

# 290G LC



<b>Engine</b>	<b>290G LC</b>		
Manufacturer and Model	John Deere PowerTech™ Plus 6.8 L		
Non-Road Emission Standard	EPA Tier 3/EU Stage IIIA		
Net Rated Power (ISO 9249)	140 kW (188 hp) at 2,100 rpm		
Cylinders	6		
Displacement	6.8 L (415 cu. in.)		
Off-Level Capacity	70% (35 deg.)		
Aspiration	Turbocharged, air-to-air charge-air cooler		
<b>Cooling</b>			
Cool-on-demand hydraulic-driven, suction-type fan with remote-mounted drive			
<b>Powertrain</b>			
2-speed propel with automatic shift			
<b>Maximum Travel Speed</b>			
Low	3.3 km/h (2.1 mph)		
High	5.5 km/h (3.4 mph)		
Drawbar Pull	25 100 kg (55,336 lb.)		
<b>Hydraulics</b>			
Open center, load sensing			
<b>Main Pumps</b>	2 variable-displacement pumps		
Maximum Rated Flow	236 L/m (62.3 gpm) x 2		
<b>System Operating Pressure</b>			
Circuits			
Implement	34 300 kPa (4,975 psi)		
Travel	35 000 kPa (5,076 psi)		
Swing	33 300 kPa (4,830 psi)		
Power Boost	38 000 kPa (5,511 psi)		
<b>Controls</b>	Pilot levers, short stroke, low-effort hydraulic pilot controls with shutoff lever		
<b>Cylinders</b>			
	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>
<b>Boom (2)</b>	135 mm (5.3 in.)	95 mm (3.7 in.)	1360 mm (53.5 in.)
<b>Arm (1)</b>	150 mm (5.9 in.)	105 mm (4.1 in.)	1659 mm (65.3 in.)
<b>Bucket (1)</b>	135 mm (5.3 in.)	90 mm (3.5 in.)	1070 mm (42.1 in.)
<b>Electrical</b>			
Number of Batteries (12 volt)	2		
Battery Capacity	1,400 CCA		
Alternator Rating	100 amp		
Work Lights	2 halogen (one mounted on boom, one on frame)		
<b>Undercarriage</b>			
<b>Rollers (each side)</b>			
Carrier	2		
Track	8		
Shoes, Triple Semi-Grousers (each side)	48		
<b>Track</b>			
Adjustment	Hydraulic		
Guides	Center		
Chain	Sealed and lubricated		
<b>Ground Pressure</b>			
800-mm (32 in.) Triple Semi-Grouser Shoes	41.6 kPa (6.04 psi)		
<b>Swing Mechanism</b>			
Speed	12.6 rpm		
Torque	77 140 Nm (56,896 lb.-ft.)		



**Serviceability** 290G LC

Refill Capacities	
Fuel Tank	500 L (132 gal.)
Cooling System	26.5 L (7 gal.)
Engine Oil with Filter	24.6 L (6.5 gal.)
Hydraulic Tank	147.6 L (39 gal.)
Hydraulic System	240 L (63 gal.)
Swing Drive	8.5 L (9 qt.)
Gearbox	
Propel (each)	7.6 L (8 qt.)
Pump Drive	1.1 L (1.2 qt.)

**Operating Weights**

With full fuel tank; 79-kg (175 lb.) operator; 1.34-m<sup>3</sup> (1.75 cu. yd.), 1065-mm (42 in.), 1034-kg (2,280 lb.) bucket; 3.75-m (12 ft. 4 in.) arm; 5812-kg (12,813 lb.) counterweight; and 800-mm (32 in.) triple semi-grouser shoes

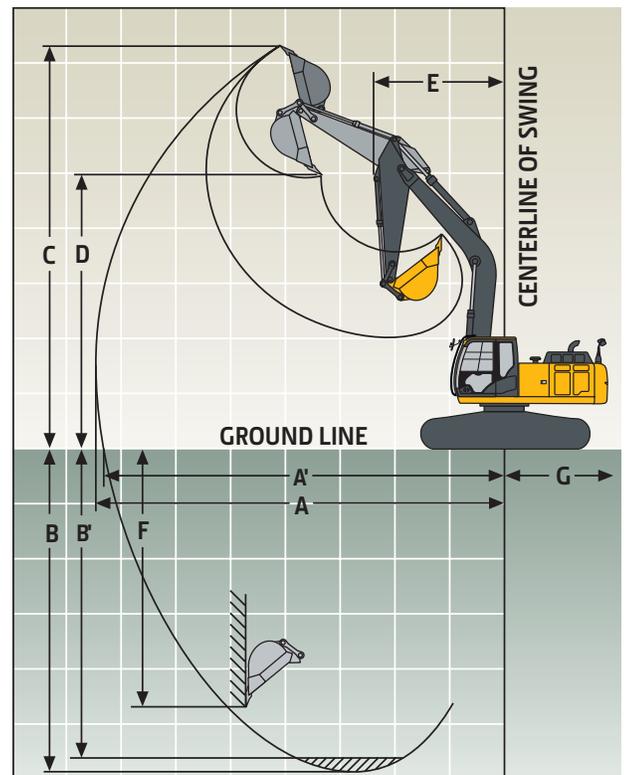
Operating Weight	30 090 kg (66,338 lb.)
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**Component Weights**

Undercarriage with 800-mm (32 in.) Triple Semi-Grouser Shoes	11 765 kg (25,937 lb.)
One-Piece Boom (with arm cylinder)	2307 kg (5,086 lb.)
Arm with Bucket Cylinder and Linkage	
3.11 m (10 ft. 2 in.)	1407 kg (3,102 lb.)
3.75 m (12 ft. 4 in.)	1497 kg (3,301 lb.)
Boom-Lift Cylinders (2), Total Weight	494 kg (1,089 lb.)

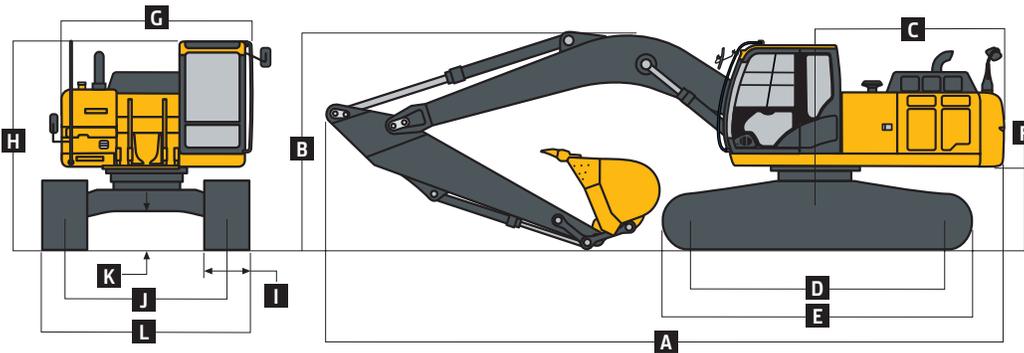
**Operating Dimensions**

Arm Length	3.11 m (10 ft. 2 in.)	3.75 m (12 ft. 4 in.)
Arm Digging Force		
SAE	137.9 kN (30,992 lb.)	121.3 kN (27,277 lb.)
ISO	144.0 kN (32,372 lb.)	127.0 kN (28,551 lb.)
Bucket Digging Force		
SAE	175.0 kN (39,352 lb.)	175.0 kN (39,352 lb.)
ISO	203.0 kN (45,636 lb.)	203.0 kN (45,636 lb.)
<b>A</b>	Maximum Reach	10.71 m (35 ft. 2 in.)
<b>A'</b>	Maximum Reach at Ground Level	10.52 m (34 ft. 6 in.)
<b>B</b>	Maximum Digging Depth	7.23 m (23 ft. 9 in.)
<b>B'</b>	Maximum Digging Depth at 2.44-m (8 ft. 0 in.) Flat Bottom	7.05 m (23 ft. 2 in.)
<b>C</b>	Maximum Cutting Height	10.26 m (33 ft. 8 in.)
<b>D</b>	Maximum Dumping Height	7.31 m (24 ft. 0 in.)
<b>E</b>	Minimum Swing Radius	3.91 m (12 ft. 10 in.)
<b>F</b>	Maximum Vertical Wall	6.48 m (21 ft. 3 in.)
<b>G</b>	Tail-Swing Radius	3.14 m (10 ft. 4 in.)



## Machine Dimensions 290G LC

<b>A</b> Overall Length	3.11 m (10 ft. 2 in.)	10.54 m (34 ft. 7 in.)
	3.75 m (12 ft. 4 in.)	10.59 m (34 ft. 9 in.)
<b>B</b> Overall Height	3.11 m (10 ft. 2 in.)	3.17 m (10 ft. 5 in.)
	3.75 m (12 ft. 4 in.)	3.31 m (10 ft. 10 in.)
<b>C</b> Rear-End Length/Swing Radius		3.14 m (10 ft. 4 in.)
<b>D</b> Distance Between Idler/Sprocket Centerline		4.05 m (13 ft. 3 in.)
<b>E</b> Undercarriage Length		4.94 m (16 ft. 2 in.)
<b>F</b> Counterweight Clearance		1.18 m (3 ft. 10 in.)
<b>G</b> Upperstructure Width		2.89 m (9 ft. 6 in.)
<b>H</b> Cab Height		3.11 m (10 ft. 2 in.)
<b>I</b> Track Width with Triple Semi-Grouser Shoes		800 mm (32 in.)
<b>J</b> Gauge Width		2.59 m (8 ft. 6 in.)
<b>K</b> Ground Clearance		0.51 m (20 in.)
<b>L</b> Overall Width with 800-mm (32 in.) Triple Semi-Grouser Shoes		3.39 m (11 ft. 3 in.)



## Lift Capacities

**Boldface type** indicates hydraulically limited capacity; **lightface type** indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 930-kg (2,050 lb.) bucket and 800-mm (32 in.) shoes; standard gauge; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on ISO 10567.

Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)		9.0 m (30 ft.)	
Horizontal Distance from Centerline of Rotation	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 3.11-m (10 ft. 2 in.) arm</i>												
6.0 m (20 ft.)							<b>5607</b>	<b>5607</b>	<b>5543</b>	<b>5104</b>		
							(12,235)	(12,235)	(12,217)	(10,924)		
4.5 m (15 ft.)					<b>8080</b>	<b>8080</b>	<b>6681</b>	<b>6681</b>	<b>6011</b>	<b>4992</b>		
					(17,332)	(17,332)	(14,472)	(14,472)	(13,120)	(10,714)		
3.0 m (10 ft.)					<b>11 031</b>	<b>10 874</b>	<b>8082</b>	<b>6920</b>	<b>6737</b>	<b>4810</b>		
					(23,653)	(23,449)	(17,465)	(14,907)	(14,643)	(10,337)		
1.5 m (5 ft.)					<b>13 516</b>	<b>10 146</b>	<b>9432</b>	<b>6551</b>	<b>7489</b>	<b>4618</b>		
					(29,105)	(21,856)	(20,388)	(14,108)	(16,252)	(9,931)		
Ground Line					<b>14 734</b>	<b>9808</b>	<b>10 378</b>	<b>6305</b>	<b>7605</b>	<b>4473</b>		
					(31,860)	(21,093)	(22,461)	(13,571)	(16,351)	(9,620)		
-1.5 m (-5 ft.)	<b>5847</b>	<b>5847</b>	<b>9276</b>	<b>9276</b>	<b>14 900</b>	<b>9730</b>	<b>10 752</b>	<b>6200</b>	<b>7533</b>	<b>4409</b>		
	(13,118)	(13,118)	(21,093)	(21,093)	(32,277)	(20,911)	(23,171)	(13,343)	(16,204)	(9,488)		
-3.0 m (-10 ft.)	<b>10 936</b>	<b>10 936</b>	<b>15 478</b>	<b>15 478</b>	<b>14 200</b>	<b>9816</b>	<b>10 428</b>	<b>6228</b>				
	(24,567)	(24,567)	(35,216)	(35,216)	(30,733)	(21,101)	(22,524)	(13,411)				
-4.5 m (-15 ft.)			<b>17 555</b>	<b>17 555</b>	<b>12 366</b>	<b>10 068</b>	<b>8917</b>	<b>6425</b>				
			(37,798)	(37,798)	(26,562)	(21,670)	(18,906)	(13,880)				

**Lift Capacities (continued) 290G LC**

**Boldface type** indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 930-kg (2,050 lb.) bucket and 800-mm (32 in.) shoes; standard gauge; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on ISO 10567.

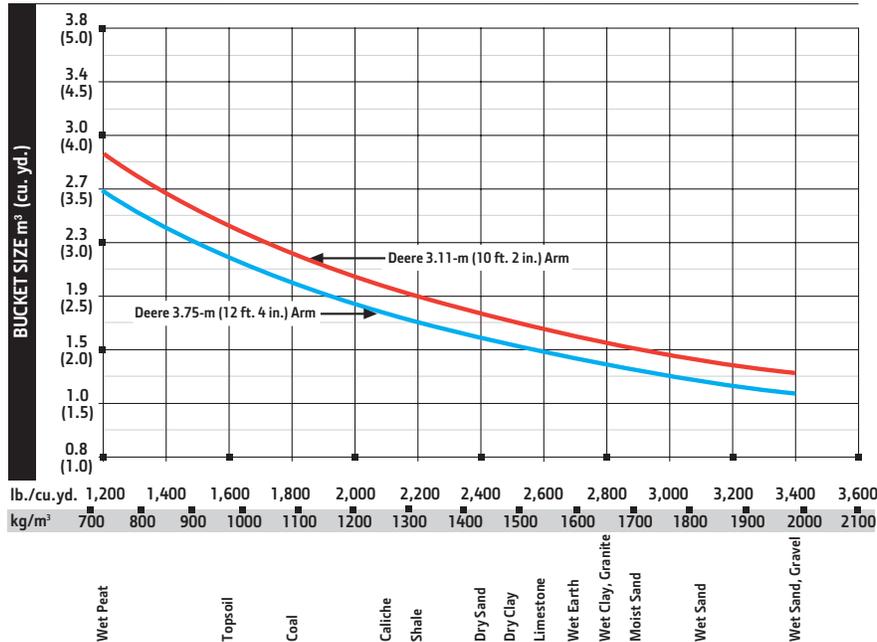
Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)		9.0 m (30 ft.)		
Horizontal Distance from Centerline of Rotation	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	
With 3.75-m (12 ft. 4 in.) arm 6.0 m (20 ft.)									4840 (10,650)	4840 (10,650)			
4.5 m (15 ft.)							5848 (12,677)	5848 (12,677)	5397 (11,777)	5076 (10,897)	4555 (8,804)	3591 (7,667)	
3.0 m (10 ft.)					9647 (20,700)	9647 (20,700)	9647 (20,700)	9647 (20,700)	7312 (15,807)	7054 (15,189)	6195 (13,465)	5616 (11,915)	3502 (7,495)
1.5 m (5 ft.)					12 454 (26,816)	10 359 (22,310)	8800 (19,025)	6637 (14,290)	7042 (15,284)	6469 (9,995)	5761 (12,367)	3395 (7,274)	
Ground Line			5560 (12,750)	5560 (12,750)	14 199 (30,686)	9862 (21,211)	9959 (21,554)	6329 (13,620)	7607 (16,350)	6329 (9,606)	4468 (9,606)	5662 (12,165)	3304 (7,088)
-1.5 m (-5 ft.)	5556 (12,430)	5556 (12,430)	8978 (20,367)	8978 (20,367)	14 843 (32,139)	9672 (20,787)	10 591 (22,935)	6164 (13,261)	7489 (16,101)	4363 (9,382)			
-3.0 m (-10 ft.)	9347 (20,976)	9347 (20,976)	13 520 (30,688)	13 520 (30,688)	14 578 (31,555)	9683 (20,810)	10 594 (22,911)	6135 (13,203)	7479 (16,093)	4354 (9,375)			
-4.5 m (-15 ft.)	13 921 (31,383)	13 921 (31,383)	19 464 (41,978)	19 464 (41,978)	13 317 (28,694)	9859 (21,207)	9723 (20,862)	6247 (13,467)					
-6.0 m (-20 ft.)					10 296 (21,623)	10 264 (21,623)							

**Buckets**

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. Tooth selection includes the John Deere Fanggs™ Standard, Tiger, Twin Tiger, Abrasion panel, or Flare tooth. Replaceable cutting edges and a variety of teeth are available through John Deere Parts. Optional side cutters add 150 mm (6 in.) to bucket widths. Capacities are SAE heaped ratings.

Type Bucket	Bucket Width		Bucket Capacity		Bucket Weight		Bucket Dig Force		Arm Dig Force 2.96 m (9 ft. 9 in.)		Arm Dig Force 3.61 m (11 ft. 10 in.)		Bucket Tip Radius		Number of Teeth
	mm	in.	m <sup>3</sup>	cu. yd.	kg	lb.	kN	lb.	kN	lb.	kN	lb.	mm	in.	
Heavy Duty	1067	42	1.06	1.38	997	2,197	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	5
Heavy Duty	1219	48	1.22	1.60	1071	2,361	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	6
Heavy Duty	1372	54	1.39	1.82	1138	2,509	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	6
Heavy Duty High Capacity	610	24	0.70	0.92	801	1,767	167.4	37,636	124.7	28,044	108.9	24,477	1588	62.5	3
Heavy Duty High Capacity	760	30	0.92	1.20	913	2,012	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	4
Heavy Duty High Capacity	914	36	1.13	1.48	968	2,135	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	4
Heavy Duty High Capacity	1065	42	1.34	1.75	1035	2,281	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	5
Heavy Duty High Capacity	1220	48	1.55	2.00	1137	2,507	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	6
Ditching	1525	60	3.00	3.90	709	1,563	232.8	52,338	150.5	33,835	131.0	29,445	1194	47.0	0

**Bucket Selection Guide\***



\*Contact your John Deere dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Does not include optional equipment such as thumbs or couplers. Larger buckets may be possible when using light materials, for flat and level operations, less compacted materials, and volume loading applications such as mass-excavation applications in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications, rocks, and uneven surfaces. Bucket capacity indicated is SAE heaped.

# Additional equipment

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

## 290G Engine

- Auto-idle system
- Automatic belt-tension device
- Batteries (2 – 12 volt)
- Coolant recovery tank
- Dual-element dry-type air filter
- Electronic engine control
- Enclosed fan guard (conforms to SAE J1308)
- Engine coolant to –37 deg. C (–34 deg. F)
- Programmable auto shutdown
- Fuel filter with water separator
- Full-flow oil filter
- Turbocharger with charge air cooler
- Cool-on-demand hydraulic-driven fan
- Glow-plug start aid
- 500-hour engine-oil-change interval
- 70% (35 deg.) off-level capability
- Engine-oil-sampling valve
- ▲ Hydraulic fan reverser
- ▲ Chrome exhaust stack
- ▲ Engine coolant heater

## Hydraulic System

- Reduced-drift valve for boom down, arm in
- Auxiliary hydraulic valve section
- Spring-applied, hydraulically released automatic swing brake
- Auxiliary hydraulic-flow adjustments through monitor
- Auto power lift
- 5,000-hour hydraulic-oil-change interval
- Hydraulic-oil-sampling valve
- ▲ Auxiliary hydraulic lines
- ▲ Auxiliary pilot and electric controls
- ▲ Hydraulic filter restriction indicator kit
- ▲ Load-lowering control / Anti-drift device
- ▲ Single-pedal propel control
- ▲ Control pattern change valve

## Undercarriage

- Planetary drive with axial piston motors
- Propel motor shields
- Spring-applied, hydraulically released automatic propel brake
- Track guides, front idler and center
- 2-speed propel with automatic shift
- Upper carrier rollers (2)
- Sealed and lubricated track chain
- Triple semi-grouser shoes, 800 mm (32 in.)

## 290G Upperstructure

- Right-hand, left-hand, and counterweight mirrors
- Vandal locks with ignition key: Cab door / Service doors / Toolbox
- Debris screen in side panel
- Remote-mounted engine oil and fuel filters

## Front Attachments

- Centralized lubrication system
- Dirt seals on all bucket pins
- Less boom and arm
- Oil-impregnated bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- ▲ Arm, 3.11 m (10 ft. 2 in.)
- ▲ Arm, 3.75 m (12 ft. 4 in.)
- ▲ Attachment quick-couplers
- ▲ Boom cylinder with plumbing to mainframe for less boom and arm
- ▲ Buckets: Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- ▲ “D” channel guard
- ▲ Material clamps
- ▲ Super-long fronts

## Operator's Station

- Adjustable independent-control positions (levers-to-seat, seat-to-pedals)
- AM/FM radio
- Auto climate control/air conditioner/heater/pressurizer
- Built-in Operator's Manual storage compartment and manual
- Cell-phone power outlet, 12 volt, 60 watt, 5 amp
- Coat hook
- Deluxe suspension cloth seat with 100-mm (4 in.) adjustable armrests
- Floor mat
- Front windshield wiper with intermittent speeds
- Gauges (illuminated): Engine coolant / Fuel
- Horn, electric
- Hourmeter, electric
- Hydraulic shutoff lever, all controls
- Hydraulic warm-up control
- Interior light
- Large cup holder

## 290G Operator's Station (continued)

- Machine Information Center (MIC)
- Mode selectors (illuminated): Power modes – 3 / Travel modes – 2 with automatic shift / Work mode – one
- Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / System monitoring with alarm features: Auto-idle indicator, engine air cleaner restriction indicator light, engine check, engine coolant temperature indicator light with audible alarm, engine oil pressure indicator light with audible alarm, low-alternator-charge indicator light, low-fuel indicator light, fault code alert indicator, fuel-rate display, wiper-mode indicator, work-lights-on indicator, and work-mode indicator
- Motion alarm with cancel switch (conforms to SAE J994)
- Power-boost switch on right console lever
- Auxiliary hydraulic control switches in right console lever
- Propel pedals and levers
- SAE 2-lever control pattern
- Seat belt, 51 mm (2 in.), retractable
- Tinted glass
- Transparent tinted overhead hatch
- Hot/cold beverage compartment
- ▲ Air-suspension heated seat
- ▲ Hydraulic oil filter restriction indicator light
- ▲ Protection screens for cab front, rear, and side
- ▲ Seat belt, 76 mm (3 in.), non-retractable
- ▲ Window vandal-protection covers

## Electrical

- 100-amp alternator
- Blade-type multi-fused circuits
- Positive-terminal battery covers
- JDLink™ Ultimate wireless communication system (available in specific countries; see your dealer for details)
- ▲ Rearview camera
- ▲ Cab extension wiring harness

## Lights

- Work lights: Halogen / One mounted on boom / One mounted on frame
- ▲ 2 lights mounted on cab / One mounted on right side of boom

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 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 1065-mm (42 in.) bucket, 800-mm (32 in.) triple semi-grouser shoes, 5812-kg (12,813 lb.) counterweight, full fuel tank, and 79-kg (175 lb.) operator.

