

308E2 CR

Mini Hydraulic Excavator



Engine

Engine Model*	Cat® C3.3B
Net Power (ISO 9249)	48.5 kW 65 hp

*Engine meets U.S. EPA Tier 4 Final/EU Stage IIIB emission standards.

Weights

Operating Weight with Cab	8400 kg	18,519 lb
---------------------------	---------	-----------

Operating Specifications

Maximum Dig Depth	4150 mm	13'7"
-------------------	---------	-------

High performance in a compact radius and swing boom design for greater versatility and controllability.

Contents

Compact Radius4

Operator Station.....5

COMPASS Control Panel6

Performance and Controllability8

Variable Angle Boom.....9

Undercarriage10

Work Tools.....11

Engine and Serviceability12

Specifications.....14

Standard Equipment.....17

Optional Equipment.....18

Notes.....19





The Cat 308E2 CR Mini Hydraulic Excavator delivers high performance with the versatility of a swing boom front linkage in a durable Compact Radius design to help you work in the tightest applications. With the COMPASS display panel, Tier 4 Final/Stage IIIB engine and High Definition Hydraulic (HDH) system, the 308E2 CR is more productive, versatile and cost effective.

Compact Radius

Work in the tightest spaces.



Compact Radius

The compact radius design gives greater machine versatility and the capability to work within confined areas. The radius of the upper body stays within 280 mm (11 in) of the undercarriage providing flexibility for different work site applications with a reduced risk of damage and less stress for the operator.

This allows the operator to concentrate on the work being done without having to worry about damaging the back of the machine or other job site obstacles.

Operator Station

Superior comfort to keep you productive throughout the work day.

Comfortable Working Environment

Spacious and comfortable operator station with excellent visibility and legroom keeps the operator comfortable and helps reduce fatigue. All hydraulic functions are fully pilot operated, lowering owning and operating costs and resulting in less downtime.

The operator station also features:

- Heated, air suspension seat
- COMPASS display panel
- Ergonomic joysticks
- Dynamic operator sound pressure 70 dB(A) ISO 6396
- Average exterior sound pressure 99 dB(A) ISO 6395 – dynamic test



COMPASS Control Panel

Complete, Operational, Maintenance, Performance and Security System.



The COMPASS control panel on the Cat E2 Series mini hydraulic excavators was specifically designed by Caterpillar for compact excavators. It adds several new features to the machines increasing the amount of customer value. All of the following features are standard on all E2 Series models.

Complete – All of the control panel features are standard on all E2 Series models

Operation – Simple operation of the pattern changer, hydraulic quick coupler and fuel gauge visibility all at the push of a button

Maintenance – Maintenance intervals, diagnostics and work hours

Performance – Maintain optimum performance levels with adjustable work tool flow features

And

Security – Anti theft device with individual user and master passwords

System – Ergonomically designed control panel



Passcode Protected Security System

A standard anti-theft device comes on every E2 Series compact excavator. A five digit alphanumeric password is required to start the machine when the anti-theft feature is enabled. There is a master password and up to five user passwords can be created by the owner if desired.

Keep your machine safe on a busy job site by locking it when you are not around.

Adjustable Auxiliary Work Tool Flow Control

The E2 Series machines feature simple adjustability of the flow going down the boom and stick to the work tool. Both the standard main line and optional secondary auxiliary hydraulics can be adjusted on a scale of 1–15 through a few buttons on the control panel.

Adjust the flow to your different tools with a simple push of a button.



UNLOCK the new features and experience the value of the exclusive COMPASS control panel on the Cat E2 Series compact excavators

Rearview Camera

Increase operator productivity and efficiency with enhanced visibility with the rear view camera.

Work more confidently with greater visibility.

Continuous Flow

Once this feature is enabled through a button on the monitor, the E2 Series machines can run in continuous flow mode. With the auxiliary hydraulics on the right hand joystick, just hold the roller switch at the desired flow rate and direction for 2.5 seconds and the machine will maintain that flow rate until it is turned off.

Maintain hydraulic flow to your tools at any flow and in any direction with the simple push of a button.

Pattern Changer

Change the operating pattern between excavator and backhoe with a simple press of a button from the comfort of the cab. (Optional in Europe)

Exclusive push button pattern changer is safe and easy.

Maintenance and Performance Information

Easily keep track of various maintenance and performance parameters of your machine.

Reset the maintenance intervals and ensure the machine is receiving proper care maximizing the life of the machine.

Site Reference System

Output from pitch and roll sensors aid in grading and level trenching for improved efficiency and job site finishing.

Finish the job faster with site information.



Performance and Controllability

Powerful digging combined with smooth responsive control.



High digging forces that provide power through even the most compacted ground, coupled with direct, smooth control through responsive hydraulics, ensure that the Cat 308E2 CR delivers the high productivity that customers demand.

Controllability

The Cat 308E2 CR front linkage has been perfectly balanced with the hydraulics to deliver the high level of control required for fine grading and landscaping applications.

- Automatic two speed function improves job site maneuverability by balancing high speed travel requirements and control.
- Joystick mounted auxiliary control enhances machine controllability. The intuitive controls give fine modulation.
- Auxiliary lines including quick connectors are fitted as standard, meaning the Cat 308E2 CR comes ready to work.
- Optional boom and stick lowering check valve includes integral overload warning device.

High Definition Hydraulic System

- Delivers fuel savings, efficiency, controllability and precision.
- Industry leading variable displacement, load sensing, flow sharing system.

Lift Capacity

To meet the diverse needs of today's customer, the 308E2 CR has high level lift capacity and outstanding stability – all in a compact radius design to provide on site versatility to get the job done.

Counterweight

An optional rear counterweight can be added to provide additional lift capacity and stability.



Variable Angle Boom

Increased flexibility and versatility.



Durable Front Linkage

Uptime and service intervals are increased with durable and reliable booms, sticks and linkage pins. Each boom and stick is built to provide superior strength to withstand any tough application. The variable angle boom option offers flexibility and versatility in the working envelope.

With full extension, the working range offers a maximum dig depth extending to 3980 mm (157 in). The maximum reach extends 760 mm (30 in) beyond the standard boom and stick configuration to 7780 mm (306 in). The working height reaches 1360 mm (54 in) beyond the standard boom and stick configuration to 8000 mm (315 in). When retracted, the Cat 308E2 Variable Angle Boom Mini Excavator can work closer to the blade and tracks, providing increased lifting capacity while working productively in confined areas.

Undercarriage

Excellent stability.



Depending on the customers application, the Cat 308E2 CR has three different track options to choose from, allowing the correct machine configuration to suit the job.



Rubber Belt

Provides the lowest ground disturbance of all track options with excellent traction in conditions that are soft underfoot. The standard track offering is 450 mm (17.7 in) width.

Steel Track

Good for demolition and heavy duty applications. A triple grouser track is available in two width options: 450 mm (17.7 in) and 600 mm (23.6 in).



Steel Track with Rubber Pads

The 450 mm (17.7 in) wide shoe has four holes to attach the rubber pads to the steel track shoes. This option prevents damage to paved road surfaces and minimizes noise and vibration during travel while providing maximum stability.

Blade Widths

The dozer blade is an important and useful tool for the Hydraulic Mini Excavator used for backfilling trenches, levelling, landscaping and site clean up. There are two blade width options available to accommodate the differences in track widths.

The blade comes standard with a replaceable weld-on dozer cutting edge constructed of hardened steel for longer life.

Tie Down Points

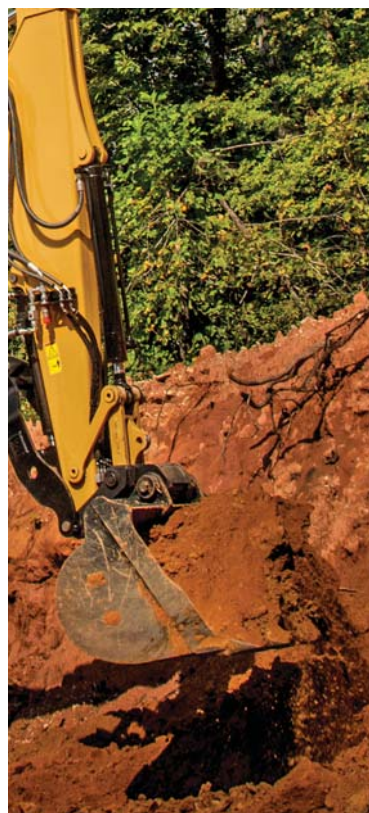
Large oval tie down points are located in two positions on the undercarriage for easy and safe machine tie down for transportation.





Work Tools

Matched to meet your application needs.



Wide Range of Work Tools

A wide range of Cat Work Tools have been designed specifically to get the best out of your machine and deliver excellent value through high productivity and long life.

Available work tools include:

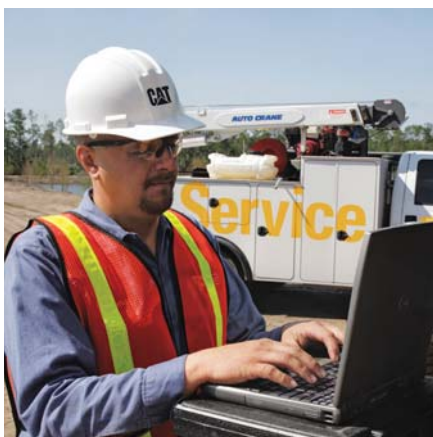
- Buckets (heavy duty and heavy duty capacity)
- Tilting and Swing Ditch Cleaning Buckets
- Hydraulic Hammers
- Augers
- Vibratory Compactors
- Shears
- Rippers
- Dual Lock Mechanical Coupler
- Dual Lock Hydraulic Coupler
- Tilting Coupler

To maximize performance and productivity, Cat mechanical and hydraulic quick couplers are compatible with all standard work tools, enabling the operator to simply release one work tool and pick up another.

One-way flow (hammer) and two-way flow (auger) auxiliary lines with quick connectors are fitted as standard. This allows the machine to adapt to a wide variety of applications without re-configuring the auxiliary lines. Versatility is further enhanced with the option of a second auxiliary supply (for a rotating grapple).

Engine and Serviceability

Superior power with easy access and minimal maintenance requirements keep you working.



Customer Support

Your Cat dealer is ready to assist you with your purchase decision and everything after.

- Financing packages are flexible to meet your needs
- Unmatched parts availability keeps you working
- Make comparisons of machines, with estimates of component life, preventative maintenance and cost of production
- For more information on Cat products, dealer services and industry solutions, visit www.cat.com



Easy Service

Convenient service features make maintenance easy, reducing your downtime:

- Lifting side hood allows access to air filter, main implement valve, 1-way/2-way auxiliary flow selector, accumulator, fuel filter and hydraulic tank. This eliminates the need to lift the cab when maintaining and servicing the machine.
- Swing open door provides access to major components and service points including engine oil check and fill, vertically mounted engine oil filter, starter motor and alternator.
- S-O-SSM oil sampling valve allows easy sampling of the hydraulic fluid for preventative maintenance.
- The 308E2 CR is Product LinkTM ready and the Cat Product Link system simplifies equipment fleet tracking. Using satellite or cellular technology, the system automatically reports information such as location, machine hours, active and logged service codes and security alarms.

Power on Demand

Automatic system ensures optimal fuel efficiency through appropriate engine rating to meet all operational requirements as needed.

Auto Engine Shutdown

Engaging this feature allows the operator to save fuel by powering down the machine after a designated inactive period. The operator can adjust the range from 1-15 minutes to meet their needs. The system will only shut down after the set time, provided the hydraulic lever is up. Electronics will remain powered after shutdown.

Engine

The Cat C3.3B electronic engine delivers quiet operation with superior power and fuel efficiency while meeting Tier 4 Final/Stage IIIB emission standards.



308E2 CR Mini Hydraulic Excavator Specifications

Engine

Engine Model	Cat C3.3B*	
Rated Net Power @ 2,400 rpm		
ISO 9249/EEC 80/1269	48.5 kW	65 hp
Gross Power		
ISO 14396	49.7 kW	66.6 hp
Bore	94 mm	3.7 in
Stroke	120 mm	4.7 in
Displacement	3.33 L	203.2 in ³

* Meets Tier 4 Final/Stage IIIB emission standards.

Weights

Operating Weight with Cab	8400 kg	18,519 lb
---------------------------	---------	-----------

- Weight with rubber tracks, bucket, operator (75 kg/165 lb), full fuel and auxiliary lines.
- Weight varies depending on machine configuration.

Swing System

Machine Swing Speed	11 rpm	
Boom Swing – Left	60°	
Boom Swing – Right	50°	

- Automatic swing break, spring applied, hydraulic release.

Travel System

Travel Speed		
High	5.1 km/h	3.17 mph
Low	2.8 km/h	1.74 mph
Maximum Traction Force		
High Speed	37.4 kN	8,408 lbf
Low Speed	64.5 kN	14,500 lbf
Gradeability (maximum)	30°	
Ground Pressure	36.3 kPa	5.26 psi

- Each track is driven by one independent 2-speed motor.
- Drive modules are integrated into the roller frame for total protection.
- Straight line travel when tracking and operating the front linkage simultaneously.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.3 kg (2.9 lb) of refrigerant which has a CO₂ equivalent of 1.9 metric tonnes (4,189 lb).

Service Refill Capacities

Fuel Tank	125 L	33 gal
Cooling System	14 L	3.7 gal
Engine Oil	11.2 L	3.0 gal
Hydraulic Tank	82 L	21.7 gal
Hydraulic System	94 L	24.8 gal

Hydraulic System

Pump Flow at 2,000 rpm	150 L/min	39.6 gal/min
Operating Pressure – Equipment	28 000 kPa	4,061 psi
Operating Pressure – Travel	28 000 kPa	4,061 psi
Operating Pressure – Swing	24 000 kPa	3,481 psi
Auxiliary Circuit – Primary (280 bar/4,061 psi)	128 L/min	33.8 gal/min
Auxiliary Circuit – Secondary (280 bar/4,061 psi)	64 L/min	16.9 gal/min
Digging Force – Stick (standard)	40.1 kN	9,015 lbf
Digging Force – Stick (long)	35.1 kN	7,891 lbf
Digging Force – Bucket	60.2 kN	13,534 lbf

- Load sensing hydraulics with variable displacement piston pump.

Blade

Width	2320 mm	91.3 in
Height	450 mm	17.7 in
Dig Depth	360 mm	14.2 in
Lift Height	380 mm	15.0 in

Cab

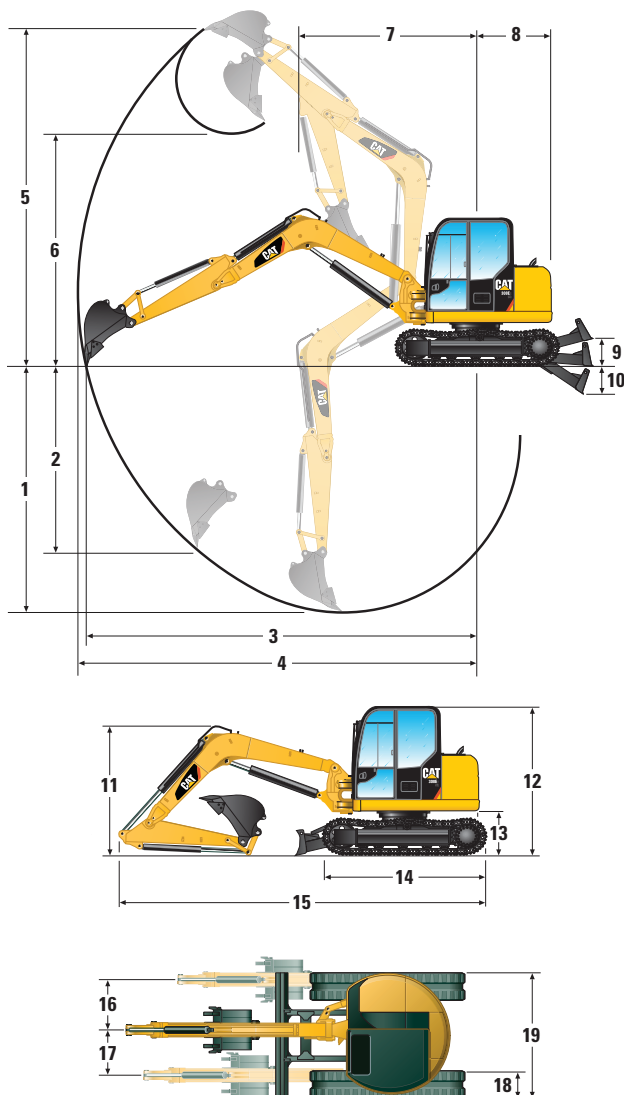
Dynamic Operator Sound Pressure	70 dB(A) ISO 6396	
Average Exterior Sound Pressure	99 dB(A) ISO 6395 – Dynamic Test	

Operating Specifications

Stick Length – Standard	1670 mm	5 ft 6 in
Stick Length – Long	2210 mm	7 ft 3 in
Machine Overhang	279.4 mm	11 in
Machine Overhang with Counterweight	406 mm	16 in
Counterweight	251 kg	551 lb

308E2 CR Mini Hydraulic Excavator Specifications

Dimensions



	Standard Stick		Long Stick	
	mm	ft/in	mm	ft/in
1 Dig Depth	4150	13'7"	4690	15'5"
2 Vertical Wall	2980	9'9"	3550	11'8"
3 Maximum Reach at Ground Level	6820	22'9"	7350	24'1"
4 Maximum Reach	7020	23'0"	7540	24'9"
5 Maximum Dig Height	6640	21'9"	6990	22'11"
6 Maximum Dump Clearance	4670	15'4"	5010	16'5"
7 Linkage In Minimum Radius	2800	9'2"	3280	10'9"
8 Tail Swing				
Standard Counterweight	1450	4'9"	1450	4'9"
9 Maximum Blade Height	420	1'5"	420	1'5"
10 Maximum Blade Depth	320	1'1"	320	1'1"
11 Boom Height in Shipping Position	2280	7'6"	2230	7'4"
12 O/A Shipping Height	2550	8'4"	2550	8'4"
13 Swing Bearing Height	735	2'5"	735	2'5"
14 O/A Undercarriage Length	2903	9'6"	2903	9'6"
15 O/A Shipping Length	6380	20'11"	6340	20'10"
16 Boom Swing Right	1010	3'4"	1010	3'4"
17 Boom Swing Left	635	2'1"	635	2'1"
18 Track Belt/Shoe Width	450	1'6"	450	1'6"
19 O/A Track Width	2320	7'7"	2320	7'7"

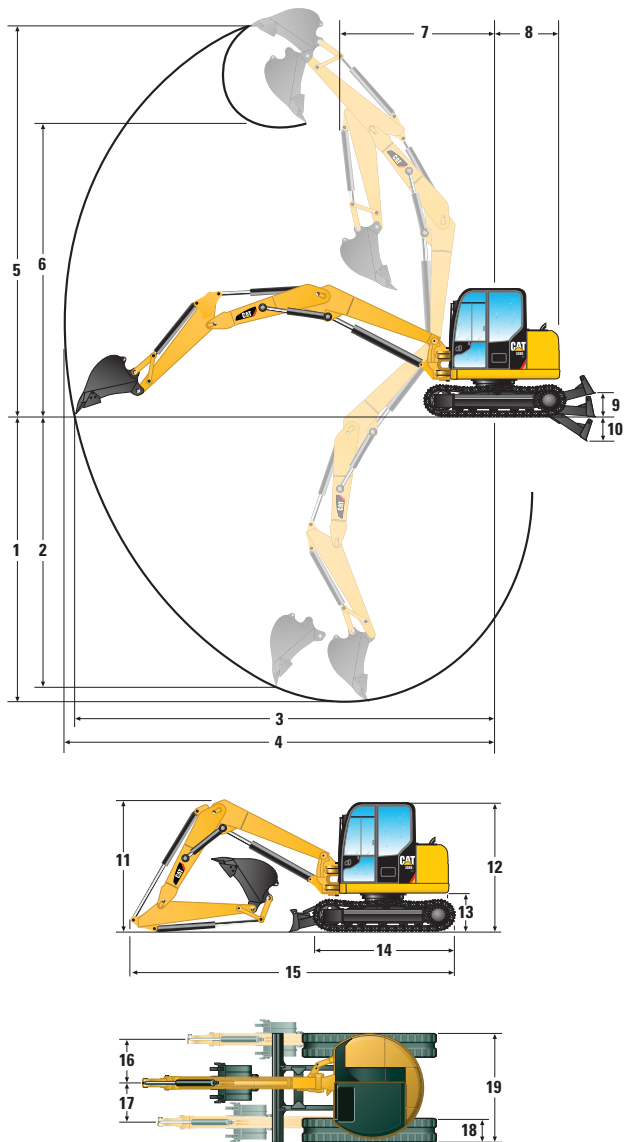
Lift Capacities at Ground Level*

Lift Point Radius		4000 mm (13'1")		6050 mm (19'10")	
		Front	Side	Front	Side
Blade Down	kg	3650	1710	1880	920
	lb	8,046	3,770	4,144	2,028
Blade Up	kg	1840	1530	970	820
	lb	4,056	3,373	2,138	1,808

* The above loads are consistent with hydraulic excavator lift capacity rating standard ISO 10567:2007 and they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. The excavator bucket weight is not included on this chart. Lifting capacities are for standard stick.

308E2 CR Mini Hydraulic Excavator Specifications

Dimensions with Variable Angle Boom



	Standard Stick with Angle Boom Extended		Standard Stick with Angle Boom Retracted	
	mm	in	mm	in
1 Dig Depth	3980	157	3710	146
2 Vertical Wall	3820	150	3600	142
3 Maximum Reach at Ground Level	7632	300	6365	251
4 Maximum Reach	7780	306	6550	258
5 Maximum Dig Height	8000	315	5200	205
6 Maximum Dump Clearance	6080	239	3360	132
7 Linkage In Minimum Radius	2925	115	3235	127
8 Tail Swing				
Standard Counterweight	1450	57	1450	57
With Extra Counterweight	1565	62	1565	62
9 Maximum Blade Height	420	17	420	17
10 Maximum Blade Depth	320	13	320	13
11 Boom Height in Shipping Position	2280	90	2200	87
12 O/A Shipping Height	2550	100	2550	100
13 Swing Bearing Height	735	29	735	29
14 O/A Undercarriage Length	2903	114	2903	114
15 O/A Shipping Length	7010	276	5795	228
16 Boom Swing Right	1010	40	1010	40
17 Boom Swing Left	635	25	635	25
18 Track Belt/Shoe Width	450	18	450	18
19 O/A Track Width	2320	91	2320	91

Lift Capacities at Ground Level with Variable Angle Boom

Lift Point Radius		Variable Angle Boom Minimum*				Variable Angle Boom Maximum*			
		5000 mm (16'5")		5500 mm (18'1")		5000 mm (16'5")		6800 mm (22'4")	
		Front	Side	Front	Side	Front	Side	Front	Side
Blade Down	kg	2354	1070	902	902	2479	945	1451	575
	lb	5,191	2,359	1,989	1,989	5,466	2,084	3,199	1,268
Blade Up	kg	1294	1070	902	902	1164	945	714	575
	lb	2,853	2,359	1,989	1,989	2,567	2,084	1,574	1,268

* The above loads are in compliance with hydraulic excavator lift capacity rating standard ISO 10567:2007 and they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. The excavator bucket weight is not included on this chart. Lifting capacities are for standard stick.

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

ENGINE

- Cat C3.3B diesel engine (meets Tier 4 Final/ Stage IIIB emission standards)
- Automatic engine idle
- Automatic engine shut-off
- Automatic two speed travel
- Diesel Particulate Filter (North America only)
- Diesel Oxidation Catalyst (North America only)
- Fuel and water separator
- Power on demand

HYDRAULIC SYSTEM

- 1-way and 2-way (combined function)
- Accumulator
- Automatic swing parking brake
- Auxiliary hydraulic lines
- Adjustable auxiliary relief
- Auxiliary line quick disconnects
- Cat interlock system: hydraulic lockout
- Continuous auxiliary flow
- Ecology drain
- Hydraulic oil cooler
- High definition hydraulics
- Load sensing/flow sharing

OPERATOR ENVIRONMENT

- 100% pilot control ergonomic joysticks
- Adjustable armrests
- Air conditioning/heat
- COMPASS: complete, operation, maintenance, performance and security system
 - Multiple languages
- Cup holder
- High back suspension seat, heated
- Hydraulic neutral lockout bar
- Interior light
- Literature holder
- Pattern changer (optional in Europe)
- Radio (optional in Europe)
- Site reference system: leveling
- Tool storage area
- Travel control pedals with hand levers
- Washable floor mat
- Windshield wiper

UNDERCARRIAGE

- Dozer blade with float function
- Track, rubber belt, 450 mm (18 in) width
- Tie down eyes on track frame
- Towing eye on base frame

FRONT LINKAGE

- 180 degree bucket rotation
- Certified lifting eye on bucket linkage (optional in Europe)
- Front shovel capable
- Thumb ready stick

ELECTRICAL

- 12 volt electrical system
- 60 ampere alternator
- 650 CCA maintenance free battery
- Fuse box
- Ignition key start/stop switch
- Slow blow fuse
- Warning horn

LIGHTS AND MIRRORS

- Cab and boom light with time delay capability
- Mirror, rear view, cab left

SAFETY AND SECURITY

- Anti-theft system (COMPASS)
- Caterpillar Corporate “One Key” System
- Door locks
- Lockable fuel cap
- Rearview camera
- Retractable seat belt
- Roll Over Protective Structure (ROPS) (ISO 12117-2)
- Tip Over Protective Structure (TOPS) (ISO 12117)
- Top guard – ISO 10262 (Level II)
- Travel alarm (optional in Europe)

308E2 CR Optional Equipment

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

ENGINE

- Engine block heater

HYDRAULIC SYSTEM

- Quick coupler lines
- Boom lowering check valve*
- Stick lowering check valve*
- Secondary auxiliary hydraulic lines*

UNDERCARRIAGE

- Blade, weld on
- Track, triple grouser (steel), 450 mm (18 in)
- Track, triple grouser (steel) with rubber pad, 450 mm (18 in)
- Track, triple grouser (steel), 600 mm (24 in)

FRONT LINKAGE

- Quick coupler: manual or hydraulic
- Thumb
- Buckets
- Full range of performance matched work tools
 - Auger, hammer, shear, ripper

LIGHTS AND MIRRORS

- Mirror, cab rear

SAFETY AND SECURITY

- Battery disconnect
- Front wire mesh guard
- Front steel plate guard
- Rain guard

TECHNOLOGY

- Product Link

OTHER ATTACHMENTS

- Counterweight, extra, 1121 kg (2,493 lb)*

*Standard on VAB configuration.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

© 2017 Caterpillar
All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

AEHQ7916-01 (07-2017)
Replaces AEHQ7916

