

# 345C L

Hydraulic Excavator



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## Engine

Engine Model	Cat® C13 with ACERT™ Technology	
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Net Flywheel Power	257 kW	345 hp
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## Weights

Operating Weight	44 970 kg	99,150 lb
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## Engine

Engine Model	Cat C13 with ACERT™ Technology	
Net Flywheel Power	257 kW	345 hp
Net Power – ISO 9249	257 kW	345 hp
Net Power – SAE J1349	257 kW	345 hp
Net Power – EEC 80/1269	260 kW	345 hp
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	763 in <sup>3</sup>

- The 345C L meets U.S. EPA Tier 3 and EU Stage IIIA exhaust emission requirements.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No engine derating needed up to 2300 m (7,500 ft).

## Weights

Operating Weight – Long Undercarriage	44 970 kg	99,150 lb
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- Reach boom, R3.9 (12'10") stick, 1219 mm (48") GP-C bucket and 750 mm (30") shoes.

## Swing Mechanism

Swing Speed	8.6 RPM	
Swing Torque	148.5 kN•m	109,560 lb ft

## Drive

Maximum Travel Speed	4.4 km/h	2.7 mph
Maximum Drawbar Pull – Long Undercarriage	337.7 kN	75,920 lb

## Service Refill Capacities

Fuel Tank Capacity	705 L	186 gal
Cooling System	61 L	16 gal
Engine Oil	42 L	11 gal
Swing Drive (each)	10 L	2.6 gal
Final Drive (each)	15 L	4 gal
Hydraulic System (including tank)	570 L	150 gal
Hydraulic Tank	243 L	64 gal

## Hydraulic System

Main System – Maximum Flow (total)	720 L/min	190 gal/min
Maximum Pressure – Equipment – Normal	35 000 kPa	5,080 psi
Maximum Pressure – Equipment – Heavy Lift	38 000 kPa	5,511 psi
Maximum Pressure – Travel	35 000 kPa	5,080 psi
Maximum Pressure – Swing	31 400 kPa	4,550 psi
Pilot System – Maximum flow	43 L/min	11 gal/min
Pilot System – Maximum pressure	4110 kPa	596 psi
Boom Cylinder – Bore	160 mm	6.3 in
Boom Cylinder – Stroke	1575 mm	62 in
Stick Cylinder – Bore	190 mm	7.5 in
Stick Cylinder – Stroke (for long reach and reach fronts)	1778 mm	70 in
Stick Cylinder – Stroke (for mass excavation fronts)	1758 mm	69.2 in
TB Family Bucket Cylinder – Bore	160 mm	6.3 in
TB Family Bucket Cylinder – Stroke	1356 mm	53.4 in
UB Family Bucket Cylinder – Bore	170 mm	6.7 in
UB Family Bucket Cylinder – Stroke	1396 mm	55 in

## Sound Performance

Performance	ANSI/SAE J1166 MAY90 Meets OSHA and MSHA Requirements
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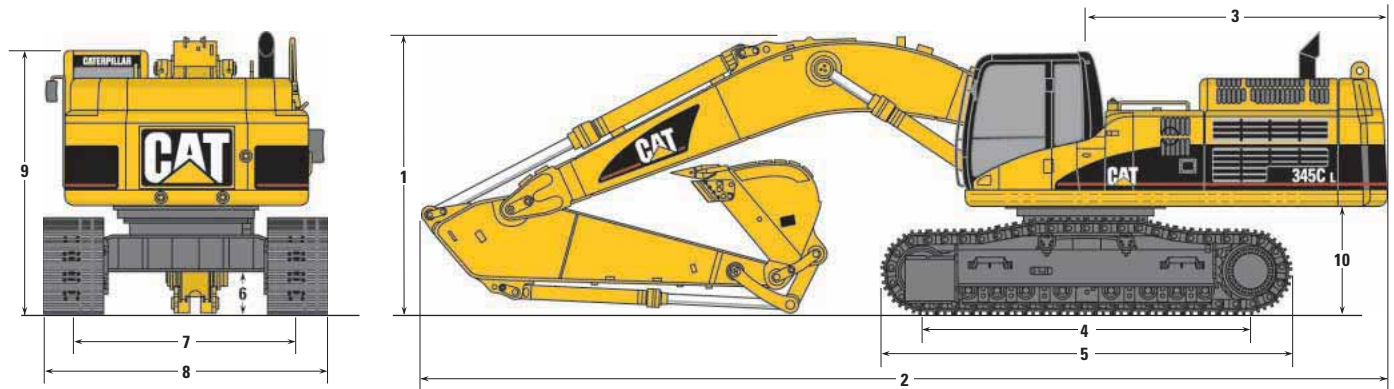
- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT 98, meets OSHA and MSHA requirements for operator sound exposure limits in effects at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.

## Standards

Brakes	SAE J1026 APR90
Cab/FOGS	SAE J1356 FEB 88 and ISO 10262-1998

# Dimensions

All dimensions are approximate.

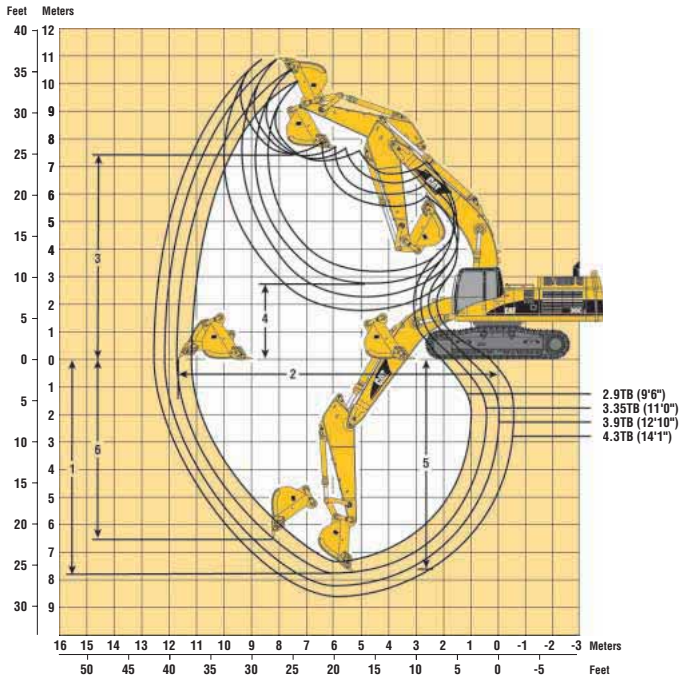


Boom	Long Reach Boom 7.4 m (24'3")			Reach Boom 6.9 m (22'8")			Mass Boom 6.55 m (21'6")	
Stick	R4.3TB (14'1")	R3.9TB (12'10")	R4.3TB (14'1")	R3.9TB (12'10")	R3.35TB (11'0")	R2.9TB (9'6")	M3.0UB (9'10")	M2.5UB (8'2")
<b>1 Shipping Height</b>								
Fixed Gauge Undercarriage	3590 mm (11'9")	3510 mm (11'6")	3770 mm (12'4")	3630 mm (11'11")	3320 mm (10'11")	3520 mm (11'7")	3970 mm (13'0")	3940 mm (12'11")
Variable Gauge Undercarriage	3600 mm (11'10")	3520 mm (11'7")	3760 mm (12'4")	3730 mm (12'3")	3340 mm (11'0")	3580 mm (11'9")	3990 mm (13'1")	3980 mm (13'1")
<b>2 Shipping Length</b>								
Fixed Gauge Undercarriage	12 390 mm (40'8")	12 410 mm (40'9")	11 910 mm (39'1")	11 920 mm (39'1")	11 840 mm (38'10")	11 870 mm (38'11")	11 550 mm (37'11")	11 630 mm (38'2")
Variable Gauge Undercarriage	12 340 mm (40'6")	12 340 mm (40'6")	11 920 mm (39'1")	11 910 mm (39'1")	11 780 mm (38'8")	11 850 mm (38'10")	11 520 mm (37'10")	11 540 mm (37'10")
<b>3 Tail Swing Radius</b>	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")	3770 mm (12'4")
<b>Undercarriage</b>				<b>Fixed Gauge</b>		<b>Variable Gauge</b>	<b>Wide Variable Gauge</b>	
<b>4 Length to Center of Rollers</b>				4360 mm (14'4")		4340 mm (14'3")	4340 mm (14'3")	
<b>5 Track Length</b>				5360 mm (17'7")		5340 mm (17'6")	5340 mm (17'6")	
<b>6 Ground Clearance</b>				510 mm (1'8")		740 mm (2'5")	740 mm (2'5")	
<b>7 Track Gauge</b>								
Retracted (Transport) Position				2740 mm (9'0")		2640 mm (8'8")	2760 mm (9'1")	
Extended (Working) Position				2740 mm (9'0")		2890 mm (9'6")	3240 mm (10'8")	
<b>8 Track Width*</b>								
Retracted (Transport) Position				3640 mm (11'11")		3540 mm (11'7")	3660 mm (12'0")	
Extended (Working) Position				3640 mm (11'11")		3790 mm (12'5")	4140 mm (13'7")	
<b>9 Cab Height</b>				3210 mm (10'6")		3360 mm (11'0")	3360 mm (11'0")	
<b>10 Counterweight Height (to bottom)</b>				1320 mm (4'4")		1470 mm (4'10")	1470 mm (4'10")	

\* Track width shown is for 900 mm (36") track shoes. Subtract 150 mm (6") for 750 mm (30") track shoes.

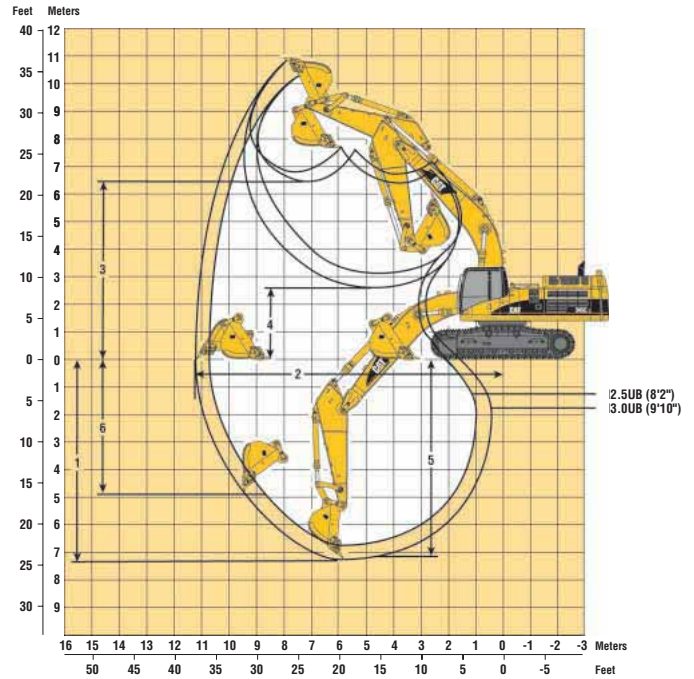
# Reach Working Ranges

Reach (R) boom configuration



# Mass Working Ranges

Mass (M) boom configuration



## 345C L Working Ranges – Long Fixed Gauge Undercarriage

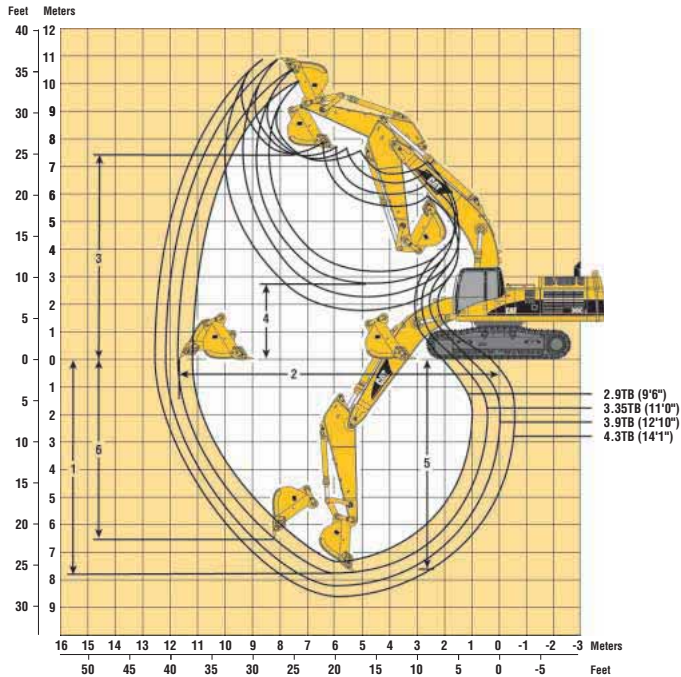
Stick	Long Reach Boom			Reach Boom			Mass Excavation Boom		
	R4.3TB (14'1")	R3.9TB (12'10")	R4.3TB (14'1")	R3.9TB (12'10")	R3.35TB (11'0")	R2.9TB (9'6")	M3.0UB (9'10")	M2.5UB (8'2")	
<b>Bucket</b>	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	HD 2.8 m <sup>3</sup> (3.70 yd <sup>3</sup> )	HD 2.8 m <sup>3</sup> (3.70 yd <sup>3</sup> )
<b>1</b> Maximum Digging Depth	8920 mm (29'3")	8520 mm (27'11")	8600 mm (28'3")	8200 mm (26'11")	7650 mm (25'1")	7200 mm (23'7")	7250 mm (23'9")	6740 mm (22'2")	
<b>2</b> Maximum Reach at Ground Level	12 960 mm (42'6")	12 600 mm (41'4")	12 520 mm (41'1")	12 150 mm (39'10")	11 710 mm (38'5")	11 290 mm (37'1")	11 200 mm (36'9")	10 740 mm (35'3")	
<b>3</b> Maximum Loading Height	7930 mm (26'0")	7800 mm (25'7")	7590 mm (24'11")	7460 mm (24'6")	7420 mm (24'4")	7240 mm (23'9")	6790 mm (22'3")	6590 mm (21'8")	
<b>4</b> Minimum Loading Height	2240 mm (7'4")	2640 mm (8'8")	1800 mm (5'11")	2200 mm (7'3")	2750 mm (9'0")	3200 mm (10'6")	2630 mm (8'8")	3130 mm (10'3")	
<b>5</b> Maximum Depth Cut for 2440 mm (8') Level Bottom	8790 mm (28'10")	8380 mm (27'6")	8480 mm (27'10")	8070 mm (26'6")	7500 mm (24'7")	7040 mm (23'1")	7100 mm (23'3")	6580 mm (21'7")	
<b>6</b> Maximum Vertical Wall Digging Depth	5960 mm (19'7")	5430 mm (17'10")	5910 mm (19'5")	5400 mm (17'8")	5210 mm (17'1")	4810 mm (15'9")	4910 mm (16'1")	4460 mm (14'8")	

## 345C L Working Ranges with Pin Grabber Coupler – Long Fixed Gauge Undercarriage

Stick	Reach Boom	
	R3.35TB (11'0")	R2.9TB (9'6")
<b>Bucket with TB-Family Coupler</b>	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )
<b>1</b> Maximum Digging Depth	7970 mm (26'2")	7520 mm (24'8")
<b>2</b> Maximum Reach at Ground Level	12 040 mm (39'6")	11 620 mm (38'2")
<b>3</b> Maximum Loading Height	7100 mm (23'3")	6920 mm (22'8")
<b>4</b> Minimum Loading Height	2430 mm (8'0")	2880 mm (9'5")
<b>5</b> Maximum Depth Cut for 2440 mm (8') Level Bottom	7840 mm (25'9")	7380 mm (24'2")
<b>6</b> Maximum Vertical Wall Digging Depth	3990 mm (13'1")	3620 mm (11'10")

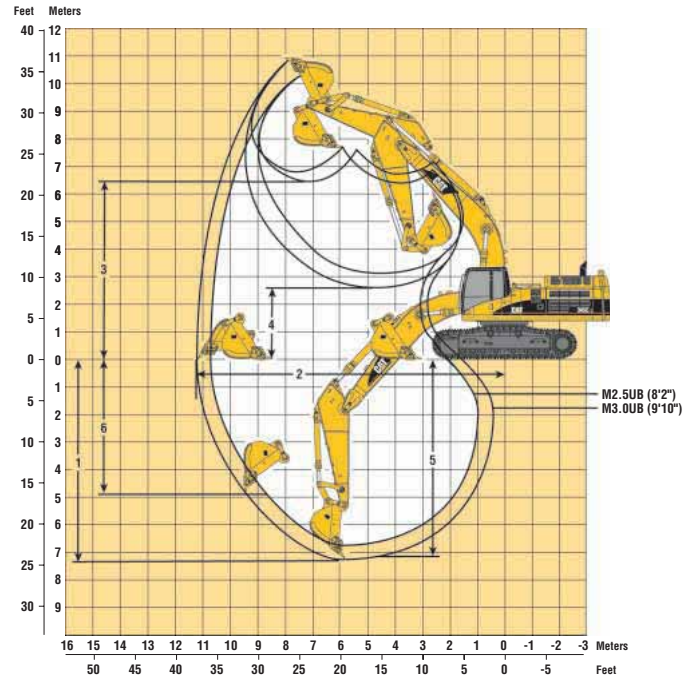
## Reach Working Ranges

Reach (R) boom configuration



## Mass Working Ranges

Mass (M) boom configuration



### 345C L Working Ranges – Long Variable Gauge Undercarriage

Stick	Long Reach Boom			Reach Boom			Mass Excavation Boom	
	R4.3TB (14'1")	R3.9TB (12'10")	R4.3TB (14'1")	R3.9TB (12'10")	R3.35TB (11'0")	R2.9TB (9'6")	M3.0UB (9'10")	M2.5UB (8'2")
<b>Bucket</b>	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	HD 2.8 m <sup>3</sup> (3.70 yd <sup>3</sup> )	HD 2.8 m <sup>3</sup> (3.70 yd <sup>3</sup> )
<b>1</b> Maximum Digging Depth	8770 mm (28'9")	8370 mm (27'6")	8450 mm (27'9")	8050 mm (26'5")	7500 mm (24'7")	7050 mm (23'2")	7100 mm (23'4")	6600 mm (21'8")
<b>2</b> Maximum Reach at Ground Level	12 940 mm (42'5")	12 570 mm (41'3")	12 490 mm (41'0")	12 120 mm (39'9")	11 680 mm (38'4")	11 260 mm (36'11")	11 180 mm (36'8")	10 710 mm (35'2")
<b>3</b> Maximum Loading Height	8070 mm (26'6")	7940 mm (26'1")	7740 mm (25'5")	7600 mm (24'11")	7570 mm (24'10")	7390 mm (24'3")	6930 mm (22'9")	6740 mm (22'1")
<b>4</b> Minimum Loading Height	2380 mm (7'10")	2780 mm (9'1")	1950 mm (6'5")	2350 mm (7'9")	2900 mm (9'6")	3350 mm (11'0")	2780 mm (9'1")	3280 mm (10'9")
<b>5</b> Maximum Depth Cut for 2440 mm (8') Level Bottom	8650 mm (28'4")	8240 mm (27'0")	8330 mm (27'4")	7920 mm (26'0")	7360 mm (24'2")	6900 mm (22'8")	6950 mm (22'10")	6430 mm (21'1")
<b>6</b> Maximum Vertical Wall Digging Depth	5810 mm (19'1")	5290 mm (17'4")	5770 mm (18'11")	5250 mm (17'3")	5070 mm (16'7")	4670 mm (15'4")	4770 mm (15'8")	4310 mm (14'2")

### 345C L Working Ranges with Pin Grabber Coupler – Long Variable Gauge Undercarriage

Stick	Reach Boom	
	R3.35TB (11'0")	R2.9TB (9'6")
<b>Bucket with TB-Family Coupler</b>	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )	GP-C 1.9 m <sup>3</sup> (2.46 yd <sup>3</sup> )
<b>1</b> Maximum Digging Depth	7830 mm (25'8")	7380 mm (24'3")
<b>2</b> Maximum Reach at Ground Level	12 010 mm (39'4")	11 590 mm (38'0")
<b>3</b> Maximum Loading Height	7240 mm (23'9")	7060 mm (23'2")
<b>4</b> Minimum Loading Height	2570 mm (8'5")	3020 mm (9'11")
<b>5</b> Maximum Depth Cut for 2440 mm (8') Level Bottom	7690 mm (25'3")	7230 mm (23'9")
<b>6</b> Maximum Vertical Wall Digging Depth	3840 mm (12'7")	3470 mm (11'5")

# Operating Weight\*

	kg	lb		kg	lb
<b>Complete machine equipped with:</b>			<b>Differences for other buckets:</b>		
6.9 m (22'8") reach boom, R3.9m (12'10") stick, 1219 mm (48") GP-C bucket, long fixed gauge undercarriage with 750 mm (30") TG track shoes, 7610 kg (16,780 lb) counterweight without removal device	44 970	99,150	See bucket specification chart		
<b>Differences for other booms:</b>			<b>Differences for other undercarriages:</b>		
7.4 m (24'3") long reach boom	+180	+400	Long variable gauge undercarriage	+2195	+4,840
6.9 m (22'8") heavy duty reach boom	+515	+1,130	Long wide variable gauge undercarriage	+2975	+6,550
6.55 m (21'6") mass excavation boom	+520	+1,150	<b>Differences for other track shoes:</b>		
<b>Differences for other sticks:</b>			600 mm (24") double grouser (DG)	-645	-1,420
R4.3m (14'1") stick with TB bucket linkage and bucket cylinder	+110	+245	750 mm (30") single grouser (SG)	-110	-250
R3.35m (11'0") stick with TB bucket linkage and bucket cylinder	-110	-245	750 mm (30") double grouser (DG)	+140	+305
R2.9m (9'6") stick with TB bucket linkage and bucket cylinder	-105	-230	900 mm (36") double grouser (DG)	+920	+2,030
M3.0m (9'10") stick with UB bucket linkage and bucket cylinder	+320	+705	900 mm (36") triple grouser (TG)	+750	+1,660
M2.5m (8'2") stick with UB bucket linkage and bucket cylinder	+140	+310	1000 mm (40") triple grouser (TG)	+1360	+3,000
			<b>Differences for other counterweights:</b>		
			8.1 MT counterweight without removal device	+500	+1,100
			9.0 MT counterweight without removal device	+1400	+3,080
			<b>Counterweight removal device</b>	+315	+690

\* Operating weight includes full fuel tank and 75 kg (165 lb) operator. Subtract 380 kg (840 lb) for 50% fuel and no operator.

## 345C L Bucket and Stick Forces

Stick Forces									
TB-Family Buckets	Sticks								
	R4.3		R3.9		R3.35		R2.9		
	kN	lb	kN	lb	kN	lb	kN	lb	
<b>GP-C, HD, HDR</b>									
Stick Digging Force (ISO)	173	38,800	186	41,800	201	45,100	221	49,600	
Stick Digging Force (SAE)	169	37,900	181	40,800	195	43,900	214	48,000	
<b>HD-P</b>									
Stick Digging Force (ISO)	178	39,900	191	43,000	207	46,600	229	51,400	
Stick Digging Force (SAE)	173	38,800	186	41,800	201	45,100	220	49,500	
<b>GP-C, HD, HDR with coupler</b>									
Stick Digging Force (ISO)	163	36,600	175	39,300	187	42,100	205	46,000	
Stick Digging Force (SAE)	160	36,000	172	38,700	184	41,300	200	45,000	
<b>HD-P with coupler</b>									
Stick Digging Force (ISO)	167	37,500	179	40,300	193	43,300	211	47,400	
Stick Digging Force (SAE)	164	36,800	176	39,500	188	42,400	206	46,200	

Sticks									
UB-Family Buckets	M3.0				M2.5				
	kN		lb		kN		lb		
	<b>GP</b>								
Stick Digging Force (ISO)	207	46,400	234	52,500	234	52,500	234	52,500	
Stick Digging Force (SAE)	199	44,700	224	50,300	224	50,300	224	50,300	
<b>HD, HDR with coupler</b>									
Stick Digging Force (ISO)	210	47,300	238	53,600	238	53,600	238	53,600	
Stick Digging Force (SAE)	203	45,500	228	51,300	228	51,300	228	51,300	

Bucket Forces									
TB-Family Buckets	TB-Family Buckets				UB-Family Buckets				
	kN		lb		kN		lb		
	<b>GP-C, HD, HDR</b>								
Bucket Digging Force (ISO)	268	60,200	279	62,700	279	62,700	279	62,700	
Bucket Digging Force (SAE)	238	53,500	248	55,700	248	55,700	248	55,700	
<b>HD-P</b>									
Bucket Digging Force (ISO)	300	67,300	293	65,800	293	65,800	293	65,800	
Bucket Digging Force (SAE)	258	58,000	259	58,300	259	58,300	259	58,300	
<b>GP-C, HD, HDR with coupler</b>									
Bucket Digging Force (ISO)	220	49,400	220	49,400	220	49,400	220	49,400	
Bucket Digging Force (SAE)	203	45,600	203	45,600	203	45,600	203	45,600	
<b>HD-P with coupler</b>									
Bucket Digging Force (ISO)	239	53,700	239	53,700	239	53,700	239	53,700	
Bucket Digging Force (SAE)	217	48,700	217	48,700	217	48,700	217	48,700	

# 345C L Hydraulic Excavator

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