

710 P

Backhoe Loader



JOHN DEERE





710 P-TIER BACKHOE LOADER

READY TO RUN IN THE REAL WORLD

When owners and operators just like you — the people who know what customers need for their operations to succeed — weighed in on our latest backhoe loaders, we heeded the real-world feedback. You asked for one machine that capably completes the work of two. A powerful overachiever with outstanding loader performance, backhoe capability, and multifunction versatility. Featuring streamlined transitions between front loader and rear backhoe functionality. And packed with productivity-elevating options to match the application. The 710 P-Tier Backhoe is a standout multitasker ready to run — and get more done — in any corner of the working world.



EXCLUSIVE
REARVIEW CAMERA

FEATURES

Proven engine technology

Reliable EPA Final Tier 4 (FT4)/EU Stage IV John Deere PowerTech™ Plus engine incorporates series turbochargers for impressive power and torque. Wet-sleeve design with replaceable cylinder liners provides uniform cooling and helps reduce oil breakdown and ring wear.

Elevated experience

Pressure-compensated, load-sensing (PCLS) hydraulics provide excellent multifunctioning, smooth machine control, and up to 15-percent greater craning capacity when Lift Mode is engaged, collectively providing a distinctive operator experience and unmatched machine performance. Trenching operation can be conducted at a lower engine rpm, reducing fuel consumption and jobsite noise.

Forward thinking

When enabled on the 25-button sealed-switch module, AutoShift automatically shifts the PowerShift™ transmission to the appropriate gear. Simply set the control lever to the highest gear desired, and the transmission will optimally shift based on engine rpm and ground speed. Included in the base machine configuration, AutoShift enhances operator ease of use during extended transport or load-and-carry applications.

Always on the move

Limited-slip mechanical-front-wheel drive (MFWD) delivers sure-footed traction in any ground condition. Engage momentary MFWD “on the fly” with a touch of a button on the loader control.

Smooth control

When set ground speed is reached, ride control automatically turns on, creating a smoother ride for the operator and reducing bucket spillage. When the machine drops below the speed setting, ride control turns off, maximizing loader productivity. Auto ride control is standard equipment on the 710 P-Tier.

Get set for a new view

Exclusive to the backhoe industry, our optional rearview camera system with a dedicated eight-inch touchscreen display allows the operator to “overlay the view” to virtually remove the rear machine structure.

Ultra-comfortable cab

Operator station is wider and features an updated HVAC system that outputs 10-percent more airflow compared to the previous model. Rear and side windows have been restyled for clear visibility. Settle in to the standard adjustable air-suspension seat, or opt for the new premium heated and vented version. Sealed-switch module now on the vertical cab post and eye-level fuel and temperature gauges ease operator awareness and navigation.

Take it easy

Highly populated “palm-on-top” loader-control grip is intuitive and easy to use.

Nice and precise

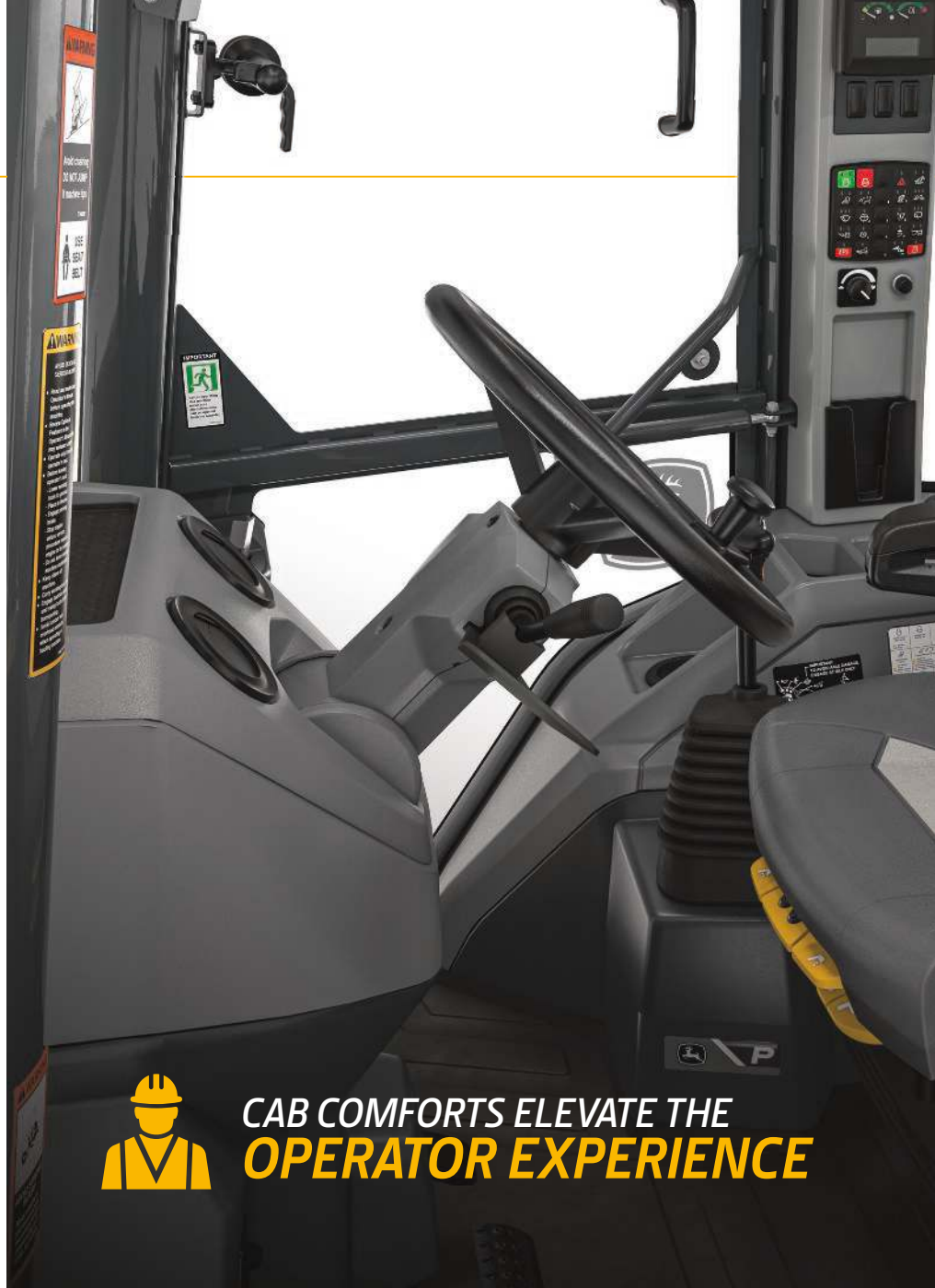
Standard precision mode reduces the speed of hydraulic backhoe functions without sacrificing lift capacity, for close work around underground utilities or jobsite obstacles, or when lifting — also useful for less experienced operators.

Save fuel with economy mode

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

Hit the ground running

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



**CAB COMFORTS ELEVATE THE
OPERATOR EXPERIENCE**



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Let there be (more) light

Optional LED 10-light package brightens darker jobsites. Optional four-corner, low-profile LED beacon system and field-kit boom light boost machine visibility to crew and bystanders.

Connected machines

John Deere construction equipment comes with in-base connectivity — free from subscriptions or annual renewals. Analyze critical machine data, track utilization, review diagnostic alerts, and more from **the John Deere Operations Center™**. The Operations Center also enables John Deere Connected Support™, which uses data from thousands of connected machines to proactively address issues before they arise. With your approval, your dealer can also remotely monitor machine health, diagnose problems, and even update machine software without a trip to the jobsite.*

*Availability varies by region and product. Options not available in every country.



710 P-TIER BACKHOE LOADER SPECIFICATIONS

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

Engine		710 P-TIER	
Manufacturer and Model	John Deere PowerTech™ Plus 4045HT084 series turbocharged		
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		
Displacement	4.5 L (276 cu. in.)		
Gross Peak Power	112 kW (150 hp) at 2,240 rpm		
Net Peak Power (ISO 9249)	110 kW (148 hp) at 2,240 rpm		
Net Peak Torque (ISO 9249)	569 Nm (420 lb.-ft.) at 1,400 rpm		
Net Torque Rise	20%		
Lubrication	Pressure system with spin-on filter and cooler		
Air Cleaner	Dual-stage dry type with safety element and evacuator valve		
Cooling			
Fan Type	Electronically controlled, variable rate, suction-type cooling fan standard		
Engine Coolant Rating	−40 deg. C (−40 deg. F)		
Engine Oil Cooler	Oil to water		
Powertrain			
Transmission	4-speed, helical-cut gears, full PowerShift™ transmission with hydraulic reverser standard; electric clutch cutoff on loader lever; AutoShift transmission standard		
Torque Converter	Single stage, dual phase with 1.92:1 stall ratio, 280 mm (11 in.)		
PowerShift Standard Transmission			
Maximum Travel Speeds With Standard Engine, Mechanical-Front-Wheel Drive (MFWD), and 21L-28 Rear Tires	Forward	Reverse	
Gear 1	6.0 km/h (3.7 mph)	6.7 km/h (4.2 mph)	
Gear 2	10.1 km/h (6.3 mph)	11.3 km/h (7.0 mph)	
Gear 3	24.9 km/h (15.5 mph)	27.8 km/h (17.3 mph)	
Gear 4	37.4 km/h (23.2 mph)	—	
Axles			
Axle Oscillation, Stop to Stop, Front Axle	18 deg.		
Axle Ratings	Front	Rear	
SAE J43	8000 kg (17,600 lb.)	10 500 kg (23,100 lb.)	
Dynamic	12 500 kg (27,600 lb.)	14 000 kg (30,900 lb.)	
Static	35 000 kg (77,200 lb.)	35 000 kg (77,200 lb.)	
Ultimate	52 000 kg (114,600 lb.)	52 000 kg (114,600 lb.)	
Differentials			
MFWD Axle	Automatic, limited-slip traction control		
Rear Axle	Loader-grip actuated, hydraulically engaged, 100% mechanical lock		
Steering (ISO 5010)	Hydrostatic power steering and emergency steering		
Axle	MFWD		
Curb-Turning Radius			
With Brakes	3.99 m (13 ft. 1 in.)		
Without Brakes	4.58 m (15 ft. 0 in.)		
Bucket-Clearance Circle			
With Brakes	11.36 m (37 ft. 3 in.)		
Without Brakes	12.23 m (40 ft. 1 in.)		
Steering Wheel Turns (lock to lock)	2.7 to 4.3		
MFWD Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears		
Rear Axle	Heavy duty, inboard planetary final drives distribute shock loads over 3 gears		
Brakes (ISO 3450)			
Service	Full power, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing		
Parking	Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control		

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Hydraulics		710 P-TIER
Main Pump	Pressure compensated load sensing (PCLS), axial-piston pump	
Pump Flow at 2,200 rpm		
Backhoe	198 L/m (52.3 gpm)	
Loader	198 L/m (52.3 gpm)	
System Relief Pressure		
Backhoe	24 993 kPa (3,625 psi)	
Lift Mode	26 890 kPa (3,900 psi)	
Loader	24 993 kPa (3,625 psi)	
Controls		
Backhoe	Pilot controls with pattern select standard; electrohydraulic (EH) auxiliary functions optional	
Loader	Single-lever control with horn, rear differential lock, electric clutch cutoff switch, MFWD (momentary), and gear-selection buttons standard; single-lever control with horn, rear differential lock, electric clutch cutoff switch, MFWD (momentary), gear-selection buttons, and EH proportional auxiliary roller optional	

Cylinders			
Heat-treated, chrome-plated, polished rods; hardened steel (replaceable bushings) pivot pins			
	Bore	Rod Diameter	Stroke
Loader Boom (2)	100 mm (3.94 in.)	56 mm (2.20 in.)	805 mm (31.69 in.)
Loader Bucket (1)	110 mm (4.33 in.)	56 mm (2.20 in.)	672 mm (26.46 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 (31.18 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 (54.02 in.)
Backhoe Stabilizer, Standard (2)	115 mm (4.53 in.)	63 mm (2.48 in.)	588 mm (23.15 in.)
MFWD (1)	75 mm (2.95 in.)	50 mm (1.97 in.)	260 mm (10.24 in.)

Electrical	
Voltage	12 volt
Alternator Rating	160 amp
Lights	10 halogen: 4 front, 4 rear, and 2 side docking (HB3 [high-beam] bulb); turn signals and flashers: 2 front and 2 rear; stop and taillights; and 2 rear reflectors; factory-installed option for 10 LED floodlights in lieu of standard halogen light package

Operator Station	
Type (ISO 3471)	Fully enclosed cab, isolation mounted, ROPS/FOPS, left/right access, with molded roof

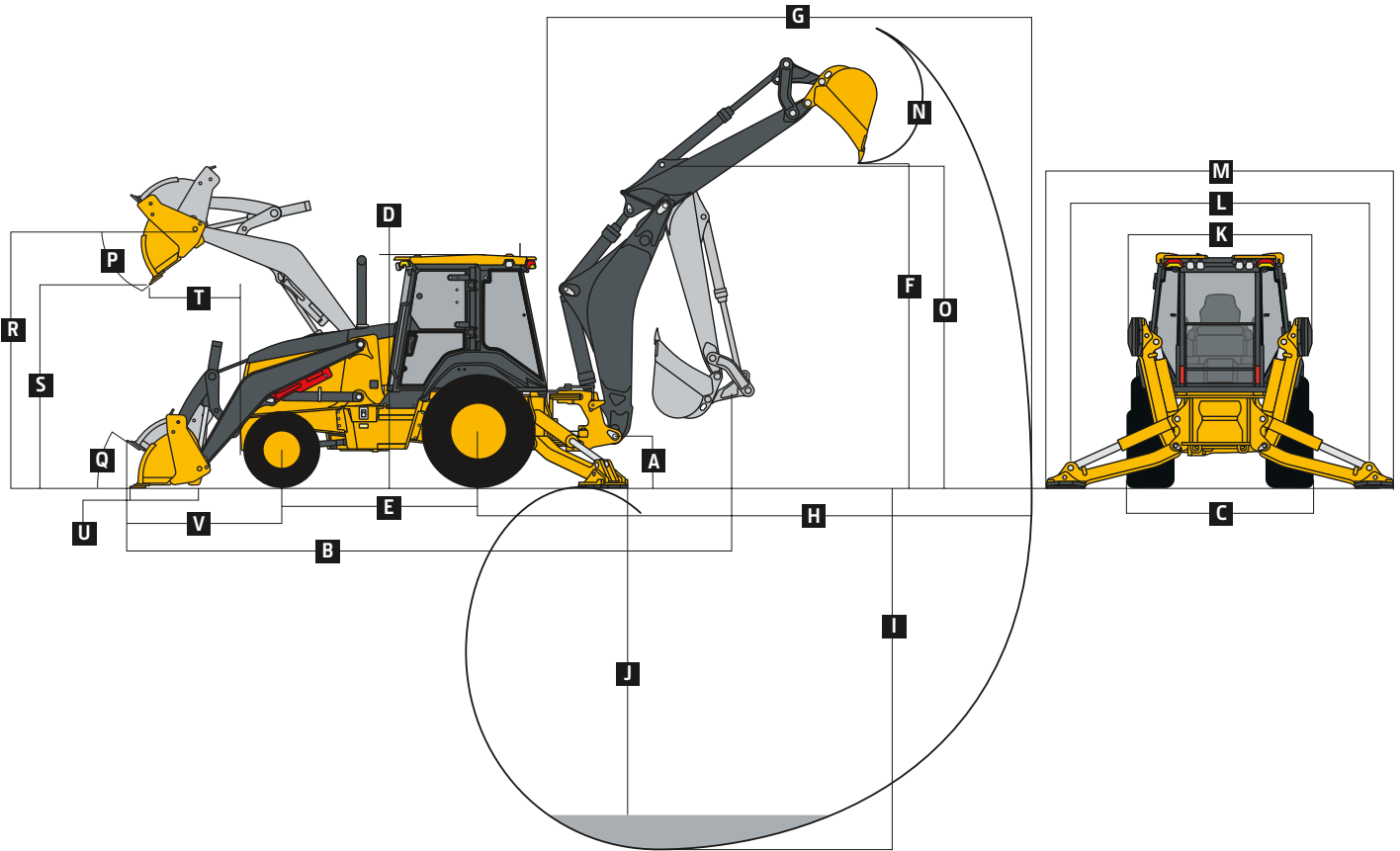
Tires/Wheels		
	Front	Rear
With MFWD	15-19.5 R4 (12)	21L-28 R4 (18)
	15-19.5 R4 (12)	20.5-25 L-3 (20)

Serviceability	
Refill Capacities	
Cooling System	28.4 L (30.0 qt.)
Rear Axle	25.0 L (26.4 qt.)
Engine Oil (including vertical spin-on filter)	13.0 L (13.7 qt.)
Torque Converter and Transmission	15.1 L (16.0 qt.)
Fuel Tank (with ground-level fueling)	174.1 L (46.0 gal.)
Diesel Exhaust Fluid (DEF) Tank	13.7 L (3.6 gal.)
Hydraulic System	168.5 L (44.5 gal.)
Hydraulic Reservoir	50.1 L (13.2 gal.)
MFWD Axle	
Differential Housing	15.0 L (15.9 qt.)
Planetary (each)	2.2 L (2.3 qt.)

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Operating Weights		710 P-TIER
ISO 6016 Operating Mass		12 150 kg (26,786 lb.)
ISO 6016 Gross Machinery Mass		13 250 kg (29,211 lb.)
With Full Fuel Tank, 75-kg (165 lb.) Operator, Standard Equipment, Cab, and 680-kg (1,500 lb.) Counterweight		11 985 kg (26,422 lb.)
Typical With Cab, Extendable Dipperstick, and 680-kg (1,500 lb.) Counterweight		12 315 kg (27,150 lb.)
Optional Components (weight difference between base equipment and option)		
Extendable Dipperstick		330 kg (728 lb.)
Front Loader Coupler		389 kg (858 lb.)
Overall Dimensions [see line art below]		
A	Ground Clearance, Minimum	306 mm (12 in.)
B	Overall Length, Transport	8.42 m (27 ft. 8 in.)
C	Width Over Tires	2.37 m (7 ft. 9 in.)
D	Height to Top of ROPS/Cab	3.02 m (9 ft. 11 in.)
E	Length From Axle to Axle, MFWD Axle	2.55 m (8 ft. 4 in.)

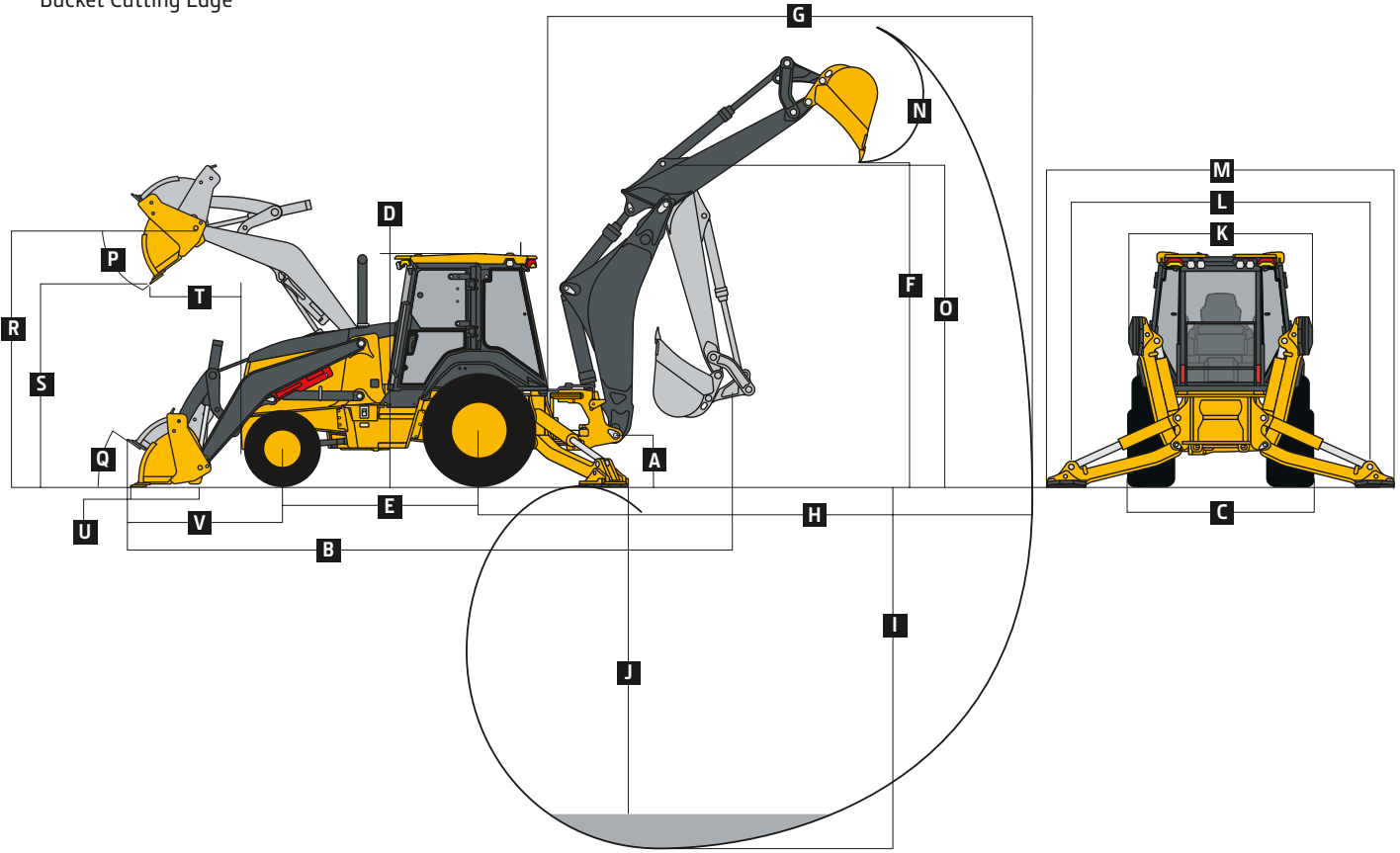


Backhoe Dimensions and Performance			
[see line art below left]		710 P-TIER	
Backhoe specifications are with 610-mm x 0.31-m³ (24 in. x 11 cu. ft.) bucket; dipper lift specs are with a boom angle of 65 deg.			
Bucket Range		610–914 mm (24–36 in.)	
Digging Force			
Bucket Cylinder		78.0 kN (17,527 lb.)	
Lift Mode		83.9 kN (18,857 lb.)	
Crowd Cylinder		53.3 kN (11,981 lb.)	
Lift Mode		57.3 kN (12,890 lb.)	
Swing Arc		180 deg.	
Operator Control		Pilot control	
		With Optional Extendable Dipperstick	
		With Standard Backhoe	Retracted Extended
F	Loading Height, Truck Loading Position	4.44 m (14 ft. 7 in.)	4.48 m (14 ft. 8 in.) 5.33 m (17 ft. 6 in.)
G	Reach from Center of Swing Pivot	6.85 m (22 ft. 6 in.)	6.84 m (22 ft. 5 in.) 8.15 m (26 ft. 9 in.)
H	Reach from Center of Rear Axle	8.12 m (26 ft. 8 in.)	8.11 m (26 ft. 7 in.) 9.42 m (30 ft. 11 in.)
I	Digging Depth (SAE maximum)	5.27 m (17 ft. 3 in.)	5.26 m (17 ft. 3 in.) 6.63 m (21 ft. 9 in.)
J	Digging Depth (SAE)		
	610-mm (2 ft.) Flat Bottom	5.25 m (17 ft. 3 in.)	5.25 m (17 ft. 3 in.) 6.62 m (21 ft. 9 in.)
	2440-mm (8 ft.) Flat Bottom	4.96 m (16 ft. 3 in.)	4.96 m (16 ft. 3 in.) 6.40 m (21 ft. 0 in.)
K	Stabilizer Width, Transport, With Standard Pads, No Guards, and No Sensors	2.29 m (7 ft. 6 in.)	2.29 m (7 ft. 6 in.) 2.29 m (7 ft. 6 in.)
L	Stabilizer Spread, Operating	3.99 m (13 ft. 1 in.)	3.99 m (13 ft. 1 in.) 3.99 m (13 ft. 1 in.)
M	Stabilizer Overall Width, Operating	4.65 m (15 ft. 3 in.)	4.65 m (15 ft. 3 in.) 4.65 m (15 ft. 3 in.)
N	Bucket Rotation	190 deg.	190 deg. 190 deg.
O	Transport Height	4.23 m (13 ft. 10 in.)	4.22 m (13 ft. 10 in.) 4.22 m (13 ft. 10 in.)
Loader Dimensions and Performance [see line art at left]			
P	Bucket Dump Angle, Maximum	45 deg.	
Q	Rollback Angle at Ground Level	40 deg.	

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Loader Dimensions and Performance		
(continued) [see line art below]		
	710 P-TIER	
	General-purpose	Multipurpose
Bucket Capacity	1.45 m³ (1.89 cu. yd.)	0.99 m³ (1.29 cu. yd.)
Width	2464 mm (97.0 in.)	2451 mm (97.0 in.)
Weight	866 kg (1,910 lb.)	1012 kg (2,232 lb.)
Breakout Force	70.4 kN (15,831 lb.)	73.7 kN (16,564 lb.)
Lift Capacity, Full Height	4477 kg (9,871 lb.)	4252 kg (9,375 lb.)
R Height to Bucket Hinge Pin, Maximum	3.73 m (12 ft. 3 in.)	3.73 m (12 ft. 3 in.)
S Dump Clearance, Bucket at 45 deg.	2.81 m (9 ft. 3 in.)	2.94 m (9 ft. 8 in.)
T Reach at Full Height, Bucket at 45 deg.	890 mm (35.0 in.)	801 mm (31.6 in.)
U Digging Depth Below Ground, Bucket Level	157 mm (6.2 in.)	129 mm (5.1 in.)
V Length From Front Axle Centerline to Bucket Cutting Edge	2.26 m (7 ft. 5 in.)	2.08 m (6 ft. 10 in.)



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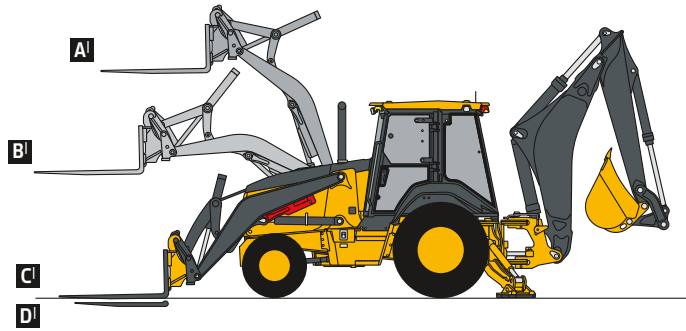
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Lift Capacity With Quick-Coupler Forks

[see line art below center]

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Hydraulic Capacity	1219-mm (48 in.) Tines	1524-mm (60 in.) Tines
A ¹ Maximum Height	2575 kg (5,677 lb.)	2389 kg (5,266 lb.)
B ¹ Maximum Reach	4452 kg (9,815 lb.)	4222 kg (9,308 lb.)
C ¹ At Ground Line	6011 kg (13,251 lb.)	5701 kg (12,568 lb.)
D ¹ Below Ground Line	227 mm (8.9 in.)	227 mm (8.9 in.)

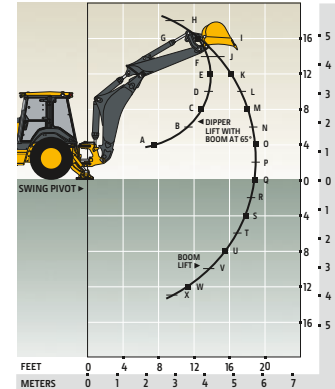


Lift Capacities [see line art at right]

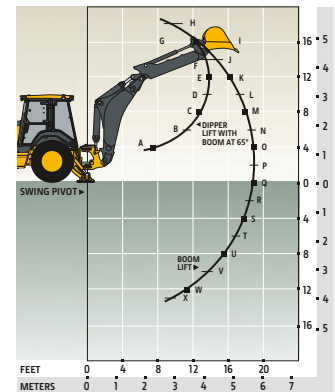
Lift capacities are over-end values in kg (lb.). Figures listed are 100% of the maximum lift force available.

With Standard Dipperstick		With 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Retracted		With 1.37-m (4 ft. 6 in.) Extendable Dipperstick, Extended	
Standard Lift	Lift Mode	Standard Lift	Lift Mode	Standard Lift	Lift Mode
A	9554 kg (21,062 lb.)	9554 kg (21,062 lb.)	9364 kg (20,643 lb.)	5445 kg (12,004 lb.)	5892 kg (12,989 lb.)
B	5269 kg (11,617 lb.)	5535 kg (12,202 lb.)	5125 kg (11,299 lb.)	3411 kg (7,520 lb.)	3699 kg (8,155 lb.)
C	4516 kg (9,956 lb.)	4759 kg (10,492 lb.)	4361 kg (9,614 lb.)	4537 kg (10,003 lb.)	2929 kg (6,457 lb.)
D	4110 kg (9,062 lb.)	4443 kg (9,795 lb.)	3948 kg (8,705 lb.)	4246 kg (9,360 lb.)	2674 kg (5,895 lb.)
E	3741 kg (8,248 lb.)	4045 kg (8,917 lb.)	3573 kg (7,878 lb.)	3876 kg (8,546 lb.)	2494 kg (5,498 lb.)
F	3241 kg (7,146 lb.)	3505 kg (7,728 lb.)	3066 kg (6,759 lb.)	3329 kg (7,339 lb.)	2339 kg (5,156 lb.)
G	2326 kg (5,127 lb.)	2519 kg (5,553 lb.)	2138 kg (4,715 lb.)	2330 kg (5,137 lb.)	2179 kg (4,804 lb.)
H	2526 kg (5,569 lb.)	2743 kg (6,048 lb.)	2309 kg (5,090 lb.)	2526 kg (5,569 lb.)	1989 kg (4,385 lb.)
I	2599 kg (5,730 lb.)	2832 kg (6,243 lb.)	2366 kg (5,216 lb.)	2599 kg (5,730 lb.)	1735 kg (3,824 lb.)
J	2559 kg (5,643 lb.)	2794 kg (6,160 lb.)	2319 kg (5,113 lb.)	2554 kg (5,630 lb.)	1356 kg (2,989 lb.)
K	2493 kg (5,496 lb.)	2725 kg (6,009 lb.)	2248 kg (4,955 lb.)	2480 kg (5,468 lb.)	1643 kg (3,583 lb.)
L	2419 kg (5,333 lb.)	2648 kg (5,838 lb.)	2170 kg (4,785 lb.)	2399 kg (5,290 lb.)	1696 kg (3,701 lb.)
M	2345 kg (5,169 lb.)	2570 kg (5,666 lb.)	2093 kg (4,613 lb.)	2318 kg (5,110 lb.)	1702 kg (3,714 lb.)
N	2272 kg (5,009 lb.)	2493 kg (5,497 lb.)	2017 kg (4,447 lb.)	2239 kg (4,936 lb.)	1686 kg (3,680 lb.)
O	2203 kg (4,856 lb.)	2420 kg (5,336 lb.)	1945 kg (4,289 lb.)	2163 kg (4,769 lb.)	1661 kg (3,624 lb.)
P	2137 kg (4,711 lb.)	2351 kg (5,183 lb.)	1877 kg (4,139 lb.)	2092 kg (4,611 lb.)	1630 kg (3,556 lb.)
Q	2075 kg (4,575 lb.)	2286 kg (5,040 lb.)	1813 kg (3,997 lb.)	2024 kg (4,463 lb.)	1596 kg (3,482 lb.)
R	2018 kg (4,448 lb.)	2226 kg (4,907 lb.)	1753 kg (3,865 lb.)	1961 kg (4,324 lb.)	1562 kg (3,406 lb.)
S	1964 kg (4,330 lb.)	2170 kg (4,783 lb.)	1697 kg (3,741 lb.)	1903 kg (4,194 lb.)	1528 kg (3,331 lb.)
T	1915 kg (4,222 lb.)	2119 kg (4,672 lb.)	1645 kg (3,626 lb.)	1849 kg (4,076 lb.)	1494 kg (3,257 lb.)
U	1872 kg (4,127 lb.)	2075 kg (4,575 lb.)	1597 kg (3,522 lb.)	1801 kg (3,970 lb.)	1462 kg (3,185 lb.)
V	1837 kg (4,050 lb.)	2041 kg (4,499 lb.)	1557 kg (3,432 lb.)	1761 kg (3,882 lb.)	1431 kg (3,117 lb.)
W	1819 kg (4,011 lb.)	2028 kg (4,470 lb.)	1529 kg (3,372 lb.)	1738 kg (3,832 lb.)	1403 kg (3,054 lb.)
X	1828 kg (4,030 lb.)	2043 kg (4,504 lb.)	1529 kg (3,371 lb.)	1744 kg (3,845 lb.)	1376 kg (2,995 lb.)
Y	—	—	—	—	1353 kg (2,943 lb.)
Z	—	—	—	—	1333 kg (2,900 lb.)
a	—	—	—	—	1320 kg (2,871 lb.)
b	—	—	—	—	1318 kg (2,865 lb.)
c	—	—	—	—	1340 kg (2,914 lb.)
d	—	—	—	—	1472 kg (3,202 lb.)

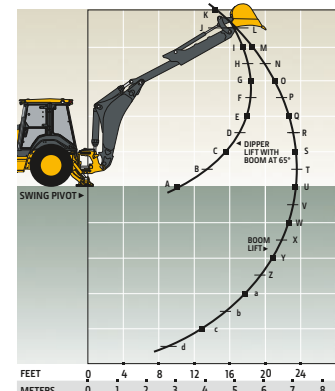
Lift capacities are over end with stabilizers down and tires tangent to ground.



With Standard Dipperstick



With Extendable Dipperstick, Retracted



With Extendable Dipperstick, Extended

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Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO 9249. Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Except where otherwise noted, these specifications are based on a unit with 21L-28-in. 18PR (R4) tubeless rear and 15-19.5-in. 12PR (R4) front tires, and 1.45-m³ (1.89 cu. yd.) loader bucket.



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