

K-SERIES BACKHOES

4.34–5.44 m (14 ft. 3 in.–17 ft. 10 in.) digging depth



JOHN DEERE





We take back(hoe)talk seriously.

Your parents probably didn't put up with it, but we like it when you talk back to us. In fact, we encourage it. After all, it's comments and observations from equipment owners and operators such as yourself that challenge and drive us to build better backhoes. And contribute to productivity- and uptime-boosting enhancements such as our smooth-shifting five-speed transmission with Autoshift option. More efficient HVAC system. Convenient sealed-switch module with keyless start and machine-security system. Redesigned easier-to-clean cooling package. And a 310K EP model that meets Interim Tier 4 (IT4) standards without after-treatment components. When it comes to delivering what you want, nobody responds like John Deere.




The EPA IT4/EU Stage IIIB technology in our 310K–710K is simple, fuel efficient, fully integrated, and fully supported. It employs field-proven cooled exhaust gas recirculation (EGR) for reducing NO_x, and a diesel particulate filter (DPF) and diesel oxidation catalyst (DOC) to reduce particulate matter.

310K EP meets EPA IT4 standards without after-treatment components and DPFs. It's an excellent choice for large fleets and rental yards.

With John Deere WorkSight™, JDLink™ monitoring provides real-time machine utilization and health data, plus location information. Fleet Care proactively suggests maintenance to correct problems early before they turn into costly downtime. And Service ADVISOR™ Remote enables your dealer to read diagnostic codes, record performance data, and even update software without a trip to the jobsite. It's the most comprehensive, easy-to-use suite of technology available for increasing uptime and productivity while lowering operating costs. And it's only available from John Deere.

K-Series Specifications	310K EP	310K	310SK	310SK TC	410K	410K TC	710K
Net power	52 kW (70 hp)	66 kW (88 hp)	72 kW (96 hp)	76 kW (102 hp)	80 kW (107 hp)	79 kW (106 hp)	97 kW (130 hp)
Operating weight	6311 kg (13,913 lb.)	6364 kg (14,030 lb.)	6671 kg (14,708 lb.)	9006 kg (19,855 lb.)	7435 kg (16,391 lb.)	9296 kg (20,494 lb.)	10 796 kg (23,802 lb.)
Backhoe digging depth	4.34 m (14 ft. 3 in.)	4.34 m (14 ft. 3 in.)	4.42 m (14 ft. 6 in.)	4.55–5.61 m (14 ft. 11 in.– 18 ft. 5 in.)	4.83 m (15 ft. 10 in.)	4.90–6.10 m (16 ft. 1 in.– 20 ft. 0 in.)	5.44 m (17 ft. 10 in.)
Loader breakout force	41.6 kN (9,350 lb.)	41.6 kN (9,350 lb.)	49.2 kN (11,051 lb.)	50.9 kN (11,450 lb.)	45.8 kN (10,300 lb.)	47.3 kN (10,640 lb.)	69.1 kN (15,540 lb.)
Loader lift capacity	2994 kg (6,600 lb.)	2994 kg (6,600 lb.)	3335 kg (7,353 lb.)	3273 kg (7,215 lb.)	3266 kg (7,200 lb.)	3091 kg (6,815 lb.)	4208 kg (9,277 lb.)



Loaded for bear or barely loaded, you choose what's best.

Not everyone runs a coast-to-coast fleet of backhoes. Or owns and operates only one. That's the importance of responding to our customers, and the beauty of the K-Series. From the basic 310K EP to the incomparable 710K, our seven-model lineup has become all things to all people. Giving you exactly what you want is how we roll in the backhoe business.



Choose from pilot, two-lever, three-lever, four-lever, or SAE excavator-style controls. Smooth response and low effort are yours regardless of which you select.

Already run our J-Series Backhoes? Loader and backhoe buckets, as well as numerous other front and rear attachments, are compatible with the K-Series.

Described by some as a cross between a four-wheel-drive loader and an excavator, our top-of-line 710K is one highly productive machine.

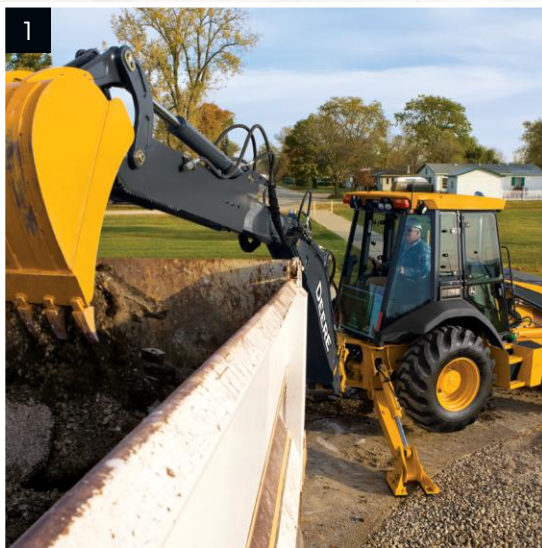
Don't let the 310K EP's competitive price fool you. There's nothing light duty about it. Plus, it comes equipped, not stripped. With many of the same features found on our other backhoes, it's the value leader in the 4.26-m (14 ft.) class.

310SK and 410K bring plenty of ability and options. For the ultimate in versatility, opt for a Tool Carrier model. Standard-equipped with our exclusive Total Machine Control (TMC), they take comfort and operating ease to a new level.

1. Extendable dipperstick (standard on tool carriers) adds digging depth, reach, and ability. Outer-box design firmly grasps cumbersome objects such as concrete slabs between the bucket and gripper teeth while extending or retracting.

2. Available TK-Series bucket teeth are engineered for maximum strength and impact absorption. Hammer-free installation and removal simplify changes, minimize downtime.

3. Worksite Pro™ top-hook coupler allows quick and easy single-pin bucket changes. Accommodates 305-, 457-, and 610-mm (12, 18, and 24 in.) heavy-duty buckets.



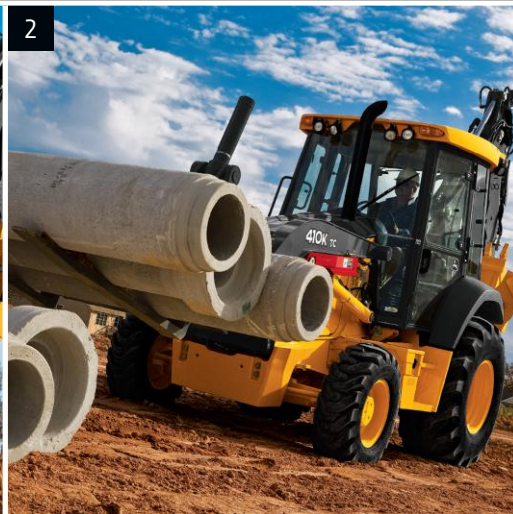
Shift productivity into a higher gear.

Go ahead — load large, dig deep, bust-up blacktop, or place pipe. Powerful and quick hydraulics deliver generous lift capacity and breakout to both working ends — along with impressive backhoe crowd power and swing torque. As always, our PowerShift™ transmission provides smooth on-the-go clutch-less gear changes. What's more, a fifth gear in the 310SK, 310SK TC, 410K, and 410K TC make them even more nimble and quick, providing transport speeds up to 40 km/h (25 mph). Add Autoshift, and you'll have the smoothest-shifting backhoe available.

Tight torque-converter match, impressive torque reserve, smooth combined-function metering, and optimum lift-to-crowd match make these aggressive and responsive loaders.

Curved-knee loader-boom design provides superior reach, enabling the K-Series to easily dump to the center of most trucks. For quick and efficient loading.

Generous swing-torque, boom, and dipperstick lift capacity empower the K-Series to crane heavy objects. Rearward-angled, box-constructed stabilizers and no-drift cylinders ensure locked-down stability.





1. Optional limited-slip mechanical-front-wheel drive (standard on tool carriers) delivers up to 65 percent of available power to the wheel with the best traction. Engage it “on the fly,” for true all-wheel drive when and where you need it.

2. Ride-control option functions as a shock absorber, smoothing moves over rough terrain. So full loads are more likely to arrive at their destination — instead of somewhere in-between. Helps reduce operator fatigue, too.

3. Power Curve™ boom’s job-proven design begins wide at the base and narrows through the line of sight for unrestricted visibility. Its proven geometry provides smooth and consistent control throughout the digging arc.

Maximize versatility, end to end.

Want to get the most from your backhoe? Choose a 310SK or 410K Tool Carrier (TC). Your operators will enjoy responsive near-effortless backhoe control and parallel lift that's simply unparalleled. One-of-a-kind electrohydraulic (EH) design delivers unsurpassed capability. With true parallel lift throughout the lift arc, it gives you the finesse to handle everything — from pipe to pallets. And unlike mechanical loader linkages, our exclusive EH-controlled loader employs fewer parts, so you'll spend less time on maintenance. You won't have to worry about replacing current attachments, either. The standard quick-coupler lets you hook up to a variety of older John Deere and other brands of loader attachments.





In addition to operating the backhoe and loader, EH joysticks provide smooth, responsive control of auxiliary loader attachments, extendable dipperstick, backhoe auxiliary attachments, hammer, mechanical-front-wheel drive, and horn.

Total Machine Control (TMC) lets an operator fine-tune backhoe speed to the job. Fast for up to 20-percent-quicker cycle times. Medium for normal digging. Or slow for craning objects, working in confined spaces, or excavating around existing utilities. Controls respond and deliver consistent low-effort response, regardless of hydraulic speed.

Go from backhoe- to excavator-style controls at the push of a button. Adjusting hydraulic flow when changing attachments is also push-button easy.

With auto-idle, momentarily releasing the joysticks automatically slows engine speed, preserving fuel and reducing noise. Preset speed resumes when a lever is reactivated.

Unlike traditional tool carriers, ours eliminates the Z-bar linkage, self-leveling rod, and numerous grease zerks.

1. Adjustable armrest-mounted EH joystick controls provide all-day comfort and nearly effortless operation.
2. Need to reposition quickly or get unstuck? Unique mini-joystick allows simultaneous loader and backhoe operation with just a fingertip and without swiveling the seat.
3. Joystick switch provides fingertip control of hydraulic-powered attachments. Toggle on and off, or push and hold for momentary control. Armrest-mounted switches operate the stabilizers.
4. Low-profile loader knee is narrow through the line of sight, for a clear view of the coupler or attachment. Visibility to the forks at truck-bed height is unsurpassed.
5. Worksite Pro loader quick-coupler lets you change attachments quickly and easily without leaving your seat. Accommodates a wide variety of attachments.



Big productivity begins here.

Who wouldn't be more productive in the spacious cab of a K-Series Backhoe? Its wide expanse of tinted glass provides a virtually unobstructed panoramic view of the work at hand and surrounding jobsite. The enhanced automatic high-velocity climate-control system's repositioned vents direct air more efficiently to keep the view clear and operator comfortable. We also added more storage space, with more lockable compartments for securing carry-ons. And there's a new sealed-switch module that provides convenient, low-effort push-button operation of numerous functions including keyless start. More comfort, more convenience, and more efficiency — that's our K-Series.

Completely redesigned HVAC system directs heated or cooled air where it's appreciated most — on the operator. For production-boosting year-round comfort.

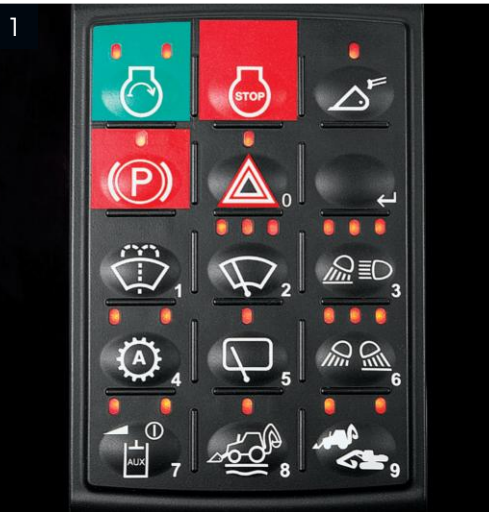
Mechanical or air-suspension armchair seats adjust multiple ways for daylong comfort and support.

With convenient handholds, self-cleaning steps, and wide entryways, getting to work has never been easier. Separate service and park brake systems provide an extra measure of security.

Tilt steering wheel is infinitely adjustable. Angles up and out of the way for swiveling the seat or passing through the cab.


You've got cruise control in your pickup — why not add it to your 310SK, 410K, or 710K? Rotary throttle lets you dial-in the speed you need.

12-volt power ports on both sides of the console provide convenient power for cell phones and other devices.





1. Sealed-switch module (unavailable in 310K EP/310K) gives fingertip control of keyless start, ride control, Autoshift, and auxiliary hydraulics — plus many other functions. Machine-security system with touchpad passcode helps prevent unauthorized operation.
2. In addition to the expected cup holders, there's more lockable storage, as well as plenty of side-console and overhead compartments for stowing a cell phone, iPod®, and other items.
3. Advanced monitor provides a wealth of vital and general operating info, plus onboard diagnostics of most sensors and switches for quick troubleshooting and maximum uptime.
4. Ergonomically designed loader control (available on 310SK–710K) utilizes a rotary-switch-actuated electrohydraulic (EH) controller for third-function loader hydraulics. Push buttons and a trigger provide fingertip operation of clutch disconnect, as well as on/off/momentary front-wheel-drive engagement.



Nothing runs like a Deere, because nothing is built like it.

Built with state-of-the-art tools and technology by a quality-conscious workforce at our world-class facility in Dubuque, Iowa, our K-Series deliver unsurpassed reliability. Everything about these backhoes — from their exceptionally durable one-piece totally welded mainframes to their box-constructed loaders, booms, and dippersticks — is designed for maximum uptime and low daily operating cost. When you know how they're built, you'll run a Deere.



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

Large pins and replaceable bushings deliver long-term durability, and help keep the backhoe and loader tight and digging true.

Totally welded mainframe resists torsional stress, absorbs shock loads, and delivers maximum strength. Simplifies service access to major components, too.

Solid-state electrical system eliminates numerous relays and connectors for enhanced reliability.

Planetary final drives distribute loads over multiple gears for long-term durability.

Wet-sleeve engine liners provide uniform cooling and longer durability than cast-in-block designs.

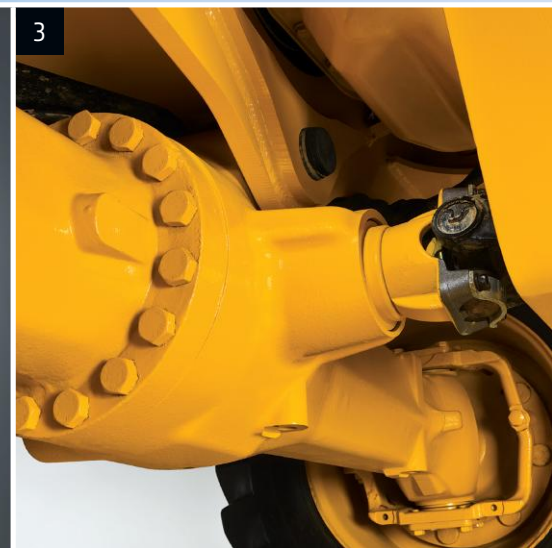
Auto-idle reduces engine speed when hydraulics aren't in use. Helps reduce noise and preserve precious fuel. It's available on 310SK-710K.

To conserve fuel and comply with regional air and bystander noise regulations, auto-shutdown turns off the engine after an operator-selected period of inactivity.

Engine hood is constructed of a resilient composite material that resists impacts and damage; reinforced grille helps protect the coolers.

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.

1. Engine hood is constructed of a resilient composite material that resists impacts and damage.
2. Backhoe boom, dipperstick, stabilizers, and loader are box-constructed of low-alloy steel for maximum strength.
3. Large kingpins and differential in the sealed mechanical-front-wheel-drive axle help ensure durability.





We've explored every angle to reduce maintenance.

From the increased hood tilt that allows even easier engine access, to the tilt-out coolers that open up the cores — our K-Series Backhoes are loaded with features that make them as easy to maintain as they are to operate. Same-side ground-level service points help daily checks and additions go more quickly. 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. And because no maintenance beats low maintenance, self-adjusting serpentine belts, park brakes, and wet-disc brakes seldom, if ever, require attention. With the John Deere K-Series, you'll spend less time and expense getting ready for work — and more time getting work done.

When you compare routine maintenance costs with other backhoes, you'll discover what owners already know — it costs less to run a Deere.

Wide-mouth fuel tank allows fast, ground-level fill-ups. Generous capacity lets you work longer before refueling.

Vertical spin-on engine, transmission, and hydraulic filters and quick-release fuel filters allow quick, no-spill changes.

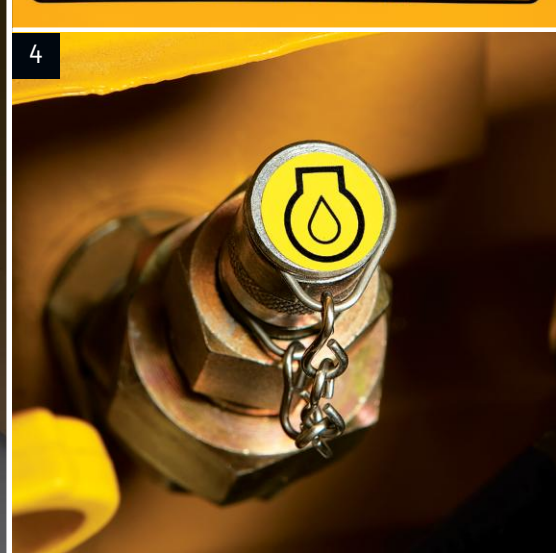
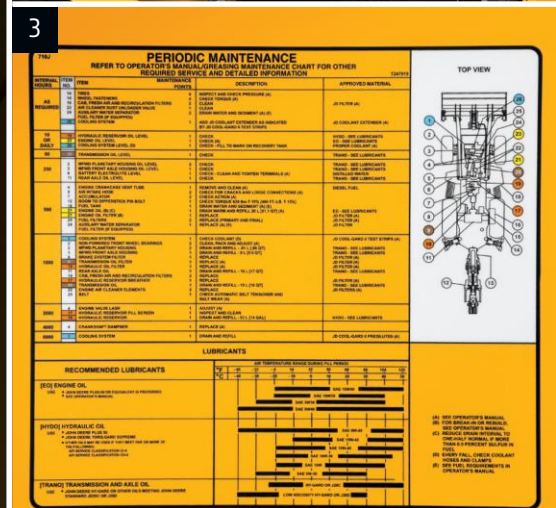
500-hour engine and 2,000-hour hydraulic oil-service intervals enable K-Series Backhoes to work longer between changes.

Rear axle bearings self-lubricate, so you'll never have to worry about greasing.

Synthetic bushings in the loader linkage and extendable dipperstick replace numerous zerks and the greasing that goes with them.

Seamless diesel particulate filter (DPF) soot cleaning happens automatically without impacting machine productivity. Periodic DPF ash removal is condition-based and should be performed by your John Deere dealer when indicated by dash lights or diagnostic codes. Actual intervals may exceed EPA minimums and are affected by machine application and maintenance practices.

1. If something goes wrong, the monitor displays easy-to-understand diagnostic information to help get you back up and running more quickly.
2. Redesigned cooling package allows coolers to tilt away from the radiator for convenient core clean-out.
3. Convenient color-coded lube and periodic maintenance chart ensures that nothing gets overlooked.
4. Diagnostic test ports and available fluid-sample ports help speed preventative maintenance and troubleshooting.



310K EP/310K

Engine	310K EP			310K		
Manufacturer and Model	John Deere PowerTech™ E 4045HT072 turbo-charged, standard			John Deere PowerTech™ Plus 4045HT073 turbo-charged, standard		
Non-Road Emissions Standard	EPA Interim Tier 4/EU Stage IIIB			EPA Interim Tier 4/EU Stage IIIB		
Displacement	4.5 L (276 cu. in.)			4.5 L (276 cu. in.)		
Net Peak Power (ISO 9249)	52 kW (70 hp) at 2,000 rpm			66 kW (88 hp) at 2,000 rpm		
Net Peak Torque (ISO 9249)	304 Nm (224 lb.-ft.) at 1,300 rpm			374 Nm (276 lb.-ft.) at 1,400 rpm		
Net Torque Rise	38%			39%		
Lubrication	Pressure system with spin-on filter and cooler			Pressure system with spin-on filter and cooler		
Air Cleaner	Dual-stage dry type with safety element and evacuator valve			Dual-stage dry type with safety element and evacuator valve		
Cooling						
Fan Type	Suction type			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	Forward	Reverse		Forward	Reverse	
Gear 1	5.2 km/h (3.3 mph)	6.6 km/h (4.1 mph)		5.6 km/h (3.5 mph)	7.0 km/h (4.4 mph)	
Gear 2	9.6 km/h (5.9 mph)	12.0 km/h (7.5 mph)		10.2 km/h (6.3 mph)	12.9 km/h (8.0 mph)	
Gear 3	19.4 km/h (12.1 mph)	—		20.9 km/h (13.0 mph)	—	
Gear 4	29.9 km/h (18.6 mph)	—		33.1 km/h (20.6 mph)	—	
Axles						
Axle Oscillation, Stop to Stop, Front Axle	22 deg.			22 deg.		
Axle Ratings	Non-Powered Front	Mechanical-Front-Wheel Drive (MFWD)	Rear	Non-Powered Front	Mechanical-Front-Wheel Drive (MFWD)	Rear
Static	18 000 kg (39,683 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)	18 000 kg (39,683 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)
Dynamic	7200 kg (15,873 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)	7200 kg (15,873 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)
Ultimate	32 950 kg (72,642 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)	32 950 kg (72,642 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)
Differentials						
MFWD Axle	Open – standard; automatic, limited-slip traction control – optional			Open – standard; automatic, limited-slip traction control – optional		
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock			Foot actuated, hydraulically engaged 100% mechanical lock		
Steering (ISO 5010)						
Axle	Non-Powered Front	MFWD		Non-Powered Front	MFWD	
Curb-Turning Radius						
With Brakes	3.44 m (11 ft. 4 in.)	3.58 m (11 ft. 9 in.)		3.44 m (11 ft. 4 in.)	3.58 m (11 ft. 9 in.)	
Without Brakes	3.94 m (12 ft. 11 in.)	4.08 m (13 ft. 5 in.)		3.94 m (12 ft. 11 in.)	4.08 m (13 ft. 5 in.)	
Bucket Clearance Circle						
With Brakes	9.89 m (32 ft. 5 in.)	10.11 m (33 ft. 2 in.)		9.89 m (32 ft. 5 in.)	10.11 m (33 ft. 2 in.)	
Without Brakes	10.76 m (35 ft. 4 in.)	11.05 m (36 ft. 3 in.)		10.76 m (35 ft. 4 in.)	11.05 m (36 ft. 3 in.)	
Steering Wheel Turns (lock to lock)	3.2	2.7		3.2	2.7	
Final Drive, Mechanical-Front Wheel 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 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)		
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)		

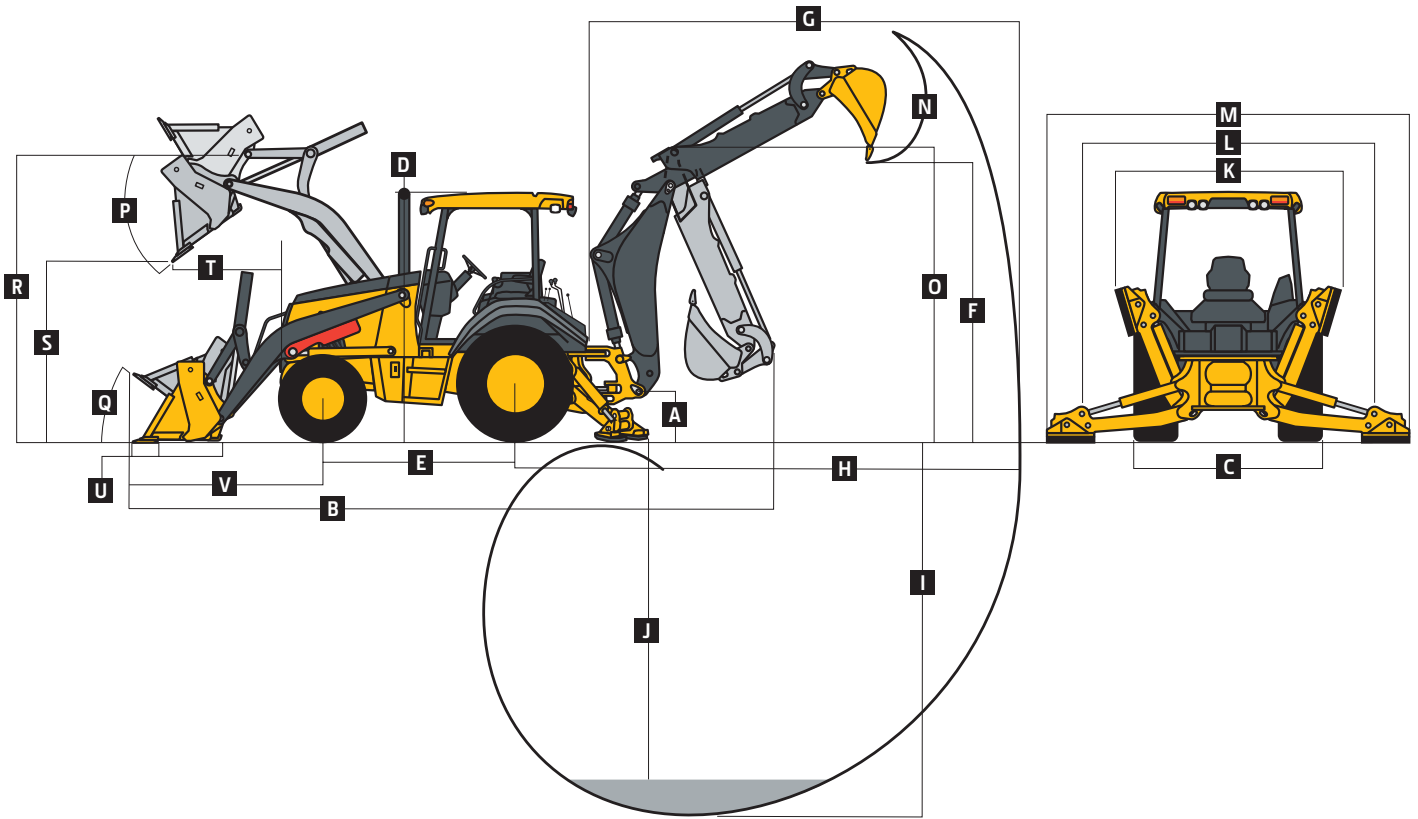


Hydraulics (continued)		310K EP	310K	
Controls				
Backhoe	2-lever manual standard; pilot controls with pattern select, 3-lever manual controls with foot swing, and manual and/or electric auxiliary functions optional			
Loader	Single-lever control with electric clutch cutoff switch standard; manual auxiliary function (2nd lever) optional			
Cylinders		310K EP / 310K		
Type	Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	Rod Diameter	Stroke	
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)	
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)	
Backhoe Boom (1)	110 mm (4.33 in.)	56 mm (2.20 in.)	821 mm (32.32 in.)	
Backhoe Crowd (1)	110 mm (4.33 in.)	63 mm (2.48 in.)	553 mm (21.77 in.)	
Backhoe Bucket (1)	80 mm (3.15 in.)	50 mm (1.97 in.)	892 mm (35.12 in.)	
Backhoe Swing (2)	80 mm (3.15 in.)	45 mm (1.77 in.)	310 mm (12.20 in.)	
Backhoe Extendable Dipperstick (1)	63 mm (2.48 in.)	32 mm (1.26 in.)	1062 mm (41.81 in.)	
Backhoe Stabilizer (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)	
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)	
MFWD (1)	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)	
Electrical		310K EP	310K	
Voltage	12 volt		12 volt	
Alternator Rating	90 amp		120 amp	
Lights	10 halogen: 4 front, 4 rear, and 2 side docking (32,500 candlepower each); turn signals and flashers: 2 front and 2 rear; stop and taillights; and 2 rear reflectors			
Operator Station				
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof			
Tires/Wheels				
	Front	Rear	Front	Rear
Non-Powered Front Axle	11L-16 F-3 (12)	19.5L-24 R-4 (10)	11L-16 F-3 (12)	19.5L-24 R-4 (10)
	11L-16 F-3 (12)	16.9-28 R-4 (10)	11L-16 F-3 (12)	16.9-28 R-4 (10)
MFWD	12-16.5 NHS (8)	19.5L-24 R-4 (10)	12-16.5 NHS (8)	19.5L-24 R-4 (10)
	305/70D16.5 NHS (10)	19.5L-24 R-4 (10)	305/70D16.5 NHS (10)	19.5L-24 R-4 (10)
	—	—	12.5/80-18 I-3 (12)	19.5L-24 R-4 (10)
	—	—	12.5/80-18 I-3 (12)	21L-24 R-4 (12)
Serviceability		310K EP / 310K		
Hydraulic Oil Filter, Spin-On Enclosed Replaceable Element	6-micron filtration; 1,000 break-in/service hours			
Refill Capacities				
Cooling System	32.9 L (34.8 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)	155.2 L (41 gal.)			
Hydraulic System	89.3 L (23.6 gal.)			
Hydraulic Reservoir	37.1 L (9.8 gal.)			
MFWD Housing				
Axle	6.5 L (6.9 qt.)			
Planetary (each)	0.9 L (1 qt.)			
Operating Weights		310K EP	310K	
With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	6311 kg (13,913 lb.)		6364 kg (14,030 lb.)	
Typical with Cab, MFWD, Extendable Dipperstick, and 454-kg (1,000 lb.) Counterweight	7380 kg (16,270 lb.)		7433 kg (16,387 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	200 kg (440 lb.)		200 kg (440 lb.)	
Front Loader Coupler	286 kg (630 lb.)		286 kg (630 lb.)	
Backhoe Bucket Coupler	59 kg (130 lb.)		59 kg (130 lb.)	

Overall Dimensions

310K EP / 310K

A Ground Clearance, Minimum	305 mm (12 in.)
B Overall Length, Transport	7.09 m (23 ft. 3 in.)
C Width Over Tires	2.18 m (7 ft. 2 in.)
D Height to Top of ROPS/Cab	2.74 m (9 ft. 0 in.)
E Length from Axle to Axle	
Non-Powered Front Axle	2.11 m (6 ft. 11 in.)
MFWD Axle	2.14 m (7 ft. 0 in.)



Backhoe Dimensions/Performance

310K EP / 310K

Backhoe specifications are with 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) bucket

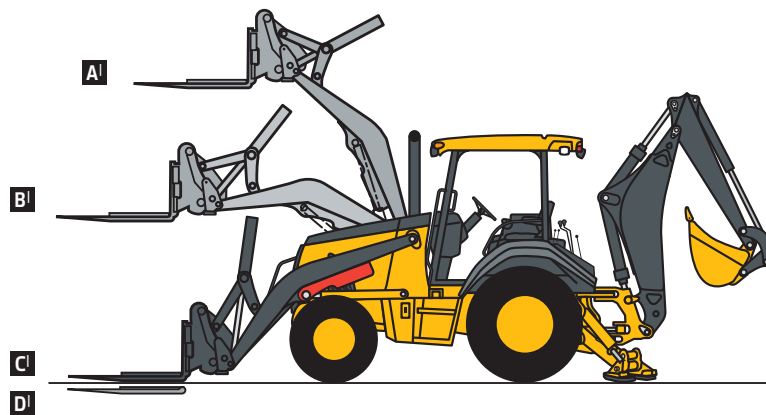
Bucket Range	305–762 mm (12–30 in.)
Digging Force	
Bucket Cylinder	49.4 kN (11,106 lb.)
Crowd Cylinder	31.2 kN (7,006 lb.)
Swing Arc	180 deg.
Operator Control	2 levers
Leveling Angle	14 deg.
Stabilizer Angle Rearward	18 deg.

With Optional Extendable Dipperstick

	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	3.33 m (10 ft. 11 in.)	3.38 m (11 ft. 1 in.)	4.24 m (13 ft. 11 in.)
G Reach from Center of Swing Pivot	5.44 m (17 ft. 10 in.)	5.51 m (18 ft. 1 in.)	6.53 m (21 ft. 5 in.)
H Reach from Center of Rear Axle	6.50 m (21 ft. 4 in.)	6.58 m (21 ft. 7 in.)	7.59 m (24 ft. 11 in.)
I Digging Depth (SAE maximum)	4.34 m (14 ft. 3 in.)	4.39 m (14 ft. 5 in.)	5.46 m (17 ft. 11 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	4.32 m (14 ft. 2 in.)	4.37 m (14 ft. 4 in.)	5.44 m (17 ft. 10 in.)
2440-mm (8 ft.) Flat Bottom	3.96 m (13 ft. 0 in.)	4.06 m (13 ft. 4 in.)	5.18 m (17 ft. 0 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	3.43 m (11 ft. 3 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)

Loader Dimensions/Performance		310K EP / 310K			
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.)	2184 mm (86 in.)	2184 mm (86 in.)	2184 mm (86 in.)
	Weight	363 kg (800 lb.)	390 kg (860 lb.)	405 kg (892 lb.)	794 kg (1,750 lb.)
	Breakout Force	41.6 kN (9,350 lb.)	42.3 kN (9,500 lb.)	39.9 kN (8,975 lb.)	36.4 kN (8,175 lb.)
	Lift Capacity, Full Height	2994 kg (6,600 lb.)	3073 kg (6,775 lb.)	2846 kg (6,275 lb.)	2280 kg (5,028 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.38 m (11 ft. 1 in.)	3.38 m (11 ft. 1 in.)	3.38 m (11 ft. 1 in.)	3.38 m (11 ft. 1 in.)
S	Dump Clearance, Bucket at 45 deg.	2.69 m (8 ft. 10 in.)	2.69 m (8 ft. 10 in.)	2.48 m (8 ft. 2 in.)	2.59 m (8 ft. 6 in.)
T	Reach at Full Height, Bucket at 45 deg.	785 mm (30.9 in.)	767 mm (30.2 in.)	809 mm (31.9 in.)	818 mm (32.2 in.)
U	Digging Depth Below Ground, Bucket Level	160 mm (6.3 in.)	175 mm (6.9 in.)	147 mm (5.8 in.)	197 mm (7.8 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.03 m (6 ft. 8 in.)	2.03 m (6 ft. 8 in.)	2.18 m (7 ft. 2 in.)	2.20 m (7 ft. 3 in.)

Lift Capacity with Quick-Coupler/Forks		310K EP / 310K Backhoe with Standard Dipperstick		310K EP / 310K Backhoe with 1.07-m (3 ft. 6 in.) Extendable Dipperstick, Retracted		310K EP / 310K Backhoe with 1.07-m (3 ft. 6 in.) Extendable Dipperstick, Extended	
	Hydraulic Capacity	1219-mm (48 in.) Tines		1524-mm (60 in.) Tines			
A¹	Maximum Height	1746 kg (3,850 lb.)		1556 kg (3,430 lb.)			
B¹	Maximum Reach	2688 kg (5,925 lb.)		2467 kg (5,438 lb.)			
C¹	At Ground Line	3493 kg (7,700 lb.)		3269 kg (7,207 lb.)			
D¹	Below Ground Line	262 mm (10.3 in.)		262 mm (10.3 in.)			

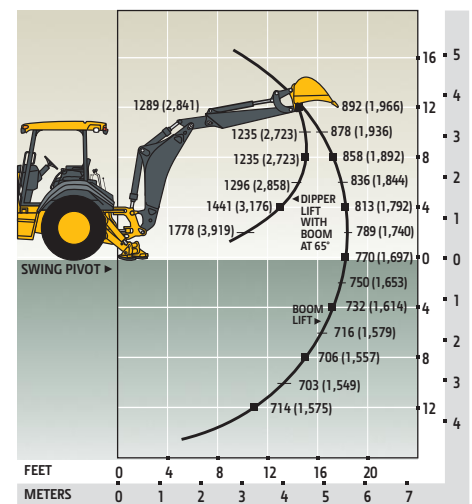
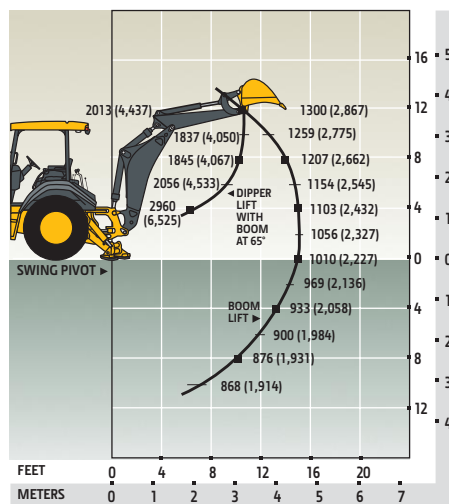
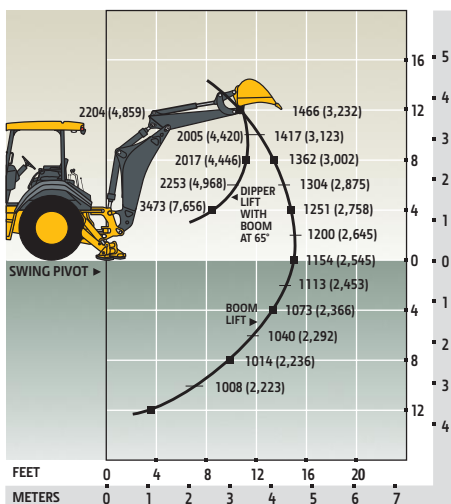


Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Base vehicle includes counterweight.

310K EP / 310K Backhoe with Standard Dipperstick

310K EP / 310K Backhoe with 1.07-m (3 ft. 6 in.) Extendable Dipperstick, Retracted

310K EP / 310K Backhoe with 1.07-m (3 ft. 6 in.) Extendable Dipperstick, Extended



310SK/310SK TC

Engine	310SK			310SK TC	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT073 turbo-charged, standard			John Deere PowerTech Plus 4045HT063 turbo-charged, standard	
Non-Road Emissions Standard	EPA Interim Tier 4/EU Stage IIIB			EPA Interim Tier 4/EU Stage IIIB	
Displacement	4.5 L (276 cu. in.)			4.5 L (276 cu. in.)	
Net Peak Power (ISO 9249)	72 kW (96 hp) at 2,000 rpm			76 kW (102 hp) at 2,000 rpm	
Net Peak Torque (ISO 9249)	399 Nm (295 lb.-ft.) at 1,400 rpm			408 Nm (301 lb.-ft.) at 1,400 rpm	
Net Torque Rise	40%			32%	
Lubrication	Pressure system with spin-on filter and cooler			Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve			Dual-stage dry type with safety element and evacuator valve	
Cooling	310SK / 310SK TC				
Fan Type	Electronically controlled, variable-rate suction type				
Engine Coolant Rating	−40 deg. C (−40 deg. F)				
Engine Oil Cooler	Oil to water				
Powertrain	310SK		310SK TC		
Transmission	5 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	Forward	Reverse	Forward	Reverse	
Gear 1	5.6 km/h (3.5 mph)	7.0 km/h (4.4 mph)	5.7 km/h (3.6 mph)	7.3 km/h (4.5 mph)	
Gear 2	10.2 km/h (6.3 mph)	12.9 km/h (8.0 mph)	10.5 km/h (6.5 mph)	13.3 km/h (8.2 mph)	
Gear 3	20.8 km/h (13.0 mph)	20.6 km/h (12.8 mph)	21.4 km/h (13.3 mph)	21.2 km/h (13.2 mph)	
Gear 4	32.8 km/h (20.4 mph)	—	32.9 km/h (20.5 mph)	—	
Gear 5	40.0 km/h (25.0 mph)	—	40.0 km/h (25.0 mph)	—	
Axles					
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		22 deg.		
Axle Ratings	Non-Powered Front	Mechanical-Front-Wheel Drive (MFWD)	Rear	Mechanical-Front-Wheel Drive (MFWD) Rear	
Static	18 000 kg (39,683 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)	12 000 kg (26,455 lb.) 13 000 kg (28,660 lb.)	
Dynamic	7200 kg (15,873 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)	6000 kg (13,228 lb.) 7000 kg (15,432 lb.)	
Ultimate	32 950 kg (72,642 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)	28 200 kg (62,170 lb.) 30 600 kg (67,461 lb.)	
Differentials					
MFWD Axle	Automatic, limited-slip traction control			Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock			Foot actuated, hydraulically engaged 100% mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering			Hydrostatic power steering and emergency steering	
Axle	Non-Powered Front	MFWD	MFWD		
Curb-Turning Radius					
With Brakes	3.44 m (11 ft. 4 in.)	3.58 m (11 ft. 9 in.)	3.58 m (11 ft. 9 in.)		
Without Brakes	3.94 m (12 ft. 11 in.)	4.08 m (13 ft. 5 in.)	4.08 m (13 ft. 5 in.)		
Bucket Clearance Circle					
With Brakes	9.89 m (32 ft. 5 in.)	10.11 m (33 ft. 2 in.)	10.40 m (34 ft. 1 in.)		
Without Brakes	10.76 m (35 ft. 4 in.)	11.05 m (36 ft. 3 in.)	11.37 m (37 ft. 4 in.)		
Steering Wheel Turns (lock to lock)	3.2	2.7	2.6 to 3.6 (flow amplified)		
Final Drive, Mechanical-Front Wheel 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			Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm					
Backhoe	136 L/m (36 gpm)			159 L/m (42 gpm)	
Loader	106 L/m (28 gpm)			159 L/m (42 gpm)	
System Relief Pressure, Backhoe and Loader	24 993 kPa (3,625 psi)			24 993 kPa (3,625 psi)	
Controls					
Backhoe	2-lever manual standard; pilot controls with pattern select, 3-lever manual controls with foot swing, and manual and/or electric auxiliary functions optional			TMC electrohydraulic (EH) controls with auxiliary functions standard	

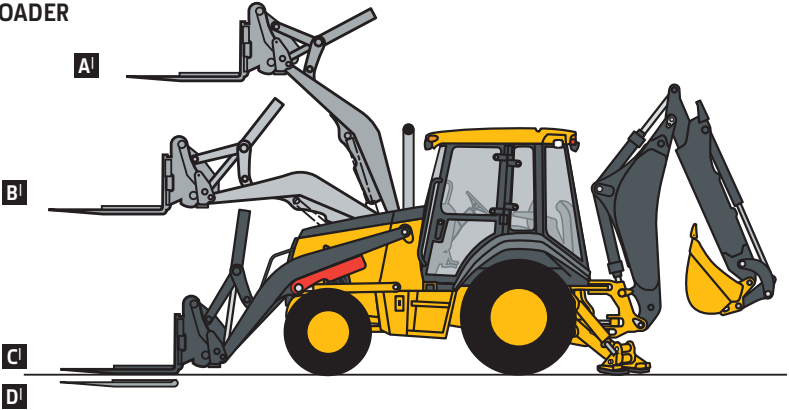


Hydraulics (continued)	310SK	310SK TC						
Controls (continued)								
Loader	Single-lever control with electric clutch cutoff switch; with auxiliary hydraulics – single-lever control with electric clutch cutoff switch, MFWD (on/off/momentary), and integrated EH proportional control of auxiliary hydraulics	TMC EH controls with auxiliary functions standard						
Cylinders								
Type	Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins							
	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>		
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)	90 mm (3.54 in.)	56 mm (2.20 in.)	673 mm (26.50 in.)		
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)	100 mm (3.94 in.)	56 mm (2.20 in.)	733 mm (28.86 in.)		
Backhoe Boom (1)	120 mm (4.72 in.)	56 mm (2.20 in.)	795 mm (31.30 in.)	120 mm (4.72 in.)	56 mm (2.20 in.)	795 mm (31.30 in.)		
Backhoe Crowd (1)	115 mm (4.53 in.)	63 mm (2.48 in.)	602.5 mm (23.72 in.)	115 mm (4.53 in.)	63 mm (2.48 in.)	602.5 mm (23.72 in.)		
Backhoe Bucket (1)	90 mm (3.54 in.)	56 mm (2.20 in.)	810 mm (31.89 in.)	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)		
Backhoe Bucket, Heavy-Duty Option (1)	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)	—	—	—		
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)		
Backhoe Extendable Dipperstick (1)	70 mm (2.76 in.)	40 mm (1.57 in.)	1067 mm (42.01 in.)	70 mm (2.76 in.)	40 mm (1.57 in.)	1067 mm (42.01 in.)		
Backhoe Stabilizer, Standard (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)	—	—	—		
Backhoe Stabilizer, Longer Optional (2)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)		
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)		
MFWD (1)	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)		
Electrical								
Voltage	12 volt		12 volt					
Alternator Rating	120 amp		200 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							
Operator Station			310SK / 310SK TC					
Type (SAE J1040)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof							
Tires/Wheels			310SK				310SK TC	
		<i>Front</i>	<i>Rear</i>		<i>Front</i>	<i>Rear</i>		
Non-Powered Front Axle		11L-16 F-3 (12)	19.5L-24 R-4 (10)		—	—		
MFWD		12.5/80-18 I-3 (14)	19.5L-24 R-4 (10)		12.5/80-18 I-3 (14)	19.5L-24 R-4 (10)		
		12.5/80-18 I-3 (12)	19.5L-24 R-4 (10)		12.5/80-18 I-3 (12)	19.5L-24 R-4 (10)		
		12.5/80-18 I-3 (12)	21L-24 R-4 (12)		12.5/80-18 I-3 (12)	21L-24 R-4 (12)		
		340/80R18 XMCL	500/70R24 XMCL		340/80R18 XMCL	500/70R24 XMCL		
Serviceability			310SK / 310SK TC					
Hydraulic Oil Filter, Spin-On Enclosed Replaceable Element	6-micron filtration; 1,000 break-in/service hours							
Refill Capacities								
Cooling System	32.9 L (34.8 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)	155.2 L (41 gal.)							
Hydraulic System	89.3 L (23.6 gal.)							
Hydraulic Reservoir	37.1 L (9.8 gal.)							
MFWD Housing								
Axle	6.5 L (6.9 qt.)							
Planetary (each)	0.9 L (1 qt.)							
Operating Weights			310SK		310SK TC			
With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	6671 kg (14,708 lb.)			—				
Typical with Cab, MFWD, Extendable Dipperstick, and 454-kg (1,000 lb.) Counterweight	7828 kg (17,258 lb.)			—				
With Cab, MFWD, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	—			9006 kg (19,855 lb.)				
Optional Components (weight difference between base equipment and option)								
Cab	263 kg (580 lb.)			In base				
MFWD with Tires	220 kg (485 lb.)			In base				
Extendable Dipperstick	222 kg (490 lb.)			In base				
Front Loader Coupler	286 kg (630 lb.)			In base				
Backhoe Bucket Coupler	63 kg (138 lb.)			63 kg (138 lb.)				

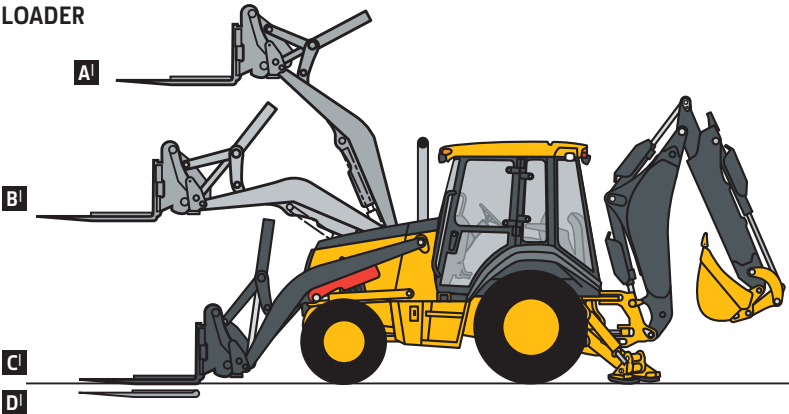
Backhoe Dimensions/Performance		310SK			310SK TC		
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket							
Bucket Range		305–762 mm (12–30 in.)			305–762 mm (12–30 in.)		
Digging Force							
Bucket Cylinder		53.3 kN (11,990 lb.)			68.6 kN (15,430 lb.)		
With Heavy-Duty Cylinder Option		67.7 kN (15,230 lb.)			—		
Crowd Cylinder		36.0 kN (8,090 lb.)			36.0 kN (8,090 lb.)		
Swing Arc		180 deg.			180 deg.		
Operator Control		2 levers			2 joysticks		
			With Optional Extendable Dipperstick		With Extendable Dipperstick		
		With Standard Backhoe	Retracted	Extended	Retracted	Extended	
F	Loading Height, Truck Loading Position	3.43 m (11 ft. 3 in.)	3.43 m (11 ft. 3 in.)	4.29 m (14 ft. 1 in.)	3.43 m (11 ft. 3 in.)	4.29 m (14 ft. 1 in.)	
G	Reach from Center of Swing Pivot	5.56 m (18 ft. 3 in.)	5.66 m (18 ft. 7 in.)	6.68 m (21 ft. 11 in.)	5.66 m (18 ft. 7 in.)	6.68 m (21 ft. 11 in.)	
H	Reach from Center of Rear Axle	6.63 m (21 ft. 9 in.)	6.73 m (22 ft. 1 in.)	7.72 m (25 ft. 4 in.)	6.73 m (22 ft. 1 in.)	7.72 m (25 ft. 4 in.)	
I	Digging Depth (SAE maximum)	4.42 m (14 ft. 6 in.)	4.55 m (14 ft. 11 in.)	5.61 m (18 ft. 5 in.)	4.55 m (14 ft. 11 in.)	5.61 m (18 ft. 5 in.)	
J	Digging Depth (SAE)						
	610-mm (2 ft.) Flat Bottom	4.37 m (14 ft. 4 in.)	4.50 m (14 ft. 9 in.)	5.56 m (18 ft. 3 in.)	4.50 m (14 ft. 9 in.)	5.56 m (18 ft. 3 in.)	
	2440-mm (8 ft.) Flat Bottom	4.06 m (13 ft. 4 in.)	4.19 m (13 ft. 9 in.)	5.33 m (17 ft. 6 in.)	4.19 m (13 ft. 9 in.)	5.33 m (17 ft. 6 in.)	
K	Stabilizer Width, Transport	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)	
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.)	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.)	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.)	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.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	
N	Bucket Rotation	190 deg.	190 deg.	190 deg.	190 deg.	190 deg.	
O	Transport Height	3.51 m (11 ft. 6 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)	3.48 m (11 ft. 5 in.)	
Loader Dimensions/Performance							
P	Bucket Dump Angle, Maximum	45 deg.			45 deg.		
Q	Rollback Angle at Ground Level	40 deg.			40 deg.		
		Standard Loader Option			Tool-Carrier Loader Option		
		Heavy-duty	Heavy-duty long lip	Heavy-duty	Multipurpose	Heavy-duty	Multipurpose
Bucket Capacity		0.86 m³ (1.12 cu. yd.)	0.96 m³ (1.25 cu. yd.)	1.00 m³ (1.31 cu. yd.)	1.00 m³ (1.31 cu. yd.)	1.00 m³ (1.31 cu. yd.)	1.00 m³ (1.31 cu. yd.)
Width		2184 mm (86 in.)	2184 mm (86 in.)	2337 mm (92 in.)	2337 mm (92 in.)	2337 mm (92 in.)	2337 mm (92 in.)
Weight		390 kg (860 lb.)	405 kg (892 lb.)	521 kg (1,148 lb.)	816 kg (1,800 lb.)	492 kg (1,085 lb.)	788 kg (1,737 lb.)
Breakout Force		49.2 kN (11,051 lb.)	45.4 kN (10,210 lb.)	45.8 kN (10,300 lb.)	42.9 kN (9,650 lb.)	50.9 kN (11,450 lb.)	43.1 kN (9,680 lb.)
Lift Capacity, Full Height		3335 kg (7,353 lb.)	3329 kg (7,340 lb.)	3266 kg (7,200 lb.)	2994 kg (6,600 lb.)	3273 kg (7,215 lb.)	2654 kg (5,850 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)	3.40 m (11 ft. 2 in.)
S	Dump Clearance, Bucket at 45 deg.	2.69 m (8 ft. 10 in.)	2.48 m (8 ft. 2 in.)	2.64 m (8 ft. 8 in.)	2.62 m (8 ft. 7 in.)	2.59 m (8 ft. 6 in.)	2.50 m (8 ft. 2 in.)
T	Reach at Full Height, Bucket at 45 deg.	767 mm (30.2 in.)	911 mm (35.9 in.)	765 mm (30.1 in.)	818 mm (32.2 in.)	762 mm (30.0 in.)	836 mm (32.9 in.)
U	Digging Depth Below Ground, Bucket Level	175 mm (6.9 in.)	147 mm (5.8 in.)	206 mm (8.1 in.)	185 mm (7.3 in.)	140 mm (5.5 in.)	152 mm (6.0 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.03 m (6 ft. 8 in.)	2.18 m (7 ft. 2 in.)	2.03 m (6 ft. 8 in.)	2.15 m (7 ft. 1 in.)	2.15 m (7 ft. 1 in.)	2.27 m (7 ft. 5 in.)

Lift Capacity with Quick-Coupler/Forks	310SK		310SK TC	
Hydraulic Capacity	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines
A ¹ Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)	2211 kg (4,875 lb.)	2053 kg (4,526 lb.)
B ¹ Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)	3438 kg (7,580 lb.)	3294 kg (7,261 lb.)
C ¹ At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)	4400 kg (9,700 lb.)	4180 kg (9,215 lb.)
D ¹ Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)	211 mm (8.3 in.)	211 mm (8.3 in.)

310SK BACKHOE LOADER

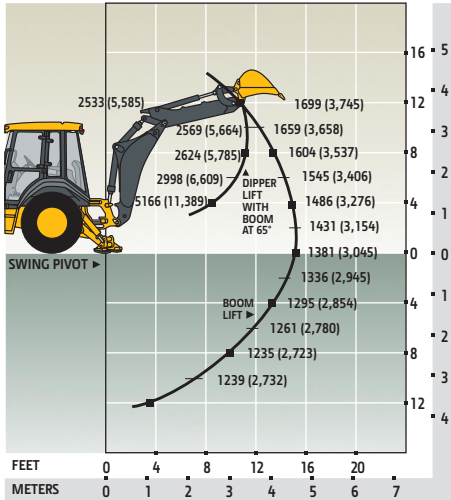


310SK TC BACKHOE LOADER

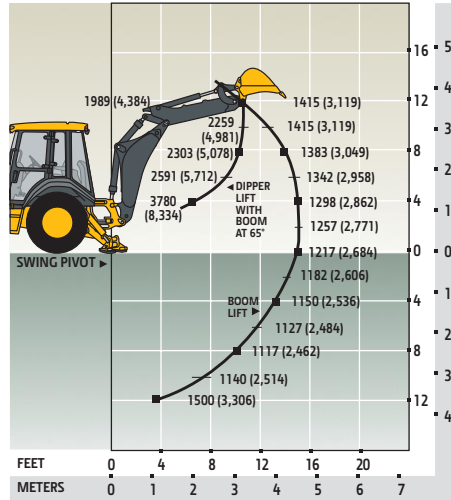


Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Base vehicle includes counterweight.

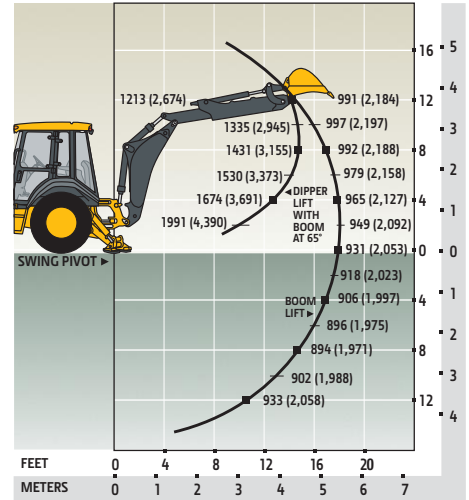
310SK Backhoe with Standard Dipperstick



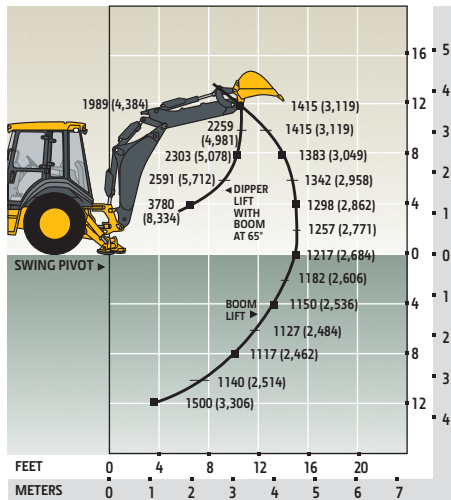
310SK Backhoe with 1.07-m (3 ft. 6 in.)
Extendable Dipperstick, Retracted



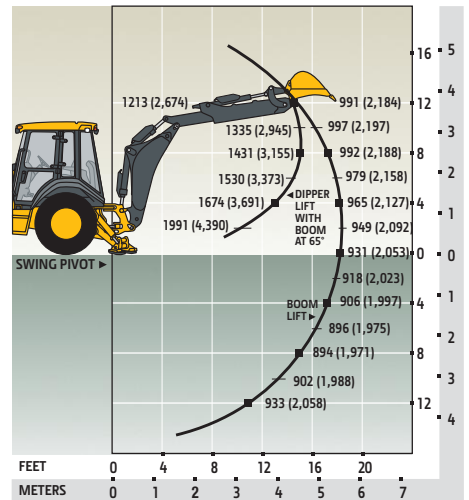
310SK Backhoe with 1.07-m (3 ft. 6 in.)
Extendable Dipperstick, Extended



310SK TC Backhoe with 1.07-m (3 ft. 6 in.)
Extendable Dipperstick, Retracted



310SK TC Backhoe with 1.07-m (3 ft. 6 in.)
Extendable Dipperstick, Extended



410K/410K TC

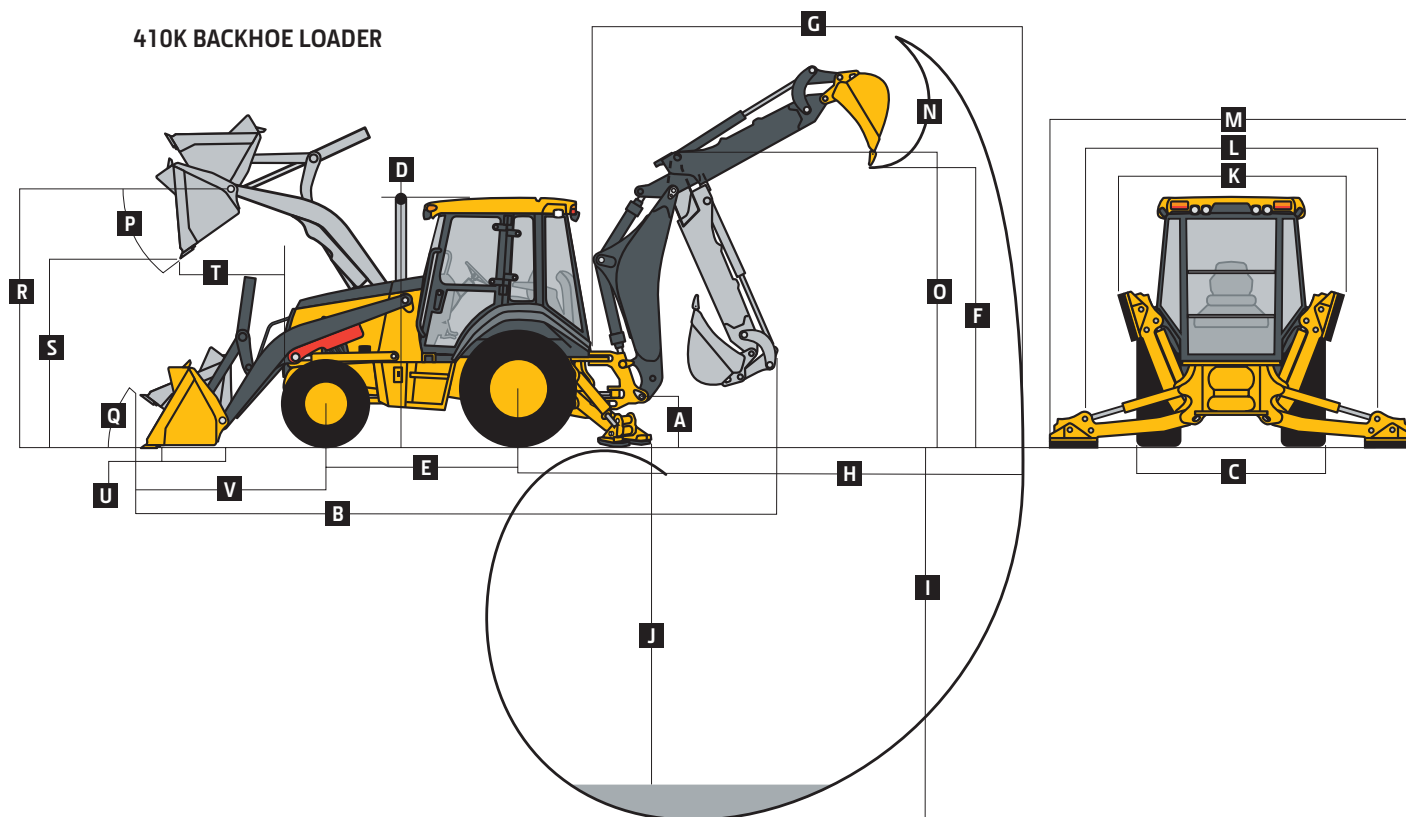
Engine	410K			410K TC	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT063 turbo-charged, standard			John Deere PowerTech Plus 4045HT063 turbo-charged, standard	
Non-Road Emissions Standard	EPA Interim Tier 4/EU Stage IIIB			EPA Interim Tier 4/EU Stage IIIB	
Displacement	4.5 L (276 cu. in.)			4.5 L (276 cu. in.)	
Net Peak Power (ISO 9249)	80 kW (107 hp) at 2,000 rpm			79 kW (106 hp) at 2,000 rpm	
Net Peak Torque (ISO 9249)	430 Nm (317 lb.-ft.) at 1,400 rpm			429 Nm (316 lb.-ft.) at 1,400 rpm	
Net Torque Rise	35%			34%	
Lubrication	Pressure system with spin-on filter and cooler			Pressure system with spin-on filter and cooler	
Air Cleaner	Dual-stage dry type with safety element and evacuator valve			Dual-stage dry type with safety element and evacuator valve	
Cooling	410K / 410K TC				
Fan Type	Electronically controlled, variable-rate suction type				
Engine Coolant Rating	−40 deg. C (−40 deg. F)				
Engine Oil Cooler	Oil to water				
Powertrain	410K			410K TC	
Transmission	5 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 21L-24 Rear Tires	Forward	Reverse		Forward	Reverse
Gear 1	5.7 km/h (3.6 mph)	7.3 km/h (4.5 mph)		5.7 km/h (3.6 mph)	7.3 km/h (4.5 mph)
Gear 2	10.5 km/h (6.5 mph)	13.3 km/h (8.2 mph)		10.5 km/h (6.5 mph)	13.2 km/h (8.2 mph)
Gear 3	21.3 km/h (13.2 mph)	21.2 km/h (13.2 mph)		21.3 km/h (13.2 mph)	21.1 km/h (13.1 mph)
Gear 4	32.8 km/h (20.4 mph)	—		32.8 km/h (20.4 mph)	—
Gear 5	40.0 km/h (25.0 mph)	—		40.0 km/h (25.0 mph)	—
Axles					
Axle Oscillation, Stop to Stop, Front Axle	22 deg.			22 deg.	
Axle Ratings	Non-Powered Front	Mechanical-Front-Wheel Drive (MFWD)	Rear	Mechanical-Front-Wheel Drive (MFWD)	Rear
Static	18 000 kg (39,683 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)
Dynamic	7200 kg (15,873 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)
Ultimate	32 950 kg (72,642 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)
Differentials					
MFWD Axle	Automatic, limited-slip traction control			Automatic, limited-slip traction control	
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock			Foot actuated, hydraulically engaged 100% mechanical lock	
Steering (ISO 5010)	Hydrostatic power steering and emergency steering			Hydrostatic power steering and emergency steering	
Axle	Non-Powered Front	MFWD		MFWD	
Curb-Turning Radius					
With Brakes	3.44 m (11 ft. 4 in.)	3.58 m (11 ft. 9 in.)		3.58 m (11 ft. 9 in.)	
Without Brakes	3.94 m (12 ft. 11 in.)	4.08 m (13 ft. 5 in.)		4.08 m (13 ft. 5 in.)	
Bucket Clearance Circle					
With Brakes	9.89 m (32 ft. 5 in.)	10.11 m (33 ft. 2 in.)		10.40 m (34 ft. 1 in.)	
Without Brakes	10.76 m (35 ft. 4 in.)	11.05 m (36 ft. 3 in.)		11.37 m (37 ft. 4 in.)	
Steering Wheel Turns (lock to lock, flow amplified)	3.1 to 4.3	2.6 to 3.6		2.6 to 3.6	
Final Drive					
Mechanical-Front Wheel	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears				
Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 4 gears				
Brakes (ISO 3450)					
Service	Power assisted, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing				
Parking	Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control				
Hydraulics					
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump				
Pump Flow at 2,200 rpm, Backhoe and Loader	159 L/m (42 gpm)			159 L/m (42 gpm)	
System Relief Pressure, Backhoe and Loader	24 993 kPa (3,625 psi)			24 993 kPa (3,625 psi)	
Controls					
Backhoe	2-lever manual standard; pilot controls with pattern select, 3-lever manual controls with foot swing, and manual and/or electric auxiliary functions optional			TMC electrohydraulic (EH) controls with auxiliary functions standard	



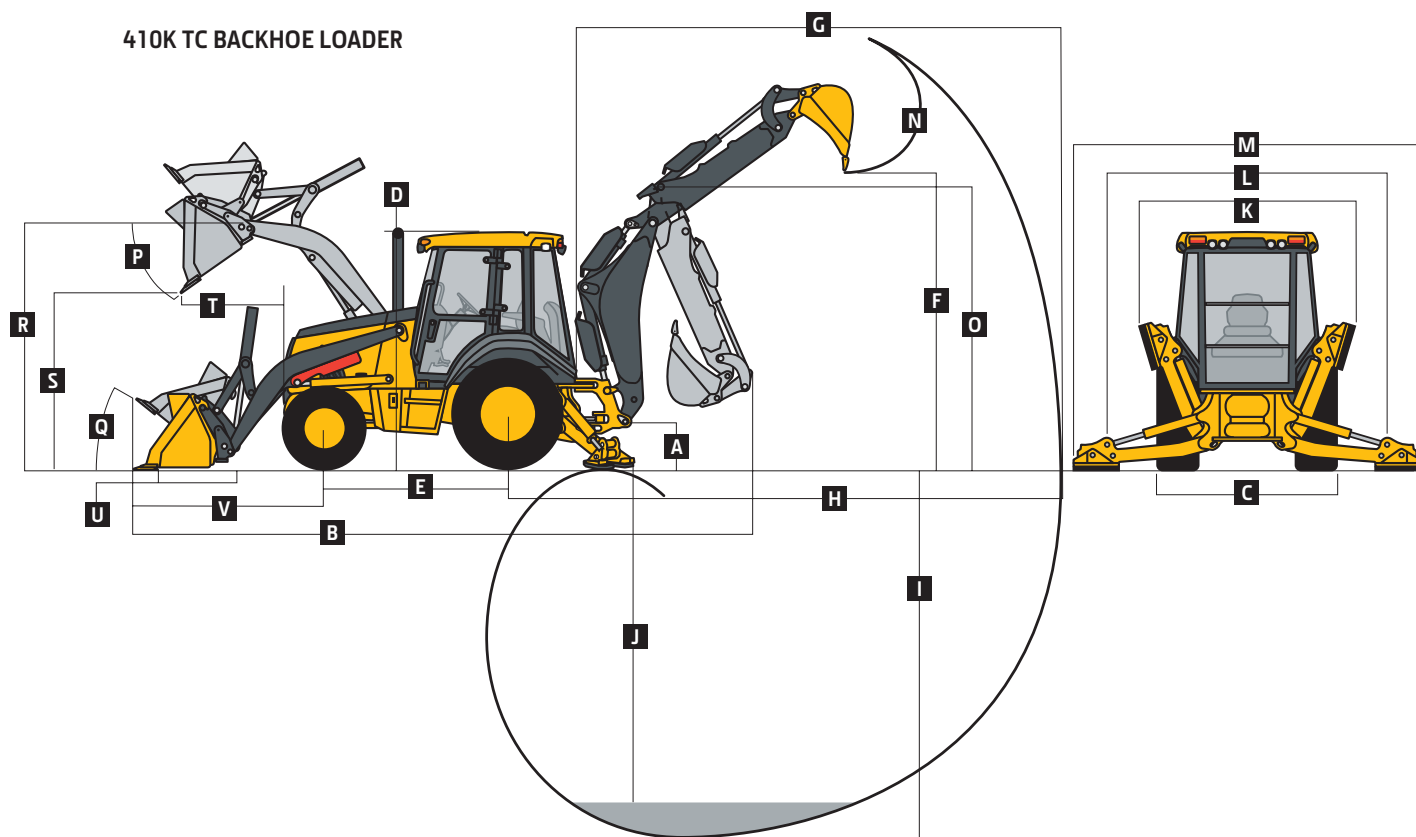
Hydraulics <i>(continued)</i>	410K			410K TC		
Controls <i>(continued)</i>						
Loader	Single-lever control with electric clutch cutoff switch; with auxiliary hydraulics – single-lever control with electric clutch cutoff switch, MFWD (on/off/momentary), and integrated EH proportional control of auxiliary hydraulics			TMC EH controls with auxiliary functions standard		
Cylinders						
Type	Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins					
	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>
Loader Boom (2)	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)	90 mm (3.54 in.)	50 mm (1.97 in.)	672.9 mm (26.49 in.)
Loader Bucket (1)	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)	100 mm (3.94 in.)	56 mm (2.20 in.)	729.8 mm (28.73 in.)
Backhoe Boom (1)	125 mm (4.92 in.)	63 mm (2.48 in.)	897 mm (35.31 in.)	125 mm (4.92 in.)	63 mm (2.48 in.)	897 mm (35.31 in.)
Backhoe Crowd (1)	115 mm (4.53 in.)	63 mm (2.48 in.)	698 mm (27.49 in.)	115 mm (4.53 in.)	63 mm (2.48 in.)	698.2 mm (27.49 in.)
Backhoe Bucket (1)	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
Backhoe Swing (2)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
Backhoe Extendable Dipperstick (1)	70 mm (2.76 in.)	40 mm (1.57 in.)	1214 mm (47.78 in.)	70 mm (2.76 in.)	40 mm (1.57 in.)	1214 mm (47.78 in.)
Backhoe Stabilizer, Standard (2)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
Non-Powered Axle (1)	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)
MFWD (1)	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)
Electrical						
Voltage	12 volt			12 volt		
Alternator Rating	120 amp			200 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					
Operator Station						
Type (SAE J1040)	410K / 410K TC Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof					
Tires/Wheels						
	410K			410K TC		
	<i>Front</i>	<i>Rear</i>		<i>Front</i>	<i>Rear</i>	
Non-Powered Front Axle	14.5/75-16.1 SL F-3 (10)	21L-24 R-4 (10)		—	—	
MFWD	12.5/80-18 I-3 (14)	19.5L-24 R-4 (10)		12.5/80-18 I-3 (14)	19.5L-24 R-4 (10)	
	12.5/80-18 I-3 (14)	21L-24 R-4 (10)		12.5/80-18 I-3 (14)	21L-24 R-4 (10)	
	12.5/80-18 I-3 (12)	21L-24 R-4 (12)		12.5/80-18 I-3 (12)	21L-24 R-4 (12)	
	340/80R18 XMCL	500/70R24 XMCL		340/80R18 XMCL	500/70R24 XMCL	
Serviceability						
Hydraulic Oil Filter, Spin-On Enclosed Replaceable Element	410K / 410K TC 6-micron filtration; 1,000 break-in/service hours					
Refill Capacities						
Cooling System	32.9 L (34.8 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)	155.2 L (41 gal.)					
Hydraulic System	93.1 L (24.6 gal.)					
Hydraulic Reservoir	37.1 L (9.8 gal.)					
MFWD Housing						
Axle	6.5 L (6.9 qt.)					
Planetary (each)	0.9 L (1 qt.)					
Operating Weights						
	410K			410K TC		
With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	7435 kg (16,391 lb.)			—		
Typical with Cab, MFWD, Extendable Dipperstick, and 454-kg (1,000 lb.) Counterweight	8646 kg (19,061 lb.)			—		
With Cab, MFWD, Extendable Dipperstick, and 567-kg (1,250 lb.) Counterweight	—			9296 kg (20,494 lb.)		
Optional Components (weight difference between base equipment and option)						
Cab	263 kg (580 lb.)			In base		
MFWD with Tires	220 kg (485 lb.)			In base		
Extendable Dipperstick	289 kg (638 lb.)			In base		
Front Loader Coupler	286 kg (630 lb.)			In base		
Backhoe Bucket Coupler	63 kg (138 lb.)			63 kg (138 lb.)		

Overall Dimensions	410K	410K TC
A Ground Clearance, Minimum	356 mm (14 in.)	356 mm (14 in.)
B Overall Length, Transport	7.29 m (23 ft. 11 in.)	7.46 m (24 ft. 6 in.)
C Width Over Tires	2.18 m (7 ft. 2 in.)	2.18 m (7 ft. 2 in.)
D Height to Top of ROPS/Cab	2.82 m (9 ft. 3 in.)	2.82 m (9 ft. 3 in.)
E Length from Axle to Axle		
Non-Powered Front Axle	2.11 m (6 ft. 11 in.)	—
MFWD Axle	2.14 m (7 ft. 0 in.)	2.14 m (7 ft. 0 in.)

410K BACKHOE LOADER



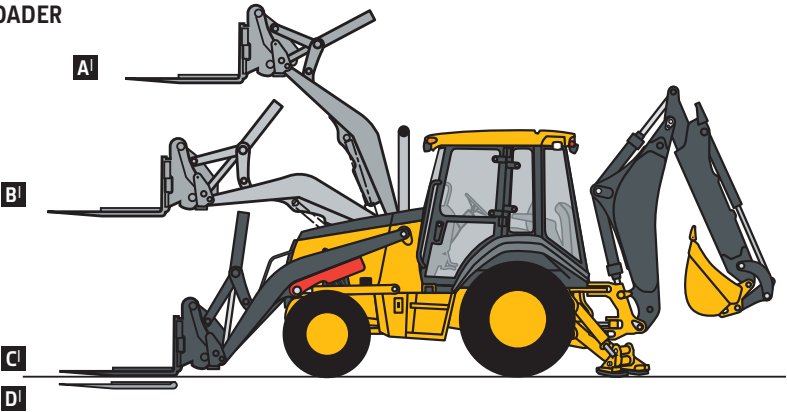
410K TC BACKHOE LOADER



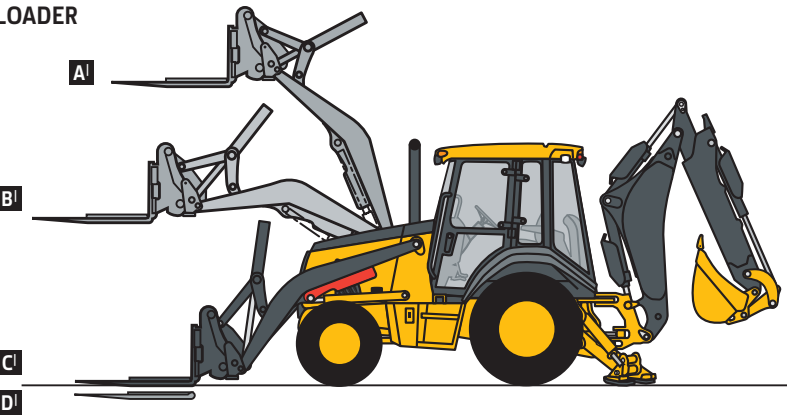
Backhoe Dimensions/Performance		410K		410K TC		
Backhoe specifications are with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) bucket						
Bucket Range		305–762 mm (12–30 in.)		305–762 mm (12–30 in.)		
Digging Force						
Bucket Cylinder		67.7 kN (15,230 lb.)		68.6 kN (15,430 lb.)		
Crowd Cylinder		38.9 kN (8,741 lb.)		38.9 kN (8,741 lb.)		
Swing Arc		180 deg.		180 deg.		
Operator Control		2 levers		2 joysticks		
		With Optional Extendable Dipperstick		With Extendable Dipperstick		
		With Standard Backhoe	Retracted	Extended	Retracted	Extended
F	Loading Height, Truck Loading Position	3.81 m (12 ft. 6 in.)	3.86 m (12 ft. 8 in.)	4.72 m (15 ft. 6 in.)	3.86 m (12 ft. 8 in.)	4.72 m (15 ft. 6 in.)
G	Reach from Center of Swing Pivot	5.99 m (19 ft. 8 in.)	6.07 m (19 ft. 11 in.)	7.21 m (23 ft. 8 in.)	6.07 m (19 ft. 11 in.)	7.21 m (23 ft. 8 in.)
H	Reach from Center of Rear Axle	7.11 m (23 ft. 4 in.)	7.19 m (23 ft. 7 in.)	8.33 m (27 ft. 4 in.)	7.19 m (23 ft. 7 in.)	8.33 m (27 ft. 4 in.)
I	Digging Depth (SAE maximum)	4.83 m (15 ft. 10 in.)	4.90 m (16 ft. 1 in.)	6.10 m (20 ft. 0 in.)	4.90 m (16 ft. 1 in.)	6.10 m (20 ft. 0 in.)
J	Digging Depth (SAE)					
	610-mm (2 ft.) Flat Bottom	4.78 m (15 ft. 8 in.)	4.85 m (15 ft. 11 in.)	6.07 m (19 ft. 11 in.)	4.85 m (15 ft. 11 in.)	6.07 m (19 ft. 11 in.)
	2440-mm (8 ft.) Flat Bottom	4.45 m (14 ft. 7 in.)	4.55 m (14 ft. 11 in.)	5.82 m (19 ft. 1 in.)	4.55 m (14 ft. 11 in.)	5.82 m (19 ft. 1 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.)	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.)	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.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
N	Bucket Rotation	190 deg.	190 deg.	190 deg.	190 deg.	190 deg.
O	Transport Height	3.94 m (12 ft. 11 in.)	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)
Loader Dimensions/Performance						
P	Bucket Dump Angle, Maximum	45 deg.		45 deg.		
Q	Rollback Angle at Ground Level	40 deg.		40 deg.		
		Standard Loader Option			Tool-Carrier Loader Option	
		Heavy-duty	Heavy-duty	Multipurpose	Heavy-duty	Multipurpose
Bucket Capacity		1.00 m³ (1.31 cu. yd.)	1.15 m³ (1.50 cu. yd.)	1.00 m³ (1.31 cu. yd.)	1.15 m³ (1.50 cu. yd.)	1.00 m³ (1.31 cu. yd.)
Width		2337 mm (92 in.)	2388 mm (94 in.)	2337 mm (92 in.)	2388 mm (94 in.)	2337 mm (92 in.)
Weight		521 kg (1,148 lb.)	548 kg (1,208 lb.)	816 kg (1,800 lb.)	519 kg (1,145 lb.)	788 kg (1,737 lb.)
Breakout Force		45.8 kN (10,300 lb.)	45.2 kN (10,170 lb.)	42.9 kN (9,650 lb.)	47.3 kN (10,640 lb.)	43.1 kN (9,680 lb.)
Lift Capacity, Full Height		3266 kg (7,200 lb.)	3207 kg (7,070 lb.)	2994 kg (6,600 lb.)	3091 kg (6,815 lb.)	2654 kg (5,850 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)	3.40 m (11 ft. 2 in.)
S	Dump Clearance, Bucket at 45 deg.	2.69 m (8 ft. 10 in.)	2.67 m (8 ft. 9 in.)	2.62 m (8 ft. 7 in.)	2.57 m (8 ft. 5 in.)	2.50 m (8 ft. 2 in.)
T	Reach at Full Height, Bucket at 45 deg.	762 mm (30.0 in.)	787 mm (31.0 in.)	818 mm (32.2 in.)	787 mm (31.0 in.)	836 mm (32.9 in.)
U	Digging Depth Below Ground, Bucket Level	170 mm (6.7 in.)	157 mm (6.2 in.)	182 mm (7.2 in.)	140 mm (5.5 in.)	152 mm (6.0 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.03 m (6 ft. 8 in.)	2.03 m (6 ft. 8 in.)	2.15 m (7 ft. 1 in.)	2.15 m (7 ft. 1 in.)	2.27 m (7 ft. 5 in.)

Lift Capacity with Quick-Coupler/Forks	410K		410K TC	
Hydraulic Capacity	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines
A ¹ Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)	2211 kg (4,875 lb.)	2053 kg (4,526 lb.)
B ¹ Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)	3438 kg (7,580 lb.)	3294 kg (7,261 lb.)
C ¹ At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)	4400 kg (9,700 lb.)	4180 kg (9,215 lb.)
D ¹ Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)	211 mm (8.3 in.)	211 mm (8.3 in.)

410K BACKHOE LOADER

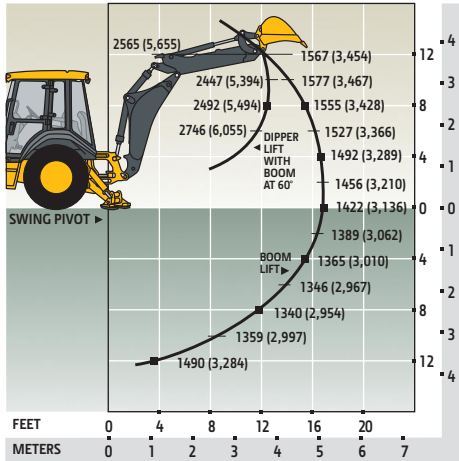


410K TC BACKHOE LOADER

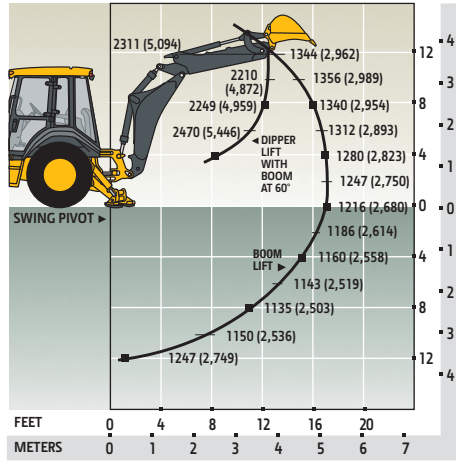


Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Base vehicle includes counterweight.

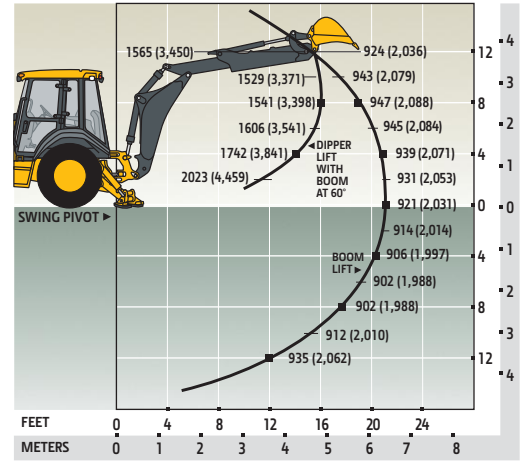
410K Backhoe with Standard Dipperstick



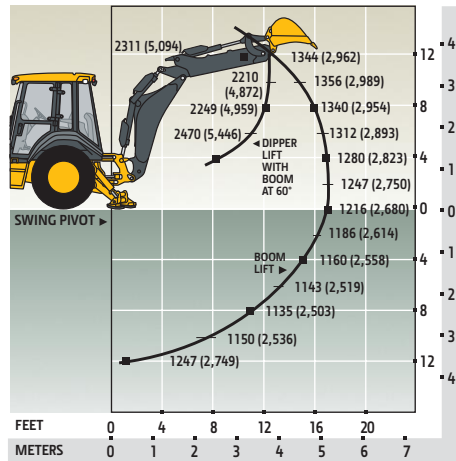
410K Backhoe with 1.22-m (4 ft.)
Extendable Dipperstick, Retracted



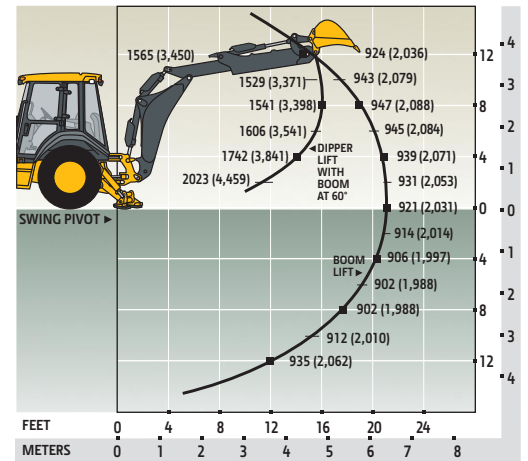
410K Backhoe with 1.22-m (4 ft.)
Extendable Dipperstick, Extended



410K TC Backhoe with 1.22-m (4 ft.)
Extendable Dipperstick, Retracted



410K TC Backhoe with 1.22-m (4 ft.)
Extendable Dipperstick, Extended



710K



Engine		710K	
Manufacturer and Model		John Deere PowerTech™ Plus 6068HT079 turbocharged, standard	
Non-Road Emissions Standard		EPA Interim Tier 4/EU Stage IIIB	
Displacement		6.8 L (414 cu. in.)	
Net Peak Power (ISO 9249)		97 kW (130 hp) at 2,000 rpm	
Net Peak Torque (ISO 9249)		550 Nm (405 lb.-ft.) at 1,300 rpm	
Net Torque Rise		32%	
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	
Torque Converter		Single stage, dual phase with 1.95:1 stall ratio, 280 mm (11 in.)	
Maximum Travel Speeds with Standard Engine with Mechanical-Front-Wheel Drive (MFWD), Measured with 21L-28 Rear Tires		Forward	Reverse
Gear 1		6.0 km/h (3.7 mph)	6.7 km/h (4.2 mph)
Gear 2		10.0 km/h (6.2 mph)	11.1 km/h (6.9 mph)
Gear 3		23.9 km/h (14.8 mph)	26.5 km/h (16.5 mph)
Gear 4		35.2 km/h (21.8 mph)	—
Axles			
Axle Oscillation, Stop to Stop, Front Axle		22 deg.	
Axle Ratings		Non-Powered Front	MFWD
Static		22 950 kg (50,596 lb.)	18 500 kg (40,786 lb.)
Dynamic		9200 kg (20,283 lb.)	7700 kg (16,976 lb.)
Ultimate		41 000 kg (90,390 lb.)	43 600 kg (96,122 lb.)
Differentials		Rear	
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		Non-Powered Front	MFWD
Curb-Turning Radius			
With Brakes		4.04 m (13 ft. 3 in.)	4.20 m (13 ft. 9 in.)
Without Brakes		4.62 m (15 ft. 2 in.)	4.79 m (15 ft. 9 in.)
Bucket Clearance Circle			
With Brakes		11.16 m (36 ft. 7 in.)	11.40 m (37 ft. 5 in.)
Without Brakes		12.14 m (39 ft. 10 in.)	12.47 m (40 ft. 11 in.)
Steering Wheel Turns (lock to lock, flow amplified)		2.9 to 4.7	2.7 to 4.4
Final Drive			
Mechanical-Front Wheel		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		Full power, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing	
Parking		Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control	
Hydraulics			
Main Pump		Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm, Backhoe and Loader		197 L/m (52 gpm)	
System Relief Pressure, Backhoe and Loader		24 993 kPa (3,625 psi)	

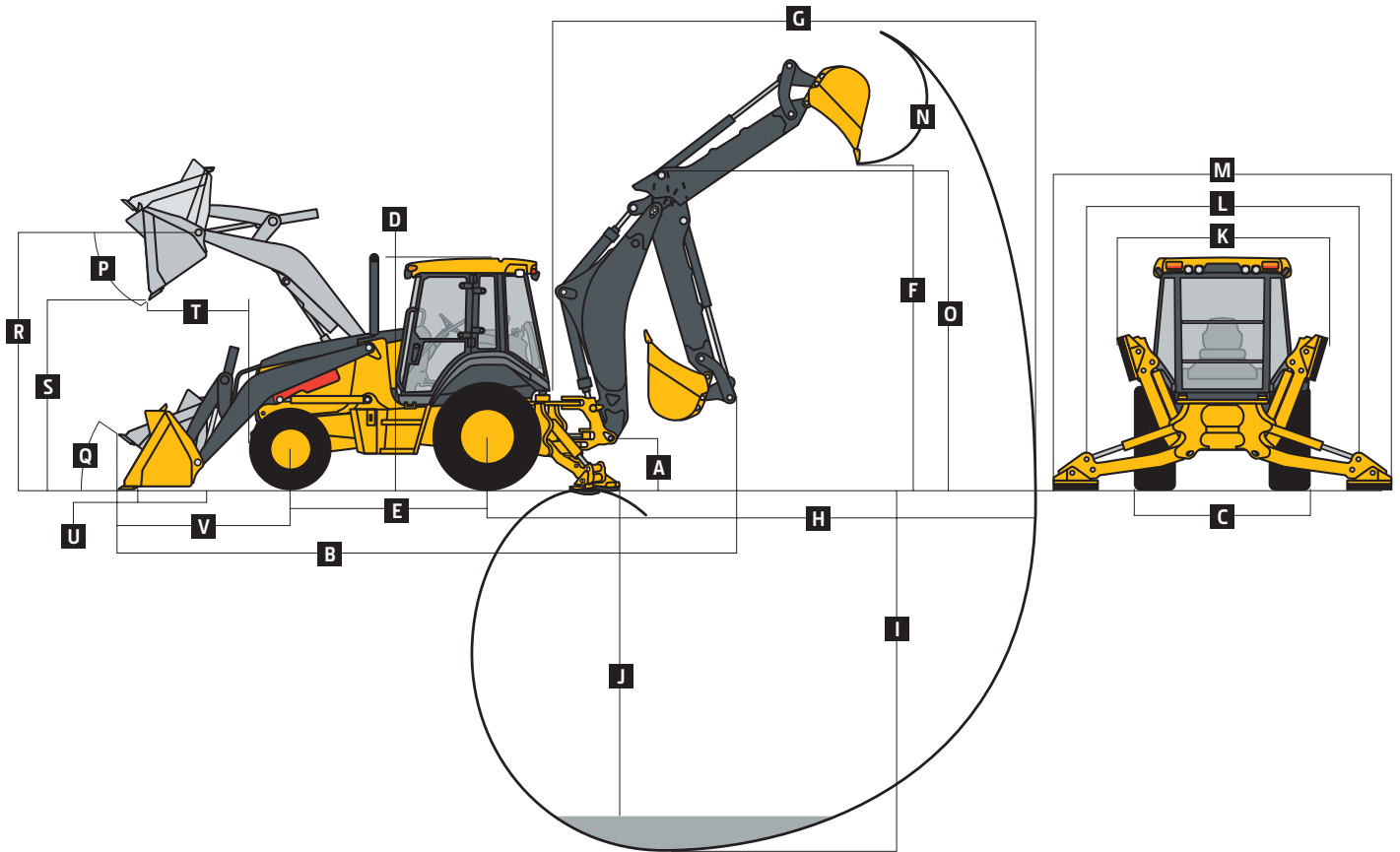


Hydraulics (continued)		710K	
Controls			
Backhoe	Pilot controls with pattern select standard; 2-lever manual, 3-lever manual controls with foot swing, and manual and/or electric auxiliary functions optional		
Loader	Single-lever control with electric clutch cutoff switch; with auxiliary hydraulics – single-lever control with electric clutch cutoff switch, MFWD (on/off/momentary), and integrated electrohydraulic (EH) proportional control of auxiliary hydraulics		
Cylinders			
Type	Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins		
	Bore	Rod Diameter	Stroke
Loader Boom (2)	100 mm (3.94 in.)	56 mm (2.20 in.)	805 mm (31.69 in.)
Loader Bucket (1)	110 mm (4.33 in.)	56 mm (2.20 in.)	672 mm (26.44 in.)
Backhoe Boom (1)	160 mm (6.30 in.)	95 mm (3.74 in.)	944 mm (37.17 in.)
Backhoe Crowd (1)	140 mm (5.51 in.)	85 mm (3.35 in.)	792 mm (31.16 in.)
Backhoe Bucket (1)	110 mm (4.33 in.)	70 mm (2.76 in.)	939 mm (36.97 in.)
Backhoe Swing (2)	110 mm (4.33 in.)	56 mm (2.20 in.)	308 mm (12.13 in.)
Backhoe Extendable Dipperstick (1)	80 mm (3.15 in.)	45 mm (1.77 in.)	1372 mm (54.00 in.)
Backhoe Stabilizer, Standard (2)	115 mm (4.53 in.)	63 mm (2.48 in.)	588 mm (23.15 in.)
Non-Powered Axle (1)	75 mm (2.95 in.)	45 mm (1.77 in.)	230 mm (9.06 in.)
MFWD (1)	75 mm (2.95 in.)	50 mm (1.97 in.)	260 mm (10.24 in.)
Electrical			
Voltage	12 volt		
Alternator Rating	120 amp		
Lights	10 halogen: 4 front, 4 rear, and 2 side docking (32,500 candlepower each); turn signals and flashers: 2 front and 2 rear; stop and taillights; and 2 rear reflectors		
Operator Station			
Type (ISO 3471)	Canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof		
Tires/Wheels			
	Front	Rear	
Non-Powered Front Axle	14.5/75-16.1 F-3 (10)	21L-28 R-4 (14)	
	16.5L-16.1 I-1 (10)	21L-28 R-4 (14)	
MFWD	15-19.5 SS-1 (12)	21L-28 R-4 (14)	
	15-19.5 SS-1 (12)	20.5-25 L-2 (12)	
Serviceability			
Hydraulic Oil Filter, Spin-On Enclosed Replaceable Element	6-micron filtration; 1,000 break-in/service hours		
Refill Capacities			
Cooling System	33.9 L (35.8 qt.)		
Rear Axle	16.1 L (17 qt.)		
Engine Oil (including vertical spin-on filter)	19.5 L (20.6 qt.)		
Torque Converter and Transmission	15.1 L (16 qt.)		
Fuel Tank (with ground-level fueling)	261.2 L (69 gal.)		
Hydraulic System	149.9 L (39.6 gal.)		
Hydraulic Reservoir	45.4 L (12 gal.)		
MFWD Housing			
Axle	9 L (9.5 qt.)		
Planetary (each)	0.8 L (0.9 qt.)		
Operating Weights			
With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	10 796 kg (23,802 lb.)		
Typical with Cab, MFWD, Extendable Dipperstick, and 635-kg (1,400 lb.) Counterweight	12 132 kg (26,747 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.)		

Overall Dimensions

710K

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. 6 in.)
MFWD Axle	2.55 m (8 ft. 4 in.)



Backhoe Dimensions/Performance

710K

Backhoe specifications are with 610-mm x 0.31-m³ (24 in. x 11.1 cu. ft.) bucket

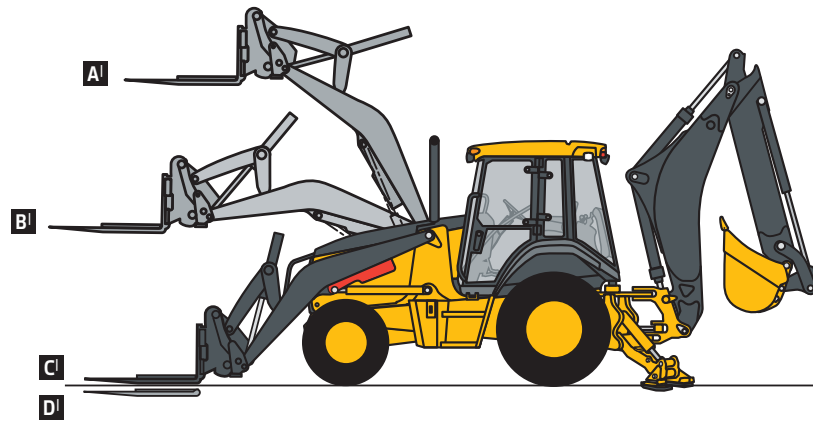
Bucket Range	610–914 mm (24–36 in.)
Digging Force	
Bucket Cylinder	75.6 kN (17,000 lb.)
Crowd Cylinder	52.3 kN (11,750 lb.)
Swing Arc	180 deg.
Operator Control	Pilot control

With Optional Extendable Dipperstick

	With Standard Backhoe	Retracted	Extended
F Loading Height, Truck Loading Position	4.34 m (14 ft. 3 in.)	4.34 m (14 ft. 3 in.)	5.18 m (17 ft. 0 in.)
G Reach from Center of Swing Pivot	6.86 m (22 ft. 6 in.)	6.86 m (22 ft. 6 in.)	8.19 m (26 ft. 10 in.)
H Reach from Center of Rear Axle	8.13 m (26 ft. 8 in.)	8.13 m (26 ft. 8 in.)	9.46 m (31 ft. 0 in.)
I Digging Depth (SAE maximum)	5.44 m (17 ft. 10 in.)	5.44 m (17 ft. 10 in.)	6.81 m (22 ft. 4 in.)
J Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom	5.41 m (17 ft. 9 in.)	5.41 m (17 ft. 9 in.)	6.83 m (22 ft. 5 in.)
2440-mm (8 ft.) Flat Bottom	5.18 m (17 ft. 0 in.)	5.18 m (17 ft. 0 in.)	6.58 m (21 ft. 7 in.)
K Stabilizer Width, Transport	2.41 m (7 ft. 11 in.)	2.41 m (7 ft. 11 in.)	2.41 m (7 ft. 11 in.)
L Stabilizer Spread, Operating	3.99 m (13 ft. 1 in.)	3.99 m (13 ft. 1 in.)	3.99 m (13 ft. 1 in.)
M Stabilizer Overall Width, Operating	4.65 m (15 ft. 3 in.)	4.65 m (15 ft. 3 in.)	4.65 m (15 ft. 3 in.)
N Bucket Rotation	190 deg.	190 deg.	190 deg.
O Transport Height	4.17 m (13 ft. 8 in.)	4.22 m (13 ft. 10 in.)	4.22 m (13 ft. 10 in.)

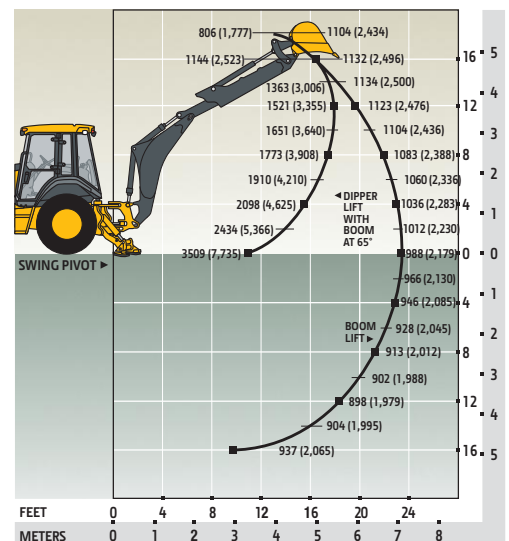
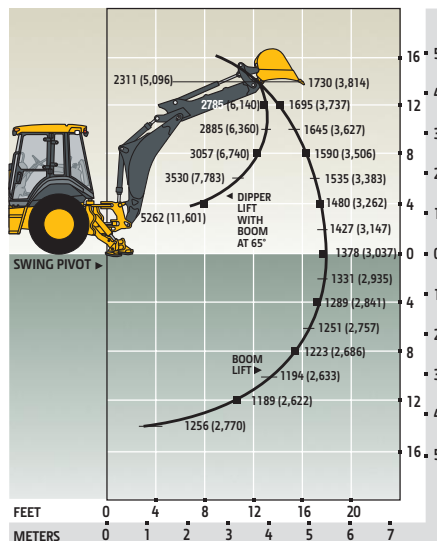
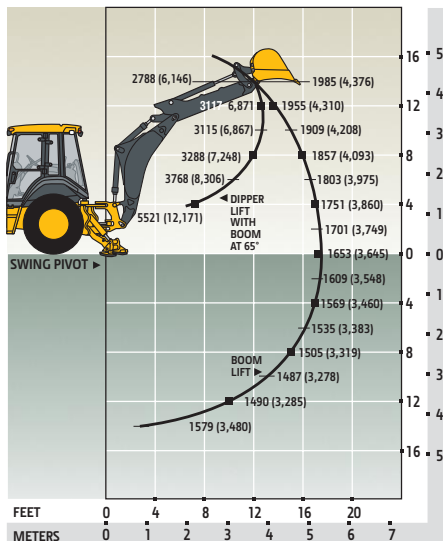
Loader Dimensions/Performance		710K			
P	Bucket Dump Angle, Maximum	45 deg.			
Q	Rollback Angle at Ground Level	40 deg.			
		<i>Standard duty</i>	<i>Standard duty</i>	<i>Multipurpose</i>	<i>Standard duty</i>
Bucket Capacity		1.24 m ³ (1.62 cu. yd.)	1.43 m ³ (1.87 cu. yd.)	1.05 m ³ (1.38 cu. yd.)	1.53 m ³ (2.00 cu. yd.)
Width		2464 mm (97 in.)	2464 mm (97 in.)	2451 mm (96.5 in.)	2545 mm (100 in.)
Weight		830 kg (1,830 lb.)	866 kg (1,909 lb.)	969 kg (2,136 lb.)	1260 kg (2,778 lb.)
Breakout Force		69.1 kN (15,540 lb.)	65.8 kN (14,800 lb.)	69.8 kN (15,690 lb.)	72.6 kN (16,312 lb.)
Lift Capacity, Full Height		4208 kg (9,277 lb.)	3943 kg (8,693 lb.)	3961 kg (8,732 lb.)	3139 kg (6,920 lb.)
R	Height to Bucket Hinge Pin, Maximum	3.78 m (12 ft. 5 in.)	3.78 m (12 ft. 5 in.)	3.78 m (12 ft. 5 in.)	3.78 m (12 ft. 5 in.)
S	Dump Clearance, Bucket at 45 deg.	2.92 m (9 ft. 7 in.)	2.84 m (9 ft. 4 in.)	2.95 m (9 ft. 8 in.)	2.56 m (8 ft. 5 in.)
T	Reach at Full Height, Bucket at 45 deg.	691 mm (27.2 in.)	770 mm (30.3 in.)	683 mm (26.9 in.)	976 mm (38.4 in.)
U	Digging Depth Below Ground, Bucket Level	104 mm (4.1 in.)	104 mm (4.1 in.)	81 mm (3.2 in.)	183 mm (7.2 in.)
V	Length from Front Axle Centerline to Bucket Cutting Edge	2.10 m (6 ft. 11 in.)	2.21 m (7 ft. 3 in.)	2.06 m (6 ft. 9 in.)	2.61 m (8 ft. 7 in.)

Lift Capacity with Quick-Coupler/Forks		1219-mm (48 in.) Tines			
Hydraulic Capacity		2632 kg (5,803 lb.)			
A¹	Maximum Height	2632 kg (5,803 lb.)			
B¹	Maximum Reach	4378 kg (9,651 lb.)			
C¹	At Ground Line	6057 kg (13,353 lb.)			
D¹	Below Ground Line	140 mm (5.5 in.)			



Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Base vehicle includes counterweight.

710K Backhoe with Standard Dipperstick **710K Backhoe with 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Retracted** **710K Backhoe with 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Extended**



Additional equipment: 310K EP / 310K

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

310K EP	310K	Engine
●	●	Meets EPA Interim Tier 4/EU Stage IIIB emissions
●	●	John Deere Model 4045HT072 — 4.5L, 52 kW (70 hp) net peak power, turbocharged, isolation mounted
	●	John Deere Model 4045HT073 — 4.5L, 66 kW (88 hp) net peak power, turbocharged, isolation mounted
●	●	Vertical spin-on engine oil filter
●	●	Vertical spin-on fuel filter with water separator
●	●	Oil-to-water engine oil cooler
●	●	Antifreeze, -40 deg. C (-40 deg. F)
●	●	Coolant recovery tank
	●	Coolant recovery tank with low-level indicator
●	●	Foldout, hinged cooling system
●	●	Serpentine belt with automatic belt tensioner
●	●	Suction-type cooling fan
	●	Electronically controlled, variable-rate suction-type cooling fan
●	●	High ambient temperature engine cooling
●	●	Dual-element dry-type air cleaner
	●	Self-cleaning exhaust aftertreatment system
●	●	Muffler, under hood, with curved-end exhaust stack
	●	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)
●	●	Transmission oil cooler
●	●	Vertical spin-on transmission filter
▲	▲	Transmission remote oil-sampling port
●	●	Differential lock, electric foot actuated, protection on/off
●	●	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
▲	▲	Rear wheel spacers for use with chains
▲	▲	MFWD driveshaft guard
Backhoe		
●	●	Standard dipperstick, 4.34-m (14 ft. 3 in.) digging depth
▲	▲	Extendable dipperstick, 1.07-m (3 ft. 6 in.) extension
●	●	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
●	●	Pivoting stabilizers with reversible pads
●	●	Less bucket, with bucket pins
▲	▲	Standard-duty backhoe bucket with lift loops
▲	▲	Heavy-duty backhoe bucket with lift loops

310K EP	310K	Backhoe (continued)
▲	▲	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
Loader¹		
●	●	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
▲	▲	Hydraulic coupler for buckets, forks, etc.
●	●	Less bucket, with bucket pins
●	●	High-visibility loader arms
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
●	●	Economy mode
●	●	Dedicated hydraulic reservoir
●	●	"O"-ring face-seal connectors
●	●	6-micron vertical spin-on filter
Electrical System		
●	●	12-volt system
●	●	90-amp alternator
	●	120-amp alternator
●	●	Single battery with 190-min. reserve capacity and 950 CCA
▲	▲	Dual batteries with 380-min. reserve capacity and 1,900 CCA
●	●	Positive terminal battery cover
●	●	Blade-type multi-fused circuits
●	●	By-pass start safety cover on starter
▲	▲	Master disconnect switch
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)
●	●	Rear reflectors (2)
Operator's Station		
●	●	Modular-design ROPS/FOPS (Level 2) canopy with molded roof (meets ISO 3449 and ISO 3471/SAE J1040): Isolation mounted
●	●	Left and right access
●	●	Slip-resistant steps and ergonomically located handholds (conform to SAE J185)
●	●	Molded floor mats (with pilot controls only)
▲	▲	Headliner (with cab only)
●	●	Coat hook
●	●	12-volt outlets (2)
●	●	Built-in cup holder
●	●	Built-in Operator's Manual storage compartment
●	●	Lockable right-side storage
▲	▲	Lockable left-hand storage with cup holders
●	●	Interior rearview mirror
▲	▲	Interior front-view mirror
▲	▲	Outside rearview mirrors
●	●	Rotary-dial hand throttle
●	●	Suspended foot throttle
●	●	Horn

310K EP	310K	Operator's Station (continued)
	▲	Air-suspension seat
●	●	Seat belt, 76-mm (3 in.), with retractor
●	●	Key start switch with electric fuel shutoff
▲	▲	Machine security
●	●	Engine coolant temperature gauge
●	●	Fuel gauge
●	●	Digital display of engine hours, engine rpm, and system voltage
●	●	Monitor system with audible and visual warnings: Engine air restriction / Low alternator voltage / Engine oil pressure / Hydraulic filter restriction / Parking brake on/off / Aftertreatment temperature / Transmission oil temperature / Fuel / Hour meter / Machine diagnostic information via 4-push-button/LCD operator interface
●	●	Canopy: Mechanical suspension deluxe vinyl swivel seat with lumbar adjustment and armrests (fully adjustable)
▲	▲	Quarter Cab: Mechanical suspension deluxe vinyl swivel seat with lumbar adjustment and armrests (fully adjustable), front windshield, and windshield wiper (1 front)
▲	▲	Cab with Dual Doors and Air Conditioning: Mechanical suspension deluxe fabric swivel seat with lumbar adjustment / Air conditioner (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant), and windshield wipers (1 rear and 1 front)
▲	▲	Cab with Dual Doors: Mechanical suspension deluxe fabric swivel seat with lumbar adjustment / Tilt steering, infinitely adjustable / AM/FM/weather-band radio / Sun visor / 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)
▲	▲	Ultimate Cab: Mechanical-suspension deluxe fabric swivel seat with lumbar adjustment / Tilt steering, infinitely adjustable / AM/FM/weather-band radio with CD player / Sun visor / 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) / Air conditioner (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant)
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
▲	▲	204-kg (450 lb.) front counterweight
▲	▲	340-kg (750 lb.) front counterweight
▲	▲	454-kg (1,000 lb.) front counterweight
▲	▲	567-kg (1,250 lb.) front counterweight
▲	▲	Rubber grille bumpers
●	●	Fuel tank, 155.2 L (41 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
●	●	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)

¹See 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 310K and up to 3050-m (10,000 ft.) for the 310K with optional altitude-compensating turbocharger. 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 310K EP and 310K units with 19.5L-24-in. 10PR (R4) tubeless rear and 11L-16-in. 12PR (F3) front tires, 0.77-m³ (1.00 cu. yd.) loader buckets, and 610-mm x 0.18-m³ (24 in. x 6.5 cu. ft.) backhoe buckets.

310SK / 410K

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

310SK	410K	Engine
●	●	Meets EPA Interim Tier 4/EU Stage IIIB emissions
●		John Deere Model 4045HT073 — 4.5L, 72 kW (97 hp) net peak power, turbocharged, isolation mounted
	●	John Deere Model 4045HT063 — 4.5L, 80 kW (107 hp) net peak power, turbocharged, isolation mounted
●	●	Vertical spin-on engine oil filter
●	●	Vertical spin-on fuel filter with water separator
●	●	Oil-to-water engine oil cooler
●	●	Antifreeze, -40 deg. C (-40 deg. F)
●	●	Coolant recovery tank with low-level indicator
●	●	Foldout, hinged cooling system
●	●	Serpentine belt with automatic belt tensioner
●	●	Electronically controlled, variable-rate suction-type cooling fan
●	●	High ambient temperature engine cooling
●	●	Dual-element dry-type air cleaner
●	●	Self-cleaning exhaust aftertreatment system
●	●	Muffler, under hood, with curved-end exhaust stack
▲	▲	Chrome exhaust extension
●	●	Glow plugs
▲	▲	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 5th gears)
●	●	5th-gear overdrive
▲	▲	Autoshift transmission
●	●	Transmission oil cooler
●	●	Vertical spin-on transmission filter
▲	▲	Transmission remote oil-sampling port
●	●	Differential lock, electric foot actuated, protection on/off
●	●	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 traction-control limited-slip differential: Electric on/off control / Sealed axle
●	●	Automatic MFWD braking (4th and 5th gear over-drive only)
▲	▲	Rear wheel spacers for use with chains
▲	▲	MFWD driveshaft guard
Backhoe		
●		Standard dipperstick, 4.42-m (14 ft. 6 in.) digging depth
	●	Standard dipperstick, 4.83-m (15 ft. 10 in.) digging depth
▲		Extendable dipperstick, 1.07-m (3 ft. 6 in.) extension
	▲	Extendable dipperstick, 1.22-m (4 ft.) 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

310SK	410K	Backhoe (continued)
●	●	Pivoting stabilizers with reversible pads
▲		Extended (long) stabilizers with reversible pads
●	●	Less bucket, with bucket pins
▲	▲	Standard-duty backhoe bucket with lift loops
▲	▲	Heavy-duty backhoe bucket with lift loops
▲	▲	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 single control lever with EH auxiliary control (MFWD and clutch disconnect)
▲	▲	Hydraulic coupler for buckets, forks, etc.
●	●	Less bucket, with bucket pins
●	●	High-visibility loader arms
Hydraulic System		
●		136-L/m (36 gpm) tandem-gear pump with unloader, open-center system
	●	159-L/m (42 gpm) axial-piston pump, PCLS system
●	●	Auto idle
●	●	Economy mode
●	●	Dedicated hydraulic reservoir
●	●	"O"-ring face-seal connectors
●	●	6-micron vertical spin-on filter
Electrical System		
●	●	12-volt system
●	●	120-amp alternator
●	●	Single battery with 190-min. reserve capacity and 950 CCA
▲	▲	Dual batteries with 380-min. reserve capacity and 1,900 CCA
●	●	Positive terminal battery cover
●	●	Blade-type multi-fused circuits
●	●	By-pass start safety cover on starter
▲	▲	Master disconnect switch
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)
●	●	Rear reflectors (2)
Operator's Station		
●	●	Modular-design ROPS/FOPS (Level 2) canopy with molded roof (meets ISO 3449 and ISO 3471/SAE J1040): Isolation mounted
●	●	Left and right access
●	●	Slip-resistant steps and ergonomically located handholds (conform to SAE J185)
●	●	Molded floor mats (with pilot controls only)
▲	▲	Headliner (with cab only)
●	●	Coat hook
●	●	12-volt outlets (2)
●	●	Built-in cup holder
●	●	Built-in Operator's Manual storage compartment
●	●	Lockable right-side storage

310SK	410K	Operator's Station (continued)
▲	▲	Lockable left-hand storage with cup holders
●	●	Interior rearview mirror
▲	▲	Interior front-view mirror
▲	▲	Outside rearview mirrors
●	●	Rotary-dial hand throttle
●	●	Suspended foot throttle
●	●	Horn
●	●	Seat belt, 76-mm (3 in.), with retractor
●	●	Keyless start
●	●	Machine security
●	●	Engine coolant temperature gauge
●	●	Transmission oil-temperature gauge
●	●	Fuel gauge
●	●	Digital display of engine hours, engine rpm, and system voltage
●	●	Sealed-switch module
●	●	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 oil 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)
▲	▲	Cab with Dual Doors: Mechanical suspension deluxe fabric swivel seat with lumbar adjustment / Tilt steering, infinitely adjustable / AM/FM/weather-band radio / Sun visor / 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)
▲	▲	Ultimate Cab: Air-suspension deluxe fabric swivel seat with lumbar adjustment / Tilt steering, infinitely adjustable / AM/FM/weather-band radio with CD player / Sun visor / 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) / Air conditioner (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant)
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
▲	▲	204-kg (450 lb.) front counterweight
▲	▲	340-kg (750 lb.) front counterweight
▲	▲	454-kg (1,000 lb.) front counterweight
▲	▲	567-kg (1,250 lb.) front counterweight
▲	▲	Rubber grille bumpers
●	●	Fuel tank, 155.2 L (41 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
●	●	Reverse warning alarm
●	●	Dent-resistant full-cover rear fenders
▲	▲	Backhoe boom-protection plate
●	●	JDLINK™ Ultimate wireless communication system (available in specific countries; see your dealer for details)

*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 3050-m (10,000 ft.) altitude. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on 310SK and 410K units with 610-mm x 0.21-m³ (24 in. x 7.5 cu. ft.) backhoe buckets; a 310SK unit with 19.5L-24-in. 10PR (R4) tubeless rear and 11L-16-in. 12PR (F3) front tires and 0.86-m³ (1.12 cu. yd.) loader bucket; and a 410K unit with 21L-24-in. 10PR (R4) tubeless rear and 14.5/75-16.1-in. 10PR (F3) front tires and 1.00-m³ (1.31 cu. yd.) loader bucket.

Additional equipment: 310SK TC / 410K TC

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

310SK TC	410K TC	Engine
●	●	Meets EPA Interim Tier 4/EU Stage IIIB emissions
●		John Deere Model 4045HT063 — 4.5L, 76 kW (102 hp) net peak power, turbocharged, isolation mounted
	●	John Deere Model 4045HT063 — 4.5L, 79 kW (106 hp) net peak power, turbocharged, isolation mounted
●	●	Vertical spin-on engine oil filter
●	●	Vertical spin-on fuel filter with water separator
●	●	Oil-to-water engine oil cooler
●	●	Antifreeze, -40 deg. C (-40 deg. F)
●	●	Coolant recovery tank with low-level indicator
●	●	Foldout, hinged cooling system
●	●	Serpentine belt with automatic belt tensioner
●	●	Electronically controlled, variable-rate suction-type cooling fan
●	●	High ambient temperature engine cooling
●	●	Dual-element dry-type air cleaner
●	●	Self-cleaning exhaust aftertreatment system
●	●	Muffler, under hood, with curved-end exhaust stack
▲	▲	Chrome exhaust extension
●	●	Glow plugs
●	●	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 5th gears)
●	●	5th-gear overdrive
▲	▲	Autoshift transmission
●	●	Auto shutdown
●	●	Transmission oil cooler
●	●	Vertical spin-on transmission filter
●	●	Transmission remote oil-sampling port
●	●	Differential lock, electric foot actuated, protection on/off
●	●	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
●	●	MFWD with traction-control limited-slip differential: Electric on/off control / Sealed axle
●	●	Automatic MFWD braking (4th and 5th gear over-drive only)
▲	▲	Rear wheel spacers for use with chains
▲	▲	MFWD driveshaft guard
Backhoe		
●		Extendable dipperstick, 1.07-m (3 ft. 6 in.) extension
	●	Extendable dipperstick, 1.22-m (4 ft.) extension
●		Heavy-duty backhoe bucket cylinder
●	●	Armrest-mounted joysticks with electric clutch cutoff, auxiliary loader control, extendable dipperstick control, MFWD control (momentary), MFWD control (permanent), proportional auxiliary backhoe control, and horn
●	●	Mini joystick for simultaneous control of loader and backhoe
●	●	Backhoe transport lock lever
●	●	Swing lock pin stored in operator's station

310SK TC	410K TC	Backhoe (continued)
●	●	Stabilizers with 2-direction anti-drift valves
●	●	Pivoting stabilizers with reversible pads
●	●	Extended (long) stabilizers with reversible pads
●	●	Less bucket, with bucket pins
▲	▲	Standard-duty backhoe bucket with lift loops
▲	▲	Heavy-duty backhoe bucket with lift loops
▲	▲	Severe-duty backhoe bucket with lift loops
▲	▲	Backhoe couplers for C-, D-, E-, G-, J-, and K-Series 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 (settable height)
●	●	Return-to-dig feature (settable/activates from curled or dumped bucket position)
●	●	Armrest-mounted joysticks with electric clutch cutoff, auxiliary loader control, extendable dipperstick control, MFWD control (momentary), MFWD control (permanent), proportional auxiliary backhoe control, and horn
●	●	Auxiliary loader hydraulics with thumb-switch control
●	●	Mini joystick for simultaneous control of loader and backhoe
●	●	Electric bucket-level indicator
●	●	Loader boom service lock
●	●	Ride control
●	●	Less coupler bucket
●	●	High-visibility loader arms
●	●	Tool-carrier loader: Front loader hydraulic quick-coupler / Parallel lift (selectable) / Return-to-carry (selectable/height set) / Boom-height kickout
Hydraulic System		
●	●	159-L/m (42 gpm) axial-piston pump
●	●	Auto idle
●	●	Economy mode
●	●	Dedicated hydraulic reservoir
●	●	"O"-ring face-seal connectors
●	●	6-micron vertical spin-on filter
Electrical System		
●	●	12-volt system
●	●	200-amp alternator
●	●	Dual batteries with 380-min. reserve capacity and 1,900 CCA
●	●	Dual battery master-disconnect switch
●	●	Positive terminal battery cover
●	●	Blade-type multi-fused circuits
●	●	By-pass start safety cover on starter
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)
●	●	Rear reflectors (2)
Operator's Station		
●	●	Modular-design ROPS/FOPS (Level 2) canopy with molded roof (meets ISO 3449 and ISO 3471/SAE J1040): Isolation mounted
●	●	Left and right access
●	●	Slip-resistant steps and ergonomically located hand-holds (conform to SAE J185)
●	●	Molded floor mats

310SK TC	410K TC	Operator's Station (continued)
●	●	Headliner
●	●	Coat hook
●	●	12-volt outlets (2)
●	●	Built-in cup holder
●	●	Built-in Operator's Manual storage compartment
●	●	Lockable right-side storage
▲	▲	Lockable left-hand storage with cup holders
●	●	Interior rearview mirror
●	●	Interior front-view mirror
▲	▲	Outside rearview mirrors
●	●	Stabilizer controls in left armrest
●	●	Rotary-dial hand throttle
●	●	Suspended foot throttle
●	●	Tilt steering, infinitely adjustable
●	●	Horn in side console
●	●	Seat belt, 76-mm (3 in.), with retractor
●	●	Keyless start
●	●	Machine security (within monitor)
●	●	Engine coolant temperature gauge
●	●	Oil-temperature gauge
●	●	Fuel gauge
●	●	Sealed-switch monitor
●	●	Digital display of engine hours, engine rpm, and system voltage
●	●	Monitor system with audible and visual warnings: Engine air restriction / Low alternator voltage / Engine oil pressure / Hydraulic filter restriction / Parking brake on/off / Seat belt / Machine diagnostic information via 4-push-button/LCD operator interface / Aftertreatment device temperature / Transmission oil temperature / Fuel / Hour meter
▲	▲	Canopy: Air-suspension deluxe vinyl swivel seat with lumbar adjustment and armrests (fully adjustable)
●	●	Ultimate Cab: Air-suspension deluxe fabric swivel seat with lumbar adjustment / AM/FM/weather-band radio with CD player / Sun visor / 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) / Air conditioner (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant)
Overall Vehicle		
●	●	1-piece unitized construction mainframe
●	●	Vehicle tie-downs (2 front and 2 rear)
●	●	Remote grease bank for front axle
●	●	Heavy-duty front bumper
▲	▲	204-kg (450 lb.) front counterweight
▲	▲	340-kg (750 lb.) front counterweight
▲	▲	454-kg (1,000 lb.) front counterweight
▲	▲	567-kg (1,250 lb.) front counterweight
▲	▲	Rubber grille bumpers
●	●	Fuel tank, 155.2 L (41 gal.), ground-level fueling
●	●	2-position easy-tilt hood
●	●	Extended grille frame
●	●	Removable toolbox with padlock hasp
●	●	Vandal protection for locking engine hood, toolbox, hydraulic reservoir, and fuel tank
●	●	Reverse warning alarm
●	●	Dent-resistant full-coverage rear fenders
●	●	JDLink™ Ultimate wireless communication system (available in specific countries; see your dealer for details)

[†]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 3050-m (10,000 ft.) altitude. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on units with 12.5/80-18-in. 14PR (I3) front tires and 610-mm x 0.21-m² (24 in. x 7.5 cu. ft.) backhoe buckets; a 310SK TC unit with 19.5L-24-in. 10PR (R4) tubeless rear tires and 1.00-m³ (1.31 cu. yd.) loader bucket; and a 410K TC unit with 21L-24-in. 10PR (R4) tubeless rear tires and 1.15-m³ (1.50 cu. yd.) loader bucket.

710K

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

710K	Engine
●	Meets EPA Interim Tier 4/EU Stage IIIB emissions
●	John Deere Model 6068HT079 — 6.8L, 97 kW (130 hp) net peak power, variable-geometry turbo-charger, isolation mounted
●	Vertical spin-on engine oil filter
●	Vertical spin-on fuel filter with water separator
●	Oil-to-water engine oil cooler
●	Antifreeze, -40 deg. C (-40 deg. F)
●	Coolant recovery tank with low-level indicator
●	Foldout, hinged cooling system
●	Serpentine belt with automatic belt tensioner
●	Electronically controlled, variable-rate suction-type cooling fan
●	High ambient temperature engine cooling
●	Dual-element dry-type air cleaner
●	Self-cleaning exhaust aftertreatment system
●	Muffler, under hood, with curved-end exhaust stack
▲	Chrome exhaust extension
●	Glow plugs
▲	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)
●	Transmission oil cooler
●	Vertical spin-on transmission filter
▲	Transmission remote oil-sampling port
●	Differential lock, electric foot actuated
●	Auto shutdown
●	Planetary final drives
●	Full-power 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 traction-control limited-slip differential: Electric on/off control / Sealed axle
●	Automatic MFWD braking (4th gear only)
▲	Rear wheel spacers for use with chains
Backhoe	
●	Standard dipperstick, 5.44-m (17 ft. 10 in.) digging depth
▲	Extendable dipperstick, 1.37-m (4 ft. 6 in.) extension
▲	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
●	Pivoting stabilizers with reversible pads

710K	Backhoe (continued)
●	Less bucket, with bucket pins
▲	Heavy-duty backhoe bucket with lift loops
▲	Severe-duty backhoe bucket with lift loops
▲	Auxiliary backhoe valve for swingers, thumbs, etc. with auxiliary plumbing
▲	Auxiliary backhoe valve for hammers and compactors with auxiliary plumbing
Loader ¹	
●	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 single control lever with EH auxiliary control (MFWD and clutch disconnect)
▲	Hydraulic coupler for buckets, forks, etc.
●	Less bucket, with bucket pins
●	Ride control
Hydraulic System	
●	197-L/m (52 gpm) axial-piston pump, PCLS system
●	Auto idle
●	Economy mode
●	Dedicated hydraulic reservoir
●	"O"-ring face-seal connectors
●	6-micron vertical spin-on filter
Electrical System	
●	12-volt system
●	120-amp alternator
●	Dual batteries with 380-min. reserve capacity and 1,900 CCA
●	Positive terminal battery cover
●	Blade-type multi-fused circuits
●	By-pass start safety cover on starter
▲	Master disconnect switch
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)
●	Rear reflectors (2)
Operator's Station	
●	Modular-design ROPS/FOPS (Level 2) canopy with molded roof (meets ISO 3449 and ISO 3471/SAE J1040): Isolation mounted
●	Left and right access
●	Slip-resistant steps and ergonomically located handholds (conform to SAE J185)
●	Molded floor mats (with pilot controls only)
▲	Headliner (with cab only)
●	Coat hook
●	12-volt outlets (2)
●	Built-in cup holder
●	Built-in Operator's Manual storage compartment

710K	Operator's Station (continued)
●	Lockable right-side storage
▲	Lockable left-hand storage with cup holders
●	Interior rearview mirror
▲	Interior front-view mirror
▲	Outside rearview mirrors
●	Rotary-dial hand throttle
●	Suspended foot throttle
●	Horn
●	Seat belt, 76-mm (3 in.), with retractor
●	Keyless start
●	Machine security
●	Engine coolant temperature gauge
●	Transmission oil-temperature gauge
●	Fuel gauge
●	Digital display of engine hours, engine rpm, and system voltage
●	Sealed-switch module
●	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 oil 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)
▲	Ultimate Cab: Air-suspension deluxe fabric swivel seat with lumbar adjustment / Tilt steering, infinitely adjustable / AM/FM/weather-band radio with CD player / Sun visor / 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) / Air conditioner (7.6-kW [26,000 Btu/h] output and CFC-free R134a refrigerant)
Overall Vehicle	
●	1-piece unitized construction mainframe
●	Vehicle tie-downs (2 front and 2 rear)
●	Remote grease bank for front axle
●	272-kg (600 lb.) front counterweight
▲	635-kg (1,400 lb.) front counterweight
●	Fuel tank, 261.2 L (69 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
●	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)

¹See dealer for range of heavy-duty, multipurpose, and coupler buckets and forks.

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