



# TD-20R

CRAWLER DOZER  
STD-LT-LGP



■ **Net Horsepower**  
185 kW (248 hp)

■ **Blade Capacity**  
up to 8.45 m<sup>3</sup> (11.1 yd<sup>3</sup>)

■ **Operating Weight**  
23 990 kg (52,890 lb) STD  
24 550 kg (54,125 lb) LT  
25 020 kg (55,159 lb) LGP

# Specification

## ENGINE

- \* Make and Model ..... CUMMINS QSL9
- Type ..... In-line, 4-cycle, water-cooled, 6-cylinder
- Electronic controls (ECM), Diesel Particulate Filter (DPF)
- Aspiration ..... Turbocharged and Charge Air Cooler (CAC)
- Fuel system ..... High Pressure Injection (HPI)
- Gross Horsepower, SAE J1995 ..... 205 kW (275 hp)
- \*\* Net Horsepower, SAE J1349/ISO 9249 ..... 185 kW (248 hp)
- Rated rpm ..... 2200 rpm
- Max. torque @1500 rpm ..... 1213 Nm (895 lb-ft)
- Displacement ..... 8.9 l (543 in<sup>3</sup>)
- Bore and Stroke ..... 114 x 144.5 mm (4.49" x 5.69")
- Fan drive type ..... hydraulic
- Air cleaner ..... dry type, dust pre-separation block  
with exhaust aspirated primary,  
..... filter elements and service indicator

\* Meets EU Stage IIIB and US EPA Tier 4 Interim emission standards  
The engine requires to use Ultra Low Sulfur Diesel (ULSD) fuel

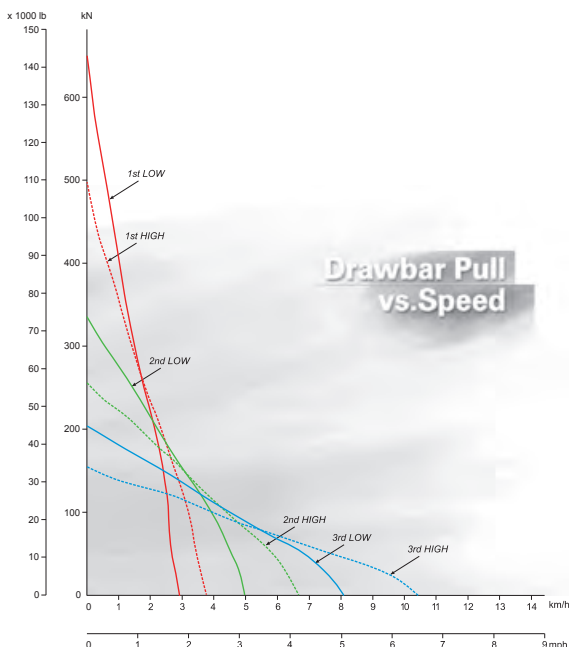
\*\*Net Horsepower at the minimum speed of hydraulic fan 202 kW (271 hp)

## TRANSMISSION & TORQUE CONVERTER

Modular, countershaft type power shift, electro-hydraulic control.  
Preset travel speed selection and auto-downshift.  
Single stage 370 mm (14.6") torque converter with a 2.3:1 stall ratio  
drives to transmission through a double universal joint.

## TRAVEL SPEEDS

Gear	Range	Forward		Reverse	
		km/h	(mph)	km/h	(mph)
1 st	Low	2.9	(1.8)	3.4	(2.1)
	High	3.7	(2.3)	4.4	(2.7)
2 nd	Low	5.2	(3.2)	6.1	(3.8)
	High	6.7	(4.1)	7.9	(4.9)
3 rd	Low	8.2	(5.1)	9.6	(6.0)
	High	10.5	(6.5)	12.2	(7.6)



## STEERING & BRAKING

Two-speed geared steering module provides gradual turns while maintaining full power to both tracks plus conventional clutch-brake performance for tight or pivot turns. This type of steering system offers superior traction in all types of operations and terrain. Coupled to 3-speed transmission, the 2-speed steering provides 6 speeds forward and 6 reverse. The left hand joystick controls transmission and steering drive for up and down shifting, steering, Hi/Lo selection and LH/RH gradual geared turn. Foot pedal applies both brakes for parking and downhill control. Brakes are spring applied and hydraulically released.

## FINAL DRIVES

Double-reduction with outboard planetary final drive stage provides desired gear reduction at the sprocket. Ring-type sprocket distributes wear evenly over track bushings letting every tooth ride free one-half of the time to reduce wear. Final drives or sprockets are replaceable without removing track frames.

## TRACK FRAME

All-welded heavy box section track frame is kept in alignment with track frame guides providing true vertical oscillation.  
Track rollers, each side STD (LT, LGP) ..... 6 (7)  
Top idlers, each side ..... 2  
Front idlers (drum type) ..... 1  
All rollers and idlers ..... lifespan lubricated  
Oscillation at center of front idler (STD) ..... 295 mm (11.6")  
Oscillation at center of front idler (LT, LGP) ..... 328 mm (12.9")

## TRACKS

Lubricated Track System (LTS) virtually eliminates internal pin and bushing wear through use of a patented seal assembly. The split master link reduces chain removal and installation time.

	STD	LT	LGP
Track shoe width, std.	560 mm (22")	560 mm (22")	864 mm (34")
Track shoes, each side	40	42	42
Ground contact area	3.2 m <sup>2</sup> (4,972 in <sup>2</sup> )	3.4 m <sup>2</sup> (5,324 in <sup>2</sup> )	5.3 m <sup>2</sup> (8,228 in <sup>2</sup> )
Ground pressure (w/standard equipment)	73.5 kPa (10.6 psi)	70.8 kPa (10.3 psi)	46.3 kPa (6.7 psi)
Height of grouser	67 mm (2.63")		
Ground clearance	460 mm (18.1")		

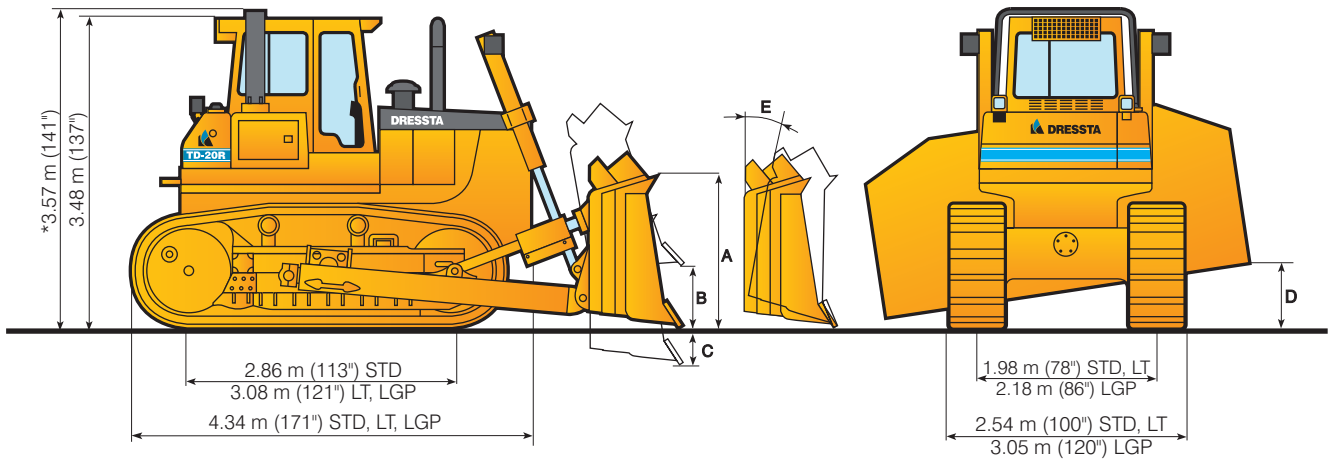
## REFILL CAPACITIES

	Liter	(US gal)
Fuel tank	490	(130)
Cooling system	37	(9.8)
Crankcase	22.5	(6.0)
Transmission system	173	(45.8)
Final drive, each side	38	(10)
Hydraulic reservoir	115	(30.4)

## OPERATING WEIGHT

Includes standard equipment with blade and full fuel.

	STD	LT	LGP
Type of blade	Semi-U	Semi-U	Straight
Cab ROPS	23990 kg (52,890 lb)	24550 kg (54,125 lb)	25020 kg (55,159 lb)
Canopy ROPS	23440 kg (51,676 lb)	24000 kg (52,910 lb)	24470 kg (53,947 lb)



\* OVERALL HEIGHT w/Canopy ROPS/FOPS - 3.62m (142.5")  
 VERTICAL DIMENSIONS INCLUDE 67 mm (2.63") GROUSER HEIGHT

## OVERALL DIMENSIONS WITH EQUIPMENT

BLADE SELECTION		SEMI-U	FULL-U	ANGLE	STRAIGHT
Length with blade and drawbar	STD	5.69 m (18'8")	5.93 m (19'5")	5.77 m (18'11")	-
	LT	5.91 m (19'5")	6.15 m (20'2")	5.99 m (19'8")	-
	LGP	-	-	-	5.73 m (18'10")
Length with blade and multi-shank ripper	STD	6.89 m (22'7")	7.13 m (23'5")	6.97 m (22'10")	-
	LT	7.11 m (23'4")	7.35 m (24'1")	7.19 m (23'7")	-
Length with blade and single-shank ripper	STD	7.05 m (23'2")	7.29 m (23'11")	7.13 m (23'5")	-
	LT	7.27 m (23'10")	7.51 m (24'8")	7.35 m (24'1")	-
Width, blade angled		-	-	4.00 m (13'2")	-
Width over trunnions		2.89 m (9'6")	2.89 m (9'6")	2.89 m (9'6")	3.32 m (10'11")
Width over "C" frame		-	-	3.17 m (10'5")	-

## BLADE SPECIFICATIONS

BLADE SELECTION		SEMI-U	FULL-U	ANGLE	STRAIGHT
UNDERCARRIAGE		STD & LT	STD & LT	STD & LT	LGP
Blade Capacity, SAE J1265		7.04 m <sup>3</sup> (9.2 yd <sup>3</sup> )	8.45 m <sup>3</sup> (11.1 yd <sup>3</sup> )	3.88 m <sup>3</sup> (5.1 yd <sup>3</sup> )	6.03 m <sup>3</sup> (7.9 yd <sup>3</sup> )
Blade dimensions: - width over end bits - height	A	3.5 m (138")	3.86 m (152")	4.41 m (174")	4.37 m (172")
		1.6 m (63")	1.6 m (63")	1.09 m (43")	1.36 m (54")
Max. lift, straight	B	STD 1150 mm (45") LT 1220 mm (48")	STD 1150 mm (45") LT 1220 mm (48")	STD 1160 mm (46") LT 1230 mm (48.4")	1210 mm (47.6")
Max. drop below ground level	C	STD 505 mm (19.9") LT 532 mm (20.9")	STD 505 mm (19.9") LT 532 mm (20.9")	STD 615 mm (24.2") LT 647 mm (25.5")	522 mm (20.6")
Max. tilt adjustment	D	670 mm (26.3")	720 mm (28.3")	480 mm (19")	660 mm (26")
Blade angle, either side		-	-	25°	-
Max. pitch adjustment	E	10°	10°	-	-
Weight of blade equipment		3420 kg (7,540 lb)	3800 kg (8,377 lb)	3230 kg (7,120 lb)	2756 kg (6,076 lb)

## RIPPER SPECIFICATIONS

RIPPER SELECTION	MULTI-SHANK	SINGLE-SHANK
Tool Beam		
Overall width	2130 mm (84")	1383 mm (54")
Cross section (height x width)	305 x 381 mm (12" x 15")	330 x 478 mm (13" x 18.8")
Ground clearance under tool beam:		
	- ripper raised - ripper lowered	1295 mm (51") 178 mm (7")
Shanks		
Number of shanks per ripper, max.	3	1
Spacing center to center	991 mm (39")	-
Penetration, max.	700 mm (27.6")	834 mm (32.8")
Ground clearance, max. raised	596 mm (23.5")	538 mm (21.2")
Shank positions (vertical)	2	2
Weight		
Complete, including one shank	2900 kg (6,400 lb)	2845 kg (6,272 lb)
Each additional shank	196 kg (432 lb)	-
Penetration Force	91.1 kN (20,479 lb)	89.99 kN (20,230 lb)
Pryout Force	282.2 kN (63,439 lb)	272.3 kN (61,213 lb)

# TD-20R CRAWLER DOZER STD-LT-LGP



## HYDRAULIC CONTROL SYSTEM

Multiple gear pumps, driven from torque converter.

Output @ 6.89 MPa (1,000 psi) and 2330 rpm:

1 st pump - 142 l/min (37.5 gpm)

2 nd pump - 62.5 l/min (16.5 gpm)

and pilot pump output @ 2.07 MPa (300psi) - 35.2 l/min (9.3 gpm)

Relief valve setting:

blade lift & ripper ..... 17.3 MPa (2,500 psi)

tilt ..... 18.6 MPa (2,650 psi)

Cylinders, bore and stroke:

lift ..... 110 x 1300 mm (4.33" x 51.18")

tilt ..... 180 x 146.5 mm (7.09" x 5.73")

tilt/pitch ..... 180/165.1 x 146.5 mm (7.09"/6.5" x 5.73")

## STANDARD EQUIPMENT

- Air cleaner, dry type, dust pre-separation block with exhaust aspirated primary, filter elements and service indicator
- Alarm, back-up
- Alternator, 50 A
- Antifreeze, -37°C (-34°F)
- Batteries, (2) 12 V, 960 CCA, cold start, maintenance free
- Brakes, foot, spring applied, hydraulically released
- Cab and ROPS Equipment:
  - Air conditioner/heater/pressurizer/defroster, underseat mounted, A/C condenser behind roof
  - Cab w/sound suppression, air recirculation system, 4 wipers w/washers, inside mirror, dome light and tinted safety glass
  - 2 post ROPS for cab and/or forestry attachment
  - Seat belt (SAE J386) - 3" wide, retractable
  - Seat, air suspension type, fabric cover, adjustable with arm rests, swivel 14° to right
  - Sun visor, front cab window
- Coolant filter conditioner
- Cooling module; includes radiator, transmission oil cooler, hydraulic oil/fan drive oil cooler and charge air cooler; isolation mounted
- Decelerator - right foot pedal and brake - center foot pedal
- Diagnostic centers for power train and equipment hydraulic pressures
- Diesel Particulate Filter with catalyst (DPF)
- Drawbar, rigid (STD, LT)
- Ecological drains for engine oil, radiator coolant and hydraulic oil
- Engine hood, solid, sloped
- Engine side doors, hinged, perforated type
- Exhaust pipe extension with elbow
- Fan, hydraulically driven, suction type, variable speed
- Filters, engine oil, full flow and by-pass with replaceable "spin-on" elements
- Filters, power train and equipment hydraulics, "spin-on" micro glass type
- Final drive seal guard
- Guards: crankcase, hinged, with front pull hook, transmission, fan, radiator, sprocket rock and dirt deflector
- Hitch, retrieval (LGP)
- Horn, electric
- Hydraulic controls, 3-spool valve, 1 lever with pilot operated blade control (lift/tilt), ready for ripper
- Instruments:
  - Engine ECM failure warning lights and switches
  - Gear, range, drive train and engine diagnostic display
  - Gauges: fuel level, engine coolant temperature, engine oil pressure, drive train system oil temperature, voltmeter, hourmeter, tachometer
  - Warning lights: air cleaner filter, drive train oil filters, hydraulic oil filters, transmission/clutch oil low pressure, coolant high temperature, drive train oil high temperature, fan drive oil filter, engine inlet air heater
  - Audible & visual warning system: low engine coolant level, low engine oil pressure
- Lights for cab, 2F-2R
- Lights with guards, 2F - lift cylinders mounted, 2R - fuel tank mounted
- Radiator guard door, two-piece, louvered, hinged
- Rear access platform
- Receptacle, starting/charging
- Starting, 24 V
- Starting aid - air grid heater
- Steering, planetary type, 2-speed, left hand single lever control (joystick)
- Strainers, fuel and hydraulic tanks
- Tools compartment
- Torque converter, single stage
- Transmission, power shift, 3 speeds forward, 3 reverse, combined with 2 speed steering provides 6 speeds forward and 6 reverse, preset travel speed selection and auto-downshift
- UNDERCARRIAGE
  - Track frames, oscillating type, lifespan lubricated rollers and idlers
  - Track adjusters, hydraulic
  - Track chain end guides, integral
  - STANDARD (STD)
    - Track chain, sealed and lubricated (LTS) with split master link, 40 links
    - Track roller, 1981 mm (78") gauge
    - Track shoes, 560 mm (22"), grouser type
  - LONG TRACK (LT)
    - Track chain, sealed and lubricated (LTS) with split master link, 42 links
    - Track chain center guides
    - Track frame, 7 roller, 1981 mm (78") gauge
    - Track shoes, 560 mm (22"), grouser type
  - LOW GROUND PRESSURE (LGP)
    - Track chain, sealed and lubricated (LTS) with split master link, 42 links
    - Track chain center guides
    - Track frame, 7 roller, 2180 mm (86") gauge
    - Track shoes, 864 mm (34"), extreme clipped corner, grouser type
- Water separator fuel system

## OPTIONAL ATTACHMENTS

- AM/FM CD radio
- Blade Equipment:
  - Full-U, w/tilt or tilt/pitch, 8.45 cu.m (11.1 cu.yd)
  - Semi-U, w/tilt or tilt/pitch, 7.04 cu.m (9.2 cu.yd)
  - Angle dozer, with tilt, 3.88 cu.m (5.1 cu.yd)
  - Straight blade (LGP) w/tilt, 6.03 cu.m (7.9 cu.yd)
- Canopy, 2 post ROPS/FOPS (SAE J1040, J231)
- Drawbar, heavy duty, counterweight
- Engine enclosures: perforated hood and perforated side doors
- Exhaust extension with guard (for use with forestry sweeps)
- Guards:
  - Crankcase, severe service w/hook
  - Track roller, full length (LT & LGP)
  - Track roller, full length (STD)
  - Transmission, severe service
  - Tank guard, bolted (includes deduct for rear access platform)
- Heater/pressurizer/defroster
- Inspection lamp, 24 V, portable with 6 m (20') cable
- Instrument panel guard (for use w/Canopy ROPS/FOPS)
- Lights for Canopy ROPS/FOPS, 2F-2R
- Lights, 2F, ROPS mounted, for use w/cab (not for use with sweeps)
- Lights, 2F, sweeps mounted (instead of standard 2F lift cylinder mounted lights)
- Mirrors, 2 pcs, exterior
- Ripper, multi-shank beam
  - Hydraulic pitch for ripper beam
  - Ripper shank w/pin, max. 3
- Ripper, single-shank beam
  - Hydraulic pitch for ripper beam
  - Pin puller, hydraulic
  - Ripper shank
- Screening package; cab for screens installation must be ordered
  - Screens for cab windows (front, rear, side and doors)
  - Screens for tractor and cab lights
- Screen rear (includes deduct for standard rear access platform)
- Seat, air suspension, vinyl cover (for use w/canopy ROPS/FOPS)
- Starting/charging receptacle plug assembly with 4.6 m (15') cable
- Sun visor for side door windows
- Sweeps, forestry, front and rear
- Tools in metal box
- Track shoes, set of 80, clipped corner (STD) 610 mm (24"), 660 mm (26")
- Track shoes, set of 84, clipped corner (LT) 610 mm (24"), 660 mm (26")
- Vandalism protection

Specifications subject to change without notice. Illustrations and pictures may include optional equipment and may not include all standard equipment.

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