



JOHN DEERE

CONSTRUCTION EQUIPMENT

BACKHOES



MODEL NO.

710G



G-SERIES

710G Backhoe Loader

Key: ● Standard equipment ▲ Optional or special equipment

*See your John Deere dealer for further information.

710G Engine

- John Deere Model 6068T – 6.8 liter, 118 SAE net hp turbocharged, isolation mounted
- Vertical spin-on engine oil filter
- Vertical spin-on fuel filter with water separator
- Vertical spin-on secondary fuel filter
- Oil-to-water engine oil cooler
- Antifreeze, -34°F (-37°C)
- Coolant recovery tank
- Serpentine belt with automatic belt tensioner
- Suction-type cooling fan
- Enclosed safety fan guard
- ▲ High ambient temperature engine cooling
- Dual-element dry-type air cleaner with evacuator valve and prescreener
- Muffler, underhood with curved-end exhaust stack
- ▲ Chrome exhaust extension
- ▲ Electric ether starting aid
- ▲ Engine coolant heater, 1,000 watts

Power Train

- Powershift transmission: Torque converter with electrically actuated twist grip F-N-R in 1st through 4th gears
- Transmission oil cooler
- Vertical spin-on transmission filter
- Electric forward-neutral-reverse control lever with neutral safety switch interlock
- Electric clutch cutoff on gearshift and loader levers
- Differential lock, electric foot-actuated
- Planetary final drives
- Power-assisted hydraulic service brakes (conform to SAE J1473): Inboard, wet multi-disc, self adjusting and self equalizing
- Parking/emergency brake with electric switch control (conforms to SAE J1473): Spring applied, hydraulically released wet multi-disc / Independent of service brakes
- Hydrostatic power steering with emergency manual mode
- Non-powered front axle
- ▲ Mechanical-front-wheel-drive with limited-slip differential: Electric on/off control / Drive-shaft guard / Sealed axle
- ▲ 14.5/75-16.1 F3 front tires
- ▲ 15-19.5 SS-1 front tires
- ▲ 16.5L-16.1 L-1 front tires
- 21L-28 R4 rear tires
- ▲ 20.5-25 L-2 rear tires
- ▲ Rear wheel spacers for use with chains

Backhoe

- Backhoe with standard dipperstick, 18-ft. 2-in. digging depth
- Two-lever (Deere) backhoe controls
- ▲ Three-lever (Case) backhoe controls
- ▲ SAE excavator two-lever backhoe controls
- Backhoe transport lock lever
- Swing lock pin stored in operator's station
- Stabilizer valve with two-direction anti-drift valves

710G Backhoe (continued)

- Pivoting stabilizers with reversible pads
- ▲ Stabilizer cylinder guards
- Less bucket, with bucket pins
- ▲ Heavy-duty backhoe bucket with lift loops
- ▲ Backhoe coupler for "C," "D," "E," and "G" Series John Deere buckets, Case buckets, and Cat buckets
- ▲ Extendable dipperstick, 5-ft. extension
- ▲ Auxiliary backhoe valve for swingers, thumbs, etc.
- ▲ Auxiliary backhoe valve for hammers, compactors
- ▲ Auxiliary backhoe plumbing for swingers, thumbs, etc.
- ▲ SAE-controlled load-lowering device valves

Loader

- Hydraulic self leveling
- Return-to-dig feature
- Single-lever control with electric clutch cutoff switch
- Bucket-level indicator
- Loader boom service lock
- ▲ Ride control
- ▲ Auxiliary loader hydraulics with two-lever control
- ▲ Loader front coupler*
- Less bucket, with bucket pins
- ▲ Heavy-duty loader buckets with bolt-on cutting edges, skid plates, and lift loops
- ▲ Multipurpose loader buckets with bolt-on cutting edges, skid plates, and lift loops

Hydraulic System

- 52-gpm (197 L/min.) axial piston pump, PCLS system
- Independent hydraulic reservoir
- "O"-ring face seal connectors
- 10-micron vertical spin-on filter

Electrical

- 12-volt system
- 65-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

Lights

- Four halogen driving/work lights, 32,500 candlepower each (two front and two rear)
- ▲ Six additional halogen work lights, 32,500 candlepower each (two front, two rear, and two side)
- Two front and two rear turn signal/flashing
- Two rear stop and tail
- Two rear reflectors
- ▲ Rotating beacon

Operator's Station

- Modular-design ROPS/FOPS canopy with molded roof (conforms to SAE J1040): Isolation mounted
- Left and right access

710G Operator's Station (continued)

- Slip-resistant steps and ergonomically located handholds
- Headliner
- Coat hook
- 12-volt outlets (2)
- Built-in beverage holders
- Built-in Operator's Manual storage compartment with manual
- Interior rearview mirror
- ▲ Outside rearview mirrors
- Hand throttle with fuel-economy setting at 2,100 rpm
- Suspended foot throttle
- ▲ Tilt steering
- Horn
- Key start switch with electric fuel shutoff
- Fuel gauge, illuminated electronic
- Monitor system with audible and visual warnings: Engine air restriction indicator / Engine oil pressure indicator with audible warning / Hydraulic filter restriction indicator / Parking brake on/off indicator with audible warning / Seat belt indicator / Low brake pressure
- Non-suspension vinyl swivel seat without armrests
- ▲ Suspension vinyl swivel seat with armrests and lumbar support
- ▲ Suspension fabric swivel seat with armrests and lumbar support
- 2-in. seat belt with retractors
- ▲ 3-in. seat belt with retractors
- ▲ Cab: Headliner, dome light, left and right cab doors, tinted safety glass, one rear and one front windshield wiper, fresh air intake heater/defroster/pressurizer (40,000-Btu/hr. [11.7 kW] heater), and 65-amp alternator standard / Front windshield washer, air conditioning (26,000-Btu/hr. [7.6 kW] output and CFC-free R134a refrigerant), 95-amp alternator, and AM/FM/weatherband radio optional / 12-volt outlets (3)

Overall Vehicle

- One-piece unitized construction mainframe
- Vehicle tiedowns, two front and one rear
- Remote grease bank for front axle
- 1,070-lb. (486 kg) front counterweight
- ▲ 1,770-lb. (804 kg) front counterweight
- Fuel tank, 44 gal. (166 L), ground-level fueling
- Two-position easy-tilt hood
- ▲ Front grille screen
- Vandal protection for instrument panel, engine hood, toolbox, hydraulic reservoir, radiator, and fuel tank
- Reverse warning alarm: Switchable to 97 dB(A) or 111 dB(A)
- Dent-resistant full-coverage rear fenders
- ▲ Front fenders*
- ▲ SMV emblem
- ▲ Rental decal kit
- ▲ Special color paint*



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Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 70 020, using No. 2-D fuel at 35 API gravity. No derating is required up to 10,000-ft. (3050 m). Gross power is without cooling fan.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with 21L-28, 14 PR rear tires, 14.5/75-16.1, 10 PR F3 front tires, 1.62-cu. yd. (1.24 m³) loader bucket, 24-in. x 11.1-cu. ft. (610 mm x 0.31 m³) backhoe bucket.



710G Loader Performance with Bucket Options

	1.62-cu. yd. (1.24 m ³) Standard Duty	1.87-cu. yd. (1.34 m ³) Standard- Duty and MFWD	1.375-cu. yd. (1.00 m ³) Multi- purpose and MFWD
Operator control.....	single lever	single lever	dual lever
Breakout force.....	15,540 lb. (69.1 kN)	14,800 lb. (66.0 kN)	15,690 lb. (69.8 kN)
Lifting capacity, full height.....	9,277 lb. (4208 kg)	8,693 lb. (3943 kg)	8,732 lb. (3961 kg)
a Height to bucket hinge pin, maximum.....	12 ft. 5 in. (3.78 m)	12 ft. 5 in. (3.78 m)	12 ft. 5 in. (3.78 m)
b Dump clearance, bucket at 45 degrees.....	9 ft. 7 in. (2.92 m)	9 ft. 4 in. (2.84 m)	9 ft. 8 in. (2.95 m)
c Bucket dump angle, maximum.....	45.3 degrees	45.3 degrees	45.3 degrees
d Reach at full height, bucket at 45 degrees.....	27.2 in. (691 mm)	30.3 in. (770 mm)	26.9 in. (683 mm)
e Rollback angle at ground level.....	40 degrees	40 degrees	40 degrees
f Digging depth below ground, bucket level.....	4.1 in. (104 mm)	4.1 in. (104 mm)	3.2 in. (81 mm)
g Distance from front axle centerline to bucket cutting edge.....	82 in. (2083 mm)	86.5 in. (2198 mm)	80.4 in. (2043 mm)
Raising time to full height.....	4.3 sec.	4.3 sec.	4.3 sec.
Bucket dump time.....	1.3 sec.	1.3 sec.	1.3 sec.
Bucket lowering time (power down).....	3.2 sec.	3.2 sec.	3.2 sec.

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

710G BACKHOE WITH
STANDARD DIPPERSTICK



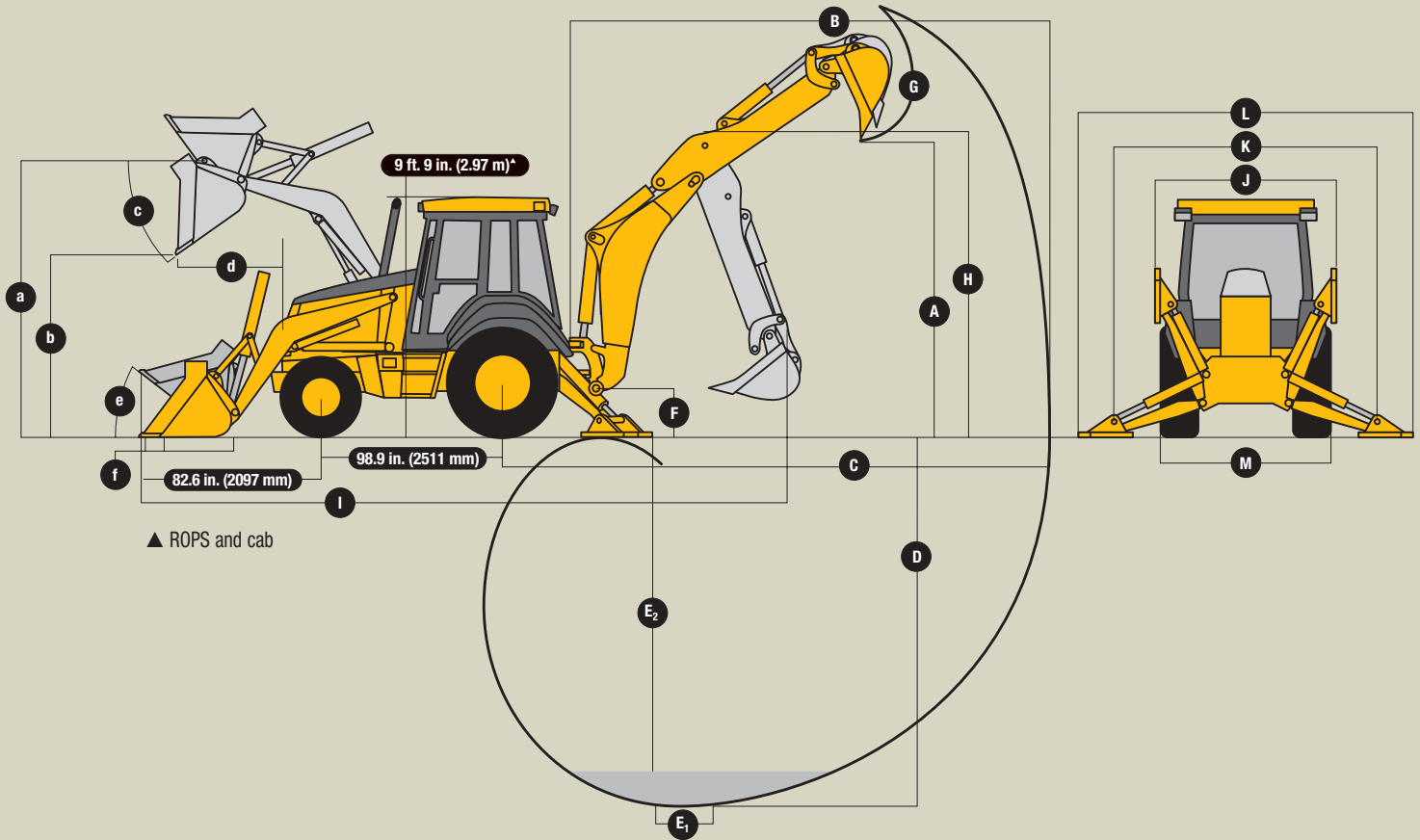
710G BACKHOE WITH 4-FT. 6-IN. (1.37 M)
EXTENDABLE DIPPERSTICK, RETRACTED



710G BACKHOE WITH 4-FT. 6-IN. (1.37 M)
EXTENDABLE DIPPERSTICK, EXTENDED



710G Backhoe Loader



Backhoe

710G

	With Standard Backhoe*	With Extendable Dipperstick*	
		Retracted	Extended
A Loading height, truck loading position.....	14 ft. 3 in. (4.34 m)	14 ft. 3 in. (4.34 m)	16 ft. (4.88 m)
B Reach from center of swing pivot.....	22 ft. 6 in. (6.86 m)	22 ft. 6 in. (6.86 m)	26 ft. 8 in. (8.13 m)
C Reach from center of rear axle.....	26 ft. 8 in. (8.13 m)	26 ft. 8 in. (8.13 m)	30 ft. 10 in. (9.40 m)
D Maximum digging depth	17 ft. 10 in. (5.44 m)	17 ft. 10 in. (5.44 m)	22 ft. 6 in. (6.86 m)
E Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom	17 ft. 9 in. (5.41 m)	17 ft. 9 in. (5.41 m)	22 ft. 5 in. (6.83 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. (5.18 m)	17 ft. (5.18 m)	21 ft. 7 in. (6.58 m)
F Ground clearance, minimum	14 in. (356 mm)	14 in. (356 mm)	14 in. (356 mm)
G Bucket rotation	190 degrees	190 degrees	190 degrees
H Transport height.....	13 ft. 8 in. (4.17 m)	13 ft. 10 in. (4.22 m)	13 ft. 10 in. (4.22 m)
I Overall length, transport.....	26 ft. 9 in. (8.15 m)	26 ft. 9 in. (8.15 m)	26 ft. 9 in. (8.15 m)
J Stabilizer width – transport with ROPS.....	7 ft. 11 in. (2.41 m)	7 ft. 11 in. (2.41 m)	7 ft. 11 in. (2.41 m)
K Stabilizer spread – operating	13 ft. 1 in. (3.99 m)	13 ft. 1 in. (3.99 m)	13 ft. 1 in. (3.99 m)
L Stabilizer overall width.....	15 ft. 3 in. (4.65 m)	15 ft. 3 in. (4.65 m)	15 ft. 3 in. (4.65 m)
M Width over tires.....	90.5 in. (2.29 m)	90.5 in. (2.29 m)	90.5 in. (2.29 m)

*Backhoe specifications are with 24-in. x 11.0-cu. ft. (610 mm x 0.31 m³) bucket.

Cylinders

710G

	<i>Bore</i>	<i>Stroke</i>	<i>Rod</i>
Loader boom (2).....	3.84 in. (100 mm)	32.00 in. (813 mm)	2.20 in. (56 mm)
Loader bucket (1).....	4.53 in. (115 mm)	26.14 in. (664 mm)	2.20 in. (56 mm)
Backhoe boom (1).....	6.30 in. (160 mm)	37.17 in. (944 mm)	3.74 in. (95 mm)
Backhoe crowd (1).....	5.51 in. (140 mm)	31.18 in. (792 mm)	3.35 in. (85 mm)
Backhoe bucket (1).....	4.53 in. (115 mm)	37.09 in. (942 mm)	2.76 in. (70 mm)
Backhoe swing (2).....	4.33 in. (110 mm)	12.13 in. (308 mm)	2.20 in. (56 mm)
Backhoe extendable dipperstick (1).....	3.15 in. (80 mm)	54.02 in. (1372 mm)	1.77 in. (45 mm)
Backhoe stabilizer (2).....	4.53 in. (115 mm)	21.34 in. (542 mm)	2.48 in. (63 mm)
Steering (1) non-powered axle.....	2.76 in. (70 mm)	9.06 in. (230 mm)	1.26 in. (32 mm)

Tires

	<i>Rear</i>	<i>Front</i>
With non-powered front axle.....	21L-28, 14 PR R4 21L-28, 14 PR R4	14.5/75-16.1, 10 PR F3 16.5L-16.1, 10 PR L1
With mechanical-front-wheel-drive.....	21L-28, 14 PR R4 20.5-25, 12 PR L2	15-19.5, 8 PR, Sure Grip 15-19.5, 8 PR, Sure Grip

SAE Operating Weights

Standard.....	23,000 lb. (10 430 kg)
Cab adds.....	645 lb. (293 kg)
Mechanical-front-wheel-drive less tires adds.....	240 lb. (109 kg)
Extendable dipperstick with required counterweight adds.....	890 lb. (404 kg)
Typical operating weight with cab, MFWD with tires, and extendable dipperstick Two counterweights equaling 1,628 lb. (738 kg).....	26,500 lb. (12 020 kg)
Optional counterweight front adds.....	660 lb. (299 kg)
Reversible stabilizer pads add.....	90 lb. (41 kg)

See backhoe and loader performance data for bucket weights.

Loader Buckets

	<i>Width</i>	<i>Heaped Capacity</i>	<i>Weight</i>
General purpose.....	96 in. (2440 mm) 96 in. (2440 mm)	1.62 cu. yd. (1.24 m ³) 1.87 cu. yd. (1.34 m ³)	1,773 lb. (804 kg) 1,830 lb. (830 kg)
Multipurpose.....	96 in. (2440 mm)	1.375 cu. yd. (1.00 m ³)	1,930 lb. (875 kg)

Auxiliary cutting edge and skid shoes are standard on all buckets.

Backhoe Performance

	<i>With Standard Backhoe*</i>	<i>With Extendable Dipperstick*</i>	
		<i>Retracted</i>	<i>Extended</i>
Digging force, bucket cylinder.....	17,000 lb. (75.6 kN)	17,000 lb. (75.6 kN)	17,000 lb. (75.6 kN)
Digging force, crowd cylinder.....	11,750 lb. (52.3 kN)	11,750 lb. (52.3 kN)	8,100 lb. (36.0 kN)
Swing arc.....	180 degrees	180 degrees	180 degrees
Operator control.....	two levers	right foot treadle	right foot treadle
Bucket rotation.....	190 degrees	190 degrees	190 degrees
Bucket positions (rollback).....	-24 degrees	-24 degrees	-24 degrees
Stabilizer angle rearward.....	15.5 degrees	15.5 degrees	15.5 degrees
Leveling angle.....	13 degrees	13 degrees	13 degrees

*Backhoe specifications are with 24-in. x 11.0-cu. ft. (610 mm x 0.31 m³) bucket.

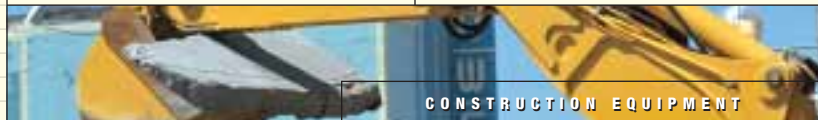
Backhoe Buckets

	<i>Width</i>	<i>Capacity</i>	<i>Weight</i>
Heavy duty with lift loop.....	18 in. (457 mm) 24 in. (610 mm) 30 in. (762 mm) 36 in. (914 mm)	7.5 cu. ft. (0.21 m ³) 11.0 cu. ft. (0.31 m ³) 14.5 cu. ft. (0.41 m ³) 18.0 cu. ft. (0.51 m ³)	620 lb. (281 kg) 698 lb. (317 kg) 767 lb. (348 kg) 845 lb. (383 kg)
Severe duty with lift loop.....	18 in. (457 mm) 24 in. (610 mm) 30 in. (762 mm) 36 in. (914 mm)	7.5 cu. ft. (0.21 m ³) 11.0 cu. ft. (0.31 m ³) 14.5 cu. ft. (0.41 m ³) 18.0 cu. ft. (0.51 m ³)	737 lb. (334 kg) 854 lb. (387 kg) 970 lb. (440 kg) 1,065 lb. (483 kg)

710G

BACKHOE LOADER

SPECIFICATIONS



CONSTRUCTION EQUIPMENT

Engine 710G

Type.....	John Deere 6068T, turbocharged; meets U.S. EPA, CARB, and European NRMM non-road diesel engine emission regulations, effective January 1, 2004	
Rated power	129 SAE gross hp (96 kW) / 118 SAE net hp (88 kW) @ 2,200 rpm	
Cylinders.....	6	
Displacement.....	414 cu. in. (6.8 L)	
Fuel consumption, typical.....	2.0 to 3.3 gal./hr. (7.6 to 12.5 L/h)	
Torque rise.....	26 percent	
Maximum net torque.....	393 lb.-ft. (532 Nm)	
Lubrication.....	pressure system with spin-on filter and cooler	
Air cleaner	dual stage dry type with safety element and precleaner	
Electrical system.....	12 volt with 65-amp alternator	
Suction-type cooling fan		

Transmission

Four-speed, helical cut gear, full power-shifted transmission with hydraulic reverser		
Torque converter, single stage, dual phase with		
1.95:1 stall ratio	11 in. (280 mm)	
Travel speeds*	<i>Forward</i>	<i>Reverse</i>
Gear 1	3.8 mph (6.2 km/h)	4.0 mph (6.4 km/h)
Gear 2	6.4 mph (10.3 km/h)	6.6 mph (10.6 km/h)
Gear 3	15.3 mph (24.7 km/h)	16.1 mph (25.9 km/h)
Gear 4	23.0 mph (37.1 km/h)	
*Equipped with 21L-24 rear and 14.5/75-16.1 front tires.		

Final Drives

Heavy-duty, inboard planetary final drives evenly distribute shock loads over four gears (per side)

Brakes

Power-assisted, hydraulic wet disc, mounted inboard, self adjusting and self equalizing

Capacities

Fuel tank (with ground level fueling)	69 gal. (261 L)
Engine coolant	28 qt. (26 L)
Engine oil including filter	20 qt. (19 L)
Torque converter and transmission	16 qt. (15 L)
Hydraulic system	40 gal. (151 L)
Rear axle.....	17 qt. (16 L)
Mechanical-front-wheel-drive axle center housing	9.5 qt. (9 L)
Planetary wheel end housings (each).....	0.96 qt. (0.81 L)

Steering

Hydrostatic power steering and emergency steering conform to ISO5010

Non-powered axle

Curb turning radius with brakes	14 ft. 0 in. (4.3 m)
Without brakes.....	15 ft. 5 in. (4.7 m)
Bucket clearance circle with brakes	37 ft. 6 in. (11.4 m)
Without brakes.....	40 ft. 4 in. (12.3 m)
Steering wheel turns, stop to stop	2.8 to 4.4

Mechanical-front-wheel-drive

Curb turning radius with brakes	13 ft. 0 in. (4.0 m)
Without brakes.....	15 ft. 5 in. (4.7 m)
Bucket clearance circle with brakes	35 ft. 6 in. (10.8 m)
Without brakes.....	40 ft. 2 in. (12.2 m)
Steering wheel turns, stop to stop	2.7 to 4.3

Axle oscillations stop to stop, both axles

Axle ratings (SAE J43)	
Front.....	30,460 lb. (13 800 kg)
Rear	23,700 lb. (10 700 kg)

Hydraulic System

System.....	pressure compensated load sensing (PCLS)
Pressure, main relief	3,625 psi (25 000 kPa)
Pump	axial piston
Flow @ 2,200 rpm	52 gpm (197 L/min.)
Filter, return oil.....	10-micron, spin-on enclosed replaceable element



710G



Optional pilot controls are loaded with best-in-class features and are available with John Deere backhoe- or backhoe/SAE excavator-style operating patterns.



Equip your 710G with an extendable dipperstick for a digging depth and reach that rivals 12-metric-ton excavators. Outer box grasps objects between the bucket and exclusive gripper teeth, eliminating the need for an extra-cost thumb.



Add a quick-coupler and attachments to either end and put more work within reach. With the heavy-duty 710G, the possibilities are many.



Easy-tilt hood and same-side ground-level service access help make quick and easy work of daily and periodic maintenance.

Far more than just a big backhoe

The 710G looks like a big backhoe — but works like something else. It digs deep, cranes heavy objects, and utilizes an ever-changing arsenal of attachments. Equipped with optional limited-slip front-wheel drive, it also heaps the bucket with four-wheel-drive loader-like productivity. In fact, this top-of-the-line backhoe does so much so well, it's like getting several machines for the price of one. Productive, reliable, serviceable — there's only one 710G. See your John Deere dealer for a demo.

