311D LRR
Hydraulic Excavators

CATERPILLAR®

Engine		
Engine Model	Cat® C4.2 ACERT®	
Net Power – SAE J1349	60 kW	80 hp
Gross Power	64 kW	86 hp
Weights		
Operating Weight	12 480 kg	27,514 lb

Features

Comfortable Operator Station

Spacious and quiet, this world class cab lets the operator focus on performance and production.

Industry-Leading Performance

The 311D LRR with a Cat® C4.2 ACERT® engine and overall system efficiency delivers industry-leading productivity.

Maximum Versatility

Easily configure a large variety of work tools with the Cat Tool Control System.

Proven Reliability

Caterpillar® design and manufacturing techniques provide maximum uptime with outstanding durability and service life.

Low Emissions Engine

Move material using less fuel with the Cat C4.2 ACERT engine. It meets U.S. EPA Tier 3 and EU Stage IIIA emissions while maintaining the power and performance expected from Caterpillar.

Contents

Achieve high productivity and lower operating costs with the Cat® 311D LRR Hydraulic Excavator. Unmatched versatility, controllability, easy operation and a comfortable, redesigned operator station help make the 311D LRR an industry-leading performer.

Operator Station

Enhanced comfort, operation and visibility

Experience a spacious, quiet and comfortable operator station. The cab is pressurized to reduce the amount of dust that enters the cab, keeping the operator comfortable the entire shift, while assuring high productivity during long work days.

- The comfortable seat adjusts to suit the operator's size and weight. Available as an option is a heated, air suspension seat.
- Standard air conditioning with automatic climate control adjusts temperature and airflow.
- Low effort joystick controls are designed to match the operator's natural wrist and arm position. Joysticks can be operated with arms on the adjustable armrests. The horizontal and vertical strokes are designed to reduce fatigue.

Prestart Check and Monitor Display

Prior to starting the machine, the system checks for low engine oil, hydraulic oil and engine coolant fluid levels and warns the operator through a color Liquid Crystal Display (LCD) monitor. The LCD monitor displays vital operating and performance information, in 28 languages, for operator convenience.

Cab Exterior

The 311D LRR provides a new cab design that allows a Falling Object Guard System (FOGS) or front windshield screen to be bolted directly to the cab, at the factory or in the field, enabling the machine to meet specifications and job site requirements. The cab shell is attached to the frame with viscous rubber cab mounts that dampen vibrations and sound levels to enhance operator comfort.

Machine Security System

An optional Machine Security System (MSS) utilizes a programmable key, deterring theft, vandalism and unauthorized usage. MSS uses electronically coded keys selected by the customer to limit usage by individuals or time parameters.

Engine

Delivering the most work per liter/gallon of fuel consumed

The Cat® C4.2 engine with ACERT® Technology optimizes performance and meets U.S. EPA Tier 3 and EU Stage IIIA regulations. In conjunction with integrated electronics, ACERT Technology reduces emissions during the combustion process by using advanced technology in the air and fuel systems. The Cat C4.2 engine delivers exceptional power, allowing more hydraulic pressure to drive productivity and reduce your cost per ton of material moved.

Automatic Engine Control and Fuel Delivery

A two stage engine speed control and one-touch low idle button maximize fuel efficiency and reduce sound levels. Fuel delivery is managed by the ADEM™ A4 Engine Controller for the best performance per liter (gallon) of fuel used. Flexible fuel mapping allows the engine to respond quickly to varying application needs.

Crankshaft and Pistons

A forged, one-piece, induction hardened crankshaft enhances balance, decreases vibration and improves abrasion resistance. Heat resistant, aluminum alloy pistons have a short compression height for greater efficiency and longer life.

Economy Mode

Accessible through the in-cab monitor, economy mode allows you to balance the demands of performance and fuel economy while maintaining the breakout forces and lift capacity enjoyed at standard power.

Hydraulics

Low effort and precise control for highly efficient performance

Outstanding Performance

With two percent more hydraulic pressure for additional lift and breakout forces, the 311D LRR hydraulic system is designed for high efficiency and performance. Auxiliary hydraulic and electrical lines are routed to the boom foot making installation of hydraulic circuits much easier. This compact design utilizes short tubes and lines, reducing friction and pressure drops, resulting in a more efficient use of power.

- Hydraulic snubbers at the rod end of the boom cylinders and both ends of the stick cylinders cushion shock, reduce sound and increase cylinder life.
- Flow is reduced to a minimum when controls are in neutral to reduce fuel consumption and extend component life.
- Electronic Under Speed Control electronically adjusts pump output to not exceed engine power, preventing the need to reserve engine power to avoid engine stalls.

Boom and Stick Regeneration Circuit

The boom and stick regeneration circuit saves energy during boom-down and stick-in operation, increasing efficiency and lowering operating costs.

Easy Operation

Work mode and power mode switches have been eliminated making full power available at all times. Operators do not need to learn different modes. An automatic boom and swing priority function automatically selects the best mode based on joystick movement.

Undercarriage and Structures

Strong, stable and easy to maneuver

Caterpillar uses advanced engineering and software to analyze all structures, creating a durable, reliable machine for the toughest applications. More than 70 percent of the structural welds are robotic and achieve additional penetration over manual welds. These structural components and undercarriage are the backbone of the machine's durability.

Carbody Design

X-shaped, box section carbody provides excellent resistance to torsional bending. Robot-welded track roller frames are press-formed, pentagonal units that deliver exceptional strength and service life. Idler and center guards help maintain track alignment when traveling or working on slopes.

Grease Lubricated Track

Grease lubricated track protects the track link, delivers long track pin and bushing inner wear and reduces sound levels.

Travel Motors

Travel motors with automatic speed selection let the 311D LRR automatically change up and down from high and low speeds in a smooth controlled manner.

Front Linkage

Reliable, durable and versatile

Built for performance and long service life, Cat booms and sticks are welded, box-section structures with thick multi-plate high strength steel fabrications. Service intervals are extended with self-lubricating bearings that resist corrosion and galling for superior durability.

Boom

The boom is designed for maximum digging capability and is robotic welded to ensure consistent quality. This allows excellent all-around versatility and a large working envelope.

Stick

Three stick options are available to meet your application needs and increase performance and productivity. A new 2.6 m (8'6") intermediate stick is available to provide long reach and increased digging and lifting capability.

Versatility

More options for more work

Work Tools

Caterpillar offers a variety of work tools, including hammers, thumbs, grapples, multi, shears, pulverizers and vibratory compactors to fit your application needs. Additionally, a wide range of buckets are available to optimize machine performance. Auxiliary hydraulic and electrical lines are routed to the boom foot for easier installation of auxiliary hydraulic circuits, therefore reducing time, parts and cost required to add a work tool.

Hydraulic Pin Grabber

An optional hydraulic pin grabber is available to pick up a wide variety of work tools without having to leave the cab, thus maximizing productivity.

Enhanced Systems

Work tool functionality has increased the versatility of the machine with the enhancement of the following:

- An optional Combined System enables one or two pump flow in one or two directions. With this system, only one hydraulic circuit is required.
- The Tool Control System stores up to 10 different tool settings through the in-cab display monitor. Cat Work Tools are selectable with preset flows and pressures.
- Offered as an option, the Priority Flow System provides one-way or two-way hydraulic work tools, such as a mower, priority for hydraulic flow.
- Medium Pressure Circuit is available as an attachment for work tools requiring moderate hydraulic flow, such as a rotating bucket or shears.
- A reduced tail swing radius allows the counterweight to swing within the length of the tracks, reducing the potential for damage to the machine and job site obstacles on busy work sites, alongside roadways and around tight residential construction jobs to name a few.

Serviceability

Simplified service and maintenance saves time and money

Designed with the service technician in mind, many service locations are at ground level so critical maintenance can be done quickly and efficiently. Longer maintenance intervals reduce cost and increase machine availability.

- LCD monitor has the capability to memorize working hours for filters, fluids, components and work tools. Working time histories and recommended change intervals can be displayed.
- Oil level gauge, fuel filter and priming pump are conveniently located on engine structure for easy maintenance.
- An optional electronic fuel water sensor is available to alert the operator when the water level is high.
- Product Link assists with fleet management by tracking hours, location and product health.
- New anti-skid plates over the top of the storage box and upper structure help prevent slipping and mud from falling into the upper structure.

Sampling Ports

Equipped with S•O•S℠ sampling ports and test ports for hydraulic, engine oil and coolant for quick diagnostics. A test connection for the Cat Electronic Technician (Cat ET) service tool is now located in the cab.

Air Cleaner

A double-layered filter core in the radial seal air filter gives more efficient filtration. A warning is displayed on the monitor when dust accumulates above a preset level. This filter is conveniently located in the compartment behind the cab. An optional pre-cleaner is also available to extend filter life and reduce maintenance costs.

Capsule Filter

Capsule-type, hydraulic return filter is accessible from outside the tank and prevents contaminants from entering the system when changing the hydraulic oil.

Radiator Compartment

Removable screens are located in front of the radiator and hydraulic cooler, reducing cleaning time and effort.

Technology Products

Advanced technologies improve productivity and simplify serviceability

AccuGrade™ Systems

AccuGrade™ Grade Control Systems are easy to use and deliver a wide range of benefits to customers, including:

- Increased productivity
- Increased job-site safety
- Assistance with labor shortages
- Improved employee satisfaction and retention
- Increased equipment versatility
- Integration into Cat® machines

AccuGrade Site Reference System

Advanced slope and elevation guidance simplifies excavation, improves accuracy, increases efficiency and lowers production costs.

AccuGrade Laser Reference System

This system builds on the Site Reference System by using laser receivers to carry benchmark information across a large job site.

AccuGrade GPS System

GPS satellites allow for precise digging and slope control in real-time for increased accuracy and productivity.

E-Ceiling Function

The e-ceiling function limits the operation of the boom, stick and bucket – except for the swing when the height limit has been set in advance. A height limit is set using the LCD monitor in the cab and must be reset for each bucket. As the bucket is about to exceed that height, the e-ceiling function starts and the bucket's vertical movement is brought to a halt.

Cab Avoidance Function

Once the bucket dimensions have been programmed into the machine, cab avoidance will automatically stop the front linkage and bucket to prevent interference with the cab.

Customer Support

Unmatched support makes the difference

- Make detailed comparisons of the machine you are considering before you buy with estimates of component life, preventive maintenance and the true cost of production.
- Customize the machine that is right for you using Build and Quote applications on your dealer's website or www.cat.com.
- Get the latest training literature and trained staff.
- Repair options programs guarantee the cost of repairs up front.
- Nearly all parts are available at dealer parts counters.
- Financing packages are flexible to meet your needs.
- Your Cat® dealer can evaluate the cost involved in repairing, rebuilding and replacing your machine so you make the right choice.
- SAFETY.CAT.COM™.

Engine

Engine Model	Cat® C4.2 ACERT®	
Gross Power	64 kW	86 hp
Net Power	60 kW	80 hp
ISO 9249	60 kW	80 hp
SAE J1349	60 kW	80 hp
Bore	102 mm	4 in
Stroke	130 mm	5.1 in
Displacement	4.25 L	259 in^3

- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No engine power derating required below 2300 m (7,500 ft).
- The 311D meets U.S. EPA Tier 3 emissions requirements.

Weights

Operating Weight	12 480 kg	27,514 lb
Operating Weight – Long Undercarriage	12 480 kg	27,514 lb

Swing Mechanism

Swing Torque	30 900 N·m	22,825 lb ft
Swing Speed	11.4 rpm	

Drive

Maximum Drawbar Pull	114 kN	25,600 lb
Travel Speed	5.1 km/h	3.1 mph

Hydraulic System

Main Implement System – Maximum Flow (2x)	117 L/min	30.9 gal/min
Maximum Pressure – Implements	30 500 kPa	4,424 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	23 000 kPa	3,336 psi
Pilot System – Maximum Flow	23 L/min	6.08 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	100 mm	3.9 in
Boom Cylinder – Stroke	1002 mm	39.4 in
Stick Cylinder – Bore	110 mm	4.3 in
Stick Cylinder – Stroke	1194 mm	47 in
Bucket Cylinder – Bore	100 mm	3.9 in
Bucket Cylinder – Stroke	939 mm	37 in

Service Refill Capacities

Fuel Tank	210 L	55 gal
Cooling System	18 L	4.8 gal
Engine Oil	19 L	5 gal
Swing Drive	3 L	1 gal
Final Drive (Each)	3 L	1 gal
Hydraulic System (Including Tank)	145 L	38 gal
Hydraulic Tank	78 L	21 gal

Standards

Cab/FOGS	SAE J1356 FEB88/ ISO 10262

Sound Performance

Performance	ANSI/SAE J1166 OCT 98

- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 73 dB(A), at standard ambient, for the cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/ windows open) for extended periods or in noisy environment.

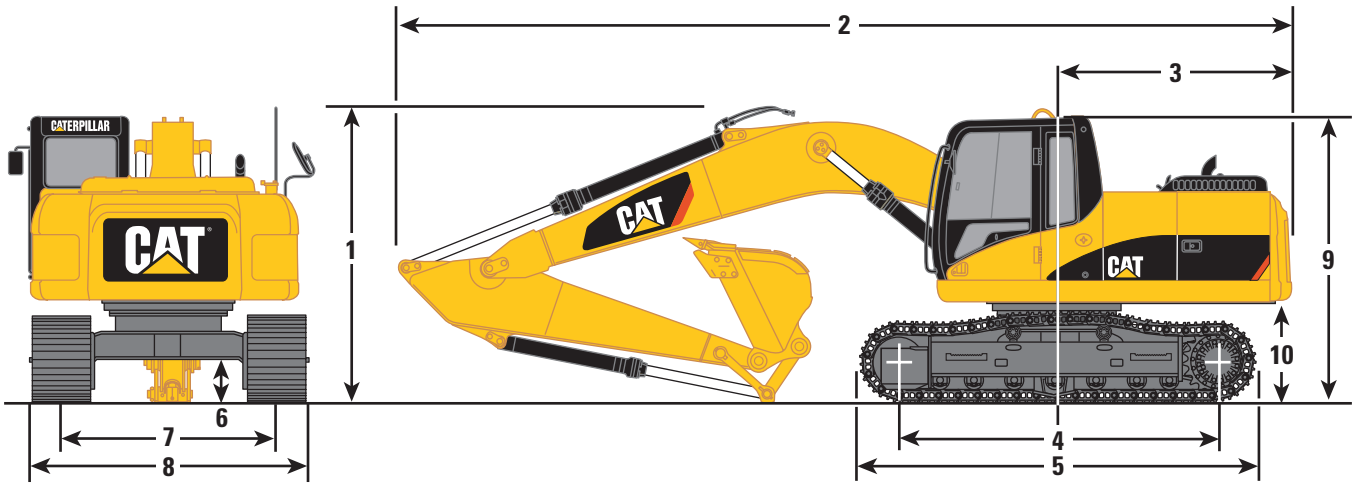
Dimensions

Transport Width	2490 mm	98.03 in
Shipping Height	2830 mm	9.28 ft
Length to Center of Rollers	2780 mm	9.12 ft

311D LRR Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.

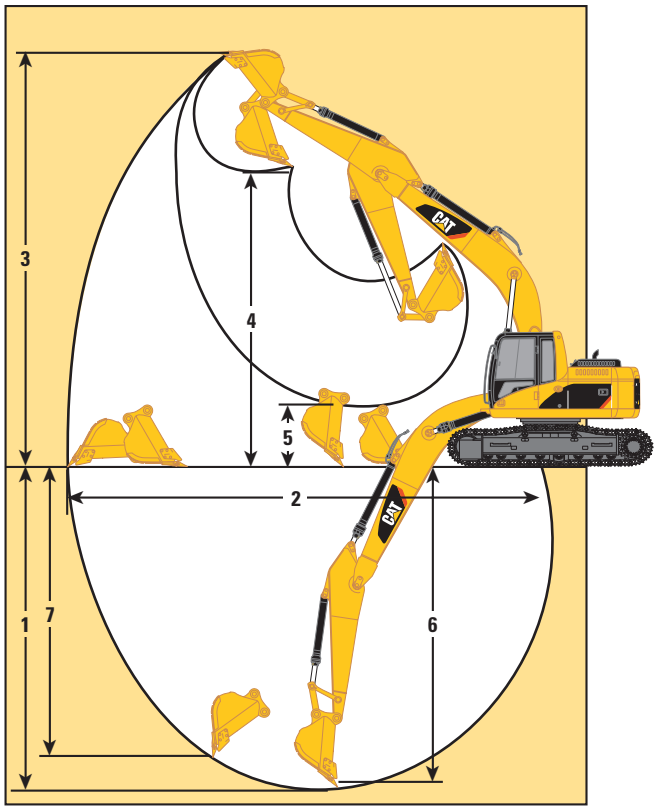


	Boom Options	Reach 4.3 m (14'1")	Reach 4.3 m (14'1")	Reach 4.3 m (14'1")
	Stick Options	**2.25 m (7'5")**	**2.6 m (8'6")**	**2.8 m (9'2")**
1	Shipping Height	2860 mm (9'5")	3020 mm (9'11")	3160 mm (10'4")
2	Shipping Length	6915 mm (22'8")	6880 mm (22'7")	6825 mm (22'5")
3	Tail Swing Radius	1750 mm (5'9")	1750 mm (5'9")	1750 mm (5'9")
4	Length to Center of Rollers	2780 mm (9'1")	2780 mm (9'1")	2780 mm (9'1")
5	Track Length	3490 mm (11'5")	3490 mm (11'5")	3490 mm (11'5")
6	Ground Clearance*	455 mm (1'6")	455 mm (1'6")	455 mm (1'6")
7	Track Gauge	1990 mm (6'6")	1990 mm (6'6")	1990 mm (6'6")
8	Transport Width	600 mm (24") Shoes	700 mm (28") Shoes	770 mm (30") Shoes
	311D LRR	2590 mm (8'6")	2690 mm (8'10")	2760 mm (9'1")
9	Cab Height	2755 mm (9'0")	2755 mm (9'0")	2755 mm (9'0")
10	Counterweight Clearance	910 mm (3'0")	910 mm (3'0")	910 mm (3'0")

* With shoe lug
All measurements are approximate

Working Ranges

All dimensions are approximate.



	Boom	Reach 4.3 m (14'1")	Reach 4.3 m (14'1")	Reach 4.3 m (14'1")
	Stick	**2.25 m (7'5")***	**2.6 m (8'6")****	**2.8 m (9'2")****
	Bucket	**0.52 m³ (0.68 yd³)**	**0.40 m³ (0.53 yd³)**	**0.40 m³ (0.53 yd³)**
1	Maximum Digging Depth	5040 mm (16'6")	5390 mm (17'8")	5590 mm (18'4")
2	Maximum Reach at Ground Level	7700 mm (25'3")	7900 mm (25'11")	8100 mm (26'7")
3	Maximum Loading Height	5450 mm (17'11")	5640 mm (18'6")	5770 mm (18'11")
4	Minimum Loading Height	1880 mm (6'2")	2200 mm (7'3")	1340 mm (4'5")
5	Maximum Depth Cut for 2440 m (8'0") Level Bottom	4300 mm (14'1")	4720 mm (15'6")	4960 mm (16'3")
6	Minimum Front Swing Radius	2450 mm (8'0")	2480 mm (8'2")	2560 mm (8'5")
7	Maximum Vertical Wall Digging Depth	4460 mm (14'8")	4770 mm (15'8")	4980 mm (16'4")
8	Maximum Cutting Height	7800 mm (25'7")	7990 mm (26'3")	8130 mm (26'8")
	Stick Digging Force (SAE)	60.32 kN (13,560 lbf)	54.57 kN (12,267 lbf)	52 kN (11,690 lbf)
	Bucket Digging Force (SAE)	89.73 kN (20,171 lbf)	89.92 kN (20,214 lbf)	89.74 kN (20,174 lbf)

* Measurements shown are for machines equipped with the 0.52 m³ (0.68 yd³) bucket

** Measurements shown are for machines equipped with the 0.40 m³ (0.53 yd³) bucket

All measurements are approximate

311D LRR Hydraulic Excavator Specifications

Operating Weights

Caterpillar designed and built track-type undercarriage.

Track Width			Operating Weight – Medium stick		Operating Weight – Intermediate stick		Operating Weight – Long stick	
311D LRR	500 mm (20") triple grouser		12 450 kg	27,448 lb	12 450 kg	27,448 lb	12 480 kg	27,514 lb
	600 mm (24") triple grouser		12 680 kg	27,955 lb	12 685 kg	27,966 lb	12 710 kg	28,021 lb
	700 mm (28") triple grouser		12 925 kg	28,495 lb	12 925 kg	28,495 lb	12 950 kg	28,550 lb
	770 mm (30") triple grouser		13 050 kg	28,770 lb	13 055 kg	28,781 lb	13 080 kg	28,836 lb
		Blade: add						
	500 mm (20") triple grouser	w/Blade	13 245 kg	29,200 lb	13 245 kg	29,200 lb	13 270 kg	29,255 lb
	600 mm (24") triple grouser	w/Blade	13 480 kg	29,718 lb	13 480 kg	29,718 lb	13 505 kg	29,773 lb
	700 mm (28") triple grouser	w/Blade	13 730 kg	30,269 lb	13 730 kg	30,269 lb	13 760 kg	30,336 lb
	770 mm (30") triple grouser	w/Blade	13 860 kg	30,556 lb	13 860 kg	30,556 lb	13 885 kg	30,611 lb

Buckets

Buckets have tapered sides, angled corner teeth, dual radius curvature, horizontal wear strips and holes for optional side cutters.

Buckets	Recommended Maximum Material Density			
	Width		Capacity	
	mm	in	m^3	yd^3
458GP-0.25	598	24	0.25	0.33
610GP-0.30	598	24	0.30	0.39
760GP-0.40	748	30	0.40	0.52
915GP-0.52	903	36	0.52	0.68
1067GP-0.63	1055	42	0.63	0.82
1218GP-0.74	1206	48	0.74	0.97

Material Densities

Material	kg/m^3*	lb/yd^3**	Material	kg/m^3*	lb/yd^3**
Clay, dry	1480	2,500	Gravel, pit run	1930	3,250
Clay, wet	1660	2,800	Rock/dirt, 50%	1720	2,900
Earth, dry	1510	2,550	Sand, dry	1420	2,400
Earth, wet	1600	2,700	Sand, wet	1840	3,100
Loam	1250	2,100	Sand & Clay	1600	2,700
Gravel, dry	1510	2,550	Stone, crushed	1600	2,700
Gravel, wet	2020	3,400	Top soil	950	1,600

* kilograms per loose cubic meter
** pounds per loose cubic yard
For densities of other materials see Caterpillar Performance Handbook

Undercarriage

Caterpillar designed and built track-type undercarriage.

Track Width	Ground Pressure		
	2.8 m (9'2") stick, STD CTWT	2.6 m (8'6") stick, STD CTWT	2.25 m (7'4") stick, STD CTWT
500 mm (20") triple grouser	40.4 kPa (5.6 psi)	40.3 kPa (5.8 psi)	40.3 kPa (5.8 psi)
600 mm (24") triple grouser	34.3 kPa (4.9 psi)	34.2 kPa (4.9 psi)	34.2 kPa (4.9 psi)
700 mm (28") triple grouser	29.9 kPa (4.3 psi)	29.9 kPa (4.3 psi)	29.9 kPa (4.3 psi)
770 mm (30") triple grouser	27.5 kPa (3.9 psi)	27.4 kPa (3.9 psi)	27.4 kPa (3.9 psi)

311D LRR Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.6 m (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000**	*900 ***2,000**	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900**	2000 ***3,900**	*850 ***1,850**	*850 ***1,850**	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350**	*2950 ***6,350**	2650 **5,650**	1950 **4,150**	*850 ***1,850**	*850 ***1,850**	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350**	5650 **12,150**	*3750 ***8,150**	2950 **6,350**	2550 **5,450**	1850 **3,950**	*900 ***2,000**	*900 ***2,000**	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500**	5200 **11,100**	3900 **8,300**	2750 **5,950**	2450 **5,250**	1800 **3,800**	*1050 ***2,300**	*1050 ***2,300**	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100**	*4500 ***10,100**	*7400 ***16,050**	5050 **10,800**	3800 **8,100**	2650 **5,750**	2400 **5,150**	1750 **3,700**	*1300 ***2,900**	*1300 ***2,900**	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450**	*6050 ***13,450**	*6700 ***14,400**	5100 **10,900**	3800 **8,150**	2700 **5,750**			*1950 ***4,350**	*1950 ***4,350**	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.6 (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000**	*900 ***2,000**	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900**	*2000 ***3,900**	*850 ***1,850**	*850 ***1,850**	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350**	*2950 ***6,350**	*2650 **5,750**	2000 **4,250**	*850 ***1,850**	*850 ***1,850**	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350**	5750 **12,350**	*3750 ***8,150**	3000 **6,500**	2600 **5,550**	1900 **4,050**	*900 ***2,000**	*900 ***2,000**	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500**	5250 **11,300**	3950 **8,500**	2850 **6,050**	2500 **5,350**	1800 **3,850**	*1050 ***2,300**	*1050 ***2,300**	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100**	*4500 ***10,100**	*7400 ***16,050**	5150 **11,000**	3850 **8,250**	2750 **5,850**	2450 **5,250**	1750 **3,800**	*1300 ***2,900**	*1300 ***2,900**	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450**	*6050 ***13,450**	*6700 ***14,400**	5200 **11,100**	3850 **8,300**	2750 **5,900**			*1950 ***4,350**	*1950 ***4,350**	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.6 m (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000**	*900 ***2,000**	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900**	*2000 ***3,900**	*850 ***1,850**	*850 ***1,850**	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350**	*2950 ***6,350**	*2650 ***5,800**	2150 **4,550**	*850 ***1,850**	*850 ***1,850**	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350**	*5750 ***12,350**	*3750 ***8,150**	3250 **6,950**	*3000 ***6,550**	2050 **4,350**	*900 ***2,000**	*900 ***2,000**	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500**	5750 **12,350**	*4500 ***9,650**	2050 **6,550**	*3350 ***7,200**	1950 **4,150**	*1050 ***2,300**	*1050 ***2,300**	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100**	*4500 ***10,100**	*7400 ***16,050**	5600 **12,050**	*4750 ***10,250**	2950 **6,300**	*3400 ***7,250**	1900 **4,100**	*1300 ***2,900**	*1300 ***2,900**	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450**	*6050 ***13,450**	*6700 ***14,400**	5700 **12,150**	*4350 ***9,300**	2950 **6,350**			*1950 ***4,350**	*1950 ***4,350**	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.6 m (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000**	*900 ***2,000**	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900**	*2000 ***3,900**	*850 ***1,850**	*850 ***1,850**	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350**	*2950 ***6,350**	*2650 ***5,800**	2200 **4,750**	*850 ***1,850**	*850 ***1,850**	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350**	*5750 ***12,350**	*3750 ***8,150**	3400 **7,250**	*3000 ***6,550**	2150 **4,550**	*900 ***2,000**	*900 ***2,000**	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500**	6050 **12,950**	*4500 ***9,650**	3200 **6,850**	*3350 ***7,200**	2050 **4,350**	*1050 ***2,300**	*1050 ***2,300**	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100**	*4500 ***10,100**	*7400 ***16,050**	5900 **12,600**	*4750 ***10,250**	3100 **6,600**	*3400 ***7,250**	2000 **4,300**	*1300 ***2,900**	*1300 ***2,900**	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450**	*6050 ***13,450**	*6700 ***14,400**	5950 **12,750**	*4350 ***9,300**	3100 **6,650**			*1950 ***4,350**	*1950 ***4,350**	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

311D LRR Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	2000 **4,250**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	1950 **4,150**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	*5450 ***11,700**	*3650 ***7,850**	3000 **6,400**	2550 **5,450**	1850 **3,950**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	5200 **11,150**	3900 **8,350**	2750 **5,950**	2450 **5,250**	1750 **3,750**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	5000 **10,750**	3750 **8,050**	2650 **5,700**	2400 **5,100**	1700 **3,650**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	5050 **10,800**	3750 **8,050**	2650 **5,700**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	*3200 ***7,500**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – Up

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	2050 **4,350**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	2000 **4,250**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	*5450 ***11,700**	*3650 ***7,850**	3050 **6,500**	2600 **5,550**	1900 **4,050**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	5300 **11,350**	3900 **8,500**	2850 **6,050**	2500 **5,350**	1800 **3,850**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	5100 **10,950**	3850 **8,200**	2700 **5,800**	2450 **5,250**	1750 **3,750**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	5150 **11,000**	3850 **8,200**	2700 **5,800**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	*3200 ***7,500**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – Down

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	*2150 ***4,350**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	2150 **4,550**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	*5450 ***11,700**	*3650 ***7,850**	3250 **7,000**	*2900 ***6,350**	2050 **4,350**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	5800 **12,400**	*4400 ***9,450**	3050 **6,550**	*3250 ***7,050**	1950 **4,150**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	5600 **12,000**	*4700 ***10,200**	2950 **6,300**	*3400 ***7,300**	1900 **4,050**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	5650 **12,050**	*4450 ***9,500**	2950 **6,300**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	*3200 ***7,500**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – Down

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	*2150 ***4,350**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	2250 **4,750**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	*5450 ***11,700**	*3650 ***7,850**	2400 **7,300**	*2900 ***6,350**	2150 **4,550**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	6050 **13,000**	*4400 ***9,450**	3200 **6,850**	*3250 ***7,050**	2050 **4,350**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	5900 **12,600**	*4700 ***10,200**	3050 **6,600**	*3400 ***7,300**	2000 **4,250**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	5900 **12,650**	*4450 ***9,500**	3050 **6,600**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	*3200 ***7,500**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

311D LRR Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – No Blade

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	1900 **4,000**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	1850 **3,900**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	5400 **11,550**	*3650 ***7,850**	2800 **6,000**	2550 **5,500**	1750 **3,700**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	4850 **10,450**	3900 **8,400**	2600 **5,550**	2450 **5,300**	1650 **3,500**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	4700 **10,050**	3800 **8,150**	2500 **5,300**	2400 **5,150**	1600 **3,400**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	4700 **10,100**	3800 **8,150**	2450 **5,300**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	3050 **7,400**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.8 m (9'2")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – No Blade

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*850 ***1,850**	*850 ***1,850**	6.58 **21.35**
4.5 m **15.0 ft**	kg **lb**							*2150 ***4,350**	1900 **4,050**	*800 ***1,700**	*800 ***1,700**	7.44 **24.31**
3.0 m **10.0 ft**	kg **lb**					*2750 ***6,000**	*2750 ***6,000**	*2550 ***5,550**	1850 **3,950**	*800 ***1,750**	*800 ***1,750**	7.86 **25.75**
1.5 m **5.0 ft**	kg **lb**			*5450 ***11,700**	*5450 ***11,700**	*3650 ***7,850**	2850 **6,100**	2600 **5,600**	1750 **3,750**	*850 ***1,850**	*850 ***1,850**	7.91 **25.97**
Ground Line	kg **lb**			*7050 ***15,150**	4950 **10,650**	4000 **8,550**	2650 **5,650**	2500 **5,400**	1700 **3,600**	*1000 ***2,150**	*1000 ***2,150**	7.63 **25.03**
–1.5 m **–5.0 ft**	kg **lb**	*4250 ***9,550**	*4250 ***9,550**	*7400 ***16,050**	4800 **10,250**	3850 **8,300**	2550 **5,400**	2450 **5,300**	1650 **3,450**	*1200 ***2,700**	*1200 ***2,700**	6.96 **22.77**
–3.0 m **–10.0 ft**	kg **lb**	*6250 ***13,850**	*6250 ***13,850**	*6850 ***14,700**	4800 **10,300**	3850 **8,300**	2550 **5,400**			*1750 ***3,950**	*1750 ***3,950**	5.74 **18.65**
–4.5 m **–15.0 ft**	kg **lb**			*4850 ***10,100**	*4850 ***10,100**					*3200 ***7,500**	3100 ***7,500**	4.08 **12.56**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities

 Load Point Height

 Load Radius Over Front

 Load Radius Over Side

 Load at Maximum Reach

STICK – 2.6 m (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 500 mm (20") triple grouser

BOOM – Reach
BLADE – No Blade

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000***	*900 ***2,000***	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900***	1850 ***3,900***	*850 ***1,850***	*850 ***1,850***	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350***	*2950 ***6,350***	*2650 **5,700***	1800 **3,850**	*850 ***1,850***	*850 ***1,850***	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350***	5300 **11,450**	*3750 ***8,150***	2800 **5,950**	2550 **5,500**	1750 **3,700**	*900 ***2,000***	*900 ***2,000***	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500***	4850 **10,400**	3900 **8,400**	2600 **5,550**	2500 **5,300**	1650 **3,500**	*1050 ***2,300***	*1050 ***2,300***	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100***	*4500 ***10,100***	*7400 ***16,050***	4700 **10,100**	3800 **8,150**	2500 **5,350**	2450 **5,200**	1600 **3,450**	*1300 ***2,900***	*1300 ***2,900***	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450***	*6050 ***13,450***	*6700 ***14,400***	4750 **10,200**	3800 **8,200**	2500 **5,350**			*1950 ***4,350***	*1950 ***4,350***	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

STICK – 2.6 m (8'6")
BUCKET – 0.4 m³ (0.53 yd³)

UNDERCARRIAGE – Long
SHOES – 600 mm (24") triple grouser

BOOM – Reach
BLADE – No Blade

		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)				
												m ft
6.0 m **20.0 ft**	kg **lb**									*900 ***2,000***	*900 ***2,000***	6.34 **20.53**
4.5 m **15.0 ft**	kg **lb**							*2000 ***3,900***	1900 ***3,900***	*850 ***1,850***	*850 ***1,850***	7.23 **23.61**
3.0 m **10.0 ft**	kg **lb**					*2950 ***6,350***	*2950 ***6,350***	*2650 ***5,800***	1850 **3,950**	*850 ***1,850***	*850 ***1,850***	7.66 **25.1**
1.5 m **5.0 ft**	kg **lb**			*5750 ***12,350***	5400 **11,650**	*3750 ***8,150***	2850 **6,100**	2600 **5,600**	1750 **3,750**	*900 ***2,000***	*900 ***2,000***	7.72 **25.33**
Ground Line	kg **lb**			*7200 ***15,500***	4950 **10,600**	4000 **8,550**	2650 **5,650**	2550 **5,400**	1700 **3,600**	*1050 ***2,300***	*1050 ***2,300***	7.42 **24.36**
–1.5 m **–5.0 ft**	kg **lb**	*4500 ***10,100***	*4500 ***10,100***	*7400 ***16,050***	4800 **10,300**	3900 **8,350**	2550 **5,450**	2500 **5,300**	1650 **3,500**	*1300 ***2,900***	*1300 ***2,900***	6.73 **22.02**
–3.0 m **–10.0 ft**	kg **lb**	*6050 ***13,450***	*6050 ***13,450***	*6700 ***14,400***	4850 **10,400**	3900 **8,350**	2550 **5,500**			*1950 ***4,350***	*1950 ***4,350***	5.44 **17.68**

* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard J1097. They-do-not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting-capacities.

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311D LRR Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for details.

Alternator, 50 amp

Automatic engine speed control

Bolt-on Falling Object Guard System (FOGS) capability

Cab

- AM/FM radio, 24-volt
- Ashtray with cigar lighter
- Coat hook
- Beverage holder
- Economy mode
- Horn

Language display monitor (full graphic/full color display)

- Clock
- Filter/fluid change information
- Level check for hydraulic oil, engine oil and coolant
- Warning messages

Light, interior

Literature holder

Openable front windshield

Openable skylight with sun shade

Storage compartment

Travel control pedals with removable hand levers

Door locks and cap locks with one-key security system

Light, storage box mounted (1)

Mirrors (frame and cab)

Power Train

- Cat® C4.2 engine with ACERT® Technology
- 24-volt electric starter
- Air intake heater
- Water separator

Radial seal air filter

Undercarriage

- Idler section track guiding guards
- Center section track guiding guards
- Track-type undercarriage with grease lubricated seals

311D LRR Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for details.

AccuGrade™ Basic, Laser and GPS ready

Air prefilter

Auxiliary hydraulics

Auxiliary hydraulic lines from booms and sticks

Boom lowering and overload warning control device

Bucket linkage

Cab mounted working lights

Cab mounted working lights with time delay function

Cold weather start

E-Ceiling and cab avoidance

Fine swing control

Front windshield guard

Falling Object Protective Structure (FOPS)

Hand control pattern changer

Heavy-duty bottom guard

High ambient cooling system

Power supply 7A-12V

Pull down sunscreen

Rain protector

Right side boom lights

Side steel bumper

Secondary exit, rear window

Stick and boom configurations

- 2.8 m (9'2") stick
- 2.6 m (8'6") stick
- 2.25 m (7'4") stick

Sun visor

Swivel guard

Vandalism protection

Water level indicator for water separator

Notes

311D LRR Hydraulic Excavator

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

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CATERPILLAR®