

PRODUCT SPECIFICATIONS FOR 793F



WEIGHTS - APPROXIMATE

Nominal Rated Payload	231 t
Rated Gross Machine Weight	386007 kg
Chassis Weight	123575 kg
Body Weight	30700 kg
Note (1)	Consult your tire manufacturer for maximum tire load
Note (2)	Chassis weight with full fuel and fluids, standard & mandatory attachments, hoist, body mounting group, rims, and tires.
Note (3)	Refer to the Cat Mining Truck 10/10/20 Overload Policy for maximum gross machine weight limitations.

ENGINE

Gross Power - SAE J1995	1976 kW
Net Power - SAE J1349	1848 kW
Engine Model	Cat® C175-16
Rated Speed	1750 r/min
Emissions	Fuel Optimized
Bore	175 mm
Stroke	220 mm
Displacement	85 l

Note (1) Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator.

Note (2) EPA Tier 4 Final / EU Stage V available for applicable markets.

TIRES

Standard Tires 40.00 R57

Rims 29" or 32"

Note Quick Change Rims optional.

Note (1) Extended life wheel stations optional.

Note (2) Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and TKPH (TMPH) capabilities.

SUSPENSION

Type Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top & bottom double shear clevis attachments

Effective Cylinder Stroke - Front 130.5 mm

Effective Cylinder Stroke - Rear 105.5 mm

Rear axle - Oscillation ±4.9 degrees

BRAKING SYSTEM

Service Brakes Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated

Front Wet Disc Brake Surface Area 89 817 cm³

Rear - Wet Disc Brake Surface Area 34 500 cm³

Standards (Service and Secondary): ISO 3450:1996

Parking Brakes Four-corner, Multi-disc, Spring Applied, Hydraulically Released

Load Brake Rear service brakes

Note Anti-Lock Brake System (ABS) optional with CMD package

BODY HOISTS

Type Twin, two-stage hydraulic cylinders with snubbing valve

Pump Flow - High Idle 846 l/min

Relief Valve Setting - Raise 20370 kPa

Body Raise Time - High Idle 19 s

Body Lower Time - Float 20 s

Body Power Down - High Idle 17.5 s

CAB

Air Conditioning Air Conditioning (HFC - 134A refrigerant): 24,300 Btu/hr

Heater / Defroster 38900 Btu/h

Note Ambient capabilities down to -30C (-22F) for heater/defroster and up to 50C (122F) for air conditioning.

ROPS Standards (1) The operator sound pressure level, 76 dB(A), complies with ISO 6394 and ISO 6396.

ROPS Standards (2) ROPS (Rollover Protective Structure) meets ISO 3471:1994 criteria.

FOPS Standards FOPS (Falling Objects Protective Structure) meets ISO 3449:1992 Level II criteria.

SERVICE REFILL CAPACITIES

Fuel Tank 2839 l

Fuel Tank - Optional	4922 l
Diesel Exhaust Fluid Tank	234.7 l
Cooling System	1074 l
Crankcase	312 l
Rear Axle - Housing	984 l
Steering System - Including Tank	290 l
Brake Hoist System - Includes Tank	1315 l
Torque Converter - Transmission Sump	102 l
Torque Converter/Transmission System - Including Sump	209 l

Note (1)

DEF Tank only available for EPA Tier 4 engine option.

CAPACITY - HP BODY - 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)
Note (1)	Contact your local Cat dealer for body recommendation.

Note (2)

*ISO 6483:1980

WEIGHT DISTRIBUTIONS - APPROXIMATE

Front Axle - Empty	48 %
Rear Axle - Empty	52 %
Front Axle - Loaded	33 %

Rear Axle - Loaded	67 %
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TRANSMISSION

Forward - 1	12.9 km/h
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Forward - 2	17.4 km/h
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Forward - 3	23.8 km/h
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Forward - 4	32.1 km/h
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Forward - 5	43.6 km/h
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Forward - 6	60 km/h
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Reverse	11.8 km/h
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Top Speed - Loaded	60 km/h
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FINAL DRIVES

Differential Ratio	1.8:1
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Planetary Ratio	16:01
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Total Reduction Ratio	26.8:1
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BRAKES

Brake Surface - Front	89817 cm ²
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Brake Surface - Rear	34500 cm ²
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Standards	J-ISO 3450 JAN88, ISO 3450:1996
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CAPACITY - MSD II - 100% FILL FACTOR

Struck	112-142 m ³ (146-186 yd ³)
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Heaped (SAE 2:1)

159-190 m3 (209-250 yd3)

Note

Contact your local Cat dealer for body recommendation.

ROPS

ROPS Standards

ROPS (Rollover Protective Structure) for cab offered by Caterpillar meets ISO 3471:1994 ROPS criteria.

FOPS Standards

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 and 6396 is 76 dB(A) for cab offered by Caterpillar, when properly installed and maintained and tested with doors and windows closed.

Sound Standards (1)

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

Steer Angle

36 °

Turning Diameter - Front

28.42 m

Steering Standards

SAE J15111 OCT90, ISO 5010:1992

793F STANDARD EQUIPMENT

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

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

Fire Suppression Ready Cab

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 (Tier 4 option only)

Heater/Defroster, 11 070 kCal (45,930 Btu)

Heated Mirrors, Right and Left

Hoist, Body Control (electric)

Horn

Integrated Object Detection System

Plug and Play Radio 12V Unswitched Power Supply Outlets

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

POWER TRAIN

Cat C175-16 Engine

- Air Cleaner with Precleaner (4)
- Air-to-Air Aftercooler (ATAAC)
- Automatic Starter Protection
- 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
- Tier 4 option: Engine Aftertreatment System: Pump Electronic Tank Unit (PETU), Clean Emissions Module (CEM)

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

Advanced Productivity Electronic Controls Strategy (APECS)

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 Fuel System, Fast Fill Diesel Exhaust Fluid System (Tier 4 option only)

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

Portable Fire Extinguisher Mounting

Primary Access Anti-slip High Visibility Demarcations

Reservoirs (3 separate)

– Brake/Hoist, Steering/Fan, Transmission/Converter

Road Analysis Control (RAC)

Rock Ejectors

Rubber-lined Battery Box Lid

Service Points, Ground Level

Sight Level Gauges for Hydraulic/Engine Oil

SL-V Grease Injectors

S•O•SSM sample ports

Supplemental Steering (automatic)

Tie Down Eyes

Tie Off Points

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.

ANTIFREEZE

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

793F OPTIONAL EQUIPMENT

OPTIONAL EQUIPMENT

Additional Lighting

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

Emergency Shutdown

Engine Coolant and Oil Heater for Cold Weather Starts

Engine Delay Shutdown Timer

Extended Life Wheel Stations

External Digital Payload Display

Fast Fill Service Center with Live S•O•SSM and Keypad

Four Mirror Package

Fuel Tank (4920 L/1,300 gal)

Fuel Tank Mud Guards

Cat Comfort Heated Operator Seat

High Visibility Reflector Group

Hydraulic Tank Mud Guards
Hub Odometer (km and miles)
Portable Fire Extinguisher
Raised Communications Bracket
Rear Axle Lubrication Cooler
Retractable Front Sun Visor
Rim Guard
Rims (813 mm/32 in)
Throttle Lock
Walkway and Handrail for Rear Cab Access
Wheel Chocks
Work Area Vision System (WAVS)
Working at Heights
Workshop Horn