

580EV

CONSTRUCTION KING™ BACKHOE LOADER BATTERY ELECTRIC VEHICLE



ELECTRIC VEHICLE SYSTEM

Battery size:	
Energy capacity	84 kWh
Usable energy	71 kWh
Nominal battery voltage	400 Volts
Battery weight	1,034 lb (470 kg)
Battery chemistry	Lithium Ion
On-board charger (SAE J1772 Level 2 Complia	nt)
Charging time 0 - 100%	7.4 hr
Charging time 20 - 80%	4.4 hr
Traction drive:	
Rated speed	2,000 RPM
Low idle	0 RPM
Rated power	108 hp (80 kW)
Peak power	127 hp (95 kW)
Rated torque	365 Nm
Peak torque	540 Nm
Hydraulic drive:	
Rated speed	2,000 RPM
Low idle	600 RPM
Rated power	55 hp (41 kW)
Peak power	106 hp (79 kW)
Rated torque	179 Nm
Peak torque	421 Nm
Ignition	Push button

DRIVETRAIN

Transmission

PowerDrive H-Type, 4F-4R hydraulic clutch shifting w/ auto shift mode and direct drive

Travel speeds - H-Type PowerDrive				
DD Transmission	Forward	Reverse		
	mph (kph)	mph (kph)		
1st	3.1 (5.0)	3.7 (5.9)		
2nd	5.0 (8.1)	6.0 (9.7)		
3rd w/ DD Feature	Off			
	10.9 (17.5)	13.1 (21.1)		
3rd w/ DD	11.4 (18.3)	13.6 (21.9)		
4th w/ DD Feature	Off			
	19.4 (31.2)	23.2 (37.3)		
4th w/ DD	20.0 (32.2)	23.84 (38.4)		

Differential-lock:

On-the-go push-button activation

Service brakes:

Individually applied, power assisted, hydraulically actuated, maintenance-free, self-adjusting, outboard mounted, wet disc, 2 per side.

Parking brakes Trans Mounted spring-applied hydraulic release – SAHR

CAB ELECTRICAL

Voltage	12 Volts, negative ground
Power plugs – 2	30 amps total

OPERATOR ENVIRONMENT

ROPS/FOPS certified 2 door protective cab with heat, A/C, keyless start ignition, 8 inch color touchscreen side display, front display, mode settings, user access levels, operator codes, machine settings, premium air suspension heated seat with 3 in seat belt, defroster, door activated dome light, 4 front, 4 rear and 2 adjustable side LED lights, floor mat, tinted glass, Bluetooth radio, front and rear wiper.

Horn Dual switched front and rear

HYDRAULICS

Pump:

Variable Displacement Axial Piston Pump

Main relief pressure:

Standard 3,450 psi (237 bar) Power Lift 3,770 psi (260 bar)

Filtration:

7-micron, In-tank hydraulic filter.

Loader flow:

30 gpm (113 L/min)

Loader control Valve:

Three spool electro hydraulic control. A single joystick commands lift, bucket and auxiliary/clam. The loader includes rotary sensors for auto features like float, return to dig, parallel lift, return to travel, return to height and height limit.

Loader auxiliary hydraulics w/ proportional thumb switch w/ detent on loader control handle: 0-30 gpm (0-113 L/min)

Backhoe flow:

30 gpm (113 L/min)

Backhoe control valve:

Eight spool electro-hydraulic control valve. Digitally compensated flow sharing for simultaneous operation of all necessary circuits.

1-way flow auxiliary hydraulics:

An in-cab digitally adjustable relief from 1850 psi to 3000 psi. Additional mechanical adjustment also possible. An in-cab digitally adjustable flow selector from 10-30 gpm.

Actuation:

Left hand joystick

2-way flow auxiliary hydraulics:

Activate the 2-way flow by selecting it within the keypad Actuation:

Left hand joystick

SERVICE CAPACITIES

Hydraulic system: Total Tank only with Filter	27 gal (102 L) 8 gal (30 L)
Transmission – total system: 4WD Standard	21 qt (19.4 L)
Standard front axle: 4WD Differential 4WD Planetaries – each	8.1 qt (7.7 L) 0.5 qt (0.5 L)
Rear axle: Differential and planetaries	14.4 qt (13.6 L)
Electric Motor Cooling	5 qt (4.7 L)
Power Electronics Cooling	6 qt (5.7 L)
Cab Heater	4 qt (3.8 L)
High Voltage Battery	7.5 qt (7.1 L)
Window washer reservoir	3.0 qt (2.8 L)

OTHER SPECIFICATIONS

Front tires:

4WD 12.0 L x 16.5, 10-ply rating

Rear tires:
2/4WD 19.5 L x 24.0, 10-ply rating

Turning radius: Curb to Curb:

4WD - engaged*:

Brakes on 11 ft (3.36 m) Brakes off 14 ft 2 in (4.31m)

4WD - disengaged*:

Brakes on 11 ft (3.35 m) Brakes off 12 ft 8 in (3.85 m)

NOTE: *Turning radius dimensions curb to curb w/ 12.0 x 16.5 front tires and 19.5 L x 24.0 rear tires.

OPERATING WEIGHT

Configuration 1 – SAE Transport:

4-IN-1 Loader Bucket, Cab w/ HVAC, 24" HD Backhoe Bucket, H Type PowerDrive Transmission, 12 x 16.5 Front Tires, 19.5 x 24 Rear Tires.

19,947 lb (9 048 kg)

LOADER BUCKET SIZES				
Туре	Width	Weight	Struck	Heaped Capacity
Long Lip Bucket with bolt-on cutting edge	82 in (2.08 m)	864 lb (392 kg)	0.88 yd ³ (0.67 m ³)	1.0 yd ³ (0.79 m ³)
Long Lip Bucket without bolt-on edge	93 in (2.36 m)	1,188 lb* (539 kg)	1.10 yd ³ (0.89 m ³)	1.3 yd ³ (0.99 m ³)
4 IN 1® Bucket with bolt-on edge	82 in (2.08 m)	1,572 lb* (713 kg)	0.85 yd ³ (0.65 m ³)	1.0 yd ³ (0.80 m ³)

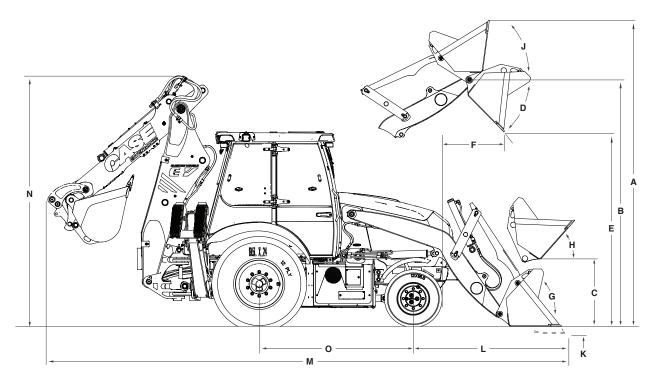
NOTE: *Weight of 4 IN 1® bucket includes edges, cylinders and tube lines.

BACKHOE BUCKET SIZES			
Туре	Width	Weight	Heaped Capacity
Universal Buckets	12 in (305 mm)	295 lb (134 kg)	3.40 ft ³ (0.10 m ³)
	18 in (457 mm)	356 lb (162 kg)	5.30 ft ³ (0.15 m ³)
	24 in (610 mm)	427 lb (194 kg)	7.70 ft ³ (0.22 m ³)
	30 in (762 mm)	489 lb (222 kg)	10.20 ft ³ (0.29 m ³)
	36 in (914 mm)	552 lb (251 kg)	12.70 ft ³ (0.36 m ³)
High Capacity Buckets	24 in (610 mm)	447 lb (203 kg)	8.50 ft ³ (0.24 m ³)
	30 in (762 mm)	502 lb (228 kg)	10.60 ft ³ (0.30 m ³)

BACKHOE OPERATIONAL DATA Extendahoe® Retracted Extended Digging depth: Maximum 14 ft 6 in (4.41 m) 17 ft 11 in (5.47 m) Maximum with hi-capacity bucket 18 ft 6 in (5.63 m) 15 ft 0 in (4.51 m) 2 ft (610 mm) flat bottom 14 ft 4 in (4.37 m) 17 ft 10 in (5.43 m) 13 ft 4 in (4.06 m) 8 ft (2.44 m) flat bottom 17 ft 1 in (5.19 m) Overall reach from: Rear axle centerline 21 ft 10 in (6.66 m) 25 ft 3 in (7.69 m) 18 ft 2 in (5.55 m) Swing pivot 21 ft 7 in (6.58 m) Loading height 12 ft 1 in (3.67 m) 14 ft 5 in (4.38 m) Loading reach 4 ft 7 in (1.41 m) 7 ft 3 in (2.20 m) 180° 180° Swing arc Bucket rotation: Straight links 175.6° 175.6° Mechanical coupler 198.0° 198.0° Hydraulic coupler - Extendahoe® dipper 194.8° 194.8° Hydraulic coupler - standard dipper 198.0° 198.0° Stabilizer spread - operating: Flip pad 9 ft 3 in (2.82 m) 9 ft 3 in (2.82 m) Digging force: Bucket cylinder - SAE rated 3,460 psi 13,975 lb (61 363 N) 13,975 lb (61 363 N) Bucket cylinder - Power Lift 14,452 lb (64 240 N) 14,452 lb (64 240 N) Dipper cylinder – SAE rated 3,460 psi 8,657 lb (38 508 N) 6,305 lb (28 045 N) Dipper cylinder - Power Lift 9,070 lb (40 345 N) 6,606 lb (29 382.7 N) Leveling angle: 11.8° 11.8° Flip pad

NOTE: Lift capacities apply straight to the rear of prime mover. 4WD with 19.5 L x 24.0 tires equipped with 24 in (610 mm) heavy-duty bucket and Case coupler except as noted.

580EV 2 of 5



Line drawings are for illustrative purpose only and may not be exact representation of unit.

LOADER DIMENSIONS		
	Long Lip Bucket	4 IN 1® Bucket
A. Overall operating height – fully raised	13 ft 9 in (4.18 m)	13 ft 8 in (4.16 m)
Height to:		
B. Bucket hinge pin fully raised	11 ft 3 in (3.42 m)	11 ft 3 in (3.42 m
C. Bucket hinge pin at SAE carry	13.6 in (345 mm)	13.6 in (345 mm)
D. Dump angle at full height	47°	47°
E. Dump clearance at full height, 45° dump:		
Bucket	8 ft 10 in (2.69 m)	8 ft 11 in (2.71 m
Clam open		9 ft 8 in (2.96 m
F. Dump reach at full height, 45° dump – from bumper:		
Bucket	31.5 in (801 mm)	29.1 in (738 mm
Clam open		15.3 in (388 mm
Bucket rollback:		
G. @ Groundline	42°	42
H. @ SAE carry	42°	42
J. @ Full height	Adjustable	Adjustable
K. Digging depth below grade:		
Bucket flat	6.1 in (155 mm)	4.8 in (122 mm
Clam open – dozing		4.1 in (103 mm
L. Reach from front axle centerline – bucket on ground	6 ft 10 in (2.07 m)	6 ft 8 in (2.03 m
Lift capacity to full height – calculated values	7,044 lb (3 195 kg)	6,703 lb (3 040 kg
Breakout force:		
Lift cylinders	9,833 lb (4 460 daN)	9,610 lb (4 359 daN
Dump cylinders	10,947 lb (4 965 daN)	11,658 lb (5 288 daN
Bucket cutting edge width	82.5 in (2.09 m)	82.0 in (2.08 m
Maximum grading angle	114°	114
Maximum clam opening	_	38.3 in (972 mm
Moldboard height	_	36.8 in (934 mm
Raising time to full height - manual/pilot controls	2.6/3.2 sec	2.6/3.2 sec
Bucket dumping time	0.8/1.2 sec	0.8/1.2 se
Lowering time:		
Power down	1.9/2.1 sec	1.9/2.1 se
Return-to-dig	2.5/2.2 sec	2.5/2.2 se
Clam:		
Open time	_	1.1 se
Close time	<u> </u>	1.1 se

NOTE: Loader dimensions taken with 4WD, 12.0 x 16.5 front tires and 19.5 L x 24.0 rear tires.

580EV 3 of 5

DIMENSIONS	
	4WD with 19.5 L x 24.0 tires
M. Overall transport length:	
4 IN 1® bucket with Quick Coupler	23 ft 1 in (7.04 m)
Long Lip bucket with Quick Coupler	23 ft 4 in (7.10 m)
Overall transport width	7 ft 2 in (2.17 m)
Height to top of cab	8 ft 11 in (2.72 m)
N. Transport	11 ft 1 in (3.37 m)
Ground clearance at backhoe frame	15.0 in (381 mm)
Angle of departure	19.0°
Front wheel tread:	
12.0 L x 16.5	67.7 in (1.72 m)
19.5 L x 24.0	61.2 in (1.55 m)
Width over tires:	
12.0 L x 16.5	81.1 in (2.06 m)
19.5 L x 24.0	81.4 in (2.07 m)
O. Wheelbase:	
19.5 L x 24.0	84.5 in (2.15 m)

BACKHOE LIFT CAPACITIES

	Extendahoe®			
	Retracted		Exter	nded
	Standard	Power Lift	Standard	Power Lift
Boom Lift	Lift Capacity	Lift Capacity	Lift Capacity	Lift Capacity
	lb (kg)	lb (kg)	lb (kg)	lb (kg)
+16 ft (4.87 m)	_	_	2,115 (959)	2,298 (1 043)
+14 ft (4.27 m)	2,837 (1 287)	3,083 (1 398)	2,395 (1 086)	2,603 (1 181)
+12 ft (3.66 m)	3,201 (1 452)	3,479 (1 578)	2,536 (1 151)	2,757 (1 250)
+10 ft (3.05 m)	3,281 (1 488)	3,566 (1 618)	2,593 (1 176)	2,818 (1 278)
+8 ft (2.44 m)	3,263 (1 480)	3,546 (1 608)	2,564 (1 163)	2,786 (1 264)
+6 ft (1.83 m)	3,213 (1 457)	3,492 (1 584)	2,549 (1 156)	2,770 (1 257)
+4 ft (1.22 m)	3,146 (1 427)	3,420 (1 551)	2,521 (1 144)	2,741 (1 243)
+2 ft (0.61 m)	3,077 (1 396)	3,345 (1 517)	2,489 (1 129)	2,706 (1 227)
Ground Level	3,018 (1 369)	3,280 (1 488)	2,489 (1 129)	2,706 (1 227)
-2 ft (0.61 m)	2,965 (1 345)	3,223 (1 462)	2,466 (1 118)	2,680 (1 215)
-4 ft (1.22 m)	2,935 (1 331)	3,190 (1 447)	2,446 (1 109)	2,659 (1 206)
-6 ft (1.83 m)	2,938 (1 333)	3,193 (1 448)	2,443 (1 108)	2,656 (1 205)
-8 ft (2.44 m)	3,007 (1 364)	3,269 (1 483)	2,465 (1 118)	2,679 (1 215)
-10 ft (3.05 m)	3,175 (1 440)	3,451 (1 565)	2,530 (1 148)	2,750 (1 248)
-12 ft (3.66 m)	_	_	2,707 (1 228)	2,943 (1 335)
-14 ft (4.27 m)	_	_	3,239 (1 469)	3,521 (1 597)
Dipper Lift				
+14 ft (4.27 m)	_	_	4,281 (1 942)	4,281 (1 942)
+12 ft (3.66 m)	5,618 (2 548)	5,618 (2 548)	4,046 (1 835)	4,046 (1 835)
+10 ft (3.05 m)	5,399 (2 449)	5,399 (2 449)	3,984 (1 807)	3,984 (1 807)
+8 ft (2.44 m)	5,360 (2 431)	5,360 (2 431)	3,913 (1 775)	3,913 (1 775)
+6 ft (1.83 m)	6,030 (2 735)	6,030 (2 735)	4,166 (1 889)	4,166 (1 889)
+4 ft (1.22 m)	7,203 (3 267)	7,203 (3 267)	4,102 (1 861)	4,102 (1 861)
+2 ft (0.61 m)	_	_	4,850 (2 200)	4,850 (2 200)

NOTE: Boom and Dipper Lift Capacities are rated per SAE J31 and are 87% of the maximum hydraulic lift force available with the specified options.

AXLE RATINGS		
	Rear	Front – 4WD
Maximum static	90,145 lb (40 889 kg)	64,613 lb (29 308 kg)
Dynamic operating	56,200 lb (25 492 kg)	39,328 lb (17 839 kg)
Static operating	22,480 lb (10 197 kg)	15,732 lb (7 136 kg)
Oscillation – front axle	_	22° total – 11° side to side

580EV 4 of 5

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

Speed selectable Auto Ride Control Comfort Steering with two speed steering pump and 3rd/4th gear cutout

DRIVETRAIN

H-Type PowerDrive Transmission Front axle:

4WD front axle with 12.0 L x 16.5 tires

Rear axle:

4WD heavy-duty outboard planetary drive, with 19.5 L x 24.0 tires

Torque converter - 11.8 in (300 mm)

On-the-go electric 4WD control

Electric F/R shuttle control

Electric differential lock control, push-button

Park brake, spring-applied, hydraulic release - SAHR

Remote mounted transmission filter

for easier access

HYDRAULICS

Hydraulic pressure diagnostics viewable on display screen

Biodegradable Hydraulic Oil

In-cab electronic flow settings for aux hyd flow (loader and backhoe)

Heavy-duty hydraulic oil cooler

In-tank hydraulic filter

LOADER

Bucket position indicator; Lifting lugs and tie downs on standard bucket; Single lever control

Loader performance features:

Parallel Lift

Anti-Rollback

Return to Dig

Float

Return to Height

Height Limit

Software Cushions

Bucket Shake

Auxiliary hydraulics for loader-mounted equipment with thumb-operated proportional control

BACKHOE

Over center design, Fabricated over-lapping cylinder boom; Pro Control System; Extendahoe integrated serrated gripper teeth

Flip Over Stabilizer Pads Combo

1-way/2-way Auxiliary backhoe hydraulics for hammers, plate compactors or similar 1-way flow attachments or switch to 2-way flow for thumbs, augers or similar 2-way flow attachments

Extendahoe®

PowerLift

PowerBoost

Electro-Hydraulic operated control system: Fingertip proportional Electro-Hydraulic stabilizer controls

Thumb-operated proportional Electro-Hydraulic Extendahoe® control Thumb-operated horn button

Thumb-operated auxiliary hydraulic control Infinitely adjustable towers

In-cab switchable "excavator to backhoe" control pattern change

Hydraulic bucket quick coupler

OTHER

Forward tilt hood

Molded front bumpers

Front/Rear tie downs

Reflective logos

Signal Lights:

2 rear tail/stop

2 front flashers/turn

2 rear flashers/turn

Working/Driving Lights: Adjustable LED lights:

4 front

2 side - one left, one right

4 rear

4-corner multi-colored/pattern

LED strobe lights

Master disconnect switch and remote iump-start terminals

Hydrostatic steering

Backup alarm

Tool box

Front Fenders

TELEMATICS

CASE SiteWatch™ Telematics - includes hardware and a 5-yr Advanced data subscription for 2-way communication

WARRANTY

- 1-Year/Unlimited-Hour Full-Coverage Base Limited Warranty
- 2-Year/2,000-Hour Extended Drivetrain Warranty
- 3-Year/3,000-Hour Battery and EV Components Warranty (includes electric powertrain system components - battery, motors, inverters, etc.)
- 3-Year/3,000-Hour EV Care Maintenance Program

OPTIONAL EQUIPMENT

LOADER

Hydraulic front quick coupler Tool portfolio of additional attachments Buckets - see page 2

BACKHOE

Bolt-on hardened gripper teeth Buckets - see page 2

Hydraulic thumb - Includes: 2 replaceable, high strength, bolt on tines with two positions for Universal or Hi-Cap buckets - meshes with Bucket teeth on 18 in & 24 in Buckets

OTHER

Severe Cold Weather Operation Includes synthetic transmission oil and backhoe hoses rated for severe cold weather Special paint

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CASE Construction Equipment is biodieselfriendly. NOTE: All engines meet current EPA emissions regulations. All specifications are stated in accordance with SAF Standards or Recommended Practices, where applicable.



SAFETY™ Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs and use any safety features provided.

Form No. CCE202407580EV Replaces Form No. CCE202405580EV

580EV 5 of 5