

PRODUCT SPECIFICATIONS FOR 789D



ENGINE

Gross Power - SAE J1995	1566 kW
Engine Model	Cat® 3516C HD
Rated Net Power - ISO 9249	1468 kW
Bore	170 mm
Stroke	215 mm
Displacement	78.1 l
Net Power	1468 kW
Gross Power	1566 kW
Emissions Rating	Fuel Optimized or EPA Tier 2 equivalent
Rated Speed	1750 r/min

OPTIONAL ENGINE

Engine Model	Cat® 3516B EUI
Gross Power	1417 kW
Rated Net Power - ISO 9249	1335 kW
Bore	170 mm
Stroke	190 mm
Displacement	69 l

WEIGHTS - APPROXIMATE

Nominal Rated Payload	194 t
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Rated Gross Machine Weight	324319 kg
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Chassis Weight (37R57 Tires)	102821 kg
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Chassis Weight (40R57 Tires)	106010 kg
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BODY - DUAL SLOPE

Body Weight	27365 kg
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OPERATING SPECIFICATIONS

Standard MSD Body (SAE 2:1)	130 m ³
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Standard X Body (SAE 2:1)	123 m ³
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Standard Dual Slope Body (SAE 2:1)	108 m ³
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Standard Combi Body (SAE 2:1)	153 m ³
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Standard Gateless Coal Body (SAE 2:1)	191 m ³
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Note	Refer to the Cat Mining Truck Optimized payload policy for maximum gross machine weight limitations.
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Standard HP Body (SAE 2:1)	144 m ³
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TRANSMISSION

Forward - 1	12.6 km/h
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Forward - 2	17.1 km/h
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Forward - 3	23.1 km/h
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Forward - 4	31.2 km/h
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Forward - 5	42.3 km/h
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Forward - 6	57.2 km/h
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Reverse	11.8 km/h
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Top Speed - Loaded	57.2 km/h
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FINAL DRIVES

Differential Ratio	2.35:1
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Planetary Ratio	10.83:1
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Total Reduction Ratio	25.46:1
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SUSPENSION

Effective Cylinder Stroke - Front	105 mm
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Effective Cylinder Stroke - Rear	93 mm
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Rear axle - Oscillation	±5.6°
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BRAKES

Brake Surface - Front	81693 cm ²
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Brake Surface - Rear	134590 cm ²
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Standards	SAE J1473 OCT90 ISO 3450:2011 - Service Brakes: Four-Corner, Wet Multi-disc, Oil Cooled, Hydraulically Actuated. Parking Brake: Four-Corner, Wet Multi-disc, Spring Applied, Hydraulically Released.
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BODY HOISTS

Pump Flow - High Idle	731 l/min
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Relief Valve Setting - Raise	17238 kPa
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Body Raise Time - High Idle	18.9 s
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High Idle Body Lower Time - Float	15.6 s
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High Idle Body Lower Time - Power	15.6 s
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Body Raise Time - High Idle Body	17.3 s
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WEIGHT DISTRIBUTIONS - APPROXIMATE

Front Axle - Empty	50 %
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Rear Axle - Empty	50 %
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Front Axle - Loaded	33 %
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Rear Axle - Loaded	67 %
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Note	Weight distributions optimized with Cat body.
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TIRES

Standard Tires	37.00-R57
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Optional Tires	40.00-R57
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SERVICE REFILL CAPACITIES

Fuel Tank - Standard	2082 l
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Fuel Tank - Optional	3785 l
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Cooling System	725 l
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Crankcase	291 l
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Differential - Final Drives	583 l
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Steering System	189 l
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Brake Hoist System	909 l
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Transmission Tank	76 l
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ROPS

ROPS Standards	Standards
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SOUND

Sound Standards	Standards
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STEERING

Steering Standards	SAE J1511 OCT90 ISO 5010:2007
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Steering Angle	36.07 °
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Turning Diameter - Front Wheel	27.53 m
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Vehicle Clearance - Turn Circle	30.23 m
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Turning Diameter - ISO 7457:1997 (33.00R51 tires)	27.53 m
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BODY - X

Body Weight	30107 kg
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DIMENSIONS (APPROXIMATE)

Centerline Front Tire Width	5410 mm
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Centerline of Rear Dual Tire Width	4695 mm
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Dump Clearance	1585 mm
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Engine Guard Clearance	1290 mm
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Front Canopy Height	6739 mm
Ground Clearance	1304 mm
Height - Top of ROPS	5550 mm
Inside Body Width	6691 mm
Loading Height - Empty	6147 mm
Outside Body Width	7377 mm
Overall Canopy Width	7769 mm
Overall Height - Body Raised	13122 mm
Overall Length	12945 mm
Overall Tire Width	7120 mm
Rear Axle - Clearance	1263 mm
Rear Axle - Tail	3856 mm
Wheel Base	5700 mm

789D STANDARD EQUIPMENT

POWER TRAIN

Diesel engine/turbocharged/aftercooled:

- Ground level engine shutdown
- Ether starting aid (automatic
- Aftercooler (separate circuit or air to air)
- Elevated low idle control
- Automatic starter protection
- Multi-point all pressure sensing

Braking system:

- Brake release motor (towing)
- Oil-cooled, multi-disc (front and rear)
- (service retarding, parking, secondary)
- Automatic Retarder Control
- Engine overspeed protection
- Extended life brake disc material

Transmission:

- 6-speed, automatic powershift with electronic control (TCC)
- Controlled throttle shifting; Individual clutch modulation
- Body-up shift inhibitor
- Directional shift management
- Downshift/reverse shift inhibitor
- Oil level sensor
- Neutral start switch/coast inhibitor
- Body-up reverse neutralizer
- Programmable top gear
- Lock-up torque converter
- Rear axle continuous lubrication/filtration

ELECTRICAL

Alarm, backup

Alternator, 105 amp

Batteries, 12V (2), 93 amp-hour

Converter, 12V electrical

Electrical system, 24V, 15 amp

Lighting system:

- Backup and hazard lights; Auxiliary work lights (2) rear, (1) RH side, (1) LH side; Directional signals (front and rear LED)
- Engine compartment lights
- External payload lights
- Headlights with lo-hi beam selector
- Ladder light and service deck lights
- Left-hand ladder/service deck
- Stop/tail lights (LED)
- VIMS, blue light (LED)

OPERATOR ENVIRONMENT

STANDARD CAB:

- Operator seat
- Non-suspension trainer seat
- Flip down front visor
- Standard side of cab access

DELUXE CAB:

- Heated and ventilated operator seat
- Suspension trainer seat
- Retractable front visor
- Rear of cab access and standard side of cab access
- Vacuum, cab clean-out
- Operator Footrest

DELUXE COLD WEATHER CAB:

- Heated and ventilated operator seat
- Suspension trainer seat
- Retractable front visor
- Rear of cab access and standard side of cab access
- Vacuum
- cab clean-out
- Operator Footrest
- Deluxe Diffuser

Air conditioner

Auxiliary power connection/cigarette lighter

Diagnostic connection port

Dome courtesy light

Entertainment Radio Ready: 5 amp converter, Speakers, Antenna wiring

Gauges/indicators: Air cleaner service indicator; Quad gauge panel: Air pressure, Brake oil temperature, Engine coolant temperature, Fuel level

Electric hour meter

Electric engine control fault indicator

Engine idle shutdown

Mirrors, right and left

Speedometer

Tachometer

Transmission gear indicator

VIMS message center with universal gauge

VIMS keypad

Heater/defroster (11 070 kCal/43,930 BTU)

Horn

Hoist, body control (electric)

Integrated object detection system

ROPS cab, insulated/sound suppressed

Seatbelt, operator, 75 mm/3" wide

Seatbelt, trainer, two points

Stairway and walkway access, 600 mm (24 in)

Steering wheel, tilt, padded, telescopic

Window, operator, electric powered

Windshield wiper, intermittent control and washer

FLUIDS

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

OTHER STANDARD EQUIPMENT

Air line dryer
Auto lubrication system
Auxiliary "buddy" dumping quick connect
Auxiliary steering quick connect (towing)
Body mounting group
Driveline guard (fully enclosed)
Fast fill fuel system
Ground level VIMS data port
Ground level battery disconnect
Rock ejectors
Supplemental steering (automatic)
Tie off points
Tow hooks (front)
Tow pin (rear)
Traction Control System
Vital Information Management System

789D OPTIONAL EQUIPMENT

BODY

Dual slope body: Body, dual slope, 109 m³ (142 yd³)

Dual slope body attachments:

- Extensions, 457 mm (18"), side, DS, 123 m³ (161 yd³)
- Extension, wraparound tail, DS
- Liner, entire body, DS
- Liner, wraparound, DS, 450 BHN
- Rock deflector, rear tire, DS

X body: Body, X, 123 m³ (161 yd³)

X body attachments: Extensions, side, X, 185 mm (7"), 131 m³ (171 yd³); Extensions, side, X, 385 mm (15"), 138 m³ (181 yd³)

MSD II body: Body, MSD II, 130 m³ (170 yd³)

MSD II body attachments:

- Extensions, side, MSD II, 141 m³ (185 yd³)
- Extensions, side, MSD II, 153 m³ (200 yd³)

Combination body: Body, combi, 153 m³ (200 yd³)

Combination body attachments: Extensions, side, combi, 195 m³ (255 yd³)

Gateless coal body: Body, gateless coal, 191 m³ (250 yd³)

Gateless coal body attachments: Extensions, side, coal, 214 m³ (280 yd³); Extensions, side, coal, 237 m³ (310 yd³)

Body lighting group - rear:

- Directional signals (LED)
- Stop/tail lights (LED)

ELECTRICAL

Lockout transmission, ground level

Auxiliary work lights (1) RH side, (1) LH side

POWER TRAIN

Prelube, engine

Oil renewal system

FILTRATION CONFIGURATIONS

Rear axle, cooler

OTHER ATTACHMENTS

Information management: Control, road analysis (RAC)

Cold weather: Brake oil, recirculating; Cold weather start

Service center

Miscellaneous:

- Fire extinguisher, portable
- Hub odometer, kilometers
- Wheel chocks
- Gauge, brake wear indicator

ANTIFREEZE

Coolant, -50° C (-58° F)