



# DL420 TECHNICAL DATA





## GENERAL SPECIFICATIONS

ITEMS		UNIT	STANDARD
ENGINE	MODEL	ea.	Cummins QSM11
	NUMBER OF CYLINDERS	ea.	6
	RATED FLYWHEEL POWER (GROSS) (SAE J1995)	hp / rpm	280 / 2,000
		kW / rpm	209 / 2,000
	RATED FLYWHEEL POWER (NET) (SAE J1349)	hp / rpm	264 / 2,000
		kW / rpm	197 / 2,000
	MAX. TORQUE (GROSS) (SAE J1995)	ft lb	1,070 @ 1,400 rpm
		Nm	1,451 @ 1,400 rpm
	PISTON DISPLACEMENT	in <sup>3</sup>	659
		cc	10,800
	BORE AND STROKE	in	4.9 x 5.8
		mm	125 x 147
	STARTER	V	24
kW		7.5	
BATTERIES	ea.	2	
	V	12	
	AH	150	
OPERATING WEIGHT		lb	49,383
		kg	22,400
BUCKET CAPACITY (BOT/BOC SAE HEAPED)		yd <sup>3</sup>	5.5
		m <sup>3</sup>	4.2
MAIN PUMPS		U.S. gpm	106
		L/min	400
SYSTEM PRESSURE (WORK)		psi	3,556
		bar	245
SYSTEM PRESSURE (STEER)		psi	2,632
		bar	181
TRAVEL SPEED	FORWARD (1 / 2 / 3 / 4)	MPH	4.0 / 7.7 / 11.4 / 23.6
		km / h	6.5 / 12.4 / 18.4 / 38.0
	REVERSE (1 / 2 / 3)	MPH	4.0 / 7.7 / 11.4
		km / h	6.5 / 12.4 / 18.4
BOOM SPEED	UP (LOADED)	sec.	6.2 ±0.4
	UP (UNLOADED)	sec.	5.8 ±0.4
	DOWN	sec.	3.0 ±0.4
BUCKET SPEED	CROWD (LOADED)	sec.	1.5 ±0.3
	CROWD (UNLOADED)	sec.	1.5 ±0.3
	DUMP	sec.	1.4 ±0.3
GRADEABILITY		%	49
		°	26
TIRE SIZE			26.5-25-28PR
BREAKOUT FORCE		lbf	47,210
		kgf	21,414

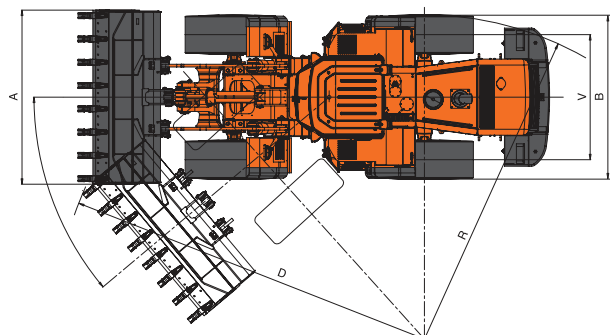
# DL420

ITEMS		UNIT	STANDARD
WORKING RANGE	DUMP HEIGHT AT 45°	ft in	10'2"
		mm	3,087
	DUMP REACH AT 45°	ft in	4'2"
		mm	1,266
	MAX. DUMP ANGLE (FULLY RAISED)	°	46
	MAX. TILT ANGLE (ON GROUND)	°	42
	MAX. TILT ANGLE (FULLY RAISED)	°	59
	MAX. TILT ANGLE (AT CARRY)	°	46.5
	BUCKET HINGE HEIGHT	ft in	14'3"
		mm	4,350
DIGGING DEPTH (0° LEVEL)	ft in	5"	
	mm	130	
TRAVEL DIMENSIONS	OVERALL LENGTH	ft in	28'7"
		mm	8,700
	OVERALL WIDTH	ft in	10'9"
		mm	3,270
	OVERALL HEIGHT	ft in	11'7"
		mm	3,522
	GROUND CLEARANCE	ft in	1'8"
		mm	520
	WHEEL BASE	ft in	11'6"
		mm	3,500
	TREAD	ft in	7'7"
		mm	2,300
MAX STEERING ANGLE		°	40
TURNING RADIUS (TIRE CENTER)	ft in	19'9"	
	mm	6,013	
TURNING RADIUS (TIRE EDGE)	ft in	20'10"	
	mm	6,350	
TURNING RADIUS (BUCKET EDGE)	ft in	22'11"	
	mm	6,980	
SOUND LEVEL IN CABIN (ISO 6396)		dB(A)	71.2
EXTERNAL SOUND POWER LEVEL (ISO 6395, 2000/14/EC)		dB(A)	104.7
FUEL TANK CAPACITY	US gal	97	
	Liter	367	



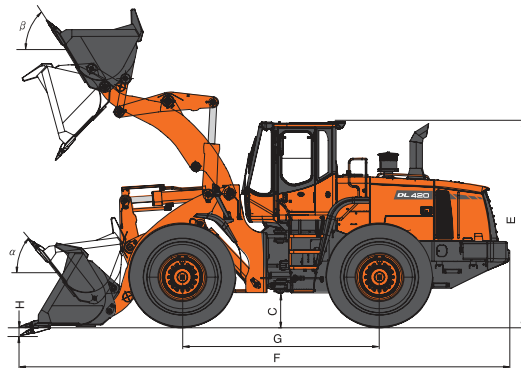
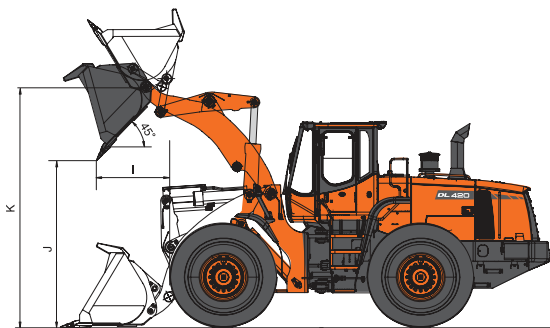
## OPERATIONAL DATA

BUCKET TYPE		GENERAL PURPOSE					
CONFIGURATION	UNIT	TEETH	TEETH	TEETH	BOLT-ON EDGE	BOLT-ON EDGE	
CAPACITY HEAPED ISO / SAE	yd <sup>3</sup>	4.8	5.1	5.2	5.1	5.4	
	m <sup>3</sup>	3.7	3.9	4.0	3.9	4.1	
TOOTH TYPE		Adapter Tooth	Adapter Tooth	Adapter Tooth			
BUCKET WIDTH	A	ft in	10'0"	10'6"	10'9"	10'0"	10'6"
		mm	3,040	3,200	3,270	3,040	3,200
BREAKOUT FORCE		lbf	49,458	49,458	47,210	49,458	49,458
		kN	220	220	210	220	220
STATIC TIPPING LOAD (STRAIGHT)		lb	40,131	39,844	39,692	39,965	39,606
		kg	18,203	18,073	18,004	18,128	17,965
STATIC TIPPING LOAD (AT FULL TURN)		lb	34,846	34,597	34,465	34,703	34,390
		kg	15,806	15,693	15,633	15,741	15,599
DUMP HEIGHT (AT 45°) <sup>1</sup> (AT FULLY RAISED)	J	ft in	9'8"	9'8"	9'8"	10'2"	10'2"
		mm	2,958	2,958	2,958	3,087	3,087
DUMP REACH (AT 45°) <sup>1</sup> (AT FULLY RAISED)	I	ft in	4'7"	4'7"	4'7"	4'2"	4'2"
		mm	1,400	1,400	1,400	1,266	1,266
DIGGING DEPTH	H	ft in	5"	5"	5"	5"	5"
		mm	130	130	130	130	130
HEIGHT AT BUCKET PIVOT POINT	K	ft in	14'3"	14'3"	14'3"	14'3"	14'3"
		mm	4,350	4,350	4,350	4,350	4,350
MAX. TILT ANGLE AT CARRY POSITION	a	°	46	46	46.5	46	46
MAX. TILT ANGLE AT FULLY RAISED	b	°	59	59	59	59	59
MAX. TILT ANGLE ON GROUND		°	42	42	42	42	42
EXTERNAL RADIUS AT TIRE SIDE	R	ft in	20'10"	20'10"	20'10"	20'10"	20'10"
		mm	6,350	6,350	6,350	6,350	6,350
EXTERNAL RADIUS AT BUCKET EDGE	D	ft in	22'7"	22'10"	22'11"	22'6"	22'9"
		mm	6,885	6,955	6,995	6,870	6,940
WHEEL BASE	G	ft in	11'6"	11'6"	11'6"	11'6"	11'6"
		mm	3,500	3,500	3,500	3,500	3,500
WIDTH AT TIRES	B	ft in	9'10"	9'10"	9'10"	9'10"	9'10"
		mm	2,985	2,985	2,985	2,985	2,985
TREAD	V	ft in	7'7"	7'7"	7'7"	7'7"	7'7"
		mm	2,300	2,300	2,300	2,300	2,300
GROUND CLEARANCE	C	ft in	1'8"	1'8"	1'8"	1'8"	1'8"
		mm	510	510	520	510	510
OVERALL LENGTH	F	ft in	28'9"	28'9"	29'2"	28'4"	28'4"
		mm	8,760	8,760	8,800	8,635	8,635
OVERALL HEIGHT	E	ft in	11'7"	11'7"	11'7"	11'7"	11'7"
		mm	3,522	3,522	3,522	3,522	3,522
TIRE SIZE		26.5-25-28PR	26.5-25-20PR (L3)	26.5-25-28PR	26.5-25-20PR (L3)	26.5-25-20PR (L3)	
OPERATING WEIGHT	lb	48,735	49,108	49,163	48,989	49,342	
	kg	22,106	22,275	22,300	22,221	22,381	



# DL420

BOLT-ON EDGE	TEETH AND SEGMENTS	ROCK	LIGHT MATERIAL		HIGH LIFT
		TEETH	TEETH	BOLT-ON EDGE	BOLT-ON EDGE
5.5	5.4	4.6	5.6	5.9	5.5
4.2	4.1	3.5	4.3	4.5	4.2
	Adapter Tooth	Adapter Tooth	Adapter Tooth		
10'9"	10'6"	10'7"	11'0"	11'0"	10'9"
3,270	3,200	3,231	3,354	3,354	3,270
47,210	49,458	47,210	42,714	42,714	46,086
210	220	210	190	190	205
39,432	39,434	39,278	39,650	39,412	34,141
17,886	17,887	17,816	17,985	17,877	15,486
34,240	34,242	34,105	34,430	34,222	29,729
15,531	15,532	15,470	15,617	15,523	13,485
10'2"	9'8"	9'6"	9'2"	9'8"	11'10"
3,087	2,958	2,884	2,802	2,955	3,600
4'2"	4'7"	4'11"	5'2"	4'7"	4'3"
1,266	1,400	1,489	1,567	1,395	1,290
5"	5"	5"	5"	5"	3"
130	130	130	130	130	85
14'3"	14'3"	14'3"	14'3"	14'3"	15'9"
4,350	4,350	4,350	4,350	4,350	4,807
46.5	46	46	46	46	50
59	59	59	59	59	60
42	42	42	42	42	44
20'10"	20'10"	20'10"	20'10"	20'10"	20'10"
6,350	6,350	6,350	6,350	6,350	6,350
22'11"	22'10"	22'8"	23'3"	23'2"	23'2"
6,980	6,955	6,900	7,080	7,060	7,060
11'6"	11'6"	11'6"	11'6"	11'6"	11'6"
3,500	3,500	3,500	3,500	3,500	3,500
9'10"	9'10"	9'10"	9'10"	9'10"	9'10"
2,985	2,985	2,985	2,985	2,985	2,985
7'7"	7'7"	7'7"	7'7"	7'7"	7'7"
2,300	2,300	2,300	2,300	2,300	2,300
1'8"	1'8"	1'8"	1'8"	1'8"	1'8"
520	510	510	510	510	510
28'7"	28'9"	29'2"	29'7"	28'11"	29'11"
8,700	8,760	8,900	9,020	8,820	9,124
11'7"	11'7"	11'7"	11'7"	11'7"	11'7"
3,522	3,522	3,522	3,522	3,522	3,522
26.5-25-20PR	26.5-25-20PR (L3)	26.5-25-20PR (L3)	26.5-25-20PR (L3)	26.5-25-20PR (L3)	26.5-25-20PR (L3)
49,383	49,509	49,663	49,298	49,531	49,824
22,400	22,457	22,527	22,361	22,467	22,600





## STANDARD EQUIPMENT

### ENGINE

Cummins QSM11; Turbo Charged Air to Air Intercooler  
Electronically Controlled Common Rail Direct Injected  
659 in<sup>3</sup> (10,800 cc), 6 Cylinder  
264 SAE Net Flywheel Horsepower (209 kW) @ 2,000 rpm  
Air Cleaner: Dry Type (Double Stage)  
Engine Self-diagnostic System  
Plastic Reversible Fan Driven by Hydraulic Fan Motor

### HYDRAULIC SYSTEM

Two Load Sensing Axial Piston Pumps with Variable Displacement  
2 Spool Type Control Valve (Pilot Operated)  
3rd Valve with Lines and Control  
Automatic Boom / Lift – Kick-out (Adjustable Electromagnetic)  
Automatic Return-to-Dig Position (Adjustable Electromagnetic)  
Accumulator for Emergency Pilot System

### BRAKE SYSTEM

Dual Pedal Braking System  
4 Wheel Outboard Wet Disk Brakes  
Fully Hydraulic, 4-Wheel Brakes with Separate Front and Rear Circuits  
Accumulator for Emergency Stopping  
Parking Brake, Spring Applied, Dry Disk, Electric-Hydraulic Released

### STEERING

Load Sensing Type with a Flow Amplifier and a Priority Valve  
40 Degree Articulation, Full Hydraulic Power Steering  
Steering Cylinder Cushion Valve  
Tilt and Telescopic Steering Wheel

### CABIN WITH ROPS

Air Conditioner  
Heater and Defroster  
Double Filtered Air Cabin  
Combination Lever  
Accelerator Pedal  
FNR Lever  
Manual / Automatic Mode Switch  
Rear Hinged (Both Sides) and Locking Doors (Emergency Access Left Side)

Radio, AM-FM Stereo, with Cassette

Switches:

- Economy Mode Switch
- Headlight Switch
- Front Work Light Switch
- Rear Work Light Switch
- Rear Wiper Switch
- Pilot Cutoff Switch
- Parking Brake Switch
- Transmission Cutoff Switch
- Mirror Heater Switch
- Reverse Fan Switch
- Engine Diagnostic Switch
- Idle Speed Control Switch

Rearview Mirrors with Heat Wire

Safety Glass, Tinted

Fully Adjustable Air Suspension Seat

Seat Belt (2 Wide)

Sliding Door Windows (Left Side)

Sound Suppression

Sun Visor

Windshield Wipers and Washers – Front and Rear

Wrist Rest

12 Volt Power Supply

### TRANSMISSION / AXLES

Full Automatic Power Shift

4 Forward and 3 Reverse Speeds

Differentials – Limited Slip Front and Rear

Self Adjusting Brake Disk Clearance

Torque Converter, Free Wheel Stator

Electrical T/M Clutch Disconnect with Service Brake

T/M Down Shift on Shift Control and Joy Stick Control

Transmission Oil Level Gauge

## **ELECTRICAL**

Alternator, 70 amp, 24 Volt

Batteries, (2) 12 Volt, 150 amp Hrs. 950 CCA

Starter, 24 Volt 7.5 kW

Horn

Hour Meter

Lights:

- (2) Front Headlights with High / Low Beams
- (2) Stoplights, Taillights and Directional Indicators
- (2) Front and Rear Floodlights

Alarm Buzzer for:

- Engine Oil Pressure
- Coolant Temperature

Electronic Monitoring and Display for:

- Fuel Level Gauge
- Speedometer
- Tachometer
- Engine Coolant Temperature Gauge
- Transmission Oil Temperature Gauge
- Transmission Display
- Preheat Indicator Light
- Air Cleaner Clogging Warning Light
- Battery Warning Light
- Left Turn and Hazard Warning Light
- Right Turn and Hazard Warning Light
- High Beam Indicator Light
- Work Light Indicator Light
- Reverse Fan Indicator Light
- Mirror Heater Indicator Light
- Parking Brake Indicator Light
- F/R (Forward/Reverse) Selector Indicator Light
- Brake Pilot Pressure Warning Light
- Engine Warning Light

Backup Alarm

Hazard Warning Light Switch

## **TIRES**

Bias 26.5-25 Kumho – Hankook

## **OTHER STANDARD EQUIPMENT**

Single Lever Control with FNR Control Buttons

Air Cleaner with Precleaner

Sealed Pins, Boom and Bucket Linkages

Engine Side Covers

Boom / Float

Drawbar and Pin

Neutral Safety Start System

Muffler

Fenders, Front and Rear

Ladders and Service Platforms

Tool Box

Manuals, Parts and Operator's

GPS with 1 Year Subscription





## OPTIONAL EQUIPMENT

### FACTORY INSTALLED – TIRES AND RIMS

26.5R25 L5 Radial Bridgestone

26.5R25 L3 Radial Triangle Or Bridgestone

### FACTORY INSTALLED – DOOSAN BUCKETS

5.0 yd<sup>3</sup> (3.9 m<sup>3</sup>), 126" (3,200 mm) Width w/3-Piece Cutting Edge

4.6 yd<sup>3</sup> (3.5 m<sup>3</sup>), 124" (3,150 mm) Heavy Duty Rock Bucket

7-Piece Bolt On Cutting Edge

### FACTORY INSTALLED – OPTIONS

Additional Counterweight 661 lb (300 kg)

Emergency Steering Kit

Load Isolation / Ride Control

Full Fender

Finger Tip Lever

Rear View Camera

### DEALER INSTALLED – DOOSAN BUCKETS

5.0 yd<sup>3</sup> (3.9 m<sup>3</sup>), General Purpose Pin On Bucket 132" (3,353 mm) w/Bolt On Cutting Edge

5.0 yd<sup>3</sup> (3.9 m<sup>3</sup>), General Purpose Coupler Mounted Bucket 132" (3,353 mm) w/Bolt On Cutting Edge

### DEALER INSTALLED – ACS BUCKETS

5.0 yd<sup>3</sup> (3.9 m<sup>3</sup>) General Purpose Pin On Bucket 132" (3,353 mm) w/Bolt On Cutting Edge

5.0 yd<sup>3</sup> (3.9 m<sup>3</sup>) General Purpose Coupler Mounted Bucket 132" (3,353 mm) w/Bolt On Cutting Edge

### DEALER INSTALLED – ACS COUPLER

Pro Series 2000 Hydraulic Coupler w/Hydraulic Installation Kit (#70)

### DEALER INSTALLED – ACS FORKS

66" (1,676 mm) Pallet Forks

### DEALER INSTALLED – ADDITIONAL OPTIONS

Auxiliary Line Kit Down the Boom Arms

3" (76 mm) Seat Belt



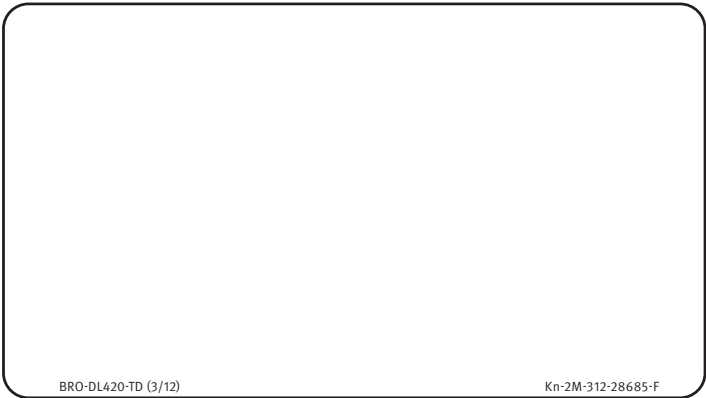
NOTES

A large grid of graph paper for taking notes. The grid consists of 20 columns and 30 rows of small squares, providing a structured area for writing or drawing.



NOTES

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.



BRO-DL420-TD (3/12)

Kn-2M-312-28685-F

For more information visit [www.doosanequipment.com](http://www.doosanequipment.com)



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