# 794 AC

Mining Truck

## Engine Specifications

<table>
<thead>
<tr>
<th>Engine</th>
<th>Cat® C175-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Power – SAE J1995</td>
<td>2610 kW 3,500 hp</td>
</tr>
<tr>
<td>Standard</td>
<td>2312 kW 3,100 hp</td>
</tr>
<tr>
<td>Optional</td>
<td>2051 kW 2,750 hp</td>
</tr>
<tr>
<td>Net Power – SAE J1349</td>
<td>2539 kW 3,405 hp</td>
</tr>
</tbody>
</table>

## Operating Specifications

<table>
<thead>
<tr>
<th>Nominal Payload Capacity</th>
<th>291 tonnes 320 tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Machine Operating Weight (GMW)</td>
<td>521 631 kg 1,150,000 lb</td>
</tr>
</tbody>
</table>
794 AC Features

High Performance Engine
The Cat C175-16 engine offers reliability and durability with proven performance in the large mining truck application.

Focus on Safety
Wide access stairways, service platforms for the engine, traction alternator and control cabinet, four corner wet disc brakes, and industry leading retarding.

Enhanced Serviceability
Open engine and traction alternator access, simplified hydraulics, grouped electrical and hydraulic routing, ground level filters and service points.

Reliable AC Electric Drive System
The Cat AC electric drive power train is Caterpillar designed, integrated and supported.

Comfortable Cab
Operators find the spacious and quiet cab offers excellent visibility with intuitive, easy to learn controls.

Truck Body Options
Caterpillar designed and built bodies provide optimal performance and reliability.

Contents
Power Train – Cat AC Electric Drive .............4
Power Train – Engine ..................................6
Engine/Power Train Integration .....................7
Cat Braking System .....................................8
Structures ..................................................9
Truck Body Systems ..................................10
Monitoring System ......................................11
Operator’s Station .......................................12
Customer Support .....................................14
Serviceability ...........................................15
Safety .......................................................16
Sustainability ..........................................17
Specifications ..........................................18
Standard Equipment .................................23
Optional Equipment ................................24
Notes .......................................................25
Designed and manufactured by Caterpillar, the 794 AC electric drive truck is single sourced from one manufacturer and supported by the best dealer network. The 794 AC is designed to:

- Deliver a true 291 tonnes (320 tons) capacity
- Deliver reliability and uptime
- Deliver easy serviceability
- Deliver low owning and operating cost
- Deliver operator confidence with four corner wet disc blended service brakes and traction control

The 794 AC is built to deliver to your bottom line.
Power Train – Cat AC Electric Drive
Delivers you more power to the ground for greater productivity.

100% Caterpillar
Designed and manufactured by Caterpillar, the 794 AC is a 291 tonnes (320 tons) AC electric drive truck that is single sourced from one manufacturer and supported with the best dealer network in the industry. The 794 AC drive system works seamlessly with the C175-16 engine and offers exceptional safety, serviceability and performance.

Modular Design for Excellent Serviceability
The modular design allows for easy removal and installation of components. The engine, traction alternator, motors, inverter, grid, and final drives can be removed independently. The close coupled, dual bearing traction alternator allows for easy mounting to the C175-16 engine.

Superior Control Inspires Operator Confidence
The Cat AC drive system gives you the best retarding, braking, and control in the industry. Class leading dynamic retarding coupled with blended service braking of the four corner wet disc brakes, provide the operator with exceptional control and confidence.

High Voltage – Lower Heat
The Cat AC drive is a high voltage system (2,600 volts) that operates at lower current than the competition. The result is lower heat generation, smaller/lighter components, and longer component life.

The Cat AC Electric Drive in Propel
The C175-16 diesel engine drives the close connected Traction Alternator/Generator through an isolation coupler. The AC power is rectified to a nominal 2,600 volts to form the DC link. The DC link supplies power to the Inverter where IGBT’s convert the DC signal to 3-phase AC to drive the traction motors. Traction motor output drives the wheels through a double reduction ring gear output final drive.
Cat AC Electric Drive in Retard
During retarding the traction/wheel motors act as generators and power is fed back through the DC link. The power is fed to the contactor and chopper circuits and then exhausted through the radial grid. An AC fan blows air across the grid to dissipate the power and control retarding speed.

Traction Alternator
No shimming or radial alignment required with the close coupled, dual bearing alternator, resulting in decreased install time. The excitation system is brushless which has longer maintenance intervals than brush type systems.

Inverter
Cat ECMs and software work with the Mitsubishi Electric IGBT Phase Modules to control the rimpull, direction and speed of the truck. Mitsubishi Electric IGBT technology is the proven leader for AC drive systems.

Traction Motors
The 794 AC uses two 3-phase AC induction traction motors. The high voltage, low current motor is mounted inside the rear axle housing.

Radial Grid
The radial design grid sits to the rear of the cab deck giving operators excellent visibility to the right side. The grid features the highest retarding power in the industry, better grid life, and is significantly quieter than box grids. The AC electric motor does not require any maintenance, which is a savings to the customer over DC motor systems.

Variable Hydraulic Blower
The hydraulic drive blower motor offers exceptional cooling, even in extreme environments. The variable hydraulic blower has the ability to provide the required cooling, even while the truck is at idle, compared to direct drive motors that are dependent on engine rpm. The variable blower is better at keeping critical components cool, and ensures long component life.

Additional Features
- The grid dry function dries the grid quickly in inclement weather.
- Traction Control System (TCS) helps operators maintain control in poor underfoot conditions. TCS monitors and adjusts front and rear wheel speeds and independently adjusts them to prevent wheel slip and slide.
- Cat AC Drive system is Trolley capable.
Power Train – Engine
Delivers power, reliability, and efficiency for your most demanding mining applications.

Cat C175-16 Engine
The Cat C175-16 is a quad turbocharged air-to-air after cooled diesel engine that has enhanced power management capabilities for maximum hauling in your most demanding mining applications. The 16-cylinder, four stroke design uses long, effective power strokes for optimum efficiency.

Three Horsepowers Available
Standard 2610 kW (3,500 hp) with optional 2312 kW (3,100 hp) or 2050 kW (2,750 hp), allows the 794 to seamlessly integrate into existing fleets and offer the best fuel economy. The horsepower can be changed with only a software change over a shift change or lunch break. This gives you the ability to optimize the power for your changing application.

Engine Block
The C175-16 engine block is comprised of a high tensile strength ferrite ductile cast iron alloy. This design offers increased resistance to stress cracking and offers support to the cylinder liners, allowing for increased head gasket sealing capability.

Serviceability
The design of the C175-16 enhances serviceability. The inlet manifolds and turbochargers are located outside of the engine’s V, giving the service technicians more space to work on top of the engine and within the engine bay.

Electronic Control Module (ECM)
The ECM utilizes advanced engine management software to monitor, control and protect the engine utilizing self-diagnosing electronic sensors.

Pistons and Connecting Rods
A forged steel, one piece piston design has an improved stainless steel top ring set. The top ring reduces ring groove and liner wear and is corrosion resistant.

Cat Common Rail Fuel System
The electronically-controlled system senses operating conditions and regulates fuel delivery for optimum fuel efficiency. This precise and flexible fuel system gives the engine the ability to meet emission regulations without sacrificing performance, reliability or durability.
Engine/Power Train Integration
Delivers low operating costs through electronically combined power train components.

Control Software and Integration
The Cat engine, AC drive system, hydraulics and controls have been integrated to make the truck easy to operate and provides:
- Excellent slow speed control for safety within the service areas.
- Superior throttle response on acceleration to move out of the loading or dump areas.
- Dynamic retarding with blended four corner wet disc service brakes, at low speed.

Cat Data Link
Cat Data Link provides one location to access all machine information from all machine sub systems. Unique tools are not required to access the drive system, engine and machine information. All systems on the 794 AC are in constant communication with each other to:
- Optimize power train performance.
- Increase reliability and component life.
- Reduce operating costs.
Cat Braking System
Delivers operator’s confidence, to maximize your productivity.

**Industry Leading Dynamic Retarding**
The radial grid is rated at 4.086 MW (5,480 hp) – allowing excellent control of the truck speed in long retarding applications. The radial design is light, efficient and quiet.

**Brake Design**
The Hydraulic brake actuation system is electrically modulated so that the first 80% of brake pedal travel uses dynamic braking while the remaining 20% uses the wet disc service brakes. The emergency service brake pedal uses full hydraulic modulation of the wet disc brakes. The loading brake is used for under the shovel and applies the rear service brakes.

**Four Corner Wet Disc Brakes**
The wet disc brakes provide the operator with excellent control and confidence in the truck. The front and rear Cat oil cooled brakes are designed with large discs and plates for reliable and adjustment free operation. They are enclosed and sealed to prevent contamination and provide long life. These oil disc brakes provide exceptional braking at all speeds.

**Dual Functioning Brake Pedal and Blended Braking**
The dual functioning brake pedal gives the operator confidence when going downhill. The first 80% of the pedal activates only the dynamic brakes, but the operator has the ability to blend in the wet disc service brakes, with the remaining 20% of the brake pedal’s range. When the operator is coming to a stop, the service brakes will automatically blend in at low speeds.

Full electric retarding effort will be maintained down to a truck speed of 3.2 km/h (2.0 mph). Blended braking of the service brakes (60/40 split rear and front service brakes) occurs between 3.6-4.0 km/h (2.25-2.5 mph) and will be used to completely stop the truck and hold it stationary.

**Automatic Retarding Control**
Operator controlled – ARC engages automatically and maintains speed consistently. A simple toggle switch is used to adjust retarding speed, eliminating troublesome dials in competitor trucks.

**Reverse Shift Inhibit**
Ensures reverse propulsion is not applied when the machine is moving forward, which helps prevent costly damage to the engine and drive system.

**Anti-Rollback**
Automatically applies service brakes to prevent the truck from rolling from a stop opposite the intended direction of travel.

**Park Brake Alarm**
Park brake alarm alerts the operator if he starts to exit the cab before the park brake has been applied. This feature helps prevent accidental movement.
Suspension System
The design of the suspension system utilizes Nitrogen/Oil suspension cylinders that feature pin to pin mounting to allow for access and change out of components without having to remove the tires.
• **Durable Design** – Double shear clevis attachment both top and bottom allows for easy removal and installation of suspension. The Nitrogen/Oil suspension cylinders reduce input loads into the structure for improved fatigue life and better ride.

Structures
Cat structures are known for being the best in the industry for durability and long life.

**Straight Rail Frame**
The 794 AC utilizes a straight rail design. The straight rail design eliminates bends and breaks, which occur at stress concentrations.
• **Box Section Construction** – The box section construction utilizes Caterpillar proprietary steel specification, which has very low sulfur content and provides excellent welding characteristics, plus outstanding durability.
• **Deep Section Main Rails** – Deep section main rails, in critical areas of the frame, lower the stress levels resulting in an increased frame life.
• **Tubular Center Cross Beam** – The tubular center cross beam with hoist cylinder and axle box attachment provides robust performance. The axle box attachment is integrated into the cross member and the bearing and pin are replaceable.

**Integrated ROPS Cab**
Designed to maximize the operator space by deforming the support structure rather than compromise the operator compartment. The transverse mounting beams absorb energy by deflecting around established pivot points, maintaining the integrity of the operator compartment.

**Single Beam Front Axle**
The single beam front axle is designed for load sharing on the beam, resulting in flatter turns and sharing of tire loading for better tire life. This lower structure absorbs the road undulations, giving a better ride and decreasing operator fatigue levels.
Truck Body Systems
Delivers a true 291 tonnes (320 tons) and provides rugged performance and reliability.

Integrated Body and Chassis Design
Integral to the truck the body is designed to fit with the chassis and work as part of the truck system. Each body is sized to meet the payload requirements without compromise to vehicle balance, braking or control.

High Efficiency (HE) Body
The body is sized and configured to meet the specific needs dictated by fragmentation, abrasion, cohesion, and the loading tool to maximize the payload capability of the truck.

- Curved floor, front, and canopy strengthens entire body as a structure.
- Strength of base plates allows minimal wear package and low operating weight.
- Joint isolation system reinforces welded areas and exploits high strength main plates.
- Runners transfer weight to the truck frame.
VIMSTM 3G Monitoring System
Provides operator critical health and payload information in real-time to keep the 794 AC performing at optimum levels. VIMS is able to monitor information from all vehicle systems. Ten (10) different machine parameters can be viewed at once. Data can be downloaded easily by service technicians for troubleshooting, planning and lowering costs.

Advisor Display
The Advisor display provides real-time performance, maintenance and diagnostic data to the operator or service technician. A large number of machine parameters can be viewed including temperature, pressure, speed, and payload.

Payload Management
Information is available to manage payloads to improve fleet effectiveness and loading tool match. It can help prevent overloading to extend component life and lower operating and maintenance costs.

External Payload Indicators
Standard external lights or optional digit display to help loading tool operator reach payload target and minimize overloading.

VIMSpce
An Off-board software reporting program that allows your service personnel to download a complete record of machine health and productivity data. Health and payload reports can be generated for more effective machine management, which reduces downtime and lowers operating costs.

VIMS Supervisor
Optional software allows your mine personnel to easily manage and interpret VIMS data for optimum fleet management and productivity.
Operator’s Station
Ergonomically designed for all-day comfort, control and productivity.
Operator Environment
The 794 AC cab can accommodate two full size reclining seats, while providing ample storage space behind the seats.

Ergonomic Layout
To minimize operator fatigue and maximize productivity, the operator station is ergonomically designed for total machine control in a comfortable, productive, and safe environment. Controls, levers, switches and gauges are positioned for ease of use.

Viewing Area
Designed for excellent all-around visibility and clear sight lines to the haul road, the large viewing area offers exceptional visibility, allowing the operator to maneuver with confidence for high productivity. The operator environment was designed with curved front glass to provide a 191-degree view. The support pillars have been moved further back to provide a more unobstructed front view. Deck compartments have been positioned to minimize impact on the side field of view.

1) Adjustable Steering Column
2) Turn Signals
3) Gauge Cluster
4) Advisor Display
5) 191-degree Viewing
6) Right Gauge Panel
7) Indicator Light Panel
8) Circuit Breakers (under dash)
9) Air Suspension Seat
10) Automatic Retard Control
11) 3-Point Seat Belt (driver) (2-Point companion)
12) Storage Compartment
Customer Support
The most experienced dealer network in the world.

Commitment to Meet Your Needs
Cat dealer 24/7 support offers solutions, services and products to help you lower costs, enhance productivity, and manage your fleet anywhere in the world. Expert technicians have the knowledge, experience, training, parts and tooling to keep your 794 AC running at high availability.

Product Support
Caterpillar supports the 794 AC with a worldwide network of parts distribution, dealer service centers and technical training facilities. Our global dealer network is ready to meet your support needs around the clock and around the world.

Service Support
Cat dealers offer a wide range of service plans to help maximize your uptime and return on your investment, including:
• Preventive Maintenance Programs
• Diagnostic Services such as Scheduled Oil Sampling and Technical Analysis
• Rebuild and Remanufactured Product Options
• Customer Support Agreements

Application Awareness
Application and site-specific factors such as material density, loading practices, payload, speed, grade and haul road design and maintenance influence the cost to operate and maintain your haulage fleet. Your Cat dealer can provide help in understanding the effects application factors and operating practices have on maintenance and operating costs. They also offer training to help operators improve productivity, decrease downtime, reduce operating costs and enhance safety.
Serviceability
Delivers easy service for more uptime and productivity.

Modular Design
Major components can be serviced individually with minimal removal and installation time. Work platforms and step/stairs are located in key service areas. The close coupled, dual bearing, traction alternator is separate from the engine and can be removed without removing the body – traction/wheel motors are separate from final drives.

Ground Level Access
Grouped service points (4 filter service groups) allow convenient access to tank levels, filters, drains and S-O-S™ oil sampling ports.

Servicing Ease
- Open engine access with service platforms makes maintenance easy. Traction alternator and optional inverter platforms allow for easier inspections, troubleshooting, and component change outs.
- Hydraulic cabinet shows critical pressures for all key systems in one centralized location.

Sealed Electrical Connectors
Electrical connectors are sealed to lock out dust and moisture. Harnesses are enclosed in conduit or braided for protection. Wires are color coded for ease of diagnosis and repair.

Separate Hydraulic and Electric Lines
Hydraulic lines run inside the left side of the frame, while the electric lines run inside the right side of the frame. This makes servicing/replacement quick and easy.
Safety
Designed with safety as the first priority.

Product Safety is a Commitment
Caterpillar is concerned about your safety. We continue to be the industry leader in proactive development of machines and features that exceed safety standards.

Controls
The Cat drive controls feature anti-roll back, traction controls, a park brake warning when exiting the cab and an automatic retarder that inspires operator confidence and error prevention.

Isolation
The 794 AC features a ground level system lockout, engine lockout and propulsion lockout (in ECM cabinet), VIMS monitoring, and stored energy dissipation at shutdown. These features, and the excellent serviceability of the 794 AC, allow your technicians to perform repairs safely and quickly.

Access/Egress
Standard 600 mm (24”) wide ladders, flat deck, toe kicks, and optional power access stair attachment allows for easy and safe access and egress.
Sustainability

Reduced maintenance time results in more productivity.

Sustainability Features
The 794 AC Mining Truck offers continuous rear axle filtration and extended maintenance intervals which aid in decreasing the amount of waste contributed to our environment.

Remanufacturing Options
794 AC trucks are designed to be rebuilt and deliver a long life, many 794 AC trucks have logged over 100,000 hours of frame life. Components are designed to be remanufactured for multiple service lives.

Engines with Advanced Technology
Engines with advanced technology contribute to better fuel economy and decreased emissions.

12,000 Hour Coolant and Low Oil/Lube Consumption
794 AC has exceptionally low oil and lube consumption when compared to the competition. This provides a reduced impact on the environment, lower cost of ownership, and less maintenance time.
# 794 AC Mining Truck Specifications

## Engine

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Model</td>
<td>Cat C175-16</td>
</tr>
<tr>
<td>Gross Power – SAE J1995</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>2610 kW, 3,500 hp</td>
</tr>
<tr>
<td>Optional</td>
<td>2312 kW, 3,100 hp</td>
</tr>
<tr>
<td>Optional</td>
<td>2051 kW, 2,750 hp</td>
</tr>
<tr>
<td>Rated Speed</td>
<td>1,800 rpm</td>
</tr>
<tr>
<td>Net Power – SAE J1349</td>
<td>2539 kW, 3,405 hp</td>
</tr>
<tr>
<td>Emissions Rating</td>
<td>Fuel Optimized</td>
</tr>
<tr>
<td>Bore</td>
<td>175 mm, 6.9 in</td>
</tr>
<tr>
<td>Stroke</td>
<td>220 mm, 8.7 in</td>
</tr>
<tr>
<td>Displacement</td>
<td>85 L, 5,187 in³</td>
</tr>
</tbody>
</table>

- Contact factory for high altitude configuration.

## Weights – approximate

<table>
<thead>
<tr>
<th>Weight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Machine Operating Weight</td>
<td>521 631 kg, 1,150,000 lb</td>
</tr>
<tr>
<td>Chassis Weight</td>
<td>189 233 kg, 417,187 lb</td>
</tr>
<tr>
<td>Body Weight</td>
<td>28 186 kg, 62,140 lb</td>
</tr>
</tbody>
</table>

- Consult your tire manufacturer for maximum tire load.
- Chassis weight with 100% fuel, hoist, body mounting group, rims, and tires.
- Body weight varies depending on how body is equipped.

## Operating Specifications

<table>
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<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Payload Capacity</td>
<td>291 tonnes, 320 tons</td>
</tr>
<tr>
<td>Top Speed – Loaded</td>
<td>60 km/h, 37 mph</td>
</tr>
<tr>
<td>Steer Angle</td>
<td>39 degrees</td>
</tr>
<tr>
<td>Minimum Turning Radius</td>
<td>16.2 m, 53 ft</td>
</tr>
</tbody>
</table>

- Payload assumes no debris, no extra options or attachments.
- Refer to the Cat Mining Truck 10/10/20 Overload Policy (AEXQ0250) for maximum gross machine weight limitations.

## Final Drives

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Reduction Ratio</td>
<td>35:1</td>
</tr>
</tbody>
</table>

## AC Drive System

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generator/Alternator</td>
<td>Brushless, engine mounted, dual bearing</td>
</tr>
<tr>
<td>Controls</td>
<td>IGBT Inverter Technology, air cooled, pressurized cabinet with filtration</td>
</tr>
<tr>
<td>Wheel Motor</td>
<td>Cat AC induction, rear axle mounted</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Variable speed, hydraulically driven cooling system</td>
</tr>
</tbody>
</table>

## Tires

- 53/80 R63.
- Production capabilities of the 794 AC truck are such that, under certain job conditions, TKPH (TMPH) capabilities could be exceeded and, therefore, limit production.
- Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection.

## Braking System

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Wet Disc Brake Surface Area</td>
<td>131 473 cm², 20,378 in²</td>
</tr>
<tr>
<td>Rear Wet Disc Brake Surface Area</td>
<td>198 388 cm², 30,750 in²</td>
</tr>
<tr>
<td>Standards</td>
<td>ISO 3450:2011</td>
</tr>
<tr>
<td>Electric Retarding – Radial Grid Design</td>
<td></td>
</tr>
<tr>
<td>Dynamic Retarding Power</td>
<td>Continuous 4086 kW, 5,480 hp</td>
</tr>
</tbody>
</table>

## Weight Distributions – approximate

<table>
<thead>
<tr>
<th>Axle Type – Weight Distribution</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Axle – Empty</td>
<td>49%</td>
</tr>
<tr>
<td>Rear Axle – Empty</td>
<td>51%</td>
</tr>
<tr>
<td>Front Axle – Loaded</td>
<td>33%</td>
</tr>
<tr>
<td>Rear Axle – Loaded</td>
<td>67%</td>
</tr>
</tbody>
</table>

## Body Hoists

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Flow – High Idle</td>
<td>910 L/min, 240 gal/min</td>
</tr>
<tr>
<td>(LAA @ 1,960 rpm)</td>
<td></td>
</tr>
<tr>
<td>Pump Flow – High Idle</td>
<td>840 L/min, 221 gal/min</td>
</tr>
<tr>
<td>(HAA @ 1,800 rpm)</td>
<td></td>
</tr>
<tr>
<td>Relief Valve Setting – Raise</td>
<td>20 884 kPa, 3,029 psi</td>
</tr>
<tr>
<td>Body Raise Time – High Idle</td>
<td>24 Seconds</td>
</tr>
<tr>
<td>High Idle Body Lower Time – Float</td>
<td>20 Seconds</td>
</tr>
<tr>
<td>Total Cycle Time</td>
<td>44 Seconds</td>
</tr>
</tbody>
</table>

- 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.
### Capacity – HE Body – 100% fill factor

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity 1</th>
<th>Capacity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck</td>
<td>108-133 m³</td>
<td>142-175 yd³</td>
</tr>
<tr>
<td>Heaped (SAE 2:1)</td>
<td>180-222 m³</td>
<td>236-290 yd³</td>
</tr>
</tbody>
</table>

**Dump Body Plate Thickness Varies Depending on Body Selection**

- **Floor Plate**: 16 mm (0.63 in)
- **Front Plate**: 9 mm (0.35 in)
- **Side Plate**: 8 mm (0.31 in)
- **Canopy Plate**: 5 mm (0.20 in)

- Contact your local Cat dealer for body recommendations.

### Service Refill Capacities

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Tank</td>
<td>4922 L</td>
<td>1,300 gal</td>
</tr>
<tr>
<td>Cooling System</td>
<td>799 L</td>
<td>211 gal</td>
</tr>
<tr>
<td>Crankcase</td>
<td>310 L</td>
<td>82 gal</td>
</tr>
<tr>
<td>Final Drives, each</td>
<td>254 L</td>
<td>67 gal</td>
</tr>
<tr>
<td>Hydraulic Tank</td>
<td>1121 L</td>
<td>296 gal</td>
</tr>
<tr>
<td>Hydraulic System (includes tank)</td>
<td>1458 L</td>
<td>385 gal</td>
</tr>
</tbody>
</table>

### ROPS

**ROPs Standards**

### Sound

**Sound Standard**
- The operator sound pressure level measured according to work cycle procedures specified in ISO 6394 and 6396 is 75 dB(A) for cab offered by Caterpillar when properly installed, maintained, and tested with doors and windows closed.
- 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
- Gross Machine Operating Weight is 521,631 kg (1,150,000 lb).
### 794 AC Mining Truck Specifications

#### Dimensions

All dimensions are approximate.

Shown with 193.6 m³ (253 yd³) HE Body.

- **Height to Top of ROPS**: 6779 mm (22'3")
- **Overall Length**: 15 463.5 mm (50'9")
- **Wheelbase**: 6644.5 mm (21'10")
- **Rear Axle to Tail**: 4716 mm (15'6")
- **Ground Clearance**: 906 mm (2'8")
- **Dump Clearance**: 1555 mm (3'0")
- **Loading Height – Empty**: 6995 mm (22'11")
- **Overall Height – Body Raised**: 14 747 mm (48'5")
- **Centerline Front Tire Width**: 7024 mm (23'0")
- **Front Axle Clearance**: 969 mm (3'2")
- **Canopy Width (without optional rock deflectors)**: 9068 mm (29'9")
- **Outside Body Width**: 9062 mm (29'9")
- **Inside Body Width**: 8560 mm (28'1")
- **Front Canopy Height**: 8024 mm (26'4")
- **Rear Axle Clearance**: 934 mm (3'1")
- **Centerline Rear Dual Tire Width**: 5727 mm (18'9")
- **Overall Tire Width**: 8738 mm (28'8")
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.

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**GROSS WEIGHT**

<table>
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<th>GROSS WEIGHT</th>
<th>lb × 1000</th>
<th>kg × 1000</th>
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**SPEED**

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**RIMPULL**

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**EFFECTIVE GRADE**

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<th>EFFECTIVE GRADE (Actual plus Rolling)</th>
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<td>30%</td>
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**KEY**

- E – Empty Operating Weight 217 419 kg (479,327 lb)
- L – Target GMW 521 631 kg (1,150,000 lb)

*At sea level, 30° C (86° F). Contact factory for performance estimates based upon site specific temperatures and altitudes.
Retarding Performance*

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.

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**KEY**

E – Empty Operating Weight 217 419 kg (479,327 lb)
L – Target GMW 521 631 kg (1,150,000 lb)

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*At sea level, 30° C (86° F). Contact factory for performance estimates based upon site specific temperatures and altitudes.
Standard Equipment

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

POWER TRAIN
- C175-16 Diesel Engine
  - Turbocharging (4)/aftercooled
  - Air to air after cooler (ATAAC)
  - Air cleaner (4) with precleaner
  - Elevated low idle control
  - Multi-point oil pressure sensing
  - Pre-lubrication/engine
- Braking system:
  - Brake release towing
  - Oil-cooled, multi-disc (front and rear)
    (service, retarding, parking, secondary)
  - Automatic Retarder Control
  - Electric dynamic retarding
    with blended low speed
  - Extended life brake disc material
- Cat AC drive train:
  - 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

OPERATOR ENVIRONMENT
- Air conditioner
- 12V DC power supply (1)
- Cup holder (2)
- Diagnostic connection port
- Dome courtesy light
- Entertainment radio ready:
  - 20 amp switched/10 amp memory converter
  - Speakers, and wiring harnesses
- Gauges/indicators
- Gauge panel:
  - Hydraulic oil temperature
  - Engine coolant temperature
  - Fuel level
  - Electric engine control fault indicator
  - Electric hour meter
  - Speedometer
  - Tachometer
  - VIMS message center advisor
- Heater/defroster
- Storage space behind seat
- ROPS cab, insulated/sound suppressed
- Seat, operator, air suspension
- Seatbelt, operator, three points
- Seat, trainer, air suspension
- Seatbelt, trainer, two point
- Steering wheel, tilt, telescopic
- Tinted glass
- Window, electric powered,
  operator/passenger
- Wiper, windshield, intermittent control
  and washer
- Fixed access ladder

FLUIDS
- Extended life coolant to –35° C (–30° F)

OTHER STANDARD EQUIPMENT
- Traction control system
- Auxiliary “buddy” dumping quick connect
- Auxiliary steering quick connect (towing)
- Rotating component guards
- Fast fill fuel system (LH and RH side)
- Fuel filter with water separator
- Ground level battery lockout
- Machine lockout
- Engine start lockout
- ECM cabinet lockout
- Ground level engine shut-down
- Rock ejectors (chain)
- Tow hooks and pin (front)
- Tow pin (rear) (empty truck only)
- Mudflaps
- Coolant level gauge (on radiator)
- Automatic lubrication system
- S·O·S sample points
  (hydraulic, cooling, engine)

ELECTRICAL
- Alarm, backup
- Brushless alternator 150 amp charging
- Batteries – 12V (8) 90 amp hour
- Converter, 12V electrical
- Electrical system, 24V, 10, 15, 20 amp fuses and breakers
- Battery charge receptacle
- Lighting, signals/service:
  - Halogen lighting package
  - Backup and hazard lighting
  - Directional signals (front and rear LED)
  - Front stair access/service deck
  - Stop/tail lights (LED)
  - Engine compartment
  - Inverter energy LED warning lights
Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- 2050 kW (2,750 hp) and 2312 kW (3,100 hp) options available
- HAA arrangements available
- Throttle lock
- Timer, engine shutdown
- Body heat exhaust
- Gel batteries (8)
- High Intensity Discharge (HID) lighting package
- LED lighting package
- Fog lights
- LED work lights
- English or Metric gauges
- Payload, digital display
- Powered access ladder
- Inverter platform
- Fast fill fuel system (front and right)
- Rims: Six (6) position and quick change
- ANSI and ISO service instructions
- Retarding indicator light
- Cab pedestal for additional display
- Radio/CD player
- Front bumper center tow attachment
- Brake wear indicator tool
- Coolant –50° C (–58° F)
- HE dump body rock box liner
- HE dump body canopy rock deflectors
- Heated mirrors (LH and RH)
- Rear axle oil cooler
- Standard accumulators and Australia/Canada certified accumulators
- Hot start, for cold weather
- Diesel fuel warmer
- Wheel chocks (ANSI or ISO)
- Portable fire extinguisher
- Murphy gauge
- High efficiency dump body
  - 1543 kg/m³ (2,600 lb/yd³) density body
  - 1721 kg/m³ (2,900 lb/yd³) density body
  - 1839 kg/m³ (3,100 lb/yd³) density body
  - 2076 kg/m³ (3,500 lb/yd³) density body
- Canopy extension
- Body rock box
- Side profile lighting
- Central service
- 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