



# CAT<sup>®</sup> 794 AC

## MINING TRUCK

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### UP TO 8% BETTER PAYLOAD

- + Designed to deliver a true 297 tonnes (327 tons)
- + Lower empty weight
- + Higher-rated gross machine weight (GMW)
- + Higher-rated field payload than competitors

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### BETTER PRODUCTIVITY AND LOWER COST PER TON

- + Faster speed on grade at any given power setting
- + Lowest cost per ton – configurable to match application
- + Ability to haul on max 28% grade (Gradeability)
- + Product health, performance monitoring and diagnostics

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### 100% SINGLE SOURCE FROM CATERPILLAR

- + Designed, validated, and built by Caterpillar
- + Integrated systems and controls provide superior performance
  - Throttle response, slow speed controls
  - Responsive maneuvering and turning
- + Parts commonality with other Cat<sup>®</sup> trucks

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### BEST IN CLASS RETARDING AND BRAKING

- + 34% more continuous retarding power
- + Four corner wet disc brakes, with automatic slack adjusters
- + Blended service brakes with retarding for traction control
- + Slow speed blended retarding for positive stopping

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### SERVICEABILITY AND LOWER MAINTENANCE

- + Modular design for easier removal and installation
  - Engine and dual bearing drive alternator can be serviced separately, eliminating shimming
  - Modular wheel motors and final drives enable service on individual components
  - Sealed and pressurized inverter cabinet requires no cleaning, eliminating recurring maintenance
- + Ground level service access with grouped service points
- + Service platform around engine, generator, and inverter for safety and convenience
- + Extended component lives and filter change interval

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### PROVEN IN THE FIELD AND WORKING AROUND THE WORLD

- + Variety of applications and ores
  - Soft rock, hard rock, deep pit, and flat haul
  - Low altitude, high altitude, high ambient, and cold weather
  - Noncertified, Tier 2 equivalent, and Tier 4 emissions
- + Operating worldwide – 4 Continents, 9 Countries

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### RELIABLE CUSTOMER SUPPORT

- + World-class customer support with Cat dealer network
- + Parts availability and commonality
- + Technical training
- + Customer Value Agreements (CVA)



# 794 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 <sup>3</sup>

- Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator.
- Fuel optimized selectable power ratings: 2312 kW/3,100 hp; 2051 kW/2,750 hp.
- U.S. EPA Tier 4 Final/EU Stage V available for applicable markets. with additional 3688 kW/2,750 hp selectable power rating.
- High Altitude Engine Configuration option available with additional 2312 kW/3,100 hp selectable power rating.

## Weights – Approximate

Rated Gross Machine Weight (RGMW)	521 631 kg	1,150,000 lb
Chassis Weight (CW)	193 338 kg	426,237 lb
Body Weight (BW)	29 187 kg	64,346 lb
Nominal Rated Payload (NRP)	297 tonnes	327 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	49%
Rear Axle – Empty	51%
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	60 km/h	37 mph
Generator/Alternator	Cat brushless, engine mounted, dual bearing	
Controls	Cat Insulated-Gate Bipolar Transistor (IGBT) Inverter Technology, air cooled, pressurized cabinet with filtration	
Wheel Motor	Cat AC induction, rear axle mounted	
Cooling System	Cat variable speed, hydraulically driven cooling system	

## Tires and Rims

53/80 R63

36" × 63" Rims

- 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	131 473 cm <sup>2</sup>	20,378 in <sup>2</sup>
Rear Wet Disc Brake Surface Area	198 388 cm <sup>2</sup>	30,750 in <sup>2</sup>
Standards (Service and Secondary)	ISO 3450:2011	
Parking Brake: Four-corner, Multi-disc, Spring applied, Hydraulically Released		
Load Brake – Rear service brakes		
Dynamic Retarding Power – Continuous	4086 kw	5,480 hp

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## Capacity – HE Body - 100% fill factor

Struck	108–133 m <sup>3</sup>	142–175 yd <sup>3</sup>
Heaped (SAE 2:1)	180–222 m <sup>3</sup>	236–290 yd <sup>3</sup>

- Consult your local Cat dealer for body recommendations.

## Body Hoists

Twin, two-stage hydraulic cylinders with snubbing valve.

Pump Flow – High Idle	910 L/min	240 gal/min
Relief Valve Setting – Raise	20 884 kPa	3,029 psi
Body Raise Time – High Idle	23.5 Seconds	
Body Lower Time – Float	21.4 Seconds	
Body Power Down – High Idle	17.5 Seconds	

- Twin, two-stage hydraulic cylinders mounted inside main frame; double-acting cylinders in both stages.
- Power raise in both stages; power down in both stages possible.
- 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	102.1 mm	4 in
Effective Cylinder Stroke – Rear	50.5 mm	2 in
Rear Axle Oscillation	± 5.32 degrees	

## Service Refill Capacities

Fuel Tank	4922 L	1,300 gal
Fuel Tank (Tier 4)	3785 L	1,000 gal
Diesel Exhaust Fluid (DEF) Tank (Tier 4)	378 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

## Cab

Air Conditioning (HFC – 134A refrigerant) 21,600 Btu/hr

Heater/Defroster 24,600 Btu/hr

- Ambient capabilities down to –30°C (–22°F) for heater/defroster and up to 50°C (122°F) for air conditioning.
- The operator sound pressure level, 75 dB(A), complies with ISO 6394 and ISO 6396.
- Rollover Protective Structure (ROPS) meets ISO 3471:2008 criteria for operator and ISO 13459:2012 for trainer.
- Falling Objects Protective Structure (FOPS) meets ISO 3449:2005 Level II for operator and ISO 13459:2012 Level II for trainer.

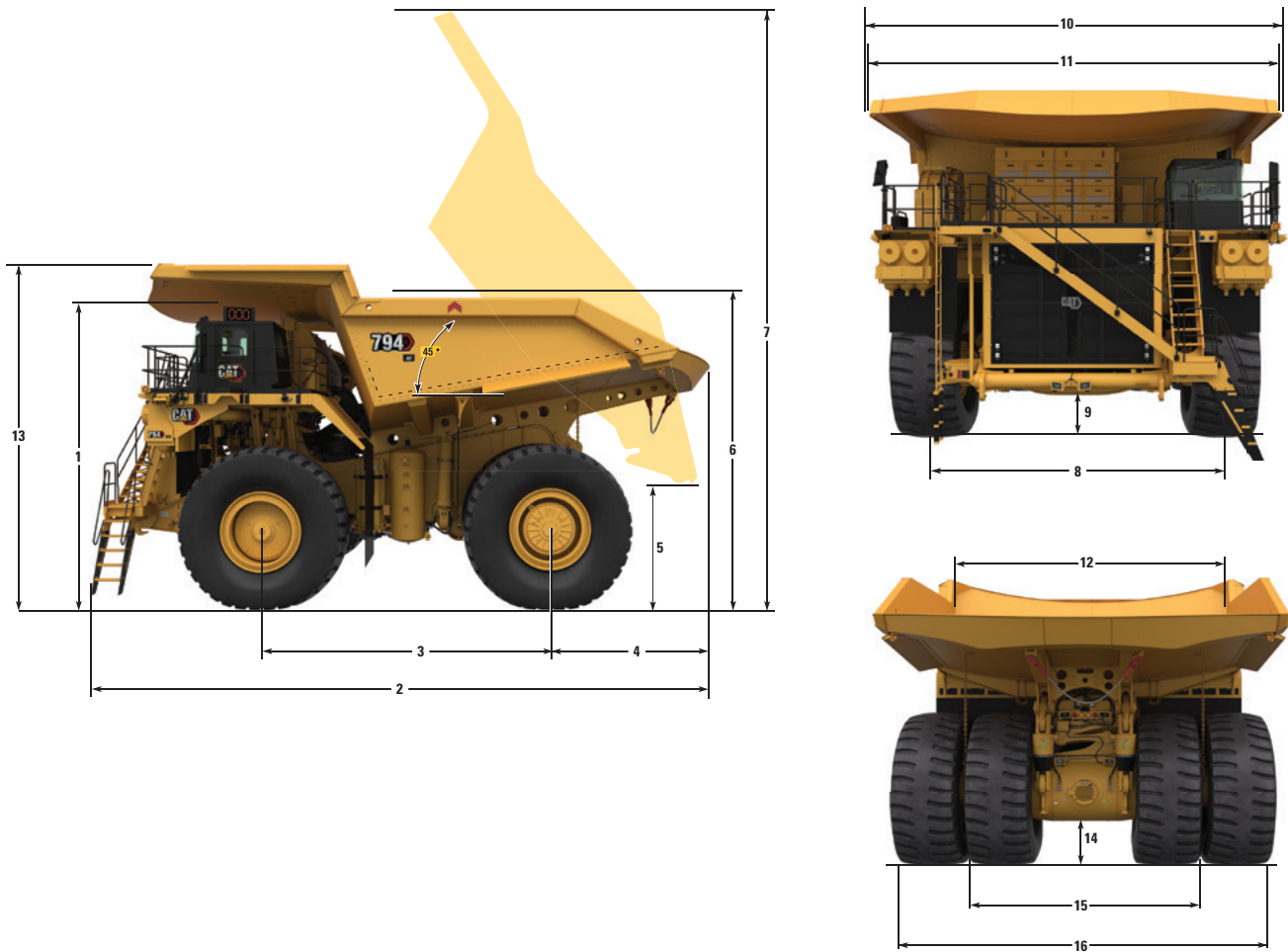
## Steering

Steer Angle	39 degrees	
Turning Diameter (ISO 7457:2009)	32.4 m	106.3 ft
Steering Standards	ISO 5010:2007	

# 794 AC Mining Truck Specifications

## Dimensions

All dimensions are approximate. Shown with 193.6 m<sup>3</sup> (253 yd<sup>3</sup>) High Efficiency (HE) Body.

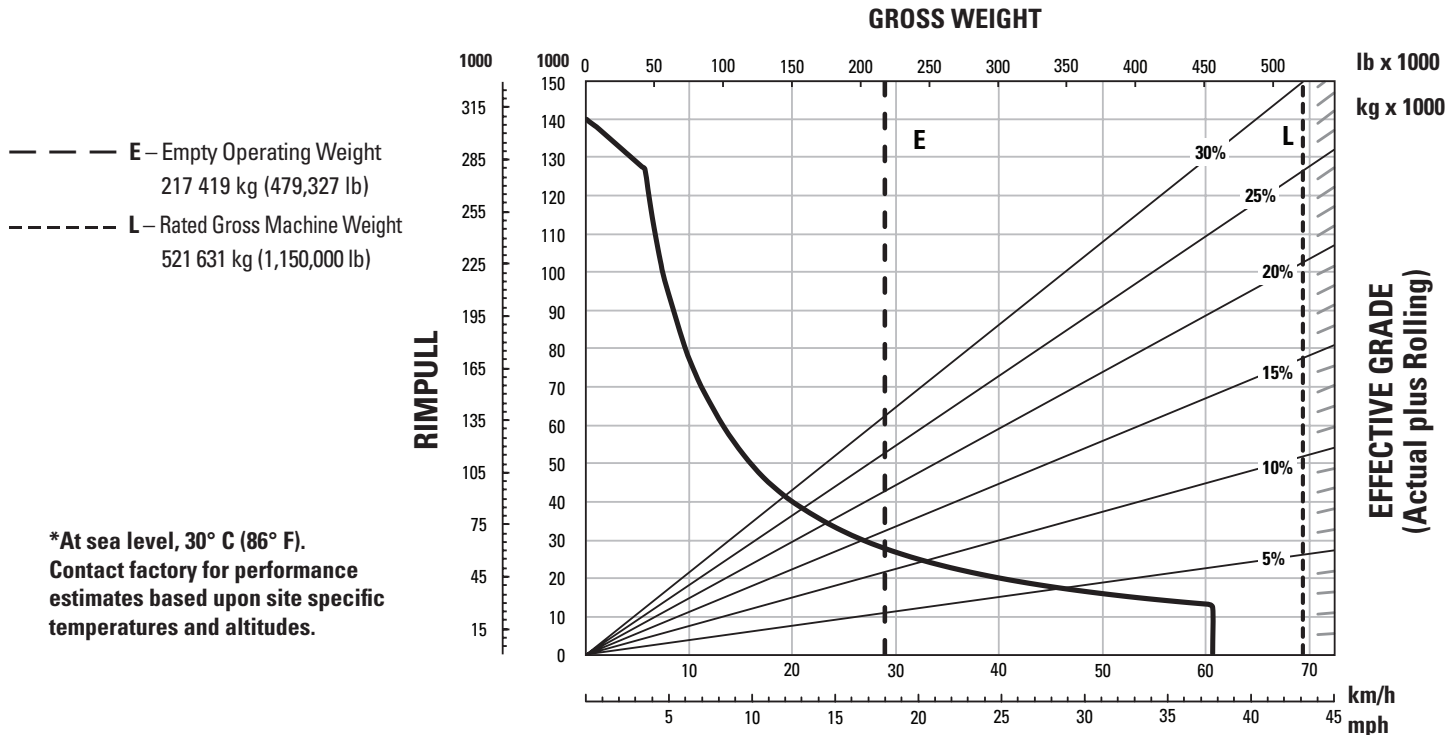


1	Height to Top of ROPS	6779 mm	22'3"
2	Overall Length	15 464 mm	50'9"
3	Wheelbase	6645 mm	21'10"
4	Rear Axle to Tail	4716 mm	15'6"
5	Dump Clearance	1516 mm	5'
6	Loading Height – Empty	6607 mm	21'8"
7	Overall Height – Body Raised	14 621 mm	48'
8	Centerline Front Tire Width	7024 mm	23'1"
9	Front Axle Clearance	969 mm	3'2"
10	Overall Canopy Width (with rock deflectors)	9611 mm	31'6"
11	Outside Body/Canopy Width	9072 mm	29'9"
12	Inside Body Width	8560 mm	28'1"
13	Front Canopy Height	8024 mm	25'8"
14	Rear Axle Clearance	934 mm	3'1"
15	Centerline Rear Dual Tire Width	5727 mm	18'10"
16	Overall Tire Width	8738 mm	28'8"

# 794 AC Mining Truck Specifications

## Gradeability/Speed/Rimpull\*

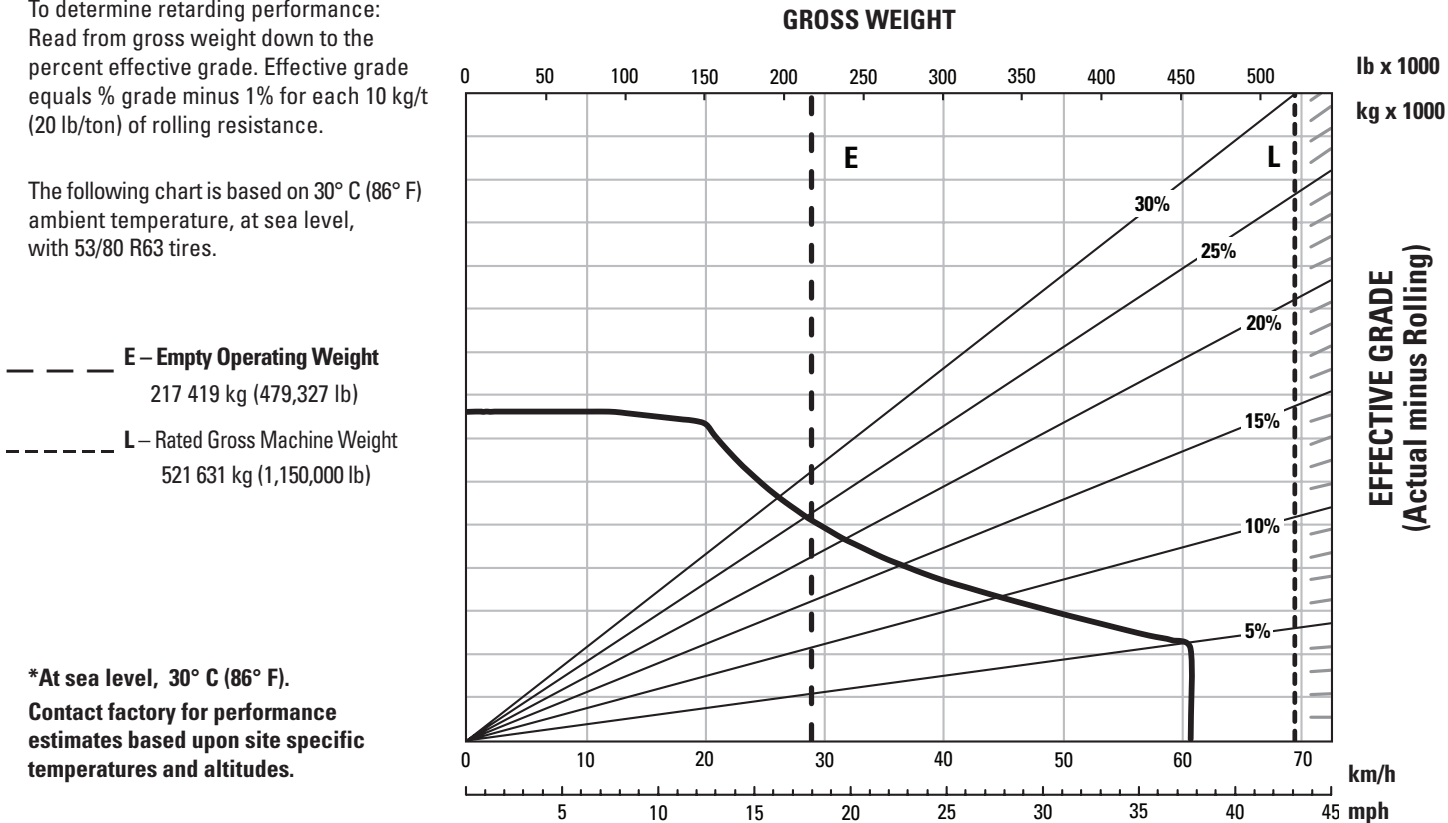
To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. Usable rimpull will depend upon traction available and weight on drive wheels.



## Retarding Performance - Continuous Grade\*

To determine retarding 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.

The following chart is based on 30° C (86° F) ambient temperature, at sea level, with 53/80 R63 tires.



# 794 AC Mining Truck Specifications

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>ELECTRICAL</b>					
Alarm, backup	✓		ROPS cab, insulated/sound suppressed	✓	
Brushless alternator 150 amp charging	✓		Seat, operator, air suspension	✓	
Batteries – 12V (8) 90 amp hour	✓		Seat, trainer, air suspension	✓	✓
Converter, 12V electrical	✓		Seatbelt, trainer, two point	✓	
Electrical system, 24V, 10, 15, 20 amp fuses, breakers	✓		Storage space behind seat	✓	
Battery charge receptacle	✓		Steering wheel, tilt, telescopic	✓	
<b>Lighting, signals/service:</b>			Tinted glass	✓	
• Halogen lighting package	✓		Window, electric powered, operator/passenger	✓	
• Backup and hazard lighting	✓		Wiper, windshield, intermittent control, washer	✓	
• Directional signals (front and rear LED)	✓		Fixed access ladder	✓	
• Front stair access/service deck	✓		Language monitors – English, Spanish, Italian, Portuguese, Dutch, Norwegian, Swedish, Estonian, Latin, Lithuanian, Slovakian, Slovenian, Greek, Romanian, Russian, Polish, Czech, Hungarian, Icelandic, Finnish, Danish, Thai, Indonesian, Vietnam, Malaysian, Chinese		✓
• Stop/tail lights (LED)	✓				
• Engine compartment	✓				
• Inverter energy LED warning lights	✓				
• Fog lights		✓			
• LED work lights		✓			
• LED lighting package		✓			
• High Intensity Discharge (HID) lighting package		✓			
<b>OPERATOR ENVIRONMENT</b>					
Air conditioner	✓				
12V DC power supply (1)	✓				
Cab pedestal for additional display		✓			
Cup holder (2)	✓				
Diagnostic connection port	✓				
Dome courtesy light	✓				
Heated mirrors (Left Hand [LH] and Right Hand [RH])		✓			
English or Metric gauges		✓			
<b>Entertainment radio ready:</b>					
• 20 amp switched/10 amp memory converter	✓				
• Speakers, and wiring harnesses	✓				
Gauges/indicators	✓				
<b>Gauge panel:</b>					
• Hydraulic oil temperature	✓				
• Engine coolant temperature	✓				
• Fuel level	✓				
• Electric engine control fault indicator	✓				
• Electric hour meter	✓				
• Speedometer	✓				
• Tachometer	✓				
• VIMS™ message center advisor	✓				
Heater/defroster	✓				
Retarding indicator light (top of cab)		✓			
Radio/CD player	✓				
			<b>POWER TRAIN</b>		
			<b>Cat C175-16 Tier 2 Emissions Equivalent Engine:</b>		
			• Air cleaner with pre-cleaner (4)	✓	
			• Air-to-Air Aftercooler (ATAAC)	✓	
			• Elevated low idle control	✓	
			• Engine Overspeed Protection	✓	
			• Multi-point oil pressure sensing	✓	
			• Pre-lubrication/engine	✓	
			• Turbocharging (4)/Aftercooled	✓	
			<b>Braking system:</b>		
			• Automatic Retarder Control	✓	
			• Brake Release Motor (towing)	✓	
			• Extended Life Brake Disc Material	✓	
			• Oil-cooled, Multi-disc (front and rear) – Service, Retarding, Parking, Secondary	✓	
			• Electric dynamic retarding – blended low speed	✓	
			<b>Cat AC Drivetrain:</b>		
			• IGBT controlled AC induction motors – AC generator	✓	
			• AC cooled radial grid	✓	
			Body-up reverse neutralizer	✓	
			Programmable top speed	✓	
			Rear axle continuous lube/filtration	✓	
			Reverse shift inhibitor	✓	
			Directional shift management	✓	
			Neutral coast inhibitor	✓	
			Body-up shift inhibitor	✓	
			Neutral start inhibitor	✓	
			Contact factory for low HP, lower emissions tier configurations and high altitude configurations.		

# 794 AC Mining Truck Specifications

## Standard and Optional Equipment (continued)

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

	Standard	Optional		Standard	Optional
<b>OTHER EQUIPMENT</b>			<b>ANTIFREEZE</b>		
Traction control system	✓		Extended Life Coolant to -35° C (-30° F)	✓	
Auxiliary "buddy" dumping quick connect	✓		Antifreeze/coolant protects to -50° C (-58° F)		✓
Auxiliary steering quick connect (towing)	✓		<b>HIGH EFFICIENCY DUMP BODY</b>		
Rotating component guards	✓		1543 kg/m <sup>3</sup> (2,600 lb/yd <sup>3</sup> ) density body		✓
Fast fill fuel system (LH and RH side)	✓		1721 kg/m <sup>3</sup> (2,900 lb/yd <sup>3</sup> ) density body		✓
Fuel filter with water separator	✓		1839 kg/m <sup>3</sup> (3,100 lb/yd <sup>3</sup> ) density body		✓
Ground level battery lockout	✓		2076 kg/m <sup>3</sup> (3,500 lb/yd <sup>3</sup> ) density body		✓
Machine lockout	✓		HE dump body rock box liner		✓
Engine start lockout	✓		HE dump body canopy rock deflectors		✓
Electronic Control Module (ECM) cabinet lockout	✓		<b>CAT TECHNOLOGY PRODUCTS</b>		
Ground level engine shut-down	✓		Cat® MineStar™ Detect (Radar and Camera) System	✓	
Rock ejectors (chain)	✓		Cat MineStar Detect (Camera Only) System		✓
Tow hooks and pin (front)	✓		Product Link™ Elite (Cellular)	✓	
Tow pin (rear) (empty truck only)	✓		Product Link Elite (Satellite)		✓
Mudflaps	✓		Cat MineStar Health		✓
Coolant level gauge (on radiator)	✓		Cat MineStar Fleet		✓
Automatic lubrication system	✓		Cat MineStar Terrain		✓
Scheduled Oil Sampling (S-O-S <sup>SM</sup> ) points (hydraulic, cooling, engine)	✓		Cat MineStar Command-Ready		✓
Rear axle oil cooler		✓	Cat MineStar Command		✓
Standard accumulators and Australia/Canada certified accumulators		✓	Cat Trolley Assist Attachment		✓
Hot start, for cold weather		✓			
Diesel fuel warmer		✓			
Wheel chocks (ANSI or ISO)		✓			
Portable fire extinguisher		✓			
Canopy extension		✓			
Body rock box		✓			
Side profile lighting		✓			
Central service		✓			
Throttle lock		✓			
Timer, engine shutdown		✓			
Body heat exhaust		✓			
Gel batteries (8)		✓			
Inverter platform		✓			
Fast fill fuel system (front and right)		✓			
Rims: Six (6) position and quick change		✓			
ANSI and ISO service instructions		✓			
Front bumper center tow attachment		✓			
Brake wear indicator tool		✓			
Payload, digital display		✓			
Powered access ladder		✓			



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AEHQ7083-09 (01-2024)  
Replaces AEHQ7083-08  
(Global)

