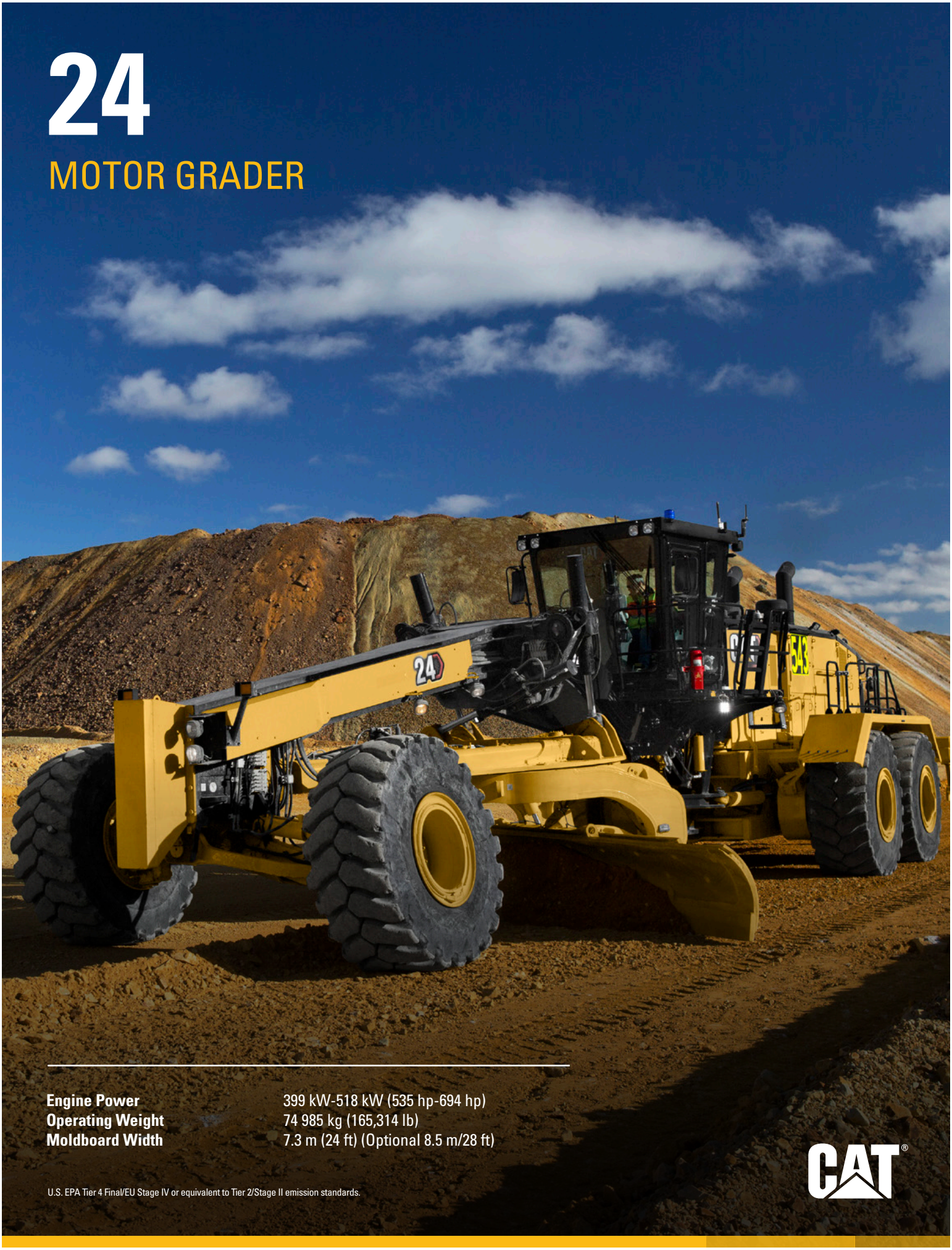
24

MOTOR GRADER



Engine Power	399 kW-518 kW (535 hp-694 hp)
Operating Weight	74 985 kg (165,314 lb)
Moldboard Width	7.3 m (24 ft) (Optional 8.5 m/28 ft)

U.S. EPA Tier 4 Final/EU Stage IV or equivalent to Tier 2/Stage II emission standards.

CAT®

Maximize your mine-site productivity with a grader that performs more effectively and saves time and money with easier serviceability.
The new Cat® 24 Motor Grader helps you get more work done in less time, while keeping operators safe and comfortable.

THE NEW CAT® 24

BOOST PRODUCTIVITY



GRADING THE ROAD AHEAD

The Cat 24 Motor Grader allows you to maximize your profitability by creating the best hauling road for your trucks and saving money on the machine itself.

+ MORE WEIGHT, MORE TORQUE, AND LARGER MOLDBOARD MEAN FEWER PASSES
+ CONSTANT GRADING SPEEDS HELP TO INCREASE PRODUCTIVITY AND EXTEND MACHINE LIFE
+ SAVE MONEY AND TIME ON MAINTENANCE WITH NEW SERVICEABILITY FEATURES



COVER MORE ROAD

WITH LESS DOWNTIME

LOWER COST PER HOUR

Operating costs are up to 7 percent lower than the 24M and up to 16 percent lower than the 24H.

SAVE A YEAR'S WORTH OF SERVICE TIME

Clustered filters, ground-level fluid center, and easier access save you 2,400 hours of service time over the first 64,000 hours of machine life.

GO FARTHER BETWEEN REBUILDS

Redesigned power train provides a 33% increase in rebuild life, saving you time and money.

SAVE TIME WITH MODULAR COMPONENTS

Modular components make maintenance faster and easier, saving up to 70% on removal and installation.

MAXIMIZED PRODUCTIVITY AND SERVICE LIFE

WITH A GRADER THAT LASTS LONGER

POWER THAT DRIVES PRODUCTIVITY

Cat C27 Engine

+ Lets operators maintain consistent grading speeds for maximum productivity. Superior torque and lugging capability pull through sudden, short-term load increases.
+ Provides improved performance when working at high altitudes.
+ Standard, automatically-enabled Consistent Power to the Ground feature gives the operator smooth and consistent power independent of ambient temperatures and machine workloads.

HIGH PERFORMANCE CIRCLE

+ The new high performance circle (HPC) for the Cat 24 Motor Grader improves machine performance, efficiency and uptime availability when maintaining haul roads at large mines.
+ When paired with Cat-exclusive extended life blade rail wear strips, the HPC reduces total cost of ownership for the drawbar circle moldboard and downtime by up to 80%.
+ With up to 16,000 hours of service life, the HPC helps to eliminate hours of monthly planned maintenance for frequent inspection, wear strip replacement and circle shoe adjustments associated with conventional circles with the new HPC.

A POWER TRAIN THAT MEETS THE TOUGHEST DEMANDS

Saving you money by giving you efficiency and longevity in the most demanding applications

+ A redesigned power train (with Cat C27 engine and 6-speed planetary transmission) increases rebuild life by 33% (compared to the 24M).
+ Standard Eco mode improves fuel economy by reducing high idle speed while maintaining power.
+ Standard Automatic Differential Lock unlocks the differential during turns and re-locks when straight for easier operation and improved power train protection.
+ Engine overspeed protection prevents downshifting until a safe travel speed has been established.
+ Advanced Productivity Electronic Control System (APECS) transmission improves speed shift performance, resulting in greater operator comfort and increased productivity.
+ Standard transmission guard provides steel protection from ground debris.
+ The front axle steering cylinder's design enhances durability, while the routing of the hydraulic hoses increases reliability.
+ Optional front guards provide protection for your front axle from rocks or other debris that could damage the axle or its components.



SIMPLIFIED MAINTENANCE

EASIER SERVICE MEANS MORE UPTIME



LONGER SERVICE INTERVALS

Compared to the 24M, many service intervals are doubled, and the redesigned power train goes 33% longer between rebuilds.

EASIER ENGINE ACCESS

French-style engine enclosure doors provide easy access to the engine and surrounding components. Barrel hinges allow easy removal of the doors.

NEW MODULAR DESIGN

Major components are modular in design, reducing your removal and reinstallation time. Transmission and cooling packages can be removed 70% faster than in the 24M.

EASIER FILTER & FLUID ACCESS

A ground-level Fluid Service Center provides one easily accessible location for engine, transmission, and hydraulic oil and coolant. Clustered filters reduce service time even more.

EASIER ASSESSMENT

Hoses, harnesses, and fluid sample ports are all at accessible locations that save you time. Check brake wear without removing brake pods.

ELECTRONIC VERIFICATION

LED indicators show when fluid compartments are full, and Ok-to-Start and Critically Low Fluid monitoring systems prevent damage and unnecessary wear, protecting your investment.

PROTECTING WORKERS AND MACHINES

TOTAL SAFETY FOCUS





BUILT-IN **FALL PROTECTION**

15 tie-off points provide secure PPE anchorage for drivers and technicians. Standard Working at Heights package adds handrails and hand holds for even greater safety.

FIRE SUPPRESSION **READY**

The 24 comes ready for you to easily install a suppression system with no compromise of other components. Optional factory-installed system with checkfire module is available.

SAFETY-FOCUSED **DESIGN**

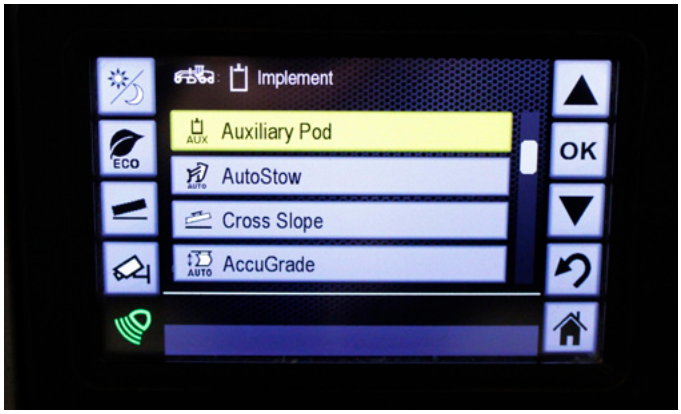
A secondary steering system, rearview camera (dual front-facing cameras optional), enclosure LED lighting, and more make the 24 a safer system for your workers.

EMPOWERING TECHNOLOGY

WORK SMARTER AND PROTECT YOUR INVESTMENT

MAKE BETTER ROADS, FASTER

Standard Cat Grade with Cross Slope helps operators maintain cross slope by automatically controlling one side of the blade, resulting in haul roads that are graded faster, are more durable, and drain better.



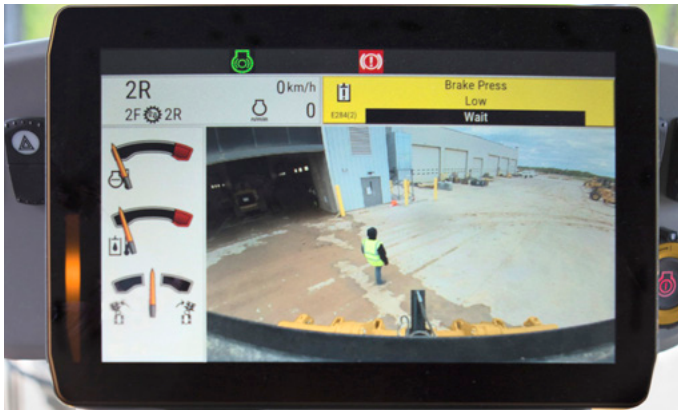
AUTO ARTICULATION

Optional Auto Articulation allows the 24 to automatically articulate to match the steering angle of the front tires, improving performance.



SYSTEMS THAT PROTECT

Numerous electronic systems from fluid level verification to circle angle limits make sure your grader will last for the long haul.



EASE OF OPERATION

Operator comfort is enhanced by two electro-hydraulic joysticks that reduce hand and wrist movement up to 78%. Intuitive control pattern and modulated blade lift make every operator more efficient.

EXTRAORDINARY VISIBILITY

The 24's cab design provides exceptional visibility, and optional heated glass keeps all windows clear. A standard rearview camera and optional dual forward cameras give your operator total awareness.

EASY COMFORT AND ADVANCED CONTROL

A new 10-inch touchscreen makes monitoring and control a snap, while a high-capacity HVAC system and suspension seat keep operators comfortable, focused, and productive.

OPERATOR STATION

SUPERIOR VISIBILITY AND CONTROL



MOVE MORE, RISK LESS

OPTIONAL ATTACHMENTS



28 FOOT (8.5 METER) MOLDBOARD

Save time, move more material, and reduce the load on the machine with a moldboard that needs fewer passes.

EXTENDED PLATFORMS

A Dual Access Cab platform package makes access easier, especially for technicians, further reducing downtime.

COOL AND PROTECT YOUR MACHINE

The Copper Grommetted (CGT) Radiator cools more efficiently and includes open passages for dirt and debris to pass through, making it perfect for high-temperature and high-debris applications. Downtime is reduced with the ability to replace individual core tubes.

GUARDING YOUR INVESTMENT

Two mud guards, two front axle guards, and an additional engine compartment guard ensure your 24 will be protected from jobsite debris.

VARIABLE BLADE FLOAT

Select the amount of downforce applied when the blade is in float, extending blade life and removing snow and mud from roads more quickly and efficiently.

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENGINE		
Engine Model	Cat C27	
Engine Power (ISO 14396:2002)	561 kW	752 hp
Displacement	27.0 L	1,649.5 in^3
Bore	137.2 mm	5.4 in
Stroke	152.4 mm	6.0 in
Maximum Torque (ISO 9249:2007)	3277 N·m	2,417 lbf-ft
Standard Capability	50°C	122°F

- The 24 is offered with two variations of the C27 engine. One meets Tier 4 Final/Stage IV (Stage IV engines comply with the transition provisions of the EU nonroad emission regulation) emission standards and is required for highly regulated countries. The other option emits equivalent to Tier 2/Stage II and is available for less regulated countries.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan at minimum speed, air intake system, exhaust system, and alternator with engine speed at 1,800 rpm.

FRONT AXLE AND TANDEMS		
Front Axle		
Height to Center	882 mm	34.7 in
Wheel Lean, Left/Right	18 degrees	
Total Oscillation Per Side	32 degrees	
Tandem Oscillation		
Front Up	20 degrees	
Front Down	20 degrees	

MOLDBOARDS		
Width		
Standard	7.3 m	24 ft
Optional	8.5 m	28 ft
Height	1067 mm	42.0 in
Thickness	50 mm	2.0 in
Throat Clearance	162 mm	6.4 in
Blade Pull*		
Base GVW	46 612 kg	102,762 lb
Maximum GVW	50 123 kg	110,502 lb
Down Force		
Base GVW	33 001 kg	72,755 lb
Maximum GVW	34 014 kg	75,104 lb

*Blade pull calculated at 0.9 traction coefficient, which is equal to ideal no-slip conditions, and Gross Machine Weight.

DRAWBAR AND CIRCLE		
Circle Centershift		
Right	437 mm	17.2 in
Left	804 mm	31.7 in
Moldboard Sideshift		
Right	1150 mm	45.3 in
Left	970 mm	38.2 in
Maximum Blade Position Angle	59 degrees	
Maximum Shoulder Reach Outside of Tires		
Right	3200 mm	126 in
Left	3175 mm	125 in
8.5 m (28 ft) Moldboard		
Right	3810 mm	150 in
Left	3785 mm	149 in
Maximum Lift Above Ground	373 mm	14.7 in
Maximum Depth of Cut	626 mm	24.6 in

- Maximum lift above ground and depth of cut with 406 mm × 60 mm (16 in × 2.4 in) cutting edges.

WEIGHTS – TIER 4/STAGE IV		
Weight – Typically Equipped		
Total	74 985 kg	165,314 lb
Weight – Maximum Tested		
Total	79 000 kg	174,165 lb

- For machines not equipped with Tier 4 Final emission engine, subtract 40 kg (88.2 lb) from the total weight. Typically equipped operating weight is calculated with a full fuel tank, coolant, lubricants, operator, 29.5R29 tires, 7.3 m (24 ft) moldboard and other commonly ordered items.

AIR CONDITIONING

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warning Potential = 1430). The system contains 1.6 kg of refrigerant which has a CO_2 equivalent of 2.288 metric tonnes.

STANDARD & OPTIONAL EQUIPMENT

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

POWER TRAIN	STANDARD	OPTIONAL
Engine: C27	●	
Air filters, dual with precleaner	●	
Automatic fan, suction with hydraulic demand	●	
Cold weather package		●
Control blade variable float		●
Differential, lock/unlock (auto/manual)	●	
Directional shift management	●	
Electric start, 24-volt	●	
Fast fill (fuel, hydraulic, transmission,coolant)	●	
Fuel priming pump, electric	●	

ELECTRICAL	STANDARD	OPTIONAL
Alarm, back-up	●	
Working halogen lighting package		●
Working LED lighting package		●

SAFETY AND SECURITY	STANDARD	OPTIONAL
Circle drive slip clutch	●	
Fire suppression ready	●	
Front facing cameras (two)		●
Ground-level engine shutdown	●	
Secondary steering	●	

DRAWBAR CIRCLE MOLDBOARD	STANDARD	OPTIONAL
7.3 m (24 ft) Moldboard	●	
8.5 m (28 ft) Moldboard		●
Flat Cutting Edge	●	
Serrated Cutting Edge		●
High performance circle	●	

OPERATOR ENVIRONMENT	STANDARD	OPTIONAL
Adjustable armrest	●	
Air conditioner and heater sound suppressed, pressurized cab 73 dB(A) ISO 6394:2008 at 70 percent fan speed	●	
Air horn		●
Auto articulation		●
Comfort suspension seat, cloth-covered	●	
Heated and ventilated seat		●
Hydraulic implement lockout	●	
Radio Bluetooth®		●
Rearview camera additional dedicated monitor	●	
Rollover protective structure (ROPS/FOPS)	●	
10-inch digital touchscreen information display	●	

TECHNOLOGY PRODUCTS	STANDARD	OPTIONAL
Cat Grade with Cross Slope	●	
Ripper auto stow	●	

OTHER STANDARD EQUIPMENT	STANDARD	OPTIONAL
Blade lift accumulators	●	
Ground-level fueling	●	
Push plate-counterweight	●	
Scheduled Oil Sampling (S·O·S℠) ports, engine, hydraulic, transmission, coolant, fuel	●	

Not all features are available in all regions. Please check with your local Cat dealer for specific offering availability in your area.
For additional information, refer to the Technical Specifications brochures for the 24 available at www.cat.com or your Cat dealer.

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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www.cat.com www.caterpillar.com

AEXQ2938-01
Replaces: AEXQ2938-00
Build Number: 14B
(Global)