

# FINNING

## 330 RB ROADBUILDER

### Summary of Features

- ▲ **222 Hp Cat 3306TA diesel** provides responsive, fuel efficient power
- ▲ **Automatic Engine Control** reduces engine rpm when controls in neutral for greater fuel efficiency
- ▲ **Electronic Diagnostic System** provides constant information on machine functions
- ▲ **Power Mode Selector** allows operator to optimize hydraulic flow/work requirement ratio
- ▲ **Cat Hi-Wide undercarriage** offers excellent ground clearance and over-the-side stability
- ▲ **Adjustable control consoles** on each armrest offer maximum operator ease
- ▲ **Heavy-duty boom and stick** offer long life in adverse conditions
- ▲ **Electronically managed hydraulics** matches output to demand for maximum efficiency



# SPECIFICATIONS



## Caterpillar® Engine

Flywheel power at 1800 RPM .....225 PS/166 kW/**222 HP**  
Kilowatts (kW) is the International System of Units equivalent to horsepower.

Net power at the flywheel of the vehicle engine is based on SAE J1349 standard conditions 25° C/77° F and 100 kPa/**29.61 Hg.** Fuel is 35° API (15.6° C/60° F) gravity having an LHV of 42 780 kJ/kg (**18,390 Btu/lb**) when used at 29.4 C/85° F and weighing 828.9g/L(**7.001 lb/U.S. gal**). Engine is equipped with fan, air cleaner, alternator, water pump, fuel pump, muffler and lubricating oil pump. No derating required up to 2300 m/**7,546 ft.**

Caterpillar four-stroke-cycle, 3306 turbocharged and aftercooled diesel engine with six cylinders, 121 mm/**4.75"** bore, 152 mm/**6.0"** stroke and 10.5 litres/**638 in<sup>3</sup>** displacement.

Direct-injection fuel system with an individual, adjustment-free pump and injector for each cylinder. Cam-turned and tapered, aluminum-alloy pistons are oil cooled. Connecting rods are tapered for excellent load distribution and durability.

One-piece, cast cylinder block with internal ribbing for added strength. Induction-hardened, forged crankshaft. Silicone-steel intake valves and stellite-faced exhaust valves for excellent wear resistance. Valve rotators.

Direct-electric, 24-volt starting system with a 50-amp alternator, 7.5 kW starter and two 12-volt, 100-amp-hour batteries. Optional 10 kW starter available in cold weather starting aid package.



## Hydraulic System

Two variable-displacement, axial-piston pumps power the boom, stick, bucket, swing and travel circuits. One, single-section, gear-type pump powers the pilot circuit.

Main implement system:

Maximum flow .....2x240 litres/min/**2x63 GPM**

Maximum pressure:

Implements and Swing .....31.4 MPa/**4550 psi**

Travel.....34.1 MPa/**4975 psi**

Pilot system:

Maximum flow.....22 litres/min/**5.8 GPM**

Maximum pressure.....3.4 MPa/**500 psi**

Cylinders, bore and stroke:

Boom (2).....150x1440 mm/**5.9"x56.6"**

Stick (1).....170x1680 mm/**6.7"x66.1"**

Bucket (1):

D family.....150x1156 mm/**5.9"x45.5"**

Snubbers are used at the rod ends of the boom cylinders and at both ends of the stick cylinders.



## Controls

Two joystick hand levers actuate boom, stick, bucket and swing. (SAE pattern.)

Right lever: Move forward and backward to lower and raise boom. Move left and right to control bucket curl and dump. Button on top is automatic engine control system's manual switch. Operator can increase or decrease engine speed by pushing the button.

Left lever: Move forward and backward to move stick out and in. Move left and right to control direction of swing. Button on top controls horn.

Oblique movement of either lever operates two functions simultaneously. Manually applied lever on left console cuts off pilot pressure for joysticks and travel controls and electrical power for engine starting circuit.

Easy Shift Control Pattern attachment allows operator to change from SAE to an alternate control pattern at the flip of a switch.

Monitor panel contains switches for power mode selector, work mode selector, automatic engine control, lights, windshield wiper, windshield washer, travel speed selector and alarm cancel. Blind switch for troubleshooting also is located on monitor panel.



## Steering

Two rocker pedals with detachable hand levers control steering and travel functions. Controls are pilot-operated for reduced efforts. Left pedal and lever control left track; right pedal and lever control right track. When idlers are in front: (1) Pushing both or levers forward moves the excavator straight ahead. (2) Rocking both pedals or pulling both levers backward moves the excavator straight back. (3) Moving one pedal or lever more than the other, either forward or backward, results in a gradual turn. (4) Moving one pedal or lever forward and the other pedal or lever backward counter-rotates the tracks for spot turns.



## Brakes

Two wet, multiple-disc brakes are used on the final drive input shafts. Spring-applied, hydraulically released. Actuating a travel control simultaneously releases the brakes. When the controls are released, the brakes automatically apply.



## Drive

Fully hydrostatic drive. Each track is driven by an independent, two-speed, axial-piston hydraulic motor. Triple-reduction, planetary final drives are splash lubricated. Track motors, brakes and final drives are integrated in the track roller frame for protection against contact damage.

Maximum drawbar pull.....27 100 kg/**59,750 lb**

Maximum travel speed.....4.6 km/h/**2.9 mph**

Gradeability .....**70%**



## Track

Caterpillar designed and built, track-type undercarriage. Robot-welded, pentagonal track roller frames with hydraulic adjusters. Sealed and lubricated rollers and idlers.

Number of shoes, each side.....**49**

Number of track rollers, each side.....**8**

Overall track length.....5010 mm (**16'5"**)

Gauge.....2915 mm (**9'7"**)

Widths of available shoes

Double grouser.....700 mm (**28"**)

Ground clearance.....762 mm (**30"**)



## Swing Mechanism

Fixed-displacement, axial-piston motor powers swing mechanism. Triple-planetary, double-reduction gear set drives pinion. Pinion is enclosed in grease bath to keep con-

taminants out and to extend service intervals. Releasing swing control cuts hydraulic power to swing motor and acts as a brake. Moving swing lever in opposite direction also will stop the swing. Hydraulics will hold upperstructure steady on a slope for limited time. Optional automatic swing brake is recommended for applications where loads are frequently handled on slopes or extended stops on slopes are necessary. Automatic, oil-disc brake applies four seconds after swing control is released. Shipping lock pins upperstructure to carbody to prevent rotation during transport.

Swing speed ..... **8.9 RPM**  
Swing torque..... **10,181 kg/m/73,620 lb/ft**



### Weight

Shipping weight (including 5600 kg/12,350 lb counterweight, lubricants, coolant, 10% fuel, bucket linkage, no bucket and 3500 mm/11'6" stick) is 39,181 kb/**86,380 lb**. Operating weight (including shipping weight plus fuel and operator) is 40,801 kg/**89,950 lb**.



### Service Refill Capacities

	Litres	U.S. Gallons
Fuel Tank.....	1484	<b>393</b>
Cooling System.....	67	<b>18</b>
Lubrication:		
Engine oil .....	28.5	<b>7.5</b>
Swing drive .....	15	<b>4.0</b>
Final drives (each) .....	13	<b>3.4</b>
Hydraulic System (includes tank)..	400	<b>106</b>
Hydraulic tank .....	175	<b>46</b>



### Caterpillar Standard Equipment

330L excavator; Hi-wide carbody with heavy duty swivel, track motor, lines guards, heavy duty upper frame and track recoil, track shoe support guards, side/side cooling, 250 U.S. gallon fuel tank counterweight; Travel alarm; 50-amp alternator, Antifreeze; Automatic engine control; Automatic swing brake; Sound suppressed cab, including – ash tray, cigar

lighter, coat hook, literature compartment, storage/lunch box compartment; Fine swing control; Floor mat; Heater with defroster; Signaling/warning horn; Hydraulic starting system; Hydraulic system lock lever; Instrument panel with LCD gauges; Interior lights; Adjustable, pilot-operated joysticks; Retractable seat belt; Adjustable suspension seat; Opening skylight; Travel controls; pedals with removable levers; Polycarbonate windows for vandalism protection; Two-piece retractable windshield; Windshield wipers and washers; Cat 3306 engine; D-family bucket linkage for severe application 6180 mm (20'3") M-boom and M3.50 3500 mm (11'6") stick; Cold weather starting aid; Ether starting aid; Hydraulic pump auxiliary port; Auxiliary hydraulic valve; Working lights – frame mounted, boom, left and right side, cab mounted; Door and cap locks (one-key system); Cab mirror; Power Mode Selector; Work Mode Selector; Straight travel circuit; 700 mm (28") double grouser track shoes; Two-speed travel.



### Finning Standard Roadbuilder Package

Full F.O.P.S. guard with rear escape; Right, left and rear window guards; Door guard with door support; Turntable guards; Catwalks; 42", 1.63 cu. yd. digging bucket; Bucket cylinder guard; Sprocket guard; AM/FM radio; Idler yoke frame reinforcement; Track adjustment guard; Smooth style house guard including engine hood and right front corner guard; Quick coupler; Hydraulic thumb.



### Roadbuilder Optional Equipment

Guarded skylight for F.O.P.S.; Extra lights; Track sliders; 66", 2.5 cu. yd. cleanup bucket; Engine/oil tank heater; Track pad relief holes; Chain guides for idler end; Air conditioner; 3-ft cab riser; Boom lowering and stick lowering check valves; High ambient cooling system; Two-way hand control pattern changer; Ground Engaging Tools; Electric refueling pump; Ripper tooth adapter; Single ripper tooth; Sidecutters; Sun visors; Tool kit.



### Multi-purpose Options

Various heights of cab risers c/w F.O.P.S.; Heel boom and grapple; Hydraulic clam bucket.

### Lift Capacities

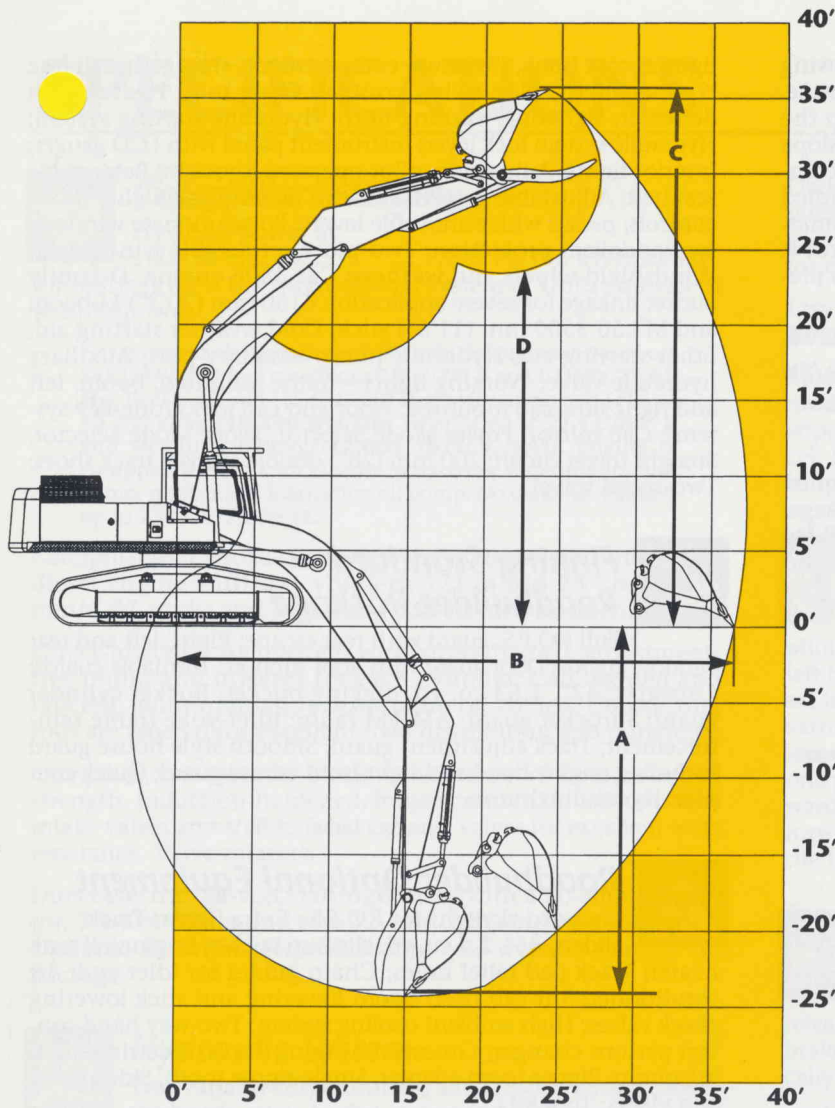
\* Indicates that load is limited by hydraulic capacity rather than tipping capacity.

Lift capacity ratings are based on SAE Standard J1097.

Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

HEIGHT (FT.)	REACH (FT.)						MAX. REACH	MAX. REACH DISTANCE (FT.)
	5	10	15	20	25	30		
30				10,875*			4,775*	26.1
				10,875*			4,775*	26.1
25				10,475*	9,875*		4,275*	30.2
				10,475*	9,875*		4,275*	30.2
20				11,475*	10,275*		4,075*	32.9
				11,475*	10,275*		4,075*	32.9
15			17,175*	13,375*	11,175*	9,275*	4,075*	34.6
			17,175*	13,375*	11,175*	8,975	4,075*	34.6
10		23,875*	22,075*	15,775*	12,375*	10,275*	4,375*	35.3
		23,875*	22,075*	15,775*	12,375*	8,775	4,375*	35.3
5			25,875*	17,875*	13,475*	10,675*	4,775*	35.2
			25,875*	17,875*	12,275	8,475	4,775*	35.2
Ground Level		15,075*	27,275*	18,875*	13,975*	10,575*	5,475*	34.2
		15,075*	27,275*	17,475	11,775	8,275	5,475*	34.2
-5	14,675*	24,175*	26,275*	18,575*	13,575*		6,675*	32.4
	14,675*	24,175*	26,275*	17,075	11,575		6,675*	32.4
-10	24,675*	33,375*	23,275*	16,575*	11,475*		7,775*	29.4
	24,675*	33,375*	23,275*	16,575*	11,475*		7,775*	29.4
-15	35,475*	24,375*	17,475*	11,875*			5,775*	24.7
	35,475*	24,375*	17,475*	11,875*			5,775*	24.7

XXXXX Lift capacity over front  
XXXXX Lift capacity over side



## Working Range

Stick .....	3500 mm/11'6"
Bucket.....	1.25 m <sup>3</sup> /1.63 yd <sup>3</sup>
<b>A</b> Maximum digging depth.....	7410 mm/24'3¾"
<b>B</b> Maximum reach at ground level .....	11 151 mm/36'7"
<b>C</b> Maximum tip height.....	10 859 mm/35'7½"
<b>D</b> Maximum loading height .....	7144 mm/23'5¼"
Bucket forces .....	17 700 kg/39,000 lb
Stick forces .....	13 700 kg/30,200 lb

## Shipping Dimensions (approximate)

Stick (M3.50D).....	3500 mm/11'6"
Shipping height .....	3658 mm/12'
Shipping length.....	10 720 mm/35'2"
Standard shoe .....	700 mm/28"
Shipping width.....	3632 mm/11'11"
Shipping weight (max.).....	89,950 lb

