

D7

Track-Type Tractor

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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Engine

Engine Model	Cat® C9.3B	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V/Japan 2014/ Korea Tier 4 Final	
Build Number	17A	
Power Train	Fully Automatic 4-Speed	
Net Power (2,200 rpm)		
ISO 9249/SAE J1349	197 kW	265 hp
ISO 9249/SAE J1349 (DIN)	268 mhp	
Engine Power (1,400 rpm)		
ISO 14396	230 kW	309 hp
ISO 14396 (DIN)	313 mhp	
Bore	115.0 mm	4.5 in
Stroke	149.0 mm	5.9 in
Displacement	9.3 L	567 in^3

- Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.
- Net power is tested per ISO 9249:2007 and SAE J1349:2011.
- Engine power is tested per ISO 14396:2002
- All non-road Tier 4 Interim and Final, Stage IIIB, Stage IV, Stage V, Japan 2014 and Korea Tier 4 Final diesel engines are required to use only ultra-low sulfur diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. 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-ULS™ 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.
- 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.

Fluid/Refill Capacities

Fuel Tank	465 L	123 gal
DEF Tank	44 L	11.6 gal
Cooling System	62 L	16.3 gal
Engine Crankcase	28 L	7.4 gal
Power Train	187 L	49.4 gal
Roller Frames Standard/LGP (each)	85-96 L	22.4-25.3 gal
Final Drives (each)	13 L	3.4 gal
Hydraulic System	144 L	38 gal

Air Conditioning System

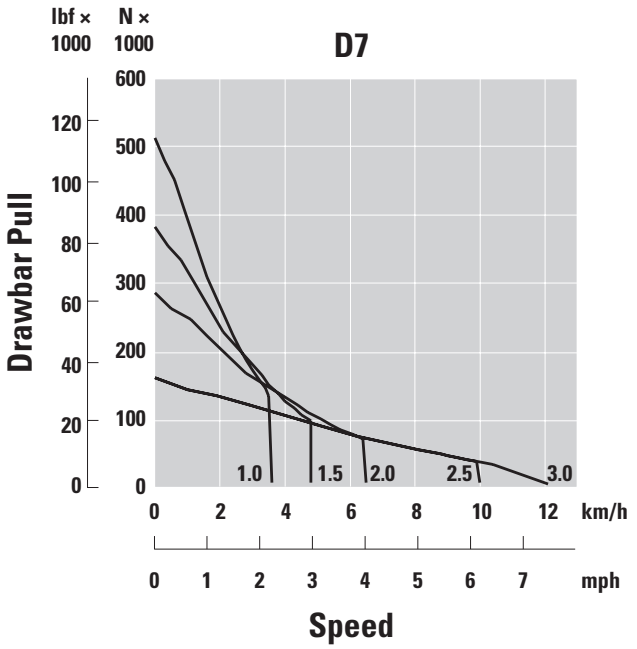
The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.36 kg of refrigerant which has a CO_2 equivalent of 1.946 metric tonnes.

Transmission

1.0 Forward	3.5 km/h	2.2 mph
1.5 Forward	4.8 km/h	3.0 mph
2.0 Forward	6.4 km/h	4.0 mph
2.5 Forward	9.0 km/h	5.6 mph
3.0 Forward	11.4 km/h	7.1 mph
1.0 Reverse	3.5 km/h	2.2 mph
1.5 Reverse	4.8 km/h	3.0 mph
2.0 Reverse	6.3 km/h	3.9 mph
2.5 Reverse	8.5 km/h	5.3 mph
3.0 Reverse	11.4 km/h	7.1 mph

D7 Track-Type Tractor Specifications

Drawbar Pull



Hydraulic Controls – Pressures

Maximum Implement Operating Pressure	31 000 kPa	4,496 psi
Maximum Steering Operating Pressure	38 000 kPa	5,510 psi

Hydraulic Controls – Pump

Pump Output (1,900 rpm engine speed*)		
Implement	220 L/min	58 gal/min
Steering	267 L/min	70 gal/min
Fan	56 L/min	15 gal/min
Lift Cylinder Flow	220 L/min	58 gal/min
Tilt Cylinder Flow	170 L/min	45 gal/min
Ripper Cylinder Flow	220 L/min	58 gal/min

*Engine speed varies with load and travel speed. A high idle/low working load speed shown.

D7 SU/U

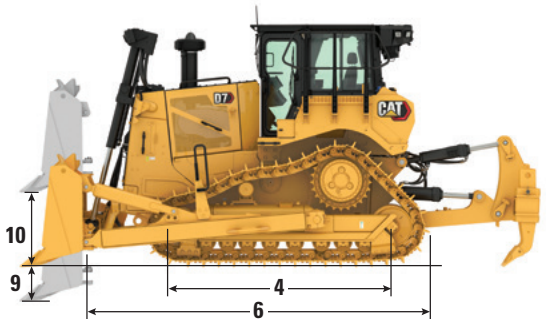
	Operating Weight*	29 776 kg	65,644 lb
	Shipping Weight**	26 043 kg	57,415 lb
	Ground Pressure (ISO 16754)	72.1 kPa	10.5 psi
	Undercarriage	41 Sections with 8 Bottom Rollers	
1	Track Gauge	1.98 m	78 in
2	Width of Track Shoe (Standard)	0.61 m	24 in
3	Width of Tractor (without trunnions)	2.59 m	102 in
4	Length of Track on Ground	2.97 m	117 in
	Ground Contact Area (ISO 16754)	4.05 m^2	6,274 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.5 in
5	Machine Height***	3.43 m	134.9 in
6	Length of Basic Tractor	4.66 m	183.4 in
	With Ripper, add	1570 mm	61.8 in

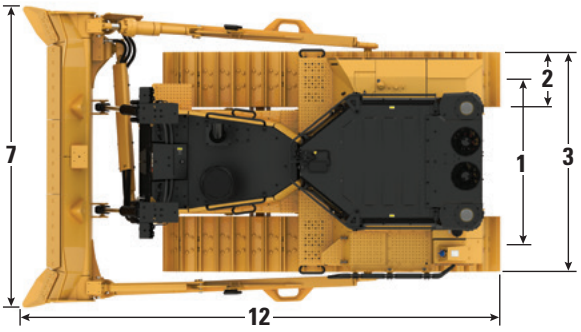
*Operating weight includes blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, ripper, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, and ripper.

***Machine height from tip of grouser to top of Product Link™ Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.







Blades

	Configuration	Semi-Universal (SU)		Universal (U)	
	Capacity (ISO 9246)	7.42 m^3	9.7 yd^3	8.56 m^3	11.2 yd^3
7	Width across End Bits	3.64 m	143.3 in	3.92 m	154.3 in
	Width without End Bits	3.50 m	138.0 in	3.78 m	149.0 in
8	Height	1.56 m	61.6 in	1.56 m	61.6 in
9	Dig Depth	0.58 m	22.8 in	0.58 m	22.8 in
10	Lift Height	1.21 m	47.8 in	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.52 m	20.4 in	0.56 m	22.2 in
	Maximum Tilt Angle	8.5°		8.5°	
	Pitch Adjustment	± 3.5°		± 3.5°	
12	Length of Machine with Blade	5.78 m	227.4 in	6.03 m	237.4 in
	Blade Weight (blade + push arms installed)	3269 kg	7,207 lb	3473 kg	7,640 lb

D7 Track-Type Tractor Specifications

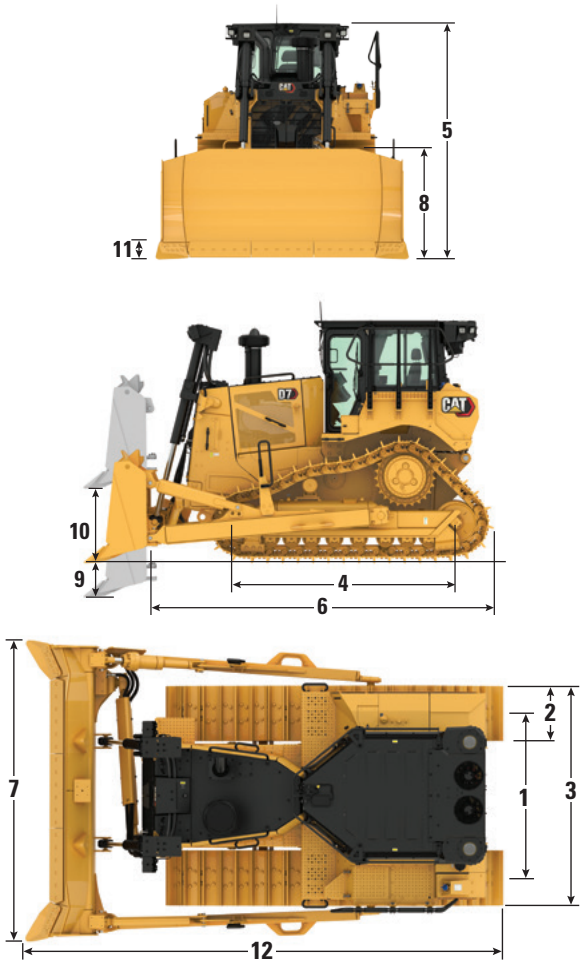
D7 LGP S/SU

	Operating Weight*	28 677 kg	63,220 lb
	Shipping Weight**	25 074 kg	55,278 lb
	Ground Pressure (ISO 16754)	43.4 kPa	6.3 psi
	Undercarriage	43 Sections with 9 Bottom Rollers	
1	Track Gauge	2.24 m	88 in
2	Width of Track Shoe (Standard)	0.91 m	36 in
3	Width of Tractor (without trunnions)	3.15 m	124 in
4	Length of Track on Ground	3.20 m	126 in
	Ground Contact Area (ISO 16754)	6.47 m^2	10,036 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.5 in
5	Machine Height***	3.43 m	135.0 in
6	Length of Basic Tractor	4.66 m	183.4 in

*Operating weight includes blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, drawbar, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, and drawbar.

***Machine height from tip of grouser to top of Product Link Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.



Standard SU Configuration Shown

Blades

	Configuration	Straight (S)		Semi-Universal (SU)	
	Capacity (ISO 9246)	6.20 m^3	8.1 yd^3	8.79 m^3	11.5 yd^3
7	Width across End Bits	4.31 m	169.8 in	3.93 m	154.6 in
	Width without End Bits	4.15 m	163.0 in	3.78 m	149.0 in
8	Height	1.37 m	53.8 in	1.56 m	61.6 in
9	Dig Depth	0.58 m	22.8 in	0.58 m	22.8 in
10	Lift Height	1.21 m	47.8 in	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.51 m	19.9 in	0.51 m	19.9 in
	Maximum Tilt Angle	7.0°		7.0°	
	Pitch Adjustment	± 3.5°		± 3.5°	
12	Length of Machine with Blade	5.50 m	216.4 in	5.79 m	227.8 in
	Blade Weight (blade + push arms installed)	3521 kg	7,762 lb	3500 kg	7,700 lb

Track Shoes

Some track shoes not available in all regions. Please consult your Cat dealer for details.

		Standard – 41 Section		LGP – 43 Section
Heavy Duty Extended Life (HDXL)	**560 mm (22 in)**	**610 mm (24 in)**	**660 mm (26 in)**	**915 mm (36 in)**
Moderate Service			✓	✓
Extreme Service	✓	✓	✓	✓
Extreme Service Trapezoidal		✓		✓
Self-Cleaning				✓
Rotating Bushing Track	**560 mm (22 in)**	**610 mm (24 in)**	**660 mm (26 in)**	**915 mm (36 in)**
Moderate Service		✓		

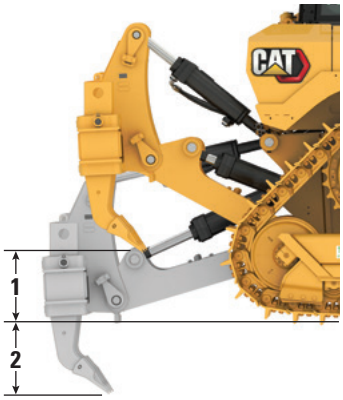
Dimensions – Rear Attachments

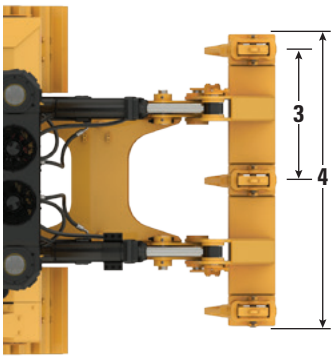
Add the following to the total length of the machine when these rear attachments are installed.

Drawbar		Winch		Ripper		Waste Striker Box	
276 mm	10.8 in	749.7 mm	29.5 in	1570 mm	61.8 in	450.5 mm	17.7 in

Ripper

	Type	Adjustable Parallelogram	
	Weight with Three Shanks	3607 kg	8,091 lb
	Weight with One Shank	3307 kg	7,431 lb
4	Beam Width	2210 mm	87 in
	Beam Cross Section	343 × 279 mm	13.5 × 11 in
1	Maximum Clearance, Raised (Shank Tip)	748 mm	29.4 in
2	Maximum Penetration	757 mm	29.8 in
3	Number of Pockets	3	
	Maximum Penetration Force	8664 kg	19,100 lb
	Maximum Pryout Force	17 138 kg	38,513 lb





D7 Track-Type Tractor Specifications

Winch

Winch Model	PA110	
Weight[2]	2046 kg	4,511 lb
Oil Refill Capacity	15 L	4 gal
Winch and Bracket Length	1575 mm	62 in
Winch Case Width[1]	1160 mm	45.6 in
Drum Diameter	320 mm	12.5 in
Drum Width	320 mm	12.5 in
Flange Diameter	610 mm	24 in
Drum Capacity – 28 mm (1.13 in)[4]	66 m	218 ft
Winch Drive	Hydraulic (High Power)	
Control	Electric	
Rope Diameter (recommended)	28 mm	1.13 in
Rope Diameter (optional)	32 mm	1.25 in
Drum Capacity – 28 mm (1.13 in)[3]	78 m	261 ft
Drum Capacity – 32 mm (1.25 in)[3]	62 m	207 ft
Drum Capacity – 28 mm (1.13 in)[4]	55 m	185 ft
Drum Capacity – 32 mm (1.25 in)[4]	36 m	119 ft
Cable Ferrule Size (O.D. × Length)	60 mm × 70 mm	2.38 in × 2.75 in
Maximum Bare Drum		
Line Pull[5]	489.3 kN	110,000 lb
Line Speed[6]	23.5 m/min	77 ft/min
Maximum Full Drum[3]		
Line Pull[5]	296 kN	66,500 lb
Line Speed[6]	39 m/min	127 ft/min

[1]Winch width does not include mounting brackets/adapters.

[2]Weight shown is base winch, mounting arrangement, guards, and oil. Wire rope not included.

[3]Theoretical drum capacity as defined by SAE J1158.

[4]Recommended drum capacity per SAE J706 (K=0.9).

[5]Maximum line pull is lesser of winch catalog rating or calculated maximum line pull at maximum tractor hydraulic system pressure.

[6]Maximum line speed is calculated maximum no-load line speed at maximum tractor hydraulic system flow.

Standards

ROPS/FOPS

- ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria ISO 3471:2008.
- FOPS (Falling Object Protective Structure) meets ISO 3449:2005 Level II.

Brakes

- Brakes meet the standard ISO 10265:2008.

Sound Level Information

- The average dynamic spectator sound power level when "ISO 6395:2008" is used to measure the value for a machine is 110 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).
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 76 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).
- 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.

Sound Level Information for Machines in European Union Countries and in Countries That Adopt the "European Union Directives"

- If equipped, the certification label is used to verify the environmental sound certification of the machine to the requirements of the European Union. The value that is listed on the label indicates the guaranteed exterior sound power level (L_{WA}) of 112 dB(A) at the time of manufacture for the conditions that are specified in "2000/14/EC."
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 75 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).
- 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.

Advanced Cabin Filtration

Operator Cabin

- Distributed HVAC ducting with automatic temperature control and blower speed provides ultimate operator comfort with less user input.
- Reduced maintenance of the condenser core with automatic reversing fans.
- Cat Advanced Cabin Filtration is standard.

Cat Advanced Cabin Filtration

- Operator protection from respirable particulate (0.3-10-micron size).
- Sustainably pressurized cab (U.S. Silica compliant).
- Reduced maintenance with longer life, high efficiency filters.
- Protection for all cabin components: electronics, etc.
- Helps meet U.S. Occupational Safety and Health Administration Silica Rule Table 1 requirements for operator cabs.
- Multi-tiered filter offerings for optional efficiency upgrades. Contact Cat dealer for availability.
  - MERV 16 – Standard Equipment
  - HEPA
  - Activated Carbon + HEPA
  - ABEK1 + HEPA

Technology Features

The Cat D7 offers the broadest choice of technology features to help you get the most from your dozer.

GRADE	Premium Display/Non-ARO	ARO with Assist	GRADE with 3D
GRADE with 3D	—	+[1]	✓
Third Party Grade Control Ready	+	✓	✓
ASSIST			
Slope Indicate	✓	✓	✓
Stable Blade Slope Assist Blade Load Monitor Traction Control AutoCarry™	—	✓	✓
VISION/DETECT			
HD Rear Camera with Backup Lines	✓	✓	✓
LINK			
Product Link Cellular	✓	✓	✓
Product Link Dual Mode	⊕	⊕	⊕
Remote Flash/Troubleshoot	✓	✓	✓
Grade Connectivity	—	✓	✓
OPERATOR FEATURES			
Operator ID[2]	✓	✓	✓
Machine Security – Passcode[2]	✓	✓	✓
Machine Security – Bluetooth®[2]	⊕	⊕	⊕

[1] Requires Software Enabled Attachment (SEA)
[2] Contact Dealer to Enable
✓ Standard
+ Dealer Install Option
⊕ Factory Option

Note: Grade and assist technologies, with the exception of Slope Indicate, are not compatible with Angle Blade.

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
POWER TRAIN		
Cat C9.3B diesel engine	✓	
Fully-automatic 4-speed transmission with Lock-Up Clutch (LUC) torque divider	✓	
Air-to-air aftercooler (ATAAC)	✓	
Aluminum bar plate radiator	✓	
Differential steering	✓	
Engine air precleaner with dust ejection	✓	
Engine air precleaner with screen and dust ejection		✓
Engine with thermal shield		✓
Engine idle shutdown	✓	
Extended life coolant	✓	
Double Reduction Final Drives – Standard or LGP	✓	
Double Reduction Final Drives – Arctic, Waste		✓
Fuel water separator	✓	
Electric fuel priming pump	✓	
Hydraulic demand fan	✓	
Hydraulic reversing fan	✓	
Sound suppression		✓
Debris resistant radiator cores	✓	
Automatic ether starting aid	✓	
Engine air filter with electronic service indicator	✓	
Diesel Exhaust Fluid (DEF) system – electronic fill indicator, heated lines/tank	✓	
Jacket water heater (110V or 220V)		✓
CAT TECHNOLOGY		
Slope Indicate	✓	
ARO with Assist – Slope Assist – Traction Control – Stable Blade – Blade Load Monitor – AutoCarry – Third Party Grade Control Ready		✓
Cat GRADE with 3D – Full-color 10-inch (254 mm) touchscreen grade display – Grade receivers and antennas – Grade Software Enabled Attachment (SEA) – ARO with Assist features		✓
Product Link, Cellular	✓	
Compatibility with radios and base stations from Trimble, Topcon, and Leica	✓	
Capability to install 3D grade systems from Trimble, Topcon, and Leica	✓	
Product Link – Dual Cellular/Satellite		✓
Remote Flash/Troubleshoot	✓	
Grade Connectivity		✓
Operator ID	✓	
Machine Security – Passcode	✓	
Machine Security – Bluetooth		✓
Remote Control Ready	✓	
Cat COMMAND for Dozing		✓

	Standard	Optional
OPERATOR ENVIRONMENT		
Fully redesigned cab with Integrated ROPS and FOPS, single pane door glass, sliding windows, with Cat Advanced Cabin Filtration	✓	
High debris cab, fully redesigned with Integrated ROPS and FOPS, impact resistant polycarbonate doors, solid side windows for improved sealing, powered precleaner with Cat Advanced Cabin Filtration for improved performance and filter life		✓
Full-color 10-inch (254 mm) liquid crystal touchscreen display	✓	
Integrated rearview camera	✓	
In-display key machine features	✓	
Operator ID/Operator ID with Security	✓	
Cloth seat with mechanical adjustable lumbar support	✓	
Deluxe leather heated/ventilated seat with electronic adjustable lumbar support		✓
Electrohydraulic implement and steering controls	✓	
Joystick control	✓	
Joystick control – ARO		✓
Fresh air filter	✓	
Powered fresh air filter precleaner		✓
Cab mounted modular HVAC system with automatic reversing fans. Automatic temperature and blower control with distributed ducting.	✓	
Communication radio ready	✓	
Rearview mirror	✓	
Retractable 76 mm (3 in) seat belt	✓	
Cup holders	✓	
Dash foot pads	✓	
Entertainment radio with Bluetooth and microphone	✓	
Lunchbox storage	✓	
Wipers	✓	
USB and AUX Ports	✓	
Operator presence switch	✓	

(continued on next page)

D7 Standard and Optional Equipment

Standard and Optional Equipment *(continued)*

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
UNDERCARRIAGE		
Standard or Low Ground Pressure (LGP) undercarriage	✓	
Heavy Duty (HDXL with DuraLink™)	✓	
Rotating bushing track		✓
Waste undercarriage		✓
Carrier rollers	✓	
Hydraulic track adjusters	✓	
Lifetime lubricated track and roller	✓	
Moderate service track shoes (see chart on page 7)	✓	
Extreme service track shoes (see chart on page 7)		✓
Track roller frame guiding guards: center, partial or full (NOTE: center guiding guards standard on LGP machine)		✓
BLADES		
Semi-Universal		✓
Straight Blade		✓
Angle Blade		✓
Universal Blade – Standard configuration only		✓
Waste/Landfill Blade		✓
Forestry/Land Clearing Blade		✓
HYDRAULICS		
Load sensing hydraulics	✓	
Independent steering and implement pumps	✓	
ELECTRICAL		
Lights – 6 LED	✓	
Premium lights – 12 LED		✓
Backup alarm	✓	
Beacon warning light		✓
Converter: two 15 Amp, 12V outlets	✓	
Forward warning horn	✓	

	Standard	Optional
SERVICE AND MAINTENANCE		
30-minute cab removal	✓	
Centralized, remote mounted pressure taps	✓	
Ecology drains	✓	
Extended service intervals (500 hours engine, 1,000-hour power train)	✓	
Ground level service center (remote electrical disconnect, secondary shutdown switch, hour meter)	✓	
Fast fuel fill		✓
High-speed oil change		✓
Heavy duty perforated radiator doors, louvered and hinged	✓	
Quick access cab floor		✓
Under hood work light	✓	
Removable engine enclosures, perforated and hinged	✓	
S·O·S℠ sampling ports	✓	
Shovel holder	✓	
BATTERIES, STARTERS, ALTERNATORS AND COOLANT		
150 Amp alternator	✓	
150 Amp ducted alternator		✓
24 Volt starter	✓	
Engine coolant, –37° C (–35° F)	✓	
Arctic engine coolant, –51° C (–60° F)		✓
ATTACHMENTS		
Ripper with straight shanks		✓
Winch: – PACCAR PA110		✓
Drawbar		✓
Rear striker box with striker bar		✓
GUARDING AND SCREENS		
Bottom guards – standard	✓	
Bottom guards – heavy-duty and sealed		✓
Fuel tank guards		✓
Grab handles	✓	
Guards for premium lights, front and side		✓
Sweeps package		✓
Rear fixed screen		✓
Hinged rear screen		✓
Hinged side screen		✓



D7
Waste Handler

Waste Handling package provides added features to help protect the machine and operator in harsh waste applications. Specialized guarding, striker bars and seals help protect the machine from impact, wrapping and airborne debris.

Fully Automatic, Next Generation Performance

- Harness more weight and horsepower than D7E.
- Like D6 and D8, fully automatic 4-speed powershift transmission continuously adjusts for maximum efficiency and power to the ground without added operator input.
- Elevated sprocket gives you better ride and balance, plus more penetration force.

Added Machine Protection

- High-debris cab has impact-resistant polycarbonate doors and dual pane windows – eliminates the need for door screens.
- Powered air precleaner helps keep cab air cleaner and pressurized for greater operator comfort.
- Fuel tank guard and heavy duty bottom guards shield major machine components.
- Internal sealing keeps the trash away from the inner compartments.
- Rear striker bar helps protect against trash climbing up the tracks.
- Guarded final drives give added protection against wrapping and impact.
- 12 premium LED lights illuminate the work area.

Ease of Maintenance

- High-debris cooling system with automatic reversing fan and slots for easy cleanout access.
- Trash resistant radiator, with 6 fins per inch, helps reduce plugging.
- Quick access cab floor option offers tool-less access to the floor plate opening.
- Laminated thermal shields on engine and aftertreatment (when equipped) provide added thermal protection in high debris applications.
- Ducted and sealed alternator for longer life.
- Engine precleaner with screen delivers cleaner air to the power train.

Equipped for the Job

- Landfill blades are equipped with a trash rack to increase productive capacity when machine works in lighter material like waste.
- Wear plate helps extend blade life.
- Heavy Duty Extended Life (HDXL) undercarriage includes Kevlar® guarded, sealed idlers to help prevent debris such as wire, string or plastic bags from wrapping into seals.
- Press-fit bushings and Positive Pin Retention (PPR2) are particularly well suited for impact applications such as forestry, waste, rock, or V-ditching.
- Center-hole track helps eject debris.

D7 Waste Handler Specifications

Engine

Engine Model	Cat® C9.3B	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V/Japan 2014/ Korea Tier 4 Final	
Build Number	17A	
Power Train	Fully Automatic 4-Speed	
Net Power (2,200 rpm)		
ISO 9249/SAE J1349	197 kW	265 hp
ISO 9249/SAE J1349 (DIN)	268 mhp	
Engine Power (1,400 rpm)		
ISO 14396	230 kW	309 hp
ISO 14396 (DIN)	313 mhp	
Bore	115.0 mm	4.5 in
Stroke	149.0 mm	5.9 in
Displacement	9.3 L	567 in^3

- Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.
- Net power is tested per ISO 9249:2007 and SAE J1349:2011.
- Engine power is tested per ISO 14396:2002
- All non-road Tier 4 Interim and Final, Stage IIIB, Stage IV, Stage V, Japan 2014 and Korea Tier 4 Final diesel engines are required to use only ultra-low sulfur diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. 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-ULS™ 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.
- 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.

Fluid/Refill Capacities

Fuel Tank	465 L	123 gal
DEF Tank	44 L	11.6 gal
Cooling System	62 L	16.3 gal
Engine Crankcase	28 L	7.4 gal
Power Train	187 L	49.4 gal
Roller Frames Standard/LGP (each)	85-96 L	22.4-25.3 gal
Final Drives (each)	13 L	3.4 gal
Hydraulic System	144 L	38 gal

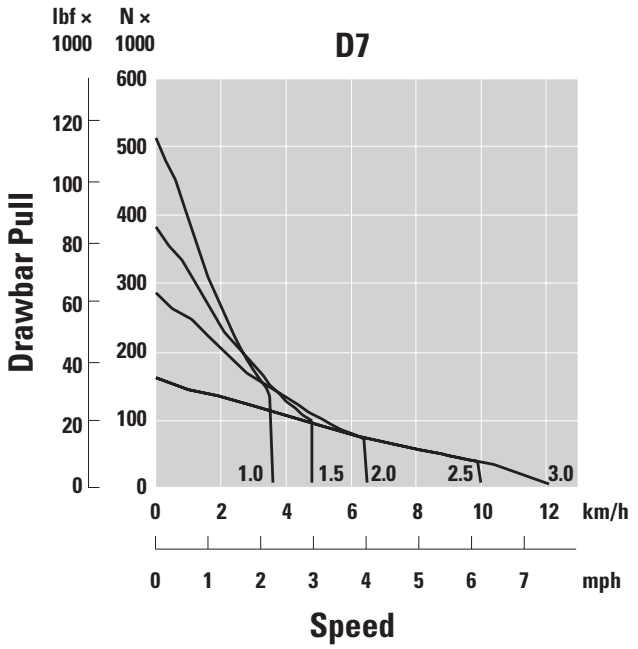
Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.36 kg of refrigerant which has a CO_2 equivalent of 1.946 metric tonnes.

Transmission

1.0 Forward	3.5 km/h	2.2 mph
1.5 Forward	4.8 km/h	3.0 mph
2.0 Forward	6.4 km/h	4.0 mph
2.5 Forward	9.0 km/h	5.6 mph
3.0 Forward	11.4 km/h	7.1 mph
1.0 Reverse	3.5 km/h	2.2 mph
1.5 Reverse	4.8 km/h	3.0 mph
2.0 Reverse	6.3 km/h	3.9 mph
2.5 Reverse	8.5 km/h	5.3 mph
3.0 Reverse	11.4 km/h	7.1 mph

Drawbar Pull



Hydraulic Controls – Pressures

Maximum Implement Operating Pressure	31 000 kPa	4,496 psi
Maximum Steering Operating Pressure	38 000 kPa	5,510 psi

Hydraulic Controls – Pump

Pump Output (1,900 rpm engine speed*)		
Implement	220 L/min	58 gal/min
Steering	267 L/min	70 gal/min
Fan	56 L/min	15 gal/min
Lift Cylinder Flow	220 L/min	58 gal/min
Tilt Cylinder Flow	170 L/min	45 gal/min
Ripper Cylinder Flow	220 L/min	58 gal/min

*Engine speed varies with load and travel speed. A high idle/low working load speed shown.

D7 Waste Handler Specifications

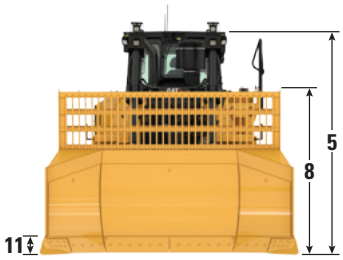
D7 Waste Handler

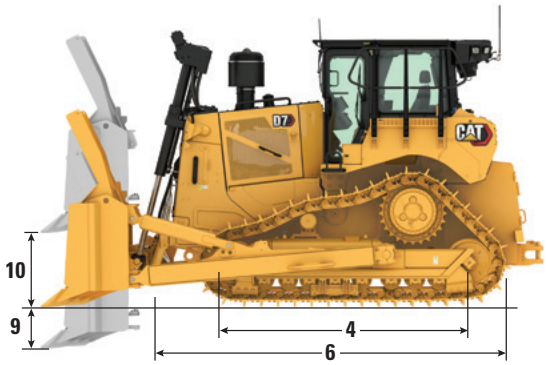
	Operating Weight*	28 140 kg	62,035 lb
	Shipping Weight**	24 026 kg	52,969 lb
	Ground Pressure (ISO 16754)	68.3 kPa	9.9 psi
	Undercarriage	41 Sections with 8 Bottom Rollers Guarded	
1	Track Gauge	1.98 m	78 in
2	Width of Track Shoe (Standard)	0.61 m	24 in
3	Width of Tractor (without trunnions)	2.59 m	102 in
4	Length of Track on Ground	2.97 m	117 in
	Ground Contact Area (ISO 16754)	4.05 m^2	6,274 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.4 in
5	Machine Height***	3.43 m	134.9 in
6	Length of Basic Tractor	4.66 m	183.4 in
	With Striker Bar Box, add	450.5 mm	17.7 in

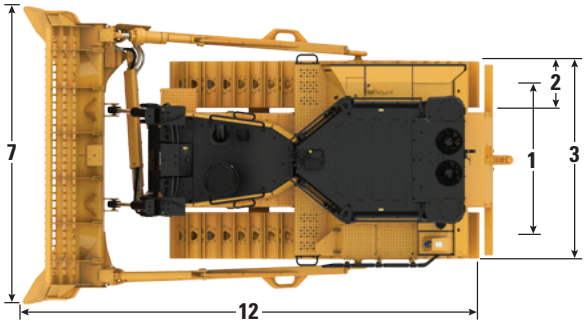
*Operating weight includes SU Landfill blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, rear striker box and one counterweight, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, and rear striker box and one counterweight.

***Machine height from tip of grouser to top of Product Link Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.







Blades

	Configuration	SU Landfill		U Landfill	
	Capacity (ISO 9246)	17.74 m^3	23.2 yd^3	19.34 m^3	25.3 yd^3
7	Width across End Bits	3.64 m	143.3 in	3.93 m	154.6 in
	Width without End Bits	3.51 m	138.0 in	3.78 m	149.0 in
8	Height	2.50 m	98.4 in	2.45 m	96.4 in
9	Dig Depth	0.58 m	22.8 in	0.58 m	22.8 in
10	Lift Height	1.21 m	47.8 in	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.52 m	20.4 in	0.56 m	22.2 in
	Maximum Tilt Angle	8.5°		8.5°	
	Pitch Adjustment	± 3.5°		± 3.5°	
12	Length of Machine with Blade	5.78 m	227.4 in	6.01 m	237.4 in
	Blade Weight (blade + push arms installed)	4050 kg	8,910 lb	4303 kg	9,467 lb

D7 Waste Handler Specifications

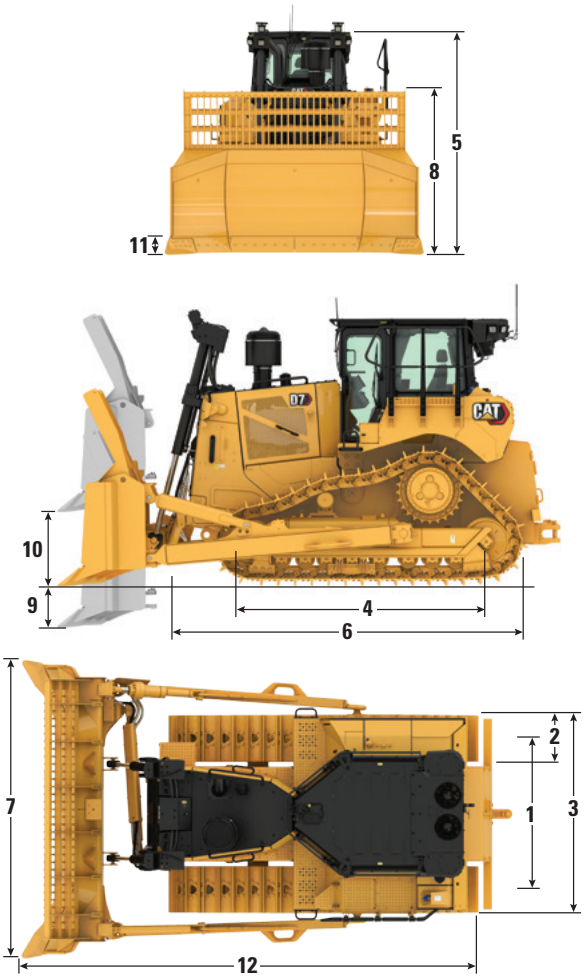
D7 LGP Waste Handler

	Operating Weight*	32 557 kg	71,775 lb
	Shipping Weight**	27 831 kg	61,356 lb
	Ground Pressure (ISO 16754)	53.8 kPa	7.8 psi
	Undercarriage	43 Sections with 9 Bottom Rollers	
1	Track Gauge	2.24 m	88 in
2	Width of Track Shoe (Standard)	0.91 m	36 in
3	Width of Tractor (without trunnions)	3.15 m	124 in
4	Length of Track on Ground	3.20 m	126 in
	Ground Contact Area (ISO 16754)	6.47 m^2	10,036 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.5 in
5	Machine Height***	3.43 m	135.0 in
6	Length of Basic Tractor	4.66 m	183.4 in

*Operating weight includes S Landfill Blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, rear striker box and one counterweight, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, and rear striker box and one counterweight.

***Machine height from tip of grouser to top of Product Link Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.



Standard Waste Handler Shown

Blades

	Configuration	LGP S Landfill	
	Capacity (ISO 9246)	16.7 m^3	21.8 yd^3
7	Width across End Bits	4.31 m	169.8 in
	Width without End Bits	4.15 m	163.0 in
8	Height	2.35 m	92.5 in
9	Dig Depth	0.58 m	22.8 in
10	Lift Height	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.51 m	19.9 in
	Maximum Tilt Angle	7.0°	
	Pitch Adjustment	± 3.5°	
12	Length of Machine with Blade	5.50 m	216.4 in
	Blade Weight (blade + push arms installed)	4371 kg	9,635 lb

D7 Waste Handler Specifications

D7 Waste Handler Features

1) High-debris cooling system with automatic reversing fan and slots for easy cleanout access. Trash resistant radiator, with 6 fins per inch, helps reduce plugging.

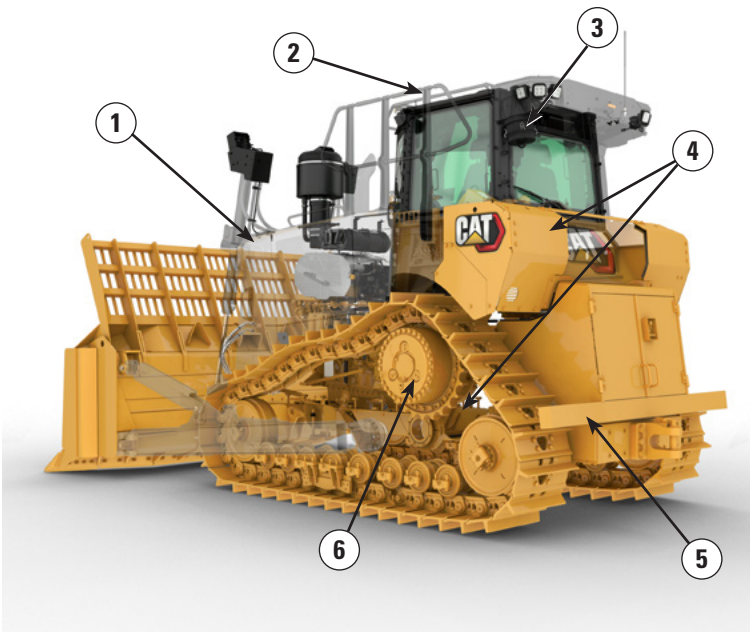
2) High debris cab has impact-resistant polycarbonate doors and dual pane windows, eliminate the need for door screens.

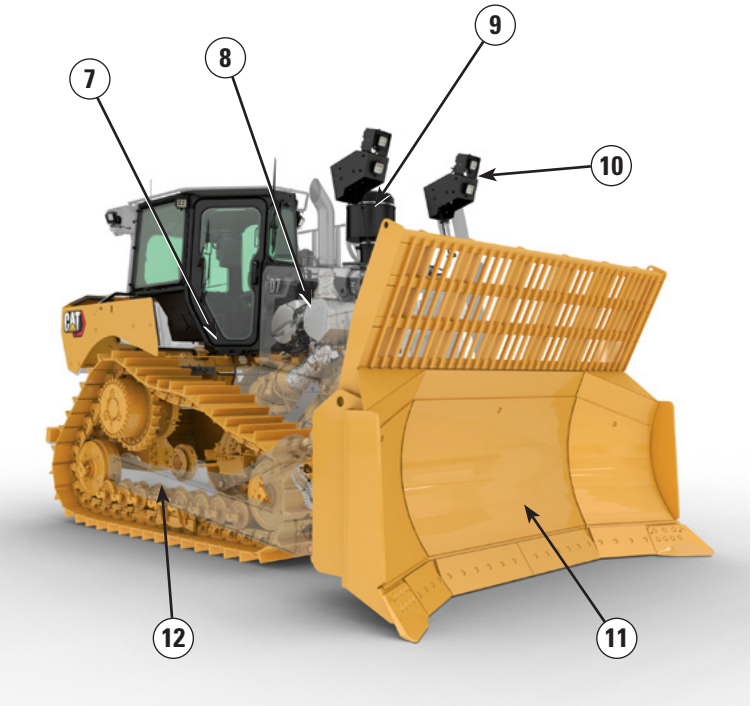
3) Powered air precleaner helps keep cab air cleaner and pressurized for greater operator comfort.

4) Fuel tank guard and heavy duty bottom guards shield major machine components. Internal sealing keeps the trash away from the inner compartments.

5) Rear striker bar helps protect against trash climbing up the tracks.

6) Guarded final drives give added protection against wrapping and impact.





7) Quick access cab floor option offers tool-less access to the floor plate opening.

8) Laminated thermal shields on engine and aftertreatment (when equipped) provide added thermal protection in high debris applications. Ducted and sealed alternator for longer life.

9) Engine precleaner with screen delivers cleaner air to the power train.

10) 12 premium LED lights illuminate the work area.

11) Landfill Blades are equipped with a trash rack to increase productive capacity when machine works in lighter material like waste. Wear plate helps extend blade life.

12) Waste Undercarriage

- Heavy Duty Extended Life (HDXL) undercarriage includes Kevlar® guarded, sealed idlers to help prevent debris such as wire, string or plastic bags from wrapping into seals.
- Press-fit bushings and Positive Pin Retention (PPR2) are particularly well suited for impact applications such as forestry, waste, rock, or V-ditching.
- Center-hole track helps eject debris.

Track Shoes – Heavy Duty Extended Life (HDXL)

Some track shoes not available in all regions. Please consult your Cat dealer for details.

	Standard – 41 Section			LGP – 43 Section
	560 mm (22 in)	610 mm (24 in)	660 mm (26 in)	915 mm (36 in)
Moderate Service			✓	✓
Extreme Service	✓	✓	✓	✓
Extreme Service Trapezoidal		✓		✓

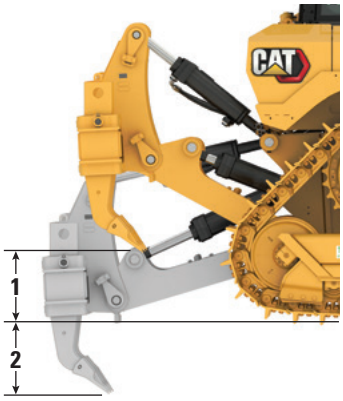
Dimensions – Rear Attachments

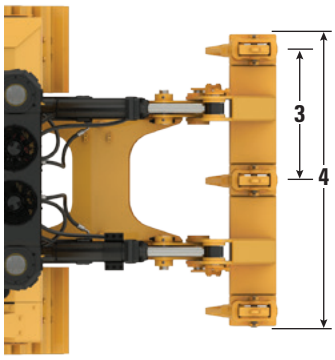
Add the following to the total length of the machine when these rear attachments are installed.

Drawbar		Winch		Ripper		Waste Striker Box	
276 mm	10.8 in	749.7 mm	29.5 in	1570 mm	61.8 in	450.5 mm	17.7 in

Ripper

	Type	Adjustable Parallelogram	
	Weight with Three Shanks	3607 kg	8,091 lb
	Weight with One Shank	3307 kg	7,431 lb
4	Beam Width	2210 mm	87 in
	Beam Cross Section	343 × 279 mm	13.5 × 11 in
1	Maximum Clearance, Raised (Shank Tip)	748 mm	29.4 in
2	Maximum Penetration	757 mm	29.8 in
3	Number of Pockets	3	
	Maximum Penetration Force	8664 kg	19,100 lb
	Maximum Pryout Force	17 138 kg	38,513 lb





Standards

ROPS/FOPS

- ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria ISO 3471:2008.
- FOPS (Falling Object Protective Structure) meets ISO 3449:2005 Level II.

Brakes

- Brakes meet the standard ISO 10265:2008.

Sound Level Information

- The average dynamic spectator sound power level when "ISO 6395:2008" is used to measure the value for a machine is 110 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).
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 76 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).
- 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.

Sound Level Information for Machines in European Union Countries and in Countries That Adopt the "European Union Directives"

- If equipped, the certification label is used to verify the environmental sound certification of the machine to the requirements of the European Union. The value that is listed on the label indicates the guaranteed exterior sound power level (L_{WA}) of 112 dB(A) at the time of manufacture for the conditions that are specified in "2000/14/EC."
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 75 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).
- 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.

Advanced Cabin Filtration

Operator Cabin

- Distributed HVAC ducting with automatic temperature control and blower speed provides ultimate operator comfort with less user input.
- Reduced maintenance of the condenser core with automatic reversing fans.
- Cat Advanced Cabin Filtration is standard.

Cat Advanced Cabin Filtration

- Operator protection from respirable particulate (0.3-10-micron size).
- Sustainably pressurized cab (U.S. Silica compliant).
- Reduced maintenance with longer life, high efficiency filters.
- Protection for all cabin components: electronics, etc.
- Helps meet U.S. Occupational Safety and Health Administration Silica Rule Table 1 requirements for operator cabs.
- Multi-tiered filter offerings for optional efficiency upgrades. Contact Cat dealer for availability.
  - MERV 16 – Standard Equipment
  - HEPA
  - Activated Carbon + HEPA
  - ABEK1 + HEPA

Technology Features

The Cat D7 offers the broadest choice of technology features to help you get the most from your dozer.

GRADE	Premium Display/Non-ARO	ARO with Assist	GRADE with 3D
GRADE with 3D	—	+[1]	✓
Third Party Grade Control Ready	+	✓	✓
ASSIST			
Slope Indicate	✓	✓	✓
Stable Blade Slope Assist Blade Load Monitor Traction Control AutoCarry™	—	✓	✓
VISION/DETECT			
HD Rear Camera with Backup Lines	✓	✓	✓
LINK			
Product Link Cellular	✓	✓	✓
Product Link Dual Mode	⊕	⊕	⊕
Remote Flash/Troubleshoot	✓	✓	✓
Grade Connectivity	—	✓	✓
OPERATOR FEATURES			
Operator ID[2]	✓	✓	✓
Machine Security – Passcode[2]	✓	✓	✓
Machine Security – Bluetooth®[2]	⊕	⊕	⊕

[1] Requires Software Enabled Attachment (SEA)
[2] Contact Dealer to Enable
✓ Standard
+ Dealer Install Option
⊕ Factory Option

Note: Grade and assist technologies, with the exception of Slope Indicate, are not compatible with Angle Blade.

D7 Waste Handler Standard and Optional Equipment

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
POWER TRAIN		
Cat C9.3B diesel engine	✓	
Fully-automatic 4-speed transmission with Lock-Up Clutch (LUC) torque divider	✓	
Air-to-air aftercooler (ATAAC)	✓	
Aluminum bar plate radiator	✓	
Differential steering	✓	
Engine air precleaner with screen and dust ejection	+	
Engine with thermal shield	+	
Engine idle shutdown	✓	
Extended life coolant	✓	
Double Reduction Final Drives – Arctic, Waste	+	
Fuel water separator	✓	
Electric fuel priming pump	✓	
Hydraulic demand fan	✓	
Hydraulic reversing fan	✓	
Sound suppression		✓
Debris resistant radiator cores	✓	
Automatic ether starting aid	✓	
Engine air filter with electronic service indicator	✓	
Diesel Exhaust Fluid (DEF) system – electronic fill indicator, heated lines/tank	✓	
Jacket water heater (110V or 220V)		✓
CAT TECHNOLOGY		
Slope Indicate	✓	
ARO with Assist – Slope Assist – Traction Control – Stable Blade – Blade Load Monitor – AutoCarry – Third Party Grade Control Ready		✓
Cat GRADE with 3D – Full-color 10-inch (254 mm) touchscreen grade display – Grade receivers and antennas – Grade Software Enabled Attachment (SEA) – ARO with Assist features		✓
Compatibility with radios and base stations from Trimble, Topcon, and Leica	✓	
Capability to install 3D grade systems from Trimble, Topcon, and Leica	✓	
Product Link, Cellular	✓	
Product Link – Dual Cellular/Satellite		✓
Remote Flash/Troubleshoot	✓	
Grade Connectivity		✓
Operator ID	✓	
Machine Security – Passcode	✓	
Machine Security – Bluetooth		✓
Remote Control Ready	✓	
Cat COMMAND for Dozing		✓

	Standard	Optional
OPERATOR ENVIRONMENT		
High debris cab, fully redesigned with Integrated ROPS and FOPS, impact resistant polycarbonate doors, solid side windows for improved sealing, powered precleaner with Cat Advanced Cabin Filtration for improved performance and filter life	+	
Full-color 10-inch (254 mm) liquid crystal touchscreen display	✓	
Integrated rearview camera	✓	
In-display key machine features	✓	
Operator ID/Operator ID with Security	✓	
Cloth seat with mechanical adjustable lumbar support	✓	
Deluxe leather heated/ventilated seat with electronic adjustable lumbar support		✓
Electrohydraulic implement and steering controls	✓	
Joystick control	✓	
Joystick control – ARO		✓
Powered fresh air filter precleaner	+	
Cab mounted modular HVAC system with automatic reversing fans. Automatic temperature and blower control with distributed ducting.	✓	
Communication radio ready	✓	
Rearview mirror	✓	
Retractable 76 mm (3 in) seat belt	✓	
Cup holders	✓	
Dash foot pads	✓	
Entertainment radio with Bluetooth and microphone	✓	
Lunchbox storage	✓	
Wipers	✓	
USB and AUX Ports	✓	
Operator presence switch	✓	

(continued on next page)

+ Included in Waste Handler Package

Standard and Optional Equipment *(continued)*

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
UNDERCARRIAGE		
Standard or Low Ground Pressure (LGP) undercarriage	✓	
Heavy Duty (HDXL with DuraLink™)	✓	
Waste undercarriage: Positive Pin Retention, Extreme Service trapezoidal track	+	
Carrier rollers		✓
Hydraulic track adjusters	✓	
Lifetime lubricated track and roller	✓	
Extreme service trapezoidal track shoes (see chart on page 19)	+	
Track roller frame with center guiding guards	+	
BLADES		
Semi-Universal Landfill	*	
Universal Landfill	*	
Straight Landfill – LGP	*	
Semi-Universal		✓
Straight Blade		✓
Angle Blade		✓
Universal Blade – Standard configuration only		✓
HYDRAULICS		
Load sensing hydraulics	✓	
Independent steering and implement pumps	✓	
ELECTRICAL		
Lights – 6 LED	✓	
Premium lights – 12 LED		✓
Backup alarm	✓	
Beacon warning light	+	
Converter: two 15 Amp, 12V outlets	✓	
Forward warning horn	✓	

	Standard	Optional
SERVICE AND MAINTENANCE		
30-minute cab removal	✓	
Centralized, remote mounted pressure taps	✓	
Ecology drains	✓	
Extended service intervals (500 hours engine, 1,000-hour power train)	✓	
Ground level service center (remote electrical disconnect, secondary shutdown switch, hour meter)	✓	
Fast fuel fill		✓
High-speed oil change		✓
Heavy duty perforated radiator doors, louvered and hinged	✓	
Quick access cab floor	+	
Under hood work light	✓	
Removable engine enclosures, perforated and hinged	✓	
S·O·S℠ sampling ports	✓	
Shovel holder	✓	
BATTERIES, STARTERS, ALTERNATORS AND COOLANT		
150 Amp ducted alternator	+	
24 Volt starter	✓	
Engine coolant, –37° C (–35° F)	✓	
Arctic engine coolant, –51° C (–60° F)		✓
ATTACHMENTS		
Ripper with straight shanks		✓
Winch: – PACCAR PA110		✓
Drawbar		✓
Rear striker box with striker bar		*
GUARDING AND SCREENS		
Bottom guards – heavy-duty and sealed	+	
Fuel tank guards	+	
Grab handles	✓	
Guards for premium lights, front and side		✓
Sweeps package		✓
Rear fixed screen		✓
Hinged rear screen		✓
Hinged side screen		✓

+ Included in Waste Handler Package

*Recommended



D7
Pipeline/Forestry

Take on the demands of land clearing and pipeline work with factory-installed equipment designed to help protect the operator and the machine in harsh applications.

Fully Automatic, Next Generation Performance

- Harness more weight and more horsepower than D7E.
- Like D6 and D8, fully automatic 4-speed powershift transmission continuously adjusts for maximum efficiency and power to the ground without added operator input.
- Elevated sprocket gives you better ride and balance, plus more penetration force.
- Long undercarriage is standard, with more track at the rear of the machine for superior dozing performance.

Added Machine Protection

- Optional high debris cab has impact-resistant polycarbonate doors.
- Optional attachments like rear and side window screens, sweeps and heavy duty handholds help protect the machine and operator from debris.
- Heavy duty guarding package with heavy duty bottom guards and fuel tank guard to help shield major machine components.
- Reversing fan helps remove debris with less maintenance time.
- Precleaner and roof-mounted filter help protect against dust and debris.
- 12 premium LED lights illuminate the work area.

Equipped for the Job

- Redesigned C-frame for Angle blades, D8-size pins and bearings add durability for harsh applications.
- Factory connections make it easy to fit the machine with a winch or ripper. Consult with your Cat dealer regarding available winch, ripper and other rear attachments options.
- Choose Standard or LGP configuration from the factory.
- Press-fit bushings and Positive Pin Retention (PPR2) are particularly well suited for applications such as forestry, waste, rock and v-ditching.
- Outfit your dozer with Angle, Semi-Universal (SU) or Straight (S) blade to suit pipeline work.
- Forestry/land clearing blades are equipped with brush rack to aid carrying, plus added guarding on the back of the blade to help protect machine components.

Engine

Engine Model	Cat® C9.3B	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V/Japan 2014/ Korea Tier 4 Final	
Build Number	17A	
Power Train	Fully Automatic 4-Speed	
Net Power (2,200 rpm)		
ISO 9249/SAE J1349	197 kW	265 hp
ISO 9249/SAE J1349 (DIN)	268 mhp	
Engine Power (1,400 rpm)		
ISO 14396	230 kW	309 hp
ISO 14396 (DIN)	313 mhp	
Bore	115.0 mm	4.5 in
Stroke	149.0 mm	5.9 in
Displacement	9.3 L	567 in^3

- Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.
- Net power is tested per ISO 9249:2007 and SAE J1349:2011.
- Engine power is tested per ISO 14396:2002
- All non-road Tier 4 Interim and Final, Stage IIIB, Stage IV, Stage V, Japan 2014 and Korea Tier 4 Final diesel engines are required to use only ultra-low sulfur diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. 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-ULS™ 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.
- 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.

Fluid/Refill Capacities

Fuel Tank	465 L	123 gal
DEF Tank	44 L	11.6 gal
Cooling System	62 L	16.3 gal
Engine Crankcase	28 L	7.4 gal
Power Train	187 L	49.4 gal
Roller Frames Standard/LGP (each)	85-96 L	22.4-25.3 gal
Final Drives (each)	13 L	3.4 gal
Hydraulic System	144 L	38 gal

Air Conditioning System

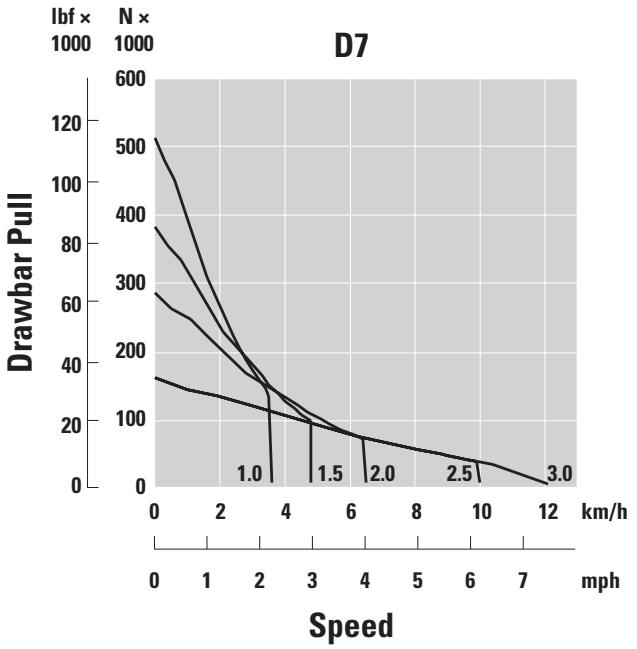
The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.36 kg of refrigerant which has a CO_2 equivalent of 1.946 metric tonnes.

Transmission

1.0 Forward	3.5 km/h	2.2 mph
1.5 Forward	4.8 km/h	3.0 mph
2.0 Forward	6.4 km/h	4.0 mph
2.5 Forward	9.0 km/h	5.6 mph
3.0 Forward	11.4 km/h	7.1 mph
1.0 Reverse	3.5 km/h	2.2 mph
1.5 Reverse	4.8 km/h	3.0 mph
2.0 Reverse	6.3 km/h	3.9 mph
2.5 Reverse	8.5 km/h	5.3 mph
3.0 Reverse	11.4 km/h	7.1 mph

D7 Pipeline/Forestry Specifications

Drawbar Pull



Hydraulic Controls – Pressures

Maximum Implement Operating Pressure	31 000 kPa	4,496 psi
Maximum Steering Operating Pressure	38 000 kPa	5,510 psi

Hydraulic Controls – Pump

Pump Output (1,900 rpm engine speed*)		
Implement	220 L/min	58 gal/min
Steering	267 L/min	70 gal/min
Fan	56 L/min	15 gal/min
Lift Cylinder Flow	220 L/min	58 gal/min
Tilt Cylinder Flow	170 L/min	45 gal/min
Ripper Cylinder Flow	220 L/min	58 gal/min

*Engine speed varies with load and travel speed. A high idle/low working load speed shown.

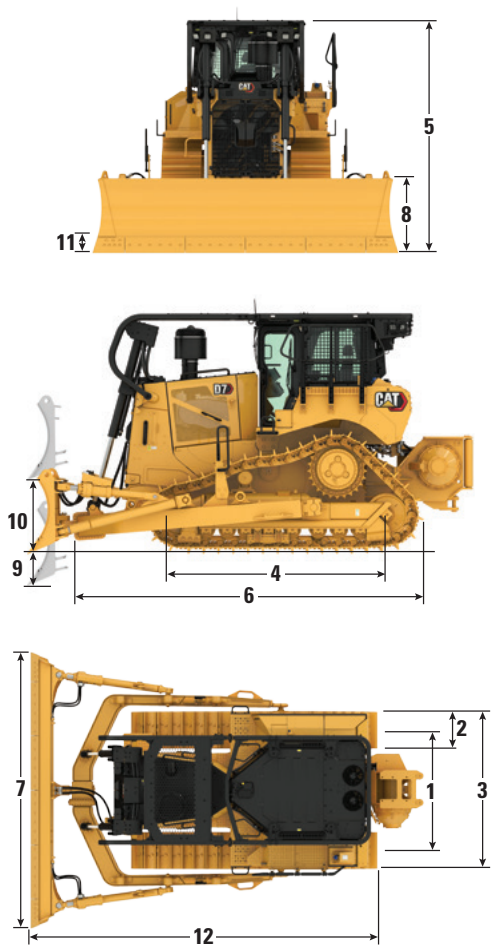
D7

	Operating Weight*	30 309 kg	66,820 lb
	Shipping Weight**	25 553 kg	56,335 lb
	Ground Pressure (ISO 16754)	73.4 kPa	10.7 psi
	Undercarriage	41 Sections with 8 Bottom Rollers	
1	Track Gauge	1.98 m	78 in
2	Width of Track Shoe (Standard)	0.61 m	24 in
3	Width of Tractor (without trunnions)	2.59 m	102 in
4	Length of Track on Ground	2.97 m	117 in
	Ground Contact Area (ISO 16754)	4.05 m^2	6,274 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.5 in
5	Machine Height***	3.43 m	134.9 in
6	Length of Basic Tractor	4.66 m	183.4 in
	With Winch, add	735 mm	28.9 in

*Operating weight includes Angle Blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, sweeps, hydraulic winch, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, lubricants, coolant, 10% fuel, ROPS/FOPS cab, sweeps and hydraulic winch.

***Machine height from tip of grouser to top of Product Link™ Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.



Standard Configuration/Optional Sweeps and Screens Shown

Blades

	Configuration	Angle Blade (STD)		Semi-Universal (SU)		Universal (U)	
	Capacity (ISO 9246)	4.16 m^3	5.4 yd^3	7.42 m^3	9.7 yd^3	8.56 m^3	11.2 yd^3
7	Width across End Bits	4.58 m	180.2 in	3.64 m	143.3 in	3.92 m	154.3 in
	Width without End Bits	4.49 m	176.8 in	3.50 m	138.0 in	3.78 m	149.0 in
8	Height	1.11 m	43.7 in	1.56 m	61.6 in	1.56 m	61.6 in
9	Dig Depth	0.75 m	29.4 in	0.58 m	22.8 in	0.58 m	22.8 in
10	Lift Height	1.15 m	45.4 in	1.21 m	47.8 in	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.65 m	25.4 in	0.52 m	20.4 in	0.56 m	22.2 in
	Maximum Tilt Angle	8.5°		8.5°		8.5°	
	Pitch Adjustment	N/A		± 3.5°		± 3.5°	
12	Length of Machine with Blade	5.28 m	208.0 in	5.78 m	227.4 in	6.03 m	237.4 in
	Blade Weight (blade + push arms installed)	4246 kg	9,341 lb	3269 kg	7,207 lb	3473 kg	7,640 lb

D7 Pipeline/Forestry Specifications

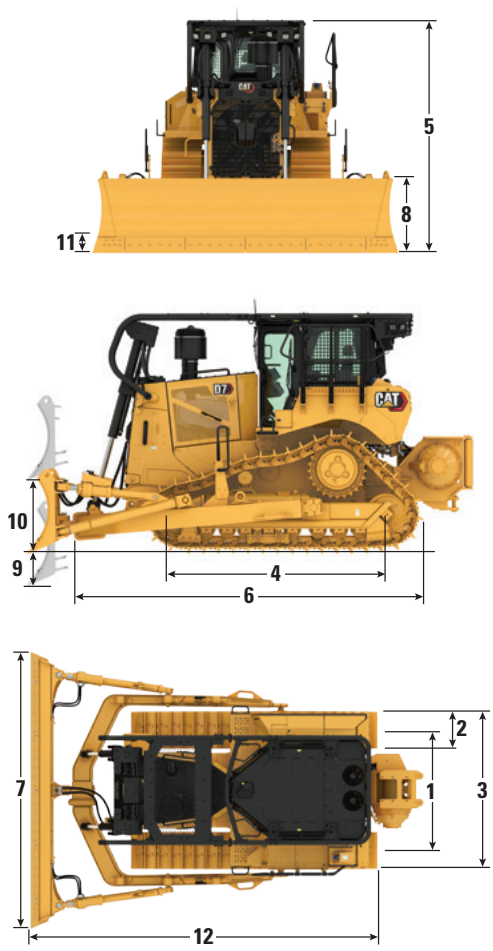
D7 LGP

	Operating Weight*	31 650 kg	69,777 lb
	Shipping Weight**	27 067 kg	59,671 lb
	Ground Pressure (ISO 16754)	48.3 kPa	7.0 psi
	Undercarriage	43 Sections with 9 Bottom Rollers	
1	Track Gauge	2.24 m	88 in
2	Width of Track Shoe (Standard)	0.91 m	36 in
3	Width of Tractor (without trunnions)	3.15 m	124 in
4	Length of Track on Ground	3.20 m	126 in
	Ground Contact Area (ISO 16754)	6.47 m^2	10,036 in^2
	Grouser Height (Moderate Service)	0.07 m	2.9 in
	Ground Clearance	0.44 m	17.5 in
5	Machine Height***	3.43 m	135.0 in
6	Length of Basic Tractor	4.65 m	183.4 in
	With Winch, add	749.7 mm	29.5 in

*Operating weight includes Angle Blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, winch, and 75 kg (165 lb) operator.

**Shipping weight includes blade lift cylinders, C-frame, lubricants, coolant, 10% fuel, ROPS/FOPS cab, and drawbar.

***Machine height from tip of grouser to top of Product Link Antenna. For sweeps, add 64 mm (2.5 in) to overall machine height. For forestry sweeps, add 81 mm (3.2 in). With Extreme Service, add 9 mm (0.4 in). When Cat GRADE with 3D antennas are installed there is no added machine height.



Optional Sweeps and Screens Shown

Blades

	Configuration	Angle Blade (LGP)		Straight (S)		Semi-Universal (SU)	
	Capacity (ISO 9246)	4.70 m^3	6.2 yd^3	6.20 m^3	8.1 yd^3	8.79 m^3	11.5 yd^3
7	Width across End Bits	5.03 m	197.9 in	4.31 m	169.8 in	3.93 m	154.6 in
	Width without End Bits	4.77 m	188.0 in	4.15 m	163.0 in	3.78 m	149.0 in
8	Height	1.11 m	43.7 in	1.37 m	53.8 in	1.56 m	61.6 in
9	Dig Depth	0.67 m	26.4 in	0.58 m	22.8 in	0.58 m	22.8 in
10	Lift Height	1.28 m	50.2 in	1.21 m	47.8 in	1.21 m	47.8 in
11	Maximum Tilt at Blade Corner	0.62 m	24.3 in	0.51 m	19.9 in	0.51 m	19.9 in
	Maximum Tilt Angle	7.0°		7.0°		7.0°	
	Pitch Adjustment	N/A		± 3.5°		± 3.5°	
12	Length of Machine with Blade	5.97 m	235.2 in	5.50 m	216.4 in	5.79 m	227.8 in
	Blade Weight (blade + push arms installed)	4537 kg	10,001 lb	3521 kg	7,762 lb	3500 kg	7,700 lb

D7 Pipeline/Forestry Features

Choose from a variety of options to ideally equip your dozer for the work you do.

1) Redesigned C-frame for Angle blades, D8-size pins and bearings add durability for harsh applications.

2) Reversing fan helps remove debris with less maintenance time.

3) Optional high debris cab has impact-resistant polycarbonate doors.

4) Optional attachments like rear and side window screens, sweeps and heavy duty handholds help protect the machine and operator from debris.

5) Heavy duty guarding package with heavy duty bottom guards and fuel tank guard to help shield major machine components.





6) Factory connections make it easy to fit the machine with a winch or ripper.

7) Press-fit bushings and Positive Pin Retention (PPR2) are particularly well suited for applications such as forestry, waste, rock and v-ditching.

8) 12 premium LED lights illuminate the work area.

9) Purpose-built Blades

10) Choose Standard or LGP configuration from the factory.

D7 Pipeline/Forestry Specifications

Track Shoes – Heavy Duty Extended Life (HDXL)

Some track shoes not available in all regions. Please consult your Cat dealer for details.

	Standard – 41 Section			LGP – 43 Section
	560 mm (22 in)	610 mm (24 in)	660 mm (26 in)	915 mm (36 in)
Moderate Service			✓	✓
Extreme Service	✓	✓	✓	✓
Extreme Service Trapezoidal		✓		✓

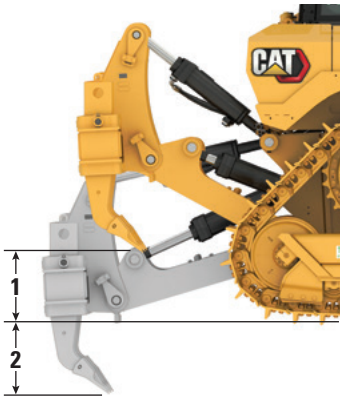
Dimensions – Rear Attachments

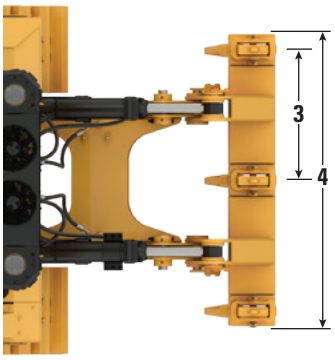
Add the following to the total length of the machine when these rear attachments are installed.

Drawbar		Winch		Ripper		Waste Striker Box	
276 mm	10.8 in	749.7 mm	29.5 in	1570 mm	61.8 in	450.5 mm	17.7 in

Ripper

	Type	Adjustable Parallelogram	
	Weight with Three Shanks	3607 kg	8,091 lb
	Weight with One Shank	3307 kg	7,431 lb
4	Beam Width	2210 mm	87 in
	Beam Cross Section	343 × 279 mm	13.5 × 11 in
1	Maximum Clearance, Raised (Shank Tip)	748 mm	29.4 in
2	Maximum Penetration	757 mm	29.8 in
3	Number of Pockets	3	
	Maximum Penetration Force	8664 kg	19,100 lb
	Maximum Pryout Force	17 138 kg	38,513 lb





Winch

Winch Model	PA110	
Weight[2]	2046 kg	4,511 lb
Oil Refill Capacity	15 L	4 gal
Winch and Bracket Length	1575 mm	62 in
Winch Case Width[1]	1160 mm	45.6 in
Drum Diameter	320 mm	12.5 in
Drum Width	320 mm	12.5 in
Flange Diameter	610 mm	24 in
Drum Capacity – 28 mm (1.13 in)[4]	66 m	218 ft
Winch Drive	Hydraulic (High Power)	
Control	Electric	
Rope Diameter (recommended)	28 mm	1.13 in
Rope Diameter (optional)	32 mm	1.25 in
Drum Capacity – 28 mm (1.13 in)[3]	78 m	261 ft
Drum Capacity – 32 mm (1.25 in)[3]	62 m	207 ft
Drum Capacity – 28 mm (1.13 in)[4]	55 m	185 ft
Drum Capacity – 32 mm (1.25 in)[4]	36 m	119 ft
Cable Ferrule Size (O.D. × Length)	60 mm × 70 mm	2.38 in × 2.75 in
Maximum Bare Drum		
Line Pull[5]	489.3 kN	110,000 lb
Line Speed[6]	23.5 m/min	77 ft/min
Maximum Full Drum[3]		
Line Pull[5]	296 kN	66,500 lb
Line Speed[6]	39 m/min	127 ft/min

[1]Winch width does not include mounting brackets/adapters.

[2]Weight shown is base winch, mounting arrangement, guards, and oil. Wire rope not included.

[3]Theoretical drum capacity as defined by SAE J1158.

[4]Recommended drum capacity per SAE J706 (K=0.9).

[5]Maximum line pull is lesser of winch catalog rating or calculated maximum line pull at maximum tractor hydraulic system pressure.

[6]Maximum line speed is calculated maximum no-load line speed at maximum tractor hydraulic system flow.

Standards

ROPS/FOPS

- ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria ISO 3471:2008.
- FOPS (Falling Object Protective Structure) meets ISO 3449:2005 Level II.

Brakes

- Brakes meet the standard ISO 10265:2008.

Sound Level Information

- The average dynamic spectator sound power level when "ISO 6395:2008" is used to measure the value for a machine is 110 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).
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 76 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).
- 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.

Sound Level Information for Machines in European Union Countries and in Countries That Adopt the "European Union Directives"

- If equipped, the certification label is used to verify the environmental sound certification of the machine to the requirements of the European Union. The value that is listed on the label indicates the guaranteed exterior sound power level (L_{WA}) of 112 dB(A) at the time of manufacture for the conditions that are specified in "2000/14/EC."
- The average dynamic operator sound pressure level when "ISO 6396:2008" is used to measure the value for an enclosed cab is 75 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).
- 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.

Advanced Cabin Filtration

Operator Cabin

- Distributed HVAC ducting with automatic temperature control and blower speed provides ultimate operator comfort with less user input.
- Reduced maintenance of the condenser core with automatic reversing fans.
- Cat Advanced Cabin Filtration is standard.

Cat Advanced Cabin Filtration

- Operator protection from respirable particulate (0.3-10-micron size).
- Sustainably pressurized cab (U.S. Silica compliant).
- Reduced maintenance with longer life, high efficiency filters.
- Protection for all cabin components: electronics, etc.
- Helps meet U.S. Occupational Safety and Health Administration Silica Rule Table 1 requirements for operator cabs.
- Multi-tiered filter offerings for optional efficiency upgrades. Contact Cat dealer for availability.
  - MERV 16 – Standard Equipment
  - HEPA
  - Activated Carbon + HEPA
  - ABEK1 + HEPA

Technology Features

The Cat D7 offers the broadest choice of technology features to help you get the most from your dozer.

GRADE	Premium Display/Non-ARO	ARO with Assist	GRADE with 3D
GRADE with 3D	—	+[1]	✓
Third Party Grade Control Ready	+	✓	✓
ASSIST			
Slope Indicate	✓	✓	✓
Stable Blade Slope Assist Blade Load Monitor Traction Control AutoCarry™	—	✓	✓
VISION/DETECT			
HD Rear Camera with Backup Lines	✓	✓	✓
LINK			
Product Link Cellular	✓	✓	✓
Product Link Dual Mode	⊕	⊕	⊕
Remote Flash/Troubleshoot	✓	✓	✓
Grade Connectivity	—	✓	✓
OPERATOR FEATURES			
Operator ID[2]	✓	✓	✓
Machine Security – Passcode[2]	✓	✓	✓
Machine Security – Bluetooth®[2]	⊕	⊕	⊕

[1] Requires Software Enabled Attachment (SEA)
[2] Contact Dealer to Enable
✓ Standard
+ Dealer Install Option
⊕ Factory Option

Note: Grade and assist technologies, with the exception of Slope Indicate, are not compatible with Angle Blade.

D7 Pipeline/Forestry Standard and Optional Equipment

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
POWER TRAIN		
Cat C9.3B diesel engine	✓	
Fully-automatic 4-speed transmission with Lock-Up Clutch (LUC) torque divider	✓	
Air-to-air aftercooler (ATAAC)	✓	
Aluminum bar plate radiator	✓	
Differential steering	✓	
Engine air precleaner with dust ejection	✓	
Engine air precleaner with screen and dust ejection		✓
Engine with thermal shield		✓
Engine idle shutdown	✓	
Extended life coolant	✓	
Double Reduction Final Drives – Standard or LGP	✓	
Double Reduction Final Drives – Arctic		✓
Fuel water separator	✓	
Electric fuel priming pump	✓	
Hydraulic demand fan	✓	
Hydraulic reversing fan	✓	
Sound suppression		✓
Debris resistant radiator cores	✓	
Automatic ether starting aid	✓	
Engine air filter with electronic service indicator	✓	
Diesel Exhaust Fluid (DEF) system – electronic fill indicator, heated lines/tank	✓	
Jacket water heater (110V or 220V)		✓
CAT TECHNOLOGY		
Slope Indicate	✓	
ARO with Assist – Slope Assist – Traction Control – Stable Blade – Blade Load Monitor – AutoCarry – Third Party Grade Control Ready		✓
Cat GRADE with 3D – Full-color 10-inch (254 mm) touchscreen grade display – Grade receivers and antennas – Grade Software Enabled Attachment (SEA) – ARO with Assist features		✓
Compatibility with radios and base stations from Trimble, Topcon, and Leica	✓	
Capability to install 3D grade systems from Trimble, Topcon, and Leica	✓	
Product Link, Cellular	✓	
Product Link – Dual Cellular/Satellite		✓
Remote Flash/Troubleshoot	✓	
Grade Connectivity		✓
Operator ID	✓	
Machine Security – Passcode	✓	
Machine Security – Bluetooth		✓
Remote Control Ready	✓	
Cat COMMAND for Dozing		✓

	Standard	Optional
OPERATOR ENVIRONMENT		
Fully redesigned cab with Integrated ROPS and FOPS, single pane door glass, sliding windows, with Cat Advanced Cabin Filtration	✓	
High debris cab, fully redesigned with Integrated ROPS and FOPS, impact resistant polycarbonate doors, solid side windows for improved sealing, powered precleaner with Cat Advanced Cabin Filtration for improved performance and filter life		✓
Full-color 10-inch (254 mm) liquid crystal touchscreen display	✓	
Integrated rearview camera	✓	
In-display key machine features	✓	
Operator ID/Operator ID with Security	✓	
Cloth seat with mechanical adjustable lumbar support	✓	
Deluxe leather heated/ventilated seat with electronic adjustable lumbar support		✓
Electrohydraulic implement and steering controls	✓	
Joystick control	✓	
Joystick control – ARO		✓
Fresh air filter	✓	
Powered fresh air filter precleaner		✓
Cab mounted modular HVAC system with automatic reversing fans. Automatic temperature and blower control with distributed ducting.	✓	
Communication radio ready	✓	
Rearview mirror	✓	
Retractable 76 mm (3 in) seat belt	✓	
Cup holders	✓	
Dash foot pads	✓	
Entertainment radio with Bluetooth and microphone	✓	
Lunchbox storage	✓	
Wipers	✓	
USB and AUX Ports	✓	
Operator presence switch	✓	

(continued on next page)

Standard and Optional Equipment *(continued)*

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional
UNDERCARRIAGE		
Standard or Low Ground Pressure (LGP) undercarriage	✓	
Heavy Duty (HDXL with DuraLink™)	✓	
Carrier rollers	✓	
Hydraulic track adjusters	✓	
Lifetime lubricated track and roller	✓	
Moderate service track shoes (see chart on page 30)	✓	
Extreme service track shoes (see chart on page 30)		✓
Track roller frame guiding guards: center, partial or full (NOTE: center guiding guards standard on LGP machine)		✓
BLADES		
Semi-Universal		✓
Straight Blade		✓
Angle Blade		*
Universal Blade – Standard configuration only		✓
Forestry/Land Clearing Blade		*
HYDRAULICS		
Load sensing hydraulics	✓	
Independent steering and implement pumps	✓	
ELECTRICAL		
Lights – 6 LED	✓	
Premium lights – 12 LED		✓
Backup alarm	✓	
Beacon warning light		✓
Converter: two 15 Amp, 12V outlets	✓	
Forward warning horn	✓	

	Standard	Optional
SERVICE AND MAINTENANCE		
30-minute cab removal	✓	
Centralized, remote mounted pressure taps	✓	
Ecology drains	✓	
Extended service intervals (500 hours engine, 1,000-hour power train)	✓	
Ground level service center (remote electrical disconnect, secondary shutdown switch, hour meter)	✓	
Fast fuel fill		✓
High-speed oil change		✓
Heavy duty perforated radiator doors, louvered and hinged	✓	
Quick access cab floor		*
Under hood work light	✓	
Removable engine enclosures, perforated and hinged	✓	
S·O·S℠ sampling ports	✓	
Shovel holder	✓	
BATTERIES, STARTERS, ALTERNATORS AND COOLANT		
150 Amp alternator	✓	
150 Amp ducted alternator		✓
24 Volt starter	✓	
Engine coolant, –37° C (–35° F)	✓	
Arctic engine coolant, –51° C (–60° F)		✓
ATTACHMENTS		
Ripper with straight shanks		✓
Winch: – PACCAR PA110		*
Drawbar		✓
GUARDING AND SCREENS		
Bottom guards – standard	✓	
Bottom guards – heavy-duty and sealed		*
Fuel tank guards		*
Grab handles	✓	
Guards for premium lights, front and side		✓
Sweeps package		✓
Rear fixed screen		*
Hinged rear screen		✓
Hinged side screen		✓

*Recommended

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AEXQ2878-02 (09-2021)
Replaces AEXQ2878-01
Build Number: 17A
(Aus-NZ, Eur, Jpn,
Korea, N Am)