# M318F Wheeled Excavator





Engine	
Engine Model	Cat <sup>®</sup> C7.1 ACERT™
Emissions	EU Stage IV
Net Power (Maximum)	
ISO 9249 at 1,750 rpm	126 kW
ISO 9249/SAE J1349 (metric)	171 hp (PS)
ISO 13496 at 1,750 rpm (gross)	129.4 kW
Weights	
Operating Weight	17 200 kg-19 700 kg

Bucket Specifications		
Bucket Capacities	0.35 m <sup>3</sup> -1.09 m <sup>3</sup>	
Working Ranges		
Maximum Reach at Ground Level	9230 mm	
Maximum Digging Depth	5920 mm	
Drive		
Maximum Travel Speed	35 km/h	

### **M318F Features**

### Made to keep your costs down.

Not only does the machine give you all the versatility you need, but it does so while providing a great deal of precision, and speed with an absolute minimum fuel consumption — and zero impact on your efficiency.

### Made to make operation easy and pleasant.

Have a seat, you will be impressed by the quietness and comfort of the cab. Feel relaxed, we help you make sure you're safe.

Enjoy integrated technologies; they act transparently.

When you add the ground level grouped service points that make your maintenance quick and easy, and multiple Cat work tools that help you do all kinds of jobs, you simply won't find a better machine.

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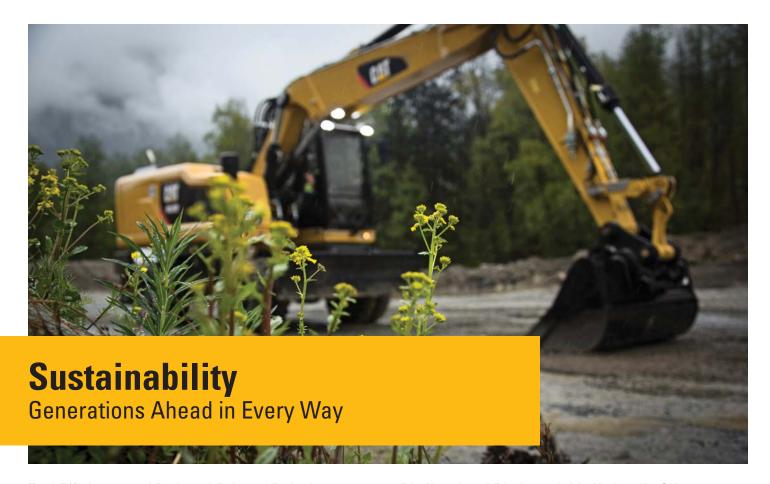
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The new F Series generation is here to help you take on the wide variety of challenges you face every day, more easily and with more pleasure.

F Series - Easier Than Ever.



### **Fuel Efficiency and Reduced Exhaust Emissions**

The engine meets EU Stage IV emission standards, performs the same amount of work, while burning significantly less fuel than the previous model, which means more efficiency, less resources, and fewer  ${\rm CO_2}$  emissions.

### **Quiet Operation**

Outstandingly low sound levels, you won't believe your machine is running.

### **Transparent Technologies and Longer Service Intervals**

- The new Eco Modes, Auto Engine Speed Control and Engine Idle Shutdown help further reduce your overall fuel consumption.
- Product Link<sup>™</sup> allows remote monitoring of the machine and helps improve overall efficiency.
- Your Cat dealer can help extend service intervals, meaning fewer fluids and disposals, all adding up to lower costs.

### **Biodiesel and Biodegradable Hydraulic Oil**

- The M318F has the flexibility of running on either ultra-lowsulfur diesel (ULSD) fuel with 15 ppm of sulfur or less or biodiesel (B20) fuel blended with ULSD.
- Cat BIO HYDO Advanced HEES™ reduces the impact on the environment.

### **Cat Certified Used**

This program is a key element in the range of solutions offered by Caterpillar and Cat dealers to help customers achieve growth at the lowest cost while eliminating waste. Used equipment is inspected, guaranteed and ready for work and customers will benefit from a Caterpillar warranty.

# **Engine**

# Power, Reliability, and Fuel Economy

### The Power and Performance You Need

### **Constant Power Strategy**

Provides a quick response to changing loads, while delivering the same amount of power regardless of operating conditions.

### A Transparent Emission Solution That Works.

The Cat C7.1 ACERT engine meets today's EU Stage IV emission standards, and it does so without interrupting your job process. It is designed to be:

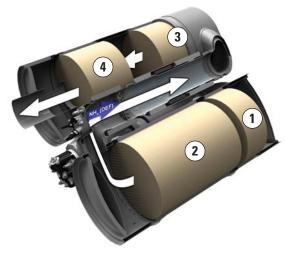
- Transparent: no operator intervention
- Durable: fit for life Diesel Particulate Filter
- Efficient: no work interruption, even in case of extended idling time
- **Simple:** minimum maintenance. Longitudinal engine installation, which further simplifies maintenance.

### **Biodiesel Not a Problem**

The engine can run on B20 biodiesel fuel that meets ASTM 6751 standards – all to give you more potential fuel-saving flexibility.

### **Proven Technology**

To assure that our technology will meet your expectations for reliable trouble-free service, we subjected these engines and technologies to extensive operating hours of test and validation.







# Built-in Fuel Savers That Add Up

- Automatic Engine Speed Control: lowers engine speed when it is not needed.
- NEW Engine Idle Shutdown (when activated): turns the engine off when it's been idling for more than a pre-set amount of time.
- NEW Cooling System: variable speed and on-demand fan optimizing consumption.
- NEW enhanced Eco Mode: reduces engine speed while delivering the same power.
- Automatic shift to Travel Mode when you start riding: optimizes driveline performance while preserving fuel.

# **Premium Comfort**

### **Keeps Operators Productive All Shift Long**



### **Legacy from the Renowned Cat Wheeled Excavators**

Designed for the operator, our cabs are unique.

### **Ergonomic Layout**

- Frequently used switches are centralized, kept to the minimum and ideally located close to the joysticks.
- Storage compartments are useful... when well designed. The lunch box provides sufficient room to store a hard hat. Several other areas include drink, phone, or key holders.

### **Comfortable Seat Options**

Our seats provide all the comfort needed for a long day of work, including FULL adjustment. All seats are heated and air suspended. Automatic weight adjustment and air cooled seats are available.

### Safety – Not an Option

ROPS/FOGS compatible cabs, seat belt alarm, safety bar, sideview camera ... among others.

### **Details That Make the Difference**

Have a look at the cab; you will see it is through details that we improve pleasure of operating.

### **Smart Controls to Reduce Fatigue**

- Features like ride control, SmartBoom or Joystick Steering will be precious to increase your productivity.
- New technologies that work transparently like the swing and auto travel lock or the automatic brake and axle lock, reduce the number of tasks you need to do.

### Plug, Charge and Play Your Devices

- The 12V 10A power supply socket is conveniently located for charging your laptop, or a tablet.
- A CD/MP3 Radio with speakers and USB port is available.







# **Simplicity and Functionality**

For Ease of Operation

### A Cab Just for You – Fully Adjustable

- · Joystick consoles, in height and angle
- Steering column adjustment, not only tilting fore/aft but also in height
- Hydraulic sensitivity of the machine to make it more or less aggressive
- · Joystick controls, buttons and thumb wheels
- Automatic air conditioning

### **Incredibly Low Sound Levels, Less Fatigue**

Increased cab pressure, preventing from dust entry, combined with new the design contributes to reducing sound. Add in new hydro mounts to fix the cab on the frame and you have a cab that's as quiet as any of today's premium cars.

### **Outstanding Visibility: See the Difference!**

- Standard LED working lights and halogen roading lights
- LED dome light
- All glass areas have been drastically increased
- Choice of 70/30 front windshield or one-piece windshield
- New wide angle mirrors including a lower mirror for a better visibility to the ground
- Parallel intermittent (four speeds) wipers covering the whole windshield

### **Standard Rear and Side Wide Angle Cameras**

Cameras let you see what's going on around. The image from the side camera is displayed on an additional wide color screen, offering the full view from the front to the rear of the machine. The rear camera is integrated into the counterweight for enhanced protection.

### **Large Color Monitor**

Easy to read and in local language, the high resolution LCD monitor will keep you aware of any important information. "Quick Access" buttons allow a quick selection of favorite functions. The tool select function lets you preset up to ten different hydraulic attachments for quick tool changes.

# **The Next Generation**

### **Easier Than Ever**



### Make the Move to the Next Generation

Refinements. From the whole design to the smallest details.
Convenient features, new advanced and transparent
technologies, not only to reduce emissions but to further
improve your daily experience when working with our products.

### **Easier Than Ever**

Work like no other with our wheeled excavators. The F Series generation is made to help you take on the wide variety of the challenges you face every day, more easily and with more pleasure, to keep you on the road to your success.

# **Cruise Control**

Focus on the Road, Not on Your Foot

### **Cruise Control**

No need to press the pedal all the time.

- Choose the very speed you wish
- Press the quick access button on the monitor
- Enjoy the ride

It's as Easy as That.



# **Smart Technologies**

Press Go and Relax

### Swing and Auto Travel Lock: As Fast, As Easy, As Safe

No need for the operator to bend to engage the swing lock pin.

- · Just press a button,
- Align the upper to the lower frame,
- Enjoy the ride: a green indicator confirms the swing and the implements have been automatically locked.

### It's As Easy As That.

### Integrated Pin Code – Switch Off and Relax

No need to buy optional security system to protect your equipment against theft.

- The pin code is integrated into the monitor (standard)
- Entering the right code allows the engine to start

The Machine Security System (MSS – optional) adds even more protection when needed.

It's as Easy as That.





# Dig and Go Auto Axle Lock

Presses the pedal for you, reducing the number of actions you need to do

The machine automatically detects when the service brake and axle need to be locked (like when digging), or unlocked (roading), hence removing the need for the operator to systematically press the pedal.

Brake and axle are released automatically by pressing the travel pedal again.

# **Hydraulics**

### Fast, Precise, Flexible

# When it comes to moving material quickly, you need efficient hydraulics – the type the F Series can deliver.

### **Efficient Design, Smart and Fast**

- Simple Design: The new hydraulic valve compartment and routings offer a simple and clean design to help ensure durability. Everything is reachable from ground level.
- Smart Main Hydraulics: The system allows reducing the load on the engine when not needed, which translates into lower fuel consumption.
- Dedicated Secondary Hydraulics: A closed hydraulic circuit is dedicated to the swing only. Having two separate pumps, one for the swing and the other for the other functions allows faster and smoother combined movements.

### **Control Like No Other**

- Electronic Pump Control Controllability is one of the main attributes of Cat excavators, and one of the key contributors to this is the Electronic Pump Control (EPC) that's designed to improve response time and precision. It puts flow exactly where you need it, when you need it, which means a much smoother operation and greater efficiency.
- Adjustable Hydraulic Sensitivity Allows you to adjust the aggressiveness of the machine according to the application.
- Stick Regeneration Circuit Increases efficiency and helps enhance controllability for higher productivity.

### Proportional Auxiliary Hydraulics, Tremendous Versatility

Medium pressure function (for tilting buckets or rotating tools), high pressure lines (for tilting/rotating work tools requiring a third auxiliary hydraulic function), hydraulic quick coupler circuit: they all come standard, which allows you to switch from one work tool to another, without the need to add lines and hydraulic circuits.







# **Undercarriage**

Strength and Versatility at 35 km/h





### **Heavy Duty Axles**

Long life with effective heavy duty axles. The transmission is mounted directly on the rear axle for protection and optimum ground clearance. The front axle offers wide oscillating and steering angles.

### **Advanced Disc Brake System**

Minimizes the rocking effect when working free on wheels. The disc brake system acts directly on the hub instead of the drive shaft to avoid planetary gear backlash.



### Fenders (optional)

Fenders provide excellent coverage of all tires, protecting the machine and surroundings from mud and stones being thrown up.



### **Joystick Steering**

Keep both hands on the joysticks even when simultaneously moving the implements and repositioning the machine, by the use of the slider switch on the right joystick.

### **New Blade Design**

- Parallel kinematic to keep the blade parallel to the ground, in every height position
- A profile that allows material to roll better and minimizes material packing

# **Booms and Sticks**

# Options To Take on Your Far-reaching or Up-close Tasks

### **Rugged Performance**

Booms and sticks are welded, box section structures with thick, multi-plate fabrications in high stress areas for the tough work you do.

### **Flexibility**

The choice of various booms and sticks provides the right balance of reach and digging forces for all applications.

### **Sticks**

- Short stick (2100 mm) for maximum breakout force and lifting capability
- Medium stick (2400 mm) for greater crowd force and lift capacity
- Long stick (2600 mm) for greater depth and reach

### **Booms**

- Variable Adjustable (VA) improved right side visibility and roading balance. When working in tight quarters or lifting heavy loads, the VA boom offers the best flexibility.
- One-Piece Boom Fits best for all standard applications such as truck loading and digging. A unique straight section in the curve of the side plate reduces stress flow and helps increase boom life.
- Offset Boom The large offset dimensions allow you to dig along walls, over obstacles, to grade while driving, and to dig under laid tubes without damaging them. The combination with a tiltable ditch cleaning bucket lets you operate a highly versatile system.





# **SmartBoom**

### **Reduces Stress and Vibration**

### **Rock Scraping**

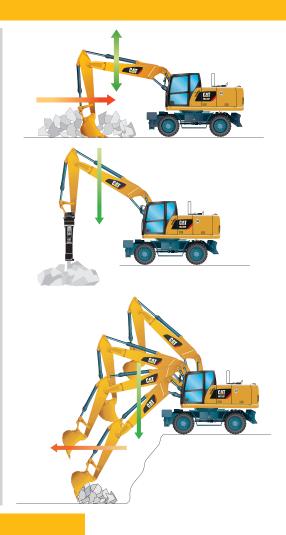
Scraping rock and finishing work is easy and fast. SmartBoom™ simplifies the task and allows more focus on stick and bucket, while the boom freely goes up and down without using pump flow.

### **Hammer Work**

The front parts automatically follow the hammer while penetrating the rock. Blank shots or excessive force on the hammer are avoided resulting in longer life for the hammer and the machine. Similar advantages with vibratory plate compactors.

### **Truck Loading**

Loading trucks from a bench is more productive and fuel efficient as the return cycle is reduced while the boom down function does not require pump flow.



# **Ride Control**

**Fast Travel Speed with More Comfort** 

The ride control system lets you travel faster over rough terrain with improved ride quality for the operator. Accumulators are acting as shock absorbers to dampen the front part motion. It can be activated through a button located on the soft switch panel in the cab.

















### **Save Time with Every Tool Change**

**Perform hydraulic tool changes in seconds** ... The new Auto-Connect hydraulic coupler automates tool exchange fully, so operators can change work tools quickly, from the safety and comfort of their cabs. The unique design of the Auto-Connect prevents ruptured hoses, avoiding unplanned downtime. It makes your operators more efficient and productive.





### **Power Match**

Match your Cat hydraulic work tools attachment to your Cat machine, and get the most out of the standard, built-in software. Work tool changes have never been easier!

### **Get the Most from Your Machine**

If you have multiple tasks to get done in a typical work day, the M318F can help. Highly versatile, you can easily expand all the possibilities it offers by utilizing any of the variety of Cat attachments.

### **Change Jobs Quickly**

A quick coupler brings the ability to quickly change attachments and increase your flexibility. Operators will be encouraged to use the right tool for the job and fewer machines will be needed.

### Dig, Load and Landscape

A wide range of buckets offers solutions for digging, excavating, trenching, loading and finishing. Ditch Cleaning buckets are suitable for grading and finishing in landscaping applications or for loading loose material that is stockpiled, where teeth would damage the surface.

### **Sort and Handle Material**

With increasing environmental regulations, you need efficient ways to deal with waste. Save on transportation, manpower and dumping costs with Cat grapples by sorting debris at source and trucking it separately. When you need good penetration, you can count on Cat digging grabs.

### **Build, Compact and Maintain Roads**

Whether you do finish grading with leveling buckets, ditch cleaning, sewer and water, or compaction, the machine in combination with the appropriate work tool will do the job quickly.

### **Break, Demolish and Scrap**

When a structure must be demolished, it has to be done quickly – and sustainably. The Cat MP300 Multi-Processors let you do exactly that and meet every demolition need. Cat E Series hammers deliver very high blow rates, and shears provide effective scrap processing.





# **Serviceability**

### When Uptime Counts

### **Convenient Access Built In**

You can reach routine maintenance items like fuel and engine oil filters and fluid taps at ground level while fuel and DEF tank with engine air filter are accessible from the safety of the slip-resistant new service platform. Compartments feature wide composite service doors, designed to be more resistant to shocks, which all include gas struts to facilitate the opening. Components are now gathered in specific dedicated compartments, like the special electrical compartments.

### A Cool Design for Any Temperature

The side-by-side and radial fan design allows greater cooling performance. The system is completely separated from the engine compartment to reduce noise and heat and all radiators are gathered in the same compartment while featuring easy-to-clean cores with a tilting device that requires no tool to unlock.

### A Fresh Idea

Ventilation inside the cab allows outside air to enter through a fresh air filter. The filter is located on the side of the cab to make it easy to reach, and it is protected by a lockable door that can be opened with the engine key.

### **Lube and Fuel Options**

An electric lubricator system is an available time-saving standard feature for greasing the whole upper carriage. Greasing points for the undercarriage are kept to a minimum and grouped. An electric refueling pump is also standard. The hose is stored in a dedicated tray, for more cleanliness. Add in the new electric lift pump removing the need to prime the system manually, the standard fuel and water separator and you get a machine that does the fastidious works for you.

### Keep it simple.









# **Integrated Technologies**

It Pays to Know



Asset Double

Ostalboard Location Alerts Health Maintenance System Details

Status

Asset D
CAT Day

Open Airets

Open Air

Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



**Equipment Management** – increase uptime and reduce operating costs.



**Productivity** – monitor production and manage job site efficiency.



**Safety** – enhance job site awareness to keep your people and equipment safe.

Featured Cat Connect technologies include the following:

### Link

Link technologies provide wireless capability to machines to enable two-way transfer of information collected by on-board sensors, control modules, and other Cat Connect technologies.

### **Manage Your Machine Remotely**

Cat Product Link is a system that is deeply integrated into the machine monitoring system to take the guesswork out of managing your equipment. The system tracks location, hours, fuel usage, productivity, idle time, and diagnostic codes and shares it with you through VisionLink® to help you maximize efficiency, improve productivity, and lower operating costs.

# CAT CONNECT









# Safety

### Your Safety Is NOT An Option

### **Embedded Features**

Smart devices are embedded to offer as much safety as possible for your operators and help enforce safe behavior:

- Safety seat belt and warning indicators (monitor)
- Automatic swing lock
- Automatic brake and axle lock
- Safety Lever, preventing exit when the implements are not locked out
- Emergency shut off switch and battery switch disconnect
- Adjustable travel alarm
- Lowering check valves

### Safe and Quiet Cab

The all-new cab provides you with a safe environment. It also contributes to your comfort with limited vibrations and drastically reduced sound levels.







Access into the cab of a wheeled excavator has always been a challenge. We bring a solution to allow you to safely climb into the cab:

- Three longer access steps, aligned with the cab entry
- Anti-skid plates on all walkways and steps reducing slipping hazards
- Convenient door handrail
- Additional extended handrail, from the top to the bottom of the cab
- Tiltable console, not to obstruct entry into the cab
- Safety lever built into the tiltable console to make sure the way in and out is free of obstacle



- 1) Laminated windshield and skylight window
- 2) Lowering check valves
- 3) Safety seat belt indicator
- 4) Safety lever
- 5) Emergency shut-off switch
- 6) Automatic brake and axle lock
- 7) Punched, anti-slippery walking surfaces
- 8) Battery switch disconnect
- 9) Swing and implement electronic lock
- 10) Adjustable travel alarm
- 11) All doors equipped with spring gas cylinders
- 12) Emergency hammer and exit
- 13) ROPS/FOGS compatible cab
- 14) Sound proofing
- 15) Beacon available
- 16) Falling Object Guard compatibility

### **Smart Lighting**

- LED lights for all working lights for enhanced night-time visibility
- Halogen lights for all roading lights
- LED dome light for better illumination inside the cab

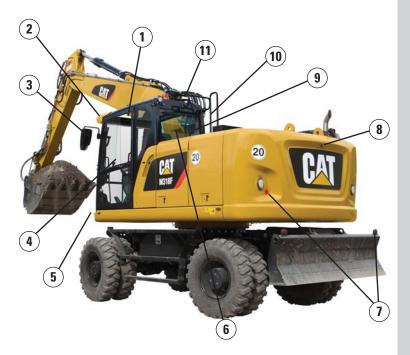


### **Great Views**

- Enlarged glass gives you excellent visibility to the front, top, rear, and sides, even to the right
- Standard rearview camera gives you a clear field of view behind the machine through the monitor. Camera is integrated into the counterweight.
- Standard sideview camera, to check nothing is hidden to you from the front right hand side to the rear of the machine
- Lenses of all the cameras are wide angle and heated
- All mirrors are wide angle and allow view not only around the machine but also to the ground

# **Unmatched Visibility**

### Make Sure Nothing Is Hidden to You



**Visibility all around is critical**, especially for machines which go on public roads.

- 1) Increased skylight and windshield glass area
- 2) Improved lighting with standard LED lights for all working lights
- 3) Optional heated mirrors
- 4) Great left hand side visibility with the new all glass door
- 5) Halogen roading lights
- 6) Wide rear window
- 7) Reflecting red lights on rear and blade/outriggers
- 8) Standard wide rearview camera
- 9) Standard side camera and dedicated monitor
- 10) Large right hand side window
- 11) Mirrors, wide angle, with additional lower mirror for ground visibility

# **Complete Customer Care**

Your Cat Dealer Will Support You Like No Other

### **Support You Can Count On**

From helping you to choose the right machine to knowledgeable on-going support, Cat dealers provide the best-in-sales and services.

- Best long-term investment with financing options and services
- Productive operation with training programs
- Preventive maintenance and guaranteed maintenance contracts
- Uptime, with best-in-class parts availability
- Repair, rebuild, or replace? Your dealer can help evaluate the best option.



Engine	
Engine Model	Cat C7.1 ACERT (1)
Ratings	1,750 rpm
Engine Gross Power (maximum)	
ISO 14396	129.4 kW
ISO 14396 (metric)	176 hp
Net Power (Rated) (2)	
ISO 9249/SAE J1349	126 kW
ISO 9249/SAE J1349 (metric)	171 hp (PS)
80/1269/EEC	126 kW
Net Power (maximum)	
ISO 9249/SAE J1349	126 kW
ISO 9249/SAE J1349 (metric)	171 hp
80/1269/EEC	126 kW
Bore	105 mm
Stroke	135 mm
Displacement	7.01 L
Maximum Torque at 1,400 rpm	783 N·m
Number of Cylinders	6

- (1) Meets EU Stage IV emission standards.
- (2) Rated speed 1,750 rpm. Constant power from 1,500-1,750 rpm.
- Net power advertised is the power available at the flywheel when engine is equipped with air cleaner, CEM exhaust gas aftertreatment, alternator, and cooling fan running at intermediate speed.
- No deratings required up to 3000 m altitude. Automatic derating occurs after 3000 m.

Transmission	
Forward/Reverse	
1st Gear	10 km/h
2nd Gear	35 km/h
Creeper Speed	
1st Gear	3 km/h
2nd Gear	12 km/h
Drawbar Pull	103 kN
Maximum Gradeability (at 17 500 kg)	75%

Swing Mechanism		
Swing Speed	10 rpm	
Swing Torque	38 kN·m	
Undercarriage		
Ground Clearance	370 mm	
Maximum Steering Angle	35°	
Oscillation Axle Angle	±9°	
Minimum Turning Radius		
Standard Axle		
Outside of Tire	6400 mm	
End of VA Boom	7000 mm	
End of One-Piece Boom	8300 mm	
End of Offset Boom	7000 mm	
Wide Axle		
Outside of Tire	6550 mm	
End of VA Boom	7100 mm	
End of One-Piece Boom	8500 mm	
End of Offset Boom	7100 mm	
Service Refill Capacities		
Fuel Tank (total capacity)	330 L	
Diesel Exhaust Fluid Tank	34.5 L	
Cooling System	46.9 L	
Engine Crankcase	18.5 L	
Rear Axle Housing (differential)	14 L	
Front Steering Axle (differential)	10.5 L	
Final Drive	2.5 L	
Powershift Transmission	2.5 L	

Weights	
Operating Weights*	17 200 kg-19 700 kg
Weights	
VA Boom	
Rear Dozer Only	17 400 kg
Rear Dozer, Front Outriggers	18 410 kg
Front and Rear Outriggers	18 670 kg
One-Piece Boom	
Rear Dozer, Front Outriggers	17 920 kg
Front and Rear Outriggers	18 180 kg
Offset Boom	
Rear Dozer Only	17 950 kg
Rear Dozer, Front Outriggers	18 950 kg
Front and Rear Outriggers	19 210 kg
Sticks**	
Short (2100 mm)	700 kg
Medium (2400 mm)	730 kg
Long (2600 mm)	750 kg
Industrial (3100 mm)	410 kg
Counterweight	
Standard	3400 kg
Optional	3900 kg

<sup>\*</sup>Operating weight includes medium stick, 3400 kg counterweight, full fuel tank, operator, 200 kg quick coupler, 600 kg bucket and dual pneumatic tires. Weight varies depending on configuration.

<sup>\*\*</sup>Includes cylinder, bucket linkage, pins and standard hydraulic lines.

Hydraulic System		
Tank Capacity	122 L	
System	210 L	
Maximum Pressure		
Implement Circuit		
Normal	350 bar	_
Heavy Lift	370 bar	
Travel Circuit	350 bar	
Auxiliary Circuit		
High Pressure	350 bar	_
Medium Pressure	185 bar	
Swing Mechanism	370 bar	
Maximum Flow		
Implement/Travel Circuit	252 L/min	_
Auxiliary Circuit		_
High Pressure	252 L/min	_
Medium Pressure	49 L/min	
Swing Mechanism	85 L/min	

_	
Tires	
Standard	10.00-20 (Dual Pneumatic)
Optional	11.00-20 (Dual Pneumatic) 445/70/R19.5 TL XF (Single Pneumatic) 10.00-20 (Dual Solid Rubber)
Blade	
Blade Type	Parallel
Blade Roll-Over Height	576 mm
Width (standard axles)	2550 mm
Width (wide axles)	2750 mm
Sustainability	
Engine Emissions	EU Stage IV
Fluids (Optional)	
Cat Bio HYDO™ Advanced	Readily biodegradable EU Flower eco-label certified
Biodiesel up to B20	Meets EN 14214 or ASTM D6751 with EN590 or ASTM D975 Standard Mineral diesel fuels
Vibration Levels	
Maximum Hand/Arm	
ISO 5349:2001	<2.5 m/s <sup>2</sup>
Maximum Whole Body	
ISO/TR 25398:2006	<0.5 m/s <sup>2</sup>
Seat Transmissibility Factor	
ISO 7096:2000-spectral class EM5	<0.7 m/s <sup>2</sup>

Standards	
ROPS	ROPS (Rollover Protective Structure) offered by Caterpillar meets ROPS criteria ISO 12117-2:2008
FOPS	FOPS (Falling Object Protective Structure) meets FOPS criteria ISO 10262:1998 and SAE J1356:2008
Cab/Sound Levels	Meets appropriate standards as listed

Sound Performance		
Operator Sound		
2000/14/EC	71 dB(A)	
Spectator Sound		
2000/14/EC	100 dB(A)	
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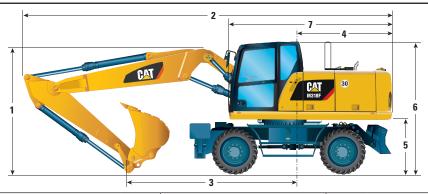
- Operator Sound The operator sound level is measured according to the procedures specified in 2000/14/EC, for a cab offered by Caterpillar, when properly installed and maintained and tested with the door and windows closed.
- Exterior Sound The labeled spectator sound power level is measured according to the test procedures and conditions specified in 2000/14/EC.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained for doors/ windows open) for extended periods or in noisy environment(s).

### **Blade**

Blade Type	Parallel
Blade Options	2550 mm, 2750 mm
1 Blade Total Height	680 mm
2 Maximum Lowering Depth from Ground	131 mm
3 Maximum Raising Height above Ground	496 mm

### **Dimensions**

All dimensions are approximate.



	VA Boom One-Piece Boom								1	Offset	Boom
Stick Length	mm	2100	2400	2600	3100*	2100	2400	2600	3100*	2100	2400
1 Shipping Height with Falling Object Guard and Handrails Lowered (highest point between boom and cab)	mm		3305		3330		3305		3330	33	05
2 Shipping Length	mm	8610	8610	8600	8580	8450	8460	8460	8480	8600	8560
3 Support Point	mm	3910	3650	3550	3640	3560	3270	3150	3520	4010	3770
4 Tail Swing Radius	mm					23	00				
5 Counterweight Clearance	mm					12	80				
<b>6</b> Cab Height – No Falling Object Guard, Handrails Lowered						31	90				
With Handrails not Lowered	mm					32	70				
With Falling Object Guard	mm					33	05				
7 Overall Machine Width											
Standard Axle	mm					25	50				
Wide Gauge Axle	mm					27	50				

<sup>\*3100</sup> mm industrial stick will be available in 2015.



Undercarriage with dozer only



### \*\* Maximum tire clearance with outrigger fully down



Undercarriage with 2 sets of outriggers



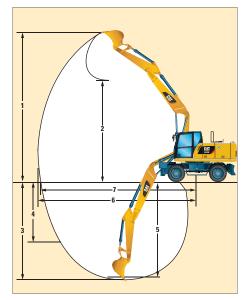
### Roading position with 2400 mm stick

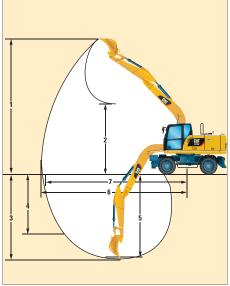


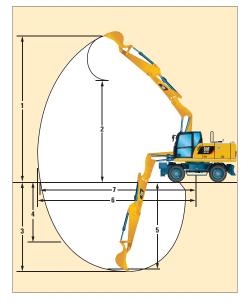
### Undercarriage with 1 set of outriggers and dozer



### **Working Ranges**







			VA E	oom			One-Pie	ce Boom	ı	Offset	Boom
Stick Length	mm	2100	2400	2600	3100*	2100	2400	2600	3100*	2100	2400
1 Digging Height	mm	10 090	10 275	10 435	8970	9045	9140	9255	7720	10 125	10 320
2 Dump Height	mm	6945	7135	7265	3980	6000	6110	6225	3200	6980	7175
3 Digging Depth	mm	5595	5890	6090	5030	5390	5690	5890	4820	5600	5895
4 Vertical Wall Digging Depth	mm	4365	4600	4780	_	4490	4665	4845	_	4410	4650
5 Depth 2.5 m in Straight Clean-Up	mm	5485	5785	5985	_	5170	5490	5700	_	5490	5790
6 Reach	mm	9120	9385	9580	8370	8920	9175	9365	8130	9135	9405
7 Reach at Ground Level	mm	8935	9210	9405	8170	8730	8995	9190	7920	8950	9225
Bucket Forces (ISO 6015)	kN		101		_		101		_	10	01
Stick Forces (ISO 6015)	kN	81	74	71		81	74	71	_	81	74

Range values are calculated with GD Bucket, 1200 mm, 0.91 m³ with tips K080 and CW-20-H.4.N. quick coupler with a tip radius of 1574 mm.

Bucket and Stick force values are calculated with heavy lift on (no quick coupler) and a tip radius of 1404 mm.

<sup>\*3100</sup> mm industrial stick will be available in 2015. Industrial stick has no bucket linkage. All dimensions refer to stick nose.

### **Bucket Specifications and Compatibility**

Contact your Cat dealer for special bucket requirements.

Without Quick Couple	er						Varia	able	Adju	ıstal	ole B	oom	l			One-Piece Boom										0	ffset	Boo	m		
Counterweight									3.4	mt									3.4	mt							3.9	mt			
Stick Length					2100	) mm	1		2400	mm			2600	mm			2400	) mm			2600	mm			2100	) mm			2400	mm	1
	Width	Capacity	Weight	e on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized
	mm	m <sup>3</sup>	kg	Free	Do;	1 Si	Full	Fre	Do	1 S	Full	Fre	Do	1 S	Full	Fre	Do;	1 S	I.	Fre	Do	1 S	I.	Fre	Do;	1 Si	Ξ	Fre	Do;	1 8	Full
	750	0.49	464																												
	1100	0.79	583																												
General Duty (GD)	1200	0.91	651																												
	1300	1.00	663																												
	1400	1.09	712																												
Heavy Duty (HD)	1300	1.00	699																												
Ditch Cleaning (DC)	2000	0.54	431																												
Ditch Cleaning Tilt	1800	0.48	567																												
(DCT)	2000	0.53	597																												
The above loads are in 87% of hydraulic lifting line with bucket curle	g capaci															und				M	axim	um r	nate	rial o	dens	ity 2	100 k	g/m <sup>3</sup>	3		
Capacity based on ISO Bucket weight with Go		uty tips																		M	axim	um r	nate	rial o	dens	ity 18	300 k	g/m <sup>3</sup>	3		
																				Maximum material density 1500 kg/m³											

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Maximum material density 1200 kg/m³

Maximum material density 900 kg/m<sup>3</sup>

Not recommended

Not recommended

### **Bucket Specifications and Compatibility**

Contact your Cat dealer for special bucket requirements.

With Pin Grabber Cou	pler		Variable Adjustable Boom One 3.4 mt											-Pie	ce B	oom					01	ffset	Boo	m							
Counterweight			3.4 mt  2100 mm  2400												3.4	mt							3.9	mt							
Stick Length					2100	) mm			2400	mm			2600	) mm			2400	mm			2600	mm			2100	mm			2400	mm	
	Width	E Capacity		ree on wheels	ozer lowered	set of stabilizers lowered	ully stabilized	ree on wheels	ozer lowered	set of stabilizers lowered	ully stabilized	ree on wheels	ozer lowered	set of stabilizers lowered	ully stabilized	ree on wheels	ozer lowered	set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	set of stabilizers lowered	Fully stabilized
	mm			ш.		-	Œ.	Ŧ		-	ı.	ı.		-	Œ.	ш	D	_	Œ.	ш		1	Œ.	Œ.		_	Œ.	Œ.			Œ.
	750 1100	0.49																													
General Duty (GD)	1200	0.91	651																												
	1300	1.00	663																												
	1400	1.09	712																												
Heavy Duty (HD)	1300	1.00	699																												
Ditch Cleaning (DC)	2000	0.54	431																												
Ditch Cleaning Tilt	1800	0.48	567																												
(DCT)	2000	0.53	597																												
The above loads are in 87% of hydraulic lifting line with bucket curled Capacity based on ISC Bucket weight with Ga	g capaci d. ) 7451.	ty or 75	% of tip													und								rial c							
Bucket Weight with de	siletai D	aty tips.	•																	Maximum material density 1500 kg/m³											
																				Maximum material density 1200 kg/m³											

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### **Bucket Specifications and Compatibility**

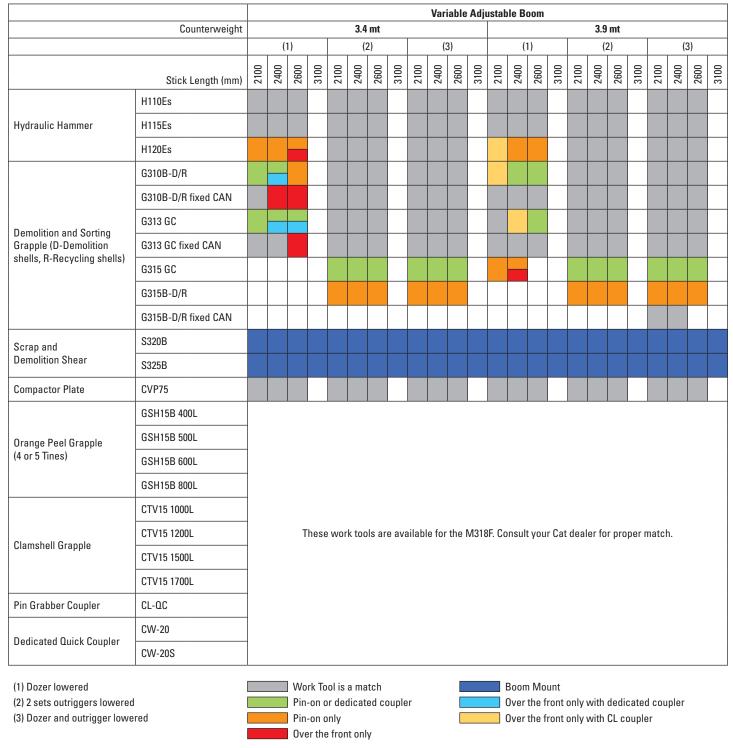
Contact your Cat dealer for special bucket requirements.

With Quick Coupler (	CW 30/C	W30s)					Varia	able	Adjı	ıstab	le B	oom	1					One	-Pie	ce B	oom				2100 mm  Page 11 Control of the cont		ffset	Boo	m		
Counterweight									3.4	mt									3.4	mt							3.9	mt			
Stick Length					2100	) mm			2400	mm			2600	mm			2400	) mm			2600	mm			2100	mm			2400	mm	
	a Width	چ Capacity	Sa Weight	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized	Free on wheels	Dozer lowered	1 set of stabilizers lowered	Fully stabilized
	600	0.35	431																												
	750	0.49	464																												
	900	0.62	524																												
General Duty (GD)	1100	0.79	583																												
	1200	0.91	633																												
	1300	1.00	663																												
	1400	1.09	693																												
	1200	0.91	649																												
Heavy Duty (HD)	1300	1.00	681																												
	1400	1.09	712																												
The above loads are i 87% of hydraulic liftin line with bucket curle Capacity based on ISI Bucket weight with G	g capaci d. O 7451.	ty or 75	% of tip													und															
Buoket Weight With C	oneral b	ary upo	•																	Ma	axim	um r	nate	rial (	densi	ity 15	500 k	(g/m <sup>2</sup>	3		
																Maximum material density 2100 kg/m³  Maximum material density 1800 kg/m³  Maximum material density 1500 kg/m³  Maximum material density 1200 kg/m³															
																				Maximum material density 1200 kg/m³  Maximum material density 900 kg/m³											
																Maximum material density 2100 kg/m³  Maximum material density 1500 kg/m³  Maximum material density 1200 kg/m³															

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

### **Work Tools Matching Guide**

When choosing between various work tool models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability. Refer to work tool specifications for application recommendations and productivity information.



Offerings not available in all areas. Matches are dependent on Wheeled Excavator configurations. Consult your Cat dealer to determine what is offered in your area and for proper work tool match.

Note: Demolition and Sorting Grapple: fixed CAN - fixed hinge plates for CW quick coupler usage.

### **Work Tools Matching Guide**

When choosing between various work tool models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability. Refer to work tool specifications for application recommendations and productivity information.

												One	-Pie	ce B	oom										
	Counterweight			- 1		I	3.4			I										mt		I			
			T	1)	1		(2		1			3)			(1					2)	1		(;		
	Stick Length (mm)	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100	2100	2400	2600	3100
	H110Es																								
Hydraulic Hammer	H115Es																								
	H120Es																								
	MP318 CC Jaw																								
Multi-Processor	MP318 D Jaw																								
	MP318 S Jaw																								
Crusher	P315																								
Pulverizer	P215																								
-	G310B-D/R																								
	G310B-D/R fixed CAN																								
	G313 GC																								
Demolition and Sorting	G313 GC fixed CAN																								
Grapple (D-Demolition shells, R-Recycling shells)	G315 GC																								
	G315 GC fixed CAN																								
	G315B-D /R																								
	G315B-D/R fixed CAN																								
Scrap and	S320B																								
Demolition Shear	S325B																								
Compactor Plate	CVP75																								
(1) Dozer lowered (2) 2 sets outriggers lowered (3) Dozer and outrigger lowered			Work Tool is a match Pin-on or dedicated coupler Pin-on only Over the front only												Boom Over Over	the f	ront						pler		

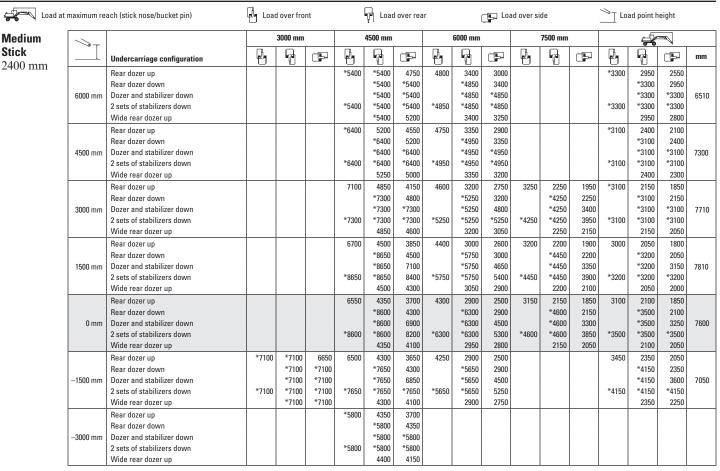
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 $Note: Demolition\ and\ Sorting\ Grapple: fixed\ CAN-fixed\ hinge\ plates\ for\ CW\ quick\ coupler\ usage.$ 

### **Lift Capacities – Variable Adjustable Boom**

Stick

All values are in kg, bucket cylinder and bucket linkage installed, worktool: none, with counterweight (3900 kg), heavy lift on.



<sup>\*</sup>Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance

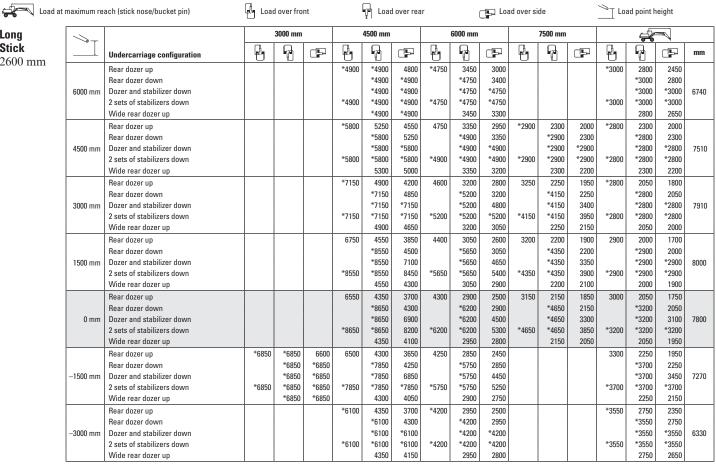
Always refer to the appropriate Operation and Maintenance Manual for specific product information.

### **Lift Capacities – Variable Adjustable Boom**

Long Stick

2600 mm

All values are in kg, bucket cylinder and bucket linkage installed, worktool: none, with counterweight (3900 kg), heavy lift on.



<sup>\*</sup>Limited by hydraulic rather than tipping load.

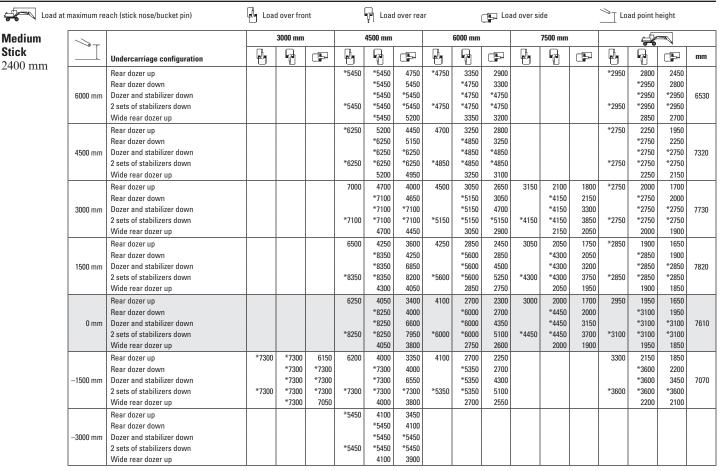
Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

### **Lift Capacities – Offset Boom**

Stick

All values are in kg, bucket cylinder and bucket linkage installed, worktool: none, with counterweight (3900 kg), heavy lift on.



<sup>\*</sup>Limited by hydraulic rather than tipping load.

Lift capacity ratings are based on ISO 10567:2007, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. The load point is the center line of the bucket pivot mounting pin on the stick. The oscillating axle must be locked. Lifting capacities are based on the machine standing on a firm uniform supporting surface and the Variable Boom Cylinder adjusted to the maximum length. For lifting capacity including bucket and/or quick coupler, the respective weight has to be subtracted from above values. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

### **M318F Wheeled Excavator Standard Equipment**

### **Standard Equipment**

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

#### **ELECTRICAL**

- Alternator, 115 A
- Lighting
  - LED light package, including all working lights (compatible with falling object guard)
  - -Boom working light
  - Cab interior LED Light
  - Roading lights two front
  - Roading lights two LED modules rear
  - Working lights, cab mounted (two front, one rear, and one counterweight for the rear camera)
- Main shut-off switch
- Maintenance free batteries, heavy duty
- · Signal/warning horn
- Electrical refueling pump

#### **ENGINE**

- Cat C7.1 engine with ACERT Technology EU Stage IV compliant
- Aftertreatment technologies including the Cat Emission Module package (CEM)
- Automatic Engine Speed Control (AESC), including one touch low idle
- Engine Idle Shutdown (EIS)
- Power mode selector
- Altitude 3000 m
- Automatic starting aid
- Fuel/water separator with water in fuel switch

#### **HYDRAULICS**

- · Adjustable hydraulic sensitivity
- All Cat XTTM-6 ES hoses
- Anti-drift valves for bucket, and tool control/multi-function circuits
- · Basic control circuits:
- Medium pressure
  - Two-way, medium pressure circuit, for rotating or tilting of work tools
- Tool control/multi function
- One/two-way high pressure for hammer application or opening and closing of a work tool
- -Programmable flow and pressure for up to 10 work tools selection via monitor
- Quick coupler circuit and lines for hydraulic quick coupler
- BLCV including overload warning device

- Heavy lift mode
- · Load-sensing hydraulic system
- Separate swing pump
- SLCV
- · Stick regeneration circuit

#### **OPERATOR STATION**

- ROPS cab structure compliant with 2006/42/EC and tested according to ISO 12117-2:2008
- · Adjustable armrests
- Air conditioner, heater and defroster with automatic climate control
- Cigarette lighter (24 volt)
- Beverage cup/can holder
- · Bolt-on FOGS capability
- · Bottle holder
- Bottom mounted intermittent (four speeds) wiping system that covers the upper and lower windshield glass
- Cameras
- Rear mounted wide angle camera (integrated into the counterweight) display through the cab monitor
- Right side wide angle camera, mounted on the cooling hood, displayed on a dedicated color large monitor
- · Coat hook
- Cruise Control System
- · Fastened seat belt warning signal
- Floor mat, washable, with storage compartment
- FM Radio with CD player, speakers and USB port
- Fully adjustable suspension seat
- · Instrument panel and gauges
  - Information and warning messages in local language
  - Gauges for fuel level, engine coolant, Diesel Exhaust Fluid (DEF) and hydraulic oil temperature
  - Filters/fluids change intervals
  - -Indicators for headlights, turning signal, low fuel, engine dial setting
  - -Clock with 10-day backup battery
- Interior LED lighting with door switch
- Joystick pilot operated
- Laminated upper front windshield
- Left side console, tiltable, with lock out for all controls

- Literature holder in right hand side panel
- Mobile phone holder
- · Parking brake
- Pin-code, engine start prevention
- Power supply, 12V-10A
- Rain protector\*
- Rear window, emergency, tempered glass, with hammer
- Retractable seat, integrated into the seat
- Safety lever, integrated into the left console
- Skylight, laminated glass
- Sealed cab with positive filtered ventilation
- Sliding door windows
- Steering column, adjustable height and angle
- Storage area suitable for a lunch box
- · Sunshade for windshield and skylight

#### **UNDERCARRIAGE**

- · All wheel drive
- Automatic axle/break lock
- · Creeper speed
- Electronic swing and travel lock
- Heavy-duty axles, advanced disc brake system and travel motor, adjustable braking force
- Oscillating front axle, lockable, with remote greasing point
- Tires, 10.00-20 16 PR, dual
- Steps with box in undercarriage (left and right)
- Two-piece drive shaft
- Two speed hydrostatic transmission

### **OTHER EQUIPMENT**

- Auto-lube, centralized greasing (implement and swing gear)
- · Automatic swing brake
- Counterweight, 3400 kg
- Engine emergency shutoff switch
- Mirrors, wide angle, frame and cab
- Product Link
- S•O•S<sup>SM</sup> sampling valves for engine oil, hydraulic oil and coolant
- \*Not compatible with the falling objects guards

### **M318F Wheeled Excavator Optional Equipment**

### **Optional Equipment**

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

### **AUXILIARY CONTROLS AND LINES**

- Basic control circuits:
  - -Second high pressure
    - Additional two-way, high pressure circuit, for tools requiring a second high or medium pressure function
- Cat BIO HYDO Advanced HEES™ biodegradable hydraulic oil
- SmartBoom

#### FRONT LINKAGE

- Booms
  - -One-piece boom, 5050 mm
  - -VA boom (two piece), 5200 mm
  - -Offset boom, 5200 mm
- Standard
- Sticks
  - -2100, 2400, 2600 mm
  - -3100 Industrial Stick\*

### **ELECTRICAL**

- Back-up alarm with three selectable modes
- · Rotating beacon on cab

#### **OPERATOR STATION**

- · Joystick steering
- Seat, adjustable high-back
  - Comfort, air-suspension, heated (vertical)
  - Deluxe with headrest, air suspension, heated and ventilated
  - -Headrest, on all seats
- Windshield
  - -One-piece high impact resistant
  - -70/30 split, openable
- Mirrors heated, frame and cab

### **UNDERCARRIAGE**

- · Rear blade only
- Front blade/rear outriggers
- Front outriggers/rear blade
- Front and rear outriggers
- Spacer rings for tires
- Travel restraint, for roading with a clamshell
- · Wide axles
- Wide rear blade
- Wide blade rear/outriggers front

#### **OTHER EQUIPMENT**

- Cat Machine Security System (MSS)
- Cooling protection package for dusty applications\*
- Counterweight, 3900 kg
- Fenders, front and rear
- Ride Control
- Tires (see pg. 22)
- Attachments (see pg. 27-30)

<sup>\*</sup>Available in 2015

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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