L-SERIES

BACKHOES

JOHN DEERE

310L EP / 310L / 310SL / 310SL HL / 315SL / 410L / 710L



LIFT MORE AND MULTITASK


THE L-SERIES
LOOKING FOR MORE
RELIABILITY AND PRODUCTIVITY?
WE'VE GOT
YOUR BACKHO
AND YOUR



RELIABLE + PRODUCTIVE

E.

BACK.



UP TO
15%
MORE
CRANING CAPACITY
FOR THE 310SL WITH LIFT MODE

WHEN WE NEED REAL-WORLD FEEDBACK,

WE ASK CUSTOMERS LIKE YOU.

Our trusted Customer Advocate Groups (CAGs) provide us with invaluable input from owners and operators — the ones just like you who know what customers really need.

And we listen. Our economically priced, rental-friendly 310L EP — with four-speed synchromesh manual transmission — and newly redesigned 310SL — with closed-center, pressure-compensated load-sensing (PCLS) hydraulics that boost productivity, machine control, and craning capacity — are just the latest examples of how we deliver the machines and features to help your operation succeed in the working world.

GET MORE DONE WITH ONE

MULTIFUNCTION VERSATILITY, EXCEPTIONAL CAPABILITY.

Why run two machines when one will do? Whether you're loading trucks, busting up blacktop, placing pipe, digging trenches, or moving materials, an L-Series Backhoe is more than up to the task. Building upon our highly productive K-Series Backhoes, the L-Series features additional backhoe lift capability and PCLS hydraulics (on the 310SL, 310SL HL, 410L, and 710L), for superb multifunction performance. The result: our most versatile backhoes ever.

Proven engine technology

You can feel confident in the reliability, performance, and fuel efficiency of the 310L EP's proven Yanmar 3.3L engine. This EPA Interim Tier 4 (IT4)-equivalent diesel complies with EPA Final Tier 4 (FT4)/EU Stage IV emissions regulations without the need for aftertreatment components, minimizing machine complexity and the number of parts needed to maintain your fleet.

Powerful FT4 engines

Rugged FT4/Stage IV John Deere PowerTech™ EWL 4045 engine on the 310L, 310SL, 310SL HL, 315SL, and 410L boosts power, torque, and reliability compared to previous models. Simple two-valve cylinder-head, wet-sleeve design with replaceable cylinder liners provides uniform cooling and aids in reducing oil breakdown and ring wear. Filter locations have been redesigned and improved over earlier models.

Multifunction hydraulics

PCLS hydraulics on the 310SL, 310SL HL, 410L, and 710L supply superb multifunction capability at all engine-rpm speeds.

Control the ride and the load

Auto ride control eliminates the need to manually turn the feature on and off during load and carry applications, enhancing the operator's ease of use. When activated, front loader cylinders function as a shock absorber, smoothing the ride over rough terrain and reducing material spillage. On/Off functionality is controlled by ground speed and can be adjusted by the operator in the cab's display monitor.

Set it and go to work

When enabled on the sealed-switch module, AutoShift (standard on 310SL, 310SL HL, 315SL, 410L, and 710L) automatically shifts the PowerShift™ transmission to the appropriate gear. Simply set the control lever to the highest gear desired, and the transmission will optimally shift based on engine rpm and ground speed.

True four-wheel drive on command

Limited-slip mechanical-front-wheel drive (MFWD) (not available on 310L EP) delivers surefooted traction in any ground condition. Engage momentary MFWD "on the fly" with the touch of a button on the loader control.

Make the shift

New powered sideshift option for the 315SL enables smooth side-by-side shifts in under six seconds, for more precise backhoe repositioning. Its design includes a series of two hydraulic cylinders used to smoothly shift the backhoe, eliminating the need for a chain-drive or pulley system. It's easily unlocked and controlled via the combination in-cab switch on the main control panel.

Powered sideshift option allows operators to take full advantage of the 315SL's narrow footprint with vertical stabilizers. This is particularly valuable in applications such as street repair; underground utility work in congested urban areas; constructing square trench boxes; and digging next to buildings, walls, or other structures.



Not all features described are available for all models or configurations. Please review the Additional Equipment section and consult with your local dealer for the latest standard and optional offerings.



BIG LIFT. SMALL FOOTPRINT.

HEAVY-LIFT BACKHOES

Managing an expanding workload and multiple tasks doesn't have to mean moving up to a larger backhoe. Boasting significantly more lifting capability than previous models, along with pressure-compensated load-sensing (PCLS) hydraulics, our 310SL, 310SL HL, 410L, and 710L are surprisingly adept — and may be the perfect addition to your equipment lineup.









See what you can do now

Now with PCLS hydraulics, the 310SL features provide increased productivity and smooth multifunction control, with increased cycle times improving trenching productivity by 16 percent over the prior 310SL design. Trenching operation can be conducted at a lower engine rpm, reducing fuel consumption and jobsite noise.

More lift capacity at the push of a button

Lift mode on the 310SL, 310SL HL, 410L, and 710L provides an additional boost of 10 to 15 percent. Simply push a button on the sealed-switch module to set engine rpm at 1,400 and maximize hydraulic pressure for increased lifting capability.

The choice is yours

The 310SL and 310SL HL deliver all the advantages of PCLS hydraulics in the 14-foot digging-depth category, enabling operator efficiency and productivity through improved multifunction control. For additional performance, the 310SL HL has up to 25-percent-more rear-craning capacity and 10 more net horsepower.

Control in close quarters

Standard on the 310SL, 310SL HL, 410L, and 710L, precision mode reduces the speed of hydraulic backhoe functions without sacrificing lift performance, for close work around underground utilities or jobsite obstacles, or when lifting. This control-enhancing feature is especially useful for less experienced operators or new trainees.



PILOT TOWERS OPTIMIZE LEGROOM & SPACE TO ROTATE

CONTROL AT YOUR FINGERTIPS

MAXIMUM PRODUCTIVITY IS CLOSE AT HAND.

Increased productivity is within easy reach in an L-Series Backhoe. Loader-control grip and pilot controllers provide effortless, fingertip operation of the backhoe and loader, while other machine functions are conveniently located on the steering column.



CLEAR SIGHTLINES TO FRONT LOADER BUCKET

Extend your workday

LED lighting kit brings things into focus when your workday goes long. For enhanced trenching visibility, boom-light field kit for the 310SL, 310SL HL, and 410L includes two LED floodlights mounted to each side of the boom.

Take it easy

Enhanced "palm-on-top" loader-control grip is comfortable and easy to use. Redesigned loader-lever linkage reduces resistance and improves its throw and feel, decreasing lever travel by up to 15 percent.

Steering column controls

Exterior lights, wipers, and turn signals are conveniently located on the multifunction lever on the steering column — just like the family SUV — helping operators keep their eyes on the job at hand.

Excellent view to front loader bucket

Clear sightlines to the loader bucket corners have been maintained over the sloped hood, even with the addition of the aftertreatment components needed to meet FT4/Stage IV compliance.

Fatigue-beating comfort

L-Series Backhoes are loaded with creature comforts, including efficient HVAC system, adjustable mechanical or air-suspension seat, and optional premium radio with Bluetooth® and auxiliary input.

Have a seat — your way

Two seat options are available from the factory to maximize comfort and productivity. A heated, air-suspension seat helps keep the operator warm and comfortable even on the coldest days. An air-suspension seat smoothes the ride for open-canopy configurations.







UNSURPASSED RELIABILITY

WON'T BACK DOWN. OR LET YOU DOWN.

Built with state-of-the-art tools and technology by a quality-conscious workforce at our world-class facility in Dubuque, Iowa, U.S.A., L-Series Backhoes deliver superb reliability and uptime. When you know how they're built, you'll see how tough they are.

4WD

OPTION AT YOUR COMMAND







Your bucket list

Our multipurpose buckets have been enhanced to boost durability. New clamshell design features tilt-free dumping, a reinforced third cutting edge, and improved hinge profile for minimized material spillage compared to previous offerings.

Bias and radial tire options

Choose from a variety of factory-installed tire options, for the traction, performance, and long service life your specific application requires. On mechanical-front-wheel drive (MFWD)-equipped models, the machine will automatically disable MFWD in fourth and fifth gears to reduce tire wear.

Maintenance-free batteries

Standard maintenance-free batteries reduce periodic servicing, improve cold-starting reliability, and lengthen battery life.

Diff-lock protection

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

Quick, clean filter changes

Vertical spin-on engine, transmission, and hydraulic filters and quick-release fuel filters allow fast, clean changes. Standard heavy-duty transmission oil filter enhances reliability over standard-duty filter. Diesel exhaust fluid (DEF) filter has been relocated from the tank, improving access and extending the change interval.

Put the brakes on

When MFWD braking is enabled through the monitor and the brakes are applied, the machine automatically activates MFWD, slowing the machine down faster and extending service-brake life.

Premium hydraulic oil

L-Series Backhoes come factory-filled with Hydrau™ premium all-season, anti-wear hydraulic oil specifically designed for construction equipment. For cold weather, opt for Hydrau™ XR, which offers all-season protection from –40 to 40 deg. C (–40 to 104 deg. F).

Protect your investment

Machine-security system with touchpad passcode safeguards against unauthorized operation.

Get connected

Customer-inspired backhoe hydraulic quick-coupler option helps expand jobsite capabilities. When equipped, both front loader and rear backhoe hydraulic couplers are conveniently controlled, based on seat position, by a single button on the sealed-switch module.



THE 710L

21' 9"

MAXIMUM DIGGING DEPTH
(WITH OPTIONAL EXTENDABLE DIPPERSTICK)

UP TO # 10%

INCREASE IN BACKHOE LIFT CAPACITY
(WITH LIFT MODE ACTIVATED)

13%

MORE HORSE-POWER THAN PREVIOUS MODEL

EASY MAINTENANCE

KEEP THE PEACE. AND YOUR PEACE OF MIND.

Save fuel with economy mode

Standard economy mode can be configured separately between loader and backhoe functions. Activate economy mode for backhoe functions while retaining full power for loader functions. This helps maximize fuel usage in lighter-work applications with minimal effect on machine performance.

Improved diagnostics

State-of-the-art multi-language monitor clearly displays machine diagnostics. Operators can quickly and easily program a multitude of time-specific functions such as auto shutdown and auto-idle.

DEF concentration sensor

Diesel exhaust fluid (DEF) concentration sensor measures fluid in the DEF tank and issues an alert of potential engine derate.



Minimize downtime and expense

Same-side ground-level service points speed daily checks and fills. Other commonsense features such as quick-change filters, extended service intervals, simple-to-read sight gauges, and easy-access grease zerks help increase uptime and lower daily operating costs.

Coolers allow easy cleanout

Hinged, stacked-assembly coolers tilt away from the radiator for convenient core cleanout.

Quiet, fuel-efficient fan

Variable-speed electronically controlled fan automatically speeds up or slows down, operating only as needed to keep things cool. Conserves power and fuel, while reducing noise.

Save fuel and reduce noise

Auto-idle decreases engine speed when hydraulics aren't in use, to help maintain quiet working conditions and conserve precious fuel. Auto shutdown turns off the engine after an operator-selected period of inactivity, further keeping noise and fuel consumption down.

Reliable engine technology

310L EP IT4-equivalent Yanmar engine requires no aftertreatment. PowerTech EWL FT4/Stage IV engine on the 310L, 310SL, 310SL HL, 315SL, and 410L features a diesel oxidation catalyst (DOC) and a selective catalytic reduction (SCR) system. PowerTech Plus FT4/Stage IV engine on the 710L has a DOC and an SCR system, and it also requires a diesel particulate filter (DPF).



Get valuable insight with

PRECISION CONSTRUCTION

This suite of construction technology delivers **Productivity Solutions** to help you get more done, more efficiently. The in-base JDLink™ subscription provides machine location, utilization data, and alerts to help you maximize productivity and efficiency. Other productivity solutions include grade-management options for multiple machine forms and payload weighing for wheel loaders and articulated dump trucks.

To maximize uptime and lower costs, JDLink also enables **John Deere Connected Support.™** John Deere's centralized Machine Health Monitoring Center analyzes data from thousands of connected machines, identifies trends, and develops recommended actions, called Expert Alerts, to help prevent downtime. Dealers use Expert Alerts to proactively address conditions that may otherwise likely lead to downtime. Your dealer can also monitor machine health and leverage remote diagnostics and programming capability to further diagnose problems and even update machine software without a time-consuming trip to the jobsite.



310L EP / 310L SPECIFICATIONS

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.

Engine	**310L EP**		**310L**	
Manufacturer and Model	Yanmar 4TNV98CT turbocharged		John Deere PowerTech™ EWL 4045HL050 turbocharged	
Non-Road Emission Standard	EPA Interim Tier 4 equivalent, EPA Final Tier 4 compliant		EPA Final Tier 4/EU Stage IV	
Displacement	3.3 L (203 cu. in.)		4.5 L (276 cu. in.)	
Gross Peak Power	53 kW (72 hp) at 2,100 rpm		76 kW (102 hp) at 1,600 rpm	
Net Peak Power (ISO 9249)	52 kW (69 hp) at 2,100 rpm		75 kW (100 hp) at 1,600 rpm	
Net Peak Torque (ISO 9249)	272 Nm (200 lb.-ft.) at 1,800 rpm		459 Nm (339 lb.-ft.) at 1,500 rpm	
Net Torque Rise	29%		51%	
Lubrication	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	
Cooling				
Fan Type	Viscous variable-rate (temperature controlled) cooling fan standard		Electronically controlled, variable rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)		–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water		Oil to water	
Powertrain				
Transmission	4-speed manual-range gear-selection transmission with synchonizers; electric clutch cutoff on loader lever and manual-range gear-selection lever		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 3.01:1 stall ratio, 300 mm (11.8 in.)		Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11.0 in.)	
Maximum Travel Speeds with Standard Engine, Measured with 19.5L-24 Rear Tires	*Forward*	*Reverse*	*Forward*	*Reverse*
Gear 1	5.7 km/h (3.5 mph)	5.7 km/h (3.5 mph)	5.4 km/h (3.4 mph)	6.8 km/h (4.2 mph)
Gear 2	9.3 km/h (5.8 mph)	9.3 km/h (5.8 mph)	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)
Gear 3	20.4 km/h (12.7 mph)	20.4 km/h (12.7 mph)	20.4 km/h (12.7 mph)	—
Gear 4	38.0 km/h (23.6 mph)	38.0 km/h (23.6 mph)	36.7 km/h (22.8 mph)	—
Axles				
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		22 deg.	
Axle Ratings	*Front*	*Rear*	*Front*	*Rear*
SAE J43	5000 kg (11,000 lb.)	6000 kg (13,200 lb.)	5000 kg (11,000 lb.)	6000 kg (13,200 lb.)
Dynamic	7500 kg (16,500 lb.)	8000 kg (17,600 lb.)	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	23 500 kg (51,800 lb.)	23 500 kg (51,800 lb.)	24 500 kg (54,000 lb.)	26 500 kg (58,400 lb.)
Ultimate	39 500 kg (87,100 lb.)	39 500 kg (87,100 lb.)	41 500 kg (91,500 lb.)	41 500 kg (91,500 lb.)
Differentials				
Mechanical-Front-Wheel-Drive (MFWD) Axle	Open		Open – standard; automatic, limited-slip traction control – custom or optional	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock		Foot actuated, hydraulically engaged 100% mechanical lock	
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	3.38 m (11 ft. 1 in.)	3.39 m (11 ft. 1 in.)	3.45 m (11 ft. 4 in.)	3.43 m (11 ft. 3 in.)
Without Brakes	3.79 m (12 ft. 5 in.)	3.80 m (12 ft. 6 in.)	3.96 m (13 ft. 0 in.)	3.90 m (12 ft. 10 in.)
Bucket-Clearance Circle				
With Brakes	9.72 m (31 ft. 11 in.)	9.73 m (31 ft. 11 in.)	9.86 m (32 ft. 4 in.)	9.80 m (32 ft. 2 in.)
Without Brakes	10.32 m (33 ft. 10 in.)	10.34 m (33 ft. 11 in.)	10.61 m (34 ft. 10 in.)	10.48 m (34 ft. 5 in.)
Steering Wheel Turns (lock to lock)	2.7	3.2	2.7	3.2
MFWD and Rear Axle	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				
Main Pump	Open-center system; axial-piston pump		Open-center system; single-gear pump	
Pump Flow at 2,200 rpm				
Backhoe	124 L/m (32.8 gpm)		106 L/m (28 gpm)	
Loader	114 L/m (30.1 gpm)		106 L/m (28 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 mechanical standard; pilot controls with pattern select and manual and/or electric auxiliary functions optional; field kits available for additional mechanical-control options			
Loader	Single-lever control with electric clutch cutoff switch standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional			

310L EP / 310L SPECIFICATIONS



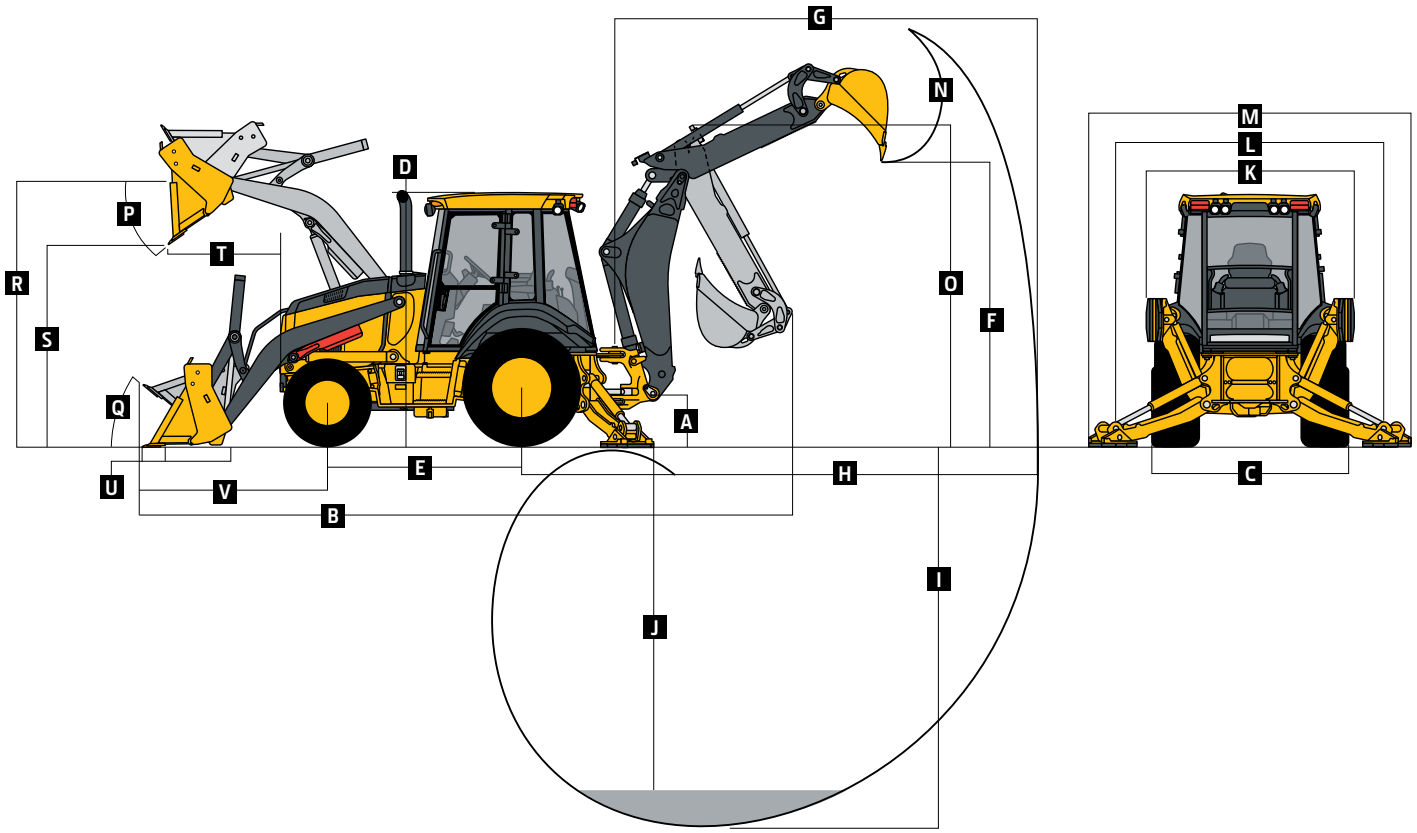
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Cylinders	**310L EP**			**310L**		
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins						
	Bore	*Rod Diameter*	*Stroke*	*Bore*	*Rod Diameter*	*Stroke*
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
Backhoe Boom (1)	110 mm (4.33 in.)	56 mm (2.20 in.)	821 mm (32.32 in.)	110 mm (4.33 in.)	56 mm (2.20 in.)	821 mm (32.32 in.)
Backhoe Crowd (1)	110 mm (4.33 in.)	63 mm (2.48 in.)	553 mm (21.77 in.)	110 mm (4.33 in.)	63 mm (2.48 in.)	553 mm (21.77 in.)
Backhoe Bucket (1)	80 mm (3.15 in.)	50 mm (1.97 in.)	892 mm (35.12 in.)	80 mm (3.15 in.)	50 mm (1.97 in.)	892 mm (35.12 in.)
Backhoe Swing (2)	80 mm (3.15 in.)	45 mm (1.77 in.)	310 mm (12.20 in.)	80 mm (3.15 in.)	45 mm (1.77 in.)	310 mm (12.20 in.)
Backhoe Extendable Dipperstick (1)	63 mm (2.48 in.)	32 mm (1.26 in.)	1062 mm (41.81 in.)	63 mm (2.48 in.)	32 mm (1.26 in.)	1062 mm (41.81 in.)
Backhoe Stabilizer, Standard (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)	80 mm (3.15 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Non-Powered Axle (1)	57 mm (2.24 in.)	35 mm (1.38 in.)	221 mm (8.69 in.)	70 mm (2.76 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
MFWD (1)	63 mm (2.48 in.)	38 mm (1.50 in.)	237 mm (9.33 in.)	65 mm (2.56 in.)	40 mm (1.57 in.)	210 mm (8.27 in.)
Electrical						
Voltage	12 volt			12 volt		
Alternator Rating	130 amp			145 amp		
Lights	4 halogen: 2 front and 2 rear (32,500 candlepower each); turn signals and flashers: 2 front and 2 rear; stop- and taillights and 2 rear reflectors; factory-installed option for 2 LED spotlights and 2 LED floodlights in lieu of the standard halogen light package			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; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station						
Type (ISO 3471)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional fully enclosed cab			Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab		
Tires/Wheels						
	Front	*Rear*		*Front*	*Rear*	
Non-Powered Front Axle	14.5/75-16.1 F3 (16)	19.5L-24 R4 (12)		12.5/80-18 F3 (12)	19.5L-24 R4 (12)	
	—	—		14.5/75-16.1 F3 (16)	19.5L-24 R4 (12)	
With MFWD	12-16.5 NHS (12)	19.5L-24 R4 (12)		12-16.5 NHS (12)	19.5L-24 R4 (12)	
	—	—		12.5/80-18 I3 (12)	19.5L-24 R4 (10)	
	—	—		12.5/80-18 R4 (10)	19.5L-24 R4 (12)	
	—	—		12.5/80-18 I3 (12)	21L-24 R4 (12)	
	—	—		12.5/80-18 R4 (10)	21L-24 R4 (12)	
	—	—		340/80R18 XMCL	500/70R24 XMCL	
	—	—		340/80R18 550	500/70R24 550	
	—	—		340/80R18 580	500/70R24 580	
Serviceability						
Refill Capacities						
Cooling System						
Cab	19.5 L (20.6 qt.)			27.5 L (29.1 qt.)		
Canopy	17.9 L (18.9 qt.)			25.7 L (27.2 qt.)		
Rear Axle				18 L (19 qt.)		
Axle Differential Housing	14.5 L (15.3 qt.)			—		
Planetary (each)	1.5 L (1.6 qt.)			—		
Engine Oil (including vertical spin-on filter)	10.5 L (11.1 qt.)			13 L (13.7 qt.)		
Torque Converter and Transmission	18 L (19 qt.)			15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	128.7 L (34 gal.)			128.7 L (34 gal.)		
Diesel Exhaust Fluid (DEF) Tank	—			13.7 L (3.6 gal.)		
Hydraulic System	126.8 L (33.5 gal.)			126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)			45 L (11.9 gal.)		
MFWD Housing						
Axle	7.5 L (7.9 qt.)			6.5 L (6.9 qt.)		
Planetary (each)	0.8 L (0.8 qt.)			0.9 L (1 qt.)		
Operating Weights						
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Bumper	6270 kg (13,822 lb.)			6654 kg (14,669 lb.)		
Typical with Cab, Extendable Dipperstick, MFWD, and 204-kg (450 lb.) Counterweight	7038 kg (15,516 lb.)			7311 kg (16,119 lb.)		
Optional Components (weight difference between base equipment and option)						
Cab	263 kg (580 lb.)			263 kg (580 lb.)		
MFWD with Tires	111 kg (244 lb.)			168 kg (370 lb.)		
Extendable Dipperstick	191 kg (420 lb.)			191 kg (420 lb.)		
Front Loader Coupler	257 kg (566 lb.)			257 kg (566 lb.)		
Backhoe Bucket Coupler	59 kg (130 lb.)			59 kg (130 lb.)		

310L EP / 310L

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Overall Dimensions		310L EP	310L
A	Ground Clearance, Minimum	318 mm (13 in.)	293 mm (12 in.)
B	Overall Length, Transport	7.24 m (23 ft. 9 in.)	7.24 m (23 ft. 9 in.)
C	Width Over Tires	2.20 m (7 ft. 3 in.)	2.20 m (7 ft. 3 in.)
D	Height to Top of ROPS/Cab	2.81 m (9 ft. 3 in.)	2.81 m (9 ft. 3 in.)
E	Length from Axle to Axle		
	Non-Powered Front Axle	2.16 m (7 ft. 1 in.)	2.16 m (7 ft. 1 in.)
	MFWD Axle	2.19 m (7 ft. 2 in.)	2.19 m (7 ft. 2 in.)

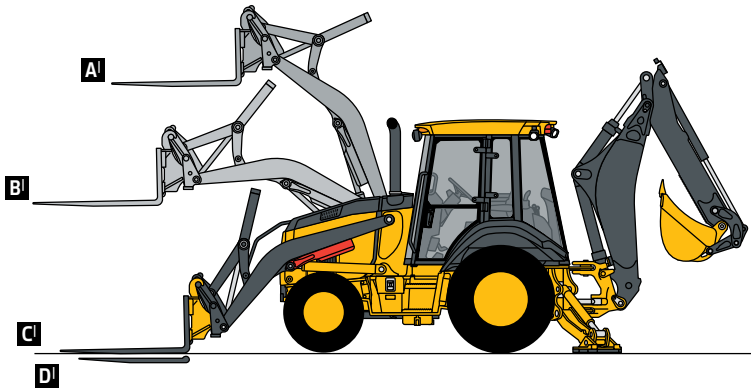


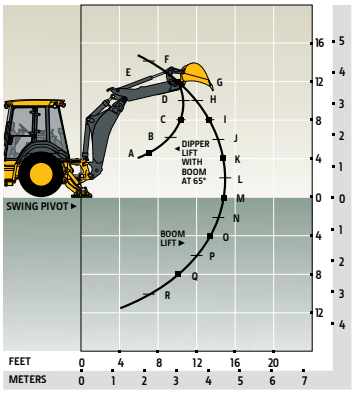
Backhoe Dimensions and Performance		310L EP			310L		
Backhoe specifications are with 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.							
Bucket Range		305–762 mm (12–30 in.)					
Digging Force							
	Bucket Cylinder	48.2 kN (10,844 lb.)					
	Crowd Cylinder	31.1 kN (6,992 lb.)					
Swing Arc		180 deg.					
Operator Control		2 levers					
		With Optional Extendable Dipperstick			*With Optional Extendable Dipperstick*		
		With Standard Backhoe	*Retracted*	*Extended*	*With Standard Backhoe*	*Retracted*	*Extended*
F	Loading Height, Truck Loading Position	3.48 m (11 ft. 5 in.)	3.57 m (11 ft. 8 in.)	4.23 m (13 ft. 10 in.)	3.38 m (11 ft. 1 in.)	3.46 m (11 ft. 4 in.)	4.12 m (13 ft. 6 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)	4.16 m (13 ft. 8 in.)	4.23 m (13 ft. 11 in.)	5.29 m (17 ft. 4 in.)	4.30 m (14 ft. 1 in.)	4.38 m (14 ft. 4 in.)	5.43 m (17 ft. 10 in.)
J	Digging Depth (SAE)						
	610-mm (2 ft.) Flat Bottom	4.13 m (13 ft. 6 in.)	4.20 m (13 ft. 9 in.)	5.26 m (17 ft. 3 in.)	4.27 m (14 ft. 0 in.)	4.34 m (14 ft. 3 in.)	5.40 m (17 ft. 9 in.)
	2440-mm (8 ft.) Flat Bottom	3.79 m (12 ft. 5 in.)	3.86 m (12 ft. 8 in.)	5.01 m (16 ft. 5 in.)	3.93 m (12 ft. 11 in.)	4.01 m (13 ft. 2 in.)	5.15 m (16 ft. 11 in.)
K	Stabilizer Width, Transport	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 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	3.49 m (11 ft. 5 in.)	3.49 m (11 ft. 5 in.)	3.49 m (11 ft. 5 in.)	3.39 m (11 ft. 1 in.)	3.39 m (11 ft. 1 in.)	3.39 m (11 ft. 1 in.)
Loader Dimensions and Performance							
P	Bucket Dump Angle, Maximum	45 deg.			45 deg.		
Q	Rollback Angle at Ground Level	40 deg.			40 deg.		

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Loader Dimensions and Performance *(continued)*	310L EP				310L			
	Heavy-duty	*Heavy-duty*	*Heavy-duty long lip*	*Multipurpose*	*Heavy-duty*	*Heavy-duty*	*Heavy-duty long lip*	*Multipurpose*
Bucket Capacity	0.77 m^3 (1.00 cu. yd.)	0.86 m^3 (1.12 cu. yd.)	0.96 m^3 (1.25 cu. yd.)	0.96 m^3 (1.25 cu. yd.)	0.77 m^3 (1.00 cu. yd.)	0.86 m^3 (1.12 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.)	2184 mm (86 in.)	2184 mm (86 in.)	2184 mm (86 in.)	2184 mm (86 in.)
Weight	363 kg (800 lb.)	390 kg (860 lb.)	405 kg (892 lb.)	794 kg (1,750 lb.)	363 kg (800 lb.)	390 kg (860 lb.)	405 kg (892 lb.)	794 kg (1,750 lb.)
Breakout Force	41.9 kN (9,410 lb.)	42.5 kN (9,564 lb.)	40.2 kN (9,028 lb.)	36.7 kN (8,248 lb.)	41.6 kN (9,361 lb.)	42.3 kN (9,512 lb.)	40.0 kN (8,983 lb.)	37.0 kN (8,321 lb.)
Lift Capacity, Full Height	2922 kg (6,443 lb.)	2998 kg (6,610 lb.)	2793 kg (6,157 lb.)	2302 kg (5,075 lb.)	2919 kg (6,435 lb.)	2995 kg (6,602 lb.)	2760 kg (6,085 lb.)	2427 kg (5,352 lb.)
R Height to Bucket Hinge Pin, Maximum	3.51 m (11 ft. 6 in.)	3.51 m (11 ft. 6 in.)	3.51 m (11 ft. 6 in.)	3.51 m (11 ft. 6 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)
S Dump Clearance, Bucket at 45 deg.	2.77 m (9 ft. 1 in.)	2.80 m (9 ft. 2 in.)	2.71 m (8 ft. 11 in.)	2.68 m (8 ft. 9 in.)	2.74 m (9 ft. 0 in.)	2.78 m (9 ft. 1 in.)	2.68 m (8 ft. 9 in.)	2.68 m (8 ft. 9 in.)
T Reach at Full Height, Bucket at 45 deg.	699 mm (27.5 in.)	664 mm (26.1 in.)	790 mm (31.1 in.)	735 mm (29.0 in.)	702 mm (27.7 in.)	667 mm (26.3 in.)	793 mm (31.2 in.)	705 mm (27.8 in.)
U Digging Depth Below Ground, Bucket Level	41 mm (1.6 in.)	41 mm (1.6 in.)	21 mm (0.8 in.)	81 mm (3.2 in.)	70 mm (2.8 in.)	71 mm (2.8 in.)	51 mm (2.0 in.)	111 mm (4.4 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	2.01 m (6 ft. 7 in.)	1.96 m (6 ft. 5 in.)	2.10 m (6 ft. 11 in.)	2.13 m (7 ft. 0 in.)	2.02 m (6 ft. 8 in.)	1.97 m (6 ft. 6 in.)	2.12 m (6 ft. 11 in.)	2.10 m (6 ft. 11 in.)

Lift Capacity with Quick-Coupler Forks				
Hydraulic Capacity	*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*	*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*
A[I] Maximum Height	1737 kg (3,829 lb.)	1616 kg (3,563 lb.)	1711 kg (3,772 lb.)	1592 kg (3,510 lb.)
B[I] Maximum Reach	2703 kg (5,959 lb.)	2542 kg (5,605 lb.)	2690 kg (5,931 lb.)	2530 kg (5,578 lb.)
C[I] At Ground Line	3449 kg (7,603 lb.)	3248 kg (7,160 lb.)	3393 kg (7,480 lb.)	3203 kg (7,061 lb.)
D[I] Below Ground Line	156 mm (6.1 in.)	155 mm (6.1 in.)	185 mm (7.3 in.)	185 mm (7.3 in.)





With Standard Dipperstick

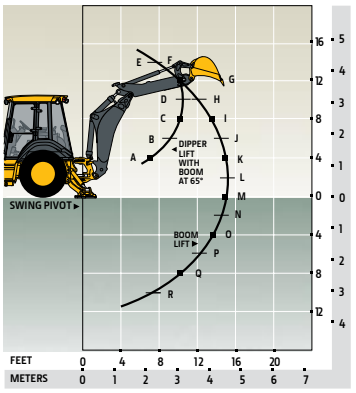
Lift Capacities

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

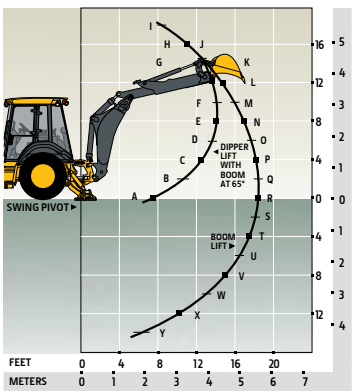
	With Standard Dipperstick		*With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Retracted*		*With 1.06-m (3 ft. 6 in.) Extendable Dipperstick, Extended*	
	310L EP	**310L**	**310L EP**	**310L**	**310L EP**	**310L**
A	3721 kg (8,204 lb.)	3593 kg (7,921 lb.)	4089 kg (9,015 lb.)	3846 kg (8,478 lb.)	2878 kg (6,346 lb.)†	3180 kg (7,011 lb.)†
B	2713 kg (5,980 lb.)	2686 kg (5,922 lb.)	2466 kg (5,437 lb.)	2444 kg (5,388 lb.)	2245 kg (4,950 lb.)	2090 kg (4,607 lb.)
C	2370 kg (5,226 lb.)	2363 kg (5,210 lb.)	2171 kg (4,786 lb.)	2165 kg (4,773 lb.)	1790 kg (3,947 lb.)	1696 kg (3,740 lb.)
D	2317 kg (5,109 lb.)	2319 kg (5,114 lb.)	2124 kg (4,683 lb.)	2126 kg (4,688 lb.)	1607 kg (3,543 lb.)	1533 kg (3,380 lb.)
E	2150 kg (4,739 lb.)	2117 kg (4,666 lb.)	1950 kg (4,299 lb.)	1920 kg (4,232 lb.)	1528 kg (3,369 lb.)	1465 kg (3,229 lb.)
F	1682 kg (3,708 lb.)	1680 kg (3,704 lb.)	1489 kg (3,283 lb.)	1488 kg (3,280 lb.)	1475 kg (3,251 lb.)	1457 kg (3,212 lb.)
G	1655 kg (3,648 lb.)	1657 kg (3,653 lb.)	1467 kg (3,234 lb.)	1469 kg (3,239 lb.)	1322 kg (2,915 lb.)	1303 kg (2,873 lb.)
H	1590 kg (3,506 lb.)	1593 kg (3,513 lb.)	1409 kg (3,106 lb.)	1412 kg (3,112 lb.)	1080 kg (2,380 lb.)	1046 kg (2,307 lb.)
I	1523 kg (3,358 lb.)	1526 kg (3,365 lb.)	1347 kg (2,969 lb.)	1349 kg (2,975 lb.)	883 kg (1,946 lb.)	—
J	1459 kg (3,217 lb.)	1462 kg (3,223 lb.)	1286 kg (2,836 lb.)	1289 kg (2,841 lb.)	1057 kg (2,331 lb.)	992 kg (2,188 lb.)
K	1400 kg (3,086 lb.)	1402 kg (3,091 lb.)	1230 kg (2,711 lb.)	1232 kg (2,716 lb.)	1080 kg (2,381 lb.)	1043 kg (2,299 lb.)
L	1345 kg (2,965 lb.)	1347 kg (2,970 lb.)	1177 kg (2,595 lb.)	1179 kg (2,600 lb.)	1070 kg (2,359 lb.)	1047 kg (2,309 lb.)
M	1295 kg (2,855 lb.)	1297 kg (2,859 lb.)	1129 kg (2,489 lb.)	1131 kg (2,493 lb.)	1049 kg (2,312 lb.)	1035 kg (2,281 lb.)
N	1249 kg (2,754 lb.)	1251 kg (2,758 lb.)	1084 kg (2,391 lb.)	1086 kg (2,395 lb.)	1023 kg (2,255 lb.)	1016 kg (2,239 lb.)
O	1207 kg (2,662 lb.)	1209 kg (2,666 lb.)	1044 kg (2,302 lb.)	1046 kg (2,306 lb.)	996 kg (2,195 lb.)	993 kg (2,190 lb.)
P	1171 kg (2,581 lb.)	1172 kg (2,584 lb.)	1008 kg (2,222 lb.)	1010 kg (2,226 lb.)	968 kg (2,135 lb.)	970 kg (2,139 lb.)
Q	1140 kg (2,514 lb.)	1142 kg (2,517 lb.)	978 kg (2,156 lb.)	979 kg (2,159 lb.)	942 kg (2,077 lb.)	948 kg (2,089 lb.)
R	1131 kg (2,494 lb.)	1130 kg (2,492 lb.)	966 kg (2,129 lb.)	965 kg (2,128 lb.)	918 kg (2,023 lb.)	926 kg (2,041 lb.)
S	—	—	—	—	895 kg (1,972 lb.)	906 kg (1,997 lb.)
T	—	—	—	—	874 kg (1,926 lb.)	888 kg (1,958 lb.)
U	—	—	—	—	856 kg (1,886 lb.)	873 kg (1,925 lb.)
V	—	—	—	—	842 kg (1,855 lb.)	863 kg (1,903 lb.)
W	—	—	—	—	834 kg (1,840 lb.)	861 kg (1,899 lb.)
X	—	—	—	—	844 kg (1,860 lb.)	879 kg (1,937 lb.)
Y	—	—	—	—	955 kg (2,105 lb.)	997 kg (2,198 lb.)

**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*

†Reach of 305 mm (12 in.) for the 310L EP and 152 mm (6 in.) for the 310L.



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended



310SL SPECIFICATIONS

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Engine	**310SL**	
Manufacturer and Model	John Deere PowerTech™ EWL 4045HL050 turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	
Gross Peak Power	78 kW (105 hp) at 1,600 rpm	
Net Peak Power (ISO 9249)	77 kW (103 hp) at 1,600 rpm	
Net Peak Torque (ISO 9249)	459 Nm (339 lb.-ft.) at 1,600 rpm	
Net Torque Rise	43%	
Lubrication	Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve	
Cooling		
Fan Type	Electronically controlled, variable-rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water	
Powertrain		
Transmission	5-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; standard AutoShift	
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine, Measured with 19.5L-24 Rear Tires	*Forward*	*Reverse*
Gear 1	5.3 km/h (3.3 mph)	6.8 km/h (4.2 mph)
Gear 2	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)
Gear 3	20.4 km/h (12.7 mph)	20.1 km/h (12.5 mph)
Gear 4	37.1 km/h (23.1 mph)	—
Gear 5	40.0 km/h (24.9 mph)	—
Axles		
Axle Oscillation, Stop to Stop, Front Axle	22 deg.	
Axle Ratings	*Front*	*Rear*
SAE J43	5500 kg (12,100 lb.)	7000 kg (15,400 lb.)
Dynamic	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	26 500 kg (58,400 lb.)	26 500 kg (58,400 lb.)
Ultimate	44 000 kg (97,000 lb.)	44 000 kg (97,000 lb.)
Differentials		
Mechanical-Front-Wheel-Drive (MFWD) Axle	Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering	
Axle	*MFWD*	*Non-Powered Front*
Curb-Turning Radius		
With Brakes	3.52 m (11 ft. 7 in.)	3.56 m (11 ft. 8 in.)
Without Brakes	4.02 m (13 ft. 2 in.)	4.17 m (13 ft. 8 in.)
Bucket-Clearance Circle		
With Brakes	10.05 m (33 ft. 0 in.)	10.22 m (33 ft. 6 in.)
Without Brakes	10.81 m (35 ft. 6 in.)	11.13 m (36 ft. 6 in.)
Steering Wheel Turns (lock to lock)	2.6 to 3.6	3.2
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears	
Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 4 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		
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm, Backhoe and Loader	159 L/m (42 gpm)	
System Relief Pressure		
Backhoe	24 993 kPa (3,625 psi)	
Lift Mode	27 579 kPa (4,000 psi)	
Loader	24 993 kPa (3,625 psi)	
Controls		
Backhoe	2-lever mechanical standard; pilot controls with pattern select and auxiliary functions optional; field kits available for additional mechanical control options	
Loader	Single-lever control with electric clutch cutoff switch and MFWD (momentary) standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional	

310SL SPECIFICATIONS

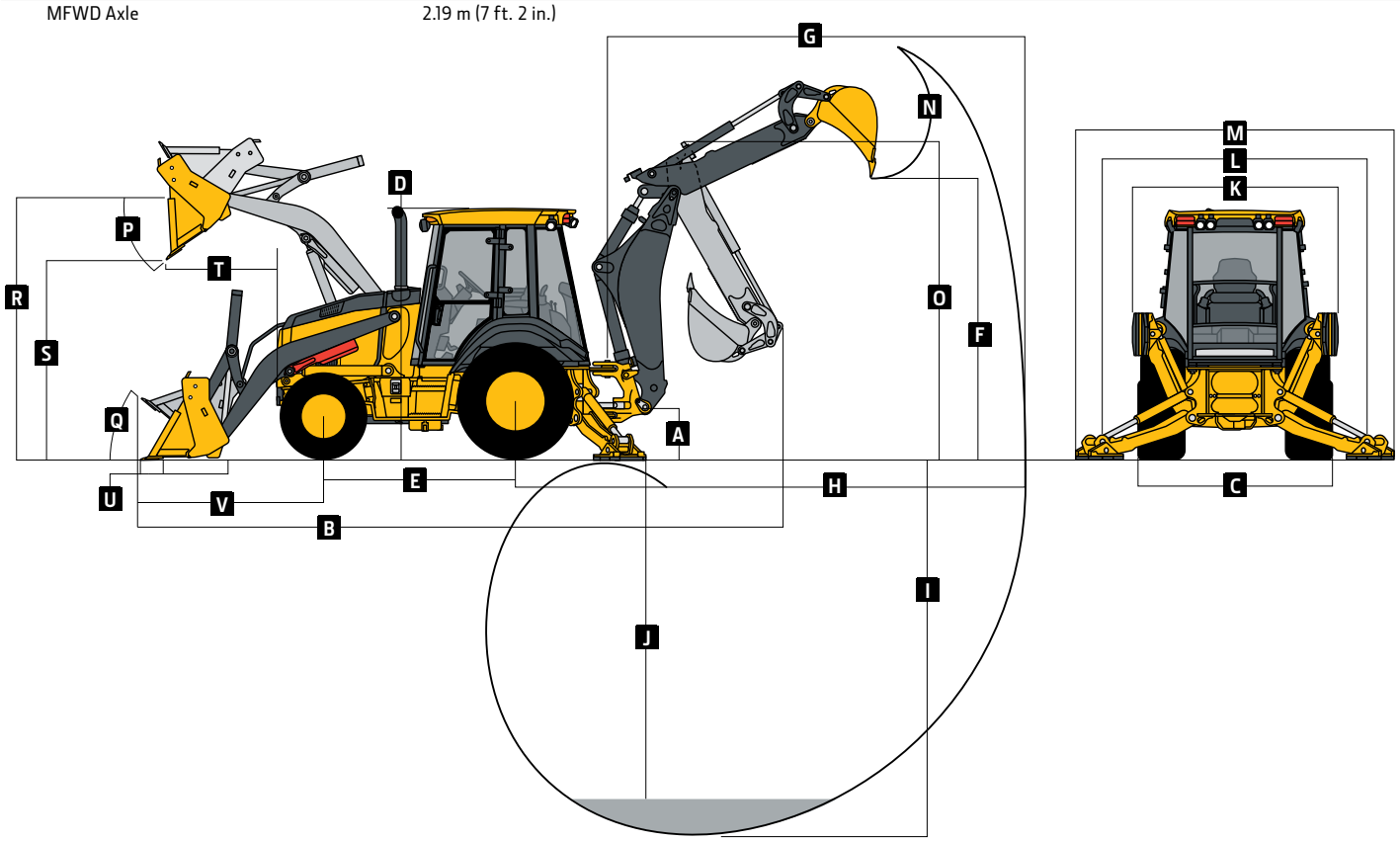


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Cylinders	**310SL**		
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	*Rod Diameter*	*Stroke*
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	789 mm (31.08 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
Backhoe Boom (1)	120 mm (4.72 in.)	56 mm (2.20 in.)	794 mm (31.26 in.)
Backhoe Crowd (1)	115 mm (4.53 in.)	63 mm (2.48 in.)	602.5 mm (23.72 in.)
Backhoe Bucket (1)	90 mm (3.54 in.)	56 mm (2.20 in.)	810 mm (31.89 in.)
Heavy-Duty Option	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
Backhoe Extendable Dipperstick (1)	70 mm (2.76 in.)	40 mm (1.57 in.)	1062 mm (41.81 in.)
Backhoe Stabilizer (2)			
Standard	90 mm (3.54 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Extended Optional	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
MFWD (1)	65 mm (2.56 in.)	40 mm (1.57 in.)	210 mm (8.27 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	145 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; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station			
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and canopy		
Tires/Wheels			
	Front	*Rear*	
Non-Powered Front Axle	12.5/80-18 F3 (12)	19.5L-24 R4 (12)	
	14.5/75-16.1 F3 (16)	19.5L-24 R4 (12)	
With MFWD	12.5/80-18 I3 (12)	19.5L-24 R4 (10)	
	12.5/80-18 R4 (10)	19.5L-24 R4 (12)	
	12.5/80-18 I3 (12)	21L-24 R4 (12)	
	12.5/80-18 R4 (10)	21L-24 R4 (12)	
	340/80R18 XMCL	500/70R24 XMCL	
	340/80R18 550	500/70R24 550	
	340/80R18 580	500/70R24 580	
Serviceability			
Refill Capacities			
Cooling System			
Cab	27.5 L (29.1 qt.)		
Canopy	25.7 L (27.2 qt.)		
Rear Axle	18 L (19 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	128.7 L (34 gal.)		
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)		
Hydraulic System	126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)		
MFWD Housing			
Axle	6.5 L (6.9 qt.)		
Planetary (each)	0.9 L (1 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Bumper	7199 kg (15,872 lb.)		
Typical with Cab, Extendable Dipperstick, and 340-kg (750 lb.) Counterweight	8025 kg (17,692 lb.)		
Optional Components (weight difference between base equipment and option)			
Cab	263 kg (580 lb.)		
MFWD with Tires	220 kg (485 lb.)		
Extendable Dipperstick	222 kg (490 lb.)		
Front Loader Coupler	257 kg (566 lb.)		
Backhoe Bucket Coupler	63 kg (138 lb.)		

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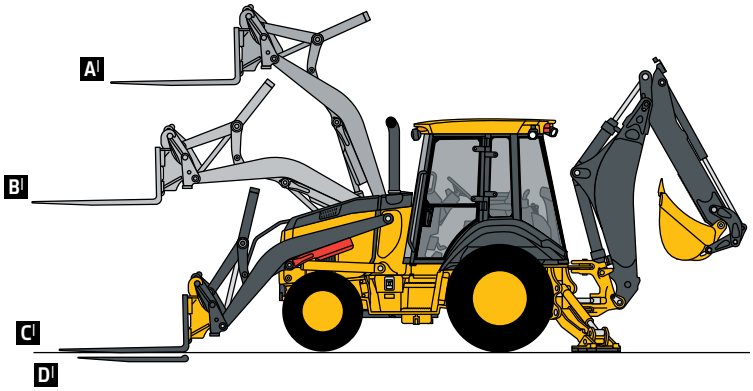
Overall Dimensions	310SL
A Ground Clearance, Minimum	330 mm (13 in.)
B Overall Length, Transport	7.28 m (23 ft. 11 in.)
C Width Over Tires	2.20 m (7 ft. 3 in.)
D Height to Top of ROPS/Cab	2.79 m (9 ft. 2 in.)
E Length from Axle to Axle	
Non-Powered Front Axle	2.16 m (7 ft. 1 in.)
MFWD Axle	2.19 m (7 ft. 2 in.)

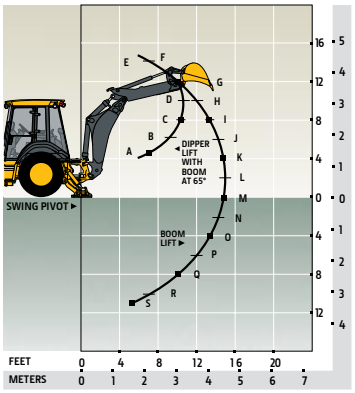


Backhoe Dimensions and Performance			
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.			
Bucket Range	305–762 mm (12–30 in.)		
Digging Force			
Bucket Cylinder	55.0 kN (12,356 lb.)		
Lift Mode	60.6 kN (13,634 lb.)		
With Heavy-Duty Cylinder Option	67.8 kN (15,254 lb.)		
Lift Mode	74.9 kN (16832 lb.)		
Crowd Cylinder	36.6 kN (8,229 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		
		With Optional Extendable Dipperstick	
	With Standard Backhoe	*Retracted*	*Extended*
F Loading Height, Truck Loading Position	3.42 m (11 ft. 3 in.)	3.54 m (11 ft. 7 in.)	4.16 m (13 ft. 8 in.)
G Reach from Center of Swing Pivot	5.52 m (18 ft. 1 in.)	5.61 m (18 ft. 5 in.)	6.62 m (21 ft. 9 in.)
H Reach from Center of Rear Axle	6.58 m (21 ft. 7 in.)	6.68 m (21 ft. 11 in.)	7.68 m (25 ft. 2 in.)
I Digging Depth (SAE maximum)	4.35 m (14 ft. 3 in.)	4.50 m (14 ft. 9 in.)	5.55 m (18 ft. 2 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.32 m (14 ft. 2 in.)	4.45 m (14 ft. 7 in.)	5.51 m (18 ft. 1 in.)
2440-mm (8 ft.) Flat Bottom	3.99 m (13 ft. 1 in.)	4.13 m (13 ft. 7 in.)	5.25 m (17 ft. 3 in.)
K Stabilizer Width, Transport	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)
L Stabilizer Spread, Operating			
Standard Stabilizers	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)	3.10 m (10 ft. 2 in.)
Extended Stabilizers	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
M Stabilizer Overall Width, Operating			
Standard Stabilizers	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)	3.53 m (11 ft. 7 in.)
Extended Stabilizers	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.48 m (11 ft. 5 in.)	3.49 m (11 ft. 5 in.)	3.49 m (11 ft. 5 in.)

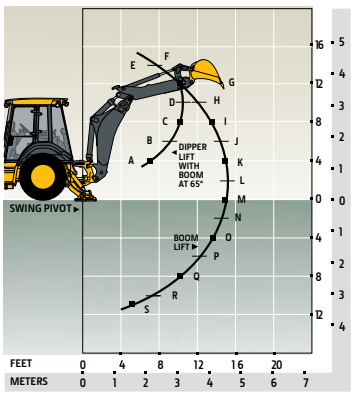
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Loader Dimensions and Performance		310SL			
P	Bucket Dump Angle, Maximum	45 deg.			
Q	Rollback Angle at Ground Level	40 deg.			
		Heavy-duty	*Heavy-duty long lip*	*Heavy-duty*	*Multipurpose*
Bucket Capacity		0.86 m³ (1.12 cu. yd.)	0.96 m³ (1.25 cu. yd.)	1.00 m³ (1.31 cu. yd.)	1.00 m³ (1.31 cu. yd.)
Width		2184 mm (86 in.)	2184 mm (86 in.)	2337 mm (92 in.)	2337 mm (92 in.)
Weight		390 kg (860 lb.)	405 kg (892 lb.)	521 kg (1,148 lb.)	863 kg (1,902 lb.)
Breakout Force		49.2 kN (11,052 lb.)	46.4 kN (10,442 lb.)	46.9 kN (10,541 lb.)	43.2 kN (9,722 lb.)
Lift Capacity, Full Height		3492 kg (7,698 lb.)	3224 kg (7,108 lb.)	3352 kg (7,390 lb.)	2862 kg (6,309 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.47 m (11 ft. 5 in.)	3.47 m (11 ft. 5 in.)	3.47 m (11 ft. 5 in.)	3.47 m (11 ft. 5 in.)
S	Dump Clearance, Bucket at 45 deg.	2.76 m (9 ft. 1 in.)	2.66 m (8 ft. 9 in.)	2.70 m (8 ft. 10 in.)	2.67 m (8 ft. 9 in.)
T	Reach at Full Height, Bucket at 45 deg.	678 mm (26.7 in.)	804 mm (31.7 in.)	675 mm (26.6 in.)	716 mm (28.2 in.)
U	Digging Depth Below Ground, Bucket Level	83 mm (3.3 in.)	64 mm (2.5 in.)	128 mm (5.0 in.)	124 mm (4.9 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	1.96 m (6 ft. 5 in.)	2.10 m (6 ft. 11 in.)	2.03 m (6 ft. 8 in.)	2.08 m (6 ft. 10 in.)
Lift Capacity with Quick-Coupler Forks					
Hydraulic Capacity		*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*		
A[I]	Maximum Height	2067 kg (4,558 lb.)	1932 kg (4,260 lb.)		
B[I]	Maximum Reach	3183 kg (7,017 lb.)	3001 kg (6,617 lb.)		
C[I]	At Ground Line	4020 kg (8,863 lb.)	3768 kg (8,306 lb.)		
D[I]	Below Ground Line	198 mm (7.8 in.)	198 mm (7.8 in.)		

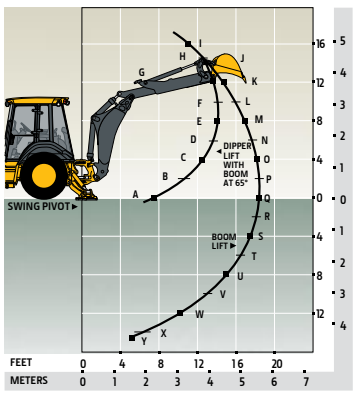




With Standard Dipperstick



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

Lift Capacities

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

	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*	
	Standard Lift	*Lift Mode*	*Standard Lift*	*Lift Mode*	*Standard Lift*	*Lift Mode*
A	4782 kg (10,543 lb.)	4858 kg (10,710 lb.)	4604 kg (10,151 lb.)	4604 kg (10,151 lb.)	3554 kg (7,834 lb.)	3946 kg (8,699 lb.)
B	3673 kg (8,097 lb.)	3673 kg (8,097 lb.)	3251 kg (7,166 lb.)	3251 kg (7,166 lb.)	2480 kg (5,468 lb.)	2758 kg (6,081 lb.)
C	3236 kg (7,135 lb.)	3236 kg (7,135 lb.)	2913 kg (6,423 lb.)	2913 kg (6,423 lb.)	2156 kg (4,753 lb.)	2399 kg (5,290 lb.)
D	3168 kg (6,985 lb.)	3168 kg (6,985 lb.)	2859 kg (6,302 lb.)	2859 kg (6,302 lb.)	2012 kg (4,436 lb.)	2185 kg (4,817 lb.)
E	3038 kg (6,698 lb.)	3364 kg (7,415 lb.)	2619 kg (5,775 lb.)	2912 kg (6,420 lb.)	1918 kg (4,228 lb.)	2087 kg (4,601 lb.)
F	1839 kg (4,054 lb.)	2051 kg (4,522 lb.)	1488 kg (3,281 lb.)	1678 kg (3,699 lb.)	1830 kg (4,034 lb.)	2038 kg (4,493 lb.)
G	1936 kg (4,269 lb.)	2165 kg (4,773 lb.)	1635 kg (3,604 lb.)	1846 kg (4,070 lb.)	1715 kg (3,782 lb.)	1912 kg (4,214 lb.)
H	1918 kg (4,228 lb.)	2147 kg (4,734 lb.)	1652 kg (3,643 lb.)	1869 kg (4,120 lb.)	1525 kg (3,362 lb.)	1701 kg (3,749 lb.)
I	1873 kg (4,128 lb.)	2099 kg (4,628 lb.)	1633 kg (3,599 lb.)	1850 kg (4,078 lb.)	1059 kg (2,334 lb.)	1198 kg (2,641 lb.)
J	1820 kg (4,013 lb.)	2043 kg (4,504 lb.)	1599 kg (3,526 lb.)	1815 kg (4,001 lb.)	1187 kg (2,616 lb.)	1344 kg (2,962 lb.)
K	1768 kg (3,897 lb.)	1986 kg (4,379 lb.)	1562 kg (3,443 lb.)	1775 kg (3,913 lb.)	1236 kg (2,726 lb.)	1401 kg (3,089 lb.)
L	1717 kg (3,786 lb.)	1932 kg (4,259 lb.)	1524 kg (3,360 lb.)	1735 kg (3,825 lb.)	1253 kg (2,763 lb.)	1422 kg (3,135 lb.)
M	1671 kg (3,685 lb.)	1882 kg (4,150 lb.)	1489 kg (3,283 lb.)	1698 kg (3,743 lb.)	1254 kg (2,765 lb.)	1425 kg (3,141 lb.)
N	1630 kg (3,594 lb.)	1838 kg (4,053 lb.)	1458 kg (3,214 lb.)	1665 kg (3,671 lb.)	1247 kg (2,749 lb.)	1418 kg (3,127 lb.)
O	1596 kg (3,518 lb.)	1802 kg (3,972 lb.)	1443 kg (3,160 lb.)	1640 kg (3,615 lb.)	1236 kg (2,724 lb.)	1407 kg (3,102 lb.)
P	1571 kg (3,463 lb.)	1776 kg (3,916 lb.)	1419 kg (3,128 lb.)	1626 kg (3,585 lb.)	1223 kg (2,696 lb.)	1394 kg (3,073 lb.)
Q	1563 kg (3,447 lb.)	1771 kg (3,904 lb.)	1424 kg (3,140 lb.)	1635 kg (3,605 lb.)	1210 kg (2,667 lb.)	1381 kg (3,044 lb.)
R	1609 kg (3,547 lb.)	1827 kg (4,027 lb.)	1486 kg (3,276 lb.)	1710 kg (3,769 lb.)	1198 kg (2,642 lb.)	1369 kg (3,019 lb.)
S	1735 kg (3,824 lb.)	1975 kg (4,353 lb.)	1604 kg (3,537 lb.)	1849 kg (4,076 lb.)	1190 kg (2,622 lb.)	1361 kg (3,001 lb.)
T	—	—	—	—	1186 kg (2,614 lb.)	1359 kg (2,995 lb.)
U	—	—	—	—	1190 kg (2,623 lb.)	1365 kg (3,009 lb.)
V	—	—	—	—	1208 kg (2,664 lb.)	1388 kg (3,061 lb.)
W	—	—	—	—	1261 kg (2,780 lb.)	1451 kg (3,199 lb.)
X	—	—	—	—	1446 kg (3,188 lb.)	1666 kg (3,674 lb.)
Y	—	—	—	—	1986 kg (4,377 lb.)	2289 kg (5,047 lb.)

**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*



310SL HL *SPECIFICATIONS*

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Engine	**310SL HL**	
Manufacturer and Model	John Deere PowerTech™ EWL 4045HL050 turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	
Gross Peak Power	86 kW (115 hp) at 1,900 rpm	
Net Peak Power (ISO 9249)	84 kW (113 hp) at 1,900 rpm	
Net Peak Torque (ISO 9249)	459 Nm (339 lb.-ft.) at 1,600 rpm	
Net Torque Rise	30%	
Lubrication	Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve	
Cooling		
Fan Type	Electronically controlled, variable rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water	
Powertrain		
Transmission	5-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; standard AutoShift	
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine, Measured with 21L-24 Rear Tires	*Forward*	*Reverse*
Gear 1	5.6 km/h (3.5 mph)	7.1 km/h (4.4 mph)
Gear 2	10.2 km/h (6.3 mph)	12.9 km/h (8.0 mph)
Gear 3	21.1 km/h (13.1 mph)	20.8 km/h (12.9 mph)
Gear 4	38.4 km/h (23.9 mph)	—
Gear 5	40.0 km/h (24.9 mph)	—
Axles		
Axle Oscillation, Stop to Stop, Front Axle	22 deg.	
Axle Ratings	*Front*	*Rear*
SAE J43	5500 kg (12,100 lb.)	7000 kg (15,400 lb.)
Dynamic	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	26 500 kg (58,400 lb.)	26 500 kg (58,400 lb.)
Ultimate	43 500 kg (95,900 lb.)	43 500 kg (95,900 lb.)
Differentials		
Mechanical-Front-Wheel-Drive (MFWD) Axle	Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering	
Axle	*MFWD*	*Non-Powered Front*
Curb-Turning Radius		
With Brakes	3.53 m (11 ft. 7 in.)	3.45 m (11 ft. 4 in.)
Without Brakes	4.02 m (13 ft. 2 in.)	3.90 m (12 ft. 10 in.)
Bucket-Clearance Circle		
With Brakes	10.09 m (33 ft. 1 in.)	10.02 m (32 ft. 10 in.)
Without Brakes	10.83 m (35 ft. 6 in.)	10.69 m (35 ft. 1 in.)
Steering Wheel Turns (lock to lock)	2.6 to 3.6	3.1 to 4.3
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears	
Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 4 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		
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm, Backhoe and Loader	159 L/m (42 gpm)	
System Relief Pressure		
Backhoe	24 993 kPa (3,625 psi)	
Lift Mode	27 579 kPa (4,000 psi)	
Loader	24 993 kPa (3,625 psi)	
Controls		
Backhoe	Pilot controls with pattern select standard; electrohydraulic (EH) auxiliary functions optional	
Loader	Single-lever control with electric clutch cutoff switch and MFWD (momentary) standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional	

310SL HL *SPECIFICATIONS*



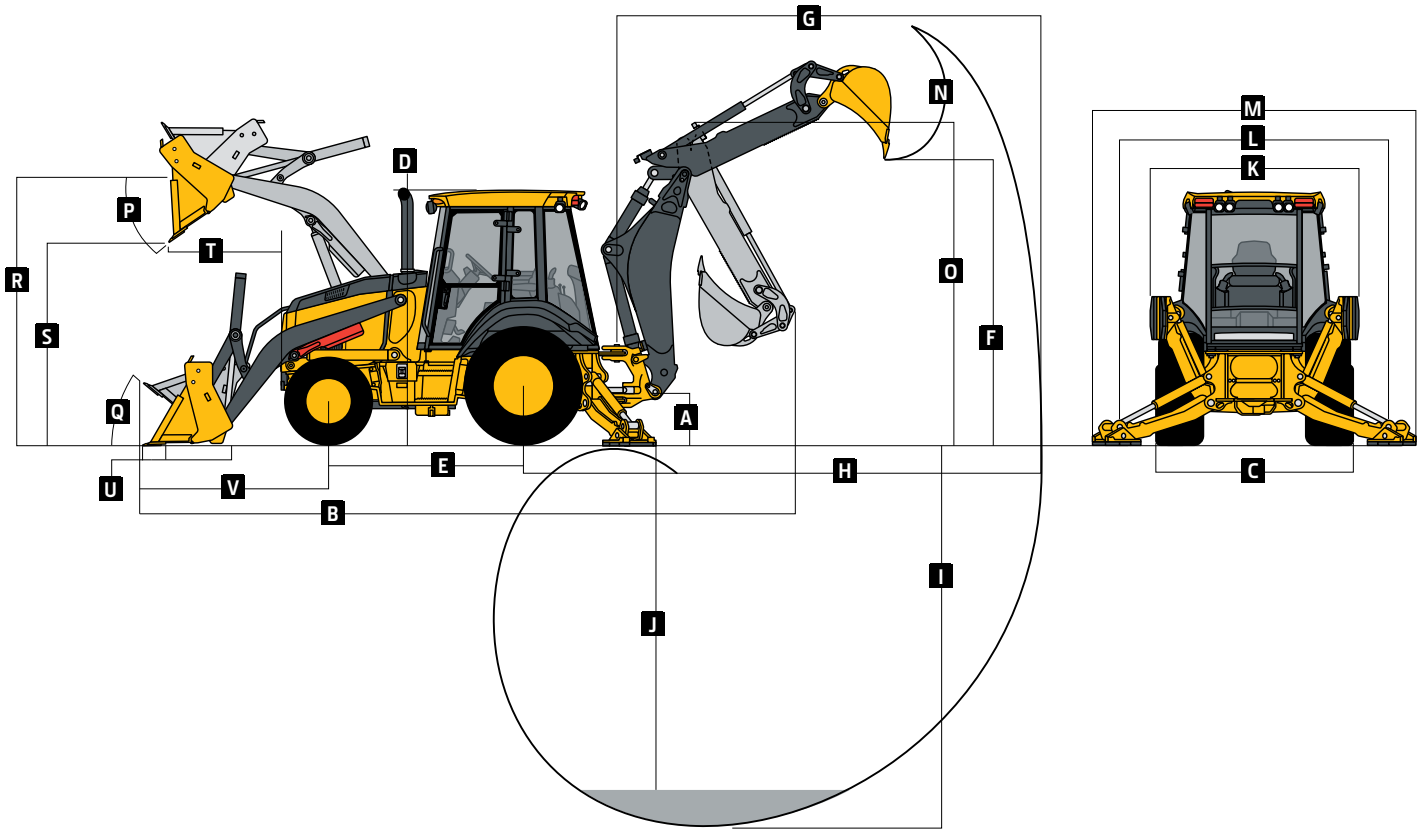
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Cylinders	**310SL HL**		
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	*Rod Diameter*	*Stroke*
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
Backhoe Boom (1)	125 mm (4.92 in.)	63 mm (2.48 in.)	887 mm (34.92 in.)
Backhoe Crowd (1)	120 mm (4.72 in.)	63 mm (2.48 in.)	591 mm (23.27 in.)
Backhoe Bucket (1)	90 mm (3.54 in.)	56 mm (2.20 in.)	810 mm (31.89 in.)
Heavy-Duty Option	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
Backhoe Extendable Dipperstick (1)	80 mm (3.15 in.)	45 mm (1.77 in.)	1062 mm (41.81 in.)
Backhoe Stabilizer, Extended (2)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
MFWD (1)	65 mm (2.56 in.)	40 mm (1.57 in.)	210 mm (8.27 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	145 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; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station			
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional canopy		
Tires/Wheels			
	Front	*Rear*	
Non-Powered Front Axle	12.5/80-18 F3 (12)	19.5L-24 R4 (12)	
With MFWD	12.5/80-18 I3 (12)	19.5L-24 R4 (10)	
	12.5/80-18 R4 (10)	19.5L-24 R4 (12)	
	12.5/80-18 I3 (12)	21L-24 R4 (12)	
	12.5/80-18 R4 (10)	21L-24 R4 (12)	
	340/80R18 XMCL	500/70R24 XMCL	
	340/80R18 550	500/70R24 550	
	340/80R18 580	500/70R24 580	
Serviceability			
Refill Capacities			
Cooling System			
Cab	27.5 L (29.1 qt.)		
Canopy	25.7 L (27.2 qt.)		
Rear Axle	18 L (19 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	128.7 L (34 gal.)		
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)		
Hydraulic System	126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)		
MFWD Housing			
Axle	6.5 L (6.9 qt.)		
Planetary (each)	0.9 L (1 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Standard Bumper	7516 kg (16,571 lb.)		
Typical with Cab, Extendable Dipperstick, and 454-kg (1,000 lb.) Counterweight	8495 kg (18,729 lb.)		
Optional Components (weight difference between base equipment and option)			
Cab	263 kg (580 lb.)		
MFWD with Tires	110 kg (242 lb.)		
Extendable Dipperstick	271 kg (578 lb.)		
Front Loader Coupler	257 kg (566 lb.)		
Backhoe Bucket Coupler	64 kg (141 lb.)		

310SL HL

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Overall Dimensions		310SL HL
A	Ground Clearance, Minimum	310 mm (12 in.)
B	Overall Length, Transport	7.37 m (24 ft. 2 in.)
C	Width Over Tires	2.34 m (7 ft. 8 in.)
D	Height to Top of ROPS/Cab	2.81 m (9 ft. 3 in.)
E	Length from Axle to Axle	
	Non-Powered Front Axle	2.16 m (7 ft. 1 in.)
	MFWD Axle	2.19 m (7 ft. 2 in.)

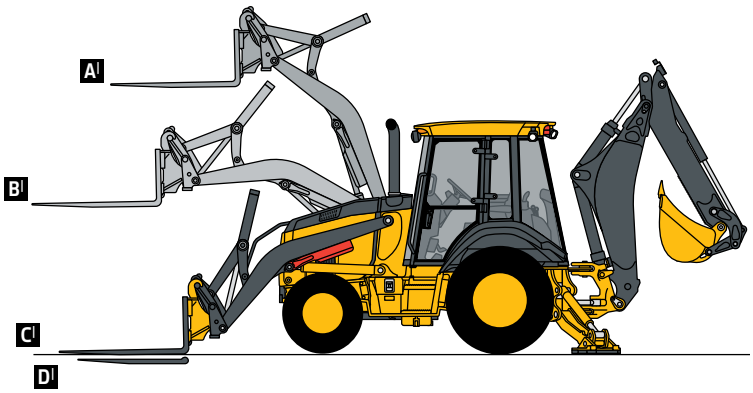


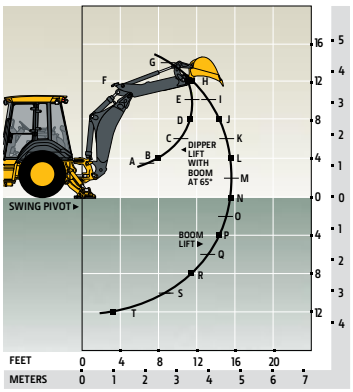
Backhoe Dimensions and Performance				
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.				
Bucket Range		305–610 mm (12–24 in.)		
Digging Force				
	Bucket Cylinder	69.9 kN (15,723 lb.)		
	Lift Mode	77.2 kN (17,349 lb.)		
	Crowd Cylinder	38.2 kN (8,581 lb.)		
	Lift Mode	42.1 kN (9,468 lb.)		
Swing Arc		180 deg.		
Operator Control		2 levers		
			With Optional Extendable Dipperstick	
		With Standard Backhoe	*Retracted*	*Extended*
F	Loading Height, Truck Loading Position	3.63 m (11 ft. 11 in.)	3.62 m (11 ft. 10 in.)	4.24 m (13 ft. 11 in.)
G	Reach from Center of Swing Pivot	5.68 m (18 ft. 8 in.)	5.62 m (18 ft. 5 in.)	6.61 m (21 ft. 8 in.)
H	Reach from Center of Rear Axle	6.74 m (22 ft. 1 in.)	6.68 m (21 ft. 11 in.)	7.67 m (25 ft. 2 in.)
I	Digging Depth (SAE maximum)	4.59 m (15 ft. 1 in.)	4.53 m (14 ft. 10 in.)	5.53 m (18 ft. 2 in.)
J	Digging Depth (SAE)			
	610-mm (2 ft.) Flat Bottom	4.55 m (14 ft. 11 in.)	4.49 m (14 ft. 9 in.)	5.50 m (18 ft. 0 in.)
	2440-mm (8 ft.) Flat Bottom	4.25 m (13 ft. 11 in.)	4.18 m (13 ft. 8 in.)	5.28 m (17 ft. 4 in.)
K	Stabilizer Width, Transport	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)
L	Stabilizer Spread, Operating	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
M	Stabilizer Overall Width, Operating	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N	Bucket Rotation	190 deg.	190 deg.	190 deg.
O	Transport Height	3.56 m (11 ft. 8 in.)	3.56 m (11 ft. 8 in.)	3.56 m (11 ft. 8 in.)
Loader Dimensions and Performance				
P	Bucket Dump Angle, Maximum	45 deg.		
Q	Rollback Angle at Ground Level	40 deg.		

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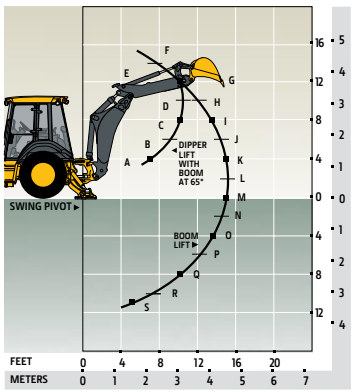
Loader Dimensions and Performance *(continued)*	**310SL HL**			
	Heavy-duty	*Heavy-duty long lip*	*Heavy-duty*	*Multipurpose*
Bucket Capacity	0.86 m^3 (1.12 cu. yd.)	0.96 m^3 (1.25 cu. yd.)	1.00 m^3 (1.31 cu. yd.)	1.00 m^3 (1.31 cu. yd.)
Width	2184 mm (86 in.)	2184 mm (86 in.)	2346 mm (92 in.)	2346 mm (92 in.)
Weight	390 kg (860 lb.)	405 kg (892 lb.)	521 kg (1,148 lb.)	863 kg (1,902 lb.)
Breakout Force	49.4 kN (11,116 lb.)	46.7 kN (10,503 lb.)	47.1 kN (10,598 lb.)	43.5 kN (9,778 lb.)
Lift Capacity, Full Height	3425 kg (7,552 lb.)	3166 kg (6,980 lb.)	3286 kg (7,244 lb.)	2801 kg (6,175 lb.)
R Height to Bucket Hinge Pin, Maximum	3.46 m (11 ft. 4 in.)	3.46 m (11 ft. 4 in.)	3.46 m (11 ft. 4 in.)	3.46 m (11 ft. 4 in.)
S Dump Clearance, Bucket at 45 deg.	2.75 m (9 ft. 0 in.)	2.65 m (8 ft. 8 in.)	2.69 m (8 ft. 10 in.)	2.66 m (8 ft. 9 in.)
T Reach at Full Height, Bucket at 45 deg.	724 mm (28.5 in.)	850 mm (33.5 in.)	720 mm (28.3 in.)	762 mm (30.0 in.)
U Digging Depth Below Ground, Bucket Level	101 mm (4.0 in.)	81 mm (3.2 in.)	145 mm (5.7 in.)	141 mm (5.6 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	1.97 m (6 ft. 5 in.)	2.11 m (6 ft. 11 in.)	2.04 m (6 ft. 8 in.)	2.09 m (6 ft. 10 in.)

Lift Capacity with Quick-Coupler Forks		
Hydraulic Capacity	*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*
A[I] Maximum Height	2028 kg (4,472 lb.)	1896 kg (4,180 lb.)
B[I] Maximum Reach	3163 kg (6,974 lb.)	2982 kg (6,575 lb.)
C[I] At Ground Line	3997 kg (8,812 lb.)	3781 kg (8,335 lb.)
D[I] Below Ground Line	216 mm (8.5 in.)	216 mm (8.5 in.)

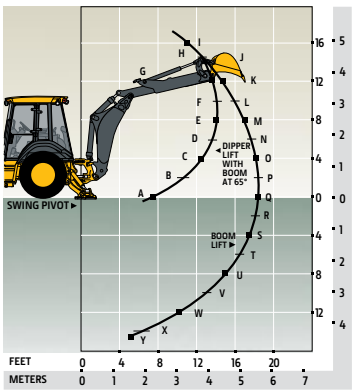




With Standard Dipperstick



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

Lift Capacities

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

	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*	
	Standard Lift	*Lift Mode*	*Standard Lift*	*Lift Mode*	*Standard Lift*	*Lift Mode*
A	5625 kg (12,402 lb.)	5625 kg (12,402 lb.)	5350 kg (11,795 lb.)	5350 kg (11,795 lb.)	4082 kg (8,999 lb.)	4537 kg (10,003 lb.)
B	4697 kg (10,356 lb.)	4697 kg (10,356 lb.)	3613 kg (7,966 lb.)	3613 kg (7,966 lb.)	2709 kg (5,972 lb.)	3018 kg (6,653 lb.)
C	3547 kg (7,819 lb.)	3547 kg (7,819 lb.)	3204 kg (7,064 lb.)	3204 kg (7,064 lb.)	2366 kg (5,216 lb.)	2638 kg (5,817 lb.)
D	3220 kg (7,098 lb.)	3220 kg (7,098 lb.)	3122 kg (6,883 lb.)	3122 kg (6,883 lb.)	2231 kg (4,918 lb.)	2412 kg (5,317 lb.)
E	3164 kg (6,976 lb.)	3164 kg (6,976 lb.)	3117 kg (6,871 lb.)	3282 kg (7,235 lb.)	2153 kg (4,747 lb.)	2295 kg (5,059 lb.)
F	3095 kg (6,823 lb.)	3327 kg (7,336 lb.)	1317 kg (2,903 lb.)	1496 kg (3,297 lb.)	2088 kg (4,604 lb.)	2268 kg (5,000 lb.)
G	1472 kg (3,244 lb.)	1645 kg (3,627 lb.)	1649 kg (3,636 lb.)	1871 kg (4,125 lb.)	2004 kg (4,418 lb.)	2236 kg (4,931 lb.)
H	1801 kg (3,971 lb.)	2016 kg (4,445 lb.)	1744 kg (3,845 lb.)	1980 kg (4,365 lb.)	1851 kg (4,080 lb.)	2067 kg (4,557 lb.)
I	1907 kg (4,204 lb.)	2136 kg (4,710 lb.)	1767 kg (3,896 lb.)	2008 kg (4,428 lb.)	904 kg (1,992 lb.)	1031 kg (2,273 lb.)
J	1940 kg (4,278 lb.)	2176 kg (4,798 lb.)	1761 kg (3,883 lb.)	2004 kg (4,418 lb.)	1152 kg (2,540 lb.)	1312 kg (2,892 lb.)
K	1944 kg (4,285 lb.)	2182 kg (4,810 lb.)	1743 kg (3,843 lb.)	1986 kg (4,378 lb.)	1267 kg (2,793 lb.)	1442 kg (3,179 lb.)
L	1933 kg (4,262 lb.)	2172 kg (4,789 lb.)	1720 kg (3,792 lb.)	1962 kg (4,326 lb.)	1326 kg (2,923 lb.)	1509 kg (3,327 lb.)
M	1918 kg (4,228 lb.)	2156 kg (4,754 lb.)	1698 kg (3,743 lb.)	1939 kg (4,275 lb.)	1356 kg (2,989 lb.)	1545 kg (3,405 lb.)
N	1902 kg (4,192 lb.)	2140 kg (4,719 lb.)	1679 kg (3,702 lb.)	1921 kg (4,235 lb.)	1370 kg (3,021 lb.)	1562 kg (3,444 lb.)
O	1889 kg (4,166 lb.)	2129 kg (4,693 lb.)	1669 kg (3,680 lb.)	1912 kg (4,215 lb.)	1376 kg (3,033 lb.)	1570 kg (3,461 lb.)
P	1886 kg (4,157 lb.)	2126 kg (4,688 lb.)	1674 kg (3,691 lb.)	1920 kg (4,234 lb.)	1377 kg (3,035 lb.)	1573 kg (3,467 lb.)
Q	1897 kg (4,183 lb.)	2142 kg (4,722 lb.)	1711 kg (3,773 lb.)	1965 kg (4,333 lb.)	1376 kg (3,034 lb.)	1574 kg (3,470 lb.)
R	1941 kg (4,279 lb.)	2194 kg (4,836 lb.)	1843 kg (4,064 lb.)	2119 kg (4,671 lb.)	1376 kg (3,034 lb.)	1576 kg (3,474 lb.)
S	2077 kg (4,578 lb.)	2350 kg (5,181 lb.)	2057 kg (4,535 lb.)	2365 kg (5,213 lb.)	1380 kg (3,042 lb.)	1582 kg (3,487 lb.)
T	3270 kg (7,210 lb.)	8176 kg (3,709 lb.)	—	—	1390 kg (3,065 lb.)	1595 kg (3,516 lb.)
U	—	—	—	—	1412 kg (3,113 lb.)	1622 kg (3,575 lb.)
V	—	—	—	—	1457 kg (3,212 lb.)	1674 kg (3,691 lb.)
W	—	—	—	—	1556 kg (3,430 lb.)	1789 kg (3,944 lb.)
X	—	—	—	—	1873 kg (4,130 lb.)	2154 kg (4,748 lb.)
Y	—	—	—	—	2846 kg (6,274 lb.)	3266 kg (7,200 lb.)

**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*



315SL SPECIFICATIONS

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.

Engine	**315SL**	
Manufacturer and Model	John Deere PowerTech™ EWL 4045HL050 turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	
Gross Peak Power	78 kW (105 hp) at 1,600 rpm	
Net Peak Power (ISO 9249)	77 kW (103 hp) at 1,600 rpm	
Net Peak Torque (ISO 9249)	459 Nm (339 lb.-ft.) at 1,600 rpm	
Net Torque Rise	43%	
Lubrication	Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve	
Cooling		
Fan Type	Electronically controlled, variable-rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water	
Powertrain		
Transmission	5-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; standard AutoShift	
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine, Measured with 16.9-28 Rear Tires	*Forward*	*Reverse*
Gear 1	5.7 km/h (3.5 mph)	7.3 km/h (4.5 mph)
Gear 2	10.6 km/h (6.6 mph)	13.4 km/h (8.3 mph)
Gear 3	21.8 km/h (13.5 mph)	21.5 km/h (13.4 mph)
Gear 4	39.7 km/h (24.7 mph)	—
Gear 5	40.0 km/h (24.9 mph)	—
Axles		
Axle Oscillation, Stop to Stop, Front Axle	22 deg.	
Axle Ratings	*Front*	*Rear*
SAE J43	5500 kg (12,100 lb.)	7500 kg (16,500 lb.)
Dynamic	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	26 000 kg (57,300 lb.)	26 500 kg (58,400 lb.)
Ultimate	42 500 kg (93,700 lb.)	42 500 kg (93,700 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	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering	
Axle	*MFWD*	*Non-Powered Front*
Curb-Turning Radius		
With Brakes	3.53 m (11 ft. 7 in.)	3.45 m (11 ft. 4 in.)
Without Brakes	4.02 m (13 ft. 2 in.)	3.90 m (12 ft. 10 in.)
Bucket-Clearance Circle		
With Brakes	10.10 m (33 ft. 2 in.)	10.04 m (32 ft. 11 in.)
Without Brakes	10.84 m (35 ft. 7 in.)	10.70 m (35 ft. 1 in.)
Steering Wheel Turns (lock to lock)	3.6	4.3
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears	
Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 4 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		
Main Pump	Open-center system; tandem gear pump with unloader	
Pump Flow at 2,200 rpm		
Backhoe	136 L/m (36 gpm)	
Loader	106 L/m (28 gpm)	
System Relief Pressure, Backhoe and Loader	24 993 kPa (3,625 psi)	
Controls		
Backhoe	2-lever mechanical standard, pilot controls with pattern select and manual and/or electric auxiliary functions optional	
Loader	Single-lever control with electric clutch cutoff switch and MFWD (momentary) standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional	

315SL SPECIFICATIONS

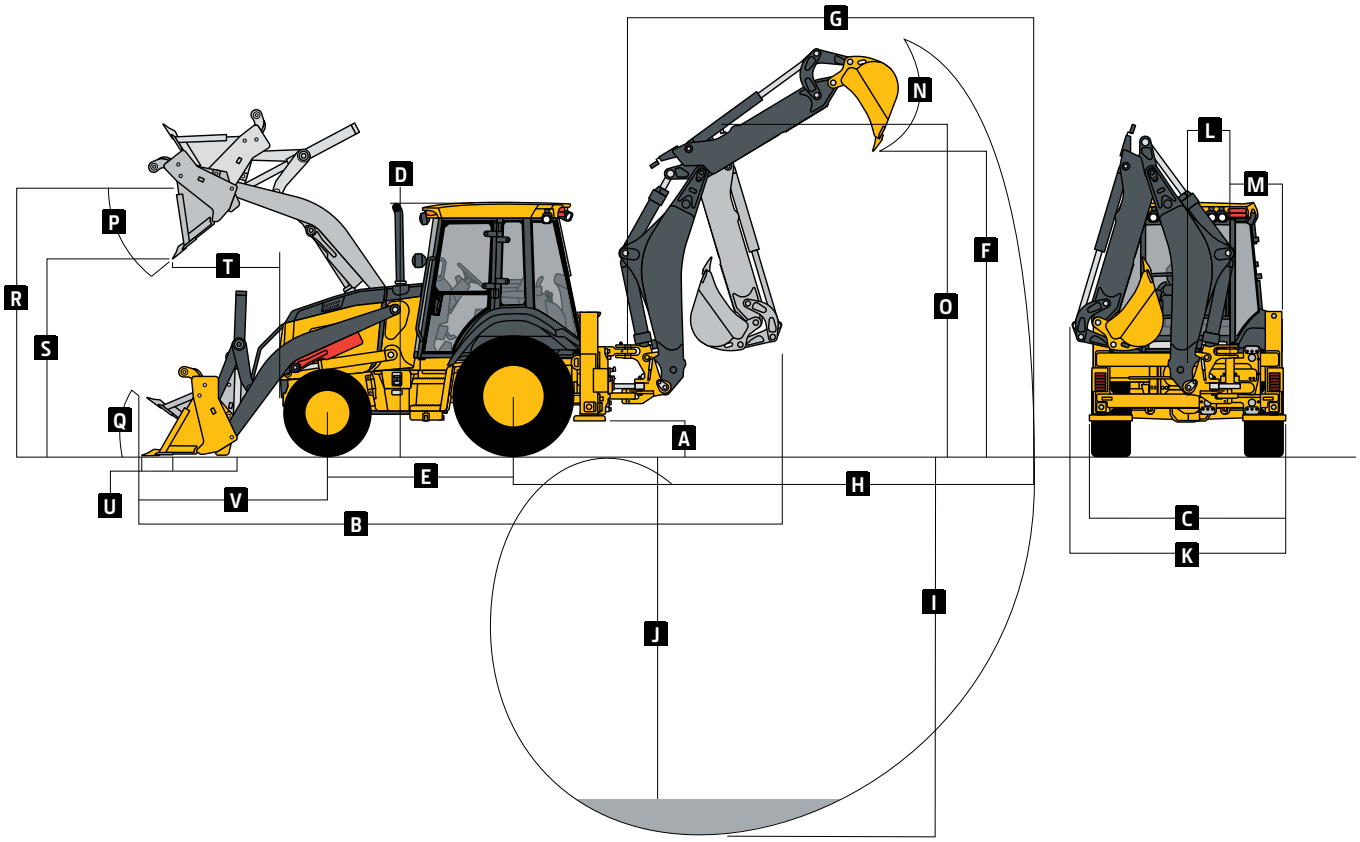


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Cylinders	**315SL**		
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	*Rod Diameter*	*Stroke*
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
Backhoe Boom (1)	120 mm (4.72 in.)	56 mm (2.20 in.)	795 mm (31.30 in.)
Backhoe Crowd (1)	115 mm (4.53 in.)	63 mm (2.48 in.)	622 mm (24.47 in.)
Backhoe Bucket (1)	90 mm (3.54 in.)	56 mm (2.20 in.)	810 mm (31.89 in.)
Heavy-Duty Option	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
Backhoe Extendable Dipperstick (1)	70 mm (2.76 in.)	40 mm (1.57 in.)	1062 mm (41.81 in.)
Backhoe Stabilizer, Standard (2)	70 mm (2.76 in.)	45 mm (1.77 in.)	716 mm (28.19 in.)
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
MFWD (1)	65 mm (2.56 in.)	40 mm (1.57 in.)	210 mm (8.27 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	145 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; front drive lamps with 55/60-watt halogen, plate lamp, reverse lamp, and front marker lamps; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station			
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional canopy		
Tires/Wheels			
	Front	*Rear*	
Non-Powered Front Axle	12.5/80-18 F3 (12)	19.5L-24 R4 (12)	
	14.5/75-16.1 F3 (16)	19.5L-24 R4 (12)	
	12.5/80-18 F3 (12)	16.9L-28 R4 (12)	
With MFWD	12.5/80-18 I3 (12)	19.5L-24 R4 (10)	
	12.5/80-18 R4 (10)	19.5L-24 R4 (12)	
	12.5/80-18 I3 (12)	21L-24 R4 (12)	
	12.5/80-18 R4 (10)	21L-24 R4 (12)	
	12.5/80-18 R4 (10)	16.9L-28 R4 (12)	
	340/80R18 XMCL	500/70R24 XMCL	
	340/80R18 550	550/70R24 550	
	340/80R18 580	500/70R24 580	
	340/80R18 550	440/80R28 550	
Serviceability			
Refill Capacities			
Cooling System			
Cab	27.5 L (29.1 qt.)		
Canopy	25.7 L (27.2 qt.)		
Rear Axle	18 L (19 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	128.7 L (34 gal.)		
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)		
Hydraulic System	126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)		
MFWD Housing			
Axle	6.5 L (6.9 qt.)		
Planetary (each)	0.9 L (1 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Bumper	7962 kg (17,554 lb.)		
Typical with Extendable Dipperstick and 204-kg (450 lb.) Counterweight	8389 kg (18,494 lb.)		
Optional Components (weight difference between base equipment and option)			
MFWD with Tires	220 kg (485 lb.)		
Cab	263 kg (580 lb.)		
Extendable Dipperstick	222 kg (490 lb.)		

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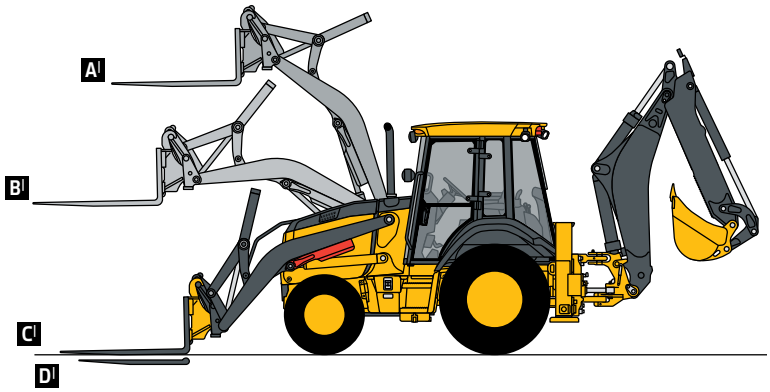
Overall Dimensions		315SL
A	Ground Clearance, Minimum	351 mm (14 in.)
B	Overall Length, Transport	5.96 m (19 ft. 7 in.)
C	Stabilizer Spread	2.26 m (7 ft. 5 in.)
D	Height to Top of ROPS/Cab	2.84 m (9 ft. 4 in.)
E	Length from Axle to Axle	
	Non-Powered Front Axle	2.16 m (7 ft. 1 in.)
	MFWD Axle	2.19 m (7 ft. 2 in.)



Backhoe Dimensions and Performance				
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.				
Bucket Range		305–762 mm (12–30 in.)		
Digging Force				
	Bucket Cylinder	55.0 kN (12,361 lb.)		
	With Heavy-Duty Cylinder Option	67.9 kN (15,260 lb.)		
	Crowd Cylinder	36.6 kN (8,231 lb.)		
Swing Arc		180 deg.		
Operator Control		2 levers		
			With Optional Extendable Dipperstick	
		With Standard Backhoe	*Retracted*	*Extended*
F	Loading Height, Truck Loading Position	3.65 m (12 ft. 0 in.)	3.77 m (12 ft. 5 in.)	4.39 m (14 ft. 5 in.)
G	Reach from Center of Swing Pivot	5.44 m (17 ft. 10 in.)	5.61 m (18 ft. 5 in.)	6.62 m (21 ft. 9 in.)
H	Reach from Center of Rear Axle	6.80 m (22 ft. 4 in.)	6.98 m (22 ft. 11 in.)	7.98 m (26 ft. 2 in.)
I	Digging Depth (SAE maximum)	4.08 m (13 ft. 5 in.)	4.24 m (13 ft. 11 in.)	5.29 m (17 ft. 4 in.)
J	Digging Depth (SAE)			
	610-mm (2 ft.) Flat Bottom	4.03 m (13 ft. 3 in.)	4.20 m (13 ft. 9 in.)	5.26 m (17 ft. 3 in.)
	2440-mm (8 ft.) Flat Bottom	3.68 m (12 ft. 1 in.)	3.87 m (12 ft. 8 in.)	5.00 m (16 ft. 5 in.)
K	Overall Width (less loader bucket)	2.43 m (8 ft. 0 in.)	2.41 m (7 ft. 11 in.)	—
L	Side-Shift from Tractor Centerline	537 mm (21 in.)	537 mm (21 in.)	537 mm (21 in.)
M	Wall to Swing Centerline	604 mm (24 in.)	604 mm (24 in.)	604 mm (24 in.)
N	Bucket Rotation	190 deg.	190 deg.	190 deg.
O	Transport Height	3.71 m (12 ft. 2 in.)	3.72 m (12 ft. 3 in.)	3.72 m (12 ft. 3 in.)

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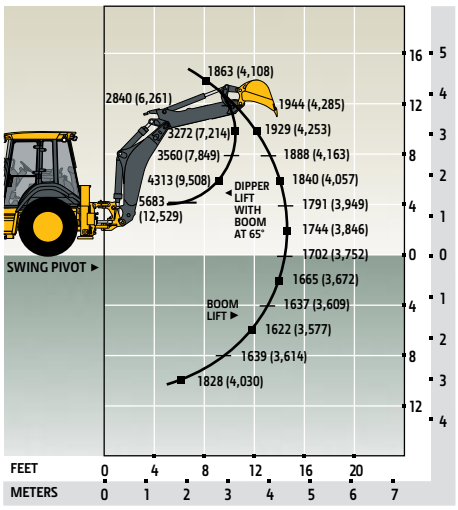
Loader Dimensions and Performance	315SL			
P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
	Heavy-duty	*Heavy-duty*	*Multipurpose*	*Multipurpose*
Bucket Capacity	0.77 m^3 (1.00 cu. yd.)	1.00 m^3 (1.31 cu. yd.)	0.96 m^3 (1.25 cu. yd.)	1.00 m^3 (1.31 cu. yd.)
Width	2184 mm (86 in.)	2337 mm (92 in.)	2184 mm (86 in.)	2337 mm (92 in.)
Weight	363 kg (800 lb.)	521 kg (1,148 lb.)	794 kg (1,750 lb.)	863 kg (1,902 lb.)
Breakout Force	49.2 kN (11,060 lb.)	47.2 kN (10,608 lb.)	43.9 kN (9,863 lb.)	43.5 kN (9,788 lb.)
Lift Capacity, Full Height	3456 kg (7,619 lb.)	3277 kg (7,225 lb.)	2833 kg (6,246 lb.)	2792 kg (6,156 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
S Dump Clearance, Bucket at 45 deg.	2.75 m (9 ft. 0 in.)	2.69 m (8 ft. 10 in.)	2.65 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	743 mm (29.2 in.)	726 mm (28.6 in.)	768 mm (30.2 in.)	768 mm (30.2 in.)
U Digging Depth Below Ground, Bucket Level	89 mm (3.5 in.)	146 mm (5.8 in.)	142 mm (5.6 in.)	142 mm (5.6 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	1.97 m (6 ft. 6 in.)	2.05 m (6 ft. 9 in.)	2.10 m (6 ft. 11 in.)	2.10 m (6 ft. 11 in.)
Lift Capacity with Quick-Coupler Forks				
Hydraulic Capacity	*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*		
A[I] Maximum Height	2023 kg (4,459 lb.)	1891 kg (4,168 lb.)		
B[I] Maximum Reach	3160 kg (6,967 lb.)	2979 kg (6,568 lb.)		
C[I] At Ground Line	4000 kg (8,818 lb.)	3783 kg (8,340 lb.)		
D[I] Below Ground Line	216 mm (8.5 in.)	216 mm (8.5 in.)		



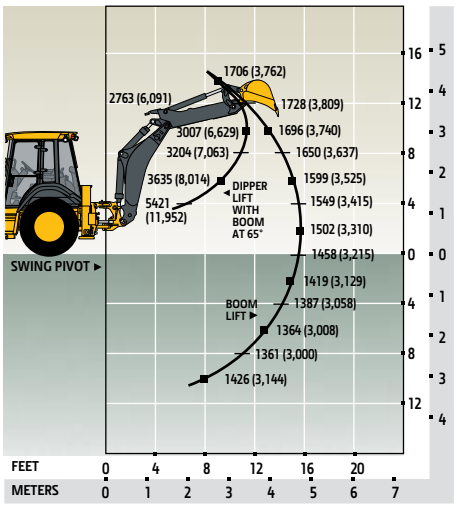
Lift Capacities

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

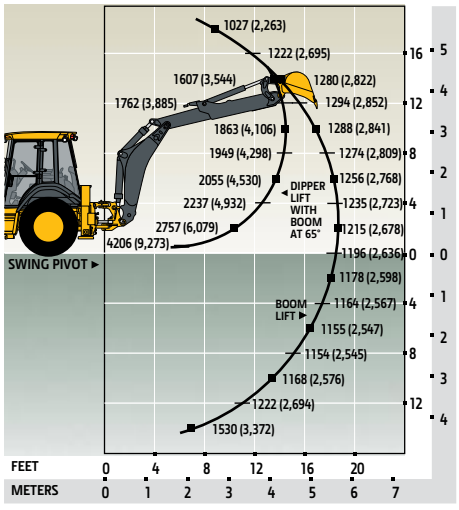
STANDARD LIFT
With Standard Dipperstick



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



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



**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*



410L SPECIFICATIONS

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Engine	**410L**	
Manufacturer and Model	John Deere PowerTech™ EWL 4045HL050 turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	
Gross Peak Power	88 kW (118 hp) at 1,900 rpm	
Net Peak Power (ISO 9249)	87 kW (116 hp) at 1,900 rpm	
Net Peak Torque (ISO 9249)	459 Nm (339 lb.-ft.) at 1,600 rpm	
Net Torque Rise	26%	
Lubrication	Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve	
Cooling		
Fan Type	Electronically controlled, variable rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water	
Powertrain		
Transmission	5-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; standard AutoShift	
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine, Measured with 21L-24 Rear Tires	*Forward*	*Reverse*
Gear 1	5.6 km/h (3.5 mph)	7.0 km/h (4.3 mph)
Gear 2	10.2 km/h (6.3 mph)	12.9 km/h (8.0 mph)
Gear 3	21.1 km/h (13.1 mph)	20.8 km/h (12.9 mph)
Gear 4	38.4 km/h (23.9 mph)	—
Gear 5	40.0 km/h (24.9 mph)	—
Axles		
Axle Oscillation, Stop to Stop, Front Axle	22 deg.	
Axle Ratings	*Front*	*Rear*
SAE J43	6500 kg (14,300 lb.)	7500 kg (16,500 lb.)
Dynamic	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	26 500 kg (58,400 lb.)	26 500 kg (58,400 lb.)
Ultimate	43 500 kg (95,900 lb.)	43 500 kg (95,900 lb.)
Differentials		
Mechanical-Front-Wheel-Drive (MFWD) Axle	Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering	
Axle	*MFWD*	*Non-Powered Front*
Curb-Turning Radius		
With Brakes	3.53 m (11 ft. 7 in.)	3.45 m (11 ft. 4 in.)
Without Brakes	4.02 m (13 ft. 2 in.)	3.90 m (12 ft. 10 in.)
Bucket-Clearance Circle		
With Brakes	10.20 m (33 ft. 6 in.)	10.13 m (33 ft. 3 in.)
Without Brakes	10.93 m (35 ft. 10 in.)	10.80 m (35 ft. 5 in.)
Steering Wheel Turns (lock to lock, flow amplified)	2.6 to 3.6	3.1 to 4.3
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears	
Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 4 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		
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm, Backhoe and Loader	159 L/m (42 gpm)	
System Relief Pressure		
Backhoe	24 993 kPa (3,625 psi)	
Lift Mode	27 579 kPa (4,000 psi)	
Loader	24 993 kPa (3,625 psi)	
Controls		
Backhoe	2-lever mechanical standard; pilot controls with pattern select and auxiliary functions optional; field kits available for additional mechanical-control options	

410L SPECIFICATIONS



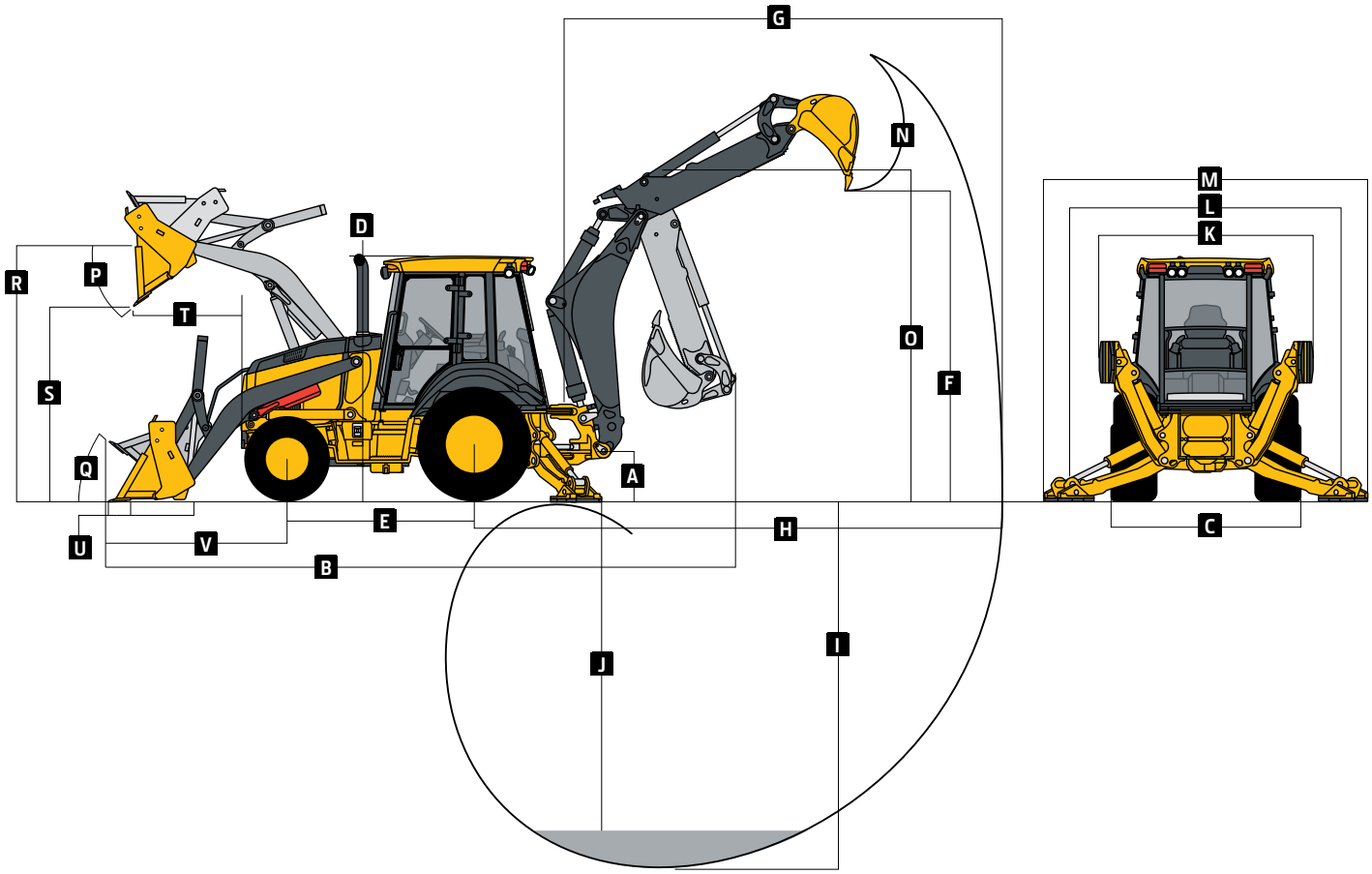
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Hydraulics *(continued)*	**410L**		
Controls *(continued)*			
Loader	Single-lever control with electric clutch cutoff switch and MFWD (momentary) standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional		
Cylinders			
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	*Rod Diameter*	*Stroke*
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
Backhoe Boom (1)	140 mm (5.51 in.)	70 mm (2.76 in.)	897 mm (35.31 in.)
Backhoe Crowd (1)	120 mm (4.72 in.)	63 mm (2.48 in.)	727 mm (28.62 in.)
Backhoe Bucket (1)	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
Backhoe Extendable Dipperstick (1)	80 mm (3.15 in.)	45 mm (1.77 in.)	1214 mm (47.78 in.)
Backhoe Stabilizer, Extended (2)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
MFWD (1)	65 mm (2.56 in.)	40 mm (1.57 in.)	210 mm (8.27 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	145 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; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station			
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional canopy		
Tires/Wheels			
	Front	*Rear*	
Non-Powered Front Axle	12.5/80-18 F3 (12)	21L-24 R4 (12)	
	14.5/75-16.1 F3 (16)	21L-24 R4 (12)	
With MFWD	12.5/80-18 R4 (10)	21L-24 R4 (12)	
	12.5/80-18 I3 (12)	21L-24 R4 (12)	
	340/80R18 XMCL	500/70R24 XMCL	
	340/80R18 550	500/70R24 550	
	340/80R18 580	500/70R24 580	
Serviceability			
Refill Capacities			
Cooling System			
Cab	27.5 L (29.1 qt.)		
Canopy	25.7 L (27.2 qt.)		
Rear Axle	18 L (19 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	128.7 L (34 gal.)		
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)		
Hydraulic System	126.8 L (33.5 gal.)		
Hydraulic Reservoir	45 L (11.9 gal.)		
MFWD Housing			
Axle	6.5 L (6.9 qt.)		
Planetary (each)	0.9 L (1 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 340-kg (750 lb.) Counterweight	8068 kg (17,786 lb.)		
Typical with Cab, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	8828 kg (19,463 lb.)		
Optional Components (weight difference between base equipment and option)			
Cab	263 kg (580 lb.)		
MFWD with Tires	110 kg (242 lb.)		
Extendable Dipperstick	271 kg (597 lb.)		
Front Loader Coupler	257 kg (566 lb.)		
Backhoe Bucket Coupler	64 kg (141 lb.)		

410L

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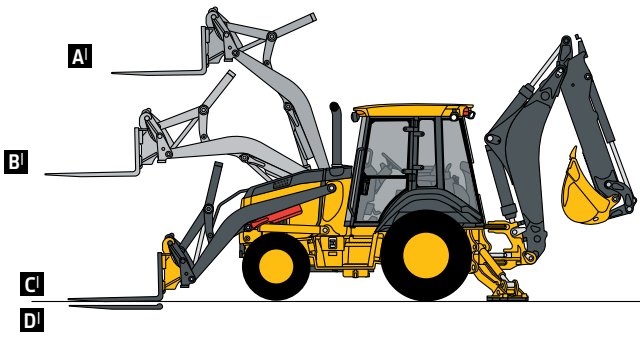
Overall Dimensions		410L
A	Ground Clearance, Minimum	334 mm (13 in.)
B	Overall Length, Transport	7.43 m (24 ft. 5 in.)
C	Width Over Tires	2.34 m (7 ft. 8 in.)
D	Height to Top of ROPS/Cab	2.87 m (9 ft. 5 in.)
E	Length from Axle to Axle	
	Non-Powered Front Axle	2.16 m (7 ft. 1 in.)
	MFWD Axle	2.19 m (7 ft. 2 in.)

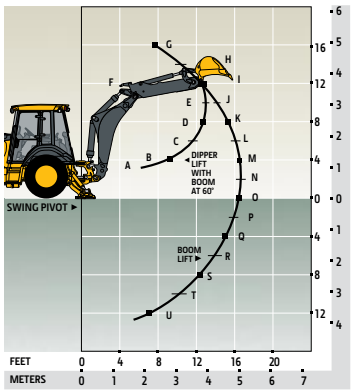


Backhoe Dimensions and Performance				
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket; dipper lift specs are with a boom angle of 60 deg.				
Bucket Range		305–762 mm (12–30 in.)		
Digging Force				
	Bucket Cylinder	69.9 kN (15,723 lb.)		
	Lift Mode	77.2 kN (17,350 lb.)		
	Crowd Cylinder	44.1 kN (9,907 lb.)		
	Lift Mode	48.6 kN (10,932 lb.)		
Swing Arc		180 deg.		
Operator Control		2 levers		
			With Optional Extendable Dipperstick	
		With Standard Backhoe	*Retracted*	*Extended*
F	Loading Height, Truck Loading Position	3.97 m (13 ft. 0 in.)	4.01 m (13 ft. 2 in.)	4.72 m (15 ft. 6 in.)
G	Reach from Center of Swing Pivot	6.02 m (19 ft. 9 in.)	6.02 m (19 ft. 9 in.)	7.14 m (23 ft. 5 in.)
H	Reach from Center of Rear Axle	7.14 m (23 ft. 5 in.)	7.14 m (23 ft. 5 in.)	8.26 m (27 ft. 1 in.)
I	Digging Depth (SAE maximum)	4.85 m (15 ft. 11 in.)	4.85 m (15 ft. 11 in.)	6.00 m (19 ft. 8 in.)
J	Digging Depth (SAE)			
	610-mm (2 ft.) Flat Bottom	4.80 m (15 ft. 9 in.)	4.80 m (15 ft. 9 in.)	5.97 m (19 ft. 7 in.)
	2440-mm (8 ft.) Flat Bottom	4.49 m (14 ft. 9 in.)	4.49 m (14 ft. 9 in.)	5.75 m (18 ft. 10 in.)
K	Stabilizer Width, Transport	2.35 m (7 ft. 9 in.)	2.35 m (7 ft. 9 in.)	2.35 m (7 ft. 9 in.)
L	Stabilizer Spread, Operating	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
M	Stabilizer Overall Width, Operating	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N	Bucket Rotation	190 deg.	190 deg.	190 deg.
O	Transport Height	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)

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Loader Dimensions and Performance	410L		
P Bucket Dump Angle, Maximum	45 deg.		
Q Rollback Angle at Ground Level	40 deg.		
	Heavy-duty	*Heavy-duty*	*Multipurpose*
Bucket Capacity	1.00 m^3 (1.31 cu. yd.)	1.15 m^3 (1.50 cu. yd.)	1.00 m^3 (1.31 cu. yd.)
Width	2346 mm (92 in.)	2394 mm (94 in.)	2346 mm (92 in.)
Weight	521 kg (1,148 lb.)	548 kg (1,208 lb.)	863 kg (1,902 lb.)
Breakout Force	47.3 kN (10,645 lb.)	46.1 kN (10,361 lb.)	43.7 kN (9,824 lb.)
Lift Capacity, Full Height	3271 kg (7,211 lb.)	3160 kg (6,967 lb.)	2787 kg (6,144 lb.)
R Height to Bucket Hinge Pin, Maximum	3.47 m (11 ft. 4 in.)	3.47 m (11 ft. 4 in.)	3.47 m (11 ft. 4 in.)
S Dump Clearance, Bucket at 45 deg.	2.70 m (8 ft. 10 in.)	2.66 m (8 ft. 9 in.)	2.67 m (8 ft. 9 in.)
T Reach at Full Height, Bucket at 45 deg.	730 mm (28.7 in.)	772 mm (30.4 in.)	772 mm (30.4 in.)
U Digging Depth Below Ground, Bucket Level	135 mm (5.3 in.)	135 mm (5.3 in.)	131 mm (5.1 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	2.03 m (6 ft. 8 in.)	2.09 m (6 ft. 10 in.)	2.08 m (6 ft. 10 in.)
Lift Capacity with Quick-Coupler Forks			
Hydraulic Capacity	*1219-mm (48 in.) Tines*	*1524-mm (60 in.) Tines*	
A[I] Maximum Height	2019 kg (4,452 lb.)	1887 kg (4,161 lb.)	
B[I] Maximum Reach	3158 kg (6,963 lb.)	2978 kg (6,565 lb.)	
C[I] At Ground Line	4009 kg (8,839 lb.)	3792 kg (8,360 lb.)	
D[I] Below Ground Line	206 mm (8.1 in.)	206 mm (8.1 in.)	





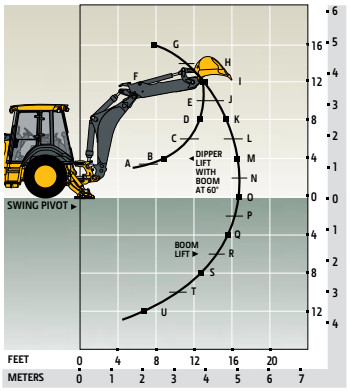
With Standard Dipperstick

Lift Capacities

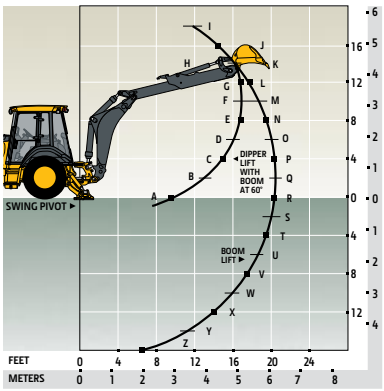
Lift capacities are over-end values in kg (lb.). Figures listed are 100% of the maximum lift force available.

	With Standard Dipperstick		*With 1.21-m (4 ft. 0 in.) Extendable Dipperstick, Retracted*		*With 1.21-m (4 ft. 0 in.) Extendable Dipperstick, Extended*	
	Standard Lift	*Lift Mode*	*Standard Lift*	*Lift Mode*	*Standard Lift*	*Lift Mode*
A	7747 kg (17,080 lb.)	7747 kg (17,080 lb.)	7508 kg (16,553 lb.)	7508 kg (16,553 lb.)	4957 kg (10,928 lb.)	5327 kg (11,743 lb.)
B	6041 kg (13,318 lb.)	6041 kg (13,318 lb.)	5826 kg (12,845 lb.)	5826 kg (12,845 lb.)	3141 kg (6,924 lb.)	3492 kg (7,698 lb.)
C	4469 kg (9,852 lb.)	4469 kg (9,852 lb.)	4277 kg (9,429 lb.)	4277 kg (9,429 lb.)	2729 kg (6,015 lb.)	3036 kg (6,693 lb.)
D	4024 kg (8,871 lb.)	4024 kg (8,871 lb.)	3838 kg (8,461 lb.)	3838 kg (8,461 lb.)	2513 kg (5,541 lb.)	2798 kg (6,169 lb.)
E	3745 kg (8,256 lb.)	3899 kg (8,596 lb.)	3621 kg (7,983 lb.)	3714 kg (8,189 lb.)	2358 kg (5,199 lb.)	2626 kg (5,790 lb.)
F	3305 kg (7,285 lb.)	3662 kg (8,074 lb.)	3180 kg (7,010 lb.)	3537 kg (7,798 lb.)	2212 kg (4,876 lb.)	2464 kg (5,433 lb.)
G	1641 kg (3,617 lb.)	1828 kg (4,029 lb.)	1481 kg (3,265 lb.)	1668 kg (3,677 lb.)	2037 kg (4,492 lb.)	2271 kg (5,008 lb.)
H	2125 kg (4,685 lb.)	2374 kg (5,234 lb.)	1943 kg (4,284 lb.)	2192 kg (4,833 lb.)	1788 kg (3,942 lb.)	1996 kg (4,401 lb.)
I	2252 kg (4,965 lb.)	2519 kg (5,554 lb.)	2061 kg (4,544 lb.)	2328 kg (5,133 lb.)	1091 kg (2,406 lb.)	1235 kg (2,722 lb.)
J	2287 kg (5,042 lb.)	2561 kg (5,646 lb.)	2090 kg (4,608 lb.)	2364 kg (5,212 lb.)	1355 kg (2,988 lb.)	1533 kg (3,381 lb.)
K	2286 kg (5,039 lb.)	2562 kg (5,648 lb.)	2084 kg (4,595 lb.)	2361 kg (5,204 lb.)	1479 kg (3,260 lb.)	1674 kg (3,690 lb.)
L	2268 kg (4,999 lb.)	2544 kg (5,609 lb.)	2063 kg (4,547 lb.)	2339 kg (5,157 lb.)	1543 kg (3,402 lb.)	1748 kg (3,854 lb.)
M	2243 kg (4,944 lb.)	2518 kg (5,551 lb.)	2034 kg (4,485 lb.)	2310 kg (5,092 lb.)	1577 kg (3,477 lb.)	1788 kg (3,943 lb.)
N	2215 kg (4,884 lb.)	2490 kg (5,489 lb.)	2004 kg (4,418 lb.)	2278 kg (5,023 lb.)	1594 kg (3,514 lb.)	1809 kg (3,988 lb.)
O	2189 kg (4,827 lb.)	2463 kg (5,429 lb.)	1975 kg (4,354 lb.)	2248 kg (4,956 lb.)	1601 kg (3,529 lb.)	1818 kg (4,009 lb.)
P	2167 kg (4,778 lb.)	2440 kg (5,380 lb.)	1949 kg (4,298 lb.)	2222 kg (4,899 lb.)	1602 kg (3,531 lb.)	1821 kg (4,015 lb.)
Q	2153 kg (4,746 lb.)	2426 kg (5,349 lb.)	1931 kg (4,257 lb.)	2204 kg (4,860 lb.)	1599 kg (3,526 lb.)	1820 kg (4,013 lb.)
R	2150 kg (4,741 lb.)	2426 kg (5,348 lb.)	1924 kg (4,242 lb.)	2200 kg (4,849 lb.)	1596 kg (3,519 lb.)	1818 kg (4,009 lb.)
S	2171 kg (4,786 lb.)	2452 kg (5,406 lb.)	1938 kg (4,274 lb.)	2220 kg (4,893 lb.)	1594 kg (3,514 lb.)	1818 kg (4,007 lb.)
T	2247 kg (4,953 lb.)	2541 kg (5,603 lb.)	2004 kg (4,418 lb.)	2299 kg (5,068 lb.)	1594 kg (3,515 lb.)	1820 kg (4,013 lb.)
U	2578 kg (5,684 lb.)	2923 kg (6,444 lb.)	2306 kg (5,084 lb.)	2651 kg (5,844 lb.)	1600 kg (3,527 lb.)	1828 kg (4,031 lb.)
V	—	—	—	—	1614 kg (3,558 lb.)	1847 kg (4,071 lb.)
W	—	—	—	—	1643 kg (3,623 lb.)	1882 kg (4,150 lb.)
X	—	—	—	—	1703 kg (3,755 lb.)	1953 kg (4,306 lb.)
Y	—	—	—	—	1843 kg (4,064 lb.)	2116 kg (4,665 lb.)
Z	—	—	—	—	2465 kg (5,435 lb.)	2832 kg (6,245 lb.)

**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended



710L SPECIFICATIONS

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Engine	**710L**	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT084 series turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	
Gross Peak Power	112 kW (150 hp) at 2,240 rpm	
Net Peak Power (ISO 9249)	110 kW (148 hp) at 2,240 rpm	
Net Peak Torque (ISO 9249)	570 Nm (420 lb.-ft.) at 1,400 rpm	
Net Torque Rise	20%	
Lubrication	Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve	
Cooling		
Fan Type	Electronically controlled, variable rate, suction-type cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water	
Powertrain		
Transmission	4-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; standard AutoShift	
Torque Converter	Single stage, dual phase with 1.92:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine with Mechanical-Front-Wheel Drive (MFWD), Measured with 21L-28 Rear Tires	*Forward*	*Reverse*
Gear 1	6.0 km/h (3.7 mph)	6.7 km/h (4.2 mph)
Gear 2	10.0 km/h (6.2 mph)	11.2 km/h (7.0 mph)
Gear 3	24.6 km/h (15.3 mph)	27.4 km/h (17.0 mph)
Gear 4	36.9 km/h (22.9 mph)	—
Axles		
Axle Oscillation, Stop to Stop, Front Axle	18 deg.	
Axle Ratings	*Front*	*Rear*
SAE J43	9000 kg (19,800 lb.)	11 500 kg (25,400 lb.)
Dynamic	12 500 kg (27,600 lb.)	14 000 kg (30,900 lb.)
Static	30 500 kg (67,200 lb.)	31 000 kg (68,300 lb.)
Ultimate	45 000 kg (99,200 lb.)	45 000 kg (99,200 lb.)
Differentials		
MFWD Axle	Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering	
Axle	*MFWD*	*Non-Powered Front*
Curb-Turning Radius		
With Brakes	3.99 m (13 ft. 1 in.)	3.98 m (13 ft. 1 in.)
Without Brakes	4.58 m (15 ft. 0 in.)	4.57 m (15 ft. 0 in.)
Bucket-Clearance Circle		
With Brakes	11.42 m (37 ft. 6 in.)	11.43 m (37 ft. 6 in.)
Without Brakes	12.30 m (40 ft. 4 in.)	12.31 m (40 ft. 5 in.)
Steering Wheel Turns (lock to lock, flow amplified)	2.7 to 4.4	2.9 to 4.7
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears	
Rear Axle	Heavy duty, inboard planetary final drives distribute shock loads over 3 gears	
Brakes (ISO 3450)		
Service	Full power, 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		
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm, Backhoe and Loader	197 L/m (52 gpm)	
System Relief Pressure, Backhoe and Loader		
Backhoe	24 993 kPa (3,625 psi)	
Lift Mode	26 890 kPa (3,900 psi)	
Loader	24 993 kPa (3,625 psi)	

710L SPECIFICATIONS

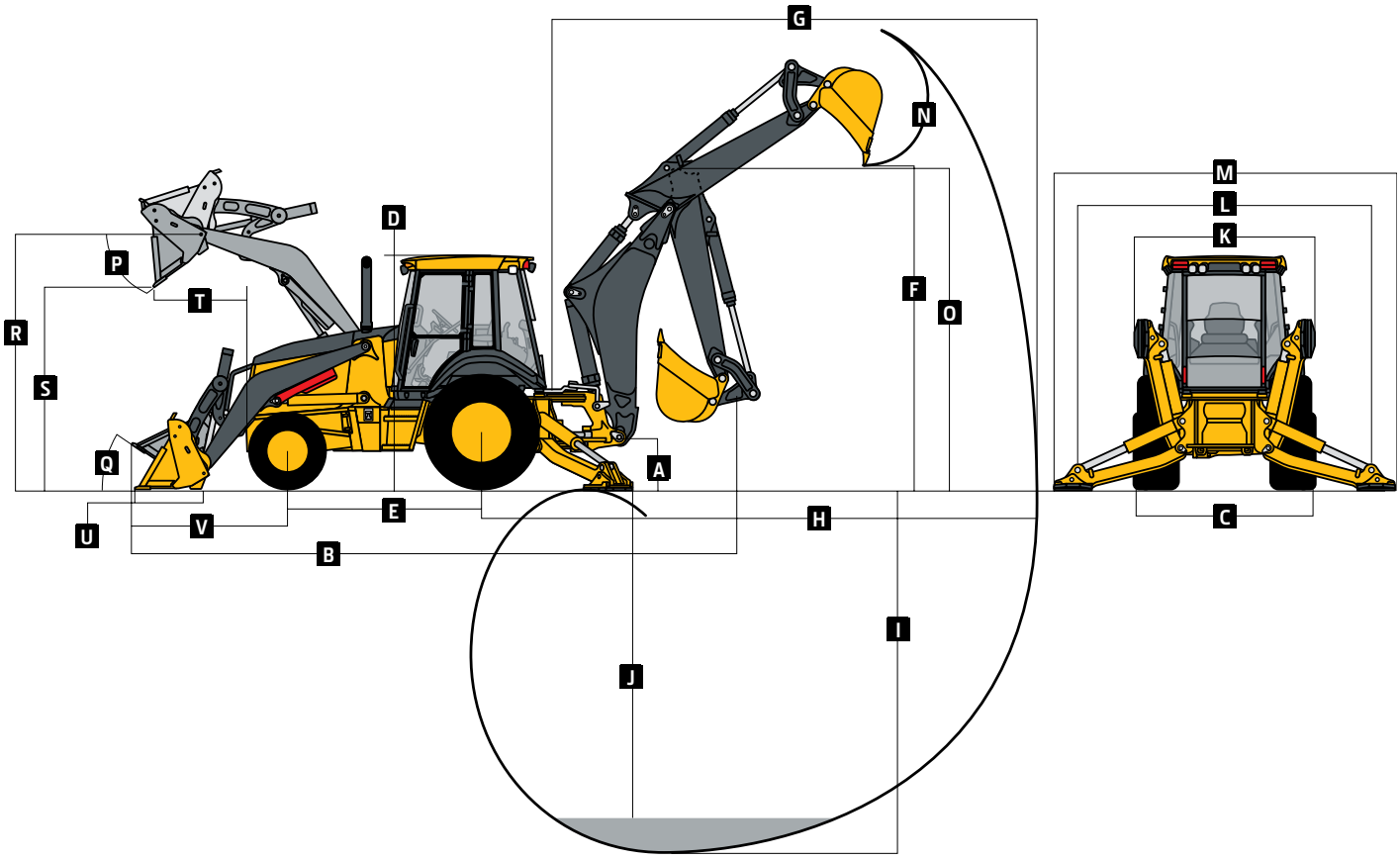


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Hydraulics *(continued)*	**710L**		
Controls			
Backhoe	Pilot controls with pattern select standard; electrohydraulic (EH) auxiliary functions optional		
Loader	Single-lever control with electric clutch cutoff switch and MFWD (momentary) standard; single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MFWD (momentary), and transmission quick-shift optional		
Cylinders			
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	*Rod Diameter*	*Stroke*
Loader Boom (2)	100 mm (3.94 in.)	56 mm (2.20 in.)	805 mm (31.69 in.)
Loader Bucket (1)	110 mm (4.33 in.)	56 mm (2.20 in.)	672 mm (26.44 in.)
Backhoe Boom (1)	160 mm (6.30 in.)	95 mm (3.74 in.)	944 mm (37.17 in.)
Backhoe Crowd (1)	140 mm (5.51 in.)	85 mm (3.35 in.)	792 mm (31.16 in.)
Backhoe Bucket (1)	110 mm (4.33 in.)	70 mm (2.76 in.)	939 mm (36.97 in.)
Backhoe Swing (2)	110 mm (4.33 in.)	56 mm (2.20 in.)	308 mm (12.13 in.)
Backhoe Extendable Dipperstick (1)	80 mm (3.15 in.)	45 mm (1.77 in.)	1372 mm (54.00 in.)
Backhoe Stabilizer, Extended (2)	115 mm (4.53 in.)	63 mm (2.48 in.)	588 mm (23.15 in.)
Non-Powered Axle (1)	75 mm (2.95 in.)	45 mm (1.77 in.)	240 mm (9.45 in.)
MFWD (1)	75 mm (2.95 in.)	50 mm (1.97 in.)	260 mm (10.24 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	160 amp (cab)		
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; factory-installed option for 2 LED spotlights and 8 LED floodlights in lieu of standard halogen light package		
Operator Station			
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional canopy		
Tires/Wheels			
	Front	*Rear*	
Non-Powered Front Axle	12.5/80-18 F3 (16)	21L-28 R4 (18)	
	14.5/75-16.1 F3 (16)	20.5-25 L-3 (20)	
With MFWD	15-19.5 R4 (12)	21L-28 R4 (18)	
	15-19.5 R4 (12)	20.5-25 L-3 (20)	
Serviceability			
Refill Capacities			
Cooling System			
Cab	28.4 L (30 qt.)		
Canopy	26.4 L (27.9 qt.)		
Rear Axle	25 L (26.4 qt.)		
Engine Oil (including vertical spin-on filter)	13 L (13.7 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	174.1 L (46 gal.)		
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)		
Hydraulic System	174.1 L (46 gal.)		
Hydraulic Reservoir	50.1 L (13.2 gal.)		
MFWD Housing			
Axle	15 L (15.9 qt.)		
Planetary (each)	2.2 L (2.3 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	11 607 kg (25,588 lb.)		
Typical with Cab, MFWD, Extendable Dipperstick, and 680-kg (1,500 lb.) Counterweight	12 262 kg (27,033 lb.)		
Optional Components (weight difference between base equipment and option)			
Cab	293 kg (645 lb.)		
MFWD with Tires	373 kg (822 lb.)		
Extendable Dipperstick	318 kg (700 lb.)		
Front Loader Coupler	363 kg (800 lb.)		

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Overall Dimensions	710L
A Ground Clearance, Minimum	356 mm (14 in.)
B Overall Length, Transport	8.23 m (27 ft. 0 in.)
C Width Over Tires	2.37 m (7 ft. 9 in.)
D Height to Top of ROPS/Cab	2.97 m (9 ft. 9 in.)
E Length from Axle to Axle	
Non-Powered Front Axle	2.58 m (8 ft. 5 in.)
MFWD Axle	2.55 m (8 ft. 4 in.)

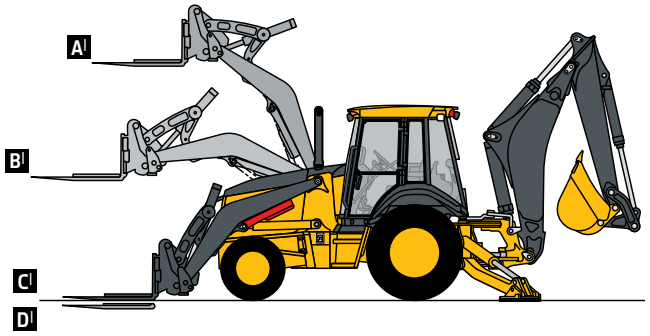


Backhoe Dimensions and Performance			
Backhoe specifications are with 610-mm x 0.31-m³ (24 in. x 11 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.			
Bucket Range	610–914 mm (24–36 in.)		
Digging Force			
Bucket Cylinder	78.4 kN (17,622 lb.)		
Lift Mode	84.3 kN (18,959 lb.)		
Crowd Cylinder	53.4 kN (11,999 lb.)		
Lift Mode	57.4 kN (12,910 lb.)		
Swing Arc	180 deg.		
Operator Control	Pilot control		
		With Optional Extendable Dipperstick	
	With Standard Backhoe	*Retracted*	*Extended*
F Loading Height, Truck Loading Position	4.45 m (14 ft. 7 in.)	4.49 m (14 ft. 9 in.)	5.35 m (17 ft. 6 in.)
G Reach from Center of Swing Pivot	6.84 m (22 ft. 5 in.)	6.84 m (22 ft. 5 in.)	8.15 m (26 ft. 9 in.)
H Reach from Center of Rear Axle	8.11 m (26 ft. 7 in.)	8.11 m (26 ft. 7 in.)	9.42 m (30 ft. 11 in.)
I Digging Depth (SAE maximum)	5.26 m (17 ft. 3 in.)	5.26 m (17 ft. 3 in.)	6.63 m (21 ft. 9 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	5.25 m (17 ft. 3 in.)	5.25 m (17 ft. 2 in.)	6.62 m (21 ft. 8 in.)
2440-mm (8 ft.) Flat Bottom	4.96 m (16 ft. 3 in.)	4.96 m (16 ft. 3 in.)	6.40 m (21 ft. 0 in.)
K Stabilizer Width, Transport	2.41 m (7 ft. 11 in.)	2.41 m (7 ft. 11 in.)	2.41 m (7 ft. 11 in.)
L Stabilizer Spread, Operating	3.99 m (13 ft. 1 in.)	3.99 m (13 ft. 1 in.)	3.99 m (13 ft. 1 in.)
M Stabilizer Overall Width, Operating	4.65 m (15 ft. 3 in.)	4.65 m (15 ft. 3 in.)	4.65 m (15 ft. 3 in.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	4.23 m (13 ft. 10 in.)	4.23 m (13 ft. 10 in.)	4.23 m (13 ft. 10 in.)
Loader Dimensions and Performance			
P Bucket Dump Angle, Maximum	45 deg.		
Q Rollback Angle at Ground Level	40 deg.		

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Loader Dimensions and Performance *(continued)*	**710L**		
	Standard-duty	*Standard-duty*	*Multipurpose*
Bucket Capacity	1.24 m³ (1.62 cu. yd.)	1.43 m³ (1.87 cu. yd.)	1.00 m³ (1.31 cu. yd.)
Width	2464 mm (97 in.)	2464 mm (97 in.)	2451 mm (96 in.)
Weight	830 kg (1,830 lb.)	866 kg (1,909 lb.)	995 kg (2,193 lb.)
Breakout Force	73.6 kN (16,539 lb.)	70.5 kN (15,853 lb.)	73.3 kN (16,474 lb.)
Lift Capacity, Full Height	4475 kg (9,866 lb.)	4239 kg (9,346 lb.)	4081 kg (8,998 lb.)
R Height to Bucket Hinge Pin, Maximum	3.73 m (12 ft. 3 in.)	3.73 m (12 ft. 3 in.)	3.73 m (12 ft. 3 in.)
S Dump Clearance, Bucket at 45 deg.	2.89 m (9 ft. 6 in.)	2.81 m (9 ft. 3 in.)	2.92 m (9 ft. 7 in.)
T Reach at Full Height, Bucket at 45 deg.	768 mm (30.2 in.)	849 mm (33.4 in.)	763 mm (30 in.)
U Digging Depth Below Ground, Bucket Level	157 mm (6.2 in.)	157 mm (6.2 in.)	141 mm (5.5 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	2.14 m (7 ft. 0 in.)	2.26 m (7 ft. 5 in.)	2.11 m (6 ft. 11 in.)

Lift Capacity with Quick-Coupler Forks	
Hydraulic Capacity	*1219-mm (48 in.) Tines*
A[I] Maximum Height	2632 kg (5,803 lb.)
B[I] Maximum Reach	4378 kg (9,651 lb.)
C[I] At Ground Line	6057 kg (13,353 lb.)
D[I] Below Ground Line	140 mm (5.5 in.)

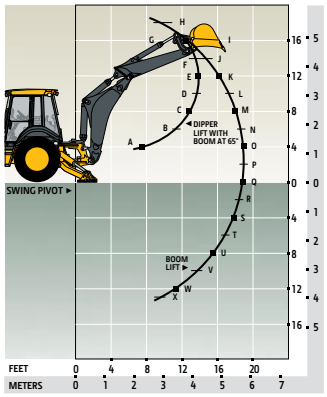


Lift Capacities

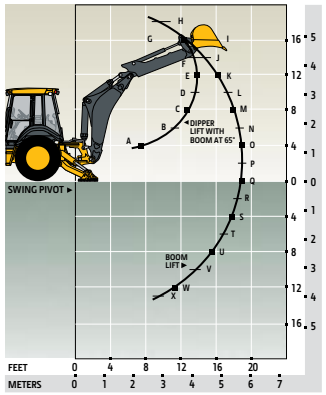
Lift capacities are over-end values in kg (lb.). Figures listed are 100% of the maximum lift force available.

	With Standard Dipperstick		*With 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Retracted*		*With 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Extended*	
	Standard Lift	*Lift Mode*	*Standard Lift*	*Lift Mode*	*Standard Lift*	*Lift Mode*
A	9519 kg (20,986 lb.)	9519 kg (20,986 lb.)	9343 kg (20,597 lb.)	9343 kg (20,597 lb.)	5431 kg (11,973 lb.)	5878 kg (12,958 lb.)
B	5244 kg (11,561 lb.)	5506 kg (12,140 lb.)	5109 kg (11,262 lb.)	5290 kg (11,662 lb.)	3397 kg (7,488 lb.)	3685 kg (8,123 lb.)
C	4492 kg (9,903 lb.)	4732 kg (10,432 lb.)	4344 kg (9,578 lb.)	4520 kg (9,965 lb.)	2914 kg (6,425 lb.)	3,165 kg (6,977 lb.)
D	4087 kg (9,010 lb.)	4419 kg (9,743 lb.)	3932 kg (8,669 lb.)	4229 kg (9,323 lb.)	2659 kg (5,862 lb.)	2889 kg (6,370 lb.)
E	3718 kg (8,197 lb.)	4022 kg (8,866 lb.)	3557 kg (7,843 lb.)	3860 kg (8,510 lb.)	2479 kg (5,466 lb.)	2695 kg (5,942 lb.)
F	3219 kg (7,096 lb.)	3483 kg (7,679 lb.)	3050 kg (6,724 lb.)	3313 kg (7,304 lb.)	2324 kg (5,123 lb.)	2527 kg (5,572 lb.)
G	2304 kg (5,079 lb.)	2497 kg (5,505 lb.)	2122 kg (4,679 lb.)	2314 kg (5,102 lb.)	2164 kg (4,771 lb.)	2355 kg (5,192 lb.)
H	2500 kg (5,512 lb.)	2717 kg (5,990 lb.)	2291 kg (5,052 lb.)	2508 kg (5,530 lb.)	1974 kg (4,351 lb.)	2150 kg (4,740 lb.)
I	2572 kg (5,670 lb.)	2805 kg (6,184 lb.)	2348 kg (5,177 lb.)	2581 kg (5,691 lb.)	1719 kg (3,790 lb.)	1875 kg (4,135 lb.)
J	2532 kg (5,581 lb.)	2766 kg (6,099 lb.)	2301 kg (5,073 lb.)	2536 kg (5,590 lb.)	1340 kg (2,954 lb.)	1467 kg (3,234 lb.)
K	2465 kg (5,434 lb.)	2697 kg (5,947 lb.)	2230 kg (4,916 lb.)	2462 kg (5,428 lb.)	1625 kg (3,583 lb.)	1789 kg (3,944 lb.)
L	2391 kg (5,271 lb.)	2620 kg (5,776 lb.)	2152 kg (4,744 lb.)	2381 kg (5,250 lb.)	1679 kg (3,701 lb.)	1852 kg (4,083 lb.)
M	2316 kg (5,105 lb.)	2541 kg (5,602 lb.)	2074 kg (4,573 lb.)	2300 kg (5,070 lb.)	1685 kg (3,714 lb.)	1862 kg (4,104 lb.)
N	2243 kg (4,945 lb.)	2464 kg (5,433 lb.)	1999 kg (4,407 lb.)	2220 kg (4,895 lb.)	1669 kg (3,680 lb.)	1848 kg (4,073 lb.)
O	2173 kg (4,791 lb.)	2391 kg (5,271 lb.)	1927 kg (4,248 lb.)	2145 kg (4,728 lb.)	1644 kg (3,624 lb.)	1822 kg (4,017 lb.)
P	2107 kg (4,646 lb.)	2321 kg (5,118 lb.)	1859 kg (4,098 lb.)	2073 kg (4,570 lb.)	1613 kg (3,556 lb.)	1791 kg (3,947 lb.)
Q	2045 kg (4,509 lb.)	2256 kg (4,974 lb.)	1794 kg (3,956 lb.)	2005 kg (4,421 lb.)	1579 kg (3,482 lb.)	1756 kg (3,872 lb.)
R	1987 kg (4,381 lb.)	2195 kg (4,840 lb.)	1734 kg (3,823 lb.)	1942 kg (4,282 lb.)	1545 kg (3,406 lb.)	1721 kg (3,793 lb.)
S	1934 kg (4,263 lb.)	2139 kg (4,716 lb.)	1678 kg (3,698 lb.)	1883 kg (4,152 lb.)	1511 kg (3,331 lb.)	1685 kg (3,715 lb.)
T	1884 kg (4,154 lb.)	2088 kg (4,604 lb.)	1625 kg (3,583 lb.)	1829 kg (4,033 lb.)	1477 kg (3,257 lb.)	1650 kg (3,639 lb.)
U	1841 kg (4,058 lb.)	2044 kg (4,506 lb.)	1578 kg (3,479 lb.)	1781 kg (3,927 lb.)	1445 kg (3,185 lb.)	1617 kg (3,565 lb.)
V	1805 kg (3,979 lb.)	2009 kg (4,429 lb.)	1537 kg (3,388 lb.)	1741 kg (3,838 lb.)	1414 kg (3,117 lb.)	1585 kg (3,495 lb.)
W	1786 kg (3,937 lb.)	1995 kg (4,397 lb.)	1509 kg (3,327 lb.)	1718 kg (3,787 lb.)	1385 kg (3,054 lb.)	1556 kg (3,429 lb.)
X	1794 kg (3,954 lb.)	2009 kg (4,429 lb.)	1508 kg (3,325 lb.)	1723 kg (3,799 lb.)	1359 kg (2,995 lb.)	1529 kg (3,370 lb.)
Y	—	—	—	—	1335 kg (2,943 lb.)	1505 kg (3,318 lb.)
Z	—	—	—	—	1316 kg (2,900 lb.)	1486 kg (3,277 lb.)
a	—	—	—	—	1302 kg (2,871 lb.)	1475 kg (3,251 lb.)
b	—	—	—	—	1299 kg (2,865 lb.)	1476 kg (3,253 lb.)
c	—	—	—	—	1322 kg (2,914 lb.)	1506 kg (3,321 lb.)
d	—	—	—	—	1453 kg (3,202 lb.)	1666 kg (3,673 lb.)

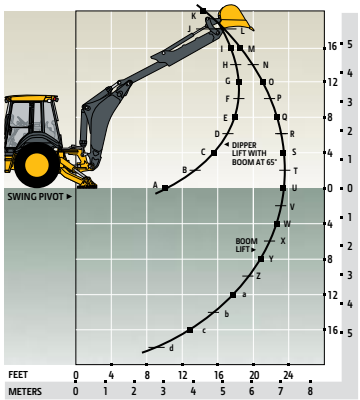
**Indicates capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.*



With Standard Dipperstick



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

Additional equipment

Key: ● Standard ▲ Optional or special — See your John Deere dealer for further information.

310L EP	310L	310SL	310SL HL	315SL	410L	710L	Engine
●	●	●	●	●	●	●	Coolant recovery tank with low-level indicator
●	●	●	●	●	●	●	Foldout, hinged cooling system
●	●	●	●	●	●	●	Serpentine belt with automatic belt tensioner
●							Viscous variable-rate cooling fan
	●	●	●	●	●	●	Electronically controlled, variable-rate suction-type cooling fan
	●	●	●	●	●	●	Self-cleaning exhaust aftertreatment system
▲	▲	▲	▲	▲	▲	▲	Chrome exhaust extension
	●	●	●	●	●		Grid heat
●						●	Glow plugs
▲	▲	▲	▲	▲	▲	▲	1,000-watt electric engine coolant heater
●	●	●	●	●	●	●	Electronic fuel lift pump
							Powertrain
●							4-speed manual synchromesh transmission
	●					●	PowerShift™ transmission: Torque converter with twist-grip Transmission Control Lever (TCL) and neutral safety switch interlock (1st through 4th gears)
		●	●	●	●		PowerShift transmission: Torque converter with twist-grip TCL and neutral safety switch interlock (1st through 5th gears)
		●	●	●	●		5th-gear overdrive
		●	●	●	●	●	AutoShift transmission
●	●	●	●	●	●	●	Transmission oil cooler
▲	▲	▲	●	▲	▲	▲	Transmission remote oil-sampling port
●	●	●	●	●	●	●	Differential lock, electric foot actuated, protection on/off [software enabled)
				●		●	Differential lock, electric foot actuated
		●	●	●	●	●	Auto shutdown
●	●	●	●	●	●	●	Planetary final drives
●	●	●	●	●	●	●	Power-assisted hydraulic service brakes (conform to ISO 3450): Inboard, wet multi-disc, self-adjusting and self-equalizing
●	●	●	●	●	●	●	Parking/emergency brake with electric switch control (conforms to ISO 3450): Spring applied, hydraulically released wet multi-disc / Independent of service brakes
●	●	●	●	●	●	●	Hydrostatic power steering with emergency manual mode
▲	▲	▲	▲	▲	▲	▲	Non-powered front axle
●	●						MFWD with open differential: Electric on/off control / Sealed axle (310L only)
	▲	●	●	●	●	●	MFWD with traction-control limited-slip differential: Electric on/off control / Sealed axle
	●	●	●	●	●	●	Automatic MFWD braking
▲	▲	▲	▲	▲	▲		MFWD driveshaft guard
							Backhoe
		●	●		●	●	Lift mode
		●	●		●	●	Precision mode
							Standard dipperstick digging depth
				●			4.08 m (13 ft. 5 in.)
●							4.16 m (13 ft. 8 in.)

310L EP	310L	310SL	310SL HL	315SL	410L	710L	Backhoe *(continued)*
							Standard dipperstick digging depth *(cont.)*
	●						4.30 m (14 ft. 1 in.)
		●					4.35 m (14 ft. 3 in.)
			●				4.59 m (15 ft. 1 in.)
					●		4.85 m (15 ft. 11 in.)
						●	5.26 m (17 ft. 3 in.)
							Extendable dipperstick extension
▲	▲	▲	▲	▲			1.06 m (3 ft. 6 in.)
					▲		1.21 m (4 ft. 0 in.)
						▲	1.37 m (4 ft. 6 in.)
		▲	●	▲	●		Heavy-duty (HD) backhoe bucket cylinder
●	●	●		●	●		ISO (Deere) 2-lever mechanical backhoe controls
▲	▲	▲	●	▲	▲	●	2-lever pilot controls with pattern-selection feature
●	●	●	●	●	●	●	Backhoe transport lock lever
●	●	●	●	●	●	●	Swing lock pin stored in operator's station
●	●	●	●	●	●	●	Stabilizers with 2-direction anti-drift valves
		▲	●		●	●	Extended (long) stabilizers with reversible pads
		▲	▲	▲	▲		Severe-duty backhoe bucket with lift loops
▲	▲	▲	▲	▲	▲		Backhoe couplers for John Deere, Case, and Cat buckets
▲	▲	▲	▲	▲	▲	▲	Auxiliary backhoe valve with 1-way flow for hammers and compactors with plumbing
▲	▲	▲	▲		▲	▲	Auxiliary backhoe valve with 1- and 2-way flow for swingers, thumbs, augers, etc. (plumbing not included)
▲	▲	▲	▲		▲		Hydraulic thumb
		▲	▲		▲		Rear hydraulic coupler
		▲	▲	▲	▲		Spring-type coupler
							Loader†
●	●	●	●	●	●	●	Loader bucket anti-spill (rollback)
●	●	●	●	●	●	●	Return-to-dig feature
●	●	●	●	●	●	●	Single-lever control with electric clutch disconnect
●	●	●	●	●	●	●	Bucket-level indicator
●	●	●	●	●	●	●	Loader boom service lock
		●	●	●	●	●	Loader valve with integrated anti-drift checks for hydraulic cylinders controlling loader boom up and bucket dump
▲	▲	▲	▲	▲	▲	▲	Auxiliary loader hydraulics with single control lever with EH auxiliary control (MFWD and clutch disconnect)
▲	▲	▲	▲	▲	▲	▲	Hydraulic coupler for buckets, forks, etc.
▲	▲						Standard ride control
		▲	▲	▲	▲	●	Auto ride control

†See dealer for range of HD, multipurpose, and coupler buckets and forks.

							Hydraulic System
●							124-L/m (32.8 gpm) backhoe flow, 114-L/m (30.1 gpm) loader flow
	●						106-L/m (28 gpm) single-gear pump, open-center system
				●			136-L/m (36 gpm) tandem-gear pump, open-center system

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Additional equipment *(continued)*

Key: ● Standard ▲ Optional or special See your John Deere dealer for further information.

310L EP	310L	310SL	310SL HL	315SL	410L	710L	Hydraulic System *(continued)*
		●	●		●		159-L/m (42 gpm) axial-piston pump, pressure-compensated load-sensing (PCLS) system
						●	197-L/m (52 gpm) axial-piston pump, PCLS system
		●	●	●	●	●	Auto-idle
	●	●	●	●	●	●	Economy mode
●	●	●	●	●	●	●	Dedicated hydraulic reservoir
							Electrical System
●	●	●	●	●	●	●	12-volt system
●							130-amp alternator
	●	●	●	●	●		145-amp alternator
						●	160-amp alternator
●	●	●	●	●	●		Single battery with 180-min. reserve capacity and 925 CCA
▲	▲	▲	▲	▲	▲	●	Dual batteries with 360-min. reserve capacity and 1,850 CCA
▲	▲	▲	▲	▲	▲	▲	Remote jump posts and battery disconnect
							Lights
●							Halogen lights (4), 32,500 candlepower each (2 front and 2 rear)
	●	●	●	●	●	●	Halogen lights (10), 32,500 candlepower 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
		▲	▲		▲		Boom-light field kit (2 LED floods)
							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, vinyl cover
	●	●	●	●	●	●	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)
		●	●	●	●	●	Keyless start
▲	▲	●	●	●	●	●	Machine security (enabled through monitor)
●	●	●	●	●	●	●	Digital display of engine hours, engine rpm, and system voltage
		●	●	●	●	●	Sealed-switch module (SSM)

310L EP	310L	310SL	310SL HL	315SL	410L	710L	Operator's Station *(continued)*
		●	●	●	●	●	Multi-function lever: Turn signals / Windshield wipers / Some light functionality
●	●	●	●	●	●	●	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)
							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.), 272 kg (600 lb.), 340 kg (750 lb.), 454 kg (1,000 lb.), 567 kg (1,250 lb.), or 680 kg (1,500 lb.)
▲	▲	▲	▲	▲	▲		Rubber grille bumpers
●	●	●	●	●	●		Fuel tank, 128.71 L (34 gal.), ground-level fueling
						●	Fuel tank, 174.1 L (46 gal.), ground-level fueling
●	●	●	●	●	●	●	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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Every day brings new challenges — demanding jobsites, long hours, and an increasing focus on uptime. Our job is to bring you the opportunities to overcome them. Our experienced engineers, specialized service techs, and global parts and service network are always ready to step up to help you **Run Your World.**

SAFETY live with it 03-30-21