

# 795F AC Trolley

Mining Truck



**For those applications and situations where you prefer an electric drive truck, Caterpillar now offers the 795F AC.**

**The Cat® AC drive system provides customers with the best retarding, braking and control in the industry. Designed and manufactured by Caterpillar, the 795F AC is the first AC electric drive truck that is single sourced from one manufacturer, and supported by the best dealer network in the industry.**

## **High Performance Engine**

The Cat C175-16 engine provides customers with the perfect balance between power, robust design and economy.

## **Focus on Safety**

Wide access stairways, standard object detection, industry leading dynamic retarding, four corner wet disc brakes and traction control with automatic front brake assist inspire operator confidence.

## **Enhanced Serviceability**

Modular components, grouped service locations and additional ground accessible maintenance points translate into more time on the haul road.

## **Reliable AC Electric Drive System**

The Cat AC electric drive power train is 100% Caterpillar designed, integrated and supported.

## **Comfortable Cab**

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

## **Mechanical Drive Legacy**

Using many components from the 797F, the 795F AC provides increased durability.

## **Truck Body Options**

Cat truck bodies are designed for optimal performance and reliability.



# 795F AC Trolley Mining Truck Specifications

## Engine

Engine Model	Cat C175-16	
Gross Power – SAE J1995		
Standard	2535 kW	3,400 hp
Optional	2312 kW	3,100 hp
Rated Speed	1,800 rpm	
Net Power – SAE J1349	2460 kW	3,299 hp
Emissions Rating	Fuel Optimized/Optional U.S. Environmental Protection Agency Tier 2 Standard Equivalent	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	85 L	5,187 in <sup>3</sup>

- Contact local Caterpillar Mining Representative for more information.

## Weights – Approximate

Target Gross Machine Weight (TGMW)	576 072 kg	1,270,000 lb
Chassis Weight	200,159 kg	441,275 lb
Trolley Attachment	4638 kg	10,225 lb
Body Weight Range	37 023- 53 760 kg	81,622- 118,369 lb

- GMW based on 59/80 R63 tires.
- GMW depends on tire selection. Consult your tire manufacturer for maximum loaded top speed.
- Chassis weight with 100% fuel, hoist, body mounting group, rims and tires.
- Body weight varies depending on how body is equipped.

## Operating Specifications

Nominal Rated Payload	333 tonnes	367 tons
Nominal Rated Payload Range	314- 346 tonnes	345- 380 tons
Top Speed – Loaded	64 km/h	40 mph
Steer Angle	34 degrees	
Turning Diameter – Front	34 m	112 ft
Turning Circle Clearance Diameter	38.7 m	127 ft

- For 59/80 R63 tires.
- Refer to the Cat Mining Truck 10/10/20 Overload Policy (AEXQ0250) for maximum gross machine weight limitations.
- Nominal Rated Payload assumes no debris and varies with machine configuration.
- An average payload target of 105% of Nominal Rated Payload can be approved based on review of the specific application and machine configuration. Contact your local Cat dealer for details.

## Final Drives

Total Reduction Ratio	35:1
-----------------------	------

## AC Drive System

Generator/Alternator	Brushless, remote mounted, dual bearing
Controls	IGBT Inverter Technology, air cooled, pressurized cabinet with filtration
Wheel Motor	Rear axle mounted Cat AC induction
Cooling System	Variable speed, hydraulic cooling system

## Suspension

Effective Cylinder Stroke – Front	293 mm	11.5 in
Effective Cylinder Stroke – Rear	141 mm	5.6 in
Rear Axle Oscillation	±4.8°	

## Body Hoists

Pump Flow – High Idle	935 L/min	247 gal/min
Relief Valve Setting – Raise	24 500 kPa	3,553 psi
Body Raise Time – High Idle	19 Seconds	
Body Lower Time – Float	20 Seconds	
Body Power Down – High Idle	17.5 Seconds	

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

# 795F AC Trolley Mining Truck Specifications

## Braking System

Oil Cooled Brakes – Retarding Capable at All Speeds		
Outside Diameter	1067 mm	42 in
Brake Surface – Front	132 258.4 cm <sup>2</sup>	20,500.09 in <sup>2</sup>
Brake Surface – Rear	198 388 cm <sup>2</sup>	30,750.2 in <sup>2</sup>
Standards	ISO 3450:1996	
Electric Retarding		
Radial Grid Design with Brushless AC Fan Motor	4750 kW (6,370 hp) rated power	
Dynamic Retarding Power	4750 kW	6,370 hp
Blended Four Corner Retarding	Standard	

## Weight Distributions – Approximate

Front Axle – Empty	49%	
Rear Axle – Empty	51%	
Front Axle – Loaded	50%	
Rear Axle – Loaded	50%	

## Capacity – MSD II – 100% Fill Factor

Struck	121.5-211 m <sup>3</sup>	159-276 yd <sup>3</sup>
Heaped (ISO 6483:1980)	181-252 m <sup>3</sup>	237-330 yd <sup>3</sup>

- Contact your local Cat dealer for body recommendations.

## Service Refill Capacities

Fuel Tank	3596 L	950 gal
Fuel Tank (optional)	7192 L	1,900 gal
Cooling System	1100 L	291 gal
Crankcase	310 L	82 gal
Final Drives, Each	341 L	90 gal
Steering Tank	210 L	55.5 gal
Steering System (Includes Tank)	300 L	79 gal
Brake/Hoist Hydraulic Tank	508 L	134.2 gal
Brake/Hoist System (Includes Tank)	1500 L	396.3 gal

## Tires

- 59/80 R63 (Standard)
- 56/80 R63 (Optional)
- Productive capabilities of the 795F 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 the tire manufacturer for proper tire selection.

## ROPS

### ROPS Standards

- ROPS (Rollover Protective Structure) for cab offered by Caterpillar meets ISO 3471:2008 ROPS criteria.
- FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II FOPS criteria.

## Sound

### Sound Standards

- The operator sound pressure level measured according to work cycle procedures specified in ISO 6394:2008 and ISO 6396:2008 is 76 dB(A) for cab offered by Caterpillar when properly installed and 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

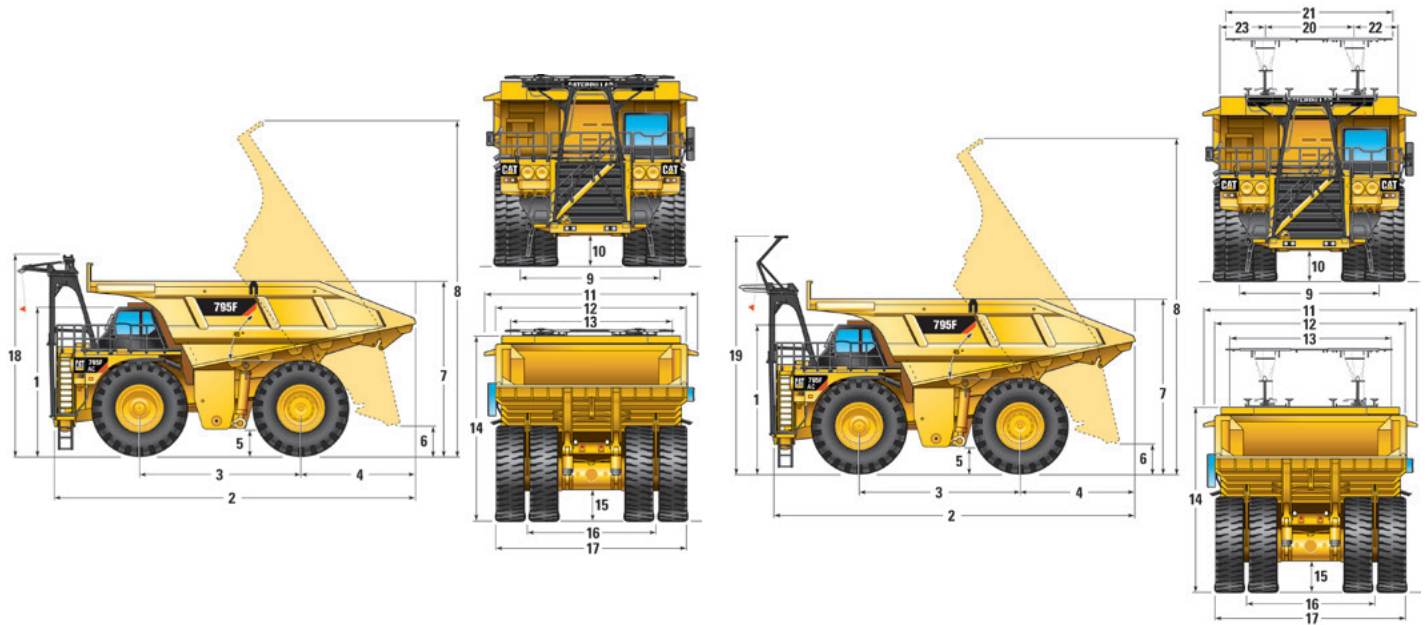
- Target Gross Machine Weight is 576 072 kg (1,270,000 lb).

# 795F AC Trolley Mining Truck Specifications

## Dimensions

All dimensions are approximate.

Shown with 220 m<sup>3</sup> (288 yd<sup>3</sup>) MSD II Body.



1 Height to Top of ROPS	6327 mm	20 ft 9 in
2 Overall Length with Trolley Down	16 296 mm	53 ft 6 in
3 Wheelbase	6725 mm	22 ft 1 in
4 Rear Axle to Tail	4411 mm	14 ft 6 in
5 Ground Clearance	750 mm	2 ft 6 in
6 Dump Clearance	1664 mm	5 ft 6 in
7 Loading Height – Empty	7040 mm	23 ft 2 in
8 Overall Height – Body Raised	15 445 mm	50 ft 8 in
9 Centerline Front Tire Width	6235 mm	20 ft 6 in
10 Engine Guard Clearance	1208 mm	4 ft 0 in
11 Overall Canopy Width	9449 mm	31 ft 0 in
12 Outside Body Width	8970 mm	29 ft 5 in
13 Inside Body Width	7856 mm	25 ft 9 in
14 Front Canopy Height	8105 mm	26 ft 1 in
15 Rear Axle Clearance	1016 mm	3 ft 4 in
16 Centerline Rear Dual Tire Width	5675 mm	18 ft 8 in
17 Overall Tire Width	8966 mm	29 ft 6 in
18 Pantograph Resting Height	8249 mm	27 ft 1 in
19 Pantograph Nominal Working Height	10 049 mm	33 ft 0 in
Pantograph Lowest Working Height*	8649 mm	28 ft 5 in
Pantograph Highest Working Height*	10 299 mm	33 ft 9 in
20 Pantograph Center-to-Center of Carbon Brushes	3985 mm	13 ft 1 in
21 Overall Pantograph Width	7508 mm	24 ft 8 in
22 Left Pantograph Center to LH Fender	2055 mm	6 ft 9 in
23 Right Pantograph Center to RH Fender	1969 mm	6 ft 6 in

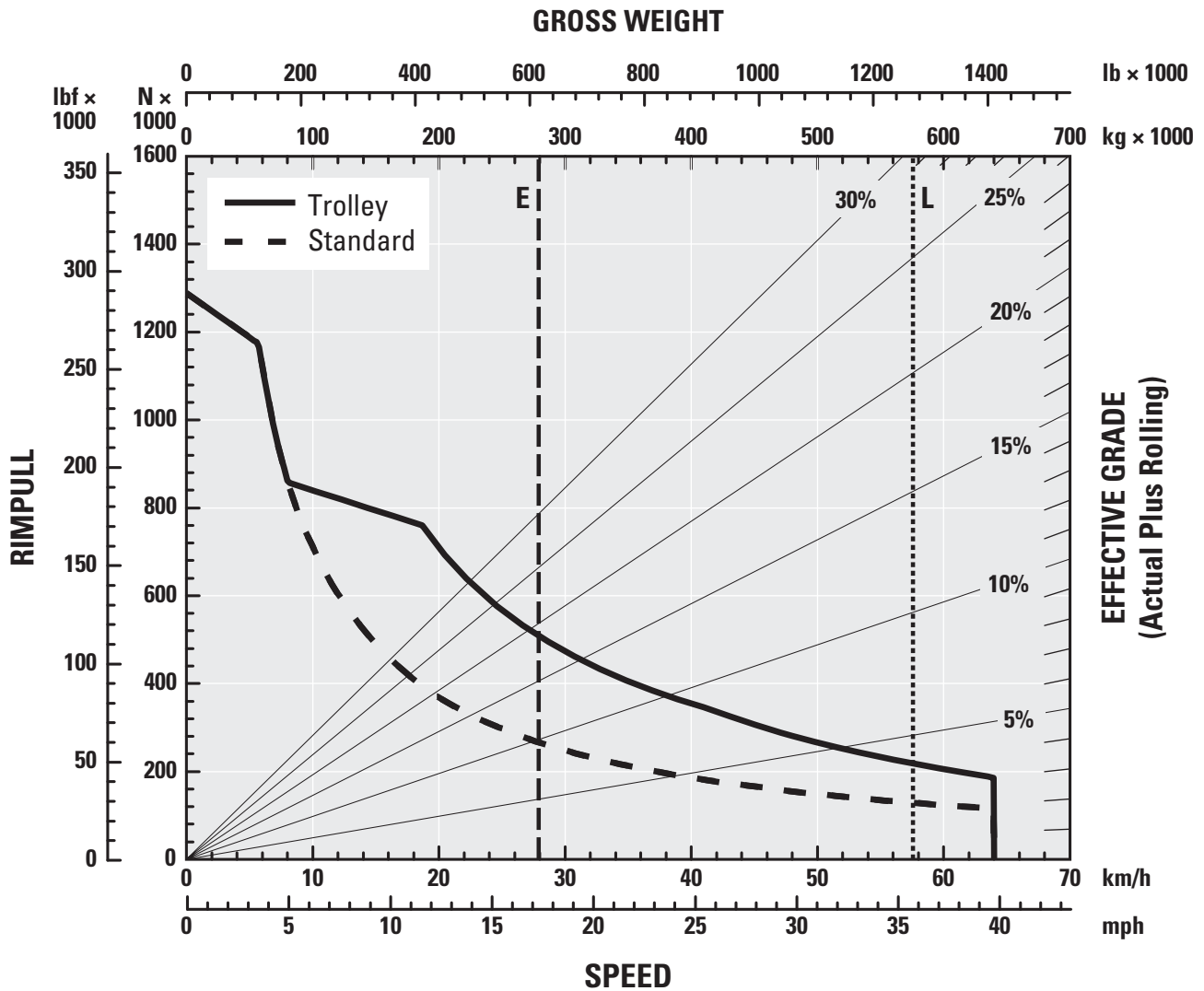
\*Not pictured.

# 795F AC Trolley Mining Truck Specifications

## 795F AC 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.

- Typical Field Empty Weight
- ..... Gross Machine Operating Weight  
576 072 kg (1,270,000 lb)



E – Empty  
L – Loaded

\*At sea level, 30° C (86° F).

Trolley below 8 km/h (5 mph) is not allowed.

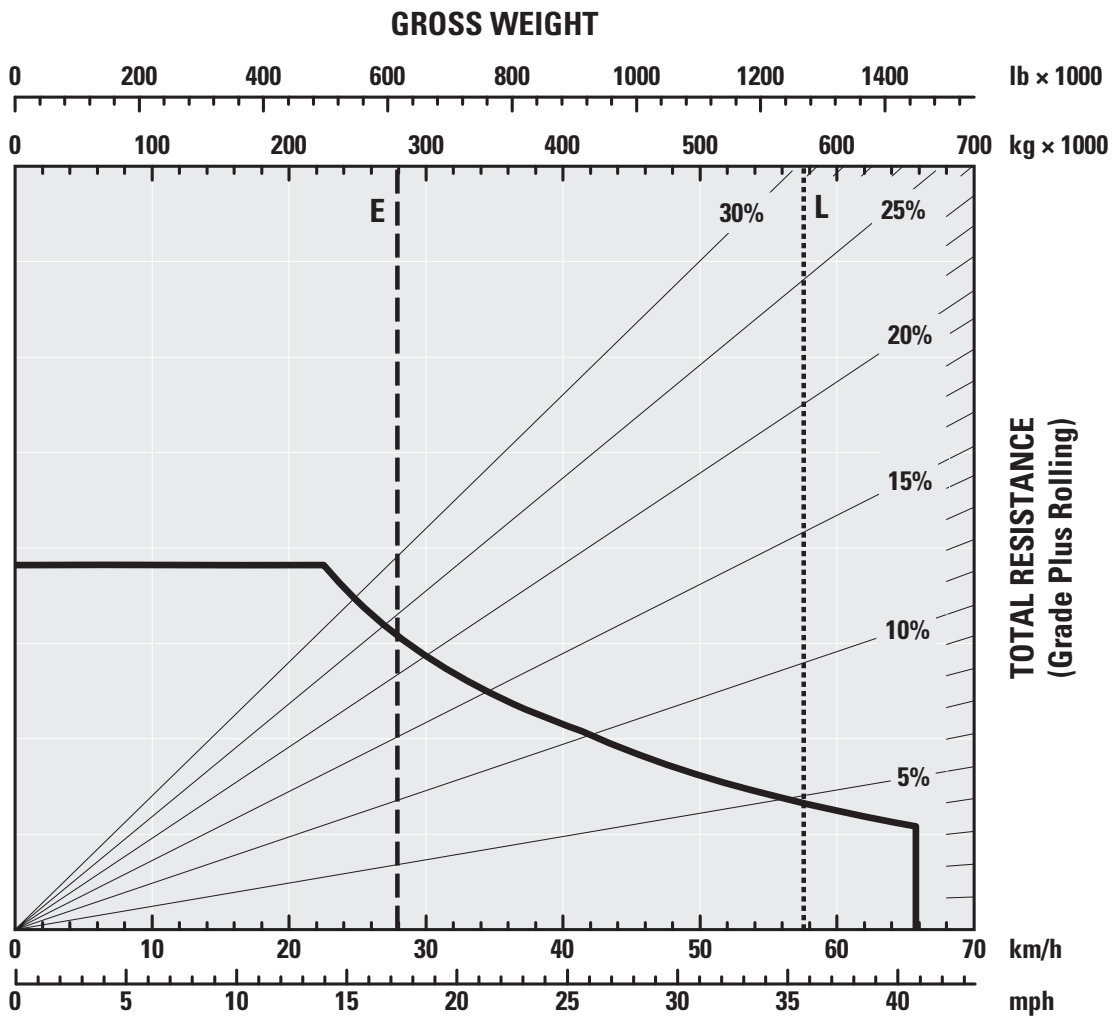
Contact factory for performance estimates based upon site specific temperatures and altitudes.

# 795F AC Trolley Mining Truck Specifications

## 795F AC Standard Retarding – Continuous\*

To determine retarding performance: Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. The following charts are based on these conditions: 30° C (86° F) ambient temperature, at sea level, with 59/80 R63 tires.

- — — — — Typical Field Empty Weight
- ..... Gross Machine Operating Weight  
576 072 kg (1,270,000 lb)



- E – Empty
- L – Loaded

\*At sea level, 30° C (86° F).

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

# 795F AC Trolley Mining Truck Standard Equipment

## Standard Equipment

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

### ELECTRICAL

- Alarm, Back-up
- Brushless Alternator, 150 ampere
- Batteries, 210-amp hour, low maintenance, 12-volt (2)
- Converter, 12-volt electrical
- Electrical System, 24-volt, 10, 15 and 20 amp
- Battery Charge Receptacle
- Lighting System
  - Back-up and Hazard Lights
  - Directional Signals (front and rear LED)
  - Front Stair Access/Service Deck
  - Stop/Tail Lights (LED)
  - Engine Compartment
  - VIMS™, Blue Light (LED)
  - Headlights, with Lo-Hi Beam Selector

### OPERATOR ENVIRONMENT

- Air Conditioner with Automatic Climate Control
- 12-volt DC Power Supply (3)
- Coat Hook
- Cup Holder
- Diagnostic Connection Port
- Dome Courtesy Light
- Map Lights (2)
- Entertainment Radio Ready
  - 20 amp Switched/10 amp Memory Converter, Speakers and Wiring Harnesses
- Gauge/Indicators
  - Gauge Panel:
    - Drive Train (system temperature)
    - Brake Oil Temperature
    - Engine Coolant Temperature
    - Fuel Level
    - Torque Converter Oil Temperature
  - Electric Engine Control Fault Indicator
  - Electric Hour Meter
  - Speedometer
  - Tachometer
- Heater/Defroster, 10 310 kCal (40,912 BTU)
- Hoist, Body Control (electric)
- Horn (2)
- Cat Detect (Radar and Camera) System
- Mirrors, Right and Left
- ROPS Cab, Insulated/Sound Suppressed

- Seat, Operator, Air Suspension
- Seatbelt, Operator, Three Points, Retractable
- Seatbelt, Trainer, Two Points, Retractable
- Stairway and Walkway Access, 600 mm (23.6 in)
- Steering Wheel, Tilt, Padded, Telescopic
- Storage Compartments
- Tinted Glass
- Transmission Gear Indicator
- VIMS Message Center with Advisor
- Window, Operator, Electric Powered
- Windshield, Wiper Intermittent Control and Washer

### POWER TRAIN

- Cat C175-16 Tier 2 Emissions Engine
  - Air Cleaner with Precleaner (4)
  - Air-to-Air Aftercooler (ATAAC)
  - Automatic Starter Protection
  - Ether Starting Aid (automatic)
  - Multi-Point Oil Pressure Sensing
  - Turbocharging (4)/Aftercooled
- Braking System
  - Automatic Retarder Control, Adjustable
  - Brake Release Motor (towing)
  - Engine Overspeed Protection
  - Extended Life Brake Disc Material
  - Oil-cooled, Multi-disc (front and rear)
    - Service, Retarding, Parking, Secondary
  - Park Brake Integrated with Gear Selector
  - Secondary, Emergency
- Cat AC Drivetrain
  - IGBT controlled AC induction motors
  - AC generator
  - AC cooled radial grid
  - Body-up Reverse Neutralizer
  - Body-up Shift Inhibitor
  - Directional Shift Management
  - Neutral Coast Inhibitor
  - Neutral Start Switch
  - Programmable Top Speed
  - Reverse Shift Inhibitor
- Pre-lubrication/Engine
- Rear Axle Continuous Lubrication/Filtration

### OTHER STANDARD EQUIPMENT

- Air Starter, Turbine
- Air System Dryer
- Automatic Lubrication System
- Aux “Buddy” Dumping Quick Connect
- Aux Steering Quick Connect (towing)
- Blended Retarding System
- Driveline Guards
- Exhaust
- Fuel Tank, 3596 L (950 gal)
- Fast Fill Fuel System
- Fuel Filter with Water Separator
- Ground Level Battery Lockout
- Ground Level Engine Shut-down
- Ground Level Engine Start Lockout
- Ground Level Machine Lockout
- Ground Level Transmission Lockout
- Ground Level VIMS Data Port
- Hi-speed Crankcase Oil Change
- Hydraulic Filters, 1,000 hour
- Payload Indicator Lights
- Reservoirs (2 separate)
  - Brake/Hoist, Steering/Fan
- Rock Ejectors
- Service Points, Ground Level
- Sight Level Gauges for Hydraulic/Engine Oil
- S·O·S<sup>SM</sup> Sample Ports
- Supplemental Steering (automatic)
- Tie Down Eyes
- Tow Hooks and Pin (front)
  - Tow Pin (rear) (Empty truck only)
- Traction Control System
- Vandalism Protection Locks
- Vital Information Management System (VIMS)
  - Includes VIMS Payload Monitor with MAX Payload and Speed Manager
    - VIMS 3G requires download cable 305-5528 VIMS 3G Connect PC software (reference media number EERP2001) and VIMS PC software JERD2175. Supplemental software “VIMS Supervisor” YERA1403. Order separately. Computer not provided.

### ANTIFREEZE

- Extended Life Coolant to –35° C (–30° F)

# 795F AC Trolley Mining Truck

## Optional Equipment

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

- Access Platform, Rear Part of Chassis
- Additional Lighting
- Additional Retarding for Downhill Hauls
- Air Start, Turbine, TDI
- Antifreeze/Coolant Protects to -50° C (-58° F)
- Body
  - MSD II Body:
    - Body, MSD II, 181 m<sup>3</sup> (237 yd<sup>3</sup>)
    - Body, MSD II, 220 m<sup>3</sup> (288 yd<sup>3</sup>)
  - MSD II Body Attachments:
    - Extensions, 400 mm (~15 in) 206 m<sup>3</sup> (270 yd<sup>3</sup>); Fits 181 m<sup>3</sup> (237 yd<sup>3</sup>) body
    - Extensions, 395 mm (~15 in) 237 m<sup>3</sup> (310 yd<sup>3</sup>); Fits 220 m<sup>3</sup> (288 yd<sup>3</sup>) body
    - Extensions, 550 mm (~21 in) 248 m<sup>3</sup> (324 yd<sup>3</sup>); Fits 220 m<sup>3</sup> (288 yd<sup>3</sup>) body
    - Extensions, 675 mm (~26 in) 252 m<sup>3</sup> (330 yd<sup>3</sup>); Fits 220 m<sup>3</sup> (288 yd<sup>3</sup>) body
  - Films, Body
  - Gateless Coal Body:
    - Body, Gateless Coal, 352 m<sup>3</sup> (460 yd<sup>3</sup>)
  - Gateless Coal Body Attachments:
    - Extensions, 440 mm (~17 in) 382 m<sup>3</sup> (500 yd<sup>3</sup>)
    - Extensions, 875 mm (~34 in) 413 m<sup>3</sup> (540 yd<sup>3</sup>)
    - Extensions, 1060 mm (~41 in) 428 m<sup>3</sup> (560 yd<sup>3</sup>)
  - Body Heat
  - Body Mounting Groups
    - MSD II Body
    - Gateless Coal Body
  - Brake Wear Indicator Gauge
  - Cabin Air Precleaner
  - Camera Only Vision System
  - Cat Comfort Air Suspension Trainer Seat
  - Cat Comfort Heated Operator Seat
  - Electric Powered Window, Right Side
  - Electric Starting System
  - Engine (High Altitude)\*
  - Engine Coolant and Oil Heater for Cold Weather Starts
  - Engine Delay Shutdown Timer
  - Filtration, Final Drive Oil Cooler
  - External Digital Payload Display
  - Fuel Tank (7192 L/1,900 gal)
  - Gauge, Brake Wear Indicator
  - Ground Access, Powered
  - Ground Access, Fixed, Reversed
  - Ground Access, Powered, Reversed
  - Heated Mirrors, RH
  - Heated Mirrors, LH
  - High Intensity Discharge (HID) Lighting (front and rear)
  - Horn, Air or Electric, LH or RH
  - Instructions (ANSI or ISO)
  - Language Monitors – English, Spanish, French, German, Italian, Portuguese, Dutch, Norwegian, Swedish, Estonian, Latin, Lithuanian, Slovakian, Slovenian, Greek, Roman, Russian, Polish, Czech, Hungarian, Icelandic, Finnish, Danish, Thai, Indonesian, Vietnam, Malaysian, Chinese, Japan, Korean, Croat, Serbian, Mongolian, Hebrew, Turkish, Arabic
  - Machine Access, Reversed
  - Portable Fire Extinguisher
  - Retractable Front Sun Visor
  - Road Analysis Control (RAC)
  - Seat, Full Size, Trainer
  - Service Center, Pressurized System
  - Service Center, Non-Pressurized System
  - SL-V Grease Injectors
  - Wheel Chocks
  - Wheels, Wedge, 1041 mm (41 in)

\*For certain markets only.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

© 2019 Caterpillar  
All rights reserved

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

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Yellow," the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

AEHQ8215 (09-2019)  
(EU, North America, Africa,  
South America)

