

Product Specifications For D9



Engine - U.S. EPA Tier 2/3 Equivalent

Engine Model	Cat® C18
Engine Power - Net SAE J1349/ISO 9249	337 kW
Bore	145 mm
Stroke	183 mm
Displacement	18.1 l
Engine Power - Gross SAE J1995	363 kW
Engine Power - ISO 14396	357 kW
Emissions	U.S. EPA Tier 2 or Tier 3 equivalent
Note (1)	All engine ratings apply at 1,750 rpm.
Note (2)	No derating required up to 4267 m (14,000 ft) altitude.

Weights

Operating Weight	49988 kg
Shipping Weight	38271 kg
Note (1)	D9 Operation Weight includes hydraulic controls, blade tilt cylinder, coolant, lubricants, full fuel tank, ROPS, FOPS cab, SU Blade, Single-Shank Ripper, 610 mm (24 in) ES shoes and operator.
Note (2)	D9 Operation Weight includes base machine chassis with cab, pivot shaft, roller frames, track and ROPS.

Undercarriage

Shoe Type	Extreme Service
Width - Shoe	610 mm
Shoes/Side	43
Grouser Height	84 mm
Pitch	240 mm
Ground Clearance	459 mm
Track Gauge	2250 mm
Length - Track on Ground	3470 mm
Ground Contact Area	4.23 m ²
Track Rollers/Side	8
Number of Carrier Rollers	1 per side (optional)

Standards

ROPS	Rollover Protective Structure (ROPS) meets the following criteria ISO 3471:2008.
FOPS	Falling Object Protective Structure (FOPS) meets the following criteria ISO 3449:2005 LEVEL II.
Sound	The average dynamic spectator sound power level when ISO 6395:2008 is used to measure the value for a machine is 116 dB(A). The measurement was conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds. NOTE: The dynamic sound power level uncertainty is +/-2 dB(A).

Sound (1)	The average dynamic operator sound pressure level when ISO 6396:2008 is used to measure the value for an enclosed cab is 78 dB(A). The measurement was conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds. The cab was properly installed and maintained. The measurement was conducted with the cab doors and the cab windows closed. NOTE: The dynamic operator sound pressure level uncertainty is +/-2 dB(A).
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Sound (2)	Hearing protection may be needed when the machine is operated with an open operator station for extended periods, in a noisy environment, or with a cab that is not properly maintained.
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Steering And Brakes

Steering Type	Differential
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Brake Type	Spring Applied Wet Disc
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Brake Diameter	393.7 mm
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Brake Count	8
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Engine - U.S. EPA Tier 4 Final/EU Stage V

Engine Model	Cat® C18
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Bore	145 mm
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Stroke	183 mm
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Displacement	18.1 l
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Engine Power - Gross SAE J1995	356 kW
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Engine Power - ISO 14396	349 kW
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Engine Power - Net SAE J1349/ISO 9249	328 kW
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Emissions	U.S. EPA Tier 4 / EU Stage V
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Note (1)	All Engine ratings apply at 1,750 rpm.
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Note (2)

No derating required up to 2499 m (8,200 ft).

FLUID CAPACITIES

Fuel Tank (Splash Fill)	963 l
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DEF Tank (Tier 4 only)	36 l
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Fuel Tank (Fast Fill)	939 l
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Cooling System	81.3 l
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Engine Crankcase*	36 l
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Powertrain	150 l
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Final Drives (each)	15 l
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Roller Frames (each)	45 l
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Pivot Shaft Oil	30 l
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Hydraulic System Tank	89 l
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Note	*With oil filters.
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Note 2

Biodiesel blends up to B20 (20% blend by volume) are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD. B20 should meet ASTM D7467 specification (biodiesel blend stock should meet Cat biodiesel spec, ASTM D6751 or EN 14214). Cat DEO-ULSTM or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are required. Consult your OMM for further machine specific fuel recommendations.

Note 3 All non-road Tier 4 Final diesel engines are required to use only ultra-low sulfur diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less.

Note 4 Diesel Exhaust Fluid (DEF) used in Cat Selective Catalytic Reduction (SCR) systems must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241.

Hydraulic Controls

Pump Type	Piston-type geared to flywheel
Pump Output - Steering	363 L/min
Fan Pump	80 L/min
Tilt Cylinder Flow - Rod End Flow	200 L/min
Tilt Cylinder Flow - Head End Flow	200 L/min
Lift Cylinder Relief Valve Setting	26200 kPa
Tilt Cylinder Relief Valve Setting	19300 kPa
Ripper - Lift - Relief Valve Setting	26200 kPa
Ripper - Pitch - Relief Valve Setting	26200 kPa
Steering System - Pressure	40500 kPa
Tank Capacity	89 l

Note (1) Steering pump output measured at 1,750 engine rpm and 30 000 kPa (4,350 psi).

Note (2)	Implement pump output measured at 1,750 engine rpm and 20 000 kPa (2,900 psi).
Note (3)	Fan pump output measured at 1,750 engine rpm and 17 000 kPa (2,470 psi)

Air Conditioning System

Air Conditioning	The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430) the system contains 2.1 kg of refrigerant which has a CO2 equivalent of 3.003 metric tonnes.
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Transmission

1.0 Forward	3.5 km/h
2.0 Forward	6.3 km/h
3.0 Forward	11 km/h
1.0 Reverse	4.4 km/h
2.0 Reverse	7.8 km/h
3.0 Reverse	13.6 km/h
Type	Planetary powershift

Blade - Semi-Universal

Blade Capacity (SAE J1265)	13.6 m ³
Blade Width (over end bits)	4350 mm
Blade Height	1934 mm
Maximum Digging Depth	606 mm
Ground Clearance at Full Lift	1422 mm

Maximum Tilt	940 mm
Blade Weight	4802 kg
Total Operating Weight* (with blade and single-shank ripper)	49 988 kg
Note	* Total Operating Weight includes: single tilt hydraulics, coolant, lubricants, full fuel tank, ROPS, FOPS cab, 610 mm (24 in) ES track shoes and the noted blade and ripper type.

Blade - Universal

Blade Capacity (SAE J1265)	16.6 m³
Blade Width (over end bits)	4680 mm
Blade Height	1934 mm
Maximum Digging Depth	606 mm
Ground Clearance at Full Lift	1422 mm
Maximum Tilt	1014 mm
Blade Weight	5450 kg
Total Operating Weight* (with blade and single-shank ripper)	50 513 kg
Note	*Total Operating Weight includes: single tilt hydraulics, coolant, lubricants, full fuel tank, ROPS, FOPS cab, 610 mm (24 in) ES track shoes and the noted blade and ripper type.

Ripper - Single Shank

Maximum penetration force * (shank vertical)	158 kN
Maximum penetration depth (standard tip)	1231 mm

Pryout Force	332 kN
Maximum Clearance Raised - Under Tip, Pinned in Bottom Hole	882 mm
Number of Pockets	1
Weight	4854 kg
Total Operating Weight* (with SU Blade and noted ripper)	49 988 kg
Note	*Total Operating Weight includes: single tilt hydraulics, coolant, lubricants, full fuel tank, ROPS, FOPS cab, 610 mm (24 in) ES track shoes and the noted blade and ripper type.

Ripper - Single Shank, Deep Ripping

Maximum penetration force * (shank vertical)	172 kN
Maximum penetration depth (standard tip)	1727 mm
Pryout Force	331 kN
Maximum Clearance Raised - Under Tip, Pinned in Bottom Hole	817 mm
Number of Pockets	1
Weight	4981 kg
Total Operating Weight* (with SU Blade and noted ripper)	50 115 kg
Note	*Total Operating Weight includes: single tilt hydraulics, coolant, lubricants, full fuel tank, ROPS, FOPS cab, 610 mm (24 in) ES track shoes and the noted blade and ripper type.

Ripper - Multi-Shank, Adjustable Parallelogram

Maximum Penetration Force - Shank Vertical	154 kN
Maximum Penetration - Standard Tip	798 mm
Pry-Out Force - Multi-Shank Ripper with One Tooth	361 kN
Maximum Clearance Raised - Under Tip, Pinned in Bottom Hole	879 mm
Number of Pockets	3
Weight	5550 kg
Total Operating Weight* - With SU-Blade and Ripper	50684 kg
Note	* Total Operating Weight includes: single tilt hydraulics, coolant, lubricants, full fuel tank, ROPS, FOPS cab, 610 mm (24 in) ES track shoes and the noted blade and ripper type.

Dimensions (Approximate)

Ground Clearance*	459 mm
Track Gauge	2250 mm
Width - Without Trunnions - Standard Shoe	2870 mm
Width - Over Trunnions	3310 mm
Height - FOPS Cab*	3820 mm
Height - Top of Stack*	3876 mm

Height - ROPS/Canopy*	4000 mm
Drawbar Height (Center of Clevis)*	763 mm
Length - Track on Ground	3470 mm
Overall Length - Basic Tractor	4910 mm
Length - Basic Tractor - With Drawbar	5242 mm
Length - Basic Tractor - With Winch	5545 mm
Length - With SU-Blade**	6601 mm
Length - With U-Blade	6967 mm
Length - With Single-Shank Ripper	6529 mm
Length - With Multi-Shank Ripper	6538 mm
Overall Length - SU-Blade/SS Ripper	8219 mm
Note (1)	*Includes grouser height for total dimensions on hard surfaces.

Winches

Winch Model	PA 140VS
Weight*	1790 kg
Oil Capacity	15 l
Drum Width	320 mm
Wire Cable Diameter - Recommended	28 mm
Wire Cable Diameter - Optional	32 mm

Maximum Drum Capacity - Recommended Cable Length	78 m
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Maximum Drum Capacity - Optional Cable Length	62 m
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Wire Cable Ferrule Size - Outside Diameter	60 mm
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Wire Cable Ferrule Size - Length	70 mm
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Note	*Weight shown is base winch only. Does not include mounting arrangement, control arrangement, oil, or wire rope. With counterweight: 3700 kg (8,150 lb).
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Note (2)	Variable speed, hydraulically driven, dual braking system, three-roller fairlead.
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D9 Standard Equipment

OPERATOR ENVIRONMENT

ROPS/FOPS, Sound-Suppressed Cab

High-Definition Primary Touchscreen Display

Visibility – Rearview Mirrors

Air Conditioner and Heater with Automatic Climate Control

Seatbelt, 76 mm (3 in) Retractable with Switch

Seat — Cloth with Air Suspension

Window Wipers with Wash — Low, High, Intermittent

Differential Steering — Power Turn

Entertainment Radio Ready (12V Power, Harness, Speakers)

Cab Glass — Single-Pane Tinted Safety

Cab Door — Right-Hand Swing

Access/Egress Lighting with Shutdown Timer

"Operator Not Present" Detection

Armrest — Adjustable

Interior LED Courtesy Lights

Interior Backlighting — Dimmable

Air Conditioning Condenser — Cab Mounted (Standard only on Tier 4 engine arrangements. Optional on Tier 2/3 versions. Tier 2/3 versions have underhood A/C condenser standard.)

Decelerator Pedal

Controls — Blade — Electronic

Controls — Ripper — Electronic

Park Brake — Electronic

Engine Speed Control Dial
Cab Access — Blade Pusharm Steps and Grab Handle
Fender Platform Guardrails
Site Communication Radio Mount
Four Fluids (Engine Oil, Coolant, Power Train, Fuel)
Continuous Fluid Level Monitoring — Four Fluids (Engine Oil, Power Train, Coolant, Fuel)
Slope and Side Slope Monitor

TECHNOLOGY

VIMS™

Automated Blade Assist (ABA) — When Equipped with Dual Tilt
Cat Product Link Elite (Cellular) (Where Allowed by Local Regulations)

POWER TRAIN

Aftercooler, air-to-air
Air filter, with precleaner
Aluminum bar plate radiator, 6 fpi
C18 Tier 4 Final and Stage IV: - 24-volt electric start - Clean Emissions Module
Coolant, extended life
Shift management: - Advanced Productivity Electronic Control System (APECS) - Enhanced AutoShift (EAS)
Engine idle shutdown timer
Ether starting aid, automatic
Fast fuel system
Fuel priming pump, key-on, electric
High speed oil change system, engine and power train
Muffler
Parking brake, electronic
Prescreener
Separator, water/fuel
Three planet, double-reduction planetary final drives
Torque converter
Transmission, electronic control (ECPC), (3F/3R speeds)

FLUIDS

Coolant — Extended Life, Standard (— 37° C / — 25° F)

UNDERCARRIAGE

Suspension-Type Undercarriage
Track Guide
Two-Piece Master Link
Lifetime-Lubricated Rollers and Idlers
Hydraulic Track Adjusters
Equalizer Bar — Greased End Pin Bearings

HYDRAULICS

Electronically Controlled, Load-Sensing Dozer Lift and Tilt

Electronically Controlled, Load-Sensing Ripper Lift and Pitch
Electronically Enabled Blade, Quick Drop

ELECTRICAL

Alternator — 150-Amp
Batteries — 2 x 4, 200-Amp Hour, 12V
12V, 15-Amp Converter
Battery Isolation
Backup Alarm
Lights, Engine Compartment
Lights — Halogen — 8 Positions

SERVICE AND MAINTENANCE

Ecology Fluid Drains — All Compartments
Hinged Bottom Guards
High-Speed Oil Change — Engine and Transmission
S•O•SSM Fluid Sampling Ports
Diagnostic Connector
CapSureTM Hammerless Ripper Tip and Shank Protectors
Anchorage Points (10)

D9 Optional Equipment

OPERATOR ENVIRONMENT

Visibility – Camera – Ripper Tip View
Visibility — Dual Camera
Visibility — Four Cameras — 360-Degree View
Seat — Heated, Cooled, Adjustable Lumbar and Bolsters
Entertainment Radio — AM/FM, Aux Input and Bluetooth®
Cab Glass — Dual-Pane Laminated Impact Safety
Cab Glass — High-Pressure Safety (40 psi/275 kPa)
Window Sunscreen
Small Operator 5th Percentile Mounting Group
Cab Door — Left-Hand Swing
Cab Access — Powered Ladder
Cab Filter Powered Precleaner

TECHNOLOGY

AutoCarryTM
Auto Ripper Control
Cat Product Link Elite Dual Mode (Cellular + Satellite)
Cat GRADE with 3D

POWER TRAIN

Coolant, arctic

Engine prelube
Exhaust, wrapped: – Insolated Clean Emissions Module
Final drives: – Cold weather – Guarded – Waste handling
Ground level DEF fill
Reversible cooling fan

FLUIDS

Coolant — Extended Life, Arctic (— 51° C / — 60° F)
High Ambient Lubrication Package
Arctic Lubrication Package

UNDERCARRIAGE

Undercarriage Arrangement — Abrasion
Undercarriage Arrangement — Waste Handling
Undercarriage Arrangement — Cold Weather
Front Striker Bars
Rubber Idler Guards
Track Links — Heavy Duty XL — DuraLink
Track Shoe — Anti-Packing Round Hole Carrier Roller
Carrier Roller
Carrier Roller — Cold Weather

HYDRAULICS

Dozer Blade Dual Tilt
Ripper Pin Puller
Guarded Tilt Cylinder Lines

ELECTRICAL

24V Electric Start, Dual Starters
Batteries — 4 x 200, 200-Amp Hour, 12V
Lights — Halogen — 12 Positions
Lights — LED — 14 Positions
Lights — High-Output LED — 14 Positions
Light — Warning Strobe

SERVICE AND MAINTENANCE

Sound-Reduction Sealed Bottom Guards
Ground-Level Fast Fuel Fill (Standard on Tier 4)
Sound Enclosure
Cat Autolube Grease System with Ground-Level Fill and Auto Shutoff
Hinged Quick-Access Door on Radiator Guard

REAR ATTACHMENTS

Ripper Ready
Winch Ready

Ripper — Single Shank
Ripper — Single-Shank Deep
Ripper — Multi Shank (three shank)
Counterweight
Striker Box (Waste)
Winch
Drawbar

BLADES

Semi-Universal (13.6 m³/17.8 yd³)
Semi-Universal Abrasion (13.6 m³/17.8 yd³)
Universal (16.6 m³/21.7 yd³)
Universal Abrasion (16.6 m³/21.7 yd³)
Semi-Universal Push Plate (13.6 m³/17.8 yd³)
SU Landfill (28.2 m³/36.8 yd³)
Universal Landfill (38.8 m³/50.8 yd³)
Woodchip (46.1 m³/60.3 yd³)
Coal (36.8 m³/48.2 yd³)
— Some blades only available through Cat Work Tools.
— SU Abrasion and U Abrasion are available with black paint on back side.

OTHER

Fire Suppression Ready

SPECIAL ARRANGEMENTS

High Debris
Stockpile
Waste Handling
Sound
Arctic