



6030

Hydraulic Shovel

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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6030 Hydraulic Shovel Specifications

Diesel Engines – Lesser Regulated

Make and Model	2 × Cat C27	
Rated Speed	1,800 min ⁻¹	1,800 rpm
Total Rated Gross Power – SAE J1995*	1141 kW	1,529 hp
Total Rated Net Power – SAE J1349	1125 kW	1,508 hp
Total Rated Net Power – ISO 9249	1128 kW	1,511 hp
No. of Cylinders (each engine)	12	
Bore	137.7 mm	5.42 in
Stroke	152.4 mm	6.0 in
Displacement	27 L	1,648 in ³
Aspiration	Turbocharged and air-to-air aftercooled	

• Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2.

* Excludes all fan losses.

Diesel Engines – Highly Regulated

Make and Model	2 × Cat C27	
Rated Speed	1,800 min ⁻¹	1,800 rpm
Total Rated Gross Power – SAE J1995*	1209 kW	1,620 hp
Total Rated Net Power – SAE J1349	1192 kW	1,597 hp
Total Rated Net Power – ISO 9249	1194 kW	1,600 hp
No. of Cylinders (each engine)	12	
Bore	137.7 mm	5.42 in
Stroke	152.4 mm	6.0 in
Displacement	27 L	1,648 in ³
Aspiration	Turbocharged and air-to-air aftercooled	

• Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

* Excludes all fan losses.

Electrical System

System Voltage	24 V
Batteries in Series/Parallel Installation	4 × 210 Ah – 12 V each 420 Ah – 24 V

Operating Weights

6030 with TriPower™ Face Shovel Attachment (FS)		
Standard Track Pads	1000 mm	3 ft 3 in
Operating Weight*	294 300 kg	648,810 lb
Ground Pressure	21.9 N/cm ²	31.7 psi
6030 with Backhoe Attachment (BH)		
Standard Track Pads	1000 mm	3 ft 3 in
Operating Weight*	296 500 kg	653,660 lb
Ground Pressure	22.1 N/cm ²	32.0 psi

* Operating weights include: base machine, front attachment, standard track pads, standard rock bucket, 100% fuel and lubricants.

Service Refill Capacities

Fuel Tank Capacity	2 × 2540 L	2 × 671 gal
Hydraulic Oil Tank Capacity	2500 L	660 gal
Total Volume of Hydraulic Oil	3500 L	925 gal
Engine Oil	2 × 99 L	2 × 26.2 gal
Engine Oil Expansion Tank (option)	2 × 260 L	2 × 68.7 gal
Engine Coolant	2 × 150 L	2 × 39.6 gal
Pump Transmission Gearbox including Cooling Circuit	2 × 25 L	2 × 6.6 gal
Pump Pre-Chambers at Pump Transmission Gearbox	2 × 6 L	2 × 1.6 gal
Swing Gearbox	2 × 38 L	2 × 10 gal
Travel Gearbox	2 × 94 L	2 × 24.8 gal
Grease Tank Capacity	450 L	119 gal

Hydraulic System

Main Pumps	4 × variable swash plate pumps	
Maximum Oil Flow	4 × 552 L/min	4 × 146 gal/min
Maximum Pressure, Attachment	310 bar	4,495 psi
Maximum Pressure, Travel	360 bar	5,220 psi
Swing Pumps	2 × reversible swash plate double pumps	
Maximum Oil Flow	4 × 197 L/min	4 × 52 gal/min
Maximum Pressure	350 bar	5,080 psi

6030 Hydraulic Shovel Specifications

Hydraulic Oil Cooling

Oil Flow of Cooling Pumps	2 × 467 L/min	2 × 123 gal/min
Number of Fans	2	
Diameter of Fans	1220 mm	48 in
Fan Speed	Thermostatically controlled	
Cooling System	Fully independent	

Swing System

Swing Drives	2 compact planetary transmissions with axial piston motors	
Parking Brakes	Wet multiple-disc brake, spring-loaded/hydraulically released	
Maximum Swing Speed	4.6 rpm	
Swing Ring	Triple-race roller bearing with sealed internal gearing	
Swing Circuit	Closed-loop with torque control	

Undercarriage

Travel Speed (2 stages)		
1st Stage – Maximum	1.4 km/h	0.87 mph
2nd Stage – Maximum	2.7 km/h	1.68 mph
Maximum Tractive Force	1637 kN	367,880 lbf
Gradeability of Travel Drives	64% approximate	
Track Pads (each side)	44	
Bottom Rollers (each side)	7	
Support Rollers (each side)	2 plus a skid plate in between	
Travel Drives (each side)	1 planetary transmission with 2 two-stage axial piston motors	
Parking Brakes	Wet multiple disc brake, spring loaded/hydraulically released	

Operator Environment

Operator's Eye Level – Approximately	6.5 m	21 ft 4 in
Internal Dimensions of Cab		
Length	2200 mm	7 ft 3 in
Width	1600 mm	5 ft 3 in
Height	2150 mm	7 ft 1 in
Spectator Sound Power Level (L _{WA})* ISO 6395:2008	114.9 dB(A)	
Operator Sound Pressure Level (L _{PA})* ISO 6396:2008	78 dB(A)	
Operator Protective Guard (Front and Top Guards)	ISO 10262:1998 Level II	

* Measurement was conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds. The cab was properly installed and maintained. The measurement was taken with the cab doors and windows closed. NOTE: The dynamic sound power level and sound pressure level uncertainty is ±2 dB(A).

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.8 kg (6.2 lb) of refrigerant, which has a CO₂ equivalent of 4.004 t (4.4136 U.S. tons) per engine.

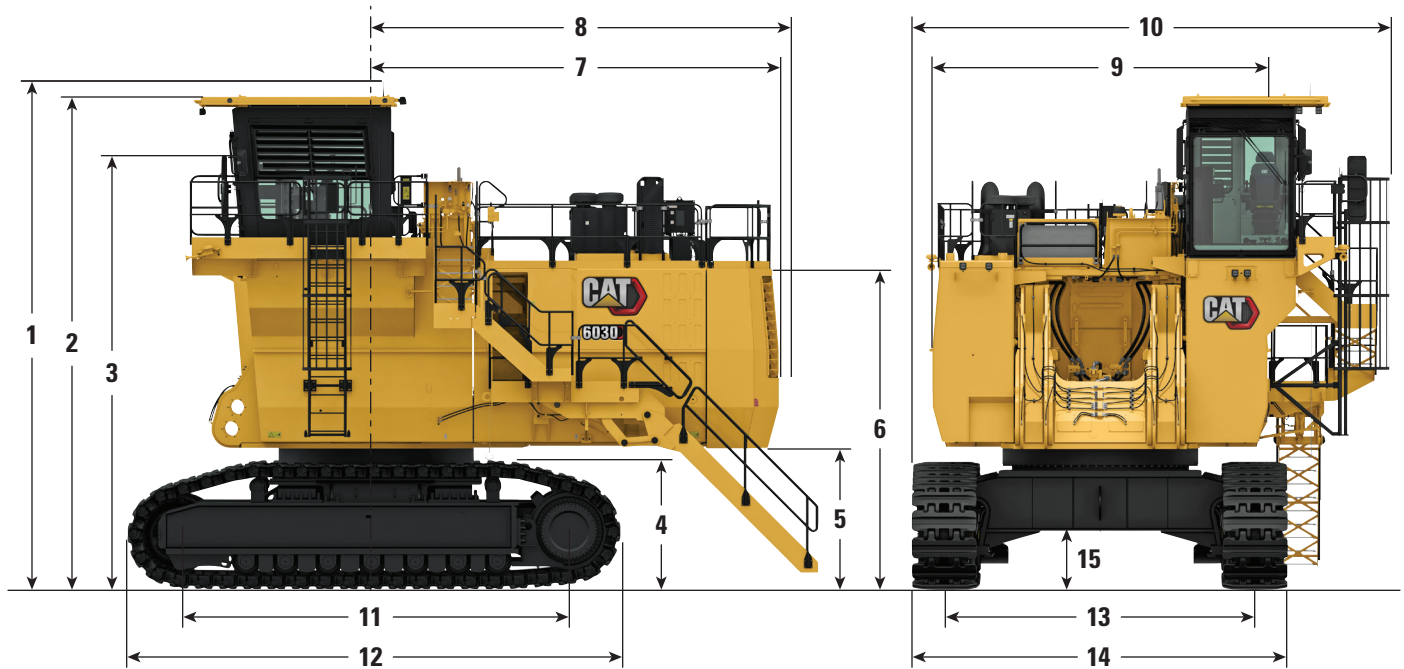
Optimal Pass Match with Cat Mining Trucks

	777G	785G	789
	91 t (100 ton)	136 t (150 ton)	181 t (200 ton)
6030	3	5	6

6030 Hydraulic Shovel Specifications

Dimensions

All dimensions are approximate.

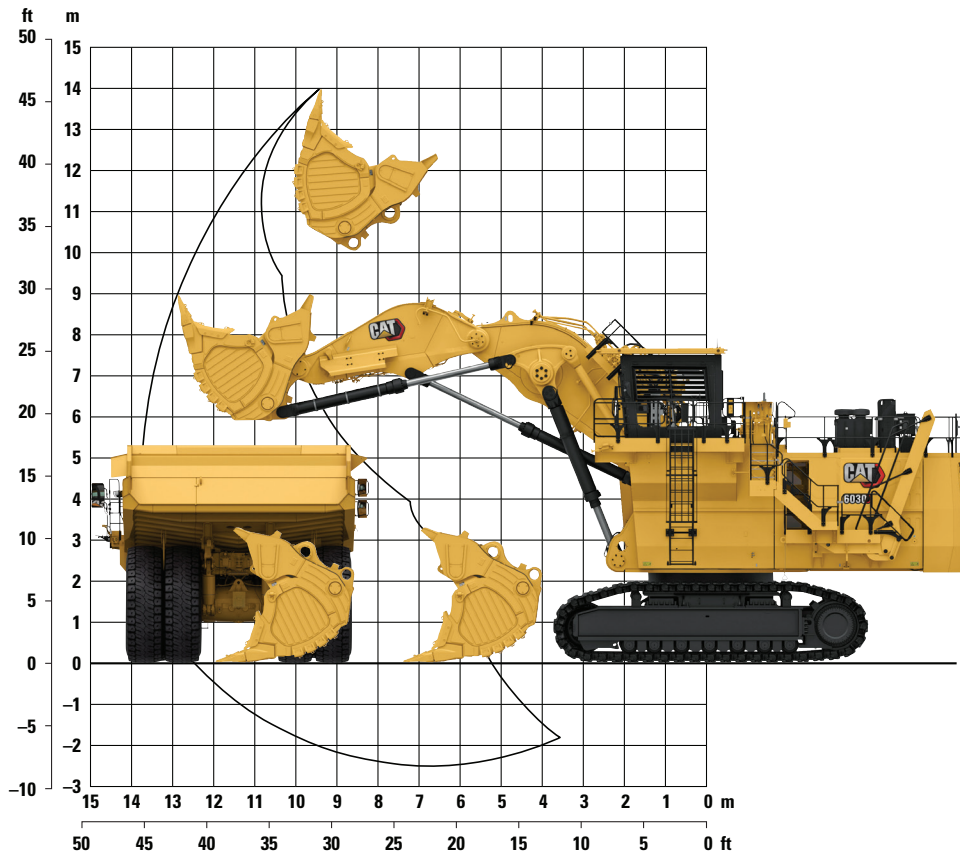


1 Height overall	8050 mm	26 ft 5 in
2 Height Top of Rock	7750 mm	25 ft 5 in
3 Operator Eye Level	6500 mm	21 ft 4 in
4 Height of Tracks	1940 mm	6 ft 4 in
5 Clearance under Counterweight	2170 mm	7 ft 1 in
6 Height to Top of Counterweight	4970 mm	16 ft 4 in
7 Tail Overhang	6330 mm	20 ft 9 in
8 Tail Swing Radius	6450 mm	21 ft 2 in
9 Width of Counterweight	5300 mm	17 ft 5 in
10 Width overall (@ 1000 mm [3 ft 3 in] standard pads)	7520 mm	24 ft 8 in
11 Length from Sprocket Center to Idler Center	6010 mm	19 ft 9 in
12 Crawler Length	7660 mm	25 ft 2 in
13 Track Gauge	4800 mm	15 ft 9 in
14 Width of Undercarriage (@ 1000 mm [3 ft 3 in] standard pads)	5800 mm	19 ft 1 in
15 Ground Clearance under Carbody Frame	880 mm	2 ft 11 in

6030 Hydraulic Shovel Specifications

Working Range – TriPower Face Shovel Attachment (FS)

All dimensions are approximate.



Boom	6.2 m	20 ft 4 in	Working Range	
Stick	4.4 m	14 ft 5 in	Maximum Digging Height	13.9 m 45 ft 7 in
Digging Forces (ISO)			Maximum Digging Reach	13.7 m 44 ft 11 in
Maximum Crowd Force	1298 kN	291,700 lbf	Maximum Digging Depth	2.5 m 8 ft 2 in
Maximum Crowd Force at Ground Level	1215 kN	273,050 lbf	Maximum Dumping Height	10.7 m 35 ft 1 in
Maximum Breakout Force	954 kN	214,390 lbf	Crowd Distance on Level	4.9 m 16 ft 1 in

Face Shovel Options

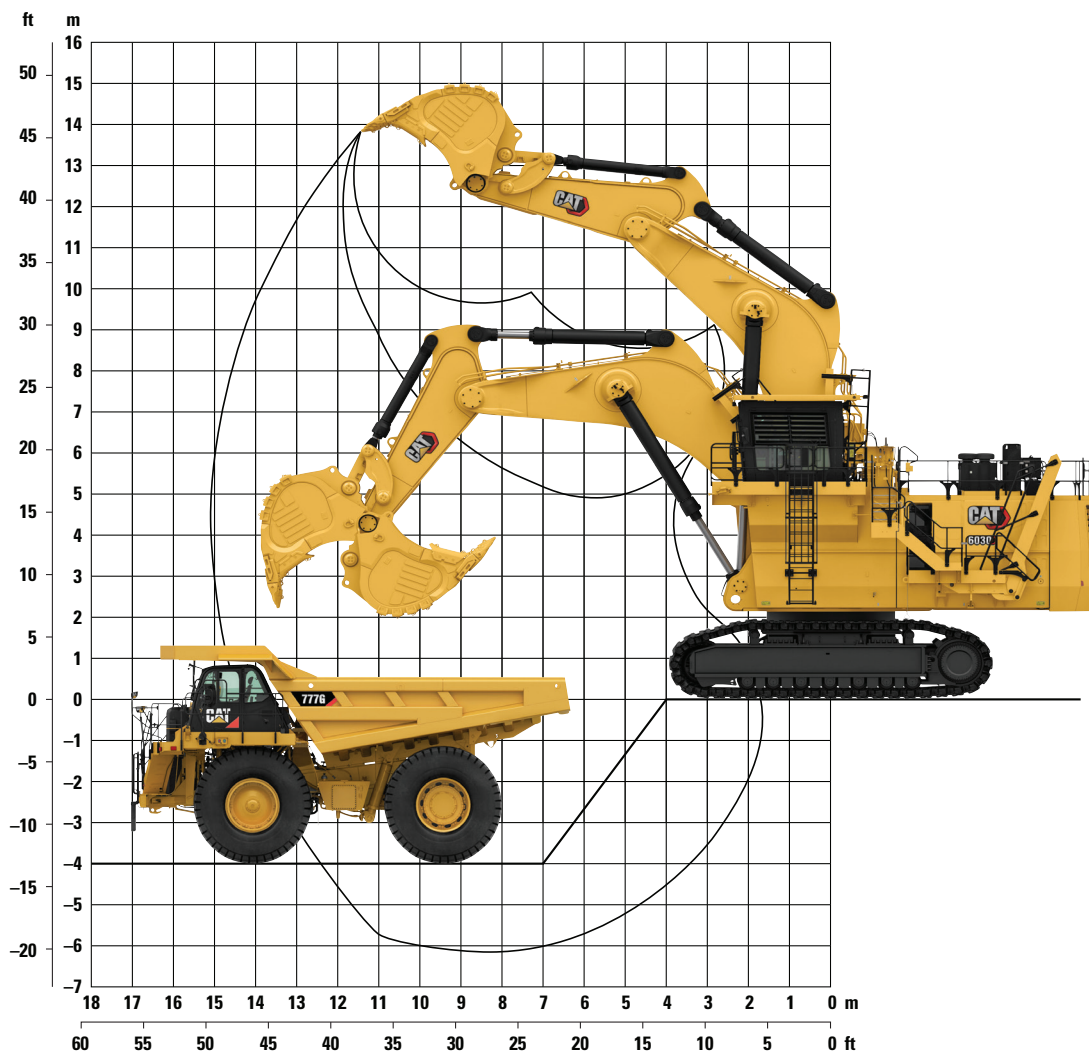
Type	Heavy Rock Bucket		Heavy Rock Bucket		Heavy Rock Bucket		Standard Rock Bucket	
Capacity Heaped 2:1 (ISO 7546)	12.0 m ³	15.7 yd ³	13.5 m ³	17.7 yd ³	15.0 m ³	19.6 yd ³	16.5 m ³	21.6 yd ³
Total Width	3935 mm	154.9 in	3935 mm	154.9 in	3935 mm	154.9 in	3935 mm	154.9 in
Opening Width	1706 mm	67.2 in	1706 mm	67.2 in	1706 mm	67.2 in	1706 mm	67.2 in
G.E.T. System	C95		C95		C95		C95	
Number of Teeth	6		6		6		6	
Wear Package	Heavy Duty – Abrasion		Heavy Duty – Abrasion		Heavy Duty – Abrasion		Heavy Duty – Impact	
Weight including Heaviest Tip Option	26 036 kg	57,400 lb	26 942 kg	59,397 lb	27 177 kg	59,915 lb	27 516 kg	60,662 lb
Maximum Material Density (loose)	2.6 t/m ³	4,380 lb/yd ³	2.2 t/m ³	3,710 lb/yd ³	2.0 t/m ³	3,370 lb/yd ³	1.8 t/m ³	3,030 lb/yd ³

Additional bucket capacities and wear packages are available upon request.

6030 Hydraulic Shovel Specifications

Working Range – Backhoe Attachment (BH)

All dimensions are approximate.



Boom	8.5 m	27 ft 11 in	Working Range	
Stick	4.0 m	13 ft 1 in	Maximum Digging Height	13.8 m 45 ft 3 in
Digging Forces (ISO)			Maximum Digging Reach	15.1 m 49 ft 6 in
Maximum Tearout Force	944 kN	212,150 lbf	Maximum Digging Depth	6.2 m 20 ft 4 in
Maximum Breakout Force	880 kN	197,760 lbf		

Backhoe Options

Type	Heavy Rock Bucket		Heavy Rock Bucket		Standard Rock Bucket		Light Duty Bucket	
Capacity Heaped 1:1 (ISO 7451)	12.0 m ³	15.7 yd ³	15.0 m ³	19.6 yd ³	17.0 m ³	22.2 yd ³	18.0 m ³	23.5 yd ³
Total Width	3520 mm	138.6 in	3950 mm	155.5 in	4240 mm	166.9 in	4430 mm	174.4 in
G.E.T. System	C85		C85		C85		C85	
Number of Teeth	5		5		6		6	
Wear Package	Heavy Duty – Abrasion		Heavy Duty – Abrasion		Heavy Duty – Impact		Light Duty	
Weight including Heaviest Tip Option	15 706 kg	34,626 lb	17 255 kg	38,041 lb	19 082 kg	42,069 lb	19 413 kg	42,798 lb
Maximum Material Density (loose)	2.6 t/m ³	4,380 lb/yd ³	2.0 t/m ³	3,370 lb/yd ³	1.8 t/m ³	3,030 lb/yd ³	1.65 t/m ³	2,780 lb/yd ³

Additional bucket capacities and wear packages are available upon request.

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
CAT POWER TRAIN			ELECTRICAL SYSTEM		
2 × Cat C27 engines	✓		4 maintenance-free batteries	✓	
Aftertreatment system (used in HRC only):	✓		Battery isolation relays	✓	
– Diesel Oxidation Catalyst (DOC)			Lockable battery isolator switch	✓	
– NO _x Reduction System (NRS)			Lockable starter isolator switch	✓	
– Non-DEF solution			14 LED high-brightness working flood	✓	
Air-to-Air After Cooling (ATAAC)	✓		11 LED service lights	✓	
Turbocharger	✓		2 electric horns (1 cab module, 1 oil cooler module)	✓	
Advanced Combustion Emissions Reduction Technology	✓		UNDERCARRIAGE		
Hydraulically driven radiator fan	✓		HD tracks with cast double-grouser track pads	✓	
Electronically controlled fan speed	✓		800 mm (2 ft 7 in) wide track pads		✓
Micro processed engine management	✓		1000 mm (3 ft 3 in) wide track pads	✓	
Heavy-duty air filters	✓		1200 mm (3 ft 11 in) wide track pads		✓
Two-stage fuel filter with series filtration	✓		Belly plate for additional undercarriage protection		✓
High-capacity water separator	✓		HD fixed axle rollers	✓	
Starting aid – automatic ether	✓		HD fixed axle idlers	✓	
Exhaust manifold and turbo heat shields	✓		Automatic hydraulic retarder valve	✓	
24 V electric starter	✓		Acoustic travel alarm (forward and reverse)	✓	
Automatic engine idle shut down	✓		Hinged travel motor covers	✓	
HYDRAULICS			Hardened running surfaces of sprockets, idlers, rollers, pad links, teeth contact areas	✓	
Cat pump managing system with:	✓		Fully hydraulic self-adjusting track tensioning system with piston accumulators	✓	
– Electronic load limit control			AUTOMATIC LUBRICATION SYSTEM		
– Flow on demand			Rectangular grease container, 450 L (120 gal) capacity (fill via service station)	✓	
– Automatic zero flow regulation			Round grease container, 200 L (53 gal) capacity (insert barrel or fill via service station)		✓
– Automatic engine RPM reduction			Lubricated pinion in swing ring	✓	
Pressure cut-off for main pumps	✓		Grease filters (200 μm)	✓	
Cooling of pump transmission gear oil	✓				
Closed loop swing circuit	✓				
Pressure testing points	✓				
Full-flow high-pressure filters (100 μm), main pumps	✓				
High pressure filters (100 μm), closed swing circuit	✓				
Full-flow filters (10 μm), return circuit	✓				
Full-flow filters (10 μm), cooling return circuit	✓				
Pressure filters (40 μm and 6 μm), servo circuit	✓				
Transmission oil filters (40 μm)	✓				
Boom float valves	✓				

(continued on next page)

6030 Standard and Optional Equipment

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			FRONT ATTACHMENT		
Single HVAC system	✓		TriPower Face Shovel attachment:		✓
Dual HVAC system		✓	– Horizontal automatic constant-angle bucket guidance		
Pneumatically cushioned and multi-adjustable comfort seat with:	✓		– Vertical automatic constant-angle bucket guidance		
– Seat heating			– Automatic roll-back limiter to prevent material spillage		
– Lumbar support			– Kinematic assistance to hydraulic forces		
– 2-point safety belt			– Constant boom momentum throughout the whole lift arc		
– Head and arm rests			– Crowd force assistance		
Independently adjustable seat consoles with integrated joysticks	✓		Guards for shovel cylinders at FS stick	✓	
Electronic-Hydraulic Servo Control	✓		Backhoe attachment		✓
FM/AM radio with USB and AUX input	✓		Frontless base machine (no boom, no stick, no linkage or kinematics)		✓
Fold-away auxiliary seat with 2-point safety belt	✓		Service access holes in boom and stick (FS and BH)	✓	
Sliding side window	✓		Boom and stick thermally stress relieved after welding	✓	
Parallel intermittent wiper/washer	✓		Catwalks with rails at boom (FS and BH)	✓	
Roller blinds at all windows	✓		CAT TECHNOLOGY		
External sun shields at side and rear windows	✓		Cat Product Link™ Elite (Cellular)	✓	
Cat Board Control system:	✓		Cat Product Link Elite (Satellite)		✓
– 305 mm (12 in) color touchscreen			Cat Product Link Elite (No radio)		✓
– On-screen documentation in .pdf			Cat MineStar™ Solutions Ready		✓
– On-screen troubleshooting assistance			COLD WEATHER		
– On-screen graphic charts of logged data			Cold Weather Package (400 V, 50 Hz):		✓
– Fault memory of related conditions			– Auxiliary heating system for cab		
– USB, LAN (TCP/IP) and CAN BUS interfaces for data export			– Fuel preheater		
Control and Monitoring Platform (CAMP)	✓		– Engine coolant tank heater		
45° stairway from engine bay to operator cab	✓		– Engine oil heater with thermostat		
2 heated mirrors on LH side	✓		– Hydraulic oil heater with thermostat		
Camera monitoring system (two cameras and additional color display)		✓	– External power source required, ca 50 kW, 400 V three phase, 50 Hz		
Level indicators for length- and crosswise inclination	✓		Cold Weather Package (208 V, 60 Hz):		✓
Document storage	✓		– Auxiliary heating system for cab		
			– Fuel preheater		
			– Engine coolant tank heater		
			– Engine oil heater with thermostat		
			– Hydraulic oil heater with thermostat		
			– External power source required, ca 50 kW, 208 V three phase, 60 Hz		

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6030 Standard and Optional Equipment

Standard and Optional Equipment *(continued)*

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

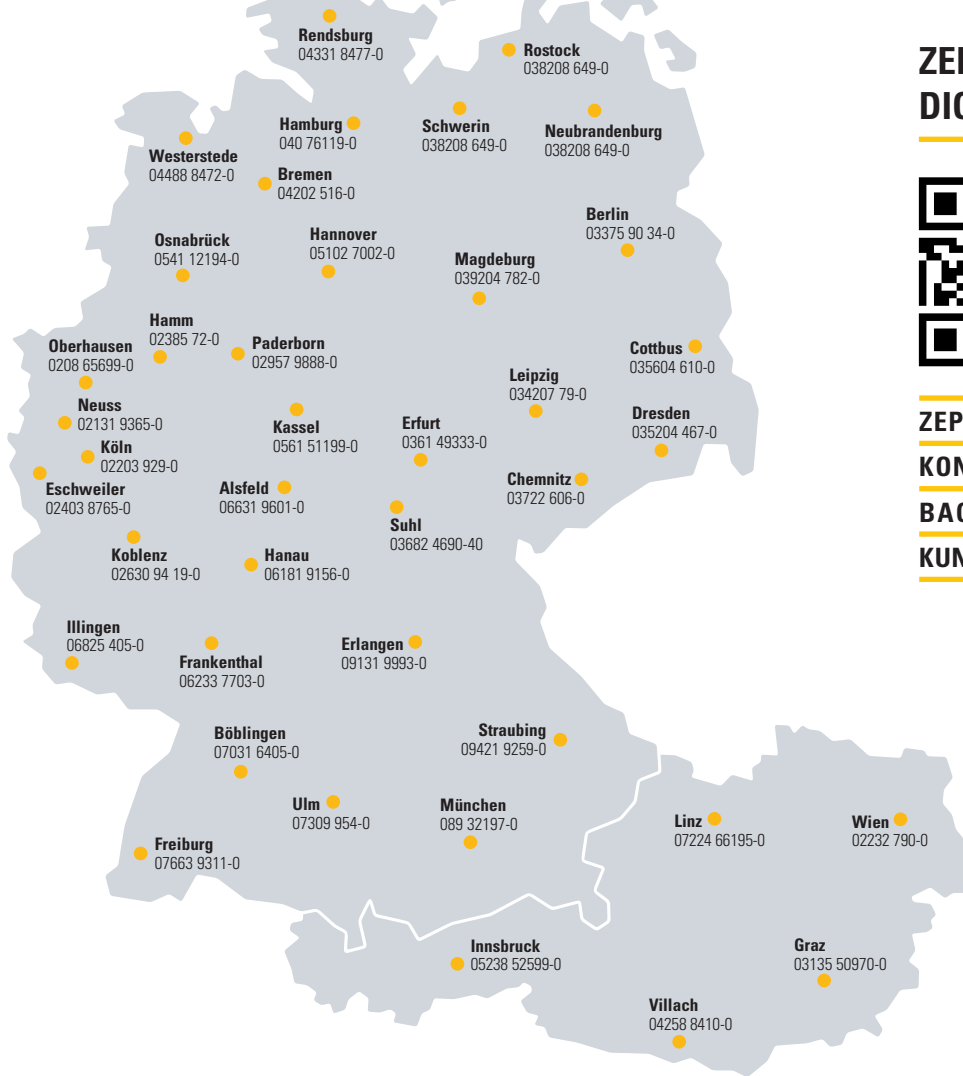
	Standard	Optional		Standard	Optional
SERVICE AND MAINTENANCE			SAFETY AND SECURITY		
Engine oil exchange interval – 500 hours	✓		Emergency stop switches: 1 in cab, 3 in engine module, 1 pull rope accessible from ground level	✓	
Engine oil exchange interval – 1,000 hours		✓	Operator Protective Guard (Front Guard)		✓
Hydraulic oil change interval – 10,000 hours	✓		Operator Protective Guard (Top Guard)	✓	
S·O·S SM sampling ports	✓		All-round safety glass	✓	
Retractable ground level service station with quick couplings for:	✓		Armored windshield	✓	
– Diesel fuel			Hydraulically operated 45° access stairway	✓	
– Engine coolant – left/right engines			Emergency egress ladder	✓	
– Pump transmission gear oil – left/right engines			MISCELLANEOUS		
– Engine oil – left/right engines			ISO or ANSI decals	✓	
– Hydraulic oil					
– Grease					
Cat battery charging connector	✓				
Indicator lights for fuel tanks and grease	✓				

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Build Number: 03A
(Global)

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