



Cat[®] 311F L RR

Hydraulic Excavator

2017

If you want a machine with the power to match your jobs but owning and operating costs to fit your business, then the Cat[®] 311F L RR excavator is your answer. Its reduced radius will get you into some pretty tight spots, and its reasonable price and miserly fuel burn will help you operate on a tight budget.

Fuel Efficiency

- The C3.4B U.S. EPA Tier 4 Final/EU Stage IV engine burns up to 14% less fuel than the model it replaces, the 311D.
- The engine is equipped to run on up to B20 biodiesel fuel.
- Two power modes, high power and eco mode, help operators manage fuel consumption.
- Auto engine idle shutdown saves fuel, reduces emissions, and extends service intervals.

Versatility

- Reduced radius is ideal for work in space-restricted areas.
- Site prep and finishing work are quick and easy with a wide range of Cat work tools.
- Utility work is fast and flawless with a Cat bucket and compactor.
- A coupler lets you swap between attachments in seconds without leaving the cab.
- See the whole money-making attachment line for your machine at www.cat.com/attachments.

Comfort

- The roll-over protective structure (ROPS) certified cab is quiet and comfortable.
- Automatic climate control helps maintain consistent cab temperature.
- Joystick consoles and armrests are adjustable.
- Seats are adjustable and feature air suspension and heated and cooled options.
- The LCD monitor is easy to navigate and programmable in 42 languages.

Durability

- Booms and sticks are built with baffle plates for enhanced service life.
- Box-section structures with multi-plate fabrications, castings, and forgings are used in high-stress areas.
- Greased track link between pins and bushings increases undercarriage life and reduces noise.

Maintenance

- Many routine service and maintenance points can be accessed from ground level reducing the time taken to check and service your machine.
- Service doors are designed to prevent debris entry and to make access to fluid taps and filters easy.
- The cooling package is designed to prevent plugging and has wide clearance to help make blowing off debris easy.

Safety

- The side-view camera is offered to enhance visibility on the boom side of the machine to help make operators more effective and efficient.*

Technology

- Cat Connect technology improves job site efficiency.
- Product Link™ system connects owners to their equipment, providing access to machine data such as location, hours, fuel consumption, idle time, events, and diagnostic codes.

*Regulation requirement for Europe only.



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Engine

Gross Power – SAE J1995	55 kW	74 hp
Net Power – SAE J1349	52 kW	70 hp
Bore	99 mm	3.90 in
Stroke	110 mm	4.33 in
Displacement	3.4 L	207 in ³

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 kg of refrigerant which has a CO₂ equivalent of 1.287 metric tonnes.

Hydraulic System

Main System – Maximum Flow (Total)	125 × 2 L/min	33 × 2 gal/min
Maximum Pressure – Equipment	30.5 MPa	4,424 psi
Maximum Pressure – Travel	35 MPa	5,076 psi
Maximum Pressure – Swing	23 MPa	3,336 psi
Pilot System – Maximum Flow	21.9 L/min	5.8 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	100 mm	4 in
Boom Cylinder – Stroke	1002 mm	39 in
Stick Cylinder – Bore	110 mm	4 in
Stick Cylinder – Stroke	1194 mm	47 in
Bucket Cylinder – Bore	100 mm	4 in
Bucket Cylinder – Stroke	939 mm	37 in

Drive

Maximum Travel Speed – High	5.4 km/h	3.4 mph
Maximum Travel Speed – Low	3.6 km/h	2.2 mph
Maximum Drawbar Pull	114.3 kN	25,696 lb

Machine Weight

Operating Weight*	13 000 kg	28,660 lb
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*4.3 m (14'1") reach boom, 2.8 m (9'2") stick, 700 mm (28") track shoes, without blade.

Swing

Swing Speed	10 rpm	
Swing Torque	30.9 kN·m	22,791 lbf·ft

Service Refill Capacities

Fuel Tank Capacity	210 L	55.48 gal
Cooling System	9 L	2.4 gal
Engine Oil (with filter)	8 L	2.1 gal
Swing Drive (each)	2.4 L	0.63 gal
Final Drive (each)	3 L	0.79 gal
Hydraulic System (including tank)	160 L	42.3 gal
Hydraulic Tank	95 L	25.1 gal

Track

Number of Shoes (each side)	43 pieces
Number of Track Rollers (each side)	6 pieces
Number of Carrier Rollers (each side)	1 piece

Sound

ISO 6396	
Operator Noise (Closed)	72 dB(A)
ISO 6395	
Spectator Noise	99 dB(A)

Dimensions

	Reach Boom – 4.3 m (14'1")	
Stick	R2.8 m (9'2")	
Shipping Height	2820 mm	9'3"
Shipping Height at Boom Top	2760 mm	9'1"
Handrail Height	2820 mm	9'3"
Shipping Length		
Long Undercarriage	6920 mm	22'8"
Long Undercarriage with Blade	7540 mm	24'8"
Tail Swing Radius	1750 mm	5'9"
Length to Center of Rollers	2780 mm	9'1"
Track Length	3490 mm	11'5"
Ground Clearance	440 mm	1'5"
Track Gauge	1990 mm	6'6"
Transport Width		
700 mm (28") Shoes	2690 mm	8'9"
Cab Height	2760 mm	9'1"
Cab Height with Top Guard	2920 mm	9'6"
Counterweight Clearance	915 mm	3'0"

Working Ranges

	Reach Boom – 4.3 m (14'1")	
Stick	R2.8 m (9'2")	
Maximum Digging Depth	5590 mm	18'4"
Maximum Reach at Ground Level	8100 mm	26'7"
Maximum Cutting Height	8140 mm	26'8"
Maximum Loading Height	5770 mm	18'11"
Minimum Loading Height	1330 mm	4'4"
Maximum Depth Cut for 2440 mm (8'0") Level Bottom	4990 mm	16'4"
Maximum Vertical Wall Digging Depth	4880 mm	16'0"

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