

L-SERIES BACKHOES



JOHN DEERE

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

LIFT MORE AND MULTITASK

INTRODUCING THE **L-SERIES**

**LOOKING FOR MORE
RELIABILITY AND PRODUCTIVITY?**

**WE'VE GOT
YOUR BACKHO
AND YOUR**



+



RELIABLE

PRODUCTIVE

310SL HL

E.
BACK.



UP TO
25%
MORE
CRANING
CAPABILITY

TO BUILD A BETTER BACKHOE,
WE WENT TO YOU, OUR CUSTOMER.

Through our Customer Advocate Group (CAG), we collected invaluable input from owners and operators — the ones who know best what customers really need.

You spoke. And we listened and responded by expanding the breadth of our product line with the introduction of our new 710L with 13-percent more horsepower and improved rear backhoe controllability. We're continuing the popular, competitively priced 310L EP as well as our heavy-lift and side-shift models, all with a host of proven features to help you boost productivity and maximize uptime, while lowering daily operating costs. **When it comes to delivering what you want, nobody responds like John Deere.**



SIDE-SHIFT FOR TIGHT SPACES WITH THE 315SL.

Standard-equipped side-shift backhoes can be offset up to 21 in. right or left of center, making them ideal for work in crowded urban areas and around obstacles.

GET MORE DONE WITH ONE

MULTIFUNCTION VERSATILITY, UNRIVALED 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 pressure-compensated load-sensing (PCLS) hydraulics (on the 310SL HL, 410L, and 710L), for superb multifunction performance. The result: our most versatile backhoes ever.

True four-wheel drive on command

Standard limited-slip mechanical-front-wheel drive (optional on the 310L EP and 310L) delivers superior traction in any ground condition. Engage momentary mechanical-front-wheel drive "on the fly" with the touch of a button on the new loader control.

Powertrain performance

Responsive and productive five-speed transmission on the 310SL, 310SL HL, 315SL, and 410L provides transport speeds up to 25 mph. Add the AutoShift option and increase versatility in any application.

Smooth gear changes

PowerShift™ transmission provides on-the-go clutchless gear changes for the operator.

Powerful FT4 engines

Rugged FT4/Stage IV PowerTech™ Plus diesel engines* meet rigid emission regulations, enabling you to work, wherever there's work — even in nonattainment areas. Our field-proven technology is simple, fluid efficient, fully integrated, and fully supported. It employs cooled exhaust gas recirculation, easy-to-maintain high-uptime exhaust filter (710L only), and selective catalytic reduction (SCR).

Control the ride and the load

With optional ride control (standard on the 710L), front loader hydraulic cylinders act as a shock absorber, smoothing travel over rough terrain, helping full loads reach their destination, and reducing operator fatigue.

Better craning capability

The 310SL HL and 410L deliver up to 25-percent more backhoe lift under normal conditions.

Multifunction hydraulics

PCLS hydraulics on the heavy-lift 310SL HL, 410L, and 710L ensure superior multifunction capability at all speeds.



FT4 EPA FINAL TIER 4 (FT4)/EU STAGE IV
POWERTECH PLUS DIESEL ENGINES*

*Interim Tier 4/Stage IIIB PowerTech on the 310L EP.

Courtesy of MachineMarket



**BIG LIFT.
SMALL
FOOTPRINT.**

THE 310SL HL HEAVY-LIFT BACKHOE

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



UP TO
15%

**INCREASE IN CRANING
POWER WITH LIFT MODE**



More lift capacity at the push of a button

Along with the 410L, the 310SL HL can deliver up to 25-percent more backhoe-lift capacity than their comparable K-Series models. Lift mode provides an additional boost of 10 to 15 percent. Simply pushing a button on the sealed-switch module (SSM) sets engine rpm at 1,400 and maximizes hydraulic pressure for increased craning capability.

PCLS hydraulics for superb multifunction operation

The 310SL HL delivers all the advantages of PCLS hydraulics in the 14–15-ft. digging-depth category, enabling operator efficiency and productivity through improved multifunction control.



Unobstructed view to the 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 compliance.



WHAT THE EXPERTS ARE SAYING:

“ Thanks to Deere asking for my input, I get a better machine, and these improvements make all the difference in my day's productivity. ”

— Todd Heiderscheidt, Backhoe CAG Member



*REDESIGNED PILOT TOWERS
GIVE MORE LEGROOM AND
SPACE TO ROTATE*

MORE CONTROL AT YOUR FINGERTIPS *MAXIMUM PRODUCTIVITY IS CLOSE AT HAND.*

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



LED SPOT- OR FLOODLIGHTS

Easy-to-use loader-control grip

Enhanced “palm-on-top” loader-control grip is even more comfortable and easy to use. Control of clutch disconnect, transmission quick-shift, auxiliary proportional roller, and momentary mechanical-front-wheel drive is at your fingertips.

Easy, fingertip control of backhoe functions

Fingertip electrohydraulic (EH) control of redesigned pilot levers provides even easier operation of backhoe functions, including selective flow and the horn.

Extend your workday

LED lighting kit includes choice of LED spot- or floodlights. For enhanced visibility when your workday goes long.

More legroom and space to rotate

Redesigned pilot towers provide more legroom and additional space for transitioning between loader and backhoe operation.

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®, auxiliary input, and XM Satellite Radio™ capability.

Steering column controls

Exterior lights, wipers, and turn signals are now more 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.



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 unmatched reliability and uptime. When you know how they're built, you'll run a Deere.



4WD

OPTION AT YOUR
COMMAND



Onboard diagnostics center

The most advanced onboard-diagnostics technology in the industry is standard on all L-Series Backhoes. The exclusive John Deere WorkSight™ suite of telematics solutions includes JDLink™ Ultimate with real-time machine monitoring and remote diagnostics to help increase uptime while lowering operating costs.

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 increases reliability.

More durable multipurpose bucket

Our rugged multipurpose bucket has been reinforced with thicker plates and stronger cylinder mountings for longer life.

Bias and radial tire options

Choose from a variety of factory-installed tire options, for the traction, exceptional performance, and long service life your specific application requires.

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.

Maintenance-free batteries

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

Superior hydraulic oil

L-Series Backhoes come factory-filled with Hydrau™ premium all-season, anti-wear hydraulic oil specifically designed for construction equipment. Or 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 helps prevent unauthorized operation.



THE NEW 710L



21 ft. 9 in.

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. For example, activate economy mode for backhoe functions while retaining full power for loader functions — a Deere exclusive. 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 program a multitude of time-specific functions such as auto shutdown and auto-idle quickly and easily.

Minimize downtime and expense

Same-side ground-level service points help 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.



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.

Quiet, fuel-efficient fan

Variable-speed electronically controlled fan automatically speeds up or slows down, operating only as needed to keep things cool. Helps conserve power and fuel, while reducing noise. A viscous variable-speed fan option is available for the 310L EP.

Proven engine technology

310L EP IT4/Stage IIIB emission-certified PowerTech engine requires no aftertreatment. 310SL HL and 410L FT4/Stage IV emission-certified PowerTech Plus engines feature a diesel oxidation catalyst (DOC) and a selective catalytic reduction (SCR) system. 310L, 310SL, 315SL, and 710L FT4/Stage IV emission-certified PowerTech Plus diesels include an SCR system. Only the 710L requires a diesel particulate filter (DPF).



Get valuable insight with

JOHN DEERE WORKSIGHT

John Deere WorkSight is an exclusive suite of telematics solutions that increases uptime while lowering operating costs. At its heart, JDLink Ultimate machine monitoring provides real-time utilization data and alerts to help you maximize productivity and efficiency while minimizing downtime. Remote diagnostics enable your dealer to read codes, record performance data, and even update software without a trip to the jobsite.

Keep downtime down with

ULTIMATE UPTIME

Ultimate Uptime, featuring John Deere WorkSight, is a customizable support solution available exclusively from your Deere dealer. This flexible offering maximizes equipment availability with standard John Deere WorkSight capabilities that can help prevent future downtime and speed repairs when needed. In addition to the base John Deere WorkSight features, our dealers work with you to build an uptime package that meets the specific needs of your machine, fleet, project, and business, including customized maintenance and repair agreements, onsite parts availability, extended warranties, fluid sampling, response-time guarantees, and more.



310L EP / 310L SPECIFICATIONS

Engine	310L EP	310L	
Manufacturer and Model	John Deere PowerTech™ E 4045HT072 turbocharged	John Deere PowerTech™ Plus 4045HT082 turbocharged	
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	4.5 L (276 cu. in.)	
Net Peak Power (ISO 9249)	52 kW (70 hp) at 1,900 rpm / 55 kW (73 hp) at 2,100 rpm with viscous fan option	69 kW (93 hp) at 2,244 rpm	
Net Peak Torque (ISO 9249)	311 Nm (229 lb.-ft.) at 1,500 rpm	383 Nm (282 lb.-ft.) at 1,400 rpm	
Net Torque Rise	32%	28%	
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		
Cooling			
Fan Type	Suction-type cooling fan standard; viscous variable-rate (temperature-controlled) fan optional	Electronically controlled, variable rate, suction type	
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, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever		
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)		
Maximum Travel Speeds with Standard Engine, Measured with 19.5L-24 Rear Tires			
	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.2 km/h (3.2 mph)	6.6 km/h (4.1 mph)	5.5 km/h (3.4 mph) / 7.0 km/h (4.3 mph)
Gear 2	9.5 km/h (5.9 mph)	12.0 km/h (7.5 mph)	10.1 km/h (6.3 mph) / 12.8 km/h (8.0 mph)
Gear 3	19.4 km/h (12.1 mph)	—	20.7 km/h (12.9 mph) / —
Gear 4	31.6 km/h (19.6 mph)	—	33.9 km/h (21.1 mph) / —
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings		<i>Mechanical-Front-Wheel Drive (MFWD)</i>	
	<i>Non-Powered Front</i>		<i>Rear</i>
SAE J43	4500 kg (9,921 lb.)	4500 kg (9,921 lb.)	6500 kg (14,330 lb.)
Dynamic	7000 kg (15,432 lb.)	8500 kg (18,739 lb.)	9500 kg (20,944 lb.)
Static	20 500 kg (45,195 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	32 500 kg (71,650 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
MFWD Axle	Open – standard; automatic, limited-slip traction control – optional		
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock		
Steering (ISO 5010)			
Axle	Hydrostatic power steering and emergency steering		
	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.58 m (11 ft. 9 in.)	3.58 m (11 ft. 9 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.24 m (13 ft. 11 in.)	
Bucket-Clearance Circle			
With Brakes	10.18 m (33 ft. 5 in.)	10.23 m (33 ft. 7 in.)	
Without Brakes	11.08 m (36 ft. 4 in.)	11.19 m (36 ft. 9 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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, gear type, tandem with unloader	Open center, single-gear pump	
Pump Flow at 2,200 rpm			
Backhoe	119 L/m (31.5 gpm)	106 L/m (28 gpm)	
Loader	98 L/m (26 gpm)	106 L/m (28 gpm)	

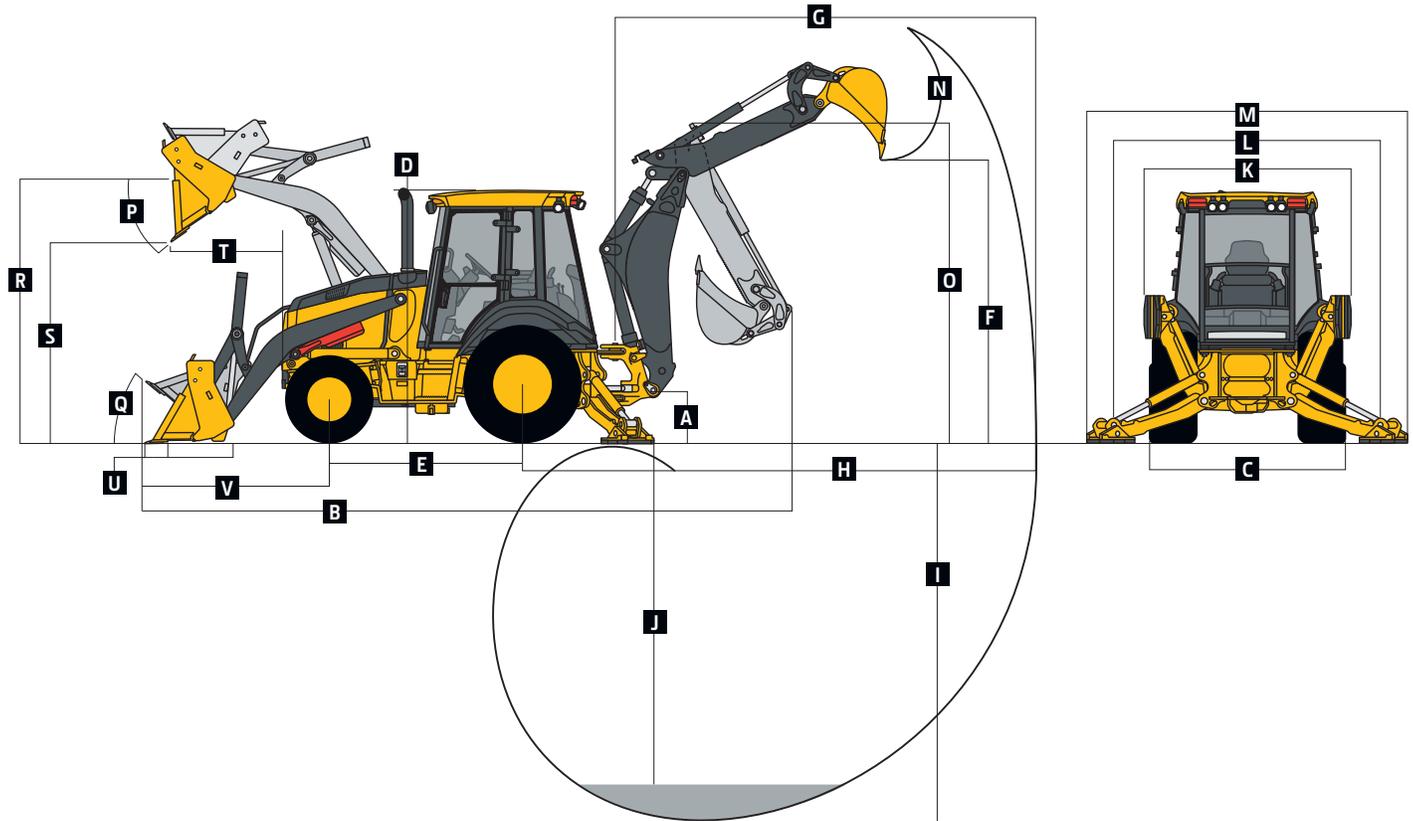
310L EP / 310L SPECIFICATIONS



Hydraulics (continued)		310L EP	310L	
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; manual auxiliary function (2nd lever), single-lever control with electric clutch cutoff and electrohydraulic (EH) proportional auxiliary control optional		
Electrical				
Voltage		12 volt	12 volt	
Alternator Rating		120 amp with cab / 90 amp with canopy and quarter cab	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights		
Operator Station				
Type (SAE J1040)		310L EP / 310L Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab		
Tires/Wheels		310L EP	310L	
		<i>Front</i>	<i>Rear</i>	<i>Rear</i>
Non-Powered Front Axle		12.5/80-18 F3 (12)	19.5L-24 R4 (12)	12.5/80-18 F3 (12)
With MFWD		12-16.5 NHS (12)	19.5L-24 R4 (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)
		—	—	340/80R18 XMCL
		—	—	500/70R24 XMCL
		—	—	340/80R18 580
		—	—	500/70R24 580
Serviceability				
Refill Capacities				
Cooling System		30 L (31.7 qt.)	35 L (37 qt.)	
Rear Axle		18 L (19 qt.)	18 L (19 qt.)	
Engine Oil (including vertical spin-on filter)		13 L (13.7 qt.)	13 L (13.7 qt.)	
Torque Converter and Transmission		15.1 L (16 qt.)	15.1 L (16 qt.)	
Fuel Tank (with ground-level fueling)		140.1 L (37 gal.)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank		—	16.3 L (4.3 gal.)	
Hydraulic System		111.7 L (29.5 gal.)	111.7 L (29.5 gal.)	
Hydraulic Reservoir		45 L (11.9 gal.)	45 L (11.9 gal.)	
MFWD Housing				
Axle		6.5 L (6.9 qt.)	6.5 L (6.9 qt.)	
Planetary (each)		0.9 L (1 qt.)	0.9 L (1 qt.)	
Hydra™ XR Hydraulic Oil		Optional	Optional	
Operating Weights				
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Bumper		6545 kg (14,430 lb.)	6654 kg (14,669 lb.)	
Typical with Cab, Extendable Dipperstick, and 204-kg (450 lb.) Counterweight		7203 kg (15,880 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		168 kg (370 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

Overall Dimensions	310L EP / 310L
A Ground Clearance, Minimum	293 mm (12 in.)
B Overall Length, Transport	7.24 m (23 ft. 9 in.)
C Width Over Tires	2.16 m (7 ft. 1 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 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		
Leveling Angle	14 deg.		
Stabilizer Angle Rearward	18 deg.		

	With Optional Extendable Dipperstick		
	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	3.41 m (11 ft. 2 in.)	3.49 m (11 ft. 6 in.)	4.15 m (13 ft. 7 in.)
G Reach from Center of Swing Pivot	5.42 m (17 ft. 10 in.)	5.49 m (18 ft. 0 in.)	6.51 m (21 ft. 4 in.)
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.)
I Digging Depth (SAE maximum)	4.27 m (14 ft. 0 in.)	4.33 m (14 ft. 2 in.)	5.39 m (17 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.22 m (13 ft. 10 in.)	4.29 m (14 ft. 1 in.)	5.36 m (17 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	3.89 m (12 ft. 9 in.)	3.96 m (13 ft. 0 in.)	5.10 m (16 ft. 9 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	3.10 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.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.42 m (11 ft. 2 in.)	3.42 m (11 ft. 2 in.)	3.42 m (11 ft. 2 in.)

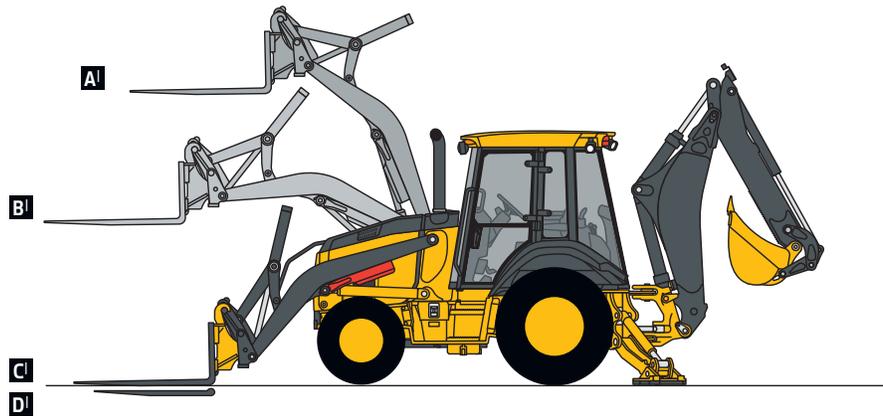
Loader Dimensions and Performance

310L EP / 310L

P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
	<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Heavy-duty long lip</i>	<i>Multipurpose</i>
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.)
Width	2184 mm (86 in.)			
Weight	363 kg (800 lb.)	390 kg (860 lb.)	405 kg (892 lb.)	794 kg (1,750 lb.)
Breakout Force	41.6 kN (9,353 lb.)	42.3 kN (9,504 lb.)	39.9 kN (8,978 lb.)	37.0 kN (8,311 lb.)
Lift Capacity, Full Height	3099 kg (6,833 lb.)	3179 kg (7,009 lb.)	2934 kg (6,469 lb.)	2605 kg (5,743 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.71 m (8 ft. 11 in.)	2.74 m (9 ft. 0 in.)	2.64 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	734 mm (28.9 in.)	699 mm (27.5 in.)	825 mm (32.5 in.)	737 mm (29.0 in.)
U Digging Depth Below Ground, Bucket Level	107 mm (4.2 in.)	107 mm (4.2 in.)	88 mm (3.5 in.)	147 mm (5.8 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	2.02 m (6 ft. 8 in.)	1.97 m (6 ft. 6 in.)	2.12 m (6 ft. 11 in.)	2.09 m (6 ft. 10 in.)

Lift Capacity with Quick-Coupler Forks

Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A Maximum Height	1695 kg (3,736 lb.)	1561 kg (3,442 lb.)
B Maximum Reach	2646 kg (5,833 lb.)	2629 kg (5,795 lb.)
C At Ground Line	3583 kg (7,900 lb.)	3269 kg (7,207 lb.)
D Below Ground Line	262 mm (10.3 in.)	262 mm (10.3 in.)

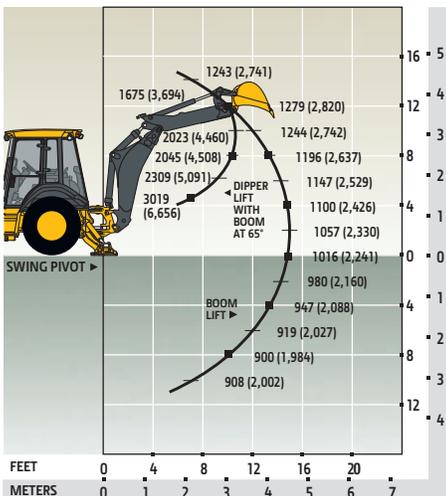


Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

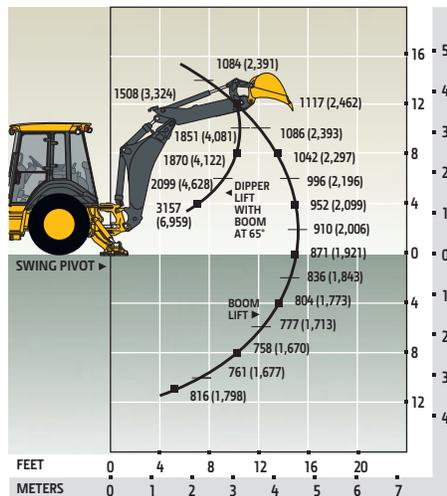
STANDARD LIFT

With Standard Dipperstick



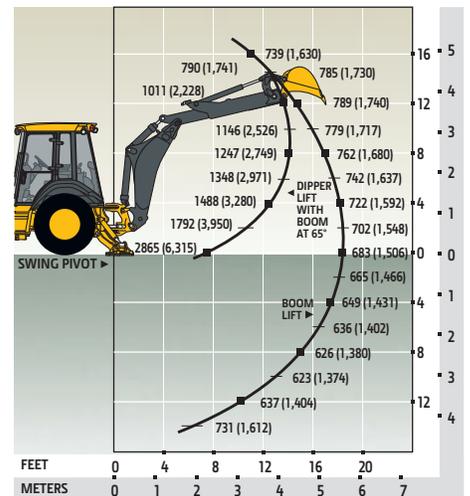
STANDARD LIFT

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



STANDARD LIFT

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





310SL SPECIFICATIONS

Engine		310SL	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	74 kW (99 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	417 Nm (307 lb.-ft.) at 1,400 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		
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; AutoShift transmission optional		
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			
	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.6 km/h (3.5 mph)	7.0 km/h (4.3 mph)	
Gear 2	10.1 km/h (6.3 mph)	12.8 km/h (8.0 mph)	
Gear 3	20.6 km/h (12.8 mph)	20.4 km/h (12.7 mph)	
Gear 4	34.5 km/h (21.4 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive (MFWD)</i>		
	<i>Non-Powered Front</i>	<i>Rear</i>	
SAE J43	5000 kg (11,023 lb.)	7000 kg (15,432 lb.)	
Dynamic	8500 kg (18,739 lb.)	9500 kg (20,944 lb.)	
Static	22 500 kg (49,604 lb.)	26 000 kg (57,320 lb.)	
Ultimate	35 000 kg (77,162 lb.)	39 500 kg (87,083 lb.)	
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.58 m (11 ft. 9 in.)	3.66 m (12 ft. 0 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.18 m (33 ft. 5 in.)	10.27 m (33 ft. 8 in.)	
Without Brakes	11.08 m (36 ft. 4 in.)	11.27 m (37 ft. 0 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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, gear type, tandem with unloader		
Pump Flow at 2,200 rpm			
Backhoe	136 L/m (36 gpm)		
Loader	106 L/m (28 gpm)		

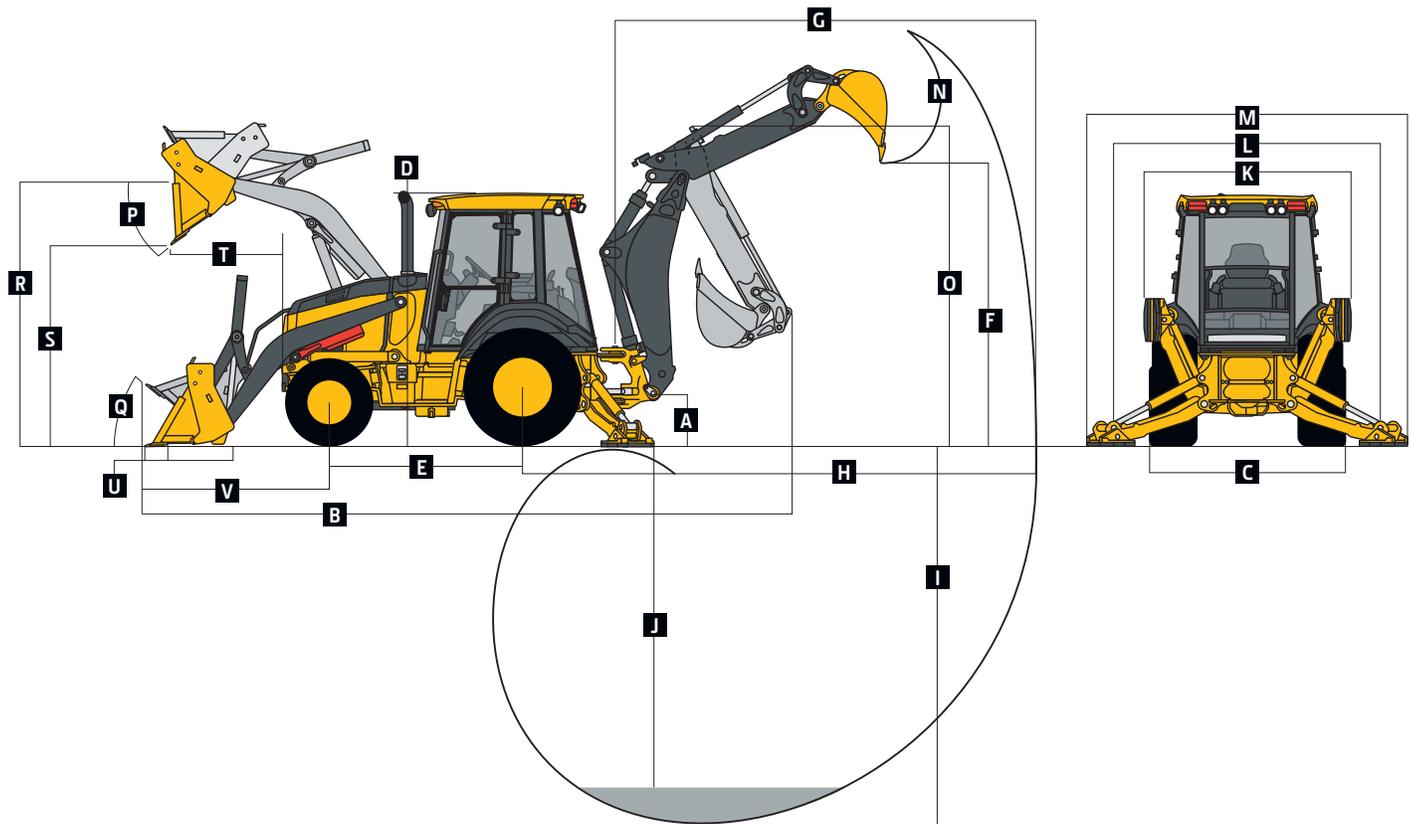
310SL SPECIFICATIONS



Hydraulics (continued)		310SL
System Relief Pressure, Backhoe and 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	
Electrical		
Voltage	12 volt	
Alternator Rating	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights	
Operator Station		
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab	
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
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 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System	35 L (37 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)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 gal.)	
Hydraulic System	111.7 L (29.5 gal.)	
Hydraulic Reservoir	45 L (11.9 gal.)	
MFWD Housing		
Axle	6.5 L (6.9 qt.)	
Planetary (each)	0.9 L (1 qt.)	
Hydra™ XR Hydraulic Oil	Optional	
Operating Weights		
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 204-kg (450 lb.) Counterweight	7287 kg (16,064 lb.)	
Typical with Cab, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	8135 kg (17,934 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.)	

310SL

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	2.18 m (7 ft. 2 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.)		
With Heavy-Duty Cylinder Option	67.8 kN (15,254 lb.)		
Crowd Cylinder	36.6 kN (8,229 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.43 m (11 ft. 3 in.)	3.55 m (11 ft. 8 in.)	4.17 m (13 ft. 8 in.)
G Reach from Center of Swing Pivot	5.52 m (18 ft. 1 in.)	5.62 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)	4.34 m (14 ft. 3 in.)	4.48 m (14 ft. 8 in.)	5.53 m (18 ft. 2 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.31 m (14 ft. 2 in.)	4.44 m (14 ft. 7 in.)	5.49 m (18 ft. 0 in.)
2440-mm (8 ft.) Flat Bottom	3.97 m (13 ft. 0 in.)	4.11 m (13 ft. 6 in.)	5.24 m (17 ft. 2 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.)
Long 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.)
Long Stabilizers	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)

Backhoe Dimensions and Performance (continued)

310SL

With Optional Extendable Dipperstick

	With Standard Backhoe	Retracted	Extended
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.49 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)

Loader Dimensions and Performance

	Heavy-duty	Heavy-duty long lip	Heavy-duty	Multipurpose
P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
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.)	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	49.1 kN (11,045 lb.)	46.4 kN (10,438 lb.)	46.8 kN (10,532 lb.)	43.2 kN (9,714 lb.)
Lift Capacity, Full Height	3462 kg (7,632 lb.)	3198 kg (7,050 lb.)	3322 kg (7,324 lb.)	2834 kg (6,248 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.62 m (8 ft. 7 in.)	2.64 m (8 ft. 8 in.)	2.68 m (8 ft. 10 in.)	2.65 m (8 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	699 mm (27.5 in.)	825 mm (32.5 in.)	695 mm (27.4 in.)	737 mm (29.0 in.)
U Digging Depth Below Ground, Bucket Level	106 mm (4.2 in.)	87 mm (3.4 in.)	151 mm (5.9 in.)	147 mm (5.8 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	1.97 m (6 ft. 6 in.)	2.12 m (6 ft. 11 in.)	2.04 m (6 ft. 8 in.)	2.09 m (6 ft. 10 in.)

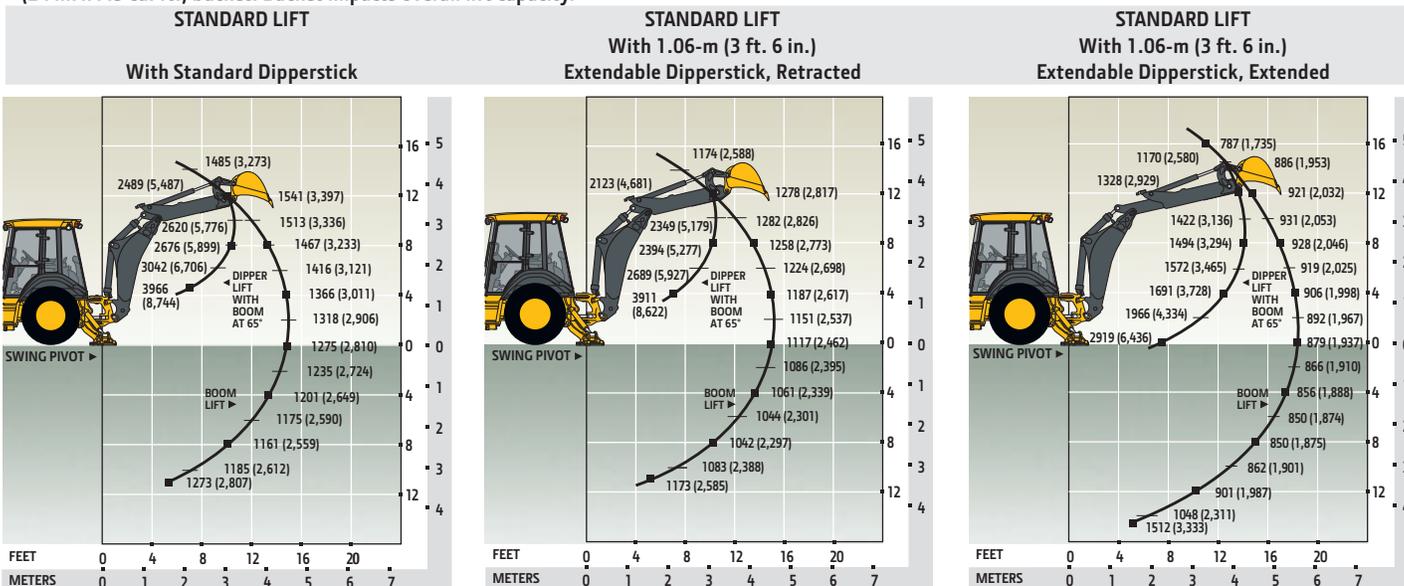
Lift Capacity with Quick-Coupler Forks

	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines
Hydraulic Capacity		
A Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)
B Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)
C At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)
D Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)



Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.





310SL HL SPECIFICATIONS

Engine		310SL HL	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	82 kW (110 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	427 Nm (315 lb.-ft.) at 1,400 rpm		
Net Torque Rise	21%		
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		
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; AutoShift transmission optional		
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			
	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.7 km/h (3.5 mph)	7.2 km/h (4.5 mph)	
Gear 2	10.5 km/h (6.5 mph)	13.3 km/h (8.3 mph)	
Gear 3	21.4 km/h (13.3 mph)	21.2 km/h (13.2 mph)	
Gear 4	36.0 km/h (22.4 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive (MFWD)</i>		
	<i>Non-Powered Front</i>	<i>Rear</i>	
SAE J43	5500 kg (12,125 lb.)	7500 kg (16,535 lb.)	
Dynamic	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)	
Static	22 500 kg (49,604 lb.)	26 000 kg (57,320 lb.)	
Ultimate	35 000 kg (77,162 lb.)	39 500 kg (87,083 lb.)	
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.61 m (11 ft. 10 in.)	3.67 m (12 ft. 0 in.)	
Without Brakes	4.24 m (13 ft. 11 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.53 m (34 ft. 7 in.)	10.61 m (34 ft. 10 in.)	
Without Brakes	11.42 m (37 ft. 6 in.)	11.59 m (38 ft. 0 in.)	
Steering Wheel Turns (lock to lock)	3.1 to 4.3	2.6 to 3.6	
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		

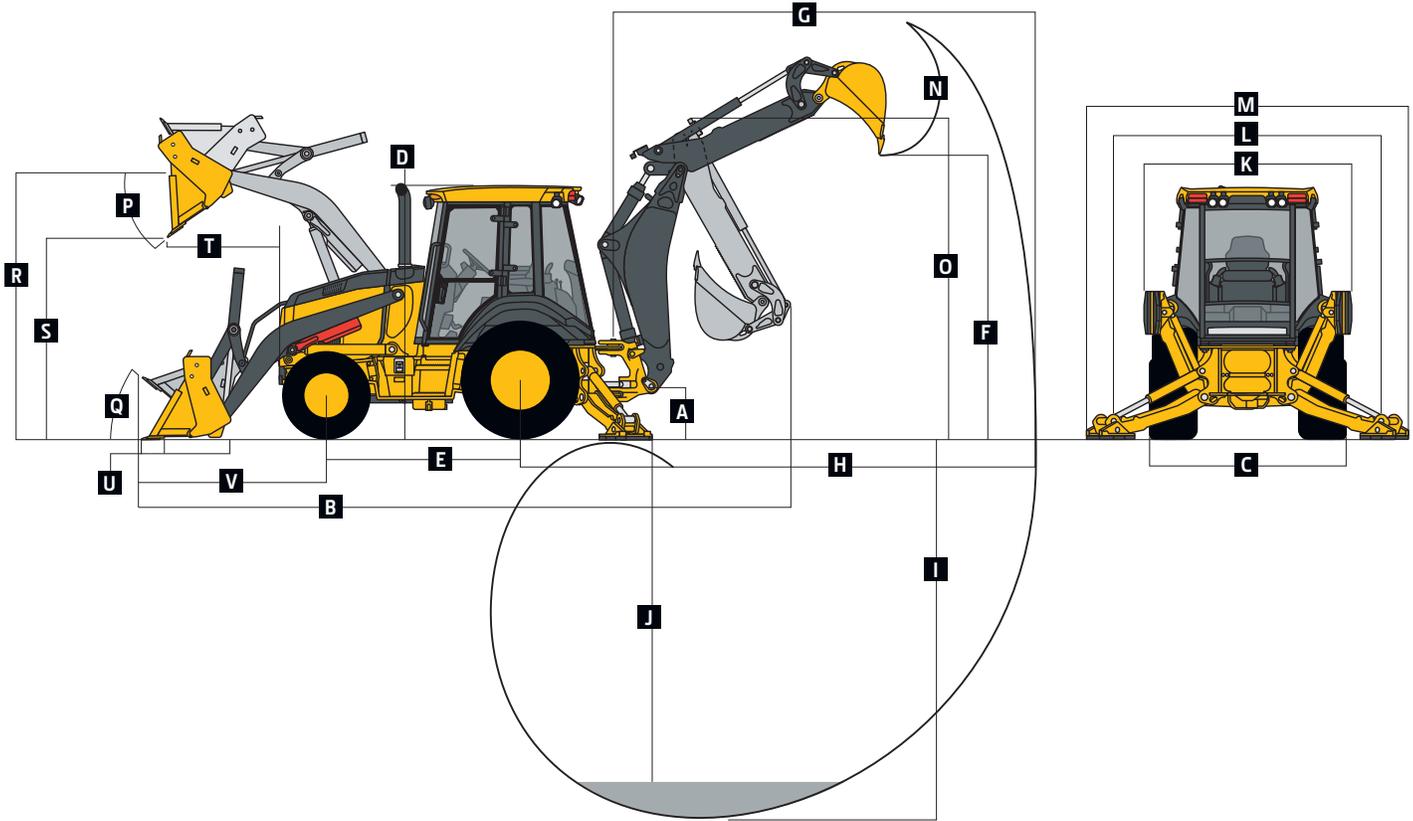
310SL HL SPECIFICATIONS



Hydraulics		310SL HL
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 and Loader		24 993 kPa (3,625 psi)
Backhoe (lift mode)		27 579 kPa (4,000 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, EH proportional auxiliary roller, and transmission quick-shift optional
Electrical		
Voltage		12 volt
Alternator Rating		150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights
Operator Station		
Type (SAE J1040)		Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
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 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System		35 L (37 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)		140.1 L (37 gal.)
Diesel Exhaust Fluid (DEF) Tank		16.3 L (4.3 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.)
Hydrau™ XR Hydraulic Oil		Optional
Operating Weights		
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 567-kg (1,250 lb.) Counterweight		8269 kg (18,231 lb.)
Typical with Cab and 567-kg (1,250 lb.) Counterweight		8533 kg (18,811 lb.)
Optional Components (weight difference between base equipment and option)		
Cab		263 kg (580 lb.)
MFWD with Tires		110 kg (242 lb.)
Front Loader Coupler		257 kg (566 lb.)
Backhoe Bucket Coupler		64 kg (141 lb.)

310SL HL

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	2.18 m (7 ft. 2 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.)



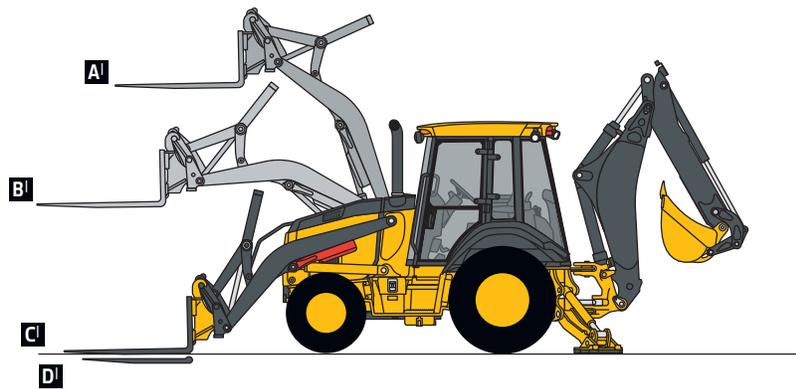
Backhoe Dimensions and Performance

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	70.9 kN (15,947 lb.)	
Lift Mode	78.3 kN (17,596 lb.)	
Crowd Cylinder	38.9 kN (8,750 lb.)	
Lift Mode	42.9 kN (9,655 lb.)	
Swing Arc	180 deg.	
Operator Control	2 levers	
	<i>With Extendable Dipperstick</i>	<i>With Extendable Dipperstick</i>
	<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.63 m (11 ft. 11 in.)	4.25 m (13 ft. 11 in.)
G Reach from Center of Swing Pivot	5.62 m (18 ft. 5 in.)	6.60 m (21 ft. 8 in.)
H Reach from Center of Rear Axle	6.68 m (21 ft. 11 in.)	7.67 m (25 ft. 2 in.)
I Digging Depth (SAE maximum)	4.51 m (14 ft. 10 in.)	5.52 m (18 ft. 1 in.)
J Digging Depth (SAE)		
610-mm (2 ft.) Flat Bottom	4.47 m (14 ft. 8 in.)	5.49 m (18 ft. 0 in.)
2440-mm (8 ft.) Flat Bottom	4.16 m (13 ft. 8 in.)	5.26 m (17 ft. 3 in.)
K Stabilizer Width, Transport	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.)
Long Stabilizers	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.)
Long Stabilizers	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N Bucket Rotation	190 deg.	
O Transport Height	3.57 m (11 ft. 9 in.)	3.57 m (11 ft. 9 in.)

Loader Dimensions and Performance		310SL HL			
P	Bucket Dump Angle, Maximum	45 deg.			
Q	Rollback Angle at Ground Level	40 deg.			
		<i>Heavy-duty</i>	<i>Heavy-duty long lip</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
	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 (11,106 lb.)	46.7 kN (10,497 lb.)	47.1 kN (10,587 lb.)	43.4 kN (9,767 lb.)
	Lift Capacity, Full Height	3397 kg (7,489 lb.)	3141 kg (6,924 lb.)	3257 kg (7,181 lb.)	2774 kg (6,116 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.43 m (11 ft. 3 in.)			
S	Dump Clearance, Bucket at 45 deg.	2.73 m (8 ft. 11 in.)	2.63 m (8 ft. 8 in.)	2.67 m (8 ft. 9 in.)	2.63 m (8 ft. 8 in.)
T	Reach at Full Height, Bucket at 45 deg.	744 mm (29.3 in.)	870 mm (34.2 in.)	740 mm (29.1 in.)	782 mm (30.8 in.)
U	Digging Depth Below Ground, Bucket Level	124 mm (4.9 in.)	105 mm (4.1 in.)	168 mm (6.6 in.)	164 mm (6.5 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	1.98 m (6 ft. 6 in.)	2.13 m (7 ft. 0 in.)	2.05 m (6 ft. 9 in.)	2.10 m (6 ft. 11 in.)

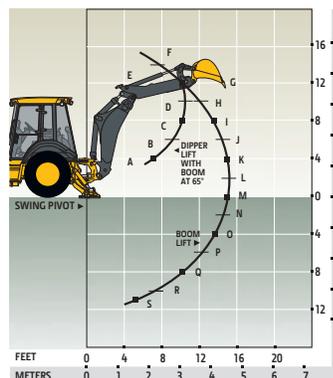
Lift Capacity with Quick-Coupler Forks		
Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A ¹	2059 kg (4,539 lb.)	2008 kg (4,426 lb.)
B ¹	3542 kg (7,809 lb.)	3484 kg (7,681 lb.)
C ¹	4079 kg (8,992 lb.)	4027 kg (8,879 lb.)
D ¹	211 mm (8.3 in.)	211 mm (8.3 in.)



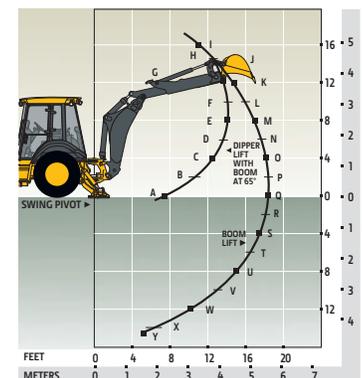
Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

	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
A	4588 kg (10,116 lb.)	4591 kg (10,122 lb.)	3404 kg (7,504 lb.)	3811 kg (8,401 lb.)
B	3012 kg (6,640 lb.)	3012 kg (6,640 lb.)	2165 kg (4,772 lb.)	2435 kg (5,367 lb.)
C	2652 kg (5,846 lb.)	2652 kg (5,846 lb.)	1873 kg (4,130 lb.)	2111 kg (4,653 lb.)
D	2583 kg (5,694 lb.)	2583 kg (5,694 lb.)	1761 kg (3,883 lb.)	1955 kg (4,309 lb.)
E	2553 kg (5,629 lb.)	2727 kg (6,011 lb.)	1698 kg (3,744 lb.)	1853 kg (4,086 lb.)
F	1131 kg (2,494 lb.)	1303 kg (2,872 lb.)	1647 kg (3,630 lb.)	1832 kg (4,039 lb.)
G	1338 kg (2,951 lb.)	1539 kg (3,392 lb.)	1578 kg (3,480 lb.)	1781 kg (3,926 lb.)
H	1388 kg (3,061 lb.)	1598 kg (3,522 lb.)	1452 kg (3,202 lb.)	1641 kg (3,617 lb.)
I	1390 kg (3,064 lb.)	1602 kg (3,532 lb.)	725 kg (1,599 lb.)	847 kg (1,867 lb.)
J	1372 kg (3,025 lb.)	1584 kg (3,493 lb.)	899 kg (1,982 lb.)	1044 kg (2,302 lb.)
K	1346 kg (2,968 lb.)	1558 kg (3,435 lb.)	977 kg (2,154 lb.)	1133 kg (2,499 lb.)
L	1318 kg (2,907 lb.)	1529 kg (3,371 lb.)	1014 kg (2,235 lb.)	1176 kg (2,594 lb.)
M	1292 kg (2,848 lb.)	1501 kg (3,310 lb.)	1030 kg (2,270 lb.)	1196 kg (2,637 lb.)
N	1269 kg (2,798 lb.)	1478 kg (3,259 lb.)	1034 kg (2,280 lb.)	1203 kg (2,651 lb.)
O	1254 kg (2,764 lb.)	1463 kg (3,226 lb.)	1032 kg (2,276 lb.)	1202 kg (2,651 lb.)
P	1251 kg (2,757 lb.)	1463 kg (3,255 lb.)	1028 kg (2,266 lb.)	1199 kg (2,642 lb.)
Q	1273 kg (2,807 lb.)	1492 kg (3,288 lb.)	1022 kg (2,253 lb.)	1194 kg (2,632 lb.)
R	1376 kg (3,034 lb.)	1614 kg (3,557 lb.)	1018 kg (2,243 lb.)	1191 kg (2,625 lb.)
S	1570 kg (3,460 lb.)	1839 kg (4,053 lb.)	1016 kg (2,240 lb.)	1191 kg (2,625 lb.)
T	—	—	1020 kg (2,249 lb.)	1197 kg (2,639 lb.)
U	—	—	1034 kg (2,279 lb.)	1214 kg (2,677 lb.)
V	—	—	1066 kg (2,351 lb.)	1254 kg (2,764 lb.)
W	—	—	1145 kg (2,524 lb.)	1346 kg (2,968 lb.)
X	—	—	1428 kg (3,149 lb.)	1675 kg (3,693 lb.)
Y	—	—	3058 kg (6,741 lb.)	3552 kg (7,831 lb.)



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended



315SL SPECIFICATIONS

Engine	315SL		
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	74 kW (99 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	417 Nm (307 lb.-ft.) at 1,400 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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.9 km/h (3.7 mph)	7.5 km/h (4.7 mph)	
Gear 2	10.8 km/h (6.7 mph)	13.6 km/h (8.5 mph)	
Gear 3	22.0 km/h (13.7 mph)	21.8 km/h (13.5 mph)	
Gear 4	36.6 km/h (22.7 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive</i>		
	<i>Non-Powered Front</i>	<i>(MFWD)</i>	<i>Rear</i>
SAE J43	5500 kg (12,125 lb.)	5500 kg (12,125 lb.)	7500 kg (16,535 lb.)
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
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	<i>Non-Powered Front</i> <i>MFWD</i>		
Curb-Turning Radius			
With Brakes	3.62 m (11 ft. 11 in.)	3.68 m (12 ft. 1 in.)	
Without Brakes	4.24 m (13 ft. 11 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.40 m (34 ft. 1 in.)	10.48 m (34 ft. 5 in.)	
Without Brakes	11.30 m (37 ft. 1 in.)	11.47 m (37 ft. 8 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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		

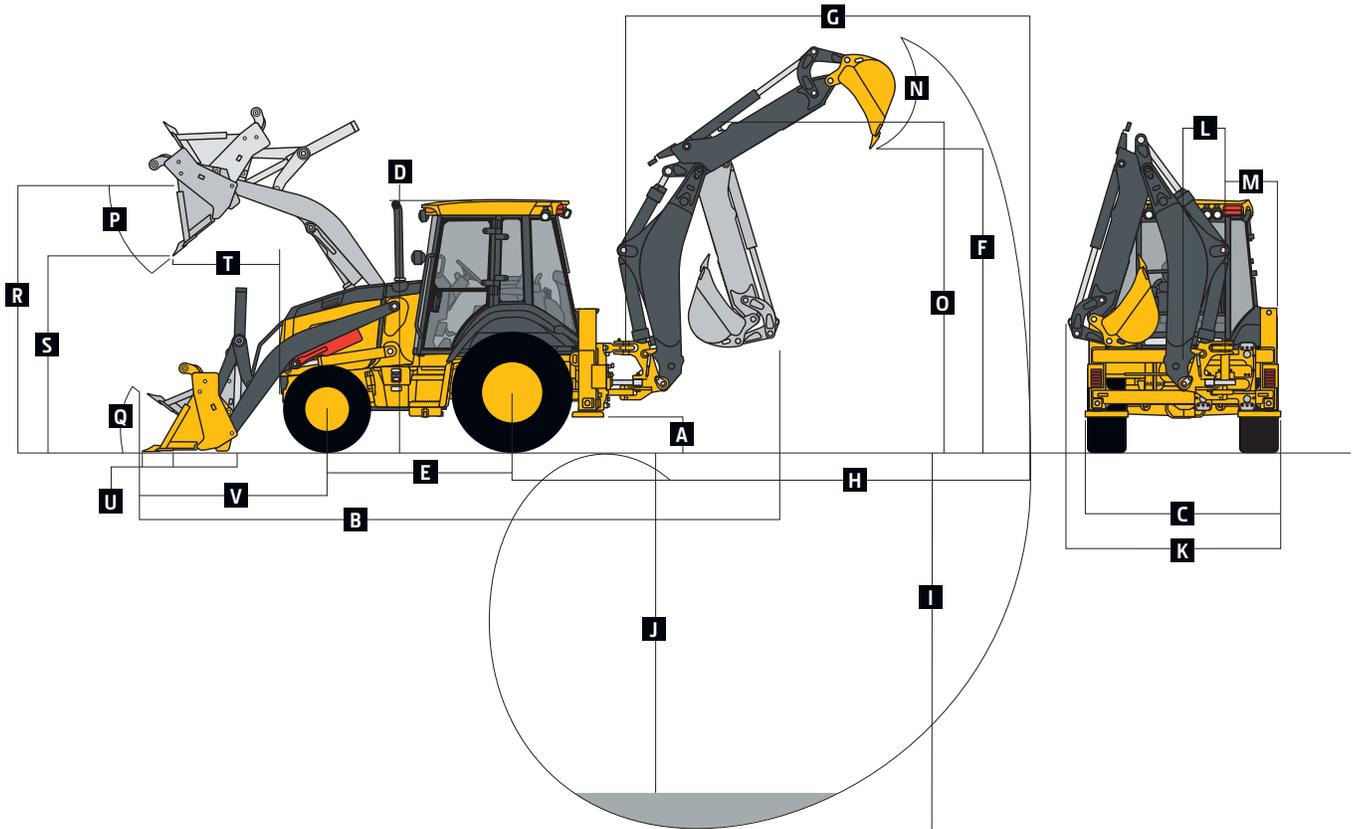
315SL SPECIFICATIONS



Hydraulics		315SL	
Main Pump		Open center, gear type, tandem 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 standard; manual auxiliary function (2nd lever), single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MWFD (momentary), and transmission quick-shift optional	
Electrical			
Voltage		12 volt	
Alternator Rating		150 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; LED light field kits available with both flood- and spotlights	
Operator Station			
Type (SAE J1040)		Cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof	
Tires/Wheels			
		<i>Front</i>	<i>Rear</i>
Non-Powered Front Axle		12.5/80-18 F3 (12)	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 580	500/70R24 580
Serviceability			
Refill Capacities			
Cooling System		35 L (37 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)		140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank		16.3 L (4.3 gal.)	
Hydraulic System		104.1 L (27.5 gal.)	
Hydraulic Reservoir		45 L (11.9 gal.)	
MFWD Housing			
Axle		6.5 L (6.9 qt.)	
Planetary (each)		0.9 L (1 qt.)	
Hydrau™ XR Hydraulic Oil		Optional	
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.)	
Extendable Dipperstick		222 kg (490 lb.)	

315SL

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 (12,356 lb.)		
With Heavy-Duty Cylinder Option	67.8 kN (15,254 lb.)		
Crowd Cylinder	36.6 kN (8,231 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		

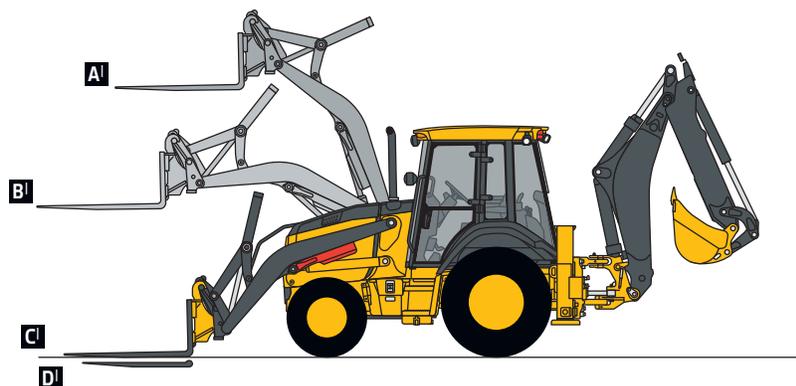
	With Optional Extendable Dipperstick		
	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	3.57 m (11 ft. 8 in.)	3.69 m (12 ft. 1 in.)	4.31 m (14 ft. 2 in.)
G Reach from Center of Swing Pivot	5.44 m (17 ft. 10 in.)	5.61 m (18 ft. 5 in.)	6.62 m (21 ft. 9 in.)
H Reach from 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)	4.17 m (13 ft. 8 in.)	4.34 m (14 ft. 3 in.)	5.39 m (17 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.13 m (13 ft. 6 in.)	4.30 m (14 ft. 1 in.)	5.35 m (17 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	3.77 m (12 ft. 5 in.)	3.96 m (13 ft. 0 in.)	5.09 m (16 ft. 9 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	3.63 m (11 ft. 11 in.)	3.63 m (11 ft. 11 in.)	3.63 m (11 ft. 11 in.)

Loader Dimensions and Performance 315SL

P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
Bucket Capacity	<i>Heavy-duty</i> 0.77 m ³ (1.00 cu. yd.)	<i>Heavy-duty</i> 1.00 m ³ (1.31 cu. yd.)	<i>Multipurpose</i> 0.96 m ³ (1.25 cu. yd.)	<i>Multipurpose</i> 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	48.3 kN (10,866 lb.)	46.8 kN (10,532 lb.)	43.5 kN (9,789 lb.)	43.2 kN (9,714 lb.)
Lift Capacity, Full Height	3375 kg (7,440 lb.)	3322 kg (7,324 lb.)	2875 kg (6,338 lb.)	2834 kg (6,248 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.71 m (8 ft. 11 in.)			
T Reach at Full Height, Bucket at 45 deg.	734 mm (28.9 in.)			
U Digging Depth Below Ground, Bucket Level	106 mm (4.2 in.)			
V Length from Front Axle Centerline to Bucket Cutting Edge	2.02 m (6 ft. 8 in.)			

Lift Capacity with Quick-Coupler Forks

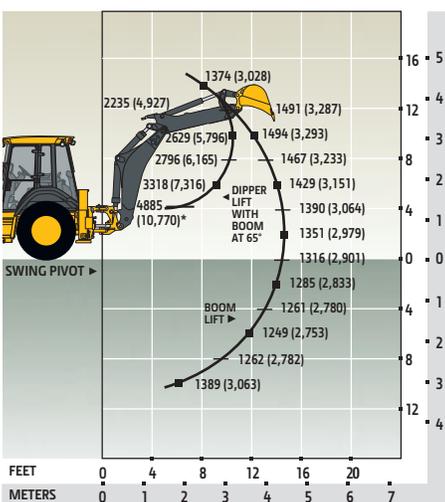
Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)
B Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)
C At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)
D Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)



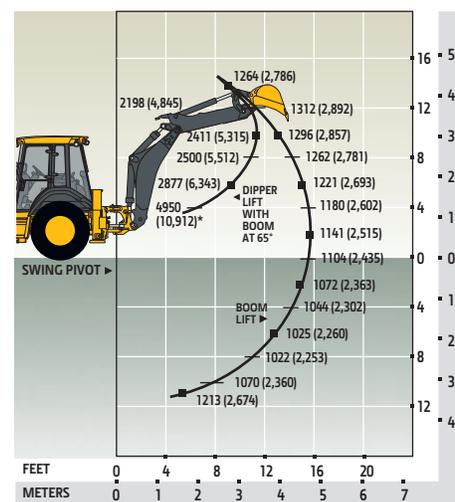
Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

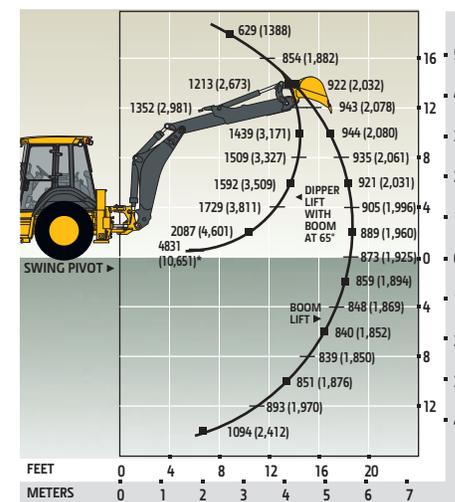
STANDARD LIFT With Standard Dipperstick



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

Engine		410L	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	84 kW (113 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	447 Nm (330 lb.-ft.) at 1,400 rpm		
Net Torque Rise	23%		
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		
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; AutoShift transmission optional		
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			
	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.7 km/h (3.5 mph)	7.2 km/h (4.5 mph)	
Gear 2	10.5 km/h (6.5 mph)	13.2 km/h (8.2 mph)	
Gear 3	21.4 km/h (13.3 mph)	21.1 km/h (13.1 mph)	
Gear 4	35.9 km/h (22.3 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive (MFWD)</i>		
	<i>Non-Powered Front</i>	<i>Rear</i>	
SAE J43	6500 kg (14,330 lb.)	6000 kg (13,228 lb.) 7500 kg (16,535 lb.)	
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.) 10 000 kg (22,046 lb.)	
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.) 26 000 kg (57,320 lb.)	
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.) 39 500 kg (87,083 lb.)	
Differentials			
MFWD Axle	Automatic, limited-slip traction control		
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock		
Steering (ISO 5010)			
Axle	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.59 m (11 ft. 9 in.)	3.67 m (12 ft. 0 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.31 m (33 ft. 10 in.)	10.40 m (34 ft. 1 in.)	
Without Brakes	11.22 m (36 ft. 10 in.)	11.41 m (37 ft. 5 in.)	
Steering Wheel Turns (lock to lock, flow amplified)	3.1 to 4.3	2.6 to 3.6	
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		

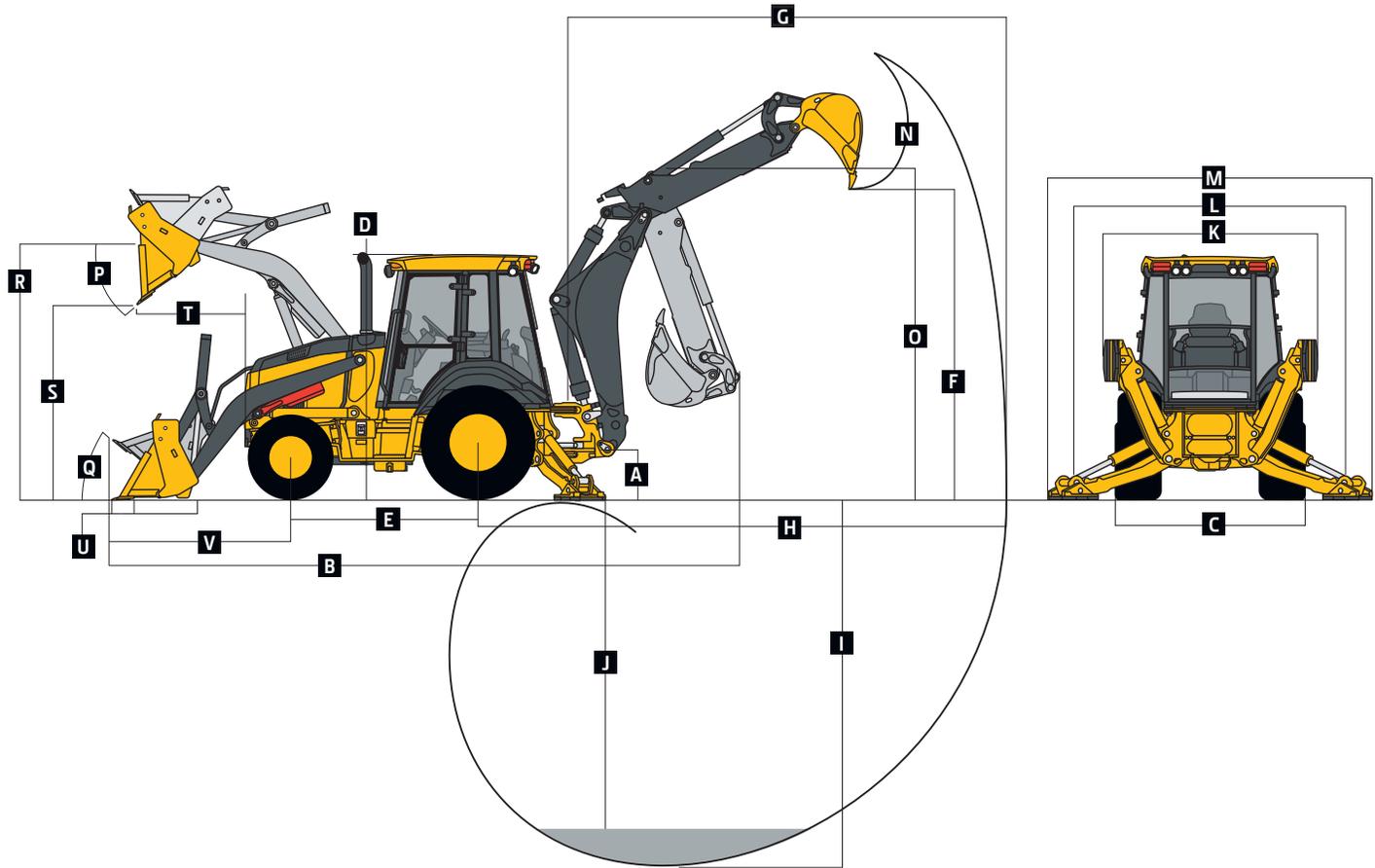
410L SPECIFICATIONS



Hydraulics		410L	
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 and Loader	24 993 kPa (3,625 psi)		
Backhoe (lift mode)	27 579 kPa (4,000 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, momentary MFWD, transmission quick-shift, and electro-hydraulic (EH) auxiliary loader control optional		
Electrical			
Voltage	12 volt		
Alternator Rating	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights		
Operator Station			
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab		
Tires/Wheels			
	<i>Front</i>	<i>Rear</i>	
Non-Powered Front Axle	12.5/80-18 F3 (12)	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 580	500/70R24 580	
Serviceability			
Refill Capacities			
Cooling System	35 L (37 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)	140.1 L (37 gal.)		
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 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.)		
Hydrau™ XR Hydraulic Oil	Optional		
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

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	2.18 m (7 ft. 2 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.)



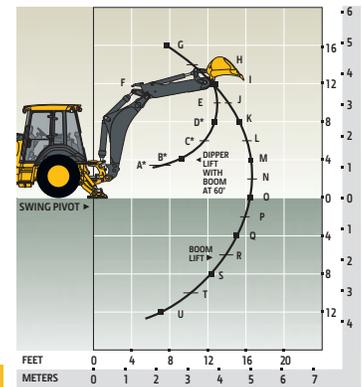
Backhoe Dimensions and Performance

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		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.98 m (13 ft. 1 in.)	4.02 m (13 ft. 2 in.)	4.73 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)	4.83 m (15 ft. 10 in.)	4.83 m (15 ft. 10 in.)	5.99 m (19 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.78 m (15 ft. 8 in.)	4.78 m (15 ft. 8 in.)	5.96 m (19 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	4.47 m (14 ft. 8 in.)	4.47 m (14 ft. 8 in.)	5.73 m (18 ft. 9 in.)
K Stabilizer Width, Transport	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 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	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)

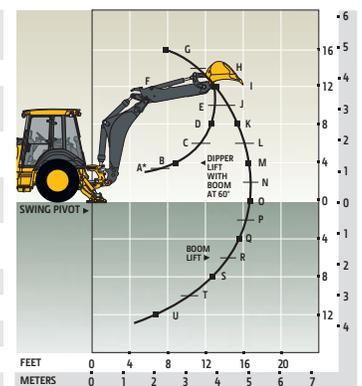
Loader Dimensions and Performance		410L		
P	Bucket Dump Angle, Maximum	45 deg.		
Q	Rollback Angle at Ground Level	40 deg.		
		<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
	Bucket Capacity	1.00 m ³ (1.31 cu. yd.)	1.15 m ³ (1.50 cu. yd.)	1.00 m ³ (1.31 cu. yd.)
	Width	2346 mm (92 in.)	2394 mm (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 (10,634 lb.)	46.0 kN (10,351 lb.)	43.6 kN (9,813 lb.)
	Lift Capacity, Full Height	3243 kg (7,149 lb.)	3134 kg (6,909 lb.)	2761 kg (6,087 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)		
S	Dump Clearance, Bucket at 45 deg.	2.68 m (8 ft. 10 in.)		
T	Reach at Full Height, Bucket at 45 deg.	750 mm (29.5 in.)		
U	Digging Depth Below Ground, Bucket Level	157 mm (6.2 in.)		
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.04 m (6 ft. 8 in.)		
			2.10 m (6 ft. 11 in.)	2.09 m (6 ft. 10 in.)

Lift Capacity with Quick-Coupler Forks		1219-mm (48 in.) Tines		1524-mm (60 in.) Tines	
Hydraulic Capacity					
A ¹	Maximum Height	2031 kg (4,478 lb.)		1880 kg (4,145 lb.)	
B ¹	Maximum Reach	3177 kg (7,005 lb.)		3002 kg (6,618 lb.)	
C ¹	At Ground Line	4208 kg (9,278 lb.)		3613 kg (7,966 lb.)	
D ¹	Below Ground Line	211 mm (8.3 in.)		211 mm (8.3 in.)	

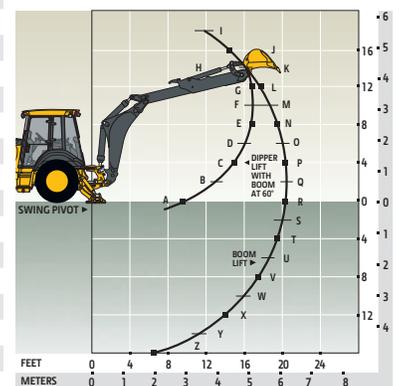


With Standard Dipperstick

Lift Capacity with Bucket		Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m ³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.					
		With 1.21-m (4 ft. 0 in.)		With 1.21-m (4 ft. 0 in.)			
		Extendable Dipperstick, Retracted		Extendable Dipperstick, Extended			
	Standard Lift	Lift Mode	Standard Lift	Lift Mode	Standard Lift	Lift Mode	
A	6359 kg (14,020 lb.)*	6359 kg (14,020 lb.)*	6513 kg (14,359 lb.)*	6513 kg (14,359 lb.)*	4181 kg (9,217 lb.)	4554 kg (10,041 lb.)	
B	4893 kg (10,788 lb.)*	4893 kg (10,788 lb.)*	4985 kg (10,990 lb.)	4985 kg (10,990 lb.)	2548 kg (5,618 lb.)	2855 kg (6,294 lb.)	
C	3627 kg (7,996 lb.)*	3627 kg (7,996 lb.)*	3587 kg (7,908 lb.)	3587 kg (7,908 lb.)	2193 kg (4,836 lb.)	2461 kg (5,426 lb.)	
D	3268 kg (7,204 lb.)*	3268 kg (7,204 lb.)*	3200 kg (7,055 lb.)	3200 kg (7,055 lb.)	2010 kg (4,432 lb.)	2258 kg (4,978 lb.)	
E	3087 kg (6,805 lb.)	3168 kg (6,984 lb.)*	2979 kg (6,568 lb.)	3093 kg (6,820 lb.)	1879 kg (4,142 lb.)	2112 kg (4,657 lb.)	
F	2717 kg (5,990 lb.)	3029 kg (6,678 lb.)	2608 kg (5,750 lb.)	2920 kg (6,438 lb.)	1755 kg (3,870 lb.)	1975 kg (4,355 lb.)	
G	1341 kg (2,957 lb.)	1511 kg (3,330 lb.)	1202 kg (2,649 lb.)	1371 kg (3,023 lb.)	1608 kg (3,545 lb.)	1812 kg (3,995 lb.)	
H	1718 kg (3,788 lb.)	1938 kg (4,272 lb.)	1560 kg (3,438 lb.)	1779 kg (3,923 lb.)	1397 kg (3,080 lb.)	1579 kg (3,480 lb.)	
I	1813 kg (3,996 lb.)	2047 kg (4,513 lb.)	1646 kg (3,629 lb.)	1880 kg (4,146 lb.)	828 kg (1,825 lb.)	956 kg (2,109 lb.)	
J	1834 kg (4,043 lb.)	2073 kg (4,571 lb.)	1662 kg (3,665 lb.)	1902 kg (4,193 lb.)	1041 kg (2,295 lb.)	1198 kg (2,642 lb.)	
K	1826 kg (4,026 lb.)	2067 kg (4,557 lb.)	1651 kg (3,639 lb.)	1892 kg (4,171 lb.)	1139 kg (2,511 lb.)	1311 kg (2,889 lb.)	
L	1805 kg (3,980 lb.)	2046 kg (4,511 lb.)	1627 kg (3,587 lb.)	1868 kg (4,118 lb.)	1189 kg (2,621 lb.)	1368 kg (3,017 lb.)	
M	1779 kg (3,923 lb.)	2019 kg (4,452 lb.)	1598 kg (3,523 lb.)	1838 kg (4,052 lb.)	1214 kg (2,676 lb.)	1398 kg (3,083 lb.)	
N	1752 kg (3,863 lb.)	1991 kg (4,389 lb.)	1568 kg (3,457 lb.)	1807 kg (3,983 lb.)	1225 kg (2,700 lb.)	1412 kg (3,114 lb.)	
O	1726 kg (3,805 lb.)	1964 kg (4,329 lb.)	1539 kg (3,394 lb.)	1777 kg (3,917 lb.)	1227 kg (2,706 lb.)	1417 kg (3,124 lb.)	
P	1704 kg (3,756 lb.)	1941 kg (4,278 lb.)	1514 kg (3,338 lb.)	1751 kg (3,860 lb.)	1225 kg (2,701 lb.)	1416 kg (3,123 lb.)	
Q	1687 kg (3,720 lb.)	1924 kg (4,242 lb.)	1494 kg (3,294 lb.)	1731 kg (3,817 lb.)	1221 kg (2,691 lb.)	1413 kg (3,115 lb.)	
R	1681 kg (3,706 lb.)	1920 kg (4,232 lb.)	1484 kg (3,271 lb.)	1723 kg (3,798 lb.)	1216 kg (2,680 lb.)	1409 kg (3,106 lb.)	
S	1693 kg (3,733 lb.)	1937 kg (4,270 lb.)	1491 kg (3,287 lb.)	1734 kg (3,824 lb.)	1211 kg (2,670 lb.)	1406 kg (3,099 lb.)	
T	1751 kg (3,859 lb.)	2005 kg (4,421 lb.)	1539 kg (3,393 lb.)	1794 kg (3,955 lb.)	1209 kg (2,666 lb.)	1405 kg (3,098 lb.)	
U	2020 kg (4,454 lb.)	2319 kg (5,112 lb.)	1783 kg (3,930 lb.)	2081 kg (4,588 lb.)	1211 kg (2,671 lb.)	1410 kg (3,108 lb.)	
V	—	—	—	—	1221 kg (2,692 lb.)	1423 kg (3,136 lb.)	
W	—	—	—	—	1243 kg (2,740 lb.)	1450 kg (3,196 lb.)	
X	—	—	—	—	1290 kg (2,844 lb.)	1506 kg (3,321 lb.)	
Y	—	—	—	—	1404 kg (3,094 lb.)	1640 kg (3,615 lb.)	
Z	—	—	—	—	1933 kg (4,261 lb.)	2253 kg (4,967 lb.)	



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

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



710L SPECIFICATIONS

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.)		
Net Peak Power (ISO 9249)	110 kW (148 hp) at 2,244 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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	6.1 km/h (3.8 mph)	6.8 km/h (4.2 mph)	
Gear 2	10.2 km/h (6.3 mph)	11.3 km/h (7.0 mph)	
Gear 3	24.9 km/h (15.5 mph)	27.7 km/h (17.2 mph)	
Gear 4	36.9 km/h (22.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	18 deg.		
Axle Ratings	<i>Non-Powered Front</i>	<i>MFWD</i>	<i>Rear</i>
SAE J43	7500 kg (16,535 lb.)	7500 kg (16,535 lb.)	11 500 kg (25,353 lb.)
Dynamic	12 500 kg (27,558 lb.)	12 500 kg (27,558 lb.)	14 000 kg (30,865 lb.)
Static	27 000 kg (59,525 lb.)	30 500 kg (67,241 lb.)	31 000 kg (68,343 lb.)
Ultimate	37 500 kg (82,673 lb.)	42 500 kg (93,696 lb.)	42 500 kg (93,696 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	<i>MFWD</i>	<i>Non-Powered Front</i>	
Curb-Turning Radius			
With Brakes	4.10 m (13 ft. 5 in.)	4.14 m (13 ft. 7 in.)	
Without Brakes	4.88 m (16 ft. 0 in.)	4.94 m (16 ft. 2 in.)	
Bucket-Clearance Circle			
With Brakes	11.41 m (37 ft. 5 in.)	11.45 m (37 ft. 7 in.)	
Without Brakes	12.57 m (41 ft. 3 in.)	12.65 m (41 ft. 6 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		

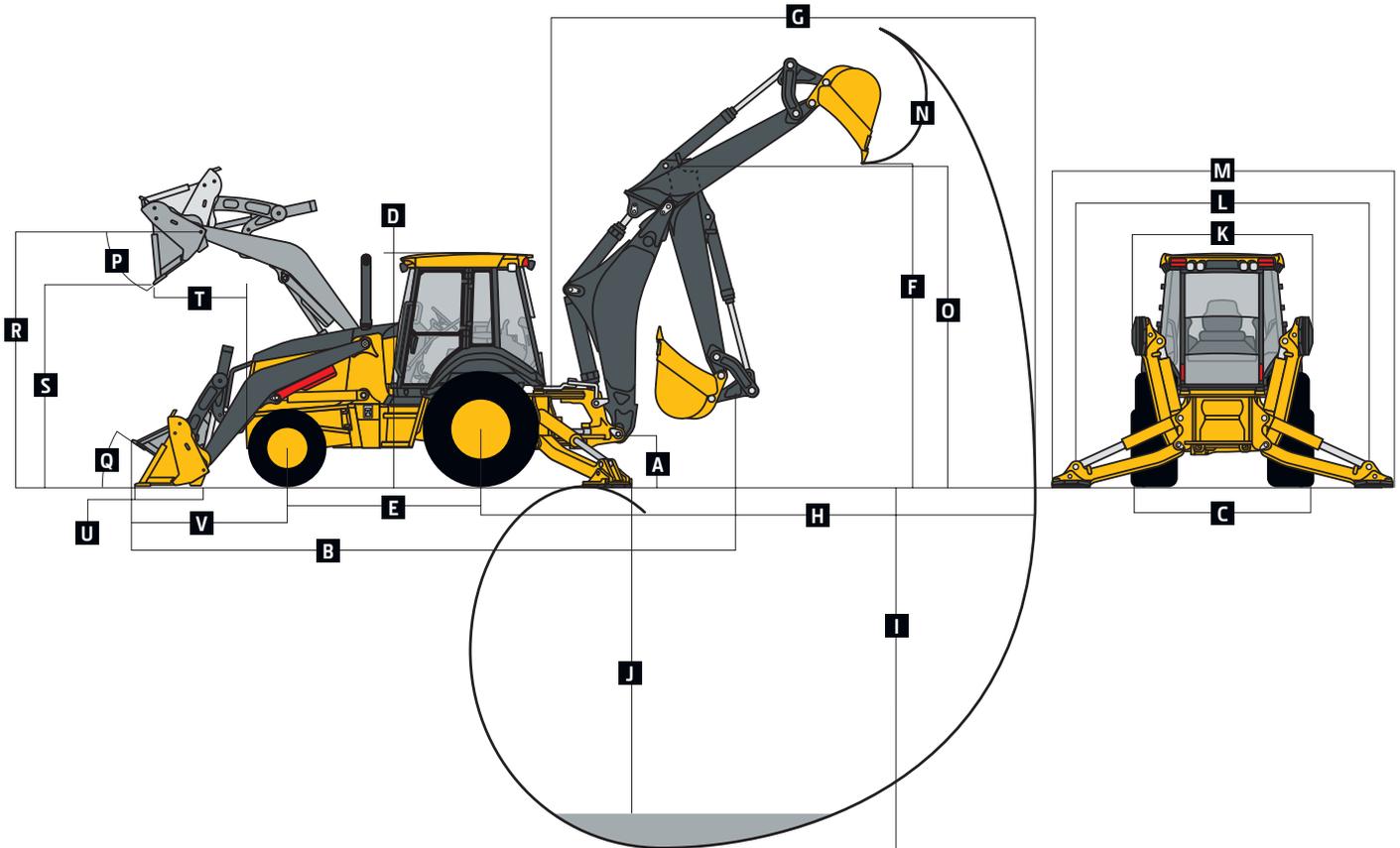
710L SPECIFICATIONS



Hydraulics		710L
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	24 993 kPa (3,625 psi)	
Backhoe (lift mode)	26 890 kPa (3,900 psi)	
Controls		
Backhoe	Pilot controls with pattern select standard; 2-lever mechanical and auxiliary functions optional; field kits available for additional mechanical-control options	
Loader	Single-lever control with electric clutch cutoff, momentary MFWD, transmission quick-shift, and electro-hydraulic (EH) auxiliary loader control optional	
Electrical		
Voltage	12 volt	
Alternator Rating	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights	
Operator Station		
Type (ISO 3471)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional fully enclosed cab	
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
Non-Powered Front Axle	12.5/80-18 F3 (16)	21L-28 R4 (18)
	12.5/80-18 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	31 L (32.8 qt.)	
Canopy	29 L (30.6 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)	185.5 L (49 gal.)	
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 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.)	

710L

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	2.29 m (7 ft. 6 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		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F	Loading Height, Truck Loading Position	4.45 m (14 ft. 7 in.)	5.35 m (17 ft. 6 in.)
G	Reach from Center of Swing Pivot	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.)	9.42 m (30 ft. 11 in.)
I	Digging Depth (SAE maximum)	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. 2 in.)	6.62 m (21 ft. 8 in.)
	2440-mm (8 ft.) Flat Bottom	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.)
L	Stabilizer Spread, Operating	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.)
N	Bucket Rotation	190 deg.	190 deg.
O	Transport Height	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.

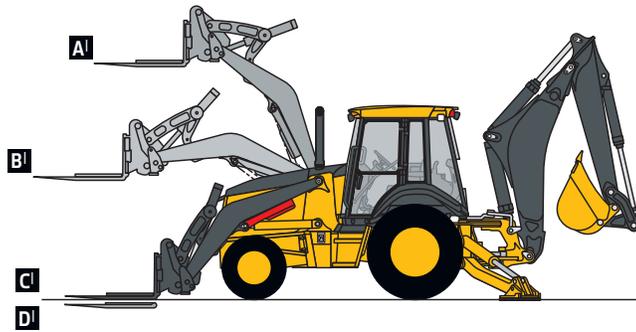
Loader Dimensions and Performance (continued)

710L

	Standard-duty	Standard-duty	Multipurpose
Bucket Capacity	1.24 m ³ (1.62 cu. yd.)	1.43 m ³ (1.87 cu. yd.)	1.00 m ³ (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 ¹ Maximum Height	2632 kg (5,803 lb.)
B ¹ Maximum Reach	4378 kg (9,651 lb.)
C ¹ At Ground Line	6057 kg (13,353 lb.)
D ¹ Below Ground Line	140 mm (5.5 in.)

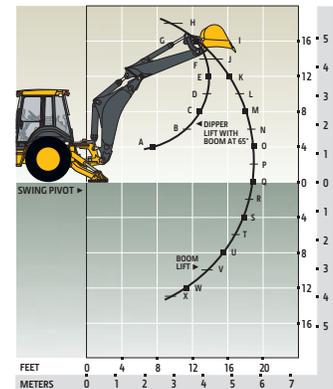


Lift Capacity with Bucket

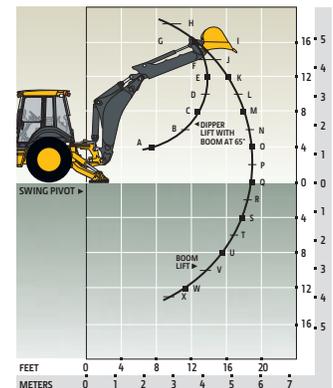
Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.31-m³ (24 in. x 11 cu. ft.) bucket. Bucket impacts overall lift capacity.

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	7938 kg (17,501 lb.)	7938 kg (17,501 lb.)	7784 kg (17,160 lb.)	4344 kg (9,577 lb.)	4733 kg (10,435 lb.)
B	4219 kg (9,302 lb.)	4480 kg (9,877 lb.)	4101 kg (9,042 lb.)	4291 kg (9,461 lb.)	2632 kg (5,803 lb.)
C	3592 kg (7,919 lb.)	3318 kg (7,318 lb.)	3463 kg (7,636 lb.)	3634 kg (8,012 lb.)	2228 kg (4,912 lb.)
D	3255 kg (7,177 lb.)	3545 kg (7,815 lb.)	3121 kg (6,881 lb.)	3390 kg (7,473 lb.)	2015 kg (4,442 lb.)
E	2948 kg (6,500 lb.)	3212 kg (7,082 lb.)	2808 kg (6,192 lb.)	3072 kg (6,773 lb.)	1865 kg (4,112 lb.)
F	2528 kg (5,573 lb.)	2758 kg (6,080 lb.)	2381 kg (5,249 lb.)	2610 kg (5,754 lb.)	1736 kg (3,827 lb.)
G	1751 kg (3,860 lb.)	1919 kg (4,231 lb.)	1593 kg (3,513 lb.)	1760 kg (3,880 lb.)	1602 kg (3,532 lb.)
H	1931 kg (4,257 lb.)	2120 kg (4,673 lb.)	1750 kg (3,857 lb.)	1938 kg (4,273 lb.)	1442 kg (3,179 lb.)
I	1977 kg (4,360 lb.)	2180 kg (4,806 lb.)	1783 kg (3,931 lb.)	1986 kg (4,378 lb.)	1227 kg (2,704 lb.)
J	1935 kg (4,266 lb.)	2139 kg (4,716 lb.)	1735 kg (3,824 lb.)	1939 kg (4,274 lb.)	904 kg (1,993 lb.)
K	1872 kg (4,128 lb.)	2075 kg (4,574 lb.)	1668 kg (3,677 lb.)	1870 kg (4,123 lb.)	1156 kg (2,549 lb.)
L	1804 kg (3,978 lb.)	2004 kg (4,417 lb.)	1597 kg (3,520 lb.)	1796 kg (3,960 lb.)	1197 kg (2,639 lb.)
M	1736 kg (3,828 lb.)	1932 kg (4,260 lb.)	1526 kg (3,365 lb.)	1722 kg (3,797 lb.)	1198 kg (2,641 lb.)
N	1670 kg (3,683 lb.)	1863 kg (4,107 lb.)	1458 kg (3,215 lb.)	1651 kg (3,640 lb.)	1182 kg (2,605 lb.)
O	1608 kg (3,544 lb.)	1797 kg (3,962 lb.)	1393 kg (3,071 lb.)	1583 kg (3,489 lb.)	1157 kg (2,551 lb.)
P	1548 kg (3,413 lb.)	1734 kg (3,823 lb.)	1332 kg (2,936 lb.)	1518 kg (3,347 lb.)	1128 kg (2,487 lb.)
Q	1492 kg (3,289 lb.)	1675 kg (3,693 lb.)	1273 kg (2,807 lb.)	1457 kg (3,212 lb.)	1097 kg (2,419 lb.)
R	1439 kg (3,172 lb.)	1620 kg (3,571 lb.)	1218 kg (2,686 lb.)	1400 kg (3,085 lb.)	1066 kg (2,350 lb.)
S	1389 kg (3,063 lb.)	1568 kg (3,458 lb.)	1167 kg (2,572 lb.)	1346 kg (2,967 lb.)	1035 kg (2,281 lb.)
T	1343 kg (2,962 lb.)	1521 kg (3,353 lb.)	1118 kg (2,465 lb.)	1296 kg (2,856 lb.)	1004 kg (2,213 lb.)
U	1302 kg (2,869 lb.)	1478 kg (3,259 lb.)	1073 kg (2,365 lb.)	1250 kg (2,755 lb.)	974 kg (2,148 lb.)
V	1265 kg (2,789 lb.)	1443 kg (3,180 lb.)	1032 kg (2,275 lb.)	1210 kg (2,667 lb.)	946 kg (2,085 lb.)
W	1239 kg (2,732 lb.)	1421 kg (3,132 lb.)	998 kg (2,201 lb.)	1180 kg (2,601 lb.)	919 kg (2,026 lb.)
X	1237 kg (2,727 lb.)	1424 kg (3,140 lb.)	988 kg (2,179 lb.)	1176 kg (2,592 lb.)	894 kg (1,971 lb.)
Y	—	—	—	—	871 kg (1,921 lb.)
Z	—	—	—	—	852 kg (1,878 lb.)
a	—	—	—	—	837 kg (1,845 lb.)
b	—	—	—	—	830 kg (1,830 lb.)
c	—	—	—	—	842 kg (1,856 lb.)
d	—	—	—	—	934 kg (2,060 lb.)

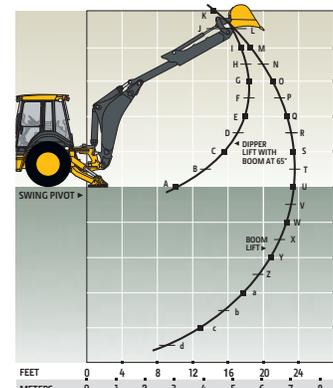
*Indicated capacity is stability limited. Lift capacities are over end with stabilizers down and tires tangent to ground.



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	310SL					Engine	
EP	310L	310SL	HL	315SL	410L	710L	
●	●	●	●	●	●	●	Coolant recovery tank with low-level indicator
●	●	●	●	●	●	●	Foldout, hinged cooling system
●	●	●	●	●	●	●	Serpentine belt with automatic belt tensioner
●							Suction-type cooling fan
▲							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
▲							Ether starting aid
▲	▲	▲	▲	▲	▲	▲	1,000-watt electric engine coolant heater
●	●	●	●	●	●	●	Electronic fuel lift pump
							Powertrain
●	●					●	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
				●		●	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
▲	▲	●	●	●	●	●	MFWD with traction-control limited-slip differential: Electric on/off control / Sealed axle
		●	●	●	●		Automatic MFWD braking (4th and 5th gear overdrive only)
●	●					●	Automatic MFWD braking (4th gear only)
▲	▲	▲	▲	▲	▲		MFWD driveshaft guard

310L	310SL					Backhoe	
EP	310L	310SL	HL	315SL	410L	710L	
			●		●	●	Lift mode
●	●						Standard dipperstick, 4.27-m (14 ft. 0 in.) digging depth
				●			Standard dipperstick, 4.34-m (14 ft. 3 in.) digging depth
				●			Standard dipperstick, 4.17-m (13 ft. 8 in.) digging depth
					●		Standard dipperstick, 4.83-m (15 ft. 10 in.) digging depth
						●	Standard dipperstick, 5.25-m (17 ft. 3 in.) digging depth
▲	▲	▲	●	▲			Extendable dipperstick, 1.06-m (3 ft. 6 in.) extension
					▲		Extendable dipperstick, 1.21-m (4 ft. 0 in.) extension
						▲	Extendable dipperstick, 1.37-m (4 ft. 6 in.) extension
		▲	●	▲	●		Heavy-duty 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 for swingers, thumbs, etc. with auxiliary plumbing
▲	▲	▲	●	▲	▲	▲	Auxiliary backhoe valve for hammers and compactors with auxiliary plumbing
▲	▲	▲	▲	▲	▲		Hydraulic thumb
							Loader[†]
●	●	●	●	●	●	●	Loader bucket anti-spill (rollback)
●	●	●	●	●	●	●	Return-to-dig feature
●	●	●	●	●	●	●	Single-lever control with electric clutch disconnect
●	●	●	●	●	●	●	Bucket-level indicator
●	●	●	●	●	●	●	Loader boom service lock
▲	▲			▲			Auxiliary loader hydraulics with 2-lever control
▲	▲	▲	▲	▲	▲	▲	Auxiliary loader hydraulics with single control lever with EH auxiliary control (MFWD and clutch disconnect)
▲	▲	▲	▲	▲	▲	▲	Hydraulic coupler for buckets, forks, etc.
▲	▲	▲	▲	▲	▲	●	Ride control
							Hydraulic System
●							119-L/m (31.5 gpm) tandem-gear pump with unloader, open-center system
	●						106-L/m (28 gpm) single-gear pump, open-center system
		●		●			136-L/m (36 gpm) tandem-gear pump, open-center system

[†]See dealer for range of heavy-duty, multipurpose, and coupler buckets and forks.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. No derating is required up to 1500-m (5,000 ft.) altitude for the 310L and up to 3050-m (10,000 ft.) for the 310L with optional altitude-compensating turbocharger, the 310SL, the 310SL HL, the 315SL, and the 410L. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on 310L EP and 310L units with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 0.86-m³ (1.12 cu. yd.) loader buckets, and 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) backhoe buckets; a 310SL unit with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 310SL HL unit with boost mode, 21L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 315SL unit with 19.5L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 410L unit with boost mode, 21L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.15-m³ (1.5 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; and a 710L unit with 21L-28-in. 18PR (R4) tubeless rear and 15-19.5-in. 12PR (R4) front tires, 1.24-m³ (1.62 cu. yd.) loader bucket, and 610-mm x 0.31-m³ (24 in. X 11 cu. ft.) backhoe bucket.

Additional equipment *(continued)*

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

310L	310SL							
EP	310L	310SL	HL	315SL	410L	710L		Hydraulic System <i>(continued)</i>
		●			●			159-L/m (42 gpm) axial-piston pump, PCLS system
						●		197-L/m (52 gpm) axial-piston pump, PCLS system
								Auto-idle
●	●	●	●	●	●	●		Economy mode
●	●	●	●	●	●	●		Dedicated hydraulic reservoir
Electrical System								
●	●	●	●	●	●	●		12-volt system
●								90-amp alternator (canopy and quarter cab)
●								120-amp alternator (cab)
	●	●	●		●			120-amp alternator (canopy and quarter cab)
						●		120-amp alternator (canopy)
	●	●	●	●	●	●		150-amp alternator (cab)
●	●	●	●	●	●			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 (10), 32,500 candlepower each (4 front driving/working, 4 rear working, and 2 side docking)
●	●	●	●	●	●	●		Turn signal/flasher (2 front and 2 rear)
●	●	●	●	●	●	●		Rear stop and tail (2)
▲	▲	▲	▲	▲	▲	▲		LED lights, field installed
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
▲	▲	▲	▲	▲	▲	▲		Air-suspension seat (with cab only)
●	●							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
		●	●	●	●	●		Multi-function lever: Turn signals / Windshield wipers / Some light functionality

310L	310SL							
EP	310L	310SL	HL	315SL	410L	710L		Operator's Station <i>(continued)</i>
●	●	●	●	●	●	●		Monitor system with audible and visual warnings: Engine air restriction / Low alternator voltage / Engine oil pressure / Hydraulic filter restriction / Parking brake on/off / Aftreatment 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 fabric 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 radio (with cab only)
▲	▲	▲	▲	▲	▲	▲		Premium radio package with XM Satellite Radio™ (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
▲	▲	▲	▲	●	▲			Heavy-duty 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, 140.1 L (37 gal.), ground-level fueling
						●		Fuel tank, 185.5 L (49 gal.), ground-level fueling
●	●	●	●	●	●			2-position easy-tilt hood
						●		3-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™ Ultimate wireless communication system (available in specific countries; see your dealer for details)

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. No derating is required up to 1500-m (5,000 ft.) altitude for the 310L and up to 3050-m (10,000 ft.) for the 310L with optional altitude-compensating turbocharger, the 310SL, the 310SL HL, the 315SL, and the 410L. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on 310L EP and 310L units with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 0.86-m³ (1.12 cu. yd.) loader buckets, and 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) backhoe buckets; a 310SL unit with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 310SL HL unit with boost mode, 21L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 315SL unit with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 410L unit with boost mode, 21L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.15-m³ (1.5 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; and a 710L unit with 21L-28-in. 18PR (R4) tubeless rear and 15-19.5-in. 12PR (R4) front tires, 1.24-m³ (1.62 cu. yd.) loader bucket, and 610-mm x 0.31-m³ (24 in. X 11 cu. ft.) backhoe bucket.



RISING TO THE CHALLENGE.

***TOGETHER,
WE ARE DEERE.***

Every day brings new challenges — demanding jobsites, long hours, and an increasing importance for uptime. Our job is to bring you the opportunities to overcome them. Our experienced engineers, specialized service techs, and global network for parts and service support work around the clock.

So the next time you need help, you know who will step up.



JOHN DEERE



06-02-16

JohnDeere.com

Courtesy of Machine.Market



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JOHN DEERE



DKALBHL Litho in U.S.A. (16-04)

JohnDeere.com

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INTRODUCING THE **L-SERIES**

**LOOKING FOR MORE
RELIABILITY AND PRODUCTIVITY?**

**WE'VE GOT
YOUR BACKHO
AND YOUR**



+



RELIABLE

PRODUCTIVE

310SL HL

E.
BACK.



UP TO
25%
MORE
CRANING
CAPABILITY

TO BUILD A BETTER BACKHOE,
WE WENT TO YOU, OUR CUSTOMER.

Through our Customer Advocate Group (CAG), we collected invaluable input from owners and operators — the ones who know best what customers really need.

You spoke. And we listened and responded by expanding the breadth of our product line with the introduction of a new heavy-lift model and a side-shift model. We're also continuing our popular and competitively priced 310L EP. And as always, we're launching a host of new features to help you boost productivity and maximize uptime, while lowering daily operating costs. *When it comes to delivering what you want, **nobody responds like John Deere.***



SIDE-SHIFT FOR TIGHT SPACES WITH THE 315SL.

Standard-equipped side-shift backhoes can be offset up to 21 in. right or left of center, making them ideal for work in crowded urban areas and around obstacles.

GET MORE DONE WITH ONE

MULTIFUNCTION VERSATILITY, UNRIVALED 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 pressure-compensated load-sensing (PCLS) hydraulics (on the 310SL HL and 410L), for superb multifunction performance. The result: our most versatile backhoes ever.

True four-wheel drive on command

Standard limited-slip mechanical-front-wheel drive (optional on the 310L EP and 310L) delivers superior traction in any ground condition. Engage momentary mechanical-front-wheel drive "on the fly" with the touch of a button on the new loader control.

Powertrain performance

Responsive and productive five-speed transmission on the 310SL, 310SL HL, 315SL, and 410L provides transport speeds up to 25 mph. Add the AutoShift option and increase versatility in any application.

Smooth gear changes

PowerShift™ transmission provides on-the-go clutchless gear changes for the operator.

Powerful FT4 engines

Rugged FT4/Stage IV PowerTech™ Plus diesel engines* meet rigid emission regulations, enabling you to work, wherever there's work — even in nonattainment areas. Our field-proven technology is simple, fluid efficient, fully integrated, and fully supported. It employs cooled exhaust gas recirculation, easy-to-maintain high-uptime exhaust filters (310SL HL and 410L only), and selective catalytic reduction.

Control the ride and the load

With ride control activated, front loader hydraulic cylinders act as a shock absorber, smoothing travel over rough terrain, helping full loads reach their destination, and reducing operator fatigue.

Better craning capability

The 310SL HL and 410L have up to 25-percent more backhoe lift under normal conditions.

Multifunction hydraulics

PCLS hydraulics on the new heavy-lift 310SL HL and the 410L ensure superior multifunction capability at all speeds.



FT4

EPA FINAL TIER 4 (FT4)/EU STAGE IV
POWERTECH PLUS DIESEL ENGINES*

*Interim Tier 4/Stage IIIB PowerTech on the 310L EP.

Courtesy of MachineMarket

STANDOUT FEATURE



**BIG LIFT.
SMALL
FOOTPRINT.**

THE NEW 310SL HL HEAVY-LIFT BACKHOE

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



UP TO

15%

**INCREASE IN CRANING
POWER WITH LIFT MODE**



More lift capacity at the push of a button

Along with the 410L, the 310SL HL can deliver up to 25-percent more backhoe-lift capacity than their comparable K-Series models. New lift mode provides an additional boost of 10 to 15 percent. Simply pushing a button on the sealed-switch module (SSM) sets engine rpm at 1,400 and maximizes hydraulic pressure for increased craning capability.

PCLS hydraulics for superb multifunction operation

The 310SL HL delivers all the advantages of PCLS hydraulics in the 14–15-ft. digging-depth category, enabling operator efficiency and productivity through improved multifunction control.



Unobstructed view to the 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 compliance.



WHAT THE EXPERTS ARE SAYING:

“ Thanks to Deere asking for my input, I get a better machine, and these improvements make all the difference in my day's productivity. ”

— Todd Heiderscheidt, Backhoe CAG Member



*REDESIGNED PILOT TOWERS
GIVE MORE LEGROOM AND
SPACE TO ROTATE*



MORE CONTROL AT YOUR FINGERTIPS
MAXIMUM PRODUCTIVITY IS CLOSE AT HAND.

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



LED SPOT- OR FLOODLIGHTS

New easy-to-use loader-control grip

New “palm-on-top” loader-control grip is even more comfortable and easy to use. Control of clutch disconnect, transmission quick-shift, auxiliary proportional roller, and momentary mechanical-front-wheel drive is at your fingertips.

Easy, fingertip control of backhoe functions

Fingertip electrohydraulic (EH) control of redesigned pilot levers provides even easier operation of backhoe functions, including selective flow and the horn.

Extend your workday

LED lighting kit includes choice of LED spot- or floodlights. For enhanced visibility when your workday goes long.

More legroom and space to rotate

Redesigned pilot towers provide more legroom and additional space for transitioning between loader and backhoe operation.

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®, auxiliary input, and XM Satellite Radio™ capability.

Steering column controls

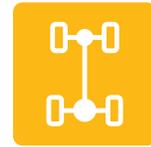
Exterior lights, wipers, and turn signals are now more conveniently located on the multifunction lever on the steering column — just like the family SUV — helping operators keep their eyes on the job at hand.



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 unmatched reliability and uptime. When you know how they're built, you'll run a Deere.



4WD
OPTION AT YOUR
COMMAND



Onboard diagnostics center

The most advanced onboard-diagnostics technology in the industry is standard on all L-Series Backhoes. The exclusive John Deere WorkSight™ suite of telematic solutions includes JDLink™ Ultimate with real-time machine monitoring and remote diagnostics to help increase uptime while lowering operating costs.

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 increases reliability.

More durable multipurpose bucket

Our rugged multipurpose bucket has been reinforced with thicker plates and stronger cylinder mountings for longer life.

Bias and radial tire options

Choose from a variety of factory-installed tire options, for the traction, exceptional performance, and long service life your specific application requires.

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.

Maintenance-free batteries

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

Superior hydraulic oil

L-Series Backhoes come factory-filled with Hydrau™ premium all-season, anti-wear hydraulic oil specifically designed for construction equipment. Or 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 helps prevent unauthorized operation.



19 ft. 8 in.

MAXIMUM DIGGING DEPTH
(FOR 410L WITH OPTIONAL
EXTENDABLE DIPPERSTICK)

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. For example, activate economy mode for backhoe functions while retaining full power for loader functions — a Deere exclusive. 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 program a multitude of time-specific functions such as auto shutdown and auto-idle quickly and easily.

Minimize downtime and expense

Same-side ground-level service points help 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.



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.

Quiet, fuel-efficient fan

Variable-speed electronically controlled fan automatically speeds up or slows down, operating only as needed to keep things cool. Helps conserve power and fuel, while reducing noise. A viscous variable-speed fan option is available for the 310L EP.

Proven engine technology

310L EP IT4/Stage IIIB emission-certified PowerTech engine requires no aftertreatment. 310SL HL and 410L FT4/Stage IV emission-certified PowerTech Plus engines feature a diesel oxidation catalyst (DOC), a diesel particulate filter (DPF), and a selective catalytic reduction (SCR) system. 310L, 310SL, and 315SL FT4/Stage IV emission-certified PowerTech Plus diesels include an SCR system.



Get valuable insight with

JOHN DEERE WORKSIGHT

John Deere WorkSight is an exclusive suite of telematic solutions that increases uptime while lowering operating costs. At its heart, JDLink Ultimate machine monitoring provides real-time utilization data and alerts to help you maximize productivity and efficiency while minimizing downtime. Remote diagnostics enable your dealer to read codes, record performance data, and even update software without a trip to the jobsite.

Keep downtime down with

ULTIMATE UPTIME

Ultimate Uptime, featuring John Deere WorkSight, is a customizable support solution available exclusively from your Deere dealer. This flexible offering maximizes equipment availability with standard John Deere WorkSight capabilities that can help prevent future downtime and speed repairs when needed. In addition to the base John Deere WorkSight features, our dealers work with you to build an uptime package that meets the specific needs of your machine, fleet, project, and business, including customized maintenance and repair agreements, onsite parts availability, extended warranties, fluid sampling, response-time guarantees, and more.



310L EP / 310L SPECIFICATIONS

Engine	310L EP	310L	
Manufacturer and Model	John Deere PowerTech™ E 4045HT072 turbocharged	John Deere PowerTech™ Plus 4045HT082 turbocharged	
Non-Road Emission Standard	EPA Interim Tier 4/EU Stage IIIB	EPA Final Tier 4/EU Stage IV	
Displacement	4.5 L (276 cu. in.)	4.5 L (276 cu. in.)	
Net Peak Power (ISO 9249)	52 kW (70 hp) at 1,900 rpm / 55 kW (73 hp) at 2,100 rpm with viscous fan option	69 kW (93 hp) at 2,244 rpm	
Net Peak Torque (ISO 9249)	311 Nm (229 lb.-ft.) at 1,500 rpm	383 Nm (282 lb.-ft.) at 1,400 rpm	
Net Torque Rise	32%	28%	
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		
Cooling			
Fan Type	Suction-type cooling fan standard; viscous variable-rate (temperature-controlled) fan optional	Electronically controlled, variable rate, suction type	
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, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever		
Torque Converter	Single stage, dual phase with 2.63:1 stall ratio, 280 mm (11 in.)		
Maximum Travel Speeds with Standard Engine, Measured with 19.5L-24 Rear Tires			
	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.2 km/h (3.2 mph)	6.6 km/h (4.1 mph)	5.5 km/h (3.4 mph) / 7.0 km/h (4.3 mph)
Gear 2	9.5 km/h (5.9 mph)	12.0 km/h (7.5 mph)	10.1 km/h (6.3 mph) / 12.8 km/h (8.0 mph)
Gear 3	19.4 km/h (12.1 mph)	—	20.7 km/h (12.9 mph) / —
Gear 4	31.6 km/h (19.6 mph)	—	33.9 km/h (21.1 mph) / —
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings		<i>Mechanical-Front-Wheel Drive (MFWD)</i>	
	<i>Non-Powered Front</i>		<i>Rear</i>
SAE J43	4500 kg (9,921 lb.)	4500 kg (9,921 lb.)	6500 kg (14,330 lb.)
Dynamic	7000 kg (15,432 lb.)	8500 kg (18,739 lb.)	9500 kg (20,944 lb.)
Static	20 500 kg (45,195 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	32 500 kg (71,650 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
MFWD Axle	Open – standard; automatic, limited-slip traction control – optional		
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock		
Steering (ISO 5010)			
Axle	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.58 m (11 ft. 9 in.)	3.58 m (11 ft. 9 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.24 m (13 ft. 11 in.)	
Bucket-Clearance Circle			
With Brakes	10.18 m (33 ft. 5 in.)	10.23 m (33 ft. 7 in.)	
Without Brakes	11.08 m (36 ft. 4 in.)	11.19 m (36 ft. 9 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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, gear type, tandem with unloader	Open center, single-gear pump	
Pump Flow at 2,200 rpm			
Backhoe	119 L/m (31.5 gpm)	106 L/m (28 gpm)	
Loader	98 L/m (26 gpm)	106 L/m (28 gpm)	

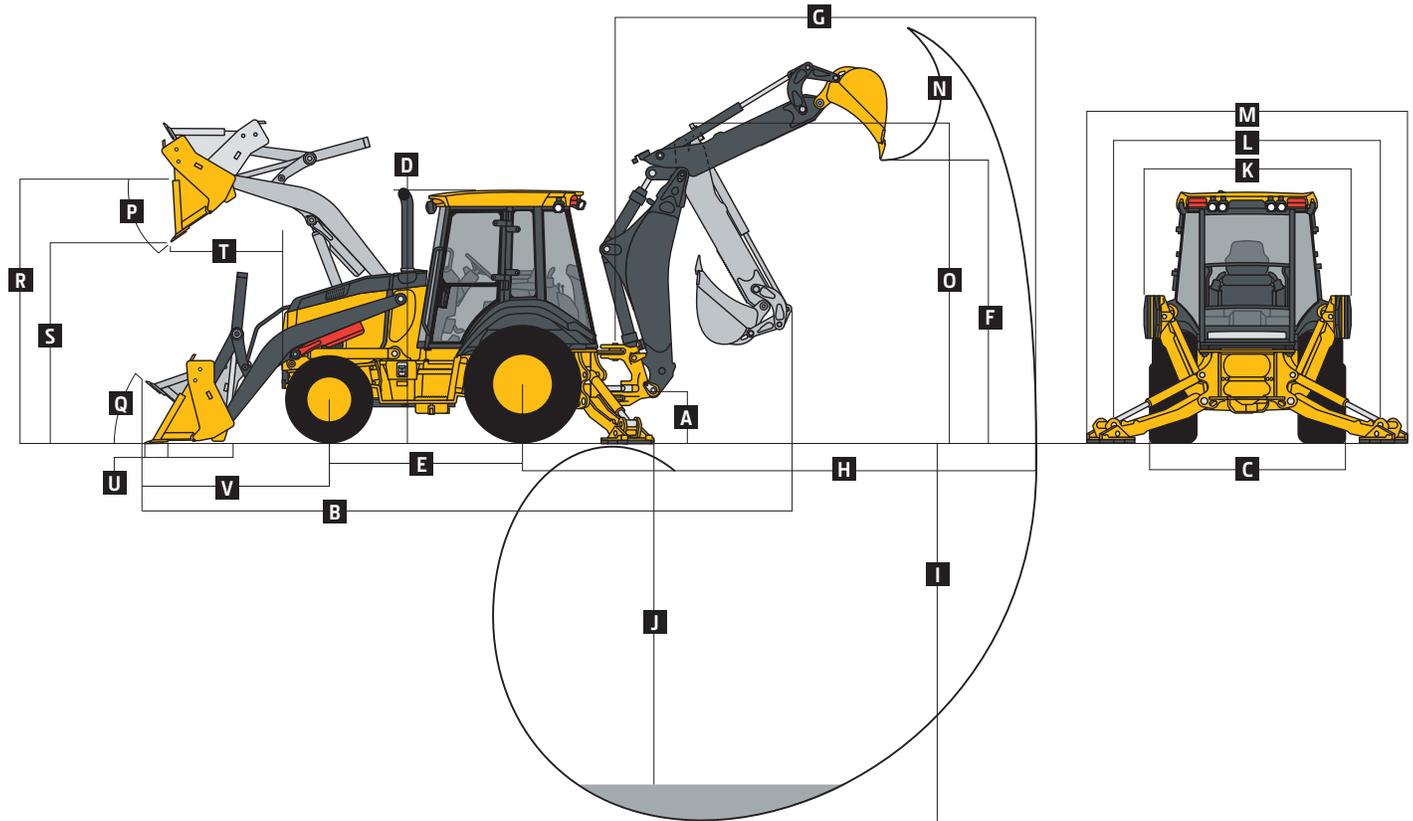
310L EP / 310L SPECIFICATIONS



Hydraulics (continued)		310L EP	310L	
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; manual auxiliary function (2nd lever), single-lever control with electric clutch cutoff and electrohydraulic (EH) proportional auxiliary control optional		
Electrical				
Voltage		12 volt	12 volt	
Alternator Rating		120 amp with cab / 90 amp with canopy and quarter cab	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights		
Operator Station				
Type (SAE J1040)		310L EP / 310L Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab		
Tires/Wheels		310L EP	310L	
		<i>Front</i>	<i>Rear</i>	<i>Rear</i>
Non-Powered Front Axle		12.5/80-18 F3 (12)	19.5L-24 R-4 (12)	12.5/80-18 F3 (12)
With MFWD		12-16.5 NHS (12)	19.5L-24 R-4 (12)	19.5L-24 R-4 (12)
		—	—	12.5/80-18 I3 (12)
		—	—	19.5L-24 R-4 (10)
		—	—	12.5/80-18 R4 (10)
		—	—	19.5L-24 R-4 (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 580
		—	—	500/70R24 580
Serviceability				
Refill Capacities				
Cooling System		30 L (31.7 qt.)	35 L (37 qt.)	
Rear Axle		18 L (19 qt.)	18 L (19 qt.)	
Engine Oil (including vertical spin-on filter)		13 L (13.7 qt.)	13 L (13.7 qt.)	
Torque Converter and Transmission		15.1 L (16 qt.)	15.1 L (16 qt.)	
Fuel Tank (with ground-level fueling)		140.1 L (37 gal.)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank		—	16.3 L (4.3 gal.)	
Hydraulic System		111.7 L (29.5 gal.)	111.7 L (29.5 gal.)	
Hydraulic Reservoir		45 L (11.9 gal.)	45 L (11.9 gal.)	
MFWD Housing				
Axle		6.5 L (6.9 qt.)	6.5 L (6.9 qt.)	
Planetary (each)		0.9 L (1 qt.)	0.9 L (1 qt.)	
Hydra™ XR Hydraulic Oil		Optional	Optional	
Operating Weights				
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and Bumper		6545 kg (14,430 lb.)	6654 kg (14,669 lb.)	
Typical with Cab, Extendable Dipperstick, and 204-kg (450 lb.) Counterweight		7203 kg (15,880 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		168 kg (370 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

Overall Dimensions	310L EP / 310L
A Ground Clearance, Minimum	293 mm (12 in.)
B Overall Length, Transport	7.24 m (23 ft. 9 in.)
C Width Over Tires	2.16 m (7 ft. 1 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 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		
Leveling Angle	14 deg.		
Stabilizer Angle Rearward	18 deg.		

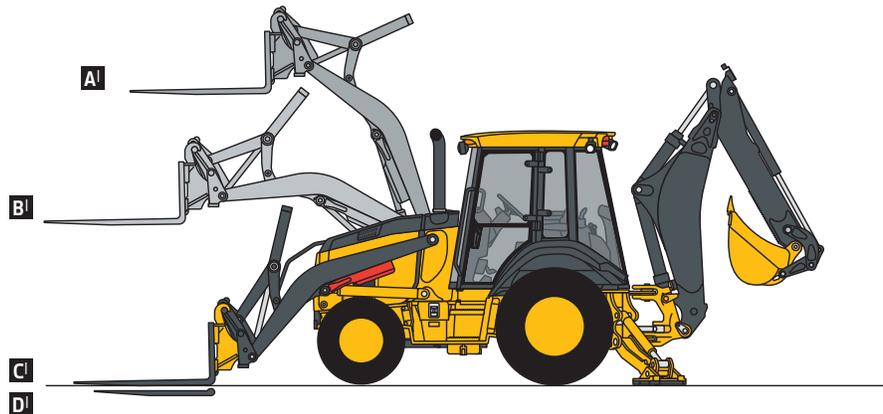
	With Optional Extendable Dipperstick		
	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	3.41 m (11 ft. 2 in.)	3.49 m (11 ft. 6 in.)	4.15 m (13 ft. 7 in.)
G Reach from Center of Swing Pivot	5.42 m (17 ft. 10 in.)	5.49 m (18 ft. 0 in.)	6.51 m (21 ft. 4 in.)
H Reach from 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.)
I Digging Depth (SAE maximum)	4.27 m (14 ft. 0 in.)	4.33 m (14 ft. 2 in.)	5.39 m (17 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.22 m (13 ft. 10 in.)	4.29 m (14 ft. 1 in.)	5.36 m (17 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	3.89 m (12 ft. 9 in.)	3.96 m (13 ft. 0 in.)	5.10 m (16 ft. 9 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	3.10 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.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.42 m (11 ft. 2 in.)	3.42 m (11 ft. 2 in.)	3.42 m (11 ft. 2 in.)

Loader Dimensions and Performance 310L EP / 310L

P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
	<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Heavy-duty long lip</i>	<i>Multipurpose</i>
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.)
Width	2184 mm (86 in.)			
Weight	363 kg (800 lb.)	390 kg (860 lb.)	405 kg (892 lb.)	794 kg (1,750 lb.)
Breakout Force	41.6 kN (9,353 lb.)	42.3 kN (9,504 lb.)	39.9 kN (8,978 lb.)	37.0 kN (8,311 lb.)
Lift Capacity, Full Height	3099 kg (6,833 lb.)	3179 kg (7,009 lb.)	2934 kg (6,469 lb.)	2605 kg (5,743 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.71 m (8 ft. 11 in.)	2.74 m (9 ft. 0 in.)	2.64 m (8 ft. 8 in.)	2.65 m (8 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	734 mm (28.9 in.)	699 mm (27.5 in.)	825 mm (32.5 in.)	737 mm (29.0 in.)
U Digging Depth Below Ground, Bucket Level	107 mm (4.2 in.)	107 mm (4.2 in.)	88 mm (3.5 in.)	147 mm (5.8 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	2.02 m (6 ft. 8 in.)	1.97 m (6 ft. 6 in.)	2.12 m (6 ft. 11 in.)	2.09 m (6 ft. 10 in.)

Lift Capacity with Quick-Coupler Forks

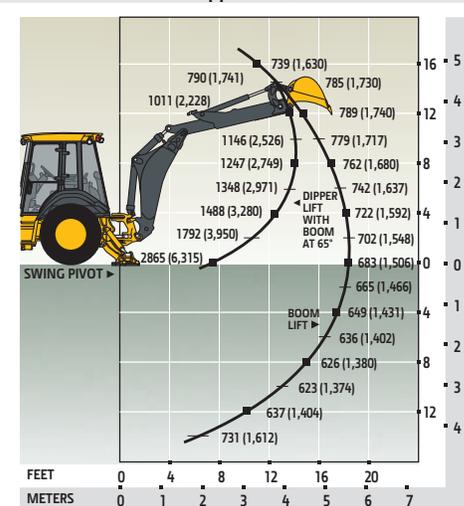
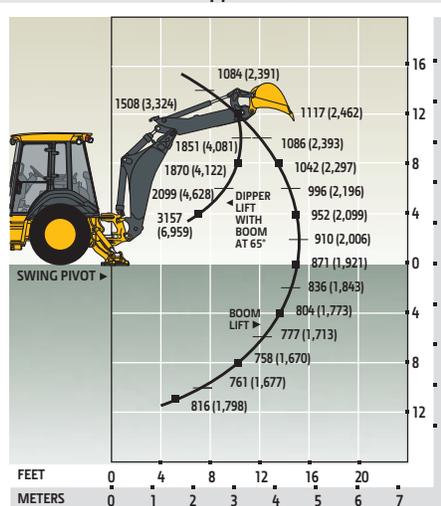
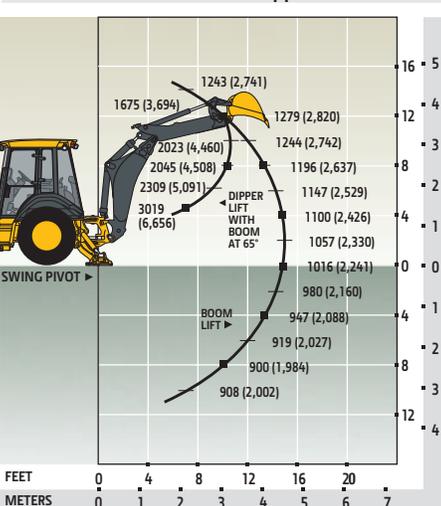
Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A Maximum Height	1695 kg (3,736 lb.)	1561 kg (3,442 lb.)
B Maximum Reach	2646 kg (5,833 lb.)	2629 kg (5,795 lb.)
C At Ground Line	3583 kg (7,900 lb.)	3269 kg (7,207 lb.)
D Below Ground Line	262 mm (10.3 in.)	262 mm (10.3 in.)



Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

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





310SL SPECIFICATIONS

Engine	310SL		
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	74 kW (99 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	417 Nm (307 lb.-ft.) at 1,400 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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.6 km/h (3.5 mph)	7.0 km/h (4.3 mph)	
Gear 2	10.1 km/h (6.3 mph)	12.8 km/h (8.0 mph)	
Gear 3	20.6 km/h (12.8 mph)	20.4 km/h (12.7 mph)	
Gear 4	34.5 km/h (21.4 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive (MFWD)</i>		
	<i>Non-Powered Front</i>	<i>Rear</i>	
SAE J43	5000 kg (11,023 lb.)	7000 kg (15,432 lb.)	
Dynamic	8500 kg (18,739 lb.)	9500 kg (20,944 lb.)	
Static	22 500 kg (49,604 lb.)	26 000 kg (57,320 lb.)	
Ultimate	35 000 kg (77,162 lb.)	39 500 kg (87,083 lb.)	
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.58 m (11 ft. 9 in.)	3.66 m (12 ft. 0 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.18 m (33 ft. 5 in.)	10.27 m (33 ft. 8 in.)	
Without Brakes	11.08 m (36 ft. 4 in.)	11.27 m (37 ft. 0 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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, gear type, tandem with unloader		
Pump Flow at 2,200 rpm			
Backhoe	136 L/m (36 gpm)		
Loader	106 L/m (28 gpm)		

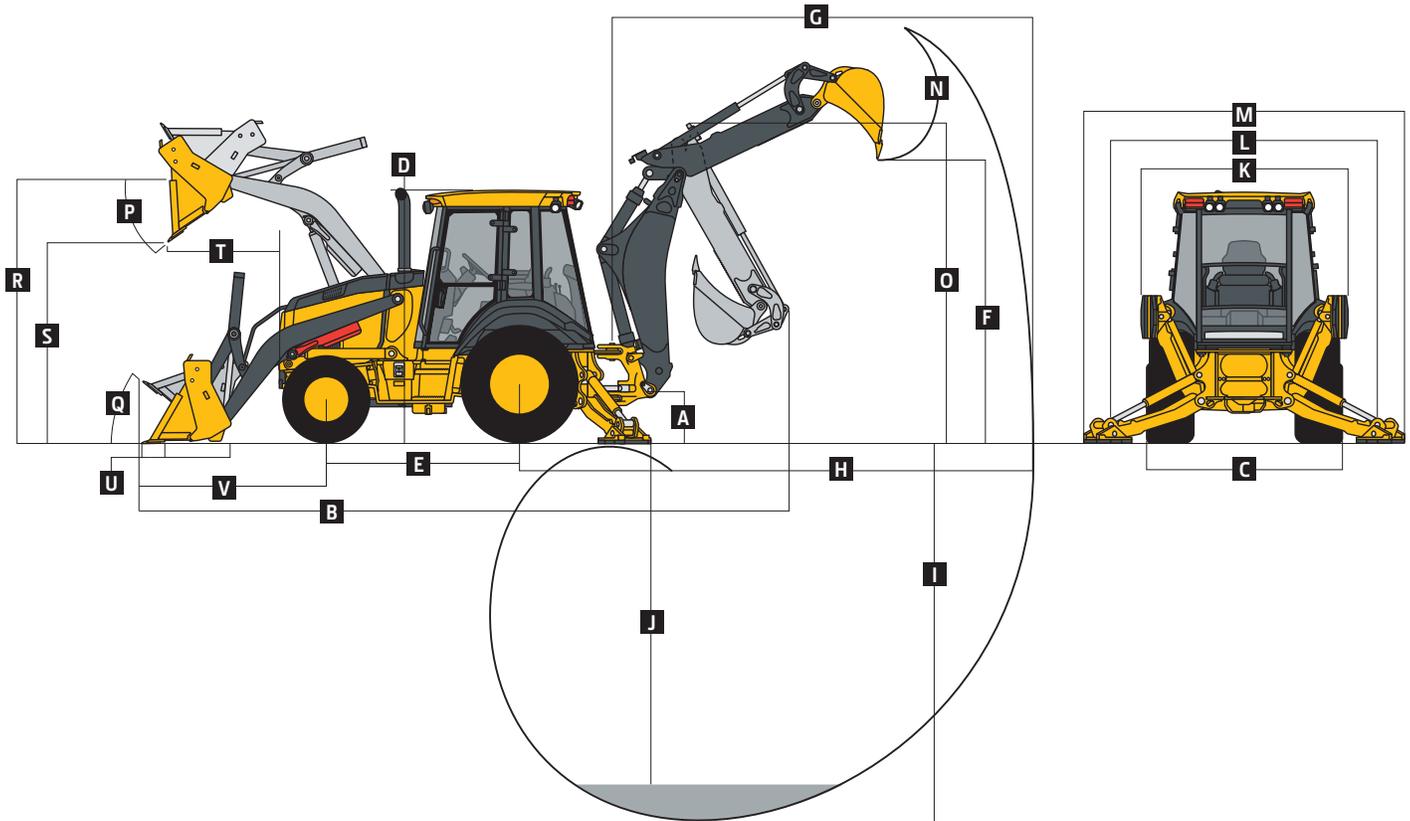
310SL SPECIFICATIONS



Hydraulics (continued)		310SL
System Relief Pressure, Backhoe and 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	
Electrical		
Voltage	12 volt	
Alternator Rating	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights	
Operator Station		
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab	
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
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 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System	35 L (37 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)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 gal.)	
Hydraulic System	111.7 L (29.5 gal.)	
Hydraulic Reservoir	45 L (11.9 gal.)	
MFWD Housing		
Axle	6.5 L (6.9 qt.)	
Planetary (each)	0.9 L (1 qt.)	
Hydra™ XR Hydraulic Oil	Optional	
Operating Weights		
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 204-kg (450 lb.) Counterweight	7287 kg (16,064 lb.)	
Typical with Cab, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	8135 kg (17,934 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.)	

310SL

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	2.18 m (7 ft. 2 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.)		
With Heavy-Duty Cylinder Option	67.8 kN (15,254 lb.)		
Crowd Cylinder	36.6 kN (8,229 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.43 m (11 ft. 3 in.)	3.55 m (11 ft. 8 in.)	4.17 m (13 ft. 8 in.)
G Reach from Center of Swing Pivot	5.52 m (18 ft. 1 in.)	5.62 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)	4.34 m (14 ft. 3 in.)	4.48 m (14 ft. 8 in.)	5.53 m (18 ft. 2 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.31 m (14 ft. 2 in.)	4.44 m (14 ft. 7 in.)	5.49 m (18 ft. 0 in.)
2440-mm (8 ft.) Flat Bottom	3.97 m (13 ft. 0 in.)	4.11 m (13 ft. 6 in.)	5.24 m (17 ft. 2 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.)
Long 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.)
Long Stabilizers	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)

Backhoe Dimensions and Performance (continued)

310SL

With Optional Extendable Dipperstick

	With Standard Backhoe	Retracted	Extended
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	3.49 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)	3.50 m (11 ft. 6 in.)

Loader Dimensions and Performance

	Heavy-duty	Heavy-duty long lip	Heavy-duty	Multipurpose
P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
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.)	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	49.1 kN (11,045 lb.)	46.4 kN (10,438 lb.)	46.8 kN (10,532 lb.)	43.2 kN (9,714 lb.)
Lift Capacity, Full Height	3462 kg (7,632 lb.)	3198 kg (7,050 lb.)	3322 kg (7,324 lb.)	2834 kg (6,248 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.62 m (8 ft. 7 in.)	2.64 m (8 ft. 8 in.)	2.68 m (8 ft. 10 in.)	2.65 m (8 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	699 mm (27.5 in.)	825 mm (32.5 in.)	695 mm (27.4 in.)	737 mm (29.0 in.)
U Digging Depth Below Ground, Bucket Level	106 mm (4.2 in.)	87 mm (3.4 in.)	151 mm (5.9 in.)	147 mm (5.8 in.)
V Length from Front Axle Centerline to Bucket Cutting Edge	1.97 m (6 ft. 6 in.)	2.12 m (6 ft. 11 in.)	2.04 m (6 ft. 8 in.)	2.09 m (6 ft. 10 in.)

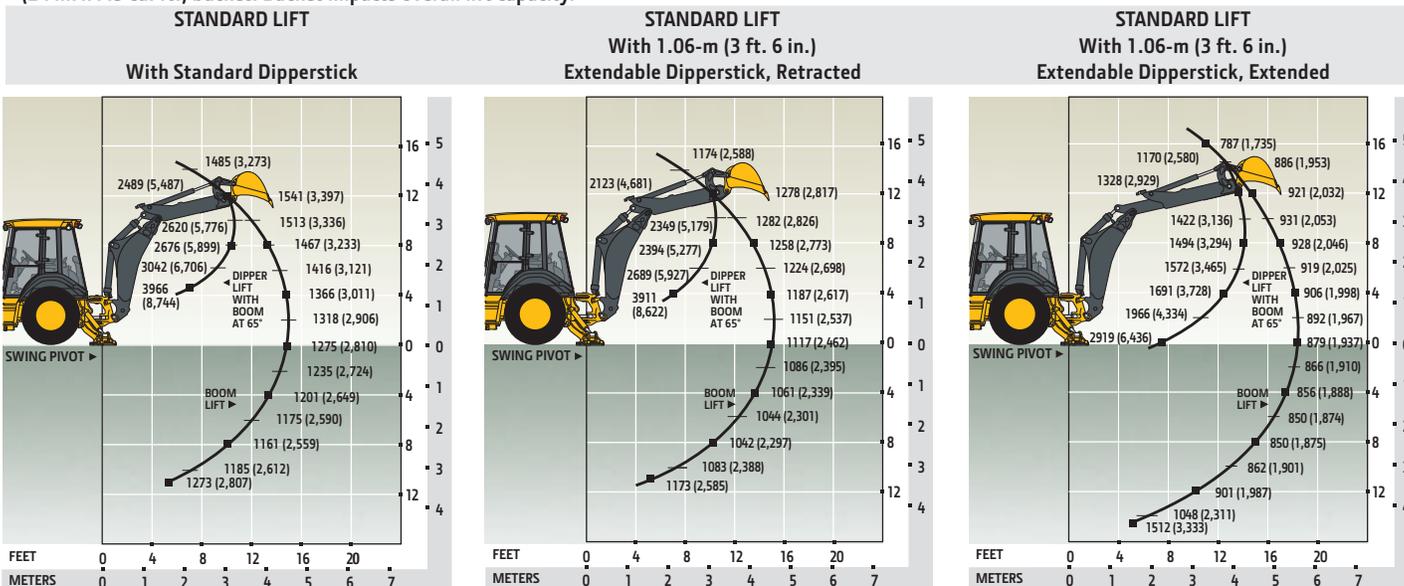
Lift Capacity with Quick-Coupler Forks

	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines
Hydraulic Capacity		
A Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)
B Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)
C At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)
D Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)



Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.





310SL HL SPECIFICATIONS

Engine		310SL HL	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT083 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	82 kW (110 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	427 Nm (315 lb.-ft.) at 1,400 rpm		
Net Torque Rise	21%		
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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.7 km/h (3.5 mph)	7.2 km/h (4.5 mph)	
Gear 2	10.5 km/h (6.5 mph)	13.3 km/h (8.3 mph)	
Gear 3	21.4 km/h (13.3 mph)	21.2 km/h (13.2 mph)	
Gear 4	36.0 km/h (22.4 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive (MFWD)</i>		
	<i>Non-Powered Front</i>		<i>Rear</i>
SAE J43	5500 kg (12,125 lb.)	5500 kg (12,125 lb.)	7500 kg (16,535 lb.)
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.61 m (11 ft. 10 in.)	3.67 m (12 ft. 0 in.)	
Without Brakes	4.24 m (13 ft. 11 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.53 m (34 ft. 7 in.)	10.61 m (34 ft. 10 in.)	
Without Brakes	11.42 m (37 ft. 6 in.)	11.59 m (38 ft. 0 in.)	
Steering Wheel Turns (lock to lock)	3.1 to 4.3	2.6 to 3.6	
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		

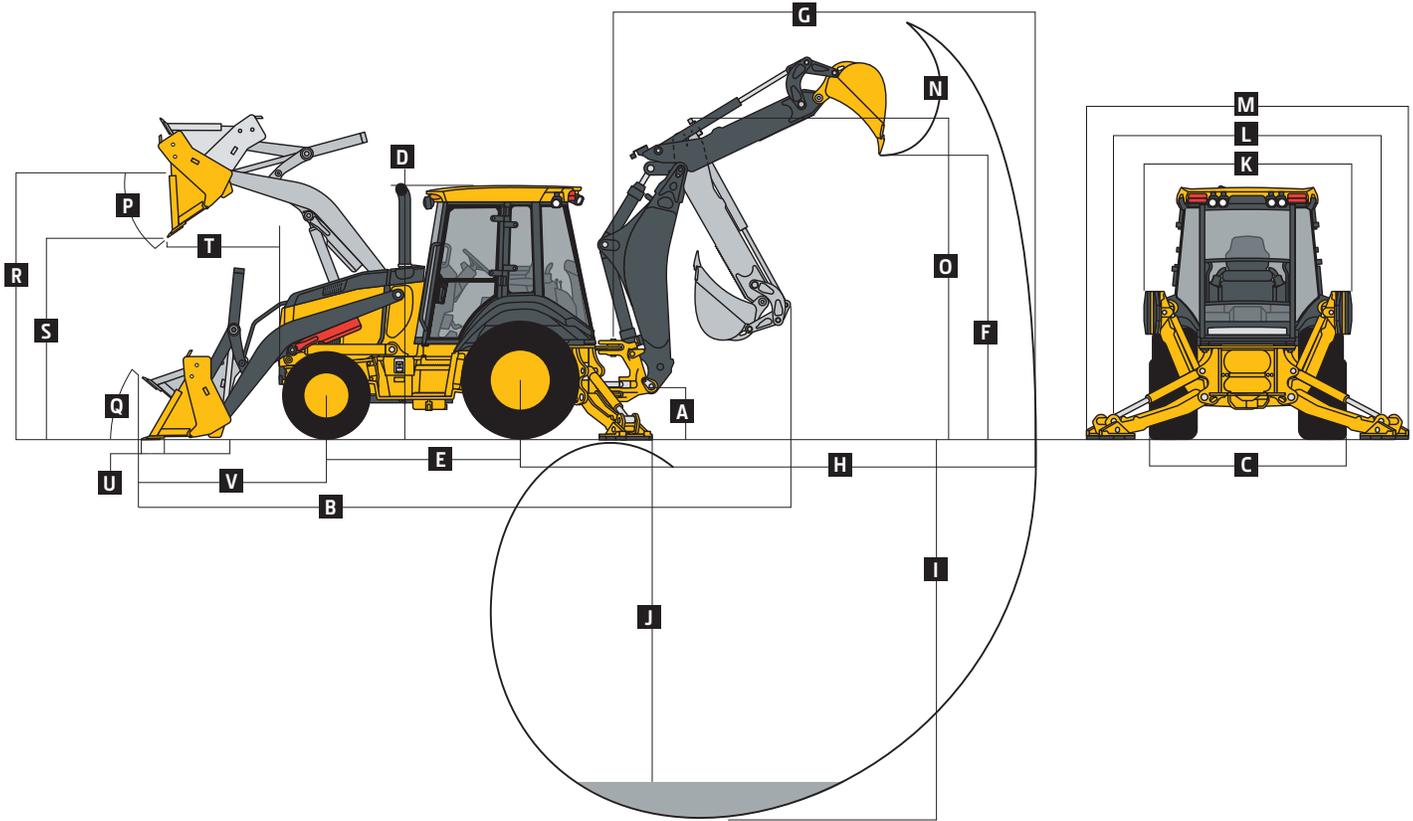
310SL HL SPECIFICATIONS



Hydraulics		310SL HL
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 and Loader		24 993 kPa (3,625 psi)
Backhoe (lift mode)		27 579 kPa (4,000 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, EH proportional auxiliary roller, and transmission quick-shift optional
Electrical		
Voltage		12 volt
Alternator Rating		150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights
Operator Station		
Type (SAE J1040)		Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
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 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System		35 L (37 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)		140.1 L (37 gal.)
Diesel Exhaust Fluid (DEF) Tank		16.3 L (4.3 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.)
Hydrau™ XR Hydraulic Oil		Optional
Operating Weights		
With Full Fuel Tank, 79-kg (175 lb.) Operator, Standard Equipment, and 567-kg (1,250 lb.) Counterweight		8269 kg (18,231 lb.)
Typical with Cab and 567-kg (1,250 lb.) Counterweight		8533 kg (18,811 lb.)
Optional Components (weight difference between base equipment and option)		
Cab		263 kg (580 lb.)
MFWD with Tires		110 kg (242 lb.)
Front Loader Coupler		257 kg (566 lb.)
Backhoe Bucket Coupler		64 kg (141 lb.)

310SL HL

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	2.18 m (7 ft. 2 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	70.9 kN (15,947 lb.)	
Lift Mode	78.3 kN (17,596 lb.)	
Crowd Cylinder	38.9 kN (8,750 lb.)	
Lift Mode	42.9 kN (9,655 lb.)	
Swing Arc	180 deg.	
Operator Control	2 levers	
	<i>With Extendable Dipperstick</i>	<i>With Extendable Dipperstick</i>
	<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.63 m (11 ft. 11 in.)	4.25 m (13 ft. 11 in.)
G Reach from Center of Swing Pivot	5.62 m (18 ft. 5 in.)	6.60 m (21 ft. 8 in.)
H Reach from Center of Rear Axle	6.68 m (21 ft. 11 in.)	7.67 m (25 ft. 2 in.)
I Digging Depth (SAE maximum)	4.51 m (14 ft. 10 in.)	5.52 m (18 ft. 1 in.)
J Digging Depth (SAE)		
610-mm (2 ft.) Flat Bottom	4.47 m (14 ft. 8 in.)	5.49 m (18 ft. 0 in.)
2440-mm (8 ft.) Flat Bottom	4.16 m (13 ft. 8 in.)	5.26 m (17 ft. 3 in.)
K Stabilizer Width, Transport	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.)
Long Stabilizers	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.)
Long Stabilizers	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N Bucket Rotation	190 deg.	
O Transport Height	3.57 m (11 ft. 9 in.)	3.57 m (11 ft. 9 in.)

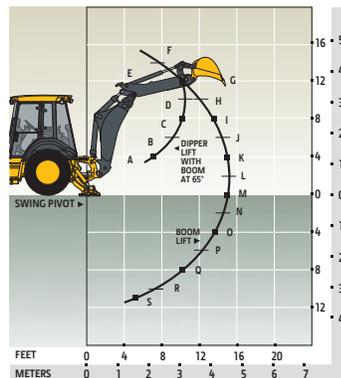
Loader Dimensions and Performance		310SL HL			
P	Bucket Dump Angle, Maximum	45 deg.			
Q	Rollback Angle at Ground Level	40 deg.			
		<i>Heavy-duty</i>	<i>Heavy-duty long lip</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
	Bucket Capacity	0.86 m ³ (1.12 cu. yd.)	0.96 m ³ (1.25 cu. yd.)	1.00 m ³ (1.31 cu. yd.)	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 (11,106 lb.)	46.7 kN (10,497 lb.)	47.1 kN (10,587 lb.)	43.4 kN (9,767 lb.)
	Lift Capacity, Full Height	3397 kg (7,489 lb.)	3141 kg (6,924 lb.)	3257 kg (7,181 lb.)	2774 kg (6,116 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.43 m (11 ft. 3 in.)			
S	Dump Clearance, Bucket at 45 deg.	2.73 m (8 ft. 11 in.)	2.63 m (8 ft. 8 in.)	2.67 m (8 ft. 9 in.)	2.63 m (8 ft. 8 in.)
T	Reach at Full Height, Bucket at 45 deg.	744 mm (29.3 in.)	870 mm (34.2 in.)	740 mm (29.1 in.)	782 mm (30.8 in.)
U	Digging Depth Below Ground, Bucket Level	124 mm (4.9 in.)	105 mm (4.1 in.)	168 mm (6.6 in.)	164 mm (6.5 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	1.98 m (6 ft. 6 in.)	2.13 m (7 ft. 0 in.)	2.05 m (6 ft. 9 in.)	2.10 m (6 ft. 11 in.)

Lift Capacity with Quick-Coupler Forks		
Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A ¹	2059 kg (4,539 lb.)	2008 kg (4,426 lb.)
B ¹	3542 kg (7,809 lb.)	3484 kg (7,681 lb.)
C ¹	4079 kg (8,992 lb.)	4027 kg (8,879 lb.)
D ¹	211 mm (8.3 in.)	211 mm (8.3 in.)

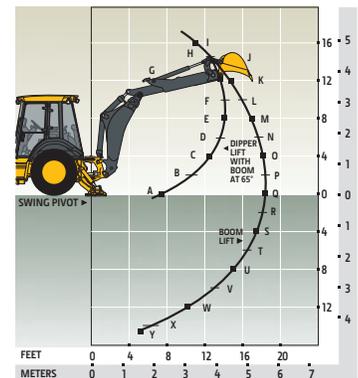


Lift Capacity with Bucket
 Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

	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
A	4588 kg (10,116 lb.)	4591 kg (10,122 lb.)	3404 kg (7,504 lb.)	3811 kg (8,401 lb.)
B	3012 kg (6,640 lb.)	3012 kg (6,640 lb.)	2165 kg (4,772 lb.)	2435 kg (5,367 lb.)
C	2652 kg (5,846 lb.)	2652 kg (5,846 lb.)	1873 kg (4,130 lb.)	2111 kg (4,653 lb.)
D	2583 kg (5,694 lb.)	2583 kg (5,694 lb.)	1761 kg (3,883 lb.)	1955 kg (4,309 lb.)
E	2553 kg (5,629 lb.)	2727 kg (6,011 lb.)	1698 kg (3,744 lb.)	1853 kg (4,086 lb.)
F	1131 kg (2,494 lb.)	1303 kg (2,872 lb.)	1647 kg (3,630 lb.)	1832 kg (4,039 lb.)
G	1338 kg (2,951 lb.)	1539 kg (3,392 lb.)	1578 kg (3,480 lb.)	1781 kg (3,926 lb.)
H	1388 kg (3,061 lb.)	1598 kg (3,522 lb.)	1452 kg (3,202 lb.)	1641 kg (3,617 lb.)
I	1390 kg (3,064 lb.)	1602 kg (3,532 lb.)	725 kg (1,599 lb.)	847 kg (1,867 lb.)
J	1372 kg (3,025 lb.)	1584 kg (3,493 lb.)	899 kg (1,982 lb.)	1044 kg (2,302 lb.)
K	1346 kg (2,968 lb.)	1558 kg (3,435 lb.)	977 kg (2,154 lb.)	1133 kg (2,499 lb.)
L	1318 kg (2,907 lb.)	1529 kg (3,371 lb.)	1014 kg (2,235 lb.)	1176 kg (2,594 lb.)
M	1292 kg (2,848 lb.)	1501 kg (3,310 lb.)	1030 kg (2,270 lb.)	1196 kg (2,637 lb.)
N	1269 kg (2,798 lb.)	1478 kg (3,259 lb.)	1034 kg (2,280 lb.)	1203 kg (2,651 lb.)
O	1254 kg (2,764 lb.)	1463 kg (3,226 lb.)	1032 kg (2,276 lb.)	1202 kg (2,651 lb.)
P	1251 kg (2,757 lb.)	1463 kg (3,255 lb.)	1028 kg (2,266 lb.)	1199 kg (2,642 lb.)
Q	1273 kg (2,807 lb.)	1492 kg (3,288 lb.)	1022 kg (2,253 lb.)	1194 kg (2,632 lb.)
R	1376 kg (3,034 lb.)	1614 kg (3,557 lb.)	1018 kg (2,243 lb.)	1191 kg (2,625 lb.)
S	1570 kg (3,460 lb.)	1839 kg (4,053 lb.)	1016 kg (2,240 lb.)	1191 kg (2,625 lb.)
T	—	—	1020 kg (2,249 lb.)	1197 kg (2,639 lb.)
U	—	—	1034 kg (2,279 lb.)	1214 kg (2,677 lb.)
V	—	—	1066 kg (2,351 lb.)	1254 kg (2,764 lb.)
W	—	—	1145 kg (2,524 lb.)	1346 kg (2,968 lb.)
X	—	—	1428 kg (3,149 lb.)	1675 kg (3,693 lb.)
Y	—	—	3058 kg (6,741 lb.)	3552 kg (7,831 lb.)



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended



315SL SPECIFICATIONS

Engine	315SL		
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT082 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	74 kW (99 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	417 Nm (307 lb.-ft.) at 1,400 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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.9 km/h (3.7 mph)	7.5 km/h (4.7 mph)	
Gear 2	10.8 km/h (6.7 mph)	13.6 km/h (8.5 mph)	
Gear 3	22.0 km/h (13.7 mph)	21.8 km/h (13.5 mph)	
Gear 4	36.6 km/h (22.7 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive</i>		
	<i>Non-Powered Front</i>	<i>(MFWD)</i>	<i>Rear</i>
SAE J43	5500 kg (12,125 lb.)	5500 kg (12,125 lb.)	7500 kg (16,535 lb.)
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.62 m (11 ft. 11 in.)	3.68 m (12 ft. 1 in.)	
Without Brakes	4.24 m (13 ft. 11 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.40 m (34 ft. 1 in.)	10.48 m (34 ft. 5 in.)	
Without Brakes	11.30 m (37 ft. 1 in.)	11.47 m (37 ft. 8 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7	
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		

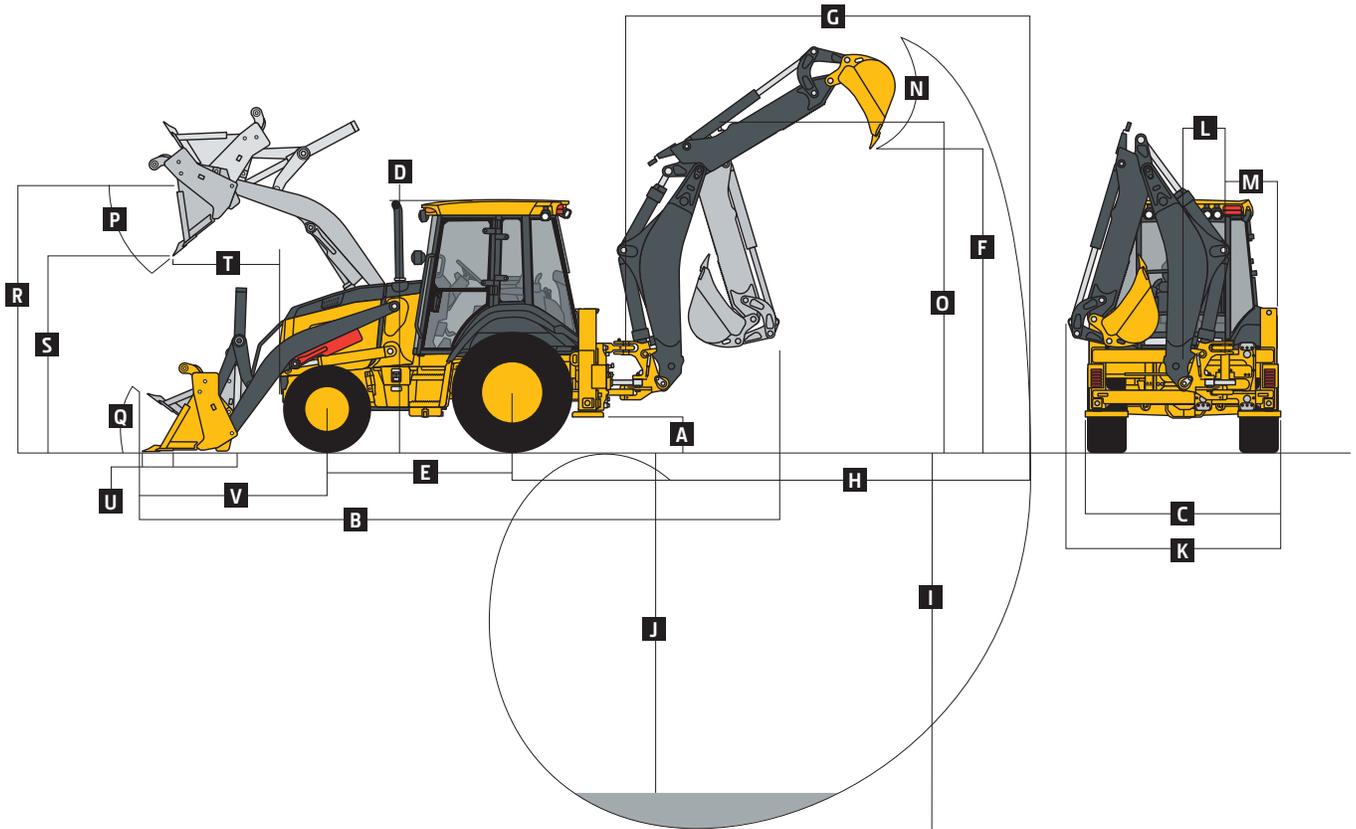
315SL SPECIFICATIONS



Hydraulics		315SL
Main Pump	Open center, gear type, tandem 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 standard; manual auxiliary function (2nd lever), single-lever control with electric clutch cutoff switch, electrohydraulic (EH) proportional auxiliary roller, MWFD (momentary), and transmission quick-shift optional	
Electrical		
Voltage	12 volt	
Alternator Rating	150 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; LED light field kits available with both flood- and spotlights	
Operator Station		
Type (SAE J1040)	Cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof	
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
Non-Powered Front Axle	12.5/80-18 F3 (12)	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 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System	35 L (37 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)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 gal.)	
Hydraulic System	104.1 L (27.5 gal.)	
Hydraulic Reservoir	45 L (11.9 gal.)	
MFWD Housing		
Axle	6.5 L (6.9 qt.)	
Planetary (each)	0.9 L (1 qt.)	
Hydrau™ XR Hydraulic Oil	Optional	
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.)	
Extendable Dipperstick	222 kg (490 lb.)	

315SL

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 (12,356 lb.)		
With Heavy-Duty Cylinder Option	67.8 kN (15,254 lb.)		
Crowd Cylinder	36.6 kN (8,231 lb.)		
Swing Arc	180 deg.		
Operator Control	2 levers		

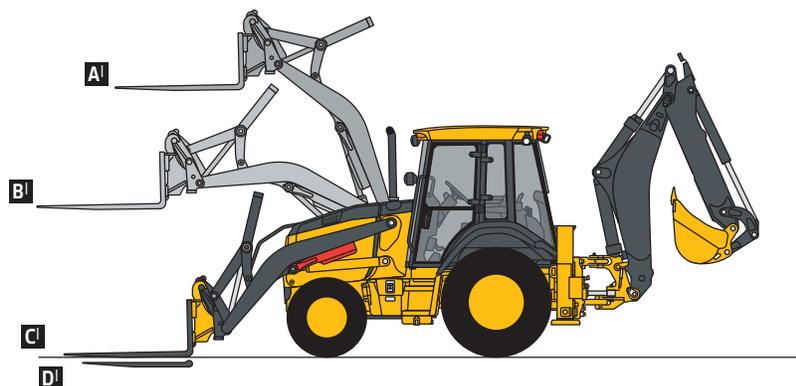
	With Optional Extendable Dipperstick		
	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	3.57 m (11 ft. 8 in.)	3.69 m (12 ft. 1 in.)	4.31 m (14 ft. 2 in.)
G Reach from Center of Swing Pivot	5.44 m (17 ft. 10 in.)	5.61 m (18 ft. 5 in.)	6.62 m (21 ft. 9 in.)
H Reach from 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)	4.17 m (13 ft. 8 in.)	4.34 m (14 ft. 3 in.)	5.39 m (17 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.13 m (13 ft. 6 in.)	4.30 m (14 ft. 1 in.)	5.35 m (17 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	3.77 m (12 ft. 5 in.)	3.96 m (13 ft. 0 in.)	5.09 m (16 ft. 9 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	3.63 m (11 ft. 11 in.)	3.63 m (11 ft. 11 in.)	3.63 m (11 ft. 11 in.)

Loader Dimensions and Performance 315SL

P Bucket Dump Angle, Maximum	45 deg.			
Q Rollback Angle at Ground Level	40 deg.			
	<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>	<i>Multipurpose</i>
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	48.3 kN (10,866 lb.)	46.8 kN (10,532 lb.)	43.5 kN (9,789 lb.)	43.2 kN (9,714 lb.)
Lift Capacity, Full Height	3375 kg (7,440 lb.)	3322 kg (7,324 lb.)	2875 kg (6,338 lb.)	2834 kg (6,248 lb.)
R Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)			
S Dump Clearance, Bucket at 45 deg.	2.71 m (8 ft. 11 in.)			
T Reach at Full Height, Bucket at 45 deg.	734 mm (28.9 in.)			
U Digging Depth Below Ground, Bucket Level	106 mm (4.2 in.)			
V Length from Front Axle Centerline to Bucket Cutting Edge	2.02 m (6 ft. 8 in.)			

Lift Capacity with Quick-Coupler Forks

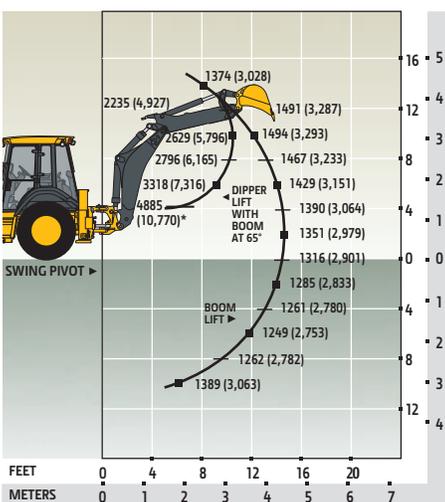
Hydraulic Capacity	<i>1219-mm (48 in.) Tines</i>	<i>1524-mm (60 in.) Tines</i>
A Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)
B Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)
C At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)
D Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)



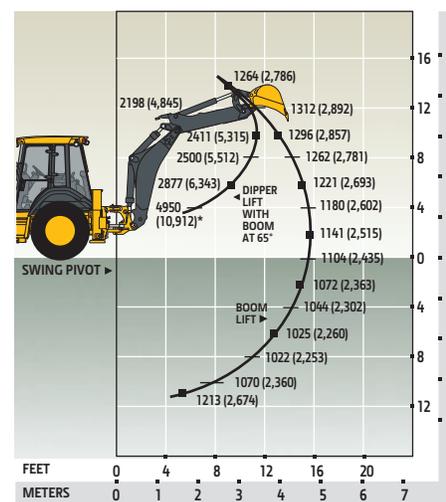
Lift Capacity with Bucket

Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

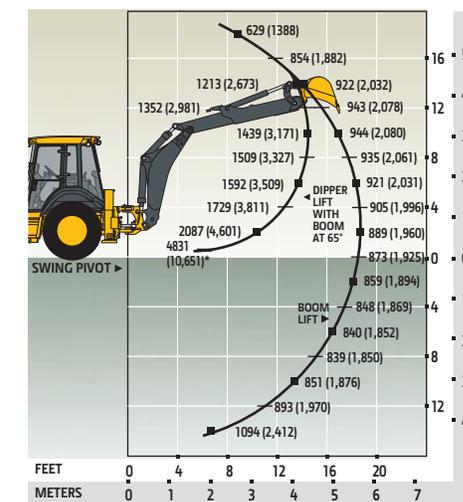
STANDARD LIFT With Standard Dipperstick



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

Engine	410L		
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT083 turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	84 kW (113 hp) at 2,244 rpm		
Net Peak Torque (ISO 9249)	447 Nm (330 lb.-ft.) at 1,400 rpm		
Net Torque Rise	23%		
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		
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; AutoShift transmission optional		
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	<i>Forward</i>	<i>Reverse</i>	
Gear 1	5.7 km/h (3.5 mph)	7.2 km/h (4.5 mph)	
Gear 2	10.5 km/h (6.5 mph)	13.2 km/h (8.2 mph)	
Gear 3	21.4 km/h (13.3 mph)	21.1 km/h (13.1 mph)	
Gear 4	35.9 km/h (22.3 mph)	—	
Gear 5	40.0 km/h (24.9 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		
Axle Ratings	<i>Mechanical-Front-Wheel Drive</i>		
	<i>Non-Powered Front</i>	<i>(MFWD)</i>	<i>Rear</i>
SAE J43	6500 kg (14,330 lb.)	6000 kg (13,228 lb.)	7500 kg (16,535 lb.)
Dynamic	8500 kg (18,739 lb.)	8500 kg (18,739 lb.)	10 000 kg (22,046 lb.)
Static	22 500 kg (49,604 lb.)	23 500 kg (51,809 lb.)	26 000 kg (57,320 lb.)
Ultimate	35 000 kg (77,162 lb.)	37 000 kg (81,571 lb.)	39 500 kg (87,083 lb.)
Differentials			
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	<i>Non-Powered Front</i>	<i>MFWD</i>	
Curb-Turning Radius			
With Brakes	3.59 m (11 ft. 9 in.)	3.67 m (12 ft. 0 in.)	
Without Brakes	4.21 m (13 ft. 10 in.)	4.35 m (14 ft. 3 in.)	
Bucket-Clearance Circle			
With Brakes	10.31 m (33 ft. 10 in.)	10.40 m (34 ft. 1 in.)	
Without Brakes	11.22 m (36 ft. 10 in.)	11.41 m (37 ft. 5 in.)	
Steering Wheel Turns (lock to lock, flow amplified)	3.1 to 4.3	2.6 to 3.6	
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		

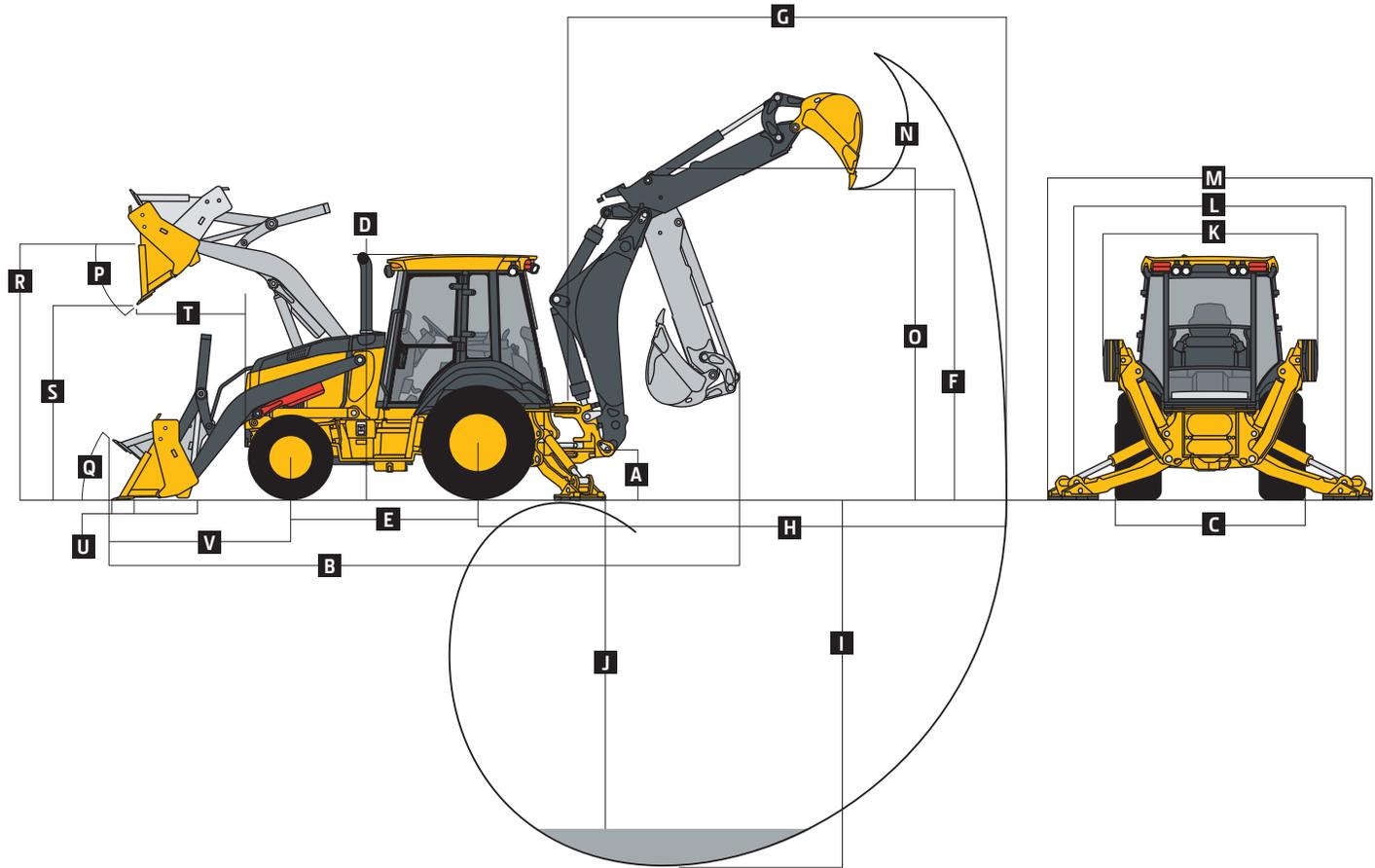
410L SPECIFICATIONS



Hydraulics		410L
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 and Loader	24 993 kPa (3,625 psi)	
Backhoe (lift mode)	27 579 kPa (4,000 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, momentary MFWD, transmission quick-shift, and electro-hydraulic (EH) auxiliary loader control optional	
Electrical		
Voltage	12 volt	
Alternator Rating	150 amp with cab / 120 amp with canopy and quarter 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; LED light field kits available with both flood- and spotlights	
Operator Station		
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof; optional quarter cab (front glass only) and fully enclosed cab	
Tires/Wheels		
	<i>Front</i>	<i>Rear</i>
Non-Powered Front Axle	12.5/80-18 F3 (12)	21L-24 R-4 (12)
With MFWD	12.5/80-18 R4 (10)	21L-24 R-4 (12)
	12.5/80-18 I3 (12)	21L-24 R-4 (12)
	340/80R18 XMCL	500/70R24 XMCL
	340/80R18 580	500/70R24 580
Serviceability		
Refill Capacities		
Cooling System	35 L (37 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)	140.1 L (37 gal.)	
Diesel Exhaust Fluid (DEF) Tank	16.3 L (4.3 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.)	
Hydrau™ XR Hydraulic Oil	Optional	
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

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	2.18 m (7 ft. 2 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.)



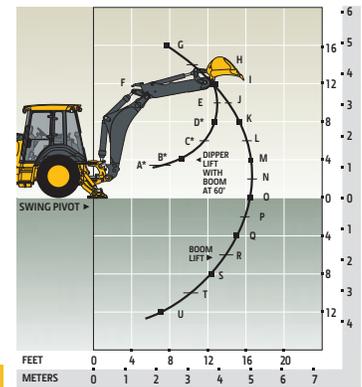
Backhoe Dimensions and Performance

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		
	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick</i>	
		<i>Retracted</i>	<i>Extended</i>
F Loading Height, Truck Loading Position	3.98 m (13 ft. 1 in.)	4.02 m (13 ft. 2 in.)	4.73 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)	4.83 m (15 ft. 10 in.)	4.83 m (15 ft. 10 in.)	5.99 m (19 ft. 8 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.78 m (15 ft. 8 in.)	4.78 m (15 ft. 8 in.)	5.96 m (19 ft. 7 in.)
2440-mm (8 ft.) Flat Bottom	4.47 m (14 ft. 8 in.)	4.47 m (14 ft. 8 in.)	5.73 m (18 ft. 9 in.)
K Stabilizer Width, Transport	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 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	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)	3.93 m (12 ft. 11 in.)

Loader Dimensions and Performance		410L		
P	Bucket Dump Angle, Maximum	45 deg.		
Q	Rollback Angle at Ground Level	40 deg.		
		<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
	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 (10,634 lb.)	46.0 kN (10,351 lb.)	43.6 kN (9,813 lb.)
	Lift Capacity, Full Height	3243 kg (7,149 lb.)	3134 kg (6,909 lb.)	2761 kg (6,087 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.45 m (11 ft. 4 in.)		
S	Dump Clearance, Bucket at 45 deg.	2.68 m (8 ft. 10 in.)		
T	Reach at Full Height, Bucket at 45 deg.	750 mm (29.5 in.)		
U	Digging Depth Below Ground, Bucket Level	157 mm (6.2 in.)		
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.04 m (6 ft. 8 in.)		

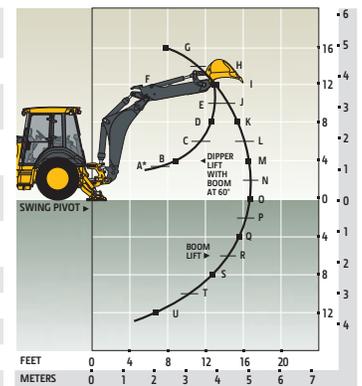
Lift Capacity with Quick-Coupler Forks		1219-mm (48 in.) Tines		1524-mm (60 in.) Tines	
Hydraulic Capacity					
A ¹	Maximum Height	2031 kg (4,478 lb.)		1880 kg (4,145 lb.)	
B ¹	Maximum Reach	3177 kg (7,005 lb.)		3002 kg (6,618 lb.)	
C ¹	At Ground Line	4208 kg (9,278 lb.)		3613 kg (7,966 lb.)	
D ¹	Below Ground Line	211 mm (8.3 in.)		211 mm (8.3 in.)	



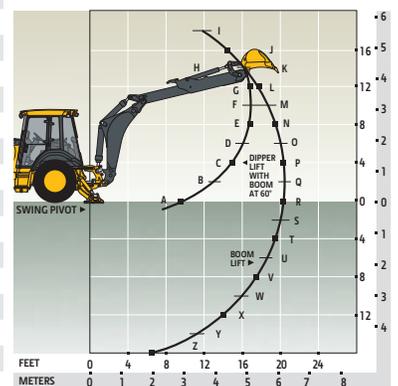
With Standard Dipperstick

Lift Capacity with Bucket
 Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Calculated with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket. Bucket impacts overall lift capacity.

	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	6359 kg (14,020 lb.)*	6359 kg (14,020 lb.)*	6513 kg (14,359 lb.)*	6513 kg (14,359 lb.)*	4181 kg (9,217 lb.)	4554 kg (10,041 lb.)
B	4893 kg (10,788 lb.)*	4893 kg (10,788 lb.)*	4985 kg (10,990 lb.)	4985 kg (10,990 lb.)	2548 kg (5,618 lb.)	2855 kg (6,294 lb.)
C	3627 kg (7,996 lb.)*	3627 kg (7,996 lb.)*	3587 kg (7,908 lb.)	3587 kg (7,908 lb.)	2193 kg (4,836 lb.)	2461 kg (5,426 lb.)
D	3268 kg (7,204 lb.)*	3268 kg (7,204 lb.)*	3200 kg (7,055 lb.)	3200 kg (7,055 lb.)	2010 kg (4,432 lb.)	2258 kg (4,978 lb.)
E	3087 kg (6,805 lb.)	3168 kg (6,984 lb.)*	2979 kg (6,568 lb.)	3093 kg (6,820 lb.)	1879 kg (4,142 lb.)	2112 kg (4,657 lb.)
F	2717 kg (5,990 lb.)	3029 kg (6,678 lb.)	2608 kg (5,750 lb.)	2920 kg (6,438 lb.)	1755 kg (3,870 lb.)	1975 kg (4,355 lb.)
G	1341 kg (2,957 lb.)	1511 kg (3,330 lb.)	1202 kg (2,649 lb.)	1371 kg (3,023 lb.)	1608 kg (3,545 lb.)	1812 kg (3,995 lb.)
H	1718 kg (3,788 lb.)	1938 kg (4,272 lb.)	1560 kg (3,438 lb.)	1779 kg (3,923 lb.)	1397 kg (3,080 lb.)	1579 kg (3,480 lb.)
I	1813 kg (3,996 lb.)	2047 kg (4,513 lb.)	1646 kg (3,629 lb.)	1880 kg (4,146 lb.)	828 kg (1,825 lb.)	956 kg (2,109 lb.)
J	1834 kg (4,043 lb.)	2073 kg (4,571 lb.)	1662 kg (3,665 lb.)	1902 kg (4,193 lb.)	1041 kg (2,295 lb.)	1198 kg (2,642 lb.)
K	1826 kg (4,026 lb.)	2067 kg (4,557 lb.)	1651 kg (3,639 lb.)	1892 kg (4,171 lb.)	1139 kg (2,511 lb.)	1311 kg (2,889 lb.)
L	1805 kg (3,980 lb.)	2046 kg (4,511 lb.)	1627 kg (3,587 lb.)	1868 kg (4,118 lb.)	1189 kg (2,621 lb.)	1368 kg (3,017 lb.)
M	1779 kg (3,923 lb.)	2019 kg (4,452 lb.)	1598 kg (3,523 lb.)	1838 kg (4,052 lb.)	1214 kg (2,676 lb.)	1398 kg (3,083 lb.)
N	1752 kg (3,863 lb.)	1991 kg (4,389 lb.)	1568 kg (3,457 lb.)	1807 kg (3,983 lb.)	1225 kg (2,700 lb.)	1412 kg (3,114 lb.)
O	1726 kg (3,805 lb.)	1964 kg (4,329 lb.)	1539 kg (3,394 lb.)	1777 kg (3,917 lb.)	1227 kg (2,706 lb.)	1417 kg (3,124 lb.)
P	1704 kg (3,756 lb.)	1941 kg (4,278 lb.)	1514 kg (3,338 lb.)	1751 kg (3,860 lb.)	1225 kg (2,701 lb.)	1416 kg (3,123 lb.)
Q	1687 kg (3,720 lb.)	1924 kg (4,242 lb.)	1494 kg (3,294 lb.)	1731 kg (3,817 lb.)	1221 kg (2,691 lb.)	1413 kg (3,115 lb.)
R	1681 kg (3,706 lb.)	1920 kg (4,232 lb.)	1484 kg (3,271 lb.)	1723 kg (3,798 lb.)	1216 kg (2,680 lb.)	1409 kg (3,106 lb.)
S	1693 kg (3,733 lb.)	1937 kg (4,270 lb.)	1491 kg (3,287 lb.)	1734 kg (3,824 lb.)	1211 kg (2,670 lb.)	1406 kg (3,099 lb.)
T	1751 kg (3,859 lb.)	2005 kg (4,421 lb.)	1539 kg (3,393 lb.)	1794 kg (3,955 lb.)	1209 kg (2,666 lb.)	1405 kg (3,098 lb.)
U	2020 kg (4,454 lb.)	2319 kg (5,112 lb.)	1783 kg (3,930 lb.)	2081 kg (4,588 lb.)	1211 kg (2,671 lb.)	1410 kg (3,108 lb.)
V	—	—	—	—	1221 kg (2,692 lb.)	1423 kg (3,136 lb.)
W	—	—	—	—	1243 kg (2,740 lb.)	1450 kg (3,196 lb.)
X	—	—	—	—	1290 kg (2,844 lb.)	1506 kg (3,321 lb.)
Y	—	—	—	—	1404 kg (3,094 lb.)	1640 kg (3,615 lb.)
Z	—	—	—	—	1933 kg (4,261 lb.)	2253 kg (4,967 lb.)



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

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

Additional equipment

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

310L		310SL				Engine
EP	310L	310SL	HL	315SL	410L	
●	●	●	●	●	●	Coolant recovery tank with low-level indicator
●	●	●	●	●	●	Foldout, hinged cooling system
●	●	●	●	●	●	Serpentine belt with automatic belt tensioner
●						Suction-type cooling fan
▲						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
▲						Ether starting aid
▲	▲	▲	▲	▲	▲	1,000-watt electric engine coolant heater
●	●	●	●	●	●	Electronic fuel lift pump
Powertrain						
●	●					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
				●		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
▲	▲	●	●	●	●	MFWD with traction-control limited-slip differential: Electric on/off control / Sealed axle
●	●	●	●	●	●	Automatic MFWD braking (4th and 5th gear overdrive only)
▲	▲	▲	▲	▲	▲	MFWD driveshaft guard

310L		310SL				Backhoe
EP	310L	310SL	HL	315SL	410L	
			●		●	Lift mode
●	●					Standard dipperstick, 4.27-m (14 ft. 0 in.) digging depth
		●				Standard dipperstick, 4.34-m (14 ft. 3 in.) digging depth
				●		Standard dipperstick, 4.17-m (13 ft. 8 in.) digging depth
					●	Standard dipperstick, 4.83-m (15 ft. 10 in.) digging depth
▲	▲	▲	●	▲		Extendable dipperstick, 1.06-m (3 ft. 6 in.) extension
					▲	Extendable dipperstick, 1.21-m (4 ft. 0 in.) extension
		▲	●	▲		Heavy-duty 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 for swingers, thumbs, etc. with auxiliary plumbing
▲	▲	▲	●	▲	▲	Auxiliary backhoe valve for hammers and compactors with auxiliary plumbing
▲	▲	▲	▲		▲	Hydraulic thumb
Loader†						
●	●	●	●	●	●	Loader bucket anti-spill (rollback)
●	●	●	●	●	●	Return-to-dig feature
●	●	●	●	●	●	Single-lever control with electric clutch disconnect
●	●	●	●	●	●	Bucket-level indicator
●	●	●	●	●	●	Loader boom service lock
▲	▲			▲		Auxiliary loader hydraulics with 2-lever control
		▲			▲	Auxiliary loader hydraulics with single control lever with EH auxiliary control (MFWD and clutch disconnect)
			●			Auxiliary loader hydraulics with thumb-switch control
▲	▲	▲	▲	▲	▲	Hydraulic coupler for buckets, forks, etc.
▲	▲	▲	▲	▲	▲	Ride control

†See dealer for range of heavy-duty, multipurpose, and coupler buckets and forks.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. No derating is required up to 1500-m (5,000 ft.) altitude for the 310L and up to 3050-m (10,000 ft.) for the 310L with optional altitude-compensating turbocharger, the 310SL, the 310SL HL, the 315SL, and the 410L. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on 310L EP and 310L units with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 0.86-m³ (1.12 cu. yd.) loader buckets, and 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) backhoe buckets; a 310SL unit with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 310SL HL unit with boost mode, 21L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 315SL unit with 19.5L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; and a 410L unit with boost mode, 21L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.15-m³ (1.5 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket.

Additional equipment *(continued)*

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

310L	310SL					
EP	310L	310SL	HL	315SL	410L	
●						Hydraulic System
	●					119-L/m (31.5 gpm) tandem-gear pump with unloader, open-center system
		●				106-L/m (28 gpm) single-gear pump, open-center system
			●		●	136-L/m (36 gpm) tandem-gear pump, open-center system
				●	●	159-L/m (42 gpm) axial-piston pump, PCLS system
●	●	●	●	●	●	Auto-idle
●	●	●	●	●	●	Economy mode
●	●	●	●	●	●	Dedicated hydraulic reservoir
Electrical System						
●	●	●	●	●	●	12-volt system
●						90-amp alternator (canopy and quarter cab)
●						120-amp alternator (cab)
	●	●	●		●	120-amp alternator (canopy and quarter cab)
	●	●	●	●	●	150-amp alternator (cab)
●	●	●		●	●	Single battery with 190-min. reserve capacity and 925 CCA
▲	▲	▲	●	▲	▲	Dual batteries with 380-min. reserve capacity and 1,850 CCA
▲	▲	▲	▲	▲	▲	Remote jump posts and battery disconnect
Lights						
●	●	●	●	●	●	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 lights, field installed
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
▲	▲	▲	▲	▲	▲	Air-suspension seat (with cab only)
●	●					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

310L	310SL					
EP	310L	310SL	HL	315SL	410L	
		●	●	●	●	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 fabric 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 radio (with cab only)
▲	▲	▲	▲	▲	▲	Premium radio package with XM Satellite Radio™ (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 cover
▲	▲	▲	●	●	▲	Heavy-duty front bumper
▲	▲	▲	▲	▲	▲	Front counterweight – 204 kg (450 lb.), 340 kg (750 lb.), 454 kg (1,000 lb.), or 567 kg (1,250 lb.)
▲	▲	▲	▲	▲	▲	Rubber grille bumpers
●	●	●	●	●	●	Fuel tank, 140.1 L (37 gal.), ground-level fueling
●	●	●	●	●	●	2-position easy-tilt hood
●	●	●	●	●	●	Extended grille frame
●	●	●	●	●	●	Removable toolbox with padlock hasp
●	●	●		●	●	Vandal protection for locking monitor, engine hood, toolbox, hydraulic reservoir, and fuel tank
			●			Vandal protection for locking engine hood, toolbox, hydraulic reservoir, and fuel tank
●	●	●	●	●	●	Reverse warning alarm
●	●	●	●	●	●	Dent-resistant full-coverage rear fenders
▲	▲	▲			▲	Backhoe boom-protection plate
●	●	●	●	●	●	JDLINK™ Ultimate wireless communication system (available in specific countries; see your dealer for details)

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. No derating is required up to 1500-m (5,000 ft.) altitude for the 310L and up to 3050-m (10,000 ft.) for the 310L with optional altitude-compensating turbocharger, the 310SL, the 310SL HL, the 315SL, and the 410L. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on 310L EP and 310L units with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 0.86-m³ (1.12 cu. yd.) loader buckets, and 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) backhoe buckets; a 310SL unit with 19.5L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 310SL HL unit with boost mode, 21L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; a 315SL unit with 19.5L-24 in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR (R4) front tires, 1.00-m³ (1.31 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket; and a 410L unit with boost mode, 21L-24-in. 12 PR (R4) tubeless rear and 12.5/80-18 10PR front tires, 1.15-m³ (1.5 cu. yd.) loader bucket, and 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe bucket.



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