

317

HYDRAULIC EXCAVATOR



Net Power – ISO 9249
Operating Weight
Maximum Digging Depth

98.9 kW (133 hp)
18 400 kg (40,500 lb)
6100 mm (20 ft)



317

HYDRAULIC EXCAVATOR

The 317 Hydraulic Excavator boosts productivity on your jobsite. Standard, easy-to-use Cat® technologies, performance upgrades, and low fuel and maintenance costs allow you to move material all day with speed and precision while keeping more money in your pocket.



INCREASED PERFORMANCE

A Cat® C3.6 engine, powerful hydraulics, and increased machine stability give you the power to move material with speed and precision.

UP TO 20% LOWER MAINTENANCE COSTS

With extended and more synchronized maintenance intervals, you get more done at a lower cost.

UP TO 45% MORE OPERATOR EFFICIENCY

Offering the industry's highest level of standard factory-equipped technology, including Cat Grade with 2D, Grade with Assist and Payload.

LATEST FEATURES



- Cab Monitor Improvements
 1. Continuously improved user interface allows for intuitive navigation, minimizing performance interruption with the easy-to-use touchscreen menu.
 2. Identify apps quickly with a grid list view, abbreviated app names, and categorized menu options.
 3. A new notification center keeps important information visible to the operator, and displays messages without shrinking the camera view.
 4. Color coded notifications set critical messages apart from the rest.
 5. Use the in-monitor QR code to learn about machine and technology features through a full suite of “how-to” videos.
- Operator Coaching is an in-cab system that recognizes specific opportunities for operators to be more productive and prevent unnecessary machine wear and tear.
- Optional Cat Detect – People Detection helps the operator avoid personnel on the jobsite with visual and auditory alerts.
- Standard integrated vehicle health management system alerts the operator with service guidance and parts needed to enhance uptime.

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area. Build Number: 07E.

HIGH PERFORMANCE AND PRODUCTIVITY



- Increased breakout forces and hydraulic power increase productivity by up to eight percent over the previous model.
- The advanced hydraulic system provides the optimum balance of power and efficiency while giving you the control you need for precise digging requirements.
- Reduce fuel consumption by up to five percent over the previous model.
- Match your machine to the job with power modes. Let Smart mode automatically match engine and hydraulic power to working conditions. Power mode constantly provides maximum productivity, and ECO mode minimizes fuel consumption in less-demanding applications.
- Get higher production in demanding applications, easier penetration into piles, and faster cycle times with Cat Advansys™ bucket tips. Quickly change tips with a simple lug wrench instead of a hammer or special tool, improving safety and uptime.
- Auxiliary hydraulic options give you the versatility to use a wide range of Cat attachments.
- The Cat C3.6 engine meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 (Tier 4 Final) emission standards.
- Don't let the temperature stop you from working. The 317 has an optional cold-start capability of -25° C (-13° F).

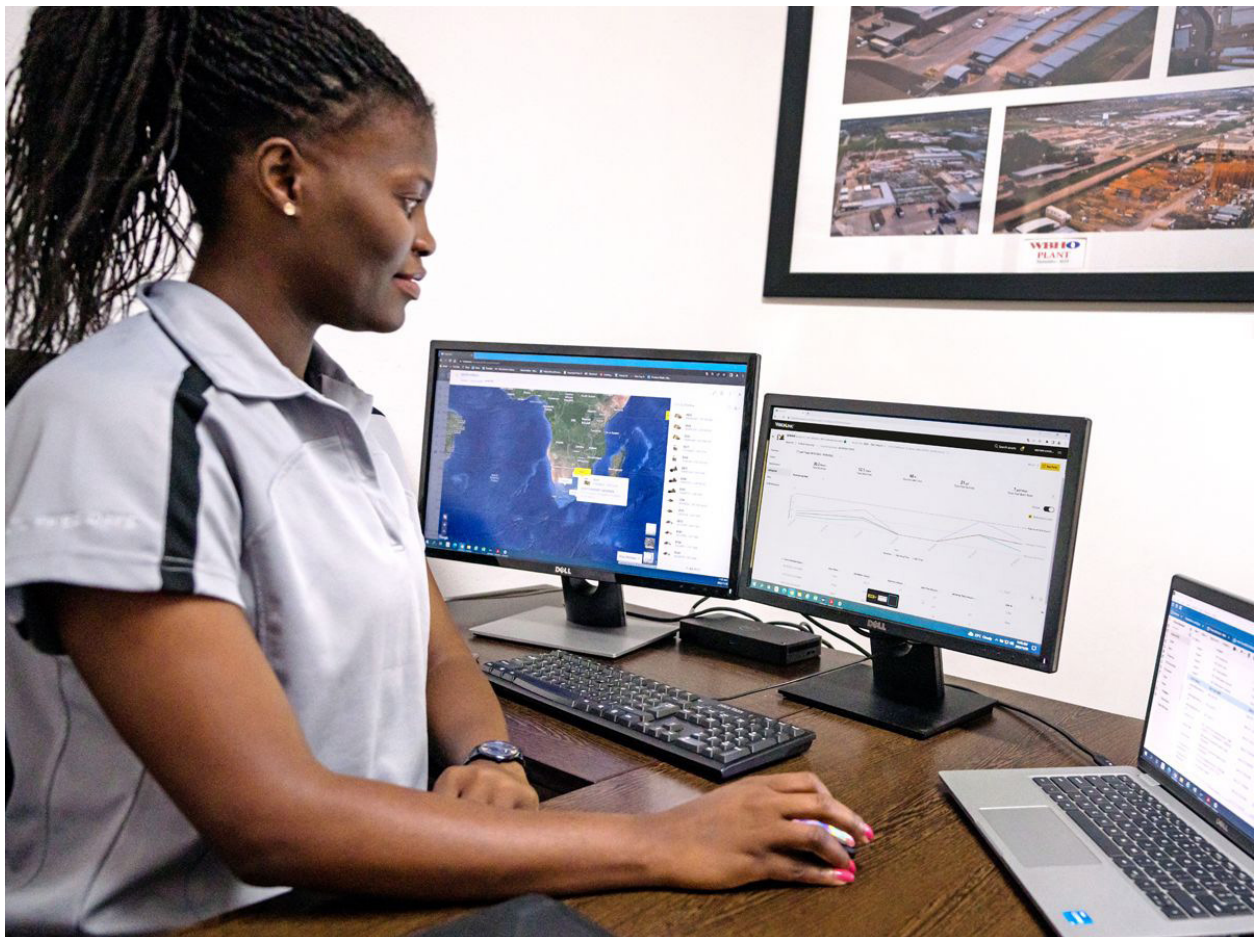
BOOST EFFICIENCY AND PRODUCTIVITY WITH CAT TECHNOLOGIES

- Boost productivity up to 45% versus traditional grading with the standard Cat Grade with 2D system – includes indicate-only and laser capability.
- Cat Payload helps you achieve precise load targets to improve your operating efficiency. Pick up a load of material – with a bucket and thumb combination or grapple and clamshell attachments – and get a real-time weight estimate without swinging.
- Combine Payload with VisionLink® and remotely manage your production targets.
- Upgrade to Cat Grade with Advanced 2D to create and edit grade designs with ease on a second, high-resolution 254 mm (10 in) touchscreen monitor.
- Want a 3D system to improve your digging results? Caterpillar new single antenna global navigation satellite system (GNSS) makes it easy by giving you visual and auditory guidance to grade. Plus you can create and edit designs on the touchscreen monitor while you're on the job. If your application calls for a dual antenna system, it's easy to upgrade.
- Upgrade to our dual antenna GNSS for maximum grading efficiency. The system lets you create and edit designs on the touchscreen monitor while you're on the job, or you can have the plan design sent to the excavator to make your work easier. Plus you get added benefits of avoidance zones, cut and fill mapping, lane guidance, and augmented reality along with advanced positioning capability.
- Know the excavator's exact position relative to GPS and GLONASS systems. The machine automatically compensates for excavator pitch and roll caused by sloping ground conditions.
- All Cat Grade systems are compatible with radios and base stations from Trimble, Topcon, and Leica. Already invested in a grade infrastructure? You can install grade systems from Trimble, Topcon, and Leica onto the machine.
- Operator Coaching is an in-cab system that recognizes specific opportunities for operators to be more productive and prevent unnecessary machine wear and tear.

TAKE THE GUESSWORK OUT OF MANAGING YOUR EQUIPMENT

- VisionLink provides actionable data insights for all assets – regardless of fleet size or equipment manufacturer.* Review equipment data from your desktop or mobile device to maximize uptime and optimize assets. Dashboards provide information such as hours, miles, location, idle time, and fuel utilization. Make informed decisions that lower costs, simplify maintenance, and improve safety and security on your jobsite.
- VisionLink Productivity gathers and summarizes machine telematics and jobsite data from all your equipment – regardless of the manufacture.* View actionable information such as idle time, fuel burn, location, payload, load counts, total cycles, and more to improve machine efficiency, productivity, and utilization. Access data anywhere via a mobile, tablet, or desktop device – on or off the jobsite.
- Cat® Inspect is a mobile application that allows you to easily perform digital preventative maintenance (PM) checks, inspections, and daily walkarounds. Inspections can easily be integrated with other Cat data systems like VisionLink so you can keep a close eye on your fleet.
- Remote Troubleshoot is a mobile application that allows your Cat dealer to perform diagnostic testing on your connected machine remotely to help ensure that issues are resolved quickly and with less downtime.
- Remote Flash is a mobile application that allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency.
- The Cat PL161 attachment locator allows you to track attachments across all worksites, reduce the number of lost attachments, and plan for attachment maintenance and replacement. The work tool recognition feature automatically adjusts machine settings based on the selected tool.

**Data field availability can vary by equipment manufacturer.*



WORK IN COMFORT



- Increase operator productivity with an updated, larger cab. Comfort, Deluxe, and Premium cab options vary by region.
- The Comfort cab is equipped with a mechanical suspension seat. The Deluxe seat is heated and air adjustable, while the Premium seat is heated and cooled and adjusts automatically.
- Get in and out of the cab easier using the tip-up left console.
- Advanced viscous mounts reduce cab vibration.
- Control the excavator comfortably with easy-to-reach controls all located in front of you.
- Stow your gear with plenty of in-cab storage beneath and behind the seat, overhead, and in the consoles. A cup holder, document holder, and coat hook are also provided.
- Use the standard radio's USB ports and Bluetooth® technology to connect personal devices and make hands-free calls.

SIMPLE TO OPERATE

- Start the engine with the push of a button, a Bluetooth key fob, or the unique Operator ID function.
- Program your preferred power mode and joystick settings using your operator ID. The excavator will automatically remember your selections.
- Navigate quickly on the standard high-resolution touchscreen monitor or with the aid of the jog dial control.
- The Cat PL161 Attachment Locator is a Bluetooth device that makes finding your attachments and other gear quick and easy. The excavator's onboard Bluetooth reader or Cat App on your phone will locate the device automatically.
- Save time and energy with work tool recognition. A simple shake of the attached tool confirms its identity ensuring all attachment settings are correct, so you can get to work quickly and efficiently.
- Not sure how a function works or how to maintain your machine? Simply access the operator's manual through the touch screen monitor.
- Make moving the excavator much easier with Cat Stick Steer. Simply push a button and use one hand to travel and turn instead of both hands or feet on levers or pedals.
- Make operating easier with the touch of a joystick button. Additional auxiliary relays allow you to power on or turn off a CB radio, beacon light, and even a dust suppression watering system without taking your hands off the joysticks.
- Tiltrotator attachments – ours or other brands – work seamlessly with Cat 2D Grade, Assist, Payload, and E-Fence. With no additional hardware required, all you have to do is simply select "Third Party Tiltrotator System Installation" in the monitor, do the calibration, and get to work.

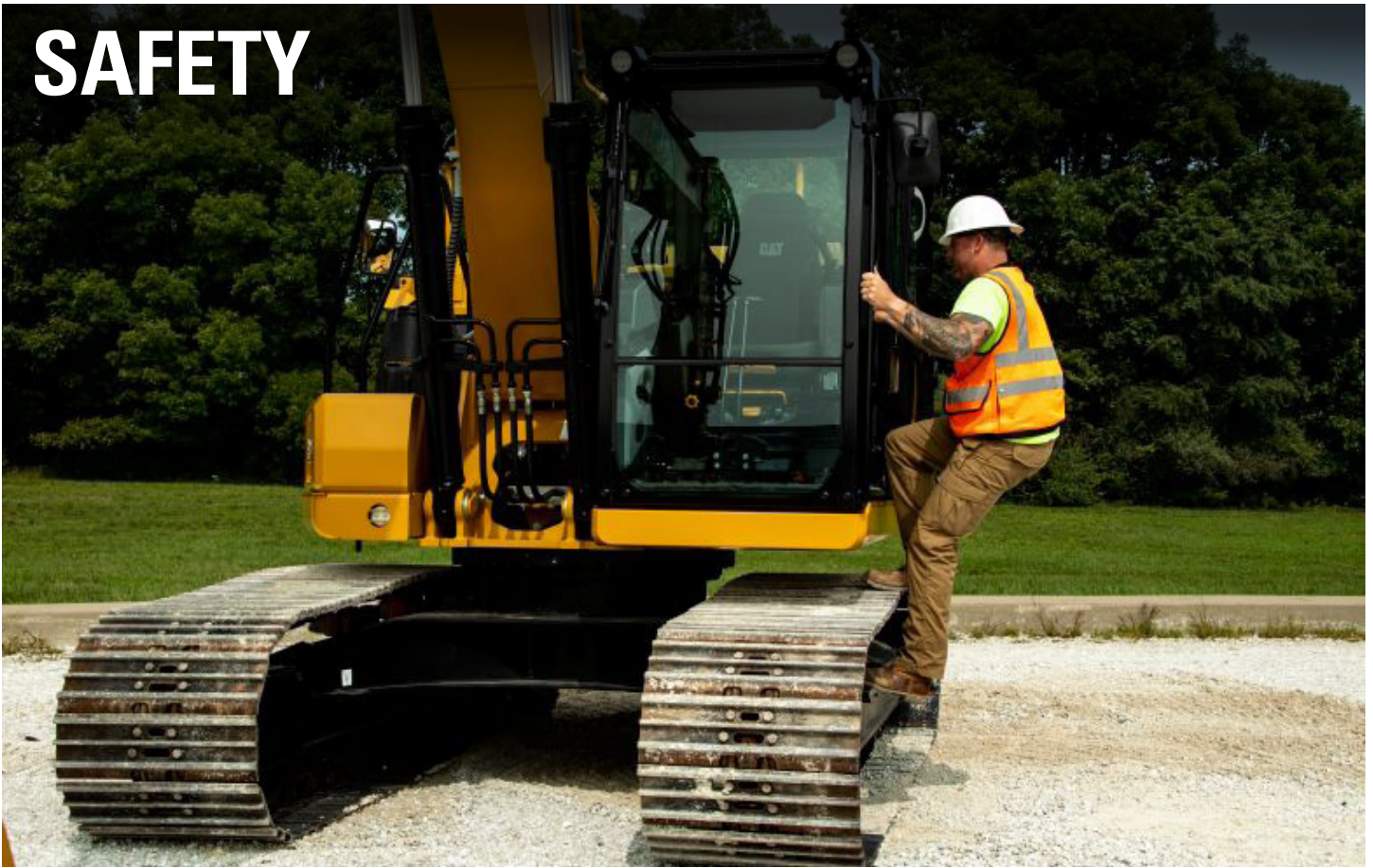


LOWER MAINTENANCE COSTS

- Expect up to 20 percent less maintenance costs over the previous model.
- Quickly check and service your machine with all daily maintenance points accessible from ground level.
- Check the engine oil level quickly and safely from the ground. Fill and check engine oil on top of the machine with a conveniently located second dipstick.
- Track your machine's filter life and maintenance intervals on the in-cab monitor.
- The hydraulic oil filter provides improved filtration performance, anti-drain valves to keep oil clean when the filter is replaced, and longer life with a 3,000-hour replacement interval – 50 percent longer than previous filter designs.
- Boost productivity with proactive service reminders. The integrated vehicle health management system alerts the operator with step-by-step service guidance along with parts needed so you don't experience any unnecessary downtime.
- Scheduled Oil Sampling (S-O-SSM) ports are located at ground level, simplifying maintenance and allowing for quick, easy extraction of fluid samples for analysis.



SAFETY



- Access all daily maintenance points from ground level – no need for you to climb on top of the machine.
- The standard Rollover Protective Structure (ROPS) cab meets ISO 12117-2:2008 requirements.
- A ground-level shutoff switch stops all fuel to the engine and shuts down the machine when activated.
- A rearview and right-side-view camera are standard. Upgrade to 360° visibility to easily see objects and personnel around the excavator in a single view.
- Updated service platform design provides easy, safe, and quick access to the upper service platform. Prevent slipping with the anti-skid punch plate on the platform steps.
- Optional boom and stick lowering check valves prevent reverse flow, keeping your front linkage securely in place should the hydraulic system unexpectedly lose power.
- Brightly colored seatbelts allow easy recognition of properly utilized safety restraints.
- Antennas have theft-prevention bolts; a special tool makes them easy to remove at the end of a shift.
- 2D E-Fence prevents the excavator from moving outside of operator-defined set points; the system works with thumb and bucket combinations along with hammer, grapple, and clamshell attachments.
- Make service work easier and safer with optional inspection lighting. With the flip of a switch, lights will illuminate the engine, pump, battery, and radiator compartments to enhance visibility.
- Enhance jobsite safety. Add a swing alarm to alert people when you're rotating from trench to stockpile and back again.

- The Cat C3.6 engine meets U.S. EPA Tier 4 Final, EU Stage V, and Japan 2014 emission standards.
- The 317 emits up to 5% less CO₂ than the previous 316F*.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels*** up to: 20% biodiesel FAME (fatty acid methyl ester)** or 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels. Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations”(SEBU6250) for details.
- Cat Grade technologies combine advanced guidance with optional automated machine control helping you reach grading targets while reducing fuel burn and greenhouse gas emissions by improving efficiency, jobsite productivity, and accuracy.
- Auto Engine Speed Control reduces unnecessary fuel burn and greenhouse gas emissions by allowing the engine to automatically go into idle mode when the machine is not working.
- Cat® Payload for excavators provides on-the-go material weighing which helps reduce fuel burn by improving loading efficiency, jobsite productivity, and eliminating trips to the scale.
- Cat® 2D E-fence keeps the front linkage within a predefined work area to avoid hazards such as traffic – not only helping keep personnel safe but also helps you avoid repairs, downtime, and costly jobsite fines.
- Extended maintenance intervals not only reduce downtime but decrease the amount of fluid and filters that are replaced over the life of the machine.
- Cat VisionLink displays the CO₂ emissions for monitored assets, calculated by fuel type for the Runtime Fuel Burned each day in a selected date range.
- Remote Flash minimizes downtime and maintenance time while keeping your asset running with maximum efficiency. Alerts for machine updates are sent virtually from your Cat dealer and updates can be deployed without a dealer technician needing to be onsite.
- Remote Troubleshoot decreases maintenance time and keeps your machine running with maximum efficiency by allowing your Cat dealer to virtually test the machine while working. Once a problem is identified, a technician can fix it the first time, saving time and money.

***All comparisons to 316F. Productivity, fuel and CO₂ emissions vary by application. CO₂ emissions calculations based on a reference work cycle using 2.2 U.S. gallons per hour of #2 U.S. diesel fuel. Applies IPCC2006 methodology using U.S. EPA Emissions Hub emission factors. Includes DEF (diesel exhaust fluid) related CO₂. Fuel measurements are at 15° C. Estimated average fuel consumption improvements are based on tests or Product Link™ data where available. Productivity improvements are based on test data.**

****Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).**

*****Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.**



MORE THAN MACHINES

BUILT AROUND YOUR SUCCESS

When you buy Cat equipment, you get so much more than the machine. You also get the support of a best-in-class dealer network, backed by a range of flexible solutions, technology, tools, and more.



CUSTOMER VALUE AGREEMENTS

A Customer Value Agreement (CVA) from your Cat dealer helps you do more and worry less. A CVA simplifies machine ownership and maintenance, adds the security of expert dealer support, and gives you the peace of mind from effective equipment health management.

GENUINE CAT PARTS

Genuine Cat parts deliver the highest level of reliability and productivity. Order direct from your Cat dealer or shop online at parts.cat.com.

REPAIR OPTIONS

A broad range of repair options gives you choices that work with your needs, budget, and timeline. Every repair is performed by expert Cat technicians. You'll receive smart repair advice, a timely, accurate quote, and service that gets your machine back into action quickly.

FINANCIAL SERVICES

Count on Cat Financial to provide the best finance and extended protection solutions for your business. For more than 30 years, we have helped our customers succeed through financial service excellence.



DOZERS



SKID STEERS



MATERIAL HANDLERS



EXCAVATORS



WHEEL LOADERS



TRACK LOADERS

INCREASE YOUR PRODUCTIVITY AND PROFIT

WITH CAT ATTACHMENTS

You can easily expand the performance of your machine by utilizing any of the variety of Cat attachments. Each Cat attachment is designed to fit the weight and horsepower of Cat excavators for improved performance, safety, and stability.

BUCKETS



COUPLERS



ATTACHMENT TRACKING MADE EASY

The Cat PL161 Attachment Locator is a Bluetooth device that makes finding your attachments and other gear quick and easy. The excavator's onboard Bluetooth reader or the Cat app on your phone will locate the device automatically.

Save more time and energy with the available work tool recognition feature. A simple shake of the attached tool confirms its identity; it also ensures all the attachment settings are correct, so you can get to work quickly and efficiently.

GRAPPLES



TILTROTATOR



DO HARD-TO-REACH WORK

With 360° rotation and 40° side-to-side tilting action, a Cat tiltrotator will help you get complex work done faster. A system upgrade from the factory allows the tool to work with Cat 2D Grade, Assist, Payload, and E-Fence. It includes factory-fit joysticks, but uses the standard cab monitor to display the tool and engage its SecureLock™ so you don't need to spend money on an extra monitor. It also works seamlessly with other brands with no additional hardware required. All you have to do is simply select "Third Party Tiltrotator System Installation" in the monitor, do the calibration, and get to work.

SHEARS



HYDRAULIC HAMMERS



PREVENT HAMMER WEAR AND TEAR

Protect your hammer tool from overheating and rapid wear. Auto hammer stop warns you after 15 seconds of continuous firing and then automatically shuts it off after 30 seconds – all to extend the tool's service life.

TECHNICAL SPECIFICATIONS

Engine

Net Power – ISO 9249	98.9 kW	133 hp
Net Power – ISO 9249 (DIN)	134 hp (metric)	
Engine Model	Cat C3.6	
Engine Power – ISO 14396	100 kW	134 hp
Engine Power – ISO 14396 (DIN)	136 hp (metric)	
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in ³
Biodiesel Capability	Up to B20 ¹	
Emissions	Meets U.S. EPA Tier 4 Final, EU Stage V, Japan 2014 emission standards.	

Net power advertised is the power available at the flywheel when the engine is equipped with fan, air intake system, exhaust system and alternator with engine speed at 2,200 rpm. Advertised power is tested per the specified standard in effect at the time of manufacture.

¹Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels** up to: 20% biodiesel FAME (fatty acid methyl ester)* or 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels. Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.

*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).

**Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

Hydraulic System

Main System – Maximum Flow	296 L/min (78 gal/min)	
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	25 800 kPa	3,741 psi

Swing Mechanism

Swing Speed	8.7 r/min	
Maximum Swing Torque	64.6 kN-m	47,647 ft-lbf

Weights

Operating Weight	18 400 kg	40,500 lb
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Service Refill Capacities

Fuel Tank Capacity	271 L	71.6 gal
Cooling System	22 L	5.8 gal
Engine Oil	11 L	2.9 gal
Final Drive – Each	6 L	1.6 gal
Hydraulic System – Including Tank	94 L	24.8 gal
Hydraulic Tank	87 L	23 gal
DEF Tank	22 L	5.9 gal

Dimensions

Boom	Reach 5.1 m (16'9")	
Stick	Reach R2.6 m (8'6")	
Bucket	GD 1 m ³ (1.31 yd ³)	
Shipping Height – Top of Cab	2930 mm	9.6 ft
Handrail Height	2940 mm	9.6 ft
Shipping Length	8550 mm	28.1 ft
Tail Swing Radius	2500 mm	8.2 ft
Counterweight Clearance	1010 mm	3.3 ft
Ground Clearance	430 mm	1.4 ft
Track Length	3970 mm	13 ft
Length to Center of Rollers	3170 mm	10.4 ft
Track Gauge	1990 mm	6.5 ft
Transport Width	2490 mm	8.2 ft

Working Ranges & Forces

Boom	Variable Angle	
Stick	Reach R2.6 m (8'6")	
Bucket	GD 1 m ³ (1.31 yd ³)	
Maximum Digging Depth	6100 mm	20 ft
Maximum Reach at Ground Level	8790 mm	28.8 ft
Maximum Cutting Height	8940 mm	29.3 ft
Maximum Loading Height	6270 mm	20.6 ft
Minimum Loading Height	2290 mm	7.5 ft
Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	5880 mm	19.2 ft
Maximum Vertical Wall Digging Depth	4980 mm	16.3 ft
Minimum Working Equipment Radius	2980 mm	9.8 ft
Bucket Digging Force – ISO	123 kN	27,650 lbf
Stick Digging Force – ISO	80 kN	17,980 lbf

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 hg of refrigerant which has a CO₂ equivalent of 1.287 metric tonnes.

STANDARD & OPTIONAL EQUIPMENT

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

	Standard	Optional		Standard	Optional
UNDERCARRIAGE AND STRUCTURES			ENGINE		
Grease lubricated track link	✓		Cat C3.6 single turbo diesel engine	✓	
Tie down points on base frame	✓		One-touch low idle with automatic engine speed control	✓	
3.77 mt (8,311 lb) counterweight	✓		Automatic engine shutdown	✓	
500 mm (20 in) triple grouser shoes		✓	Electric fuel priming pump	✓	
600 mm (24 in) triple grouser shoes		✓	Two-stage fuel filtration system with water separator and indicator	✓	
700 mm (28 in) triple grouser shoes		✓	Sealed double element air filter with integrated pre-cleaner	✓	
790 mm (31") triple grouser track shoes		✓	Electric cooling fans	✓	
2500 mm (8'2") blade		✓	Biodiesel capability up to B20	✓	
2600 mm (8'6") blade		✓	-18° C (0° F) cold start capability	✓	
2700 mm (8'10") blade		✓	-25° C (-13° F) cold start capability	✓	
BOOMS AND STICKS			ELECTRICAL SYSTEM		
5.1 m (16'9") Reach boom		✓	Maintenance free battery	✓	
2.64 m (8'8") stub + 2.6 (8'6") fore		✓	LED chassis light, left-side/right-side boom lights, cab lights	✓	
Variable Angle boom			Programmable time-delay LED working lights	✓	
2.25 m (7'5") Reach stick		✓	360° lighting		✓
2.6 m (8'6") Reach stick		✓	SERVICE AND MAINTENANCE		
3.1 m (10'2") Reach stick		✓	Side entry to service platform	✓	
Bucket linkage without lifting eye, Cat Grade		✓	Grouped engine oil and fuel filters	✓	
CAB			Ground-level engine oil dipstick	✓	
ROPS	✓		S-O-S ports	✓	
Comfort cab: mechanical suspension seat, 8" touchscreen monitor		✓	Integrated vehicle health management system	✓	
Deluxe Cab: air suspension heated seat, 10" touch screen monitor		✓	HYDRAULIC SYSTEM		
Premium cab: air suspension heated and cooled seat, 10" touchscreen monitor		✓	Boom and stick regeneration circuit	✓	
Cat Stick Steer		✓	Automatic hydraulic warm up	✓	
Auxiliary relay		✓	Automatic two speed travel	✓	
CAT TECHNOLOGIES			Electric main control valve	✓	
Cat VisionLink	✓		Boom and stick drift reduction valve	✓	
VisionLink Productivity		✓	Element-type main hydraulic filter	✓	
Cat Payload	✓		Single-type electronic main pump	✓	
2D E-Fence	✓		SAFETY AND SECURITY		
Remote Flash	✓		Rear and right-side-view cameras	✓	
Remote Troubleshoot	✓		Ground-level engine shutoff switch	✓	
Cat Grade with 2D	✓		Service platform with anti-skid plate and countersunk bolts	✓	
Cat Assist	✓		Signaling/warning horn	✓	
Work tool recognition	✓		Hydraulic lock out lever	✓	
Work tool tracking	✓		360° visibility		✓
Auto hammer stop	✓		Swing alarm		✓
Cat Grade 2D with Attachment Ready Option (ARO)		✓	Inspection lighting		✓
Cat Grade with 3D single GNSS		✓			
Cat Grade with 3D dual GNSS		✓			
Cat Tilt Rotator (TRS) Integration		✓			
Operator Coaching		✓			

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

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

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AEXQ3119-04
Replaces AEXQ3119-03
Build Number: 07E
(Aus-NZ, Eur)

