

310 P

Backhoe Loader



JOHN DEERE



MEET THE 310 P-TIER

When we upgraded our 310L Backhoe Loader, we really used our imaginations. For starters, we imagined more engine power and increased productivity. Low-effort controls. Responsive hydraulics. Unmatched durability. And easier periodic service for lower operating costs. Then we delivered all that — and more, including comfortable cab conveniences, masterful maneuverability, and an extendable dipperstick option. Welcome to your new favorite machine.

FEATURES

Field proven

John Deere 4.5L engines are some of the strongest, most reliable we've ever built. P-Tier Backhoes use a wet-sleeve engine design with replaceable cylinder liners for exceptional cooling, reduced oil breakdown, and reduced ring wear. This means cooler engine components and longer life compared to cast-in block designs.

Greater productivity

The 91-net-peak-horsepower engine option provides nine-percent more power for improved hill climbing, pushing force, and front loader work. Configured with the axial-piston pump, it delivers 26-percent more hydraulic flow versus the standard single-gear pump, enabling greater control, productivity, and multifunctioning at lower engine-rpm range. Better multifunctioning eases the operator's ability to "crabwalk" (or simultaneously use the front and rear machine structures) in tough off-road, sticky, and/or wet conditions.

Reach new heights

For greater performance in extreme elevations and conditions, our high-altitude engine configuration easily gets the job done. It offers pilot injection for easy cold-weather starting, four-valve cylinder head for exceptional "breathing" at high altitude, and a Variable Geometry Turbocharger (VGT) that automatically compensates for altitude changes.

Simplified maintenance

You asked for periodic service and machine repairs to be simple and do-it-yourself. Our proven high-performance systems such as robust mechanical fuel and hydraulic gear pumps help get your machine back to work without leaving the jobsite or dragging into downtime. With this kind of reliability, what else can you expect from a backhoe?

Comfortable cab

Operator's station includes mechanical-suspension deluxe fabric swivel seat with a range of lumbar settings, fully adjustable armrests, expansive front window, and more legroom. To be even more efficient and reduce operator fatigue, opt for low-effort backhoe pilot controls.



**HIGH-ALTITUDE ENGINE
BOOSTS PERFORMANCE
IN EXTREME ELEVATIONS
& WORKING CONDITIONS**

Smooth gear changes

Standard four-speed PowerShift™ transmission provides on-the-go clutchless gear changes for the operator, minimizing fatigue and maximizing productivity. Travel speeds of over 22 mph help ease moves on and between jobsites.

Work in tight areas

Compact overall length enables extra maneuverability on close jobsites. Looking for more reach? The extendable dipperstick option will help you get there.

True 4WD on command

Optional limited-slip mechanical-front-wheel drive (MFWD) delivers sure-footed traction in a wide range of ground conditions.

Diagnostic interface

State-of-the-art multi-language monitor clearly displays a wealth of vital and general machine info plus onboard diagnostics of most sensors and switches, for uptime-boosting troubleshooting.

Diff-lock protection

When enabled through the monitor, differential-lock protection prevents engagement at high travel speeds and subsequent wear and tear on axle components.

Take it easy

Optional ride control functions as a shock absorber, smoothing moves over rough terrain. So full loads are more likely to arrive at their destination instead of somewhere in-between. Also helps reduce operator fatigue.

Get a grip

"Palm-on-top" loader-control grip is even more comfortable and easy to use. Clutch disconnect is integrated into the control grip, ideal for stock-piling or truck loading.



OPTIONAL 4WD
AT YOUR COMMAND



310 P-TIER BACKHOE LOADER



Save time and money

Quick-change filters and generous nonmetallic fuel tank increase uptime and lower daily operating costs.

Extended service intervals

500-hour engine and 2,000-hour hydraulic oil-service intervals[†] enable the 310 P-Tier to work longer between changes.

[†]High-altitude engine configuration has a 250-hour oil-service interval.

Daily checks made easy

Same-side ground-level service points speed daily checks and fluid fills. Simple-to-read sight gauges and easy-access grease zerks help increase uptime and contain operating costs.



310 P-TIER BACKHOE LOADER SPECIFICATIONS

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Engine	310 P-TIER									
Manufacturer and Model	John Deere PowerTech™ 4.5L 4045TBZ02 turbo- charged		John Deere PowerTech™ 4.5L 4045TBZ01 turbo- charged		John Deere PowerTech™ Plus 4.5L 4045HBZ02 turbocharged, country specific		John Deere PowerTech™ E 4.5L 4045HT086 turbo- charged, country specific		John Deere PowerTech™ EWL 4.5L 4045HL050 turbocharged	
Non-Road Emission Standard	Noncertified		EPA Tier 2/EU Stage II		EU Stage IIIA certified; optimized for high- altitude operation (HALT)		Mar-I / EPA Tier 3/ EU Stage IIIA / R96		EPA Final Tier 4 (FT4)/ EU Stage IV	
Displacement	4.5 L (276 cu. in.)		4.5 L (276 cu. in.)		4.5 L (276 cu. in.)		4.5 L (276 cu. in.)		4.5 L (276 cu. in.)	
Power Ratings										
Gross Power at Rated Speed	63 kW (85 hp) at 2,200 rpm		63 kW (84 hp) at 2,200 rpm		66 kW (88 hp) at 2,250 rpm		66 kW (88 hp) at 2,250 rpm		71 kW (96 hp) at 2,200 rpm	
Gross Peak Power	69 kW (92 hp) at 1,800 rpm		66 kW (88 hp) at 2,000 rpm		68 kW (92 hp) at 2,000 rpm		68 kW (92 hp) at 2,000 rpm		76 kW (102 hp) at 1,600 rpm	
Gross Peak Torque	388 Nm (286 lb.-ft.) at 1,200 rpm		355 Nm (262 lb.-ft.) at 1,300 rpm		387 Nm (285 lb.-ft.) at 1,300 rpm		387 Nm (285 lb.-ft.) at 1,300 rpm		467 Nm (344 lb.-ft.) at 1,500 rpm	
Net Peak Power (ISO 9249)	68 kW (91 hp) at 1,800 rpm		62 kW (83 hp) at 2,000 rpm		65 kW (87 hp) at 1,960 rpm		68 kW (91 hp) at 2,000 rpm		75 kW (100 hp) at 1,600 rpm	
Net Peak Torque (ISO 9249)	383 Nm (282 lb.-ft.) at 1,200 rpm		345 Nm (254 lb.-ft.) at 1,200 rpm		377 Nm (278 lb.-ft.) at 1,300 rpm		382 Nm (282 lb.-ft.) at 1,300 rpm		459 Nm (338 lb.-ft.) at 1,500 rpm	
Net Torque Rise	41%		36%		46%		39%		51%	
Power Ratings With Optional Viscous Fan										
Gross Power at Rated Speed	N/A		N/A		66 kW (88 hp) at 2,250 rpm		N/A		N/A	
Gross Peak Power	N/A		N/A		68 kW (92 hp) at 2,000 rpm		N/A		N/A	
Gross Peak Torque	N/A		N/A		387 Nm (285 lb.-ft.) at 1,300 rpm		N/A		N/A	
Net Peak Power (ISO 9249)	N/A		N/A		68 kW (91 hp) at 2,000 rpm		N/A		N/A	
Net Peak Torque (ISO 9249)	N/A		N/A		382 Nm (282 lb.-ft.) at 1,300 rpm		N/A		N/A	
Net Torque Rise	N/A		N/A		39%		N/A		N/A	
Lubrication	Pressure system with spin-on filter and cooler		Pressure system with spin-on filter and cooler		Pressure system with spin-on filter and cooler		Pressure system with spin-on filter and cooler		Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve		Dual-stage dry type with safety element and evacuator valve		Dual-stage dry type with safety element and evacuator valve		Dual-stage dry type with safety element and evacuator valve		Dual-stage dry type with safety element and evacuator valve	
Cooling										
Fan Type	Suction type, tempera- ture-controlled (viscous), variable rate		Suction type		Suction type standard; suction type, tempera- ture-controlled (viscous), variable rate optional		Suction type, tempera- ture-controlled (viscous), variable rate		Electronically controlled, variable-rate, suction- type cooling fan	
Engine Coolant Rating	-40 deg. C (-40 deg. F)		-40 deg. C (-40 deg. F)		-40 deg. C (-40 deg. F)		-40 deg. C (-40 deg. F)		-40 deg. C (-40 deg. F)	
Engine Oil Cooler	Oil to water		Oil to water		Oil to water		Oil to water		Oil to water	
Powertrain										
Transmission	4-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever									
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)									
Measured With 19.5L-24 Rear Tires	Standard Engine									
	Forward	Reverse	Forward	Reverse	Forward	Reverse	Forward	Reverse	Forward	Reverse
Gear 1	5.4 km/h (3.4 mph)	6.8 km/h (4.2 mph)	5.4 km/h (3.4 mph)	6.8 km/h (4.2 mph)	5.4 km/h (3.4 mph)	6.9 km/h (4.3 mph)	5.5 km/h (3.4 mph)	6.9 km/h (4.3 mph)	5.4 km/h (3.4 mph)	6.9 km/h (4.3 mph)
Gear 2	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)	10.0 km/h (6.2 mph)	12.7 km/h (7.9 mph)	10.1 km/h (6.3 mph)	12.8 km/h (8.0 mph)	10.1 km/h (6.3 mph)	12.7 km/h (7.9 mph)
Gear 3	20.3 km/h (12.6 mph)	N/A	20.3 km/h (12.6 mph)	N/A	20.7 km/h (12.9 mph)	N/A	20.8 km/h (12.9 mph)	N/A	20.7 km/h (12.9 mph)	N/A
Gear 4	37.0 km/h (23.0 mph)	N/A	36.9 km/h (22.9 mph)	N/A	37.4 km/h (23.2 mph)	N/A	37.7 km/h (23.4 mph)	N/A	37.1 km/h (23.1 mph)	N/A
	Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96 / EPA FT4/EU Stage IV									
Axles										
Axle Oscillation, Stop to Stop, Front Axle	22 deg.									
Axle Ratings	Front		Rear							
SAE J43	5500 kg (12,100 lb.)		6500 kg (14,300 lb.)							
Dynamic	9000 kg (19,800 lb.)		10 000 kg (22,000 lb.)							
Static	24 500 kg (54,000 lb.)		26 500 kg (58,400 lb.)							
Ultimate	41 500 kg (91,500 lb.)		41 500 kg (91,500 lb.)							
Differentials										
Mechanical-Front-Wheel-Drive (MFWD) Axle	Open – standard; automatic, limited-slip traction control – custom or optional									
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock									

310 P-TIER BACKHOE LOADER SPECIFICATIONS

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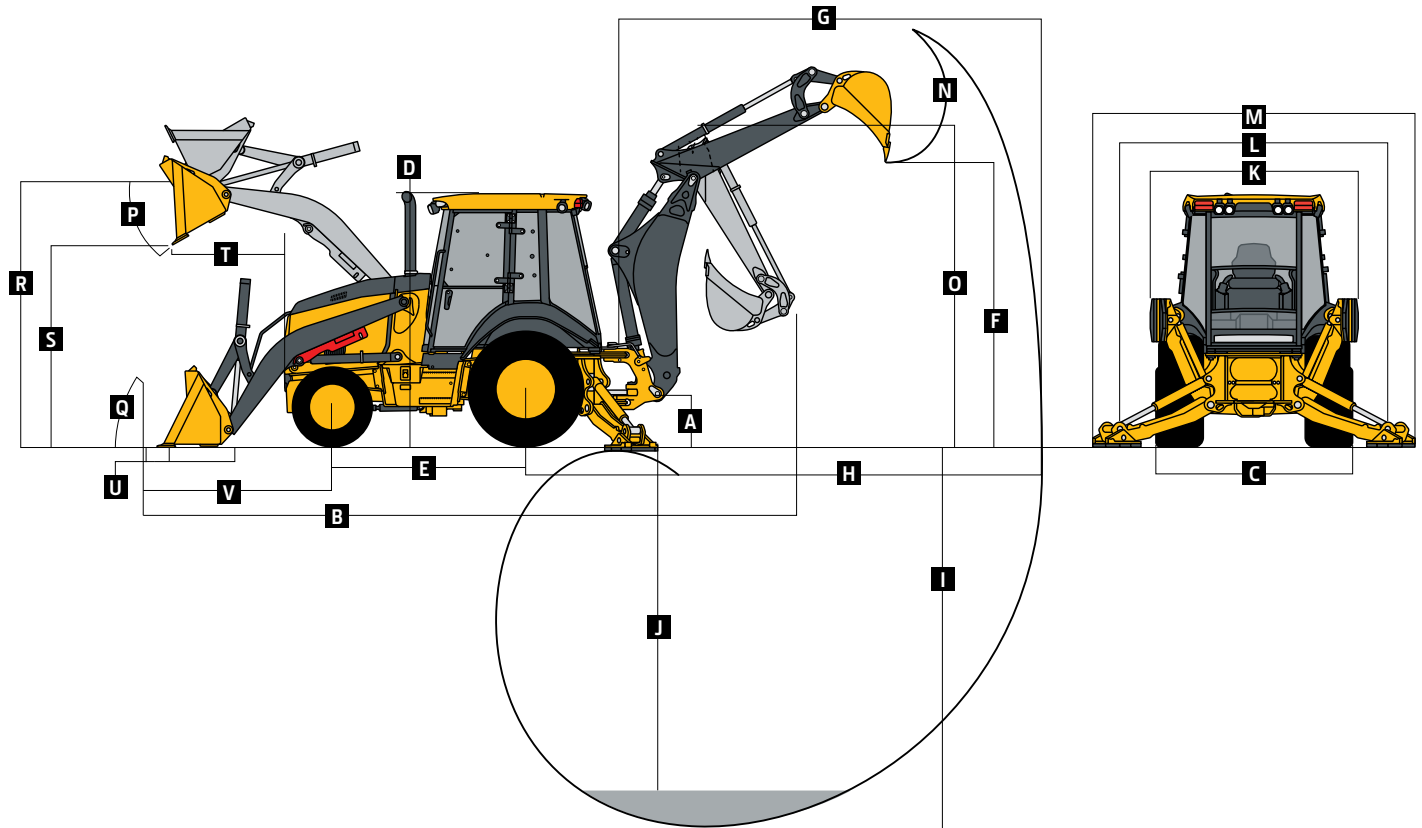
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Powertrain (continued)		310 P-TIER			
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96		EPA FT4/EU Stage IV	
Steering (ISO 5010)		Hydrostatic power steering and emergency steering		Hydrostatic power steering and emergency steering	
Axle		MFWD	Non-Powered Front	MFWD	Non-Powered Front
Curb-Turning Radius With Brakes		3.43 m (11 ft. 3 in.)	3.33 m (10 ft. 11 in.)	3.48 m (11 ft. 5 in.)	3.38 m (11 ft. 1 in.)
Curb-Turning Radius Without Brakes		3.91 m (12 ft. 10 in.)	3.77 m (12 ft. 4 in.)	3.99 m (13 ft. 1 in.)	3.84 m (12 ft. 7 in.)
Bucket-Clearance Circle With Brakes		9.97 m (32 ft. 9 in.)	9.90 m (32 ft. 6 in.)	10.08 m (33 ft. 1 in.)	10.02 m (32 ft. 10 in.)
Bucket-Clearance Circle Without Brakes		10.67 m (35 ft. 0 in.)	10.55 m (34 ft. 7 in.)	10.81 m (35 ft. 6 in.)	10.69 m (35 ft. 1 in.)
Steering Wheel Turns (lock to lock)		2.7	3.2	2.7	3.2
MFWD and Rear Axles		Heavy duty, outboard planetary final drives distribute shock loads over 3 gears			
Brakes (ISO 3450)					
Service		Power assisted, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing			
Parking		Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control			
Hydraulics					
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96 / EPA FT4/EU Stage IV			
Main Pump		Open-center system; single-gear pump standard		Open center, axial-piston pump optional	
Pump Flow		2,200 rpm		2,400 rpm	
Backhoe		106 L/m (28 gpm)		134 L/m (35.5 gpm)	
Loader		106 L/m (28 gpm)		120 L/m (31.7 gpm)	
System Relief Pressure					
Backhoe		24 993 kPa (3,625 psi)		24 993 kPa (3,625 psi)	
Loader		22 063 kPa (3,200 psi)		22 063 kPa (3,200 psi)	
Controls					
Backhoe		2-lever manual standard; pilot controls with pattern select optional			
Loader		Single-lever control with electric clutch cutoff switch standard; manual auxiliary function (2nd lever) optional			
Electrical					
		Noncertified	EPA Tier 2/EU Stage II	HALT	Mar-I / EPA Tier 3/ EU Stage IIIA / R96
Voltage		12 volt	12 volt	12 volt	12 volt
Alternator Rating					
Dual-Lever Backhoe Control		90 amp	90 amp	120 amp	90 amp
Pilot Backhoe Control		120 amp	120 amp	120 amp	120 amp
Lights		10 halogen: 4 front, 4 rear, and 2 side docking (32,500 candlepower each); turn signals and flashers: 2 front and 2 rear; stop and taillights; and 2 rear reflectors; cab (10 lights); quarter cab (6 lights)			
Operator Station					
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96 / EPA FT4/EU Stage IV			
Type (ISO 3471)		Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) or canopy (no glass)*			
*Not available for HALT models.					
Tires/Wheels					
		Front	Rear		
Non-Powered Front Axle		11L-16 F-3 (12)	19.5L-24 R-4 (10)		
		10.5L-16 12 PR	16.9L-24 10 PR		
With MFWD		12 – 16.5 in. 10 PR	19.5L-24 in. 10 PR		
		12.5/80-18 in. 14 PR	19.5L-24 in. 10 PR		
		12.5/80-18 in. 12 PR	19.5L-24 in. 12 PR		
		12.5/80-18 in. 10 PR	19.5L-24 in. 10 PR		
		12.5/80-18 in. 14 PR	21.0L-24 in. 10 PR		
Serviceability					
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96		EPA FT4/EU Stage IV	
Refill Capacities					
Cooling System		21 L (22.2 qt.)		27.5 L (29.1 qt.) cab / 25.7 L (27.2 qt.) canopy	
Rear Axle		18 L (19 qt.)		18 L (19 qt.)	
Engine Oil (including vertical spin-on filter)		13 L (13.7 qt.)		13 L (13.7 qt.)	
Torque Converter and Transmission		15.1 L (16 qt.)		15.1 L (16 qt.)	
Fuel Tank (with ground-level fueling)		155.2 L (41 gal.)		128.7 L (34 gal.)	
Diesel Exhaust Fluid (DEF) Tank		N/A		13.7 L (3.6 gal.)	
Hydraulic System		102.2 L (27 gal.)		126.8 L (33.5 gal.)	
Hydraulic Reservoir		37.1 L (9.8 gal.)		45.0 L (11.9 gal.)	
MFWD Axle					
Differential Housing		6.5 L (6.9 qt.)		6.5 L (6.9 qt.)	
Planetary (each)		0.9 L (1.0 qt.)		0.9 L (1.0 qt.)	
Operating Weights					
With Full Fuel Tank, 75-kg (165 lb.) Operator, and Standard Equipment					
Standard With Cab, 4-Wheel-Drive Axle, and Bumper		7357 kg (16,219 lb.)		7389 kg (16,290 lb.)	
Typical With Cab, 4WD, Extendable Dipperstick, and 204-kg (450 lb.) Counterweight		7757 kg (17,101 lb.)		7789 kg (17,172 lb.)	
Optional Components (weight difference between base equipment and option)					
Cab		281 kg (619 lb.)		281 kg (619 lb.)	
Standard Front Axle With Tires		-137 kg (-302 lb.)		-137 kg (-302 lb.)	
Extendable Dipperstick		196 kg (432 lb.)		196 kg (432 lb.)	

310 P-TIER

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Overall Dimensions		310 P-TIER	
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96	EPA Final Tier 4 (FT4)/EU Stage IV
A	Ground Clearance, Minimum	305 mm (12 in.)	293 mm (12 in.)
B	Overall Length, Transport	7.09 m (23 ft. 3 in.)	7.24 m (23 ft. 9 in.)
C	Width Over Tires	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)
D	Height to Top of ROPS/Cab	2.74 m (9 ft. 0 in.)	2.81 m (9 ft. 3 in.)
E	Length From Axle to Axle		
	Non-Powered Front Axle	2.11 m (6 ft. 11 in.)	2.16 m (7 ft. 1 in.)
	MFWD Axle	2.14 m (7 ft. 0 in.)	2.19 m (7 ft. 2 in.)



Backhoe Dimensions and Performance		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96			EPA FT4/EU Stage IV		
Backhoe specifications are with 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) bucket; dipper-lift specs are with a boom angle of 65 degrees							
Bucket Range		305–762 mm (12–30 in.)			305–762 mm (12–30 in.)		
Digging Force							
Bucket Cylinder		48.2 kN (10,843 lb.)			48.2 kN (10,843 lb.)		
Crowd Cylinder		31.1 kN (6,991 lb.)			31.1 kN (6,991 lb.)		
Swing Arc		180 deg.			180 deg.		
Operator Control		2 levers			2 levers		
Leveling Angle		14 deg.			14 deg.		
Stabilizer Angle Rearward		18 deg.			18 deg.		
		With Standard Backhoe	With Optional Extendable Dipperstick Retracted	With Optional Extendable Dipperstick Extended	With Standard Backhoe	With Optional Extendable Dipperstick Retracted	With Optional Extendable Dipperstick Extended
F	Loading Height, Truck Loading Position	3.40 m (11 ft. 2 in.)	3.48 m (11 ft. 5 in.)	4.14 m (13 ft. 7 in.)	3.39 m (11 ft. 2 in.)	3.48 m (11 ft. 5 in.)	4.14 m (13 ft. 7 in.)
G	Reach From Center of Swing Pivot	5.42 m (17 ft. 10 in.)	5.49 m (18 ft. 0 in.)	6.51 m (21 ft. 4 in.)	5.42 m (17 ft. 9 in.)	5.49 m (18 ft. 0 in.)	6.51 m (21 ft. 4 in.)
H	Reach From Center of Rear Axle	6.49 m (21 ft. 3 in.)	6.55 m (21 ft. 6 in.)	7.57 m (24 ft. 10 in.)	6.49 m (21 ft. 3 in.)	6.55 m (21 ft. 6 in.)	7.57 m (24 ft. 10 in.)
I	Digging Depth (SAE maximum)	4.27 m (14 ft. 0 in.)	4.35 m (14 ft. 3 in.)	5.40 m (17 ft. 9 in.)	4.28 m (14 ft. 0 in.)	4.35 m (14 ft. 3 in.)	5.41 m (17 ft. 9 in.)
J	Digging Depth (SAE)						
	610-mm (2 ft.) Flat Bottom	4.24 m (13 ft. 11 in.)	4.31 m (14 ft. 2 in.)	5.37 m (17 ft. 7 in.)	4.24 m (13 ft. 11 in.)	4.31 m (14 ft. 2 in.)	5.38 m (17 ft. 8 in.)
	2440-mm (8 ft.) Flat Bottom	3.90 m (12 ft. 10 in.)	3.98 m (13 ft. 1 in.)	5.12 m (16 ft. 10 in.)	3.91 m (12 ft. 10 in.)	3.99 m (13 ft. 1 in.)	5.13 m (16 ft. 10 in.)
K	Stabilizer Width, Transport With Standard Pads and No Guards	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)
L	Stabilizer Spread, Operating	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)
M	Stabilizer Overall Width, Operating	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)
N	Bucket Rotation	190 deg.	190 deg.	190 deg.	190 deg.	190 deg.	190 deg.
O	Transport Height	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)

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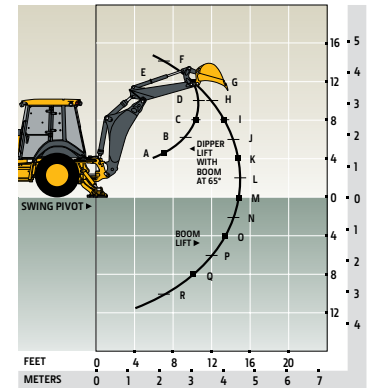
Loader Dimensions and Performance		310 P-TIER			
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96		EPA FT4/EU Stage IV	
P	Bucket Dump Angle, Maximum	45 deg.		45 deg.	
Q	Rollback Angle at Ground Level	40 deg.		40 deg.	
		<i>Heavy-duty</i>		<i>Heavy-duty</i>	
		<i>Multipurpose</i>		<i>Multipurpose</i>	
	Bucket Capacity	0.96 m ³ (1.25 cu. yd.)	0.96 m ³ (1.25 cu. yd.)	0.96 m ³ (1.25 cu. yd.)	0.96 m ³ (1.25 cu. yd.)
	Width	2184 mm (86 in.)	2184 mm (86 in.)	2184 mm (86 in.)	2184 mm (86 in.)
	Weight	480 kg (1,058 lb.)	800 kg (1,764 lb.)	480 kg (1,059 lb.)	800 kg (1,764 lb.)
	Breakout Force	39.6 kN (8,908 lb.)	37.0 kN (8,314 lb.)	39.6 kN (8,894 lb.)	37.0 kN (8,328 lb.)
	Lift Capacity, Full Height	2860 kg (6,306 lb.)	2578 kg (5,684 lb.)	2867 kg (6,320 lb.)	2585 kg (5,698 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)
S	Dump Clearance, Bucket at 45 deg.	2.63 m (8 ft. 7 in.)	2.63 m (8 ft. 8 in.)	2.63 m (8 ft. 8 in.)	2.63 m (8 ft. 8 in.)
T	Reach at Full Height, Bucket at 45 deg.	837 mm (33.0 in.)	753 mm (29.6 in.)	841 mm (33.1 in.)	756 mm (29.8 in.)
U	Digging Depth Below Ground, Bucket Level	106 mm (4.2 in.)	166 mm (6.5 in.)	100 mm (3.9 in.)	160 mm (6.3 in.)
V	Length From Front Axle Centerline to Bucket Cutting Edge	2.10 m (6 ft. 11 in.)	2.08 m (6 ft. 10 in.)	2.12 m (6 ft. 11 in.)	2.10 m (6 ft. 11 in.)

Lift Capacities [see line art at right]

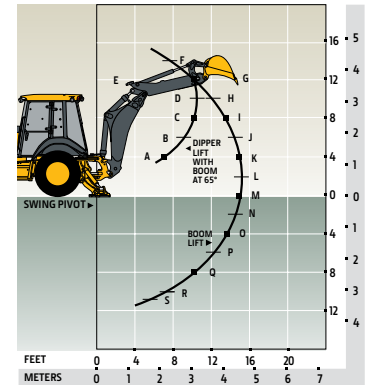
Lift capacities are over-end values in kg (lb.). Figures listed are 100% of the maximum lift force available.

		EPA FT4/EU Stage IV			
		Noncertified / EPA Tier 2/EU Stage II / HALT / Mar-I / EPA Tier 3/EU Stage IIIA / R96		EPA FT4/EU Stage IV	
		With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Retracted	With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Extended	With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Retracted	With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Extended
With Standard Dipperstick					
A	4014 kg (8,850 lb.)	3323 kg (7,327 lb.)	3018 kg (6,654 lb.)	A 3969 kg (8,751 lb.)	3293 kg (7,259 lb.)
B	2497 kg (5,505 lb.)	2267 kg (4,999 lb.)	2030 kg (4,476 lb.)	B 2481 kg (5,469 lb.)	2252 kg (4,965 lb.)
C	2225 kg (4,905 lb.)	2031 kg (4,478 lb.)	1656 kg (3,651 lb.)	C 2211 kg (4,875 lb.)	2018 kg (4,449 lb.)
D	2200 kg (4,850 lb.)	2010 kg (4,431 lb.)	1500 kg (3,306 lb.)	D 2188 kg (4,823 lb.)	1998 kg (4,404 lb.)
E	2047 kg (4,514 lb.)	1857 kg (4,093 lb.)	1434 kg (3,162 lb.)	E 2044 kg (4,507 lb.)	1854 kg (4,087 lb.)
F	1517 kg (3,346 lb.)	1340 kg (2,955 lb.)	1429 kg (2,740 lb.)	F 1502 kg (3,311 lb.)	1326 kg (2,924 lb.)
G	1589 kg (3,502 lb.)	1403 kg (3,093 lb.)	1298 kg (2,849 lb.)	G 1581 kg (3,485 lb.)	1396 kg (3,077 lb.)
H	1559 kg (3,437 lb.)	1378 kg (3,037 lb.)	1036 kg (1,987 lb.)	H 1554 kg (3,426 lb.)	1373 kg (3,026 lb.)
I	1511 kg (3,330 lb.)	1333 kg (2,940 lb.)	—	I 1507 kg (3,323 lb.)	1330 kg (2,933 lb.)
J	1459 kg (3,217 lb.)	1285 kg (2,834 lb.)	960 kg (1,841 lb.)	J 1457 kg (3,212 lb.)	1283 kg (2,829 lb.)
K	1409 kg (3,106 lb.)	1238 kg (2,729 lb.)	1024 kg (1,964 lb.)	K 1408 kg (3,103 lb.)	1237 kg (2,726 lb.)
L	1362 kg (3,002 lb.)	1193 kg (2,630 lb.)	1036 kg (1,986 lb.)	L 1361 kg (3,001 lb.)	1192 kg (2,629 lb.)
M	1318 kg (2,906 lb.)	1151 kg (2,538 lb.)	1028 kg (2,266 lb.)	M 1319 kg (2,907 lb.)	1151 kg (2,538 lb.)
N	1279 kg (2,820 lb.)	1113 kg (2,455 lb.)	1012 kg (2,231 lb.)	N 1280 kg (2,822 lb.)	1114 kg (2,456 lb.)
O	1245 kg (2,745 lb.)	1080 kg (2,382 lb.)	992 kg (2,187 lb.)	O 1247 kg (2,748 lb.)	1082 kg (2,385 lb.)
P	1218 kg (2,685 lb.)	1053 kg (2,322 lb.)	971 kg (2,141 lb.)	P 1220 kg (2,690 lb.)	1056 kg (2,327 lb.)
Q	1203 kg (2,651 lb.)	1037 kg (2,287 lb.)	950 kg (2,095 lb.)	Q 1206 kg (2,659 lb.)	1041 kg (2,294 lb.)
R	1228 kg (2,707 lb.)	1055 kg (2,326 lb.)	930 kg (2,051 lb.)	R 1234 kg (2,721 lb.)	1061 kg (2,339 lb.)
S	—	1141 kg (2,515 lb.)	912 kg (2,010 lb.)	S —	1150 kg (2,536 lb.)
T	—	—	895 kg (1,974 lb.)	T —	—
U	—	—	882 kg (1,945 lb.)	U —	—
V	—	—	874 kg (1,927 lb.)	V —	—
W	—	—	875 kg (1,929 lb.)	W —	—
X	—	—	897 kg (1,977 lb.)	X —	—
Y	—	—	1024 kg (2,257 lb.)	Y —	—

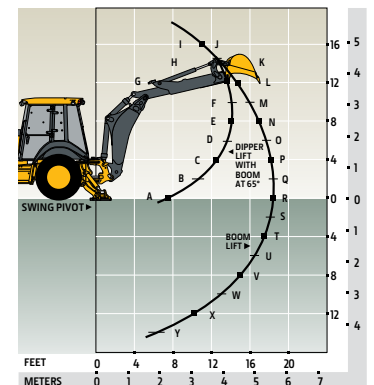
Lift capacities are over end with stabilizers down and tires tangent to ground.



With Standard Dipperstick



With 1.06-m (3 ft. 6 in.)
Extendable Dipperstick, Retracted



With 1.06-m (3 ft. 6 in.)
Extendable Dipperstick, Extended

Additional equipment

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

310 P Engine	310 P Powertrain (continued)	310 P Loader[†] (continued)
● Coolant recovery tank with low-level indicator	▲ Non-powered front axle	● Loader bucket heaped capacity, 0.96 m ³ (1.25 cu. yd.)
● Foldout, hinged cooling system	● Mechanical-front-wheel drive (MFWD) with open differential: Electric on/off control / Sealed axle	● Bucket-level indicator
● Serpentine belt with automatic belt tensioner	▲ MFWD with traction-control limited-slip differential: Electric on/off control / Sealed axle	● Loader boom service lock
● Electronically controlled, variable-rate suction-type cooling fan	● Automatic MFWD braking	▲ Auxiliary loader hydraulics (3rd-function valve) with 2-lever control and clutch disconnect
● Self-cleaning exhaust aftertreatment system	▲ MFWD driveshaft guard	▲ Standard ride control
▲ Chrome exhaust extension	Backhoe	Hydraulic System
● Grid heat	Standard dipperstick digging depth	● 106-L/m (28 gpm) single-gear pump, open-center system
▲ 1,000-watt electric engine coolant heater	● 4.27 m (14 ft. 0 in.)	▲ 134-L/m (35.5 gpm) backhoe, 120-L/m (31.7 gpm) loader axial-piston pump, open-center system
● Electronic fuel lift pump	Extendable dipperstick extension	● Economy mode
Powertrain	▲ 1.06 m (3 ft. 6 in.)	Electrical System
● PowerShift™ transmission: Torque converter with twist-grip Transmission Control Lever (TCL) and neutral safety switch interlock (1st through 4th gears)	● ISO (Deere) 2-lever mechanical backhoe controls	● 12-volt system
● Transmission oil cooler	▲ 2-lever pilot joystick controls with pattern-selection feature	● Alternator, 90 amp (with dual-lever backhoe manual controls; Noncertified, EPA Tier 2/EU Stage II, and Mar-I / EPA Tier 3/EU Stage IIIA / R96; 120 amp for high-altitude operation [HALT] only)
▲ Transmission remote oil-sampling port	● Backhoe transport lock lever	● Alternator, 120 amp (with pilot backhoe controls)
● Differential lock, electric foot actuated, protection on/off (software enabled)	● Swing lock pin stored in operator's station	● Alternator, 145 amp (EPA Final Tier 4 [FT4]/EU Stage IV only)
● Planetary final drives	● Stabilizers with 2-direction anti-drift valves	● Single battery with 190-min. reserve capacity and 1,010 CCA
● Power-assisted hydraulic service brakes (conform to ISO 3450): Inboard, wet multi-disc, self-adjusting and self-equalizing	▲ Backhoe couplers for John Deere, Case, and Cat buckets	▲ Dual batteries with 380-min. reserve capacity and 2,020 CCA
● Parking/emergency brake with electric switch control (conforms to ISO 3450): Spring applied, hydraulically released wet multi-disc / Independent of service brakes	▲ Auxiliary backhoe valve with 1-way flow for hammers and compactors with plumbing	▲ Remote jump posts and battery disconnect
● Hydrostatic power steering with emergency manual mode	▲ Rear bucket capacities, 0.14 m ³ (0.18 cu. yd.), 0.18 m ³ (0.24 cu. yd.), 0.21 m ³ (0.27 cu. yd.), and 0.28 m ³ (0.37 cu. yd.)	
	Loader[†]	
	● Loader bucket anti-spill (rollback)	
	● Return-to-dig feature	
	● Single-lever control with electric clutch disconnect	

[†]See dealer for range of heavy-duty (HD), multi-purpose, and coupler buckets and forks.

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. No derating is required up to 3050-m (10,000 ft.) altitude. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on a unit with 19.5-24-in. 10PR (R4) tubeless rear and 12.5/80-18 12PR front tires, and 0.96-m³ (1.25 cu. yd.) loader bucket.

Additional equipment *(continued)*

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

310 P Lights

- Halogen lights (10), 32,500 candle-power each (4 front driving/working, 4 rear working, and 2 side docking)
- Turn signal/flashing (2 front and 2 rear)
- Rear stop and tail (2)
- ▲ LED light package

Operator's Station

- Modular-design ROPS/FOPS (Level 2) canopy with molded roof (meets ISO 3449 and ISO 3471/SAE J1040): Isolation mounted
- Molded floor mats (with pilot controls only)
- 12-volt outlet
- Lockable right-side storage
- ▲ Lockable left-hand storage with cup holders
- ▲ Interior front-view mirror
- ▲ Outside rearview mirrors
- Rotary-dial hand throttle
- Suspended foot throttle
- Mechanical-suspension seat, cloth cover
- ▲ Air-suspension heated seat (with cab only)
- ▲ Air-suspension vinyl seat
- Key start switch with electric fuel shutoff
- Tilt steering, infinitely adjustable (with cab only)
- ▲ Tilt steering, infinitely adjustable (with canopy and quarter cab)
- ▲ Machine security (enabled through monitor)

310 P Operator's Station *(continued)*

- Digital display of engine hours, engine rpm, and system voltage
- Monitor system with audible and visual warnings: Engine air restriction / Low alternator voltage / Engine oil pressure / Hydraulic filter restriction / Parking brake on/off / Aftertreatment temperature / Transmission fluid temperature / Fuel / Hour meter / Machine diagnostic information via 4-push-button/LCD operator interface
- **Canopy:** Mechanical-suspension deluxe vinyl swivel seat with lumbar adjustment and armrests (fully adjustable)
- ▲ **Quarter Cab:** Mechanical-suspension deluxe vinyl swivel seat with lumbar adjustment and armrests (fully adjustable), front windshield, and windshield wiper (1 front)
- ▲ **Cab With Dual Doors and A/C:** Mechanical-suspension deluxe fabric swivel seat with lumbar adjustment / Headliner, dome light, left and right cab doors, tinted safety glass, windshield wipers (1 rear and 1 front), front windshield washer, fresh-air intake, and heater/defroster/pressurizer (11.7-kW [40,000 Btu/h] heater) / A/C (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant)
- ▲ AM/FM/weather-band (WB) radio (with cab only)
- ▲ Premium radio package (with cab only; includes additional 12-volt and USB outlets)

310 P Overall Vehicle

- 1-piece unitized construction mainframe
- Vehicle tie-downs (2 front and 2 rear)
- Remote grease bank for front axle
- Front bumper cover
- ▲ HD front bumper
- ▲ Front counterweight – 204 kg (450 lb.) or 340 kg (750 lb.)
- ▲ Rubber grille bumpers
- Fuel tank, 155.2 L (41 gal.), ground-level fueling (Noncertified, EPA Tier 2/EU Stage II, HALT, and Mar-I / EPA Tier 3 / EU Stage IIIA / R96 only)
- Fuel tank, 128.7 L (34 gal.), ground-level fueling (EPA FT4/EU Stage IV only)
- Diesel exhaust fluid (DEF) tank, 13.7 L (3.6 gal.) (EPA FT4/EU Stage IV only)
- 2-position easy-tilt hood
- Extended grille frame
- Toolbox with padlock hasp
- Vandal protection for locking monitor, engine hood, toolbox, hydraulic reservoir, and fuel tank
- Reverse warning alarm
- Dent-resistant full-coverage rear fenders
- ▲ Backhoe boom-protection plate
- JDLink™ wireless communication system (available in specific countries; see your dealer for details)
- ▲ HD front grille screen
- ▲ HD stabilizer pads

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JOHN DEERE