

Product Specifications For 789 (04)



Weights - Approximate

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

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
Rated Speed	1750 r/min

Cab

Heater / Defroster	10.1 kW
Air Conditioning	69 kW (23,543 Btu/hr)

ROPS Standards (1)	ROPS for Operator meets ISO 3471:2008; for Trainer meets ISO 13459:2012
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FOPS Standards	FOPS for Operator meets ISO 3449:2005 Level II; for Trainer meets ISO 13459:2012 Level II
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Note	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.
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Dimensions

Height - Top of ROPS	5400 mm
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Overall Length	12915 mm
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Wheel Base	5700 mm
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Rear Axle - Tail	3860 mm
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Ground Clearance	1224 mm
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Dump Clearance	1620 mm
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Loading Height - Empty	6150 mm
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Overall Height - Body Raised	13045 mm
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Centerline Front Tire Width	5410 mm
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Engine Guard Clearance	1210 mm
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Overall Canopy Width	7770 mm
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Outside Body Width	7770 mm
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Inside Body Width	6705 mm
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Front Canopy Height	6525 mm
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Rear Axle - Clearance	1178 mm
Centerline of Rear Dual Tire Width	4625 mm
Overall Tire Width	6945 mm

Dimensions (Approximate)

Height - Top of ROPS	5400 mm
Overall Length	12650 mm
Wheel Base	5700 mm
Rear Axle - Tail	3590 mm
Ground Clearance	1224 mm
Dump Clearance	1740 mm
Loading Height - Empty	5470 mm
Overall Height - Body Raised	13335 mm
Centerline Front Tire Width	5410 mm
Engine Guard Clearance	1210 mm
Overall Canopy Width	7645 mm
Outside Body Width	7645 mm
Inside Body Width	6500 mm
Front Canopy Height	6700 mm
Rear Axle - Clearance	1178 mm

Centerline of Rear Dual Tire Width	4625 mm
Overall Tire Width	6945 mm
Dimensions (All Dimensions Are Approximate. MSD II Body, 33R51 Tires, Unloaded Machine.)	
Height - Top of ROPS	5400 mm
Overall Length	13350 mm
Wheel Base	5700 mm
Rear Axle - Tail	3985 mm
Ground Clearance	1224 mm
Dump Clearance	1315 mm
Loading Height - Empty	5840 mm
Overall Height - Body Raised	13100 mm
Centerline Front Tire Width	5410 mm
Engine Guard Clearance	1210 mm
Overall Canopy Width	7780 mm
Outside Body Width	7800 mm
Front Canopy Height	6335 mm
Rear Axle - Clearance	1180 mm
Centerline of Rear Dual Tire Width	4625 mm
Overall Tire Width	6945 mm

Body - Dual Slope

Body Weight	27365 kg
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Optional Engine

Engine Model	Cat® 3516B EUI
Gross Power	1417 kW
Rated Net Power - ISO 9249	1320 kW
Bore	170 mm
Stroke	190 mm
Displacement	69 l

Operating Specifications

Standard MSD Body (SAE 2:1)	130 m³
Standard X Body (SAE 2:1)	123 m³
Standard Dual Slope Body (SAE 2:1)	108 m³
Standard Combi Body (SAE 2:1)	153 m³
Standard Gateless Coal Body (SAE 2:1)	191 m³
Note	Refer to the Cat Mining Truck Optimized payload policy for maximum gross machine weight limitations.
Standard HP Body (SAE 2:1)	144 m³

Weight Distributions - Approximate

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

Steering

Steering Standards	ISO 5010:2019
Steering Angle	36.07 °
Turning Diameter - Front Wheel	27.53 m
Vehicle Clearance - Turn Circle	30.23 m
Turning Diameter - ISO 7457:1997 (33.00R51 tires)	30.34 m

Service Refill Capacities

Fuel Tank - Standard	2082 l
Fuel Tank - Optional	3785 l
Cooling System	725 l
Crankcase	291 l
Differential - Final Drives	830 l
Steering System	189 l
Brake Hoist System	909 l
Brake/Hoist Hydraulic Tank	540 l
Steering Tank	134 l

Transmission Tank	76 l
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Transmission

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

Final Drives

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

Suspension

Effective Cylinder Stroke - Front	105 mm
Effective Cylinder Stroke - Rear	93 mm
Rear axle - Oscillation	±5.4°

Brakes

Brake Surface - Front	81693 cm²
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Brake Surface - Rear	134522 cm ²
Standards	ISO 3450:2011

Body Hoists

Pump Flow - High Idle	699 L/min
Relief Valve Setting - Raise	18950 kPa
Body Raise Time - High Idle	18.9 s
High Idle Body Lower Time - Float	15.6 s
Note (1)	Refer to the Cat Mining Truck Optimized payload policy for maximum gross machine weight limitations.
High Idle Body Lower Time - Power	15.6 s
Body Raise Time - High Idle Body	17.3 s

Tires

Standard Tires	37.00-R57
Optional Tires	40.00-R57

Body - X

Body Weight	30107 kg
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Sound

Sound Standards	Operator sound pressure level 78.5 dB(a) tested to ISO 6394:2008 and ISO 6396:2008
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789 (04) Standard Equipment

POWERTRAIN

Engine, 1566 kW (2,100 hp) 3516C, HD, EUI
Diesel engine/turbocharged/aftercooled
Ground level engine shutdown
Ether starting aid (automatic)
Aftercooler
Elevated low idle control
Automatic starter protection
Multi-point oil pressure sensing
Muffler
Fan, conventional drive
Electric start

BRAKING SYSTEM

Brake release motor (towing)
Oil-cooled, multi-disc (front and rear)/(service, resistive braking, parking, secondary)
Automatic resistor control
Engine overspeed protection
Extended life brake disc material

TRANSMISSION

Controlled throttle shifting
Individual clutch modulation
Body-up shift inhibitor
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

Back up alarm
Alternator 105 ampere
Batteries, 12V (2), 93 amp-hour
Converter, 12V electrical
Electrical system, 24V, 15 amp

LED Lighting system:

- Backup and hazard lights
 - Directional signals, front and rear
 - Engine compartment lights
 - External payload lights
 - Headlights and fog lights
 - Lo-hi beam selector
 - Ladder light and service deck lights
 - Left-hand ladder/Service deck -Stop/taillights VIMS, blue light
- Payload indicator lights

INFORMATION MANAGEMENT

Wiring standard (less road analysis control)

OPERATOR ENVIRONMENT

Air conditioner

Auxiliary power connection/cigarette lighter

Diagnostic connection port

Dome courtesy light

Entertainment radio ready:

- 5-amp converter, speakers, antenna, and wiring

Air cleaner service indicator

Gauge panel: Air pressure, Brake oil temperature, Engine coolant temperature, Fuel level

Electric hour meter

Electric engine control fault indicator

Mirrors, right and left

Speedometer and tachometer

Supplemental steering (automatic)

Traction control system

Transmission gear indicator

Vital Info Management System (VIMS)

OBJECT DETECTION SYSTEM

Radar and camera

CAT TECHNOLOGY PRODUCTS

Product Link™ cellular

SAFETY AND SECURITY

Ground level VIMS data port

Ground level battery disconnect

Working at heights handrail

FUEL SYSTEMS

Fast fill fuel system

2082 L (550 gal) capacity fuel tank and fast fill system
Fuel filter basic screen

FLUIDS

Antifreeze protection to -35° C (-30° F)

ACCESS

Fixed ladder

FRAMES

Mirror heated

Driveline guard

SERVICE

Service center

Quick connect fitting for engine oil

BODIES ACCESSORIES

Rock ejectors

Auxiliary "buddy" dumping quick connect

789 (04) Optional Equipment

POWERTRAIN

Engine, 1417 kW (1,900 hp) 3516B, EUI

Engine, 1566 kW (2,100 hp) 3516C, HD, EUI, US EPA Tier 2 equivalent

Pre-lube

Filtration for oil cooler

Oil renewal system

Muffler, extended exhaust

Exhaust system to heat body

Exhaust deflector

Fan, variable speed, rockford for use in freezing weather operations

Air start

ELECTRICAL

Lock out transmission at ground level

Lighting auxiliary at catwalk and passenger platform

Lighting at body rear for signals and stop/taillights

Payload digital display

INFORMATION MANAGEMENT

Wiring with road analysis control

OBJECT DETECTION SYSTEM

Camera only (radar ready)
Omission, camera and radar

CAT TECHNOLOGY PRODUCTS

Product Link satellite

SAFETY AND SECURITY

Working at heights package
Working at heights service
Fire extinguisher, portable

FUEL SYSTEMS

3785 L (1,000 gal) capacity fuel tank and fast fill system
Fuel filter with separator
Fuel filter with separator and heater

FLUIDS

Antifreeze protection to -50° C (-58° F)

RIMS AND WHEELS

37R57
37R57 quick change
40R57
40R57 quick change
Rim diffuser
Hub odometer
Wheel chocks
Brake wear indicator

MUD GUARDS

Mud guards for standard hydraulic and fuel tanks
Mud guards for standard hydraulic and large fuel tank

ACCESS

Powered staircase

FRAMES

Mirror wide and heated
Lift assist struts for front and rear hoods

COLD WEATHER

Starting, cold weather
Brake oil recirculating

SERVICE

Service center
Quick connect fitting for engine oil

BODIES ACCESSORIES

Side extensions
Tail wraparound
Liner for base only
Liner for entire body
Rock guard for dual slope bodies