



D7R Series 2

Track-Type Tractor



Engine

Engine Model	Cat [®] 3176C	
Gross Power	192 kW	258 hp
Flywheel Power	179 kW	240 hp

Weights – Standard

Operating Weight	25 304 kg	55,786 lb
Shipping Weight	20 630 kg	45,479 lb

Engine

Engine Model	Cat 3176C	
Gross Power	192 kW	258 hp
Flywheel Power	179 kW	240 hp
Net Power - Caterpillar	179 kW	240 hp
Net Power - ISO 9249	179 kW	240 hp
Net Power - SAE J1349	177 kW	238 hp
Net Power - EU 80/1269	179 kW	240 hp
Net Power - DIN 70020	248 PS	
Bore	125 mm	4.9 in
Stroke	140 mm	5.5 in
Displacement	10.3 L	629 in ³

- Engine Ratings at 2100 RPM
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No derating required up to 2286 m (7500 ft) altitude, beyond 2286 m (7500 ft) automatic derating occurs.

Transmission

1 Forward	3.52 kph	2.19 mph
2 Forward	6.10 kph	3.79 mph
3 Forward	10.54 kph	6.55 mph
1 Reverse	4.54 kph	2.82 mph
2 Reverse	7.85 kph	4.88 mph
3 Reverse	13.58 kph	8.44 mph

Weights

Operating Weight - Std.	25 304 kg	55,786 lb
Shipping Weight - Std.	20 630 kg	45,479 lb
Operating Weight - XR	25 880 kg	57,056 lb
Shipping Weight - XR	21 206 kg	46,752 lb
Operating Weight - LGP	27 443 kg	60,503 lb
Shipping Weight - LGP	22 722 kg	50,094 lb

- Shipping Weight
(Includes lubricants, coolant, cab, hydraulic controls, Standard Track and 10% fuel.)
- Operating weight
(Includes lubricants, coolant, full fuel tank, SU blade with tilt cylinder, shoes, cab, hydraulic controls, drawbar and operator.)

Service Refill Capacities

Fuel Tank	479 L	126.5 gal
Cooling System	77.4 L	20.4 gal
Engine Crankcase	31 L	8.2 gal
Power Train	178 L	47 gal
Final Drives (each)	13 L	3.4 gal
Roller Frames (each)	24.6 L	6.5 gal
Attachment Hydraulic System Tank Only	54 L	14.3 gal
Pivot Shaft Compartment	1.9 L	0.5 gal

Hydraulic Controls - Pump

Pump Capacity	7000 kPa	1,015 psi
Pump Output (Differential Steering)	295 L/min	77.9 gal/min
Lift Cylinder Flow	180 L/min	47.6 gal/min
Tilt Cylinder Flow	80 L/min	21.1 gal/min
Ripper Cylinder Flow	180 L/min	47.6 gal/min

- Pump speed at 2231 RPM
- Pump specifications at rated engine speed

Hydraulic Controls - Main Relief Valve Settings

Differential Steering Models	42 000 kPa	6,092 psi
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Hydraulic Controls - Maximum Operating Pressure

Bulldozer	22 800 kPa	3,307 psi
Tilt Cylinder	17 225 kPa	2,498 psi
Ripper (Lift)	22 750 kPa	3,300 psi
Ripper (Pitch)	22 750 kPa	3,300 psi
Steering	38 000 kPa	5,511 psi

Blades

Blade Type		
U Blade Capacity	8.34 m ³	10.91 yd ³
U Blade Width	3988 mm	13.08 ft
SU Blade Capacity	6.86 m ³	8.98 yd ³
SU Blade Width	3693 mm	12.12 ft
S Blade Capacity	5.16 m ³	6.75 yd ³
S Blade Width	3904 mm	12.81 ft
LGP S Blade Capacity	5.89 m ³	7.70 yd ³
LGP S Blade Width	4545 mm	14.91 ft
A Blade Capacity	3.89 m ³	5.08 yd ³
A Blade Width	4503 mm	14.77 ft

Multi-Shank Ripper

Type	Adjustable Parallelogram	
Beam width	2210 mm	87 in
Beam cross section	343 x 279 mm	13.5 x 11 in
Maximum penetration	748 mm	29.4 in
Maximum clearance raised (shank tip)	757 mm	29.8 in
Number of pockets	3	
Maximum penetration force	8664 kg	19,100 lb
Maximum pryout force	17 138 kg	38,513 lb
Weight - with one shank	3307 kg	7,431 lb
Weight - each additional shank	150 kg	330 lb

Winch Specifications

Winch Model	PA110VS Variable Speed	
Weight	1894 kg	4,176 lb
Winch and Bracket Length	1461 mm	57.5 in
Winch Case Width	1171 mm	46.1 in
Increased Tractor Length - STD	742 mm	29.2 in
Increased Tractor Length - XR	587 mm	23.1 in
Increased Tractor Length - LGP	742 mm	29.2 in
Flange Diameter	610 mm	24 in
Drum Width	337 mm	13.3 in
Drum Diameter	318 mm	12.5 in
Drum Capacity - 24 mm (1 in)	127.41 m	418 ft
Drum Capacity - 29 mm (1.13 in)	84.12 m	276 ft
Drum Capacity - 32 mm (1.25 in)	58.83 m	193 ft
Ferrule Size (O.D. x Length)	2.38 in x 2.56 in / 60 mm x 65 mm	
Oil Capacity	15.1 L	4 gal

Standards

ROPS/FOPS

- ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria SAE J395, SAE 1040 MAY94, AND ISO 3471-1994.
- FOPS (Falling Object Protective Structure) meets ISO 3449-1992 Level II.

Cab

- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 83 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- 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 noisy environment.
- The exterior sound pressure level for the standard machine measured at a distance of 15 meters according to the test procedures specified in SAE J88 APR 95, mid-gear-moving operation, is 86 dB(A).

Brakes

- Brakes meet the standard SAE J/ISO 10265 MARCH99.

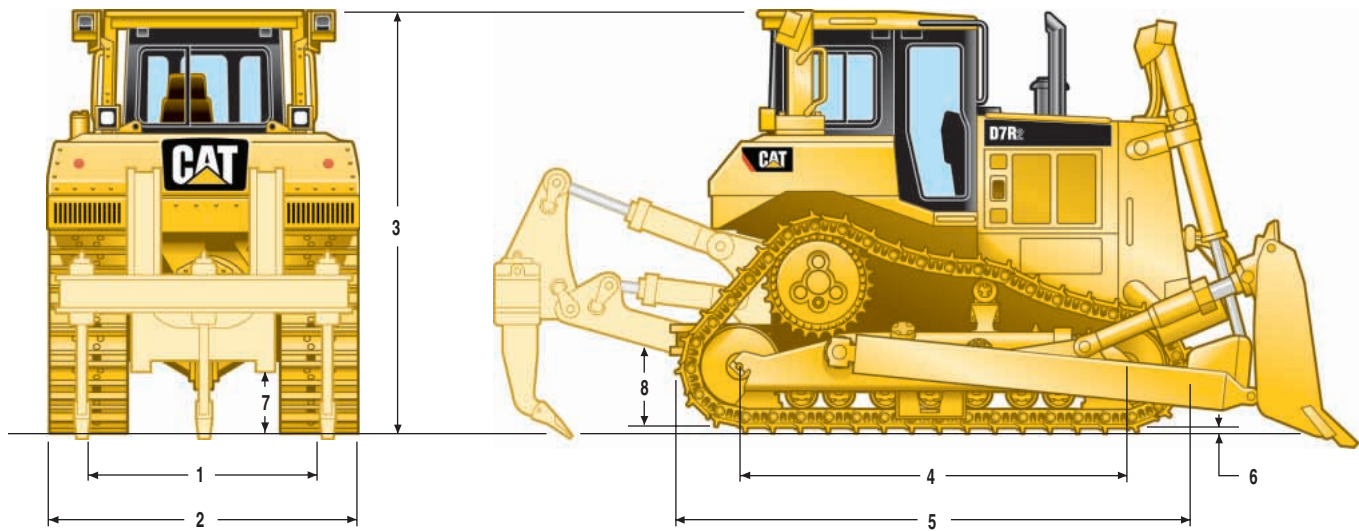
Bulldozer Specifications

Blade		7S	7SU	7U	7A		7S LGP
					Straight	Angled 25°	
Blade Capacity (SAE J1265)	m ³	5.16	6.86	8.34	3.89	—	5.89
	yd ³	6.75	8.98	10.91	5.08	—	7.70
Width (over end bits)	mm	3904	3693	3988	4503	4120	4545
	ft/in	12'10"	12'1"	13'1"	14'9"	13'6"	14'11"
Height	mm	1363	1524	1553	1111	1111	1343
	ft/in	4'5.7"	5'0"	5'3"	3'7.7"	3'7.7"	4'5"
Digging Depth	mm	527	527	527	669	669	668
	in	20.7"	20.7"	20.7"	26.3"	26.3"	26.3"
Ground Clearance	mm	1145	1145	1145	1115	1115	1153
	in	45"	45"	45"	44"	44"	45"
Maximum Tilt	mm	845	799	861	627	627	686
	in	33.3"	31.4"	33.9"	24.7"	24.7"	27"
Weight (without hyd. controls)	kg	3465	3593	3926	3523	3523	3732
	lb	7640	7923	8657	7768	7768	8229
Total Operating Weight* (with blade)	kg	27 277	27 413	27 731	27 323	27 323	29 500
	lb	60,136	60,436	61,136	60,236	60,236	65,036

* Operating weight includes power shift arrangement, lubricants, coolant, full fuel tank, hydraulic controls, blade tilt cylinder, ROPS canopy, multi shank ripper (one shank), 560 mm (22") shoes for standard, 914 mm (36") shoes for LGP and operator. (Width with C-frame only is 3085 mm (10'1.5") includes C-frame assembly.

Dimensions

(approximate)



Tractor Dimensions

	Standard		XR		LGP	
1. Track Gauge	1981 mm	78"	1981 mm	78"	2235 mm	88"
2. Width of Tractor						
Over Trunnions	2869 mm	9'5"	2869 mm	9'5"	3371 mm	11'1"
Without Trunnions (std. shoe width)	2540 mm	8'4"	2590 mm	8'6"	3150 mm	10'4"
3. Machine Height from tip of Grouser:						
Stack	3353 mm	11'0"	3353 mm	11'0"	3435 mm	11'3"
OROPS	3372 mm	11'1"	3372 mm	11'1"	3454 mm	11'4"
EROPS	3359 mm	11'2"	3359 mm	11'2"	3441 mm	11'3"
From Ground Face of Shoe	563 mm	22.2"	563 mm	22.2"	642 mm	25.3"
4. Length of Track on Ground	2878 mm	114"	3050 mm	120"	3167 mm	125"
5. Length of Basic Tractor (with drawbar)	4736 mm	15'6"	4736 mm	15'6"	4736 mm	15'6"
With the following attachments add to basic tractor length:						
Ripper (with tip at ground line)	1196 mm	3'11.1"	1196 mm	3'11.1"	—	—
Ripper (with tip fully raised)	992 mm	3'3.1"	992 mm	3'3.1"	—	—
Winch	77 mm	3"	77 mm	3"	77 mm	3"
S Blade	1081 mm	3'6.6"	1081 mm	3'6.6"	1071 mm	3'6"
SU Blade	1301 mm	4'3"	1301 mm	4'3"	—	—
U Blade	1541 mm	5'7"	1541 mm	5'7"	—	—
A Blade	1301 mm	4'6.4"	1301 mm	4'6.4"	—	—
6. Height of Grouser	71 mm	2.8"	71 mm	2.8"	71 mm	2.8"
Ground Contact Area (std. shoe)	3.22 m ²	5016 in ²	3.72 m ²	5760 in ²	5.79 m ²	9000 in ²
Number of Shoes per side	40		41		43	
7. Ground Clearance	416 mm	16.4"	416 mm	16.4"	496 mm	19.5"
Standard Shoe Width and Type*	560 mm	22" ES	610 mm	24" ES	914 mm	36" MS
Ground Pressure	0.766 kg/cm ²	10.9 psi	0.690 kg/cm ²	9.8 psi	0.464 kg/cm ²	6.6 psi
8. Drawbar Height (grouser tip to center of clevis)	634 mm	24.9"	634 mm	24.9"	713.4 mm	28.1"
Pitch	216 mm	8.5"	216 mm	8.5"	216 mm	8.5"
Track Rollers/Side	7		8		7	
Number of Carrier Rollers (optional)	1 per side		1 per side		1 per side	

* ES – Extreme Service
MS – Moderate Service

Standard Equipment

Electrical

- Alternator, 95-amp brushless
- Alarm, backup
- Batteries, 2 maintenance free 12V (24V system)
- Converter, 12V, 10 amp with 2 power outlets
- Horn, forward warning
- Starting receptacle, auxiliary

Operator Environment

- Air conditioner, under hood
- Armrests, adjustable
- Cab, sound suppressed
- Differential steering control with touch shift
- Distance travel indicator, electronic
- Electronic Monitoring System (EMS)
 - with coolant temperature, power train oil, hydraulic oil and fuel gauge, tachometer, odometer, gear indicator and diagnostic functions
- Heater
- Hour meter, electronic
- Mirror, rearview
- Pedal, decelerator
- Pilot operated hydraulic controls with electronic deactivation switch
- Radio ready
- Seat, adjustable contour suspension (gray fabric)
- Seat belt, retractable 76 mm (3")
- Wipers, intermittent

Power Train

- 3176C diesel engine with EUI (electronic unit injection)
- Advanced Modular Cooling System (AMOCS)
- Air filter with electronic service indicator
- Coolant, extended life
- Fan, blower, direct drive
- Final drives, 3 planet double reduction planetary
- Fuel priming pump
- Muffler with mitered stack
- Parking brake, electronic
- Precleaner with stratta tube dust ejector
- Prescreener
- Shift management:
 - Automatic directional and downshift
 - Controlled throttle, load compensating
- Starting aid, automatic ether
- Torque divider
- Transmission, electronically controlled – 3F/3R speeds
- Turbocharger, waste gate
- Water separator

Undercarriage

- Carrier roller (LGP, only)
- Track adjuster, hydraulic
- Idlers, lifetime lubricated
- Track rollers, lifetime lubricated
- End track guiding guards
- Sprocket rim segments, replaceable

Other Standard Equipment

- CD-ROM parts book
- Engine enclosures, perforated
- Front pull device
- Guards, hinged bottom
- Hood, perforated
- Hydraulics, load sensing, dozer lift and tilt
- Oil cooler, hydraulic
- Product Link ready
- Radiator doors, hinged fan blast deflector
- S·O·SSM sampling ports
- Tool box
- Vandalism protection for fluid and battery compartments

Optional Equipment (with approximate change in operating weight)

Standard and optional equipment may vary. For specific tractor applications, additional guarding may be required. Consult your Caterpillar dealer for further information.

	Mass (kg)	Weight (lb)		Mass (kg)	Weight (lb)
Bulldozer Arrangements Complete Bulldozers Installed			Operator Environment		
7A Bulldozer, Complete	3542	7,810	Air Conditioner (ROPS Mounted)	277	611
7S Bulldozer, Complete	3457	7,623	Air Suspension Seat	1.5	3
7S LGP Bulldozer, Complete	3728	8,220	Glass, Ultra-Strength 40	51	113
7SU Bulldozer, Complete	3681	8,117	Seat, Vinyl	0	0
7U Bulldozer, Complete	3911	8,624	Power Train		
Bulldozer Attachments			Ecology Drain	4	9
7A Tilt Cylinders	166	366	Fan, Reversible	0	0
7S Landfill Blade w/Trash Rack	2349	5,180	Fast Fuel System	3	7
7SU Blade Wear Plate	332	732	Oil Change System	9	20
7SU Landfill Blade w/Trash Rack	2404	5,300	Sand Blast Grid	15	33
7SU Landfill Blade Wear Plate	332	732	Undercarriage		
7S LGP ERF Dual Tilt	500	1,103	Track Groups		
7U Landfill Blade w/Trash Rack	2730	6,020	STD 24" ES HD	614	1,354
Electrical			STD 24" MS HD	155	342
AccuGrade Ready Option	83	182	STD 24" MS RBT	155	342
Alternator – 75A (Sealed)	13	29	STD 26" MS HD	304	670
Converter 20A, 12V	1	2	XR 24" MS RBT	0	0
Lights, 6	32	71	XR 26" ES HD	470	1,037
Lights, 8	33	73	XR 26" MS HD	153	337
Lights, 10	64	141	LGP 36" MS RBT	0	0
Lights, Supplemental – (Adj Rip Only)	2	4	Carrier Rollers		
Lights, Supplemental – 2 Fender	19	42	Carrier Rollers – STD	156	344
Machine Security System	1	3	Carrier Rollers – XR	156	344
Product Link	3	7	Other Attachments		
Guards			Counterweight	1061	2,340
Crankcase – ES	80	176	Counterweight Additional	345	761
Fuel Tank – STD	236	520	Drawbar	234	516
Fuel Tank – XR	240	529	Sound Suppression	159	351
Fuel Tank – LGP	245	540	Winch	1841	4,059
Rear	71	157	Winch Control	53	117
Radiator, Hinged – HD	48	106	Starting Aids		
Screen – Rear (Winch)	86	190	Batteries, HD	15	33
Screen – Rear (ROPS AC)	71	157	Heater, Engine Coolant	3	7
Sweeps	295	650	Hydraulics		
Track Guiding Guards			Controls, Ripper	43	95
Center – STD	85	187	Controls, Ripper Adjustable	55	121
Center – XR	107	236	Cooler, Hydraulic Oil	26	57
Track Roller Guards			Ripper		
Track Roller Guard – STD	292	644	Adjustable Ripper, Multi-Shank	3307	7,431
Track Roller Guard – XR	362	798	Additional Tooth	150	330
Track Roller Guard – LGP	405	893	Field Installed Attachments		
			Radio/Cassette	1	2
			Tool Kit	5	10

- Waste Handling Arrangements are available from the factory. Contact Custom Products for availability.