

Cat[®] 797F

MINING TRUCK



Specifications

Engine

Engine Model	Cat [®] C175-20	
Gross Power – SAE J1995:2015	2983 kW	4,000 hp
Net Power – SAE J1349:2011	2899 kW	3,887 hp
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	106 L	6,469 in ³

- Power ratings apply at 1,750 rpm when tested under the specific conditions for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 99 kPa (29.32 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (61° F) and an LHV of 42 780 kJ/kg (18,390 Btu/lb) when engine is used at 30° C (86° F).
- No low altitude arrangement (LAA) engine derating required up to 2134 m (7,000 ft) altitude.
- Emission Standards. The Cat C175-20 engine meets U.S. EPA Tier 4 Final emission standards.

Weights – Approximate

Target Gross Machine Operating Weight (GMW)	623 690 kg	1,375,000 lb
Body Weight Range	42 620-44 500 kg	93,960-98,110 lb
Chassis Weight Range	216 860-220 440 kg	478,100-486,000 lb

- Refer to the Cat Mining Truck 10/10/20 Payload Policy for maximum gross machine weight limitations.
- Body weight varies depending on body and liner configuration. Weight range for known applications.
- Chassis weight with 100 percent fuel, hoist, body mounting group, rims and tires.

Operating Specifications

Nominal Payload Capacity	363 tonnes	400 tons
Heaped 2:1 Capacity – ISO 6483:1980	240-267 m ³	314-350 yd ³
Top Speed – Loaded	67.6 km/h	42 mph
Steer Angle	40 Degrees	
Machine Clearance Turning Diameter	42 m	138 ft

Final Drives

Differential Ratio	1.276:1
Planetary Ratio	16.67:1
Total Reduction Ratio	21.26:1

- Double reduction, planetary with full floating axles.

Transmission

Forward 1	11.3 km/h	7 mph
Forward 2	15.2 km/h	9.5 mph
Forward 3	20.5 km/h	12.7 mph
Forward 4	27.7 km/h	17.2 mph
Forward 5	37.2 km/h	23.1 mph
Forward 6	50.3 km/h	31.2 mph
Forward 7	67.6 km/h	42 mph
Reverse	11.9 km/h	7.4 mph

Suspension

Effective Cylinder Stroke – Front	313.6 mm	12.3 in
Effective Cylinder Stroke – Rear	165.1 mm	6.5 in
Rear Axle Oscillation	±4.0 degrees	

Body Hoists

Pump Flow – High Idle	1200 L/min	317 gal/min
Relief Valve Setting – Raise	24 200 kPa	3,510 psi
Body Raise Time – High Idle	25 Seconds	
High Idle Body Lower Time – Float	19 Seconds	

Brakes

Number of Discs per Side – Front	10	
Number of Discs per Side – Rear	15	
Outside Diameter	1067 mm	42 in
Brake Surface	330 517 cm ²	51,243 in ²
Standards	ISO 3450:1996	

Approximate Weights – HP Body

Front Axle – Empty	47.2%
Front Axle – Loaded	33.3%
Rear Axle – Empty	52.8%
Rear Axle – Loaded	66.7%

Weight Distributions – Approximate

Front Axle – Empty	47.2%
Rear Axle – Empty	52.8%
Front Axle – Loaded	33.3%
Rear Axle – Loaded	66.7%



797F Mining Truck

Capacity – 100% Fill Factor

Struck	188-213 m ³	246-290 yd ³
Heaped 2:1 Capacity – ISO 6483:1980	240-267 m ³	314-350 yd ³

- Consult your local Cat dealer for truck body recommendations.

Service Refill Capacities

Fuel Tank	4540 L	1,200 gal
DEF Tank	375 L	99 gal
Cooling System	1160 L	306 gal
Crankcase	319 L	84 gal
Front Wheels, Each	61 L	16 gal
Final Drives, Each	185 L	49 gal
Differentials	1176 L	311 gal
Steering Tank	254 L	67 gal
Steering System (Includes Tank)	355 L	94 gal
Brake/Hoist Hydraulic Lines	830 L	219 gal
Brake/Hoist System (Includes Tank)	1600 L	441 gal
Brake/Hoist Tank	770 L	203 gal
Torque Converter Sump	303 L	80 gal
Torque Converter/Transmission System (Includes Sump)	629 L	166 gal

Tires

Tire	59/80R63 – Michelin or Bridgestone
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- Productive capabilities of the 797F are such that, under certain job conditions, TKPH (TMPH) capabilities of standard tires could be exceeded and, therefore, limit production.

ROPS

ROPS Standards

- ROPS (Rollover Protective Structure) for cab offered by Caterpillar meets ISO 3471:1994 ROPS Criteria.
- FOPS (Falling Objects Protective Structure) meets ISO 3449:1992 Level II FOPS Criteria.

Sound

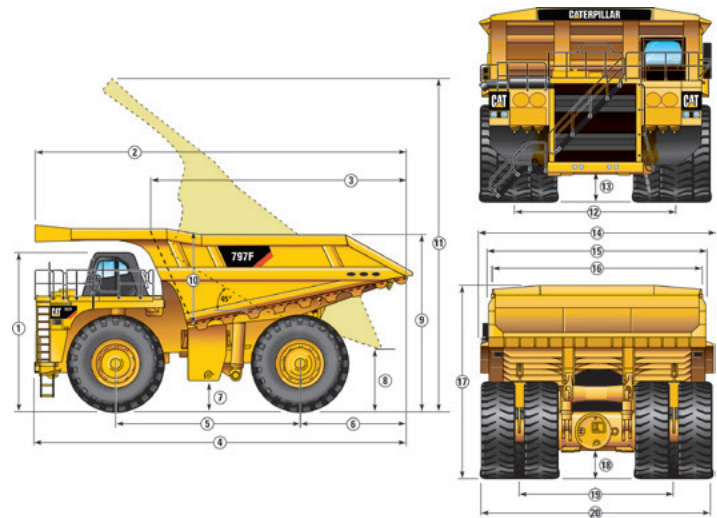
Sound Standards

- The operator sound pressure level measured according to work cycle procedures specified in ISO 6394:2008 is 74 dB(A) and 6396:2008 is 75.5 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



Dimensions (All dimensions are approximate)

Dimensions are with body 507-1580.

1 Height to Top of ROPS – Empty	6526 mm	21 ft 5 in
2 Overall Body Length	15 583 mm	51 ft 2 in
3 Inside Body Length	9976 mm	32 ft 9 in
4 Overall Length	15 583 mm	51 ft 2 in
5 Wheelbase	7195 mm	23 ft 7 in
6 Rear Axle to Tail	3944 mm	12 ft 11 in
7 Loaded Ground Clearance	786 mm	2 ft 7 in
8 Dump Clearance	1768 mm	5 ft 10 in
9 Loading Height – Empty	6786 mm	22 ft 3 in
10 Inside Body Depth – Maximum	3363 mm	11 ft 0 in
11 Overall Height – Body Raised	15 485 mm	50 ft 10 in
12 Centerline Front Tire Width	6534 mm	21 ft 5 in
13 Engine Guard Clearance – Loaded	1025 mm	3 ft 4 in
14 Outside Body Width	10 393 mm	34 ft 1 in
15 Overall Canopy Width	10 393 mm	34 ft 1 in
16 Inside Body Width	9036 mm	29 ft 8 in
17 Front Canopy Height – Empty	7630 mm	25 ft 0 in
18 Rear Axle Clearance – Loaded	947 mm	3 ft 1 in
19 Centerline Rear Dual Tire Width	6233 mm	20 ft 5 in
20 Overall Tire Width	9529 mm	31 ft 3 in

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