (10,000 ft).

OPERATING SPECIFICATIONS		
Target Payload (100%)	98.2 t	108.3 ton (US)
Top Speed - Loaded	67.1 km/h	41.7 mile/h
Maximum Working Payload (110%)	108 032 kg	238,170 lbs
Not to Exceed Payload (120%)	117 853 kg	259,822 lbs

- Empty Operating weights may vary based on the machine configuration.
- Capacity with dual slope body without liner.
- Refer to Caterpillar 10/10/20 Payload Policy for maximum gross vehicleweight limitations.

OPERATING WEIGHTS		
Target Gross Machine Weight	163 360 kg	360,147 lbs
Body Weight, Dual Slope	16 070 kg	35,428 lbs
Body Weight, Flat Floor	15 907 kg	35,069 lbs
Empty Operating Weight, Dual Slope	65 149 kg	143,629 lbs
Empty Operating Weight, Flat Floor	64 987 kg	143,272 lbs
Target Payload, Dual Slope	98 211 kg	216,518 lbs
Target Payload, Flat Floor	98 373 kg	216,875 lbs

\*Empty operating weights may vary based on the machine configuration.

BODY CAPACITIES		
Struck (Dual Slope)	41.9 m³	54.8 yd³
Heaped Volume (Dual Slope), SAE 2:1	60.1 m³	78.6 yd³
Struck (Flat Floor)	43.1 m³	56.4 yd³
Heaped Volume (Flat Floor), SAE 2:1	64.1 m³	83.8 yd³

\*Contact your local Cat dealer for body options

TRANSMISSION					
Forward 1	10.9 km/h	6.8 mph	Forward 5	36.8 km/h	22.9 mph
Forward 2	14.8 km/h	9.2 mph	Forward 6	49.4 km/h	30.7 mph
Forward 3	20.1 km/h	12.5 mph	Forward 7	67.1 km/h	41.7 mph
Forward 4	27.1 km/h	16.9 mph	Reverse	12.1 km/h	7.5 mph

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

WEIGHT DISTRIBUTION – APPROXIMATE	
Dual Slope	
Front Axle, Empty/Loaded	46%/30%
Rear Axle, Empty/Loaded	54%/70%
Flat Floor	
Front Axle, Empty/Loaded	45%/28%
Rear Axle, Empty/Loaded	55%/72%

FINAL DRIVE	
Differential Ratio	2.74:1
Planetary Ratio	7.00:1
Total Reduction Ratio	19.16:1

BRAKES		
Brake Surface – Front dry	2787 cm²	432 in²
Brake Surface – Rear	102 116 cm²	15,828 in²
Brake Surface – Front wet (optional)	40 225 cm²	6,235 in²
Brake Standard	ISO 3450:2011	

BODY HOISTS	
Body Raise Time – High Idle	15 seconds
Body Lower Time – Float	13 seconds
Body Lower Time – High Idle	13 seconds

SOUND	
Sound Standards	ISO 6396:2008
<ul style="list-style-type: none"> <li>• The dynamic operator sound pressure level is 80 dB(A) as per ISO 6396:2008 for cab offered by Caterpillar. The cab was properly installed and maintained. The test was conducted with the cab doors and the cab windows closed.</li> </ul>	

CAB	
Rollover Protective Structure (ROPS)/Falling Objects Protective Structure (FOPS)	ROPS meets ISO 3471:2008 for operator and ISO 13459:2012 for trainer. FOPS meets ISO 3449:2005 Level II for operator and ISO 13459:2012 Level II for trainer.

TIRES	
Standard Tire 27.00R49 (E4)	
<ul style="list-style-type: none"> <li>• Productive capabilities of the 777 truck are such that, under certain job conditions, tons miles/kilometers per hour (TMPH/TKPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.</li> <li>• Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.</li> </ul>	

STEERING		
Steering Standards	ISO 5010:2019	
Steer Angle	30.5°	
Turning Diameter – Front	25.3 m	83 ft
Turning Circle Clearance Diameter	28.4 m	93 ft

SUSPENSION		
Effective Cylinder Stroke – Front	318 mm	12.5 in
Effective Cylinder Stroke – Rear	165 mm	6.5 in
Rear Axle Oscillation	± 5.4°	

# TECHNICAL SPECIFICATIONS

See [cat.com](http://cat.com) for complete specifications.

SERVICE REFILL CAPACITIES		
Fuel Tank	1140 L	300 gal
Cooling System	212 L	56 gal
Crankcase	115 L	30 gal
Differentials	222 L	59 gal
Final Drives (each)	42 L	11 gal
Steering System	60 L	16 gal
Brake/Hoist System	420 L	110 gal
Torque Converter/Transmission System	125 L	33 gal
Front wheel (each)	7.5 L	2 gal

DIMENSIONS (APPROXIMATE) - DUAL SLOPE		
Overall Front Tire Width	4961 mm	16.28 ft
Engine Guard Clearance	864 mm	2.83 ft
Inside Body Width	5197 mm	17.05 ft
Centerline Front Tire Width	4163 mm	13.66 ft
Inside Body Length	6920 mm	21.54 ft
Outside Body Width	5524 mm	18.12 ft
Height - Top of ROPS - Loaded	4730 mm	15.51 ft
Rear Axle - Clearance	902 mm	2.95 ft
Centerline of Rear Dual Tire Width	3576 mm	11.73 ft
Inside Body Depth - Maximum	1895 mm	6.21 ft
Overall Canopy Width	6200 mm	19.87 ft
Overall Height - Body Raised	9953 mm	33 ft
Overall Body Length	9555 mm	31.35 ft
Front Canopy Height - Loaded	5177 mm	17 ft
Operating Width	6545 mm	21.47 ft
Ground Clearance	896 mm	2.93 ft
Operating Width - Extended Catwalk	6545 mm	21.47 ft
Loading Height - Empty	4380 mm	14.37 ft
Rear Axle - Tail	3045 mm	10 ft
Overall Tire Width	5262 mm	17.26 ft
Dump Clearance	890 mm	2.91 ft
Overall Length	10 004 mm	32.82 ft
Wheel Base	4570 mm	14.99 ft

# STANDARD & OPTIONAL EQUIPMENT

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

POWERTRAIN	STANDARD	OPTIONAL
Auto electric fuel priming pump	•	
Biodiesel compatibility, B30	•	
Brake release motor (towing)	•	
Braking system: Oil cooled multiple disc (rear) and caliper disc (front), hydraulically applied & spring released	•	
Cat® C32B engine	•	
Cat transmission: 7F/1R speed planetary powershift, ECPC control, APECS software, programmable top, gear/speed selection, body upshift inhibitor, directional shift management, neutral start switch, neutral coast inhibitor, reverse shift inhibitor, reverse neutralizer during dump, 2 <sup>nd</sup> gear movement	•	
Economy mode/Adaptive Economy mode	•	
Emergency/parking brake, spring applied and hydraulically released	•	
Engine overspeed protection	•	
Retarder control – manual	•	
Water/fuel separator	•	
Front oil cooled disc brake		•
Retarder control – automatic		•
Traction control system		•
OPERATOR ENVIRONMENT	STANDARD	OPTIONAL
Advisor, touchscreen display	•	
Ash tray	•	
Coat hook	•	
Combined gearshift/hoist/park break lever	•	
Cup/bottle holder	•	
Diagnostic connection port	•	
Horn electric	•	
HVAC	•	
Liquid crystal display (LCD), cluster gauge: Brake oil temperature, transmission oil temperature, engine coolant temperature, hour meter, tachometer, fuel level gauge, speedometer	•	
Left-side power window	•	
Mirrors, left and right	•	
Radio ready	•	
Right-side access door	•	
ROPS/FOPS cabin	•	
Seat, trainer with lap belt	•	
Seats: operator – fully adjustable, air suspension, 4-point seat belt with reminder	•	
Storage compartment	•	
Sun visor	•	
Switches: Throttle lock, wipers/washers, hazard lights, headlights, secondary steering, back light adjust, AC on/off, spare, Economy mode, egress lamp, Product Link disconnect	•	
Tilt and telescopic steering wheel	•	
Heated mirror		•

ELECTRICAL SYSTEM	STANDARD	OPTIONAL
Access system lights, LED	•	
Alternator, 150 A	•	
Auxiliary jump start receptacle	•	
Backup alarm	•	
Backup light, LED	•	
Directional Signal/hazard warning lights, Front and rear, LED	•	
Electrical system, 10 A, 24V to 12V converter	•	
Four batteries, 12V, 190 amp-hour	•	
Ground-level battery disconnect switch	•	
Ground-level engine shutdown switch	•	
Headlights with dimmer, LED	•	
Operator courtesy lights, LED	•	
Stop/taillights, LED	•	
Product Link™	•	
Switch, engine lockout	•	
Switch, machine lockout	•	
Two starter motors	•	
Audio visual backup alarm		•
Camera system		•
Cat Detect system		•
Fog lamp		•
Truck payload management system (TPMS)		•
Vital Information Management System (VIMS™)		•
OTHER	STANDARD	OPTIONAL
Body down indicator	•	
Body mounting group	•	
Body safety pin	•	
Driveline guard	•	
Engine crankcase guard	•	
Exhaust body heat system	•	
Extended life coolant to -35°C (-30°F)	•	
Ground-level grease fittings	•	
Hydropneumatic suspension	•	
Load counter	•	
Rock ejectors	•	
Tie down eyes/tow down hooks	•	
Vandalism protection lock	•	
Automatic lubrication system (27 kg/40 kg)		•
Body liner		•
Body sideboards		•
Cluster/grouped lubrication system		•
Cold weather package		•
Exhaust muffler		•
Fast fluid fill system		•
Fast fuel fill system		•
Fire extinguisher		•
High speed engine oil change system		•
Hydraulic power port		•
Wheel chocks		•







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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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[www.cat.com](http://www.cat.com) [www.caterpillar.com](http://www.caterpillar.com)

AEXQ3081-04 (03-2025)  
Replaces AEXQ3081-03  
Build Number: 05B  
(Afr-ME, Eurasia, Pacific  
Islands, SE Asia, S Am)

