

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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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 Optin	nized
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 4,000 hp 2983 kW 3,700 hp 2759 kW 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 Ontimized**

Linissions Rating	Tuel 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

High Altitude Arrangement

• 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 3450:20	11
Parking Brake: Four-corner, Multi-dise Hydraulically Released	c, Spring appli	ed,
Load Brake – Rear service brakes		
Dynamic Resistive Braking (retarding) Power – Continuous	4086 kW	5,480 hp
A set I and Desiler Construct (ADC) and in	1	

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	\pm 5.32 degree	es

Service Refill Capacities

Fuel Tank	4922 L	1,300 gal
Fuel Tank (U.S. EPA Tier 4 Final/	4542 L	1,200 gal
EU Stage V)		
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

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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 (12	22° 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 639	75 dB(A) 4 and 6396:2008	
Rollover Protective Structure (ROPS	S) for:	
Operator meets	ISO 3471:200)8
Trainer meets	ISO 13459:20	012
Falling Objects Protective Structure	(FOPS) for:	
Operator meets	ISO 3449:200)5 Level II
Trainer meets	ISO 13459:20)12 Level II
Steering		
Steer Angle	39 degrees	
Turning Diameter (ISO 7457:1997)	32.4 m	106.3 ft
Steering Standards	ISO 5010:201	19

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	15 679 mm	51'5"
Overall length (High Altitude only)	15 810 mm	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.



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.



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.



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Standard and Optional Equipment

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

	Standard	Optional		Standard	Optiona
POWER TRAIN			POWER TRAIN (continued)		
Cat C175-16 Diesel Engine:			Cat AC Drivetrain:		
2610 kW (3,500 hp) Fuel Optimized,	\checkmark		– AC generator	\checkmark	
(available for applicable markets)			- AC induction motors (high-torque)	\checkmark	
2610 kW (3,500 hp) U.S. EPA Tier 4 Final/EU Stage V (available for	\checkmark		– IGBT motor control	\checkmark	
applicable markets)			- Radial retarding grid with AC motor control	√	
- Turbocharging (4)/Aftercooled (ATAAC)	\checkmark		- Programmable top speed	\checkmark	
Cat C175-20 Diesel Engine			- TorqueBoost technology	\checkmark	
(High Altitude only):			– Traction control system	✓	
3095 kW (4,150 hp) Fuel Optimized	✓		Directional Shift Management:		
(available for applicable markets)			– Body-up reverse neutralizer	\checkmark	
2759 kW (3,700 hp) Fuel Optimized		\checkmark	– Body-up shift inhibitor	\checkmark	
(available for applicable markets)			– Reverse shift inhibitor	\checkmark	
2983 kW (4,000 hp) power setting, Fuel Optimized (available for		\checkmark	- Neutral coast inhibitor	√	
applicable markets)			OPERATION AND CONTROLS		
- Turbocharging (8)/Aftercooled (ATAAC)	✓		Integrated ROPS/FOPS cab, insulated/sound suppressed	√	
Cat C175 Engine All of these options are standard with			Seat, operator, air suspension, adjustable, heated/cooled	\checkmark	
the C175 regardless of cylinder count – Centrifugal oil filter	✓		Seatbelt, operator, three-point with visual and audible reminder	\checkmark	
	✓ ✓		Seatbelt, status alert, exterior beacon for		✓
- Self-cleaning oil filter	✓ ✓		visual confirmation to site personnel		v
- Charging Alternator (225 amp), brushless	-		Seat belt compliance log available with Product Link [™] -equipped machines	\checkmark	
- Pre-lubrication/engine	✓		Seat, trainer, air suspension, adjustable	✓	
- Air cleaner with pre-cleaner (4)	✓		Seatbelt, trainer, two point	 ✓	
- Multi-point oil pressure sensing	√		Steering wheel, tilt, telescopic, horn	 ✓	
– Exhaust – Muffler, Right Side Exit	\checkmark		Horn, electric	 ✓	
– Exhaust – Body Heat		\checkmark	Directional shift lever	 ✓	
Braking System:			Resistive braking and oil-cooled brake	 ✓	
 Electric dynamic resistive braking with blended low speed 	\checkmark		control, single pedal		
 Oil-cooled, Multi-disc (front and rear) – Service, Parking, Secondary 	√		Automatic Resistor Control (ARC) toggle switch	√	
– Load Brake (rear axle only)	✓		Load brake switch	\checkmark	
- Extended Life Brake Disc Material	√		Windshield, three-piece, with tinted/safety glass	\checkmark	
Automatic Resistor Control (ARC)Brake wear indicators (Front and Rear)	√	\checkmark	Window, electric powered, operator/passenger	√	
- Anti-Lock Braking System (with Command for Hauling)		\checkmark	Windshield Wipers (2), intermittent control and washer	\checkmark	
			Vices (2)	/	

Visor (2)

(continued on next page)

 \checkmark

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	\checkmark	
Cup holder (2)	\checkmark	
Dome courtesy light	\checkmark	
Entertainment radio ready with speakers	\checkmark	
and wiring harnesses		
Converter, 12V	\checkmark	
12V DC power supply (1)	\checkmark	
Throttle lock		✓
Timer, engine shutdown		\checkmark
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		\checkmark
ground access (High Altitude only)		
Secondary egress ladder shield	\checkmark	
HVAC:		
- Cab air filtration MERV 16 filter	\checkmark	
- Cab air filtration Cyclonic Pre-cleaner		\checkmark
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	\checkmark	
– Alarm, Park brake/open operator door	\checkmark	
- Third party telematics port	✓	
- VIMS message center advisor	✓	
– Language monitors		\checkmark
0		

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

(continued on next page)

Standard and Optional Equipment (continued)

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

DDITIONAL FEATURES AND EQUIPMENT					Optional
			ANTIFREEZE		
Accumulators (Steering and Brake) – Australian and Canadian certified	\checkmark		Cat [®] Extended Life Coolant (ELC) protects to -35°C (-30° F)	\checkmark	
Automatic lubrication system	\checkmark		Antifreeze/coolant protects to		\checkmark
Rotating component guards	\checkmark		–50° C (–58° F)		
Mud Flaps	\checkmark		CAT TECHNOLOGY PRODUCTS		
Portable fire extinguisher		\checkmark	Cat [®] MineStar [™] Detect	\checkmark	
Tow hooks and pins (front)	\checkmark		(Radar and Camera) System Cat [®] MineStar™ Detect		/
Tow pin (rear) (empty truck only)	\checkmark		(Camera Only) System		v
Front bumper single-point center tow		\checkmark	Driver Safety System		√
Front bumper single-point center tow,	\checkmark		Product Link TM Elite (Cellular)	✓	
(High Altitude only)			Product Link TM Elite (Satellite)		✓
Wheel chocks (ANSI and ISO)		✓	Cat MineStar TM Health		
44 x 63 rims, six position (6)		✓	Cat MineStar TM Fleet		· ·
44 x 63 rims, quick change (2 quick change, 4 standard)		\checkmark	Cat MineStar TM Terrain		· ·
(2 quick change, 4 standard) Fueling:			Cat MineStar [™] Command-Ready		• •
– 4922 L (1,300 gal) fuel tank (16 cyl only)	✓		Cat MineStar™ Command		•
	 ✓		DUMP BODY		v
– 4543 L (1,200 gal) fuel tank (U.S. EPA Tier 4 Final/EU Stage V	v		High Efficiency (HE) body,	✓	
engines only)			$218-276 \text{ m}^3 (285-361 \text{ yd}^3)$	v	
- 7571L (2,000 gal) fuel tank			HE Body Mounting Group	✓	
- (High Altitude only)	\checkmark		HE rock box liner		✓
– 379 L (100 gallon) DEF tank	\checkmark		HE canopy rock deflectors		✓
(U.S. EPA Tier 4 Final/EU Stage V			HE rear tire rock deflectors		✓
engines only)			HE impact liner		✓
- Fuel filter with water separator	✓ ✓		Rock ejectors (chain)	✓	
 – 210 GPM Fast fill fuel system (Left and Right) 	\checkmark		Rock ejectors (solid bar)		~
- 300 GPM Fast fill fuel system		\checkmark	Canopy Extension		\checkmark
(Left and Right)			Synthetic body cable		~
Service:			5		
- Engine service platforms (2)	\checkmark				
– Inverter platform (rear access)		\checkmark			
- ANSI or ISO service instructions	\checkmark				
- Scheduled Oil Sampling (S·O·S SM) sample points (hydraulic oil, engine coolant, engine oil)	\checkmark				
- 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	~				

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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