

ZX190LC-7H SPECIFICATIONS

HITACHI

Reliable Solutions

LANDCROS

ENGINE	
Model	Yanmar 4TN107
Type	4-cycle water-cooled, common rail direct injection
Aspiration	Turbocharged, intercooled, cooled EGR
Aftertreatment	DOC + CSF + SCR system
No. of cylinders	4
Rated power	
ISO 14396 : 2002 gross	136 HP (101.3 kW) at 1 900 min ⁻¹
ISO 9249 : 2007 net	132 HP (98.6 kW) at 1 900 min ⁻¹
Maximum torque	444 lbf (602 Nm) at 1 500 min ⁻¹
Piston displacement	278.697 cu.in. (4.567 L)
Bore and stroke	4.2" x 5.0" (107 mm x 127 mm)
Batteries	2 x 12 V / 93 Ah

HYDRAULIC SYSTEM			
Hydraulic Pumps			
Main pumps	2 variable displacement axial piston pumps		
Maximum oil flow	2 x 50 gal/min (190 L/min)		
Pilot pump	1 gear pump		
Maximum oil flow	8.4 gal/min (31.9 L/min)		
Hydraulic Motors			
Travel	2 variable displacement axial piston motors		
Swing	1 axial piston motor		
Relief Valve Settings			
Implement circuit	4 974.8 psi (34.3 MPa)		
Swing circuit	4 699.2 psi (32.4 MPa)		
Travel circuit	4 974.8 psi (34.3 MPa)		
Pilot circuit	565.6 psi (3.9 MPa)		
Power boost	5 511.4 psi (38.0 MPa)		
Hydraulic Cylinders			
	Quantity	Bore	Rod diameter
Boom	2	4.7" (120 mm)	3.3" (85 mm)
Arm	1	4.9" (125 mm)	3.5" (90 mm)
Bucket	1	4.1" (105 mm)	3.0" (75 mm)

UPPERSTRUCTURE	
Revolving Frame	
D-section frame for resistance to deformation.	
Swing Device	
Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row. Swing parking brake is spring-set/hydraulic-released disc type.	
Swing speed	14.1 min ⁻¹
Swing torque	39 091 lbf (53 kNm)

UNDERCARRIAGE	
Tracks	
Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals. Track shoes with triple grousers made of induction-hardened rolled alloy. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.	
Numbers of Rollers and Shoes on Each Side	
Upper rollers	2
Lower rollers	7
Track shoes	46
Track guards	2
Travel Device	
Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.	
Travel speeds	High : 0 to 3.3 mph (0 to 5.3 km/h)
	Low : 0 to 2.1 mph (0 to 3.4 km/h)
Maximum traction force	36 869 lbf (164 kN)
Gradeability	70% (35 degree) continuous

SERVICE REFILL CAPACITIES	
Fuel tank	75.2 gal (285.0 L)
Engine coolant	6.1 gal (23.0 L)
Engine oil	5.8 gal (22.0 L)
Swing device	1.8 gal (6.9 L)
Travel device (each side)	1.8 gal (6.8 L)
Hydraulic system	55.4 gal (210.0 L)
Hydraulic oil tank	33.0 gal (125.0 L)
DEF/AdBlue® tank	9.2 gal (35.0 L)

ENVIRONMENT	
Engine Emissions	EPA Final Tier 4 / EU Stage V
Sounds Level	
Sound level in cab according to ISO 6396 : 2008	LpA 69 dB(A)
External sound level according to ISO 6395 : 2008 and EU Directive 2000/14/EC	LwA 100 dB(A)

SPECIFICATIONS

ZX190LC-7H

WEIGHTS AND GROUND PRESSURE

Operating Weight and Ground Pressure

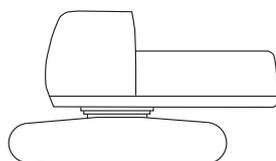
			ZX190LC-7H *	
Boom type			Monoblock	
Shoe type	Shoe width (inch (mm))	Arm length (ft-in (m))	lb (kg)	psi (kPa)
Triple grouser	32" (800)	8' 11" (2.71 m)	43 652 (19 800)	4.79 (33)
		10' 6" (3.21 m)	43 872 (19 900)	4.79 (33)

* Including 0.67 yd³ (0.51 m³) (ISO 7451: 2007 heaped) bucket weight (1 102 lb (500 kg)) and counterweight (7 430 lb (3 370 kg)).

BASIC MACHINE WEIGHT AND COMPONENTS WEIGHT

Basic Machine Weight and Overall Width

Excluding front end attachment, fuel, hydraulic oil and coolant etc. Including counterweight.



		ZX190LC-7H	
Shoe type	Shoe width (inch (mm))	Weight lb (kg)	Overall width (inch (mm))
Triple grouser	32" (800)	34 839 (15 800)	9' 10" (3 000)

Components Weight

Unit: lb (kg)

		ZX190LC-7H
Counterweight		7 430 (3 370)
Monoblock boom (with arm cylinder and boom cylinder)		4 453 (2 020)
Arm 8' 11" (2.71 m) (with bucket cylinder)		2 116 (960)
Arm 10' 6" (3.21 m) (with bucket cylinder)		2 227 (1 010)
Bucket ISO 7451 : 2007 0.67 yd ³ (0.51 m ³)		1 102 (500)

BUCKET AND ARM DIGGING FORCE

Unit: lbf (kN)

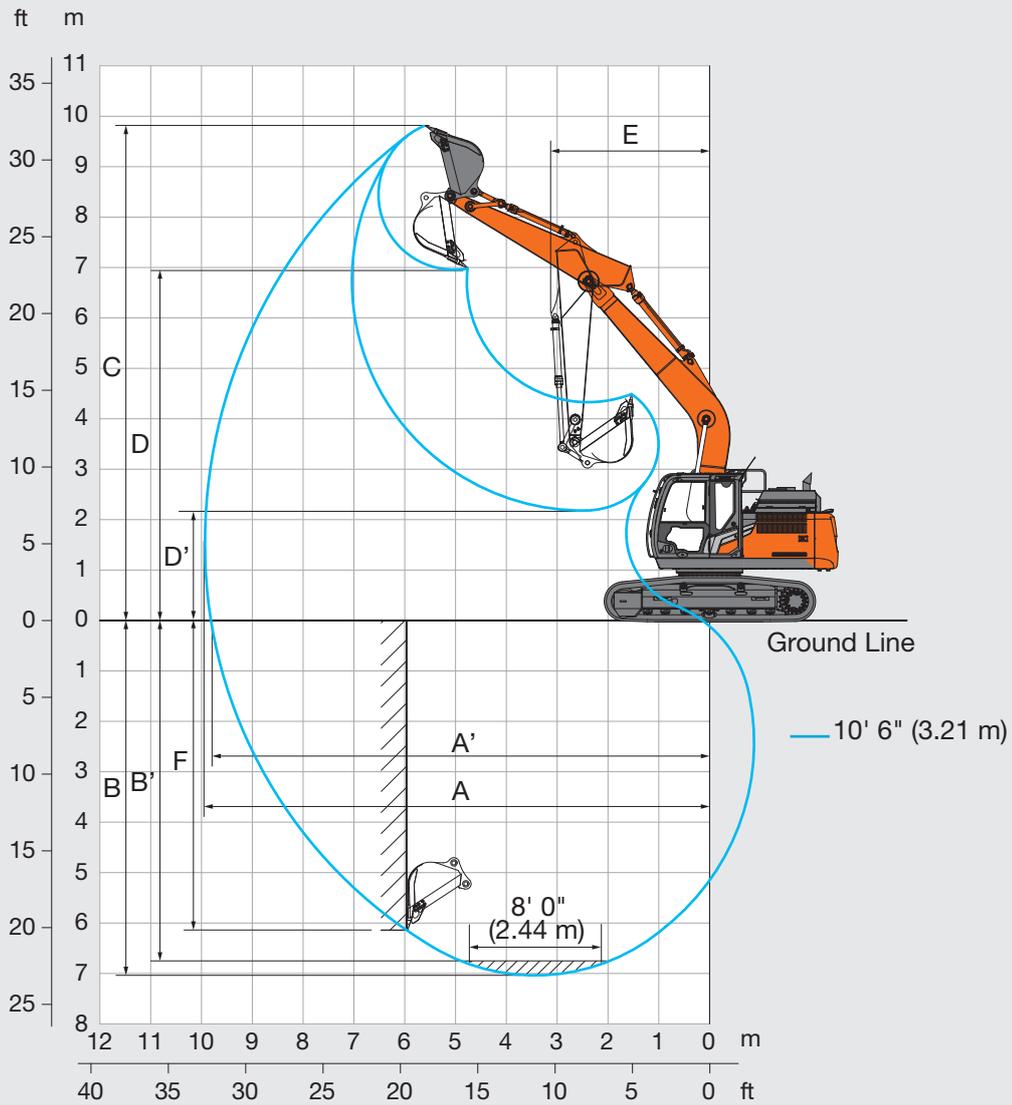
		ZX190LC-7H	
Arm length	8' 11" (2.71 m)	10' 6" (3.21 m)	
Bucket digging force ISO 6015 : 2006	28 551 (127)	28 551 (127)	
Arm crowd force ISO 6015 : 2006	21 357 (95)	18 884 (84)	

Calculated value at power boost

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WORKING RANGES



Unit: ft-in (mm)

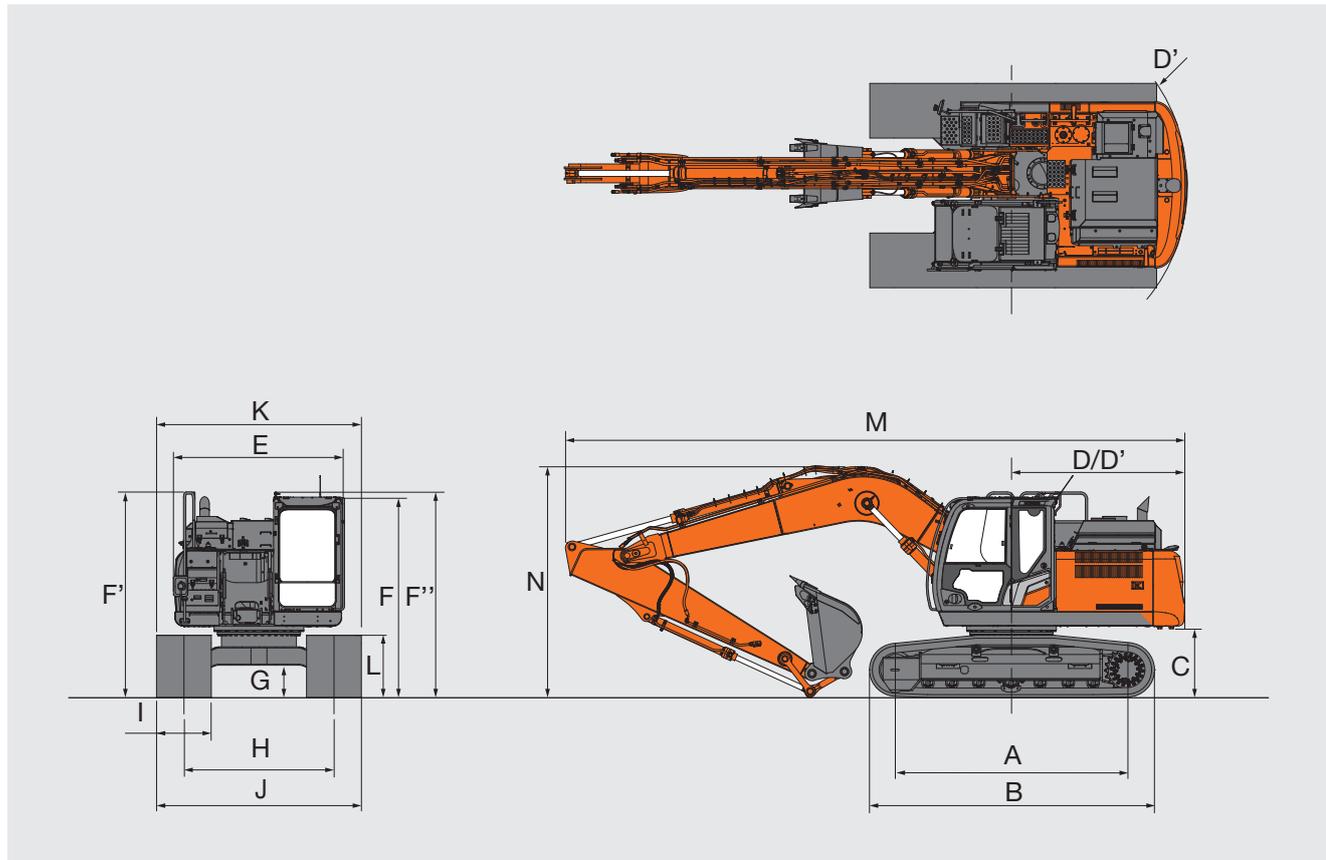
	ZX190LC-7H	
	Monoblock boom	
Arm length	8' 11" (2.71 m)	10' 6" (3.21 m)
A Max. digging reach	30' 11" (9 430)	32' 7" (9 940)
A' Max. digging reach (on ground)	30' 5" (9 270)	32' 1" (9 790)
B Max. digging depth	21' 7" (6 570)	23' 2" (7 070)
B' Max. digging depth for 8' 0" (2.44 m) level	20' 9" (6 320)	22' 6" (6 870)
C Max. cutting height	30' 10" (9 400)	32' 1" (9 790)
D Max. dumping height	21' 7" (6 570)	22' 9" (6 940)
D' Min. dumping height	8' 4" (2 550)	6' 9" (2 060)
E Min. swing radius	10' 3" (3 130)	10' 3" (3 130)
F Max. vertical wall digging depth	18' 3" (5 550)	20' 2" (6 140)

Excluding track shoe lug

SPECIFICATIONS

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DIMENSIONS



Unit: ft-in (mm)

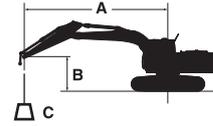
		ZX190LC-7H
		Monoblock boom
A	Distance between tumblers	11' 1" (3 370)
B	Undercarriage length	13' 8" (4 170)
*C	Counterweight clearance	3' 3" (980)
D	Rear-end swing radius	8' 4" (2 550)
D'	Rear-end length	8' 4" (2 530)
E	Overall width of upperstructure	8' 2" (2 500)
F	Overall height of cab	9' 8" (2 950)
F'	Overall height of handrail	9' 11" (3 030)
F''	Overall height of handrail (on cab)	9' 11" (3 020)
*G	Min. ground clearance	1' 6" (450)
H	Track gauge	7' 3" (2 200)
I	Track shoe width	G 2' 7" (800)
J	Undercarriage width	9' 10" (3 000)
K	Overall width	9' 10" (3 000)
*L	Track height with triple grouser shoes	3' 0" (920)
Overall length		
M	With Arm 8' 11" (2.71 m)	29' 8" (9 050)
	With Arm 10' 6" (3.21 m)	29' 8" (9 050)
Overall height of boom		
N	With Arm 8' 11" (2.71 m)	10' 2" (3 090)
	With Arm 10' 6" (3.21 m)	11' 3" (3 420)

* Excluding track shoe lug G: Triple grouser shoe

MACHINE CAPACITIES

ZX190LC-7H

- Notes:
1. Ratings are based on ISO 10567 : 2007.
 2. Machine capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the center-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. 0 ft (0 m) = Ground.



- A: Load radius
B: Load point height
C: Machine capacity

For machine capacities, subtract installed attachment and quick hitch weight from machine capacities.

To determine lifting capacities, apply "Rating over-side or 360 degrees" machine capacities from the table and deduct weight of installed attachment and quick hitch. Optional feature may affect machine performance.

ZX190LC-7H MONOBLOCK BOOM

Rating over-front Rating over-side or 360 degrees Unit : lb (kg)

Conditions	Load point height (ft (m))	Load radius										At max. reach		
		5 ft (1.5 m)		10 ft (3.0 m)		15 ft (4.5 m)		20 ft (6.0 m)		25 ft (7.5 m)		ft-in (meter)		
Boom 18' 1" (5.50 m) Arm 8' 11" (2.71 m) Counterweight 7 430 lb (3 370 kg)	20' (6.0)							*9 880 (*4 460)	9 340 (4 340)			*7 450 (*3 370)	*7 450 (*3 370)	21' 9" (6.69)
	15' (4.5)					*11 530 (*5 330)	*11 530 (*5 330)	*10 590 (*4 850)	9 130 (4 230)			*7 330 (*3 320)	6 620 (2 980)	24' 4" (7.45)
	10' (3.0)					*15 100 (*7 000)	13 330 (6 170)	*12 170 (*5 600)	8 730 (4 040)	9 540 (4 430)	6 200 (2 880)	*7 580 (*3 440)	5 910 (2 670)	25' 9" (7.86)
	5' (1.5)					*18 680 (*8 650)	12 400 (5 740)	13 030 (6 050)	8 300 (3 840)	9 340 (4 330)	6 020 (2 790)	*8 200 (*3 720)	5 640 (2 550)	26' 1" (7.96)
	0 (Ground)			*11 220 (*4 850)	*11 220 (*4 850)	19 690 (9 160)	11 850 (5 490)	12 680 (5 880)	7 990 (3 700)	9 190 (4 260)	5 880 (2 720)	8 940 (4 050)	5 720 (2 590)	25' 6" (7.77)
	-5' (-1.5)	*11 570 (*5 160)	*11 570 (*5 160)	*20 000 (*8 780)	*20 000 (*8 780)	19 500 (9 070)	11 690 (5 420)	12 530 (5 810)	7 850 (3 640)			9 800 (4 430)	6 240 (2 820)	23' 10" (7.27)
	-10' (-3.0)	*20 920 (*9 300)	*20 920 (*9 300)	*28 570 (*13 180)	22 320 (10 390)	19 640 (9 140)	11 800 (5 470)	12 640 (5 860)	7 950 (3 670)			11 950 (5 370)	7 560 (3 400)	20' 10" (6.38)
	-15' (-4.5)			*22 630 (*10 570)	*22 630 (*10 570)	*15 570 (*7 350)	12 290 (5 680)					*14 590 (*6 600)	11 490 (5 050)	15' 9" (4.90)
Boom 18' 1" (5.50 m) Arm 10' 6" (3.21 m) Counterweight 7 430 lb (3 370 kg)	20' (6.0)							*8 700 (*3 940)	*8 700 (*3 940)			*6 090 (*2 750)	*6 090 (*2 750)	23' 9" (7.29)
	15' (4.5)							*9 590 (*4 390)	9 240 (4 290)	*7 870 (*3 820)	6 410 (2 980)	*5 970 (*2 700)	5 920 (2 670)	26' 2" (7.99)
	10' (3.0)			*20 030 (*9 410)	*20 030 (*9 410)	*13 630 (*6 310)	13 580 (6 290)	*11 270 (*5 180)	8 820 (4 090)	9 590 (4 450)	6 240 (2 900)	*6 110 (*2 770)	5 340 (2 420)	27' 5" (8.37)
	5' (1.5)					*17 490 (*8 100)	12 560 (5 820)	13 090 (*6 070)	8 350 (3 870)	9 350 (4 340)	6 010 (2 790)	*6 520 (*2 960)	5 110 (2 310)	27' 9" (8.47)
	0 (Ground)			*11 950 (*5 190)	*11 950 (*5 190)	19 750 (9 190)	11 880 (5 510)	12 680 (5 880)	7 970 (3 690)	9 140 (4 240)	5 830 (2 700)	*7 290 (*3 300)	5 160 (2 340)	27' 2" (8.29)
	-5' (-1.5)	*10 010 (*4 460)	*10 010 (*4 460)	*18 050 (*7 920)	*18 050 (*7 920)	19 420 (9 040)	11 600 (5 380)	12 450 (5 780)	7 770 (3 600)	9 050 (4 190)	5 740 (2 660)	*8 670 (*3 910)	5 560 (2 510)	25' 8" (7.82)
	-10' (-3.0)	*17 400 (*7 730)	*17 400 (*7 730)	*27 960 (*12 230)	21 980 (10 240)	19 440 (9 050)	11 630 (5 390)	12 460 (5 780)	7 780 (3 600)			10 320 (4 640)	6 530 (2 940)	22' 11" (7.01)
	-15' (-4.5)	*27 590 (*12 170)	*27 590 (*12 170)	*25 240 (*11 740)	22 610 (10 520)	*17 440 (*8 140)	11 960 (5 540)					*13 470 (*6 090)	9 030 (4 010)	18' 5" (5.69)

SPECIFICATIONS

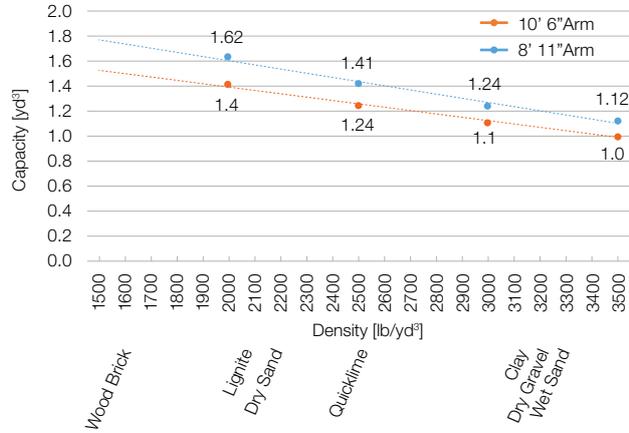
ZX190LC-7H

ZX190LC-7H BUCKET SELECTION

The buckets recommended for installation on this machine are representative only. Actual weights and dimensions should be used to determine acceptability.

* Optional equipment such as Thumb and Coupler are not included.

	Bucket						Arm Length	
	Width		Capacity		Weight		10' 6"	8' 11"
	in	mm	yd ³	m ³	kg	kg		
ZX190LC-7H	24	610	1.00	0.76	1,600	726	●	-
	24	610	1.12	0.86	1,700	771	-	●
	30	762	1.00	0.76	1,600	726	●	-
	30	762	1.12	0.86	1,700	771	-	●
	36	914	1.10	0.84	1,800	816	⊙	-
	36	914	1.24	0.95	1,900	862	-	⊙
	42	1,067	1.24	0.95	2,000	907	○	-
	42	1,067	1.41	1.08	2,100	953	-	○
	48	1,219	1.40	1.07	2,300	1,043	▲	-
	48	1,219	1.62	1.24	2,400	1,089	-	▲
Maximum load with pin-on (Bucket + Payload)						lb	5,110	5,640
						kg	2,310	2,550



- : Suitable for materials with density of 3,500 lb/yd³ (2,100 kg/m³) or less.
- ⊙ : Suitable for materials with density of 3,000 lb/yd³ (1,800 kg/m³) or less.
- : Suitable for materials with density of 2,500 lb/yd³ (1,500 kg/m³) or less.
- ▲ : Suitable for materials with density of 2,000 lb/yd³ (1,200 kg/m³) or less.
- △ : Suitable for materials with density of 1,800 lb/yd³ (1,100 kg/m³) or less.
- : Suitable for materials with density of 1,500 lb/yd³ (900 kg/m³) or less.
- : Not applicable

Maximum load with pin-on (Bucket + Payload) complies with ISO 10567: 2007.

Using a bucket heavier or wider than recommended specifications may result in less than optimal performance, including reduced productivity, stability, reliability and component durability.

Improper use of the bucket to sweep, pry, twist or snag heavy loads will shorten the life of the boom and arm.

[Reference]

Example calculation for Maximum Load of 7,450 lb.

$$\begin{aligned} \text{Load with pin-on (Bucket + Payload)} &= \text{Bucket weight} + \text{Payload (Bucket capacity} \times \text{Material density)} \\ &= 1,708 \text{ lb} + (1.36 \text{ yd}^3 \times 3,500 \text{ lb/yd}^3) \\ &= 6,468 \text{ lb} < \text{Maximum Load } 7,450 \text{ lb} \text{ ---> OK} \end{aligned}$$

Example calculation for Maximum Load of 7,450 lb and Attachment (Thumb and coupler etc) weight of 1,800 lb.

$$\begin{aligned} \text{Load with pin-on (Bucket + Payload)} &= \text{Bucket weight} + \text{Payload (Bucket capacity} \times \text{Material density)} + \text{Attachment weight} \\ &= 1,708 \text{ lb} + (1.36 \text{ yd}^3 \times 2,800 \text{ lb/yd}^3) + 1,800 \text{ lb} \\ &= 7,316 \text{ lb} < \text{Maximum Load } 7,450 \text{ lb} \text{ ---> OK (Up to } 2,800 \text{ material density can be used)} \end{aligned}$$

EQUIPMENT

ZX190LC-7H

● : Standard equipment ○ : Optional equipment

ENGINE	ZX-7H 190LC
Aftertreatment device	●
Air cleaner double filters	●
Alternator 80 A	●
Auto idle system	●
Auto shut-down control	●
Belt auto tensioner	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
ConSite OIL (sensor)*	○
DEF / AdBlue® tank	●
DEF / AdBlue® tank inlet strainer and extension filler	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Dust-proof indoor net	●
ECO / PWR / HP mode control	●
Electrical fuel feed pump	●
Engine oil drain coupler	●
Expansion tank	●
Fan guard	●
Fuel cooler	●
Fuel pre-filter with water separator	●
Isolation-mounted engine	●
Maintenance free pre-cleaner	○
Oil separator	●
Radiator, oil cooler and intercooler	●

HYDRAULIC SYSTEM	ZX-7H 190LC
Auto power lift	●
ConSite OIL (sensor)*	○
Control valve with main relief valve	●
Equipment package for lifting objects	○
Extra port for control valve	●
High mesh full flow filter	●
Hose rupture valve for arm	○
Hose rupture valve for boom	○
Pilot filter	●
Power boost	●
Restriction indicator for full flow filter	○
Suction filter	●
Swing dampener valve	●
Variable reliefvalve for breaker and crusher	●
Work mode selector	●

CAB	ZX-7H 190LC
Auto control air conditioner	●
AUX function lever (breaker)	●
AUX function lever (breaker assist)	○
Bluetooth® integrated radio	●
Cab : All-weather sound suppressed steel	●
Cab : CRES VII (center pillar reinforced structure)	●
Cab : OPG top guard Level I (ISO 10262 : 1998) compliant	●
Cab : ROPS (ISO 12117-2 : 2008) compliant	●
Console height adjustment	●
Control lever auto-lock	●
Drink holder with hot and cool function	●
Electric double horn	●
Engine shut-off switch	●
Equipped with reinforced, tinted (green color) glass windows	●
Evacuation hammer	●
Floor mat	●
Footrest	●
Front guard : OPG Level II (ISO 10262 : 1998) compliant	○
Front window washer (1 point)**	●
Front window washer (2 points)**	○
Glove compartment	●
Hands-free calling device	●
Hot and cool box	●
Intermittent windshield wipers	●
Key cylinder light	●
LED room light	●
Magazine rack	●
Pilot shut-off lever	●
Power outlet 12 V and 24 V	●
Push button low idle	●
Rain guard (without OPG front guard)	●
Rear tray	●
Retractable seat belt 3 in. (76 mm)	●
Rubber radio antenna	●
Seat : air suspension seat with heater	●
Seat adjustment part : backrest, armrest, height and angle, slide forward / back	●
Seat belt reminder	●
Short wrist control levers	●
Smartphone holder	●
Straight travel pedal	○
Sunscreen roller type (multi-use front or side and rear window)	●
Top guard: OPG Level II (ISO 10262 : 1998) compliant	○
Transparent roof with slide curtain	●
USB power supply	●
Wide view wiper	○
Windows on front, upper, lower and left side can be opened	●
2 speakers	●
4 fluid-filled elastic mounts	●
8 inch monitor	●

MONITOR SYSTEM	ZX-7H 190LC
Alarm buzzers: overheat, engine oil pressure, overload, SCR system trouble, etc	●
Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, SCR system trouble, etc	●
Display of meters: water temperature, hour, fuel rate, clock, DEF / AdBlue® rate, etc	●
Other displays: work mode, auto-idle, glow, rearview monitor, operating conditions, etc	●
35 languages selection	●

LIGHTS	ZX-7H 190LC
Additional boom LED light with cover	●
Additional cab roof front LED lights	●
Additional cab roof rear LED lights	●
LED lights for camera (side and rear view camera)	○
Rotating lamp	○
2 working LED lights	●

UPPER STRUCTURE	ZX-7H 190LC
AERIAL ANGLE (270-degree view camera system)	●
Batteries 2 x 93 Ah	●
Body top handrail	●
Cab top handhold	●
Control pattern changer (ISO / BH)	●
Counterweight 7 430 lb (3 370 kg)	●
Electric fuel refilling pump with auto stop and filter	●
Fuel level float	●
HD undercover	○
Hydraulic oil level gauge	●
Lockable fuel refilling cap	●
Lockable machine covers	●
Lockable tool box	●
Platform handrail	●
Side view mirror (right and left)	●
Skid-resistant plates	●
Swing parking brake	●
Undercover	●
2 way battery disconnect switch	●

EQUIPMENT

ZX190LC-7H

UNDERCARRIAGE	ZX-7H 190LC
Bolt-on sprocket	●
Greasing type track adjuster	●
Reinforced track links with pin seals	●
Shoe: 32" (800 mm) triple grouser	●
Towing hole for light weight object	●
Track undercover	○
Travel direction mark on track frame	●
Travel motor covers	●
Travel parking brake	●
Upper and lower rollers	●
2 track guards (each side)	●
4 tie down brackets	●

FRONT ATTACHMENTS	ZX-7H 190LC
Arm 8' 11" (2.71 m)	○
Arm 10' 6" (3.21 m)	●
Arm tip remote lubrication	●
Casted bucket link A	●
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Lower arm reinforcement	●
Reinforced resin thrust plate	●
Reinforced bucket link B	●
WC (tungsten-carbide) thermal spraying	●

ATTACHMENTS	ZX-7H 190LC
Accessories for 2 speed selector	○
Additional pump (7.9 gal (30 L)/min)	○
Assist piping	○
Breaker and crusher piping (Short piping)	○
Breaker and crusher piping	●
Pilot accumulator	○
Quick coupler piping	○

QUICK LINKS	ZX190LC-7H
Website's Product Page	

● : Standard equipment ○ : Optional equipment

MISCELLANEOUS	ZX-7H 190LC
ConSite	○
Global e-Service	●
Onboard information controller	●
Satellite communication device	○
Standard tool kit	●
Travel alarm	●

Standard and optional equipment may vary by country, so please consult authorized dealer for details.

* Engine oil and hydraulic oil monitoring sensor.

** Front window washer (1 point) is only when equipped with standard wiper.

Front window washer (2 points) is only when equipped with wide view wiper.