Cat® 798 AC
Mining Truck

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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798 AC Mining Truck Specifications

Engine

Engine Model	Cat® C175-16	
Gross Power – SAE J1995:2014	2610 kW	3,500 hp
Net Power – SAE J1349:2011	2539 kW	3,405 hp
Rated Speed	1,800 rpm	
Emissions Rating	Fuel Optimized	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	85 L	5,187 in^3

- Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator.
- U.S. EPA Tier 4 Final/EU Stage V available for applicable markets.
- Additional fuel optimized selectable power rating: 2312 kW/3,100 hp.

Engine – High Altitude Only

Engine Model	Cat C175-20	
Gross Power – SAE J1995:2014	3095 kW	4,150 hp
	2983 kW	4,000 hp
	2759 kW	3,700 hp
Net Power – SAE J1349:2011	3019 kW	4,049 hp
	2916 kW	3,911 hp
	2706 kW	3,629 hp
Rated Speed	1,750 rpm	
Emissions Rating	Fuel Optimized	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	106 L	6469 in^3

- Gross power advertised is the power available at the flywheel when the engine is equipped with muffler and auxiliary water pump.
- Net Power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler, auxiliary water pump, and fan at minimum required cooling capacity.
- Additional fuel optimized selectable power rating: 2983 kW/4,000 hp.
- Additional fuel optimized selectable power rating: 2759 kW/3,700 hp.

Weights – Approximate

Rated Gross Machine Weight (RGMW)	623 690 kg	1,375,000 lb
Chassis Weight (CW)	205 852 kg	453,826 lb
Body Weight (BW)	38 833 – 43 275 kg	85,611 – 95,406 lb
Nominal Rated Payload (NRP)	372 tonnes	410 tons
Nominal Rated Payload (NRP) High Altitude Arrangement	363 tonnes	400 tons

- Consult your tire manufacturer for maximum tire load.
- Chassis weight with full fuel and fluids, standard and mandatory attachments, hoist, body mounting group, rims, and tires.
- Refer to Cat Mining Truck 10/10/20 Overload Policy (AEXQ0250) for maximum gross machine weight limitations.

Weight Distributions – Approximate

Front Axle – Empty	47 %
Rear Axle – Empty	53 %
Front Axle – Loaded	33 %
Rear Axle – Loaded	67 %

- Weight distributions optimized with Cat body.

AC Drive System

Total Reduction Ratio	35:1	
Top Speed – Loaded	64 km/h	40 mph
Generator/Alternator	Cat brushless, engine mounted, dual bearing	
Controls	Cat Insulated-Gate Bipolar Trasnsistor (IGBT) Inverter Technology, air cooled, pressurized cabinet with filtration	
Wheel Motor	Cat high-torque AC induction, rear axle mounted	
Cooling System	Cat variable speed, hydraulically driven cooling system	

Tires and Rims

59/80 R63

Rims – 1117.6 mm (44 in) wide × 1600.2 mm (63 in) diameter

- Quick Change Rims optional.
- Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and Tonne Kilometres Per Hour (TKPH) Ton-Miles Per Hour (TMPH) capabilities.

Braking System

Service Brakes: Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated

Front Wet Disc Brake Surface Area	146 081 cm^2	22,642 in^2
Rear Wet Disc Brake Surface Area	211 163 cm^2	32,730 in^2
Standards (Service and Secondary)	ISO 3450:2011	

Parking Brake: Four-corner, Multi-disc, Spring applied, Hydraulically Released

Load Brake – Rear service brakes		
Dynamic Resistive Braking (retarding) Power – Continuous	4086 kW	5,480 hp

- Anti-Lock Brake System (ABS) optional with CMD package

Capacity – HE Body – 100% fill factor

Struck	129-200 m^3	168-261 yd^3
Heaped (SAE 2:1)	218-276 m^3	285-361 yd^3

- Consult your local Cat dealer for body recommendations.

Body Hoists

Twin, two-stage hydraulic cylinders with snubbing valve.		
Pump Flow – High Idle	964 L/min	257.3 gal/min
Relief Valve Setting – Raise	20 884 kPa	3,029 psi
Body Raise Time – High Idle	21 Seconds	
Body Lower Time – Float	22 Seconds	
Body Power Down – High Idle	17.5 Seconds	

- Twin, two-stage hydraulic cylinders mounted outside main frame; double-acting cylinders in both stages.
- Power raise in both stages; power down capability in the first stage.
- Automatic body-lower modulation reduces impact on frame.

Suspension

Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top and bottom double shear clevis attachments.		
Effective Cylinder Stroke – Front	254 mm	10 in
Effective Cylinder Stroke – Rear	133.35 mm	5 in
Rear Axle Oscillation	± 5.32 degrees	

Service Refill Capacities

Fuel Tank	4922 L	1,300 gal
Fuel Tank (U.S. EPA Tier 4 Final/ EU Stage V)	4542 L	1,200 gal
Diesel Exhaust Fluid (DEF) Tank	379 L	100 gal
Cooling System	799 L	211 gal
Crankcase	310 L	82 gal
Front Wheels, each	28 L	7 gal
Final Drives, each	254 L	67 gal
Hydraulic Tank	1121 L	296 gal
Hydraulic System (includes tank)	1458 L	385 gal
Grease Tank Capacity	41 kg	90 lb

Service Refill Capacities – High Altitude Only

Fuel Tank	7571 L	2,000 gal
Cooling System	1032 L	273 gal
Crankcase	471 L	124 gal
Hydraulic Tank	1032 L	273 gal
Hydraulic System (includes tank)	1296 L	342 gal

Cab

Air Conditioning (HFC – 134A refrigerant)	6.33 kW	21,600 Btu/hr
Ambient capabilities up to 50° C (122° F)		
Heater/Defroster	7.2 kW	24,600 Btu/hr
Ambient capabilities down to –15° C (5° F)		
Operator Sound pressure level Measured in accordance to ISO 6394 and 6396:2008	75 dB(A)	
Rollover Protective Structure (ROPS) for:		
Operator meets	ISO 3471:2008	
Trainer meets	ISO 13459:2012	
Falling Objects Protective Structure (FOPS) for:		
Operator meets	ISO 3449:2005 Level II	
Trainer meets	ISO 13459:2012 Level II	

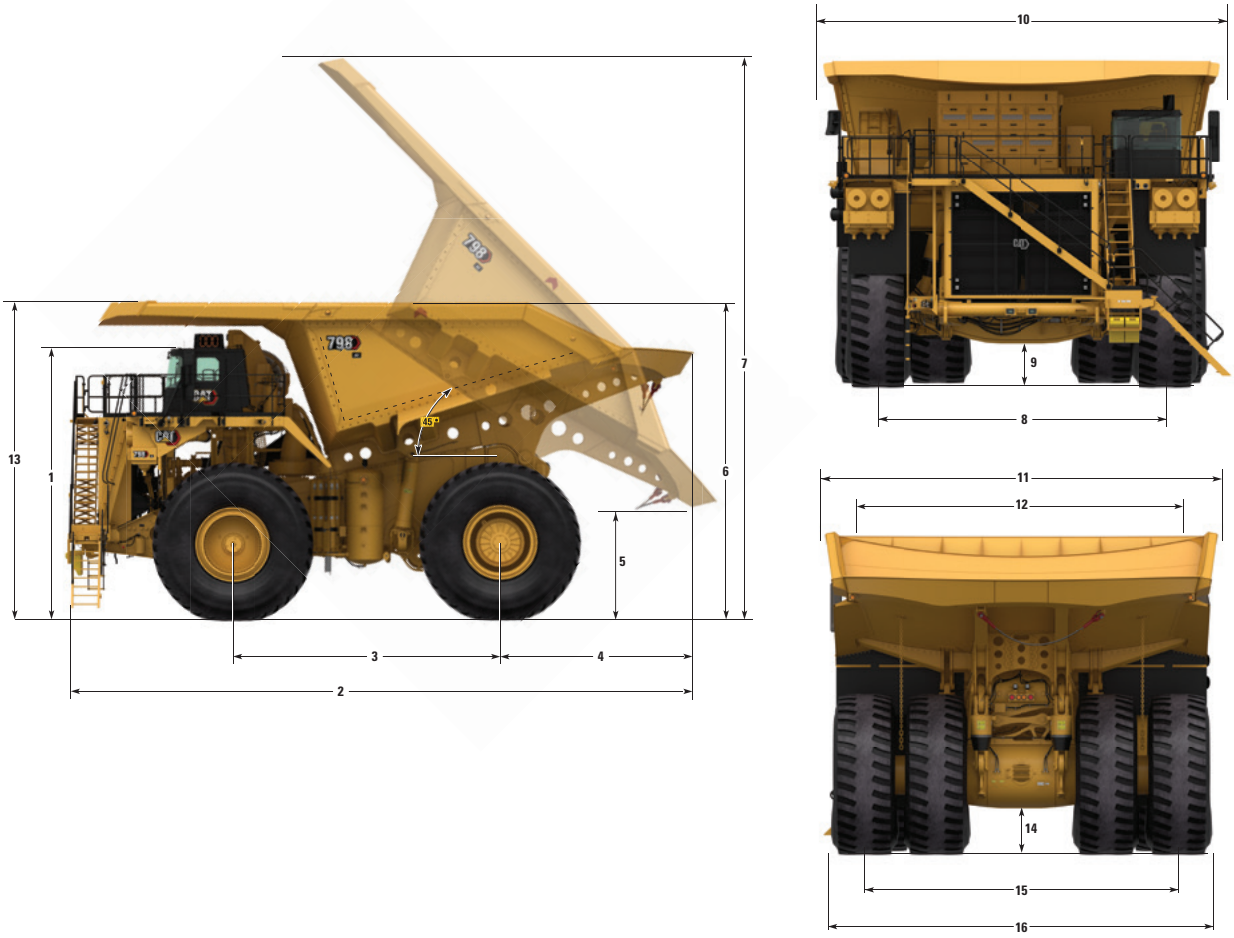
Steering

Steer Angle	39 degrees	
Turning Diameter (ISO 7457:1997)	32.4 m	106.3 ft
Steering Standards	ISO 5010:2007	

798 AC Mining Truck Specifications

Dimensions

All dimensions are approximate. Shown with 276 m³ (361 yd³) HE Body.



1	Height to Top of ROPS	6720 mm	22'1"
2	Overall Length Overall length (High Altitude only)	15 679 mm 15 810 mm	51'5" 51'10"
3	Wheelbase	6674 mm	21'11"
4	Rear Axle to Tail	4898 mm	16'1"
5	Dump Clearance – Empty	1744 mm	5'9"
6	Loading Height – Empty	7784 mm	25'7"
7	Overall Height – Body Raised	14 890 mm	48'10"
8	Centerline Front Tire Width	7028 mm	23'1"
9	Front Axle Clearance – Loaded	855 mm	2'10"
10	Overall Canopy Width (with rock deflectors)*	10 103 mm	33'2"
11	Outside Body/Canopy Width (without rock deflectors)	9639 mm	31'8"
12	Inside Body Width	8973 mm	29'5"
13	Front Canopy Height – Empty	7928 mm	26'0"
14	Rear Axle Clearance – Loaded	854 mm	2'10"
15	Centerline Rear Dual Tire Width	5943 mm	19'6"
16	Overall Tire Width – Empty	9226 mm	30'3"

*Dimension listed includes canopy deflectors (not pictured)

Gradeability/Speed/Rimpull*

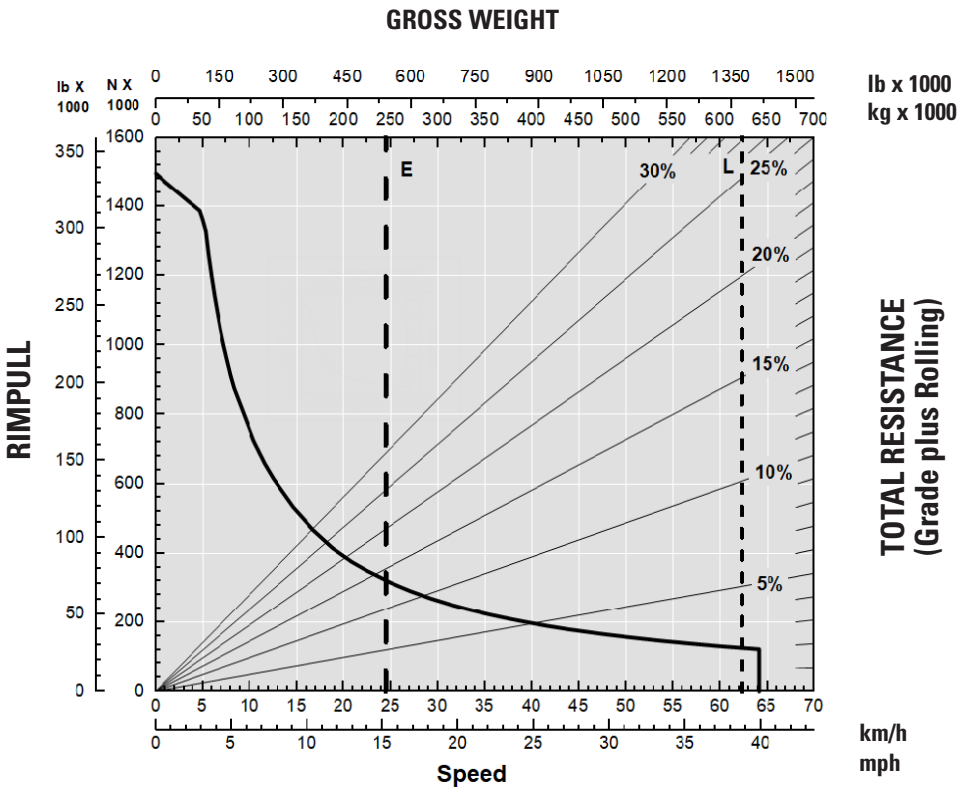
To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. Usable rimpull will depend upon traction available and weight on drive wheels.

***At sea level, 30° C (86° F), with 59/80 R63 tires**

— — — **E – Nominal Empty Machine Weight**

– – – – – – **L – Rated Gross Machine Weight 623 690 (1,375,000)**

Contact factory for performance estimates based upon site specific temperatures and altitudes.



Gradeability/Speed/Rimpull* for High Altitude

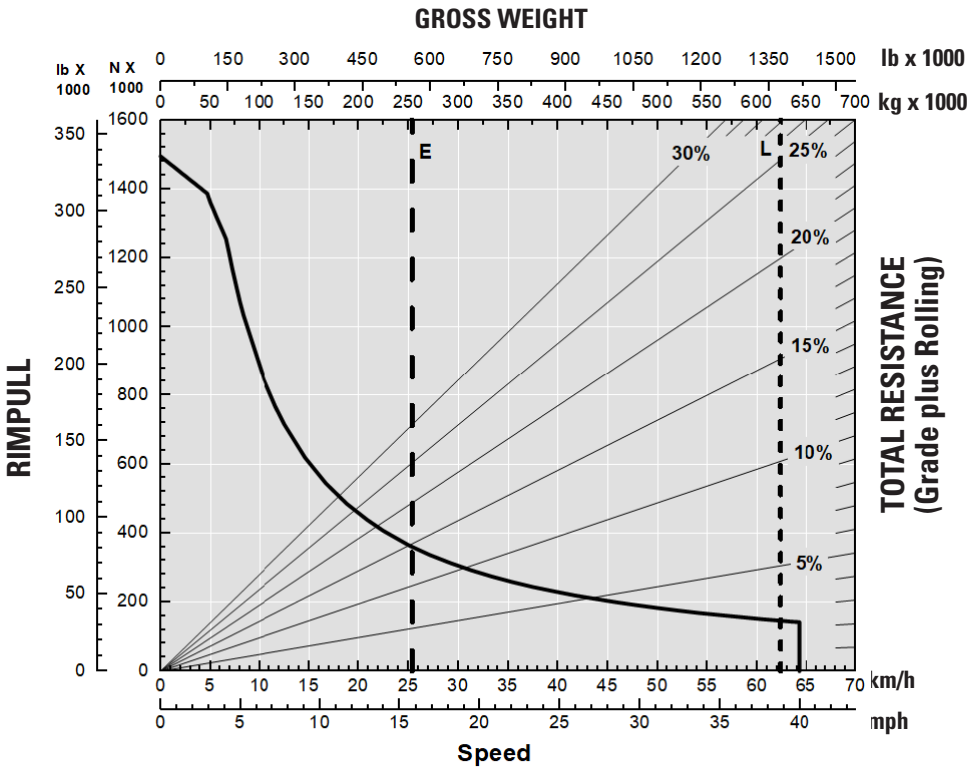
To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. Usable rimpull will depend upon traction available and weight on drive wheels.

***At sea level, 30° C (86° F), with 59/80 R63 tires. The 798 AC in High Altitude Configuration has full power up to 4,876 m (16,000 ft). Therefore, this chart is representative of all high altitude mine sites.**

— — — **E – Nominal Empty Machine Weight**

– – – – – – **L – Rated Gross Machine Weight 623 690 (1,375,000)**

Contact factory for performance estimates based upon site specific temperatures and altitudes.



Resistive Braking Performance – Continuous Grade*

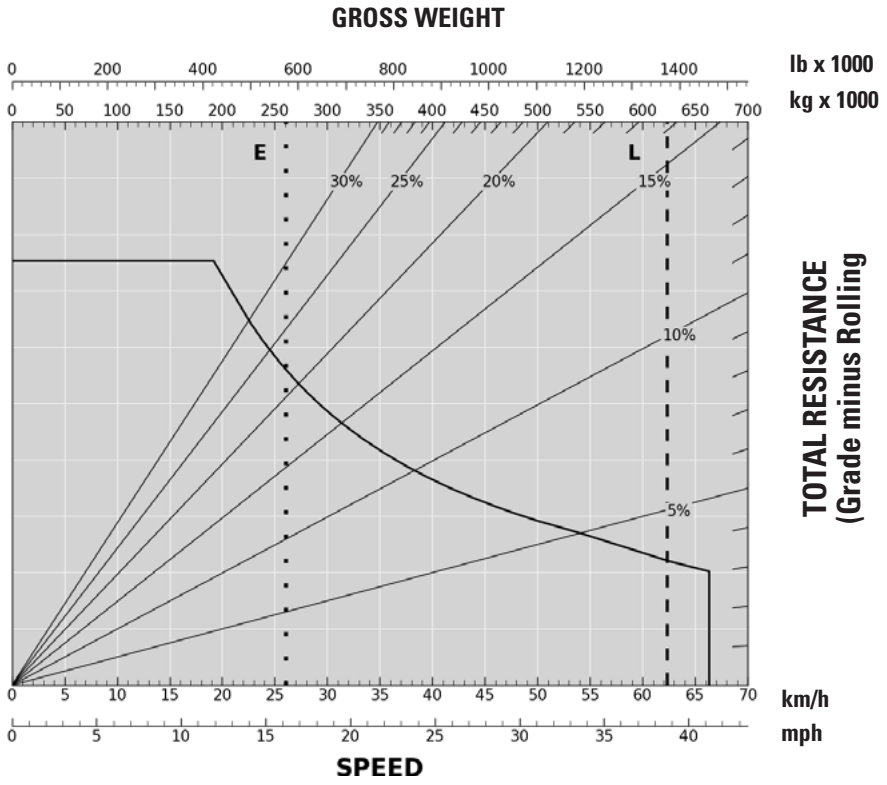
To determine resistive braking performance: Read from gross weight down to the percent effective grade. Effective grade equals % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance.

***At sea level, 30° C (86° F), with 59/80 R63 tires**

— — — **E – Nominal Empty Machine Weight**

– – – – – – **L – Rated Gross Machine Weight 623 690 (1,375,000)**

Contact factory for performance estimates based upon site specific temperatures and altitudes.



Standard and Optional Equipment

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

	Standard	Optional
POWER TRAIN		
Cat C175-16 Diesel Engine:		
2610 kW (3,500 hp) Fuel Optimized, (available for applicable markets)	✓	
2610 kW (3,500 hp) U.S. EPA Tier 4 Final/EU Stage V (available for applicable markets)	✓	
– Turbocharging (4)/Aftercooled (ATAAC)	✓	
Cat C175-20 Diesel Engine (High Altitude only):		
3095 kW (4,150 hp) Fuel Optimized (available for applicable markets)	✓	
2759 kW (3,700 hp) Fuel Optimized (available for applicable markets)		✓
2983 kW (4,000 hp) power setting, Fuel Optimized (available for applicable markets)		✓
– Turbocharging (8)/Aftercooled (ATAAC)	✓	
Cat C175 Engine All of these options are standard with the C175 regardless of cylinder count		
– Centrifugal oil filter	✓	
– Self-cleaning oil filter	✓	
– Charging Alternator (225 amp), brushless	✓	
– Pre-lubrication/engine	✓	
– Air cleaner with pre-cleaner (4)	✓	
– Multi-point oil pressure sensing	✓	
– Exhaust – Muffler, Right Side Exit	✓	
– Exhaust – Body Heat		✓
Braking System:		
– Electric dynamic resistive braking with blended low speed	✓	
– Oil-cooled, Multi-disc (front and rear) – Service, Parking, Secondary	✓	
– Load Brake (rear axle only)	✓	
– Extended Life Brake Disc Material	✓	
– Automatic Resistor Control (ARC)	✓	
– Brake wear indicators (Front and Rear)		✓
– Anti-Lock Braking System (with Command for Hauling)		✓

	Standard	Optional
POWER TRAIN *(continued)*		
Cat AC Drivetrain:		
– AC generator	✓	
– AC induction motors (high-torque)	✓	
– IGBT motor control	✓	
– Radial retarding grid with AC motor control	✓	
– Programmable top speed	✓	
– TorqueBoost technology	✓	
– Traction control system	✓	
Directional Shift Management:		
– Body-up reverse neutralizer	✓	
– Body-up shift inhibitor	✓	
– Reverse shift inhibitor	✓	
– Neutral coast inhibitor	✓	
OPERATION AND CONTROLS		
Integrated ROPS/FOPS cab, insulated/sound suppressed	✓	
Seat, operator, air suspension, adjustable, heated/cooled	✓	
Seatbelt, operator, three-point with visual and audible reminder	✓	
Seatbelt, status alert, exterior beacon for visual confirmation to site personnel		✓
Seat belt compliance log available with Product Link™-equipped machines	✓	
Seat, trainer, air suspension, adjustable	✓	
Seatbelt, trainer, two point	✓	
Steering wheel, tilt, telescopic, horn	✓	
Horn, electric	✓	
Directional shift lever	✓	
Resistive braking and oil-cooled brake control, single pedal	✓	
Automatic Resistor Control (ARC) toggle switch	✓	
Load brake switch	✓	
Windshield, three-piece, with tinted/safety glass	✓	
Window, electric powered, operator/passenger	✓	
Windshield Wipers (2), intermittent control and washer	✓	
Visor (2)	✓	

(continued on next page)

Standard and Optional Equipment *(continued)*

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

	Standard	Optional
OPERATION AND CONTROLS *(continued)*		
Storage rear of seats	✓	
Cup holder (2)	✓	
Dome courtesy light	✓	
Entertainment radio ready with speakers and wiring harnesses	✓	
Converter, 12V	✓	
12V DC power supply (1)	✓	
Throttle lock		✓
Timer, engine shutdown		✓
Tier 4 Final – Delayed Engine Shutdown (DES) Standard, Lesser Regulated Countries (LRC)/ High Altitude Arrangement (HAA) – Engine Shutdown Timer		
Mirrors, standard (Left-Flat, Right-Convex)	✓	
Heated mirrors (Left and Right)		✓
Fixed access ladder, left hand ground access	✓	
Powered access ladder, left hand ground access		✓
Fixed access ladder, right hand ground access (High Altitude only)	✓	
Powered access ladder, right hand ground access (High Altitude only)		✓
Secondary egress ladder shield	✓	
HVAC:		
– Cab air filtration MERV 16 filter	✓	
– Cab air filtration Cyclonic Pre-cleaner plus MERV 16 filter; also able to add HEPA filter, odor reducing filter, or ABEK filter to remove gases and vapors		✓
– Pressurized, filtered environment	✓	
– Air conditioner	✓	
– Heater/defroster	✓	
Metric or English gauges:		
– Speedometer	✓	
– Tachometer	✓	
– Electric hour meter	✓	
– Fuel level	✓	
– DEF level (U.S. EPA Tier 4 Final/ EU Stage V engines only)	✓	
– Hydraulic oil temperature	✓	
– Engine coolant temperature	✓	
Service and Information:		
– Diagnostic connection port	✓	
– Electric engine control fault indicator	✓	
– Alarm, Park brake/open operator door	✓	
– Third party telematics port	✓	
– VIMS message center advisor	✓	
– Language monitors		✓

	Standard	Optional
ELECTRICAL		
Audible Alarm, backup	✓	
Electrical system, 24V with fuses and breakers	✓	
Batteries, 12V (8) 90 amp hour	✓	
Ground level Battery charge receptacle	✓	
Lighting, signals/service:		
– Headlights (4 low beam, 4 high beam), LED	✓	
– Headlights (4 low beam, 2 high beam, 2 fog lights), LED (High Altitude only)	✓	
– Backup and marker/hazard, LED	✓	
– Directional signals (front and rear), LED	✓	
– Front stair access/service deck, LED	✓	
– Stop/tail and resistive braking lights, LED	✓	
– Engine compartment, LED	✓	
– Inverter energy warning lights, LED	✓	
– Fog lights, LED		✓
– Fog lights, LED High Altitude	✓	
– Work lights, LED		✓
– Side profile lights, LED		✓
– Dump body marker/stop lights, LED		✓
Resistive braking indicator light, multi color: Amber – Resistive Braking Green – Parking Brake Red – Service Brake		✓
Payload indicator, red/green	✓	
Payload, digital display		✓

(continued on next page)

Standard and Optional Equipment *(continued)*

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

	Standard	Optional
ADDITIONAL FEATURES AND EQUIPMENT		
Accumulators (Steering and Brake) – Australian and Canadian certified	✓	
Automatic lubrication system	✓	
Rotating component guards	✓	
Mud Flaps	✓	
Portable fire extinguisher		✓
Tow hooks and pins (front)	✓	
Tow pin (rear) (empty truck only)	✓	
Front bumper single-point center tow		✓
Front bumper single-point center tow, (High Altitude only)	✓	
Wheel chocks (ANSI and ISO)		✓
44 x 63 rims, six position (6)		✓
44 x 63 rims, quick change (2 quick change, 4 standard)		✓
Fueling:		
– 4922 L (1,300 gal) fuel tank (16 cyl only)	✓	
– 4543 L (1,200 gal) fuel tank (U.S. EPA Tier 4 Final/EU Stage V engines only)	✓	
– 7571L (2,000 gal) fuel tank		
– (High Altitude only)	✓	
– 379 L (100 gallon) DEF tank (U.S. EPA Tier 4 Final/EU Stage V engines only)	✓	
– Fuel filter with water separator	✓	
– 210 GPM Fast fill fuel system (Left and Right)	✓	
– 300 GPM Fast fill fuel system (Left and Right)		✓
Service:		
– Engine service platforms (2)	✓	
– Inverter platform (rear access)		✓
– ANSI or ISO service instructions	✓	
– Scheduled Oil Sampling (S·O·S℠) sample points (hydraulic oil, engine coolant, engine oil)	✓	
– Service Center, fast-fill		✓
– Autolube reservior, platform level or ground level	✓	
– Machine lockout, ground level (battery)	✓	
– Engine shut-down, ground level	✓	
– Drivetrain lockout, ground level	✓	
– Engine start lockout, ground level	✓	
– Auxiliary “buddy” dumping quick connect	✓	
– Auxiliary steering quick connect (towing)	✓	
– Jumpstart Receptacle on bumper, dedicated 24V on High Altitude Arrangement	✓	

	Standard	Optional
ANTIFREEZE		
Cat® Extended Life Coolant (ELC) protects to –35°C (–30° F)	✓	
Antifreeze/coolant protects to –50° C (–58° F)		✓
CAT TECHNOLOGY PRODUCTS		
Cat® MineStar™ Detect (Radar and Camera) System	✓	
Cat® MineStar™ Detect (Camera Only) System		✓
Driver Safety System		✓
Product Link™ Elite (Cellular)	✓	
Product Link™ Elite (Satellite)		✓
Cat MineStar™ Health		✓
Cat MineStar™ Fleet		✓
Cat MineStar™ Terrain		✓
Cat MineStar™ Command-Ready		✓
Cat MineStar™ Command		✓
DUMP BODY		
High Efficiency (HE) body, 218-276 m^3 (285-361 yd^3)	✓	
HE Body Mounting Group	✓	
HE rock box liner		✓
HE canopy rock deflectors		✓
HE rear tire rock deflectors		✓
HE impact liner		✓
Rock ejectors (chain)	✓	
Rock ejectors (solid bar)		✓
Canopy Extension		✓
Synthetic body cable		✓

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

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

AEXQ3749 (09-2024)
Build Number: 798 AC (01A)
798 AC HAA (02A)
(Global)