MONTANA
Department of Transportation

MDT-BRG-015 04/23

Montana Department of Transportation
Bridge Bureau
Approved Construction Equipment List

Make:	*Caterpillar*
Model:	*D6*
Equipment Type:	*Track Tractor*
Contractor Modifications:	*None*

Interstate Approval Conditions

Approval Type	*Crossing Only*
Speed:	*No Restriction*
Weight:	*49,030 lb or less*
Traffic:	*Approved with regular traffic*
Location Restrictions:	*No Restriction*

Non-Interstate Approval Conditions

Approval Type	*Crossing Only*
Speed:	*No Restriction*
Weight:	*49,030 lb or less*
Traffic:	*Approved with regular traffic*
Location Restrictions:	*No Restriction*

Comments:

Equipment configuration, weights, and specifications on following pages. Approval does not apply to posted bridges. Other construction equipment is not allowed to operate on or cross bridge at the same time this equipment is on the bridge. Vibratory system must be turned off while on bridge.



D6/D6 XE

Track-Type Tractors

Technical Specifications

Engine

Engine Model	Cat® C9.3B	
Emissions	U.S. EPA Tier 4 Final, EU Stage V, Korea Tier 4 Final	
Build Number	20A	
Net Power (Rated) – D6 2,200 rpm/D6 XE 1,700 rpm		
ISO 9249/SAE J1349	161 kW	215 hp
ISO 9249/SAE J1349 (DIN)		219 hp
D6 Engine Power (Maximum) – 1,200 rpm		
ISO 14396	187 kW	251 hp
ISO 14396 (DIN)		254 hp
D6 XE Engine Power (Maximum) – 1,400 rpm		
ISO 14396	177 kW	237 hp
ISO 14396 (DIN)		241 hp
Bore	115 mm	4.5 in
Stroke	149 mm	5.9 in
Displacement	9.3 L	567 in^3

- The new Cat C9.3B engine features a new high pressure common rail fuel system, simplified engine system electronics, and simplified air system through the removal of the previously used exhaust gas recirculation (EGR) system.
- The XE drive train allows the engine to operate in a tighter rpm range, 1,400-1,700 rpm, which helps extend engine life and provide improved fuel economy. The increased drive train efficiency also allows the machine to provide more engine power to the ground, resulting in greater machine performance.
- 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.
- No derating required up to 2286 m (7,500 ft). Above this, automatic derating occurs.
- All non-road Tier 4 Interim and Final, Stage IIIB, IV and V 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.

D6 XE Drive Train

Type	Electric Drive
Electric Drive System Nominal Voltage	715 Volts

CAT®

Configuration Tables – D6/D6 XE VPAT

	Configuration	D6/D6 XE*	
	Operating Weight**	22 240 kg	49,030 lb
	Shipping Weight***	20 500 kg	45,195 lb
	Ground Pressure (ISO 16754)	49 kPa	7.1 psi
	Undercarriage (Standard)	45 Section with 8 Bottom Rollers	
1	Track Gauge	2.080 m	82 in
2	Width of Maximum Track Shoe	0.610 m	24 in
3	Width over Tracks	2.690 m	105.9 in
4	Length of Track on Ground	3.247 m	127.8 in
	Ground Contact Area (ISO 16754)	4.473 m^2	6,933 in^2
	Track Pitch	0.2028 m	7.9 in
	Grouser Height (Moderate Service)	0.065 m	2.6 in
	Ground Clearance	0.422 m	16.6 in
	Oscillation at Front Idler	0.112 m	4.4 in
5	Machine Height****	3.222 m	126.9 in
6	Length of Machine without Blade	5.134 m	202.1 in

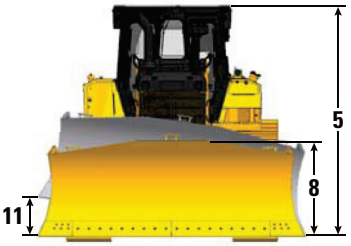
All dimensions above with Heavy Duty undercarriage with Moderate Service shoes of maximum width for configuration, VPAT blade, and calculated per ISO 16754 unless otherwise specified.

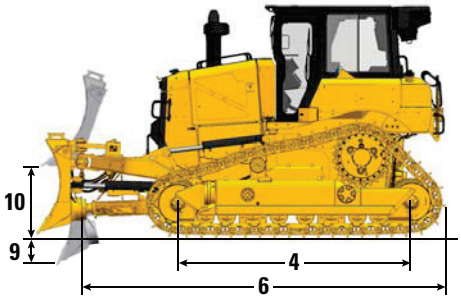
*XE power train adds 0.7 kPA (0.1 psi) and 273 kg (600 lb) to the published ground pressure and weights.

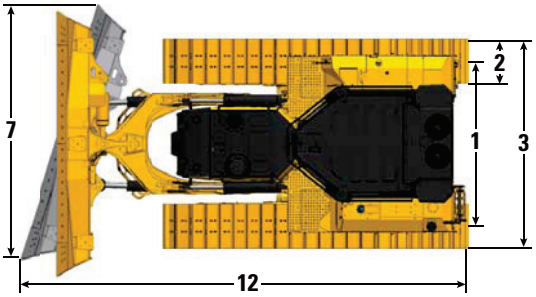
**Operating weight includes blade, lubricants, coolant, full fuel tank, ROPS/FOPS cab, drawbar, and 75 kg (165 lb) operator.

***Shipping weight includes blade lift cylinders, 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 66 mm (2.6 in) to overall machine height. For forestry sweeps, add 122 mm (4.4 in). With Extreme Service Track Shoes add 12 mm (0.5 in). When Cat GRADE with 3D antennas are installed there is no addition to machine height.







Blade

	Configuration	6 VPAT	
	Capacity (ISO 9246)	4.1 m^3	5.4 yd^3
7	Width across End Bits	3.680 m	12 ft 0.9 in
	Width without End Bits	3.570 m	11 ft 8.6 in
	Width across End Bits (Blade Angled)	3.363 m	11 ft 0.4 in
	Width without End Bits (Blade Angled)	3.266 m	10 ft 8.6 in
	Maximum Blade Angle	24.1 degrees	
8	Height	1.312 m	4 ft 3.7 in
9	Dig Depth	0.698 m	27.5 in
10	Lift Height	1.131 m	44.5 in
11	Maximum Tilt at Blade Corner	0.576 m	22.7 in
	Maximum Tilt Angle	9 degrees	
	Pitch Adjustment	+3.1/–2.9 degrees	
12	Length of Machine (Blade Straight)	5.662 m	18 ft 6.9 in
	Length of Machine (Blade Angled)	6.365 m	20 ft 10.6 in
	Weight (Blade)	1414 kg	3,117 lb

Dimensions – Rear Attachments

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

		Winch		Ripper		Drawbar or Counterweight*		Waste Striker Box	
Push Arm and Angle Dozers	D6, D6 LGP (30 in)	441 mm	17.4 in	1179 mm	46.4 in	249 mm	9.8 in	478 mm	18.8 in
	D6 LGP (36 in)	416 mm	16.4 in	1154 mm	45.4 in	224 mm	8.8 in	453 mm	17.8 in
VPAT Dozers		416 mm	16.4 in	1154 mm	45.4 in	224 mm	8.8 in	453 mm	17.8 in

*Drawbar weight 119 kg (262 lb), 331 kg (730 lb) for each counterweight slab. The new D6 dozer design provides improved balance. Counterweights are only recommended with heavier aftermarket blades.

	Type	Fixed Parallelogram	
	Number of Pockets	3	
1	Ramp Angle	31 degrees	
2	Maximum Clearance Raised (under tip)	664 mm	26.1 in
3	Maximum Penetration	571 mm	22.5 in
4	Pocket Spacing	1000 mm	39.4 in
5	Shank Gauge	2000 mm	78.8 in
	Shank Section	74 mm × 175 mm	2.9 in × 6.9 in
6	Overall Beam Width	2190 mm	86 in
	Beam Cross Section	219 mm × 304 mm	8.8 in × 12 in
	Maximum Penetration Force*	68.8 kN	15,470 lbf
	Pryout Force	126 kN	28,350 lbf
	Ripper Weight		
	With One Shank	1550 kg	3,417 lb
	Each Additional Shank	73 kg	161 lb

Specifications based on D6 tractor configuration with Heavy Duty undercarriage, MS shoes, and straight ripper shanks.
*May vary based on configuration and machine weight.

