# CAT® DOZER TECHNOLOGIES



With tight deadlines and even tighter budgets, every pass matters. Cat® dozer technologies help you get to grade faster and with greater accuracy. Save time, materials, and rework from first pass to finish grade. Help operators of all skill levels work more efficiently and productively – and with less fatigue – all shift long.

# CAT DOZER TECHNOLOGIES AVAILABLE FOR SELECT MODELS



#### **BUILT-IN PROBLEM SOLVERS**

Cat technologies are integrated into your dozer at the factory for optimal performance. Easily upgrade later as your work demands it.

- + A broad range of Assist, Grade, and Command technology choices help boost productivity so you get the most from your machine.
- + Automated functions help newer operators achieve greater efficiency with fewer inputs in a shorter amount of time.
- + Seasoned operators can enjoy reduced effort and less fatigue, along with faster, more accurate results.



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**CHOOSE THE RIGHT LEVEL OF TECHNOLOGY** TO FIT YOUR BUSINESS AND BUDGET. ORDER FROM THE FACTORY OR UPGRADE LATER.



## **CAT ASSIST** WITH ATTACHMENT-READY OPTION (ARO)

Cat Assist with ARO equips your Cat dozer with technology directly from the factory, like Slope Assist and Steer Assist, that helps operators of varied skill levels get the job done faster and more easily.

## **CAT GRADE 3D** WITH ASSIST

Cat Grade 3D with Assist package gives you all Assist features, plus Steer Assist 3D. Additional Grade hardware and software subscription are required to use Cat Grade with 3D. To help minimize initial investment on select models, order the Grade 3D Ready hardware option from the factory and activate software later as your work demands it. Consult your Cat dealer for more information.

# **CAT** COMMAND

Remote control-ready cab enables dealer installation of the Cat Command system. Available on select models. Consult your Cat dealer for more information.

# CAT GRADE WITH SLOPE ASSIST<sup>TM</sup>



### NO GPS SIGNAL? NO PROBLEM.

Slope Assist works alongside 3D GPS systems in areas without GPS/GNSS signal. No base station, laser, or additional hardware is required.

## FINISH JOBS FASTER

Get to design plan faster to save time and reduce the cost of rework, labor, and materials. Slope Assist helps operators of varied experience levels work faster and with more accuracy.

# REDUCE OPERATOR INPUTS

Fewer inputs mean easier operation – easily maintain blade angles for better surface quality. Switch between manual and automatic modes with the push of a button.

#### AUTOMATED STEERING FOR EASIER OPERATION

Help increase productivity with less effort, resulting in greater efficiency and reduced operator fatigue.



# AUTOMATED STEERING CAT STEER ASSIST

- + Cat Steer Assist automates multiple steering functions to help make operation easier.
- + Reduce Steering Inputs by up to 75%\*
- Steer Assist helps reduce operator fatigue for greater daily efficiency. Use it to automatically maintain straight travel with lighter loads on flat ground and side slopes.
- + Use blade tilt steering to push heavy loads more efficiently than track steering.
- Steer Assist is included in the Assist with ARO package.
  Compatible with all D5 and D7 dozers, plus D6/D6 XE models with serial numbers 1000+.
- \* Cat Assist Advantage Study, August 2022, by Caterpillar at Peoria Proving Grounds

# PROVEN ADVANTAGE WORK HARDER EASIER

Cat Assist and Grade technologies work in the background to help dozer operators of varied skill levels and are especially beneficial to less experienced operators. To demonstrate just how much these built-in technology features help, Caterpillar put them to the test. Two novice operators and two expert operators took on three challenges. Each operator completed three runs of each task – one in manual, one using Assist technology features, and one using Assist plus Cat Grade with 3D. The team measured productivity<sup>1</sup>, efficiency<sup>2</sup>, completion time, final surface quality and operator inputs.

## **SLOT DOZING**

**Productivity and efficiency** – novice operators went from 9% lower productivity and efficiency than the experts in manual to matching the experts when using Assist.



# TRUCK DUMP SPREADING/ GRADING IN SAND

**Completion time** – novice operators took 49% more time than the experts in manual and narrowed the gap to 17% using Assist and to 9% by adding Grade.

**Blade inputs** – novice operator blade inputs were reduced 45% with Assist, and 55% with Assist plus Grade. Expert operator blade inputs were reduced 32% with Assist, and 53% with Assist plus Grade.

**Surface quality** – novice operator surface quality improved up to 51% using technology while expert operator surface quality improved up to 27% using technology. Novice operators using technology produced similar surface quality to the expert operators in manual.

# SIDE SLOPE/STEER ASSIST

**Steering inputs** – novice and expert operator steering inputs reduced by 75% in forward and by 67% combining forward and reverse.

<sup>1</sup> Material moved per hour

<sup>2</sup> Material moved per unit of fuel/diesel exhaust fluid (DEF) Study conducted by Caterpillar, August 2022

# MORE ASSIST TECHNOLOGY

#### **BLADE LOAD MONITOR**

Blade Load Monitor provides visual feedback to help operators achieve a fully loaded blade with every push. This helps to improve grading productivity and efficiency.

#### **TRACTION CONTROL**

Traction Control reduces track slippage to help prevent stalling under maximum load conditions. It delivers more consistent grades, reduced operator fatigue and improved undercarriage life.

#### **STABLE BLADE**

Stable Blade works seamlessly with operator inputs to help produce a smoother surface when operating manually.

#### **AUTOCARRY**<sup>TM</sup>

AutoCarry<sup>™</sup> automatically controls blade lift to reduce operator fatigue. This function maintains desired blade load while limiting track slip and improving load consistency.



# GET TO DESIGN PLAN FASTER CAT GRADE WITH 3D m

## MORE WORK. LESS TIME.

Cat Grade with 3D is a grade control system that helps operators improve grading efficiency, accuracy, and productivity using automated blade movements. Included in the Grade 3D with Assist package.

# MAXIMIZE Blade Loads

Grade with 3D uses a GPS/GNSS signal to automatically adjust blade movements as you follow the design, effectively reducing operator inputs.

# FULLY INTEGRATED

Cat Grade Connectivity uses machine telematics to connect to Virtual Reference Station networks without the need for additional hardware. Grade with 3D is also compatible with radios and base stations from Trimble, Topcon, and Leica. Associated subscriptions required.



# PRECISE STEERING FOR MORE COMPLEX DESIGNS CAT STEER ASSIST 3D



# ADVANCED GUIDANCE

Cat Steer Assist 3D provides advanced guidance capabilities that work in tandem with Cat Grade with 3D (required). Included in Grade 3D with Assist package.

# SMARTER DOZING

This smart technology automatically follows guidance lines from site design plans and infield designs under any load.

# GREATER ACCURACY

Use Steer Assist 3D to more accurately cut or spread material to an edge, toe, crown, etc. Reduce the number of passes with precise pass-to-pass overlap.

# BOOST OPERATOR SAFETY CAT COMMAND

Cat Command is a sophisticated remote-control system that takes operators off the machine and away from potential dangers when working with hazardous materials or in unsafe conditions. Plus, it maintains the option to utilize other advanced control technologies like Grade and Assist features for dozers.



# INCREASED COMFORT

Once operators become familiar with the feel of the remote-control system, they can operate as efficiently, accurately, and confidently as in the cab. In fact, because they experience dramatically less noise and no vibration, operators can work efficiently for longer periods of time with less fatigue.

# FULL INTEGRATION

Most components that make Command for Dozing possible are already integrated into next generation machines. Getting the operator started is fast and easy with only a few additional parts needed. Contact your dealer for more information.

# TWO SOLUTIONS

The portable Cat Command Console allows the user to work outside of the cab while remaining on site and in direct visual contact with the machine. The dedicated Cat Command Station allows for working remotely in a seated indoor "virtual cab" located on site or many miles away.

Note: Cat Command is not available in all regions or for all models. Please consult with your Cat dealer for machine compatibility and availability in your area.

# TECHNOLOGY PACKAGE AVAILABILITY

Technology packages are available from the factory on select dozer models. Consult your Cat dealer for available technologies and applicable models and/or serial number ranges.

Attachment-Ready Option (ARO) allows machine to easily be upgraded to Cat Grade with 3D integrated grade control systems or Accugrade GNSS, laser, or UTS blade mounted Grade Control Systems. ARO includes IMU sensors, EC520 controller, wiring, and mounting brackets. Upgrading to Cat Grade with 3D after build requires grade display, GNSS receivers and antennas, data corrections solutions, SITECH provided Grade license files, and Caterpillar-provided software-enabled attachment (SEA).

**Assist with ARO Package:** Includes Attachment Ready Option (ARO), Slope Assist, Steer Assist, Stable Blade, Blade Load Monitor, Traction Control, AutoCarry.

**Grade 3D with Assist Package**: Includes full-color 10-inch (254 mm) touchscreen grade display, Steer Assist 3D, Grade receivers and antennas, Grade Software Enabled Attachment (SEA), Assist with ARO package featuring:

- + Product Link<sup>™</sup>, Dual Cellular/Satellite
- + Grade Connectivity
- + Machine Security Bluetooth®
- + Cat Command for Dozing

# AVAILABLE TECHNOLOGY FEATURES

- + Slope Indicate
- + Product Link, Cellular
- + Grade Control Ready Cab
- + Remote Control Ready
- + Remote Flash/Remote Troubleshoot
- + Operator ID
- + Machine Security Passcode
- + Capability with radios and base stations from Trimble, Topcon, and Leica
- + Capability to install 3D grade systems from Trimble, Topcon, and Leica

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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Based on the Labor, Safety and Health Laws in Japan, employers of small construction equipment are required to provide specific training for all operators on machines with machine weight less than 3 metric tons. For machines greater than 3 metric tons, operator needs to obtain operator license certification from a government-approved registered training school.

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