



Cat[®] 793F

MINING TRUCK

FEATURES:

- **Emissions** – Meets U.S. EPA Tier 4 Final emission standards, and features the Caterpillar Selective Catalytic Reduction (SCR) system that provides the least Total Fluid Consumption cost with greater reliability.
- **High Performance Engine** – The Cat[®] C175-16 engine offers you the perfect balance between power, robust design and economy.
- **Enhanced Serviceability** – Improved serviceability points and grouped service locations mean your truck spends more time on the haul road than in the shop.
- **Robust Braking** – Cat oil-cooled, multiple disc brakes on all four corners offer you exceptional, fade-resistant braking.
- **Power Shift Transmission** – A smooth shifting six speed transmission using ECPC gives operators a comfortable ride, constant power and improved fuel efficiency.
- **Reliable Mechanical Drive System** – The 793F's power train gives you the fastest truck on steep grades, poor underfoot conditions and on haul roads with high rolling resistance.
- **Comfortable Cab** – Operators find the large, spacious cab offers unmatched visibility and exceptional comfort.
- **Truck Body** – A variety of Caterpillar designed and built bodies provide you optimal performance and reliability.

Specifications

Engine

Engine Model	Cat C175-16	
Gross Power – SAE J1995	1976 kW	2,650 hp
Torque Rise	20%	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	85 L	5,187 in ³

- Power ratings apply at 1,750 rpm when tested under the specified condition for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 99 kPa (29.61 Hg) dry barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42.780 kJ/kg (18,390 Btu/lb) when engine used at 30° C (86° F).
- No engine derating required up to 3200 m (10,500 ft) altitude.
- Meets Tier 4 Final emission standards.

Weights – Approximate

Chassis Weight	124 586 kg	274,587 lb
Body Weight Range	26 862- 47 627 kg	59,220- 105,000 lb

- Chassis weight with 100 percent fuel, hoist, body mounting group, rims and 40.00R57 tires.
- Body weight varies depending on how body is equipped.

Operating Specifications

Nominal Payload Capacity	226.8 tonnes	250 tons
Top Speed – Loaded	60 km/h	37.3 mph
Steer Angle	36 Degrees	
Turning Diameter – Front	28 m	93 ft
Turning Circle Clearance Diameter	33 m	107 ft
Gross Machine Operating Weight	386 007 or 390 089 kg	851,000 or 860,000 lb

- Refer to the Cat Mining Truck 10/10/20 Overload Policy for maximum gross machine weight limitations.

Final Drives

Differential Ratio	1.8:1
Planetary Ratio	16:1
Total Reduction Ratio	28.8:1

Transmission

Forward 1	12.9 km/h	8 mph
Forward 2	17.4 km/h	10.8 mph
Forward 3	23.8 km/h	14.8 mph
Forward 4	32.1 km/h	19.9 mph
Forward 5	43.6 km/h	27.1 mph
Forward 6	60 km/h	37.3 mph
Reverse	11.8 km/h	7.3 mph



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Suspension

Effective Cylinder Stroke – Front	130.5 mm	5.1 in
Effective Cylinder Stroke – Rear	105.5 mm	4.2 in
Rear Axle Oscillation	±4.9 degrees	

Body Hoists

Pump Flow – High Idle	846 L/min	224 gal/min
Relief Valve Setting – Raise	20 370 kPa	2,955 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 outside 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.

Brakes

Outside Diameter	874.5 mm	34.5 in
Brake Surface – Front	89 817 cm ²	13,921 in ²
Brake Surface – Rear	34 500 cm ²	20,847 in ²
Standards	ISO 3450:1996	

Weight Distributions – Approximate

Front Axle – Empty	49%
Rear Axle – Empty	51%
Front Axle – Loaded	33%
Rear Axle – Loaded	67%

Capacity – HP – 100% Fill Factor

Struck	112.6-151 m ³	147-197.5 yd ³
Heaped (SAE 2:1)*	162-191 m ³	212-250 yd ³

- Contact your local Cat dealer for body recommendation.

*ISO 6483:1980

Service Refill Capacities

Fuel Tank	2839 L	750 gal
Cooling System	1074 L	284 gal
Crankcase	312 L	82 gal
Rear Axle Housing	984 L	260 gal
Steering System (Includes Tank)	290 L	77 gal
Brake/Hoist System (Includes Tank)	1315 L	347 gal
Torque Converter/Transmission Sump	102 L	27 gal
Torque Converter/Transmission System (Includes Sump)	209 L	55 gal
Diesel Exhaust Fluid Tank	234.7 L	62 gal

ROPS

ROPS Standards

- ROPS (Rollover Protective Structure) cab offered by Caterpillar meets ISO 3471:2008 for Operator and ISO 13459:2012 for Trainer.
- FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 for Operator and ISO 13459:2012 Level II FOPS for Trainer.

Sound

Sound Standards

- The operator sound pressure level measured according to work cycle procedures specified in ISO 6394 and 6396 is 74 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.

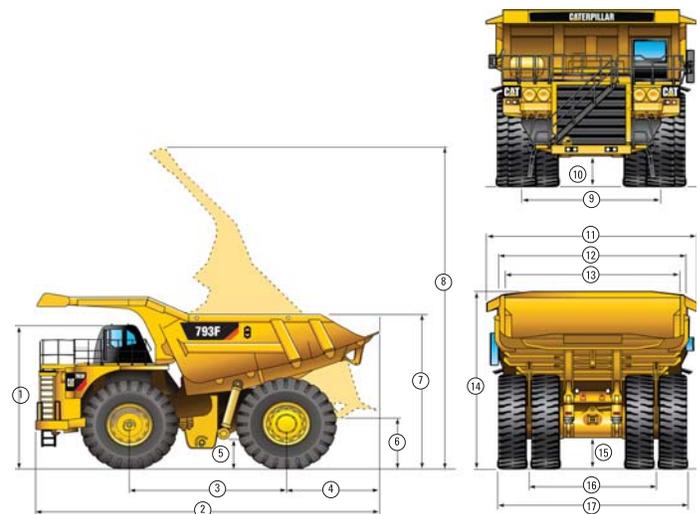
Steering

Steering Standards

ISO 5010:2007

Dimensions (All dimensions are approximate.)

Shown with 162 m³ (212 yd³) HP Body.



1	Height to Top of ROPS	5712 mm	18 ft 9 in
2	Overall Length	13 360 mm	44 ft 10 in
3	Wheelbase	5905 mm	19 ft 5 in
4	Rear Axle to Tail	3997 mm	13 ft 2 in
5	Ground Clearance	1041 mm	3 ft 5 in
6	Dump Clearance	1301 mm	5 ft 4 in
7	Loading Height – Empty	6181 mm	20 ft 4 in
8	Overall Height – Body Raised	13 710 mm	45 ft
9	Centerline Front Tire Width	5609 mm	18 ft 5 in
10	Engine Guard Clearance	1325 mm	4 ft 4 in
11	Overall Canopy Width	8563 mm	28 ft 1 in
12	Outside Body Width	7942 mm	26 ft 1 in
13	Inside Body Width	7334 mm	24 ft 1 in
14	Front Canopy Height	7074 mm	23 ft 3 in
15	Rear Axle Clearance	1130 mm	3 ft 9 in
16	Centerline Rear Dual Tire Width	4963 mm	16 ft 3 in
17	Overall Tire Width	7605 mm	24 ft 11 in

STANDARD EQUIPMENT

ELECTRICAL

- Alarm, Back-up
- Brushless Alternator, 225 ampere
- Batteries, 210-amp hour, low maintenance, 12-volt (2)
- Converter, 12-volt electrical
- Electrical System, 24-volt, 10, 15 and 20 amp
- Jump Start 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
 - Brake and Retarder Light Status Ready

OPERATOR ENVIRONMENT

- Air Conditioner with Automatic Climate Control
- 12-volt DC Power Supply (3)
- Coat Hook
- Cup Holder
- Diagnostic Connection Port
- Dome Courtesy Light
- Entertainment Radio Ready
 - 5 amp Converter, Speakers and Wiring Harness
- Gauge/Indicators
 - Gauge Panel:
 - Transmission Fluid Temperature
 - Brake Oil Temperature
 - Engine Coolant Temperature
 - Fuel Level
 - Torque Converter Oil Temperature
 - Electric Engine Control Fault Indicator
 - Electric Hour Meter
 - Speedometer
 - Tachometer
 - Diesel Exhaust Fluid Level Indicator
- Heater/Defroster, 11 070 kCal (45,930 Btu)
- Hoist, Body Control (electric)
- Horn
- Integrated Object Detection System
- Heated 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 A/C Condenser Filled Washer Bottle
- Plug and Play Radio 12V Unswitched Power Supply Outlets
- Fire Suppression Ready Cab

POWER TRAIN

- Cat C175-16 meets Tier 4 Final emission standards
 - 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
- Engine Aftertreatment System
 - Pump Electronic Tank Unit (PETU)
 - Clean Emissions Module (CEM)
- 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
- Advanced Productivity Electronic Controls Strategy (APECS)
- Transmission
 - 6-speed, Automatic Powershift with Electronic Control (ECPC)
 - Body-up Reverse Neutralizer
 - Body-up Shift Inhibitor
 - Controlled Throttle Shifting
 - Directional Shift Management
 - Downshift/Reverse Shift Inhibitor
 - Individual Clutch Modulation
 - Lock-up Torque Converter
 - Neutral Coast Inhibitor
 - Neutral Start Switch
 - Programmable Top Speed
 - Pre-lubrication/Engine
 - Rear Axle Continuous Lubrication/Filtration

OTHER STANDARD EQUIPMENT

- Auto Lubrication System with 41 kg (90 lb) barrel, auto shutoff, and grease filter
- Aux “Buddy” Dumping Quick Connect
- Aux Steering Quick Connect (towing)
- Driveline Guard
- Fast Fill Diesel Exhaust Fluid System
- Fast Fill Diesel Fuel System
- Fuel Filter with Water Separator
- Ground Level Battery Lockout
- Ground Level Engine Shut-down
- Ground Level Engine Start Lockout
- Ground Level Transmission Lockout
- Ground Level VIMS Data Port
- Hi-speed Crankcase Oil Change
- Hydraulic Filters, 1,000 hour
- Reservoirs (3 separate)
 - Brake/Hoist, Steering/Fan, Transmission/Converter
- Rock Ejectors
- Service Points, Ground Level
- Sight Level Gauges for Hydraulic/Engine Oil
- S•O•SSM Sample Ports
- Supplemental Steering (automatic)
- Tie Down Eyes
- Tow Hooks (front)/Tow Pin (rear)
- Traction Control System
- Vandalism Protection Locks
- Vital Information Management System (VIMS)
 - Includes VIMS Payload Monitor with MAX Payload and Speed Manager
 - (Recommend using download cable 127-9797 and PC based software JERD2175. Supplemental software “VIMS Supervisor” YERA1403. Order separately. Computer not provided.)
- Primary Access Anti-slip High Visibility Demarcations
- Tie Off Points
- Rubber-lined Battery Box Lid
- Portable Fire Extinguisher Mounting
- SL-V Grease Injectors
- Fuel Tank Mud Guards

ANTIFREEZE

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

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OPTIONAL EQUIPMENT

- Additional Retarding for Downhill Hauls
- Body Heat
- Cat Comfort Air Suspension Trainer Seat
- Antifreeze/Coolant Protects to -50° C (-58° F)
- Brake Wear Indicator Gauge
- Cabin Air Precleaner
- Center Tow Bumper Attachment
- Electric Powered Window, Right Side
- Electric Starting System
- Engine Coolant and Oil Heater for Cold Weather Starts
- Additional Lighting
- High Visibility Reflector Group
- Workshop Horn
- Working at Heights
- Emergency Stop
- Four Mirror Package
- Hydraulic Tank Mud Guards
- Engine Delay Shutdown Timer
- Extended Life Wheel Stations
- External Digital Payload Display
- Fast Fill Service Center with Live S•O•S and Keypad
- Cat Comfort Heated Operator Seat
- High Intensity Discharge (HID) Lighting (front and rear)
- Hub Odometer (km and miles)
- Portable Fire Extinguisher
- Rear Axle Lubrication Cooler
- Retractable Front Sun Visor
- Rim Guard
- Rims (813 mm/32 in)
- Road Analysis Control (RAC)
- Throttle Lock
- Walkway and Handrail for Rear Cab Access
- Wheel Chocks
- Work Area Vision System (WAVS)

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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