



ecreasing machine idle time is key to improving your fleet's fuel efficiency. Idle time cannot be eliminated because of warm up and shut down requirements, but it can be controlled and reduced. Seven sure-fire methods to reduce idle time:

- **1. Education** Reviewing fuel consumption data and fuel costs with employees helps educate them on idling's effect to equipment and overall fleet operation.
- **2. Limit warm up time** Equipment warm up time at the start of shifts varies by ambient conditions, but as rule of thumb warm up times can be limited to five minutes.
- **3. Five-minute idle rule** If a machine idles for more than five minutes, shut it down. Restarting equipment uses less fuel than idling for extended periods of time.
- **4. Limit cool down time** Machines should be idled when shifts end so that turbochargers and emission systems can cool and purge. Consult the operator's manual for the correct cool down procedure to avoid excess idling.

- **5. Idle management systems\*** Some equipment is equipped with "auto-idle" or "engine idle management" systems. These systems monitor equipment parameters and automatically reduce engine rpm to reduce idle fuel consumption to less than one gallon per hour.
- **6. Breaks and lunch** Don't idle machines during breaks and lunch periods. Some operators do this to keep the cab at temperature. Systems such as engine off cab heaters and coolers can reduce the "need" to idle over breaks.
- 7. Monitoring asset utilization Use telematics, such as Product Link<sup>TM</sup>, to monitor equipment use and set benchmarks to identify opportunities to reduce idling time.

Talk with experts at our dealership. Visit **www.cat.com/ en\_us/rethink-the-tank** to learn more ways to improve your fleet's fuel efficiency.

\* All features not available on every machine.







**DOZERS**Efficiency, economy and productivity



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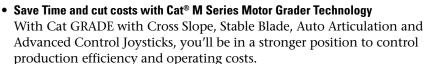
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#### CAT.COM/GOVERNMENTAL

**Cat.com/governmental** includes specifications for all machines. Download them or access our Request for Proposal (RFP) Builder. Check this out and more at **Cat.com/governmental**.



120M2 12M3 140M3 160M3 14M3



• Control Accuracy: Cat GRADE with Cross Slope
Get to grade faster and more accurately with this simple blade control system that requires no satellites or infrastructure. It automatically adjusts pitch on one side of the blade based on the operator's manual input. The result is quick, precise grading with less fuel, material and effort

• Control Efficiency: Stable Blade
When Stable Blade senses bounce, it automatically reduces engine speed
at 15 percent intervals until the machine stabilizes. Then it increases
rpm systematically until a pre-set level is reached, producing a smooth,
even grade

• Control Turns: Auto Articulation
Improve performance and maneuverability in tight spaces with Auto
Articulation, a simple technology that lets your M Series grader articulate
automatically as it's steered

• Control Efficiency: Advanced Control Joysticks
Equip your motor grader with Advanced Control Joysticks to boost
operator safety, efficiency and productivity. Easy to learn and easy to use,
these revolutionary controls let operators steer, shift, articulate, adjust the
blade, use automated grading systems and control auxiliary hydraulics—
without taking their hands off the joysticks







• Net Power: 68 hp – 127 hp

• Digging Depths: 14.3 ft – 21.4 ft

• Operating Weights: 24,251 lb – 27,115 lb

- Powerful, load-sensing hydraulic systems provide excellent response for improved hoe and loader productivity and more bucket breakout force
- All new operator station with machine controls at operator's fingertips and multiple adjustments to keep the operator comfortable and productive\*
- An economy mode, that not only saves fuel, but maintains machine performance\*
- Industry-leading versatility with an integrated toolcarrier that provides a hydraulic coupler and increased loader performance over the single tilt loader, as well as parallel lift\*
- Air-suspension seat and ergonomic controls provide a comfortable working environment
- Travel speeds up to 25 mph enable faster roading between jobsites

\* Features do not apply to the 450F model

415F2 416F2 420F2/420F2 IT 430F2/430F2 IT





## D6K2 D6N D6T D7E D8T

#### Medium | D6K2, D6N, D6T, D7E

- Flywheel Power: 130 hp 238 hp
- Operating Weights: 29,258 lb 57,441 lb
- The new D6T and D6N feature a new transmission with full Auto Shift that provides significant fuel efficiency and improved operator control
- Stable Blade Control complements operator input to automatically make instantaneous adjustments for smoother grading results with less effort
- Technologies like  $AccuGrade^{TM}$  and  $Product Link^{TM}$  help improve overall efficiency, save fuel and fluids and reduce wear and tear
- The D7E/D6N/D6T waste handler packages feature specialized guarding, striker bar, and seals to protect the machine from debris. The purpose-built heavy-duty final drive guarding helps prevent wire, cables, rope and debris from wrapping into the final drive seals
- Cat GRADE with Slope Assist is standard on D6K2/D6N/D6T and helps operators more easily achieve the required main-fall and slope orientation of the blade by automatically maintaining pre-established blade angles for the grade. The system saves time, improves finish quality and reduces operator input

#### Large | D8T, D9T

- Flywheel Power: 312 hp 439 hp
- Operating Weights: 86,900 lb 106,618 lb
- The D8T's standard Operator Presence detection system enables the machine to idle when the operator isn't seated, but locks out the powertrain and front implements to prevent unintentional movement
- GRADE with 3D is optional on both models. This feature is engineered specifically for Cat dozers and fully integrated at the factory. Thorough integration enables the system to work seamlessly with other features to optimize for full blade loads
- The D9T's major components are modular in design, so most can be removed and reinstalled without disturbing other systems
- D9T electronic options include: Automated Blade Assist, Autocarry™, Adaptive Load Select, Automatic Ripper Control and Cat Grade Control 3D





### Small/Medium | 926M, 930M, 938M, 950 GC, 950M, 962M, 966M, 966M XE

• Net Power: 153 hp – 302 hp

- Operating Weights: 28,360 lb 51,176 lb
- The new 950 GC offers proven Cat® reliability and performance at a lower acquisition cost
- Load-sensing hydraulics, higher dump clearance and standard rear-view camera are standard on the 950 GC
- M Series wheel loaders are powered by U.S. EPA Tier 4 Final ACERT engines
- Fuel efficiency on all M Series machines is best in class
- XE advanced power train technology, available on 966 and 972 models, delivers 25 percent lower fuel consumption compared to traditional power trains
- Cat Production Measurement and VisionLink® enable the access of machine data including bucket payload, fuel consumption, engine idle time and operating hours

#### Medium/Large | 972M, 972M XE, 980M, 982M, 986H, 988K

- Net Power: 299 hp 541 hp
- Operating Weights: 54,871 lb 112,574 lb
- Fuel efficiency in the 988K is improved through Cat Torque Converter with Lock-up Clutch, Positive Flow Control and Fuel Economy Mode
- 982M is a two-pass match with typical on-highway trucks for superior productivity in materials yard load-out
- The 972M Aggregate Package is a three-pass match with typical on-highway trucks

926M 930M 938M 950 GC 950M 962M 966M 966M XE 972M 972M XE 980M 982M 986H





226D 232D 236D 242D 246D 262D 272D2 2 XHP

- Gross Power: 67.1 hp 110 hp
- Rated Operating Capacities: 1,550 lb to 3,900 lb
- Electronic Torque Management system helps maximize performance, minimize fuel consumption
- Available high-back, heated, air-ride seats include seat-mounted, adjustable joystick controls
- Sealed and pressurized cabs provide a cleaner, quieter work environment
- Speed Sensitive Ride Control option assures an even smoother ride with better material retention
- Available high-flow, high-pressure hydraulic systems efficiently run even the most power-hungry attachments







- Gross Power: 67.1 hp 110 hp
- Rated Operating Capacities: 2,050 lb to 4,975 lb 50 percent tipping load
- Standard, fully independent torsion axle suspension and Speed Sensitive Ride Control option assure a smoother ride, better material retention
- High-flow, high-pressure hydraulic systems are available to maximize attachment performance
- Intelligent Leveling<sup>™</sup> system and optional positioning capabilities speed cycle times
- Industry-leading sealed and pressurized cab option provides a cleaner, quieter work environment
- Available high-back, heated, air-ride seats include seatmounted, adjustable joystick controls
- Bar-style rubber track tread option available for extra traction, especially when operating in snow

239D 299D2 249D 299D2 XHP 259D 279D 289D





257D 277D 287D 297D2 297D2 XHP

- Gross Power: 74.3 hp 110 hp
- Rated Operating Capacities: 2,800 lb to 5,060 lb 50 percent tipping load
- Standard, fully independent torsion axle suspension and Speed Sensitive Ride Control option assure a smoother ride, better material retention
- High-flow, high-pressure hydraulic systems are available to maximize attachment performance
- $\bullet$  Intelligent Leveling  $^{\text{TM}}$  system and optional positioning capabilities speed cycle times
- Industry-leading sealed and pressurized cab option provides a cleaner, quieter work environment
- Available high-back, heated, air-ride seats include seat-mounted, adjustable joystick controls







• Net Flywheel Power: 153 hp – 306 hp

• Operating Weights: 54,450 lb – 88,800 lb

• The 336F XE features the Cat Production Measurement system that enables operators to load trucks with just the right weight, while managers remotely monitor productivity

• Cat Grade Control Depth and Slope helps your agency achieve consistent grades and slopes with more precision and less effort in a wide range of applications

• Cat GRADE with ASSIST on the 323F provides the operator automatic grade protection and single stick grade lock to help operators optimize grading efficiency and maximize productivity

• Product Link<sup>TM</sup> provides accurate, timely and useful equipment information to improve efficiency and reduce operating costs

• You can reach most routine maintenance items like fuel and oil filters, fluid traps, and grease points from the safety and convenience of ground level

• Compact Radius machines available with EPA Tier 4 final engines in three size classes 315F, 325F, 335F

 311F LRR
 320F

 313F GC
 323F

 313F
 325F

 315F
 335F

 316F
 336F

 318F
 336F XE





M314F M315F M316F M317F M318F M320F M322F

- Net Power: 141 hp 169 hp
- The F Series includes quick coupler lines and circuits to enable quick attachment changes from the safety of the cab
- To reduce operator fatigue, F Series machines feature an automatic system that locks the axle-oscillation function and sets the service brakes to prepare for digging
- The versatility and mobility of wheeled excavators enable your agency to complete jobs, in less time, using fewer machines
- With a Tool Control System, you can pre-program hydraulic flow and pressure for up to 10 different attachments
- Standard rearview and sideview cameras provide a clear field of view of the machine's rear and sides
- The compact radius of the new M315F and M317F increases fleet versatility by enabling tight-quarter and restricted radius projects such as road construction and work on small jobsites





#### Material Handlers | MH3022, MH3024

• Maximum power: 174 hp

• Operating Weights: 47,399 lb - 59,525 lb

- Increased strength, with continuous top and side-plate construction throughout boom and stick
- Auto-reversing fan can be equipped with a industrial / waste handling
  package that includes: pre cleaner, smaller ventilation openings to limit
  debris intake, continuous front seal, and auto reversing fan that purges
  debris at adjustable intervals. screen to prevent clogging of the radiator
- Increased visibility, with skylight, rear and side cameras monitor and spacesaving joystick steering

Medium Wheel Loaders | 926M, 930M, 938M, 950M, 962M, 966M, 966M XE

• Net Power: 188 hp - 298 hp

- Operating Weights: 35,104 lb 51,176 lb
- M Series machines feature deep system integration, which reduces emissions and improves performance and fuel economy
- CAT Flexport solid tires to decrease downtime and increase productivity
- 3 specially designed waste buckets for different waste applications
- Product Link<sup>TM</sup> and the online application, VisionLink<sup>®</sup>, enable your agency to monitor real-time machine data to improve machine health and fleet management
- Waste handling package includes: heavy duty guarding for the application that is designed and fit at the factory, special radiators, reversing fans, engine and cab pre- cleaners, and more, all improve up-time, reliability and operator comfort

MH302 MH302 926M 930M 938M 950M

962M 966M 966M XE







D6N D6T D7E D8T 816K 826K 836K 621K 623K 627K

#### **Dozers | D6N, D6T, D7E, D8T**

- Flywheel Power: 207 hp 312 hp
- Operating Weights: 46,263 lb 86,900 lb
- Waste handler packages feature heavy duty guarding, steps, handrails, window guards, striker bars, engine / compartment seals that protect the machine from debris, reversing fans, wider fin spaced radiators for easier purging of dirt / debris, engine pre cleaners, plus cab filtration and pressurization
- Landfill blades and center-hole track shoes optimize waste handler performance
- Insulated Clean Emissions Module and thermal shields provide a high level of thermal protection

#### Landfill Compactors | 815K, 816K, 826K, 836K

- Gross Power: 284 hp 562 hp
- Operating Weights: 52,364 lb 123,319 lb
- Comprehensive guarding includes the Cat Axle Guard system, which protects final drives and wheel rims. The area is smooth to minimize snagging materials and widens the axle diameter to help prevent wrapping
- Cat wheels and tips maximize performance and compaction. Choose from chopper wheels, smooth steel wheels and step tips
- A variety of blades—Straight Blades, Semi U-Blades and U-Blades—help meet diverse cover material spreading requirements

#### Scrapers | 621K, 623K, 627K

- 407 hp, (+290 hp on tandem models)
- Scraper Capacity: 23 24 yd<sup>3</sup> (heaped)
- The K Series steering system requires significantly less steering effort, which reduces operator fatigue and improves efficiency
- Ground Speed Control enables the operator to set the desired top speed and the machine will find the gear that works best for the engine and transmission. This results in a lower engine load factor and reduced fuel burn

#### Articulated Trucks | 725C2, 730C2, 730 C2 EJ, 735C, 740C EJ, 745C

- Net Power: 314 hp 496 hp
- Rated Payload: 26 tons 45.2 tons
- Articulated trucks are well-suited for placing cover soil. The 730 C2 EJ and 740C EJ feature ejector bodies, which provide clean load ejection on-the-go
- Three-point front suspension provides a smooth ride, a great help in rough conditions





# APPLICATION-MATCHED ATTACHMENTS

Equipment budgets are a fact of life. You simply must make the most of your agency's fleet. Cat® attachments enable you to stretch your fleet capabilities to meet your agency's wide array of responsibilities—from road maintenance, waste collection and disposal, to installing irrigation lines and snow removal—and help you make the most of your equipment budget.

#### **Cat Attachments Include:**

- Augers
- Backhoes
- Bale Handlers
- Blades
- Brooms
- Brushcutters
- Buckets
- Cold Planers
- Compactors
- Couplers
- Cutters
- Fork-Mounted Work Platforms
- Forks
- Grapples
- Hammers
- Lifting Hooks
- Material Handling Arms

- Mulchers
- Multi Processors
- Plows
- Pulverizers
- Rakes
- Rippers
- Scarifiers
- Shears
- Snow Blowers
- Snow Plows and Wings
- Snow Pushers
- Stump Grinders
- Thumbs
- Tillers
- Trenchers
- Truss Booms
- Wheel Saws
- Winches





#### **SO MUCH MORE**

Machines and attachments help your agency to be successful, but Caterpillar and our dealership provide so much more. In waste applications, qualified waste machine/application trainers help improve operator skills, and experienced personnel are available to perform site and machine assessments, machine right-sizing, and machine and application best practices training. Visit **Safety. Cat.com** for help in a wide variety of applications.

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## FLEET MANAGEMENT MADE SIMPLE

Fleet management is one of every agency's top goals.  $Cat^{\otimes}$  Product  $Link^{TM}$  is an easy, effective way to improve fleet management. The telemetric system provides accurate, timely, and useful information about the location, utilization, and condition of your machines.

Product Link transmits fleet information via cell and satellite. The corresponding web-based application, VisionLink®, enables customized health and utilization reports delivered to your computer, tablet and/or smart phone.

Visit our dealership or **Cat.com/governmental** to learn how to use Product Link and VisionLink to improve your agency's fleet management.







## CAT® FINANCIAL PROVIDES SPECIAL OPTIONS FOR **GOVERNMENTAL BUYERS**

Flexible terms, up to 100 percent financing for qualified agencies, are available from Cat<sup>®</sup> Financial for all types of state and local governmental agencies.

Financing options available to agencies include: non-appropriations clauses, insurance services, low interest rates, and tax-exempt options when financing new or used equipment.

Or consider a governmental lease or tax lease, either of which can be cancelled without penalty on the last day of an appropriations period if funding isn't approved for the following year.

Contact our dealership, or visit Cat.com/governmental, to learn more about the financing options available from Cat Financial to help reach your agency's budgetary objectives.