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### **New 18M3 Adds Power, Capability to Cat® Mining Motor Grader Range**

With the addition of the new 18M3 Motor Grader to the Caterpillar lineup, mining operations using trucks with capacities to 190 tons (172 tonnes) can now choose the popular workhorse of the industry, the 16M3, or if more capability is required, the more productive 18M3. The new 18M3 features an average of 5 percent greater power in each gear as compared to the 16M3, and the new motor grader is equipped with an 18-foot (5.5-meter) moldboard as compared to the 16-foot (4.9-meter) moldboard of the 16M3. More power and greater coverage per pass increase productivity.

The added blade length also can be used to grade with a more aggressive blade angle of about 8 degrees. The increased blade angle reduces blade loading and combines with the additional power and weight and refined balance of the 18M3 for highly productive cutting passes.

The 18M3 is equipped for mining operations. Front axle and transmission guards protect key machine components against heavy debris and rocks, and all required provisions and brackets are in place to install most major fire-suppression systems without compromising machine components and structures. The fire-suppression-ready system complies with the guidelines of major system providers.

#### **Engine and drive train**

The 18M3 is powered by a Cat® C13 ACERT™ engine, which uses the Caterpillar Optimized Variable Horsepower (VHP) system, designed to deliver optimum power in each gear for the operating situation. The engine is available in three configurations to satisfy global emissions standards: U.S. EPA Tier 4 Final/EU Stage IV/Japan 2014 (Tier 4 Final); Tier 3/Stage IIIA/Japan 2006 (Tier 3) equivalent; and Tier 2/Stage II/Japan 2001 (Tier 2) equivalent.

To enhance fuel efficiency, ECO mode limits engine speed to 1,900 rpm in working gears during light to moderate load applications. This operator-selected feature maintains peak performance in lower gears and automatically disengages in gears 6F-8F and 4R-6R. ECO Mode is not available for Tier 3/Stage IIIA/Japan 2006 (Tier 3) equivalent emission standards machines.

The Cat direct drive, power shift transmission, with eight forward and six reverse gears, uses the Cat Advanced Productivity Electronic Control Strategy (APECS) system for smooth shifting and extended component life. The heavy-duty modular trans-axle has a standard automatic differential lock that engages and disengages as required.

The hydraulic brakes use large discs and pistons to provide a high dynamic braking torque, and a new manual brake wear indicator simplifies disc wear measurement, eliminating the need to remove the brake pods to check wear.

### **Structures and hydraulics**

The front frame is fabricated of continuous top and bottom plates, and the center-shift section is a heavy-duty steel casting that effectively distributes stress in this highly loaded area of the mainframe. The long rear frame uses two bumper castings and thick hitch plates for long term durability. The front axle is designed for extended cylinder bearing life. Standard equipment for the 18M3 includes a ripper and front counterweight.

The 18M3 features the Cat load sensing hydraulic system with advanced Proportional Priority Pressure Compensating electrohydraulic valves. The system provides precise implement control and continuously matches hydraulic flow and pressure to power demands for added fuel savings and reduced heat generation.

### **Operator environment**

The full color, touch-screen display allows monitoring machine performance, setting operating parameters (such as blade-lift modulation), and accessing service information for initial troubleshooting. The display shows Cat Grade Control Cross Slope readings, DEF (diesel exhaust fluid) level, and information pertinent to daily operation. The Advanced-Control

joysticks allow easy control of the Cat Grade Control Cross Slope or AccuGrade™ systems, and a keypad with lighted, one-touch buttons simplifies operation.

Hardware for Product Link™ Elite, the Cat advanced telematics system, is standard and provides technologies for improved fleet management via the VisionLink® online interface. New capabilities include global 3G-cellular-network and lower-latency satellite connections.

### **Safety and service**

The standard rearview camera system provides images on the new information display or on an optional LCD screen above the rearview mirror. Also standard are the speed-sensitive steering and a seat belt indicator, which alerts the operator that the belt is not fastened and records the incident as a fault code.

The optional enhanced-access platform provides ladders, walkways and handrails for a second access path to the engine compartment and cab, and an alternate configuration provides enhanced access to the engine compartment. Grab handles and a non-slip step provide improved access to the tandem walkways when platforms are not ordered. French-door-type panels on the engine enclosure allow easy access to service points, and two large LED lights illuminate the engine compartment. Ground-level engine shut-off and electrical-disconnect switches are standard. The 18M3 also uses a new modular cooling package, which facilitates removal and installation of components in the cooling system.

For more information, go to: [www.cat.com/18m3](http://www.cat.com/18m3)

### **Cat 18M3 Motor Grader Specifications**

Engine make/model	Cat C13 ACERT
Net power range, hp (kW)	304-357 (227-266)
Operating weight, lb. (kg)*	74,300 (33 700)
Moldboard width, ft. (m)	18 (5.5)
Transmission	Direct drive powershift
Gear ranges	8F/6R

\*Typically equipped

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