

310 P

Backhoe Loader



JOHN DEERE



FEATURES

Powerful engine technology

Rugged EPA Final Tier 4 (FT4)/EU Stage IV John Deere PowerTech EWL engine boosts power, torque, and reliability compared to previous models. Simple two-valve cylinder-head, wet-sleeve design with replaceable cylinder liners provides uniform cooling and aids in reducing oil breakdown and ring wear. Filters have been redesigned and relocated for easier servicing over earlier models.

Always on the move

Optional 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 (included with optional third-function auxiliary loader hydraulics).

Make the shift

PowerShift™ transmission and machine forward/neutral/reverse (F-N-R) are controlled by an easy-to-use twist-grip Transmission Control Lever (TCL). Hydraulically actuated clutch packs enable smooth shifting and reliable performance under all operating conditions and loads.

Keeping it cool

Field-proven open-center control valve and pump combination delivers high contamination resistance, exceptional swing control and multifunction performance, steady pressure/force control, and reliable operator "feel" compared to other hydraulic systems. Continuous oil flow boosts cooling and filtration, even with all functions in neutral. Cleaner, cooler oil improves system life and promotes uptime.



POWERTECH™ EWL ENGINE
FEATURES RELOCATED FILTERS
FOR EASY SERVICE ACCESS

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.

It all looks good from here

Spacious operator station is loaded with creature comforts including an efficient HVAC system, choice of adjustable mechanical or air-suspension seat, and optional premium radio with Bluetooth® and auxiliary input. Sightlines to the loader bucket corners over the sloped hood are clear.

Take it easy

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

Enjoy the ride

Optional ride control reduces tire flexing over rough terrain at high speeds with a loaded bucket, reducing material spillage and improving machine ride to boost operator comfort and efficiency.

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.



**ACTIVATE ECONOMY MODE
FOR BACKHOE FUNCTIONS
WHILE STILL POWERING
LOADER FUNCTIONS**



310 P-TIER BACKHOE LOADER



Precision Construction

From grade management and obstacle detection to product automation features and jobsite intelligence, this suite of construction technology delivers productivity solutions to help you get more done, more efficiently.

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. 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.



310 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	310 P-TIER			
Manufacturer and Model	John Deere PowerTech™ EWL 4.5L turbocharged		John Deere PowerTech™ 4.5L turbocharged	
Non-Road Emission Standard	EPA Final Tier 4/EU Stage IV		EPA Tier 2/EU Stage II	
Displacement	4.5 L (276 cu. in.)		4.5 L (276 cu. in.)	
Gross Peak Power	76 kW (102 hp) at 1,600 rpm		64 kW (85 hp) at 2,010 rpm	
Net Peak Power (ISO 9249)	75 kW (100 hp) at 1,600 rpm		62 kW (84 hp) at 2,000 rpm	
Net Peak Torque (ISO 9249)	459 Nm (338 lb.-ft.) at 1,500 rpm		347 Nm (256 lb.-ft.) at 1,400 rpm	
Net Torque Rise	51%		30%	
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	Electronically controlled, variable-rate, suction-type cooling fan standard		Viscous variable-rate (temperature controlled) cooling fan standard	
Engine Coolant Rating	–40 deg. C (–40 deg. F)		–40 deg. C (–40 deg. F)	
Engine Oil Cooler	Oil to water		Oil to water	
Powertrain				
Transmission	4-speed, 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 (11.0 in.)			
PowerShift Standard Transmission				
Maximum Travel Speeds With Standard Engine, With 19.5L-24 Rear Tires	Forward	Reverse	Forward	Reverse
Gear 1	5.4 km/h (3.4 mph)	6.8 km/h (4.2 mph)	5.4 km/h (3.4 mph)	6.8 km/h (4.2 mph)
Gear 2	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)	9.9 km/h (6.2 mph)	12.5 km/h (7.8 mph)
Gear 3	20.3 km/h (12.6 mph)	—	20.3 km/h (12.6 mph)	—
Gear 4	36.6 km/h (22.7 mph)	—	36.9 km/h (22.9 mph)	—
Axles				
Axle Oscillation, Stop to Stop, Front Axle	22 deg.		22 deg.	
Axle Ratings	Front	Rear	Front	Rear
SAE J43	5000 kg (11,000 lb.)	6000 kg (13,200 lb.)	5000 kg (11,000 lb.)	6000 kg (13,200 lb.)
Dynamic	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)	9000 kg (19,800 lb.)	10 000 kg (22,000 lb.)
Static	24 500 kg (54,000 lb.)	26 500 kg (58,400 lb.)	24 500 kg (54,000 lb.)	26 500 kg (58,400 lb.)
Ultimate	41 500 kg (91,500 lb.)	41 500 kg (91,500 lb.)	41 500 kg (91,500 lb.)	41 500 kg (91,500 lb.)
Differentials				
Mechanical-Front-Wheel-Drive (MFWD) Axle	Open – standard; automatic, limited-slip traction control – custom or optional			
Rear Axle	Foot actuated, hydraulically engaged 100% mechanical lock			
Steering (ISO 5010)	Hydrostatic power steering and emergency steering			
Axle	MFWD		Non-Powered Front	
Curb-Turning Radius				
With Brakes	3.45 m (11 ft. 4 in.)		3.43 m (11 ft. 3 in.)	
Without Brakes	3.96 m (13 ft. 0 in.)		3.90 m (12 ft. 10 in.)	
Bucket-Clearance Circle				
With Brakes	9.86 m (32 ft. 4 in.)		9.80 m (32 ft. 2 in.)	
Without Brakes	10.61 m (34 ft. 10 in.)		10.48 m (34 ft. 5 in.)	
Steering Wheel Turns (lock to lock)	2.7		3.2	
MFWD and Rear Axle	Heavy duty, outboard planetary final drives distribute shock loads over 3 gears			
Brakes (ISO 3450)				
Service	Power assisted, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing			
Parking	Spring applied, hydraulically released, wet, multi-disc, independent of service brakes with electric switch control			
Hydraulics				
Main Pump	Open-center system; single-gear pump			
Pump Flow at 2,200 rpm				
Backhoe	106 L/m (28 gpm)			
Loader	106 L/m (28 gpm)			
System Relief Pressure				
Backhoe	24 993 kPa (3,625 psi)			
Loader	22 063 kPa (3,200 psi)			