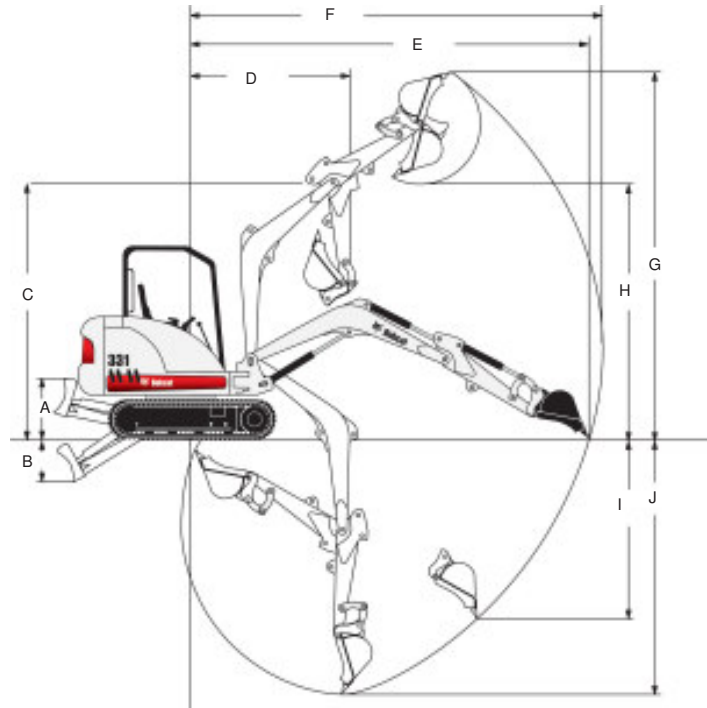


# 331 COMPACT EXCAVATOR SPECIFICATIONS

## WORKING RANGE



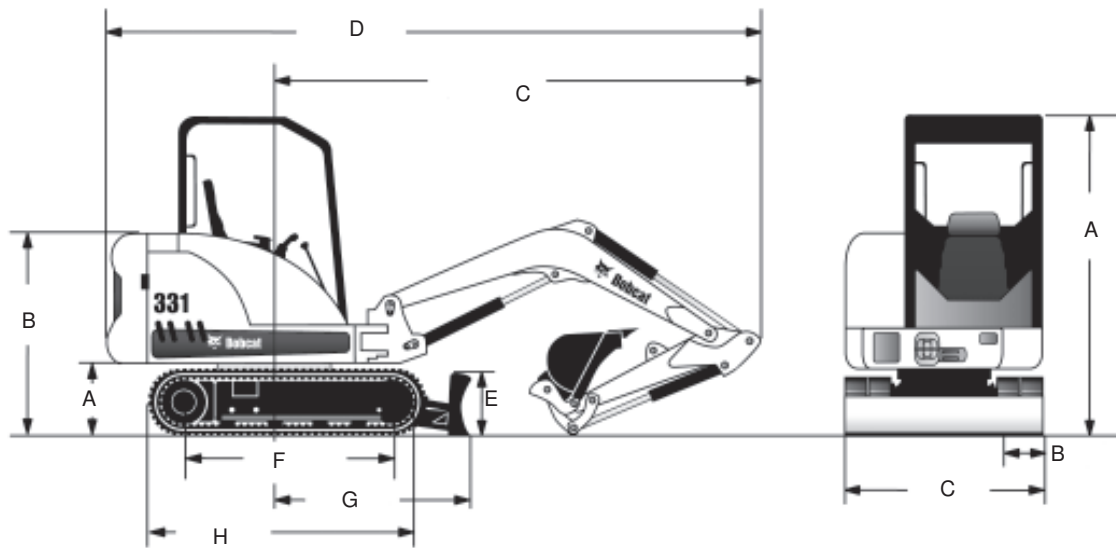
### STANDARD & LONG ARM SPECIFICATIONS

	Standard Arm	Long Arm
A. Maximum Blade Height .....	15.7" (398 mm)	16.0" (405 mm)
B. Maximum Blade Depth .....	21.5" (546 mm)	21.0" (534 mm)
C. Maximum Height of Working Equipment with Arm Retracted .....	138.6" (3522 mm)	138.6" (3520 mm)
D. Maximum Working Equipment Radius with Boom @ Maximum Height .....	93.1" (2365 mm)	94.2" (2393 mm)
E. Maximum Reach at Ground Level .....	200.7" (5097 mm)	212.4" (5395 mm)
F. Maximum Radius of Working Equipment .....	205.5" (5219 mm)	216.8" (5507 mm)
G. Maximum Bucket Tooth Height .....	180.0" (4571 mm)	187.2" (4755 mm)
H. Maximum Dump Height .....	123.0" (3125 mm)	129.0" (3276 mm)
I. Maximum Depth of Vertical Wall which can be Excavated .....	85.6" (2175 mm)	102.5" (2604 mm)
J. Maximum Dig Depth .....	120.7" (3066 mm)	132.5" (3366 mm)
Bucket Pivot Angle .....	186°	186°

### EXTENDABLE ARM SPECIFICATIONS

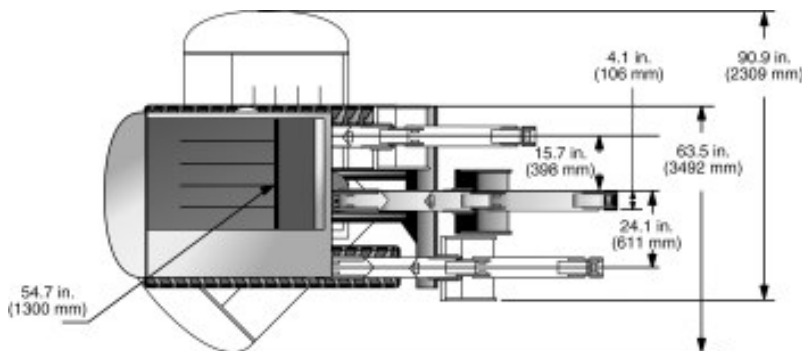
	Retracted	Extended
A. Maximum Blade Height .....	15.4" (390 mm)	15.4" (390 mm)
B. Maximum Blade Depth .....	21.1" (546 mm)	21.1" (535 mm)
C. Maximum Height of Working Equipment with Arm Retracted .....	139.7" (3549 mm)	139.7" (3549 mm)
D. Maximum Working Equipment Radius with Boom @ Maximum Height .....	89.1" (2262 mm)	86.2" (2190 mm)
E. Maximum Reach at Ground Level .....	191.6" (4866 mm)	221.0" (5614 mm)
F. Maximum Radius of Working Equipment .....	195.9" (4977 mm)	224.7" (5709 mm)
G. Maximum Bucket Tooth Height .....	175.6" (4459 mm)	188.3" (4782 mm)
H. Maximum Dump Height .....	121.1" (3077 mm)	132" (3404 mm)
I. Maximum Depth of Vertical Wall which can be Excavated .....	69.0" (1752 mm)	100.4" (2550 mm)
J. Maximum Dig Depth .....	122.0" (3098 mm)	154.1" (3914 mm)
Bucket Pivot Angle .....	184°	184°

**DIMENSIONS**



- A. Clearance, Upperstructure to Ground line ..... 20.1" (511 mm)
- B. Groundline to top of engine cover ..... 58.1" (1476 mm)
- C. Minimum radius in transport position-Standard Arm ..... 137.5" (3492 mm)
- Minimum radius in transport position-Long Arm ..... 137.8" (3499 mm)
- Minimum radius in transport position-Extendable-retracted .. 142.9" (3630 mm)
- D. Overall length in transport position-Standard Arm ..... 192.1" (4879 mm)
- Overall length in transport position-Long Arm ..... 192.5" (4889 mm)
- Overall length in transport position-Extendable Arm ..... 197.6" (5020 mm)
- Overall length in transport position-Extendable-extended ..... 198.8" (5050 mm)
- E. Blade height ..... 14.9" (379 mm)
- F. Length of track on ground ..... 61.5" (1562 mm)
- G. Machine centerline to blade ..... 64.5" (1638 mm)
- H. Overall length of track assembly ..... 78.9" (2005 mm)

- A. Cab Height ..... 92.85" (2358 mm)
- B. Track width ..... 12.6" (320 mm)
- C. Blade width ..... 60.6" (1540 mm)
- Track Lug Height ..... 0.98" (25 mm)



- A. Machine centerline to working equipment centerline, left hand rotation ..... 15.7" (398 mm)
- B. Machine centerline to working equipment centerline, right hand rotation ..... 24.1" (611 mm)
- C. Minimum turning radius ..... 60.0" (1524 mm)
- D. Swing clearance, rear of upperstructure ..... 54.7" (1390 mm)
- E. Working width maximum right hand rotation ..... 90.9" (2309 mm)
- Tail Swing overhang ..... 24.4" (620 mm)

## MACHINE PERFORMANCE

Operating Weight (includes standard equipment and 24" bucket) (SAE J732)

- With Canopy, Standard Arm ..... 7756 lbs. (3518 kg)
- With Cab, Heat/Air Conditioning ..... 8019 lbs. (3637 kg)
- With Canopy, Extendable Arm ..... 8301 lbs. (3765kg)
- With Canopy, Long Arm ..... 8166 lbs. (3704kg)

Travel Speed

- Low Range ..... 1.7 mph (2,7 km/hr)
- High Range ..... 3.2 mph (5,15 km/hr)

Arm (Stick) Digging Force ..... 4000 lbs. (17792 N)

Bucket Digging Force ..... 7000 lbs. (31136 N)

## HYDRAULIC SYSTEM

- Pump Type ..... Dual Outlet Piston with Gear
- Pump Capacity ..... 2 x 10.1 GPM (38,4 L/min)
- System Relief Pressure ..... 3480 PSI (270 Bar)
- Auxiliary Relief ..... 2600 PSI (180 Bar)
- Auxiliary Flow ..... 15.9 GPM (64,0 L/min)
- Control Valves ..... (1) 10-Spool, closed center
- Drive Motors ..... (2) Axial Piston Motors
- Swing Motor ..... Orbit Motor
- Slew Speed ..... 9.2 RPM
- Boom Swing (Left) ..... 90°
- Boom Swing (Right) ..... 50°

### Hydraulic Function Times

- Bucket ..... Curl - 2.6 Seconds    Dump - 1.8 Seconds
- Arm (cushion out) ..... Retract - 3.3 Seconds    Extend - 2.7 Seconds
- Boom (cushion up) ..... Raise - 4.6 Seconds    Lower - 5.4 Seconds
- Boom Swing  
(cushion Left/Right) ..... Left - 6.2 Seconds    Right - 5.7 Seconds
- Blade ..... Raise - 2.9 Seconds    Lower - 3.2 Seconds

## HYDRAULIC CYLINDERS

	<i>Bore Diameter</i>	<i>Rod Diameter</i>	<i>Stroke Diameter</i>
Boom (cushion up) .....	3.00 in. (76,2 mm)	1.75 in. (44,5 mm)	25.09 in. (637,3 mm)
Arm (cushion extend) .....	2.75 in. (69,9 mm)	1.50 in. (38,1 mm)	23.62 in. (599,9 mm)
Bucket .....	2.75 in. (69,9 mm)	1.75 in. (44,5 mm)	18.39 in. (467,1 mm)
Boom Swing (cushion left and right) ....	3.00 in. (76,2 mm)	1.50 in. (38,1 mm)	20.65 in. (524,5 mm)
Blade .....	3.50 in. (88,9 mm)	1.75 in. (44,5 mm)	7.28 in. (184,9 mm)

## ENGINE/ELECTRICAL

Make/Model .....	Kubota/V2403
Fuel/Cooling .....	Diesel/Liquid
Horsepower (SAE Gross) .....	41.8 HP (31,2 kW)
Horsepower (SAE Net) .....	40.5 HP (30,2 kW)
Maximum Governed RPM .....	2200 RPM
Torque @ 1500 RPM (SAE Net) .....	102.5 ft. -lbs. (139 Nm)
Number of Cylinders .....	4
Displacement .....	134 cu. in. (2,2 L)
BorexStroke .....	3.42 x 3.64 in. (87 x 92,4 mm)
Lubrication .....	Forced
Filter .....	Cartridge Type - Full Flow
Air Cleaner .....	Dry replaceable cartridge with safety element
Alternator .....	12 volt; 90 amps
Battery .....	12 volt; 530 cold cranking amps @ 0°F (-18°C); 75 minute reserve capacity
Starter .....	12 volt; 2.7 HP (2,0 kW) Gear Reduction Type

## UNDERCARRIAGE

Undercarriage .....	Crawler-Type Tractor Design
Track Rollers .....	Sealed with Reinforced Box- Section Track Roller Frame
Track Adjusters .....	Grease Type with Shock Absorbing Recoil Springs
Track Type (Standard) .....	Half Pitch Rubber
Width .....	12.6" (320 mm)
Track Type (Optional) .....	Steel Shoe
Width .....	12.6" (320 mm)
Number of Track Rollers .....	4 each side
Ground Pressure-Rubber Tracks .....	4.22 PSI (29,1 kPa)
Ground Pressure-Steel Tracks .....	4.31 PSI (29,7 kPa)

## CAPACITIES

Fuel Tank .....	12.3 gal. (46,6 L)
Cooling System .....	4.5 gal. (17,0 L)
Engine Oil and Filter .....	7.5 qts. (7,1 L)
Hydraulic Reservoir .....	7.8 gal. (29,5 L)

## DRIVE SYSTEM

Final Drive .....	Each track is driven by a hydrostatic axial piston motor
Type of Reduction .....	Two stage planetary gear reduction 36.4:1
Max. Drawbar Pull .....	7830 lbf. (34838 N)
Maximum Gradability ..	30°

## OPTIONS/ ACCESSORIES

AM/FM Stereo Radio  
 Cab/Canopy Light Kit  
 Cab Enclosure, Vinyl  
 Catalytic Exhaust Purifier Kit  
 Counterweight  
 Extendable Arm  
 FOPS Kit  
 Keyless Start  
 Lifting Chain Kit  
 Secondary Auxiliary Hydraulics  
 Special Applications Kit  
 Steel Tracks  
 TOPS/ROPS Cab  
     with Heat & Air Conditioning  
 Travel Motion Alarm

## ATTACHMENTS

Auger  
 Grading Blade  
 Grading Bucket  
 Grapple, 3-Tine  
 Hydra-Tilt  
 Hydraulic Breaker  
 Hydraulic Clamp  
 Plate Compactor  
 Power Tilt  
 Ripper  
 Trencher  
 Trenching Buckets

## CONTROLS

Vehicle Steering ..... Direction and speed controlled by two hand levers or foot levers  
 Excavator Functions ..... Two hydraulic joysticks control boom, arm, bucket and cab swing. Foot pedal controls boom swing. The blade is controlled by a separate lever. Switches on right hand joystick control auxiliary hydraulic functions.  
 Service Brake (Travel) ... Hydraulic lock on motor  
 Parking Brake (Travel) ... Hydraulic lock on motor  
 Service Brake (Swing) ... Hydraulic lock on motor  
 Holding Brake (Swing) ... Pin lock

## STANDARD FEATURES

5' Dozer Blade  
 12.6" Half Pitch Rubber Track  
 Auxiliary Hydraulics with Quick Couplers  
 Control Console Locks  
 Control Pattern Selector Valve (ISO/STD)  
 Engine Shutdown System  
 Fingertip Auxiliary Hydraulic Control  
 Horn  
 Hydraulic Joystick Controls  
 Retractable Seat Belt  
 Spark Arrestor Muffler  
 Suspension Seat with High Back  
 \*TOPS/ROPS Canopy  
 Two-Speed Travel  
 Vandalism Protection  
 Working Lights  
 X-Change™ (Attachment Mounting System)  
 Warranty: 12 Months, Unlimited Hours

**\*Roll Over Protective Structure (ROPS) -  
 Meets Requirements of SAE-J1040C**

**\*Tip Over Protective Structure (TOPS) -  
 Meets Requirements of ISO/DIS 12117**

## INSTRUMENTATION

**Right of Operator Seat**  
 Auxiliary Mode Indicator  
 Console Indicator  
 Hourmeter/Job Clock/Tachometer  
 Engine/Hydraulic System Indicators  
 Engine Temperature Gauge  
 Fuel Gauge  
 Low Fuel Indicator  
 Pre-Heat Indicator  
 Two-Speed Indicator

# LIFT CHARTS

## WARNING

**OVERLOAD CAN TIP THE EXCAVATOR AND CAUSE INJURY OR DEATH**

- Do not lift or hold any load that exceeds these ratings at their specified load radii and height.
- Total rated load is shown. The weight of all lifting devices must be deducted to determine the net load that can be lifted.

### EXCAVATOR MODEL 331

CIRCUIT PRESSURES	BOOM LENGTH	2400 mm	(94.5 in)
WORKING 240 bar (3480 psi)	ARM LENGTH	1200 mm	(47.2 in)
HOLDING 270 bar (3915 psi)	COUNTERWEIGHT	83.9 kg	(185 lb)
	STANDARD BUCKET	609 mm	(24.0 in)
		97.5 kg	(215 lb)

Where applicable, specifications conform to ISO Standards. Specifications are subject to change without notice. Lift Point is bucket hinge point with standard bucket attached and bucket cylinder fully extended.

LIFT POINT HEIGHT	RATED LIFT CAPACITY OVER BLADE, BLADE DOWN - kg(lb.)				RATED LIFT CAPACITY OVER BLADE, BLADE UP - kg(lb.)				RATED LIFT CAPACITY OVER SIDE, BLADE UP - kg(lb.)			
	LIFT RADIUS - mm (in.)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT RADIUS - mm (in.)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT RADIUS - mm (in.)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)
	2000 (78.7)	3000 (118.1)	4000 (157.5)		2000 (78.7)	3000 (118.1)	4000 (157.5)		2000 (78.7)	3000 (118.1)	4000 (157.5)	
3000 (118.1)				*487 (1073) @ 3815 (150)				*463 (1021) @ 3815 (150)				*391 (863) @ 3815 (150)
2000 (78.7)		*599 (1321)	*551 (1214)	*558 (1231) @ 4270 (168)		*575 (1268)	370 (816)	339 (748) @ 4270 (168)		*605 (1334)	360 (793)	298 (658) @ 4270 (168)
1000 (39.4)		*878 (1936)	*658 (1451)	*640 (1412) @ 4310 (170)		583 (1286)	348 (767)	312 (688) @ 4310 (170)		554 (1221)	336 (740)	275 (606) @ 4310 (170)
Ground		*1096 (2416)	*743 (1637)	*733 (1616) @ 4067 (160)		544 (1200)	341 (752)	332 (731) @ 4067 (160)		513 (1131)	331 (729)	278 (614) @ 4067 (160)
-1000 (-39.4)	*1932 (4259)	*1116 (2460)		*833 (1836) @ 3576 (141)	1054 (2324)	540 (1190)		409 (902) @ 3576 (141)	970 (2139)	511 (1127)		349 (770) @ 3576 (141)

\* Rated Hydraulic Lift Capacity

61322

SW 7110137

## WARNING

**OVERLOAD CAN TIP THE EXCAVATOR AND CAUSE INJURY OR DEATH**

- Do not lift or hold any load that exceeds these ratings at their specified load radii and height.
- Total rated load is shown. The weight of all lifting devices must be deducted to determine the net load that can be lifted.

### EXCAVATOR MODELS 331 EQUIPPED WITH LONG ARM 331E EQUIPPED WITH LONG ARM 334

**CIRCUIT PRESSURES**  
 WORKING 240 bar (3480 psi)  
 HOLDING 270 bar (3915 psi)

**BOOM LENGTH** 2400 mm (94.5 in)  
**ARM LENGTH** 1500 mm (59.1 in)  
**COUNTERWEIGHT** 235 kg (517 lb)  
**STANDARD BUCKET** 609 mm (24.0 in)  
 97.5 kg (215 lb)

Where applicable, specifications conform to ISO Standards. Specifications are subject to change without notice. Lift Point is bucket hinge point with standard bucket attached and bucket cylinder fully extended.

LIFT POINT HEIGHT	RATED LIFT CAPACITY OVER BLADE, BLADE DOWN - kg (lb)						RATED LIFT CAPACITY OVER BLADE, BLADE UP - kg (lb)						RATED LIFT CAPACITY OVER SIDE, BLADE UP - kg (lb)					
	LIFT RADIUS - mm (in)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT RADIUS - mm (in)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT RADIUS - mm (in)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT RADIUS - mm (in)			LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)		
	2000 (78.7)	3000 (118.1)	4000 (157.5)		2000 (78.7)	3000 (118.1)	4000 (157.5)		2000 (78.7)	3000 (118.1)	4000 (157.5)		2000 (78.7)	3000 (118.1)	4000 (157.5)			
3000 (118.1)			*386 (851)	*434 (957) @ 4167 (164)				*380 (838)	*408 (899) @ 4167 (164)							*395 (870)	*414 (914) @ 4167 (164)	
2000 (78.7)		*469 (1034)	*473 (1042)	*485 (1068) @ 4546 (179)				*445 (981)	*455 (1002)	350 (773) @ 4546 (179)				*481 (1064)	*474 (1044)		289 (638) @ 4546 (179)	
1000 (39.4)		*772 (1703)	*597 (1316)	*552 (1218) @ 4582 (180)				*745 (1642)	418 (923)	323 (711) @ 4582 (180)				623 (1373)	387 (853)		278 (613) @ 4582 (180)	
Ground		*1026 (2262)	*710 (1566)	*639 (1406) @ 4378 (172)				634 (1397)	400 (883)	343 (756) @ 4378 (172)				582 (1284)	370 (816)		291 (641) @ 4378 (172)	
-1000 (-39.4)	*2034 (4485)	*1128 (2486)		*733 (1616) @ 3934 (155)	1125 (2480)	625 (1379)				402 (887) @ 3934 (155)				1092 (2400)	588 (1296)		339 (748) @ 3934 (155)	

\* Rated Hydraulic Lift Capacity

## WARNING

**OVERLOAD CAN TIP THE EXCAVATOR AND CAUSE INJURY OR DEATH**

- Do not lift or hold any load that exceeds these ratings at their specified load radii and height.
- Total rated load is shown. The weight of all lifting devices must be deducted to determine the net load that can be lifted.

### EXCAVATOR MODELS 331 EQUIPPED WITH EXTENDABLE ARM 334 EQUIPPED WITH EXTENDABLE ARM 331E

**CIRCUIT PRESSURES**  
 WORKING 240 bar (3480 psi)  
 HOLDING 270 bar (3915 psi)

**BOOM LENGTH** 2400 mm (94.5 in)  
**ARM LENGTH:**  
 RETRACTED 1196 mm (47.1 in)  
 EXTENDED 2019 mm (79.5 in)  
**COUNTERWEIGHT** 235 kg (517 lb)  
**STANDARD BUCKET** 609 mm (24.0 in)  
 97.5 kg (215 lb)

Where applicable, specifications conform to ISO Standards. Specifications are subject to change without notice. Lift Point is bucket hinge point with standard bucket attached and bucket cylinder fully extended.

LIFT POINT HEIGHT	RATED LIFT CAPACITY OVER BLADE, BLADE DOWN - kg (lb)						RATED LIFT CAPACITY OVER BLADE, BLADE UP - kg (lb)						RATED LIFT CAPACITY OVER SIDE, BLADE UP - kg (lb)					
	LIFT RADIUS - mm (in)						LIFT RADIUS - mm (in)						LIFT RADIUS - mm (in)					
	ARM RETRACTED			ARM EXTENDED			ARM RETRACTED			ARM EXTENDED			ARM RETRACTED			ARM EXTENDED		
mm (in)	2000 (78.7)	3000 (118.1)	4000 (157.5)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)		2000 (78.7)	3000 (118.1)	4000 (157.5)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)		2000 (78.7)	3000 (118.1)	4000 (157.5)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	LIFT @ MAXIMUM RADIUS, kg (lb) @ mm (in)	
3000 (118.1)				*425 (937) @ 3837 (151)	*294 (648) @ 4658 (183)					*405 (893) @ 3837 (151)	*278 (613) @ 4658 (183)					*420 (927) @ 3837 (151)	*285 (626) @ 4658 (183)	
2000 (78.7)		*499 (1101)	*485 (1068)	*492 (1085) @ 4211 (166)	*343 (755) @ 4940 (194)		*483 (1066)	372 (820)	341 (752) @ 4211 (166)	248 (546) @ 4940 (194)					*511 (1127)	345 (761)	279 (615) @ 4211 (166)	210 (463) @ 4940 (194)
1000 (39.4)		*754 (1662)	*579 (1276)	*552 (1218) @ 4228 (166)	*405 (893) @ 5006 (197)		572 (1262)	358 (790)	305 (673) @ 4228 (166)	223 (491) @ 5006 (197)					531 (1170)	319 (704)	254 (561) @ 4228 (166)	175 (389) @ 5006 (197)
Ground		*970 (2138)	*862 (1860)	*640 (1412) @ 4089 (161)	*478 (1054) @ 4799 (189)		544 (1200)	338 (746)	320 (705) @ 4089 (161)	224 (493) @ 4799 (189)					486 (1073)	301 (664)	258 (569) @ 4089 (161)	189 (418) @ 4799 (189)
-1000 (-39.4)	*1820 (4013)	*1005 (2216)		*734 (1618) @ 3602 (142)	*559 (1233) @ 4429 (174)		1051 (2318)	533 (1175)					1018 (2244)	484 (1067)		343 (755) @ 3602 (142)	223 (491) @ 4429 (174)	

\* Rated Hydraulic Lift Capacity

## WARRANTY

One Year Unlimited Hours ..... Standard  
24 Month, 2000 Hour Limit ..... Optional  
36 Month, 3000 Hour Limit ..... Optional  
60 Month, 5000 Hour Limit  
(Municipalities Only) ..... Optional

## SERVICEABILITY

Access is available to the following through the rear tailgate or side access hood:

- Air cleaner with indicator
- Battery
- Cooling system (engine oil and hydraulic oil coolers) for cleaning
- Control Valve
- Engine oil and fuel filters
- Engine oil level
- Fuel Fill
- Hydraulic valve bank
- Starter
- Sight gauges for hydraulic level

Tailgate and access cover have locks for vandal proofing.

Easy access to all grease points.

Central grease point for swing bearing, swing pinion, and offset cylinder

## SAFETY

Seat Belt (Std.) ..... Should always be worn when operating the excavator  
Grab Handles (Std.) ..... Should always be used when entering/exiting excavator.  
Front Working Lights (Std.) ..... Use for indoor and low light operation.  
Control Lockout (Std.) ..... Operator console shall lock out work group and travel functions when in the upright position.  
House Swing Lock (Std.) ..... A lock pin shall be provided to lock the upper structure to the undercarriage for transporting  
Operator's Handbook ..... Weather resistant operator handbook written in English will be attached to inside of cab, providing operational instructions and warnings by decals with pictorials and international symbols plus some messages in four basic languages: English, French, German and Spanish.

## TRAINING RESOURCES

*Bobcat Excavator Operator Training Course*

4-hour course provides video, classroom and hands-on training

*Bobcat Excavator Service Safety Training Course*

2-hour course provides video, classroom and hands-on training

---