2020

# CAT® ATTACHMENTS @WORK

**PREMIER ISSUE**




CAT®
LET'S DO THE WORK.™

CAT.COM/**ATTACHMENTS**

# CAT SMART ATTACHMENTS MAKE THEIR DEBUT

**Caterpillar is excited and proud to present Smart Attachments for its D3-series Skid Steer Loaders and Compact Track Loaders machines. These Smart Attachments enable plug and play attachment recognition, special display screens and tailored machine controls. You can switch machine control modes, easily reposition your machine or change attachments with the click of a button. Best of all, this industry-first smart technology is standard on the D3-series machines. Look inside the Cat® Attachments @ Work Magazine for more details.**




CAT.COM/Attachments

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**CAT ATTACHMENTS @ WORK**

2020: Issue 1

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# AN ENTIRE FLEET **IN ONE MACHINE**



Hammers



Augers



Smart Backhoes



Bale Grabs



Brushcutters



Cold Planers



Compactors



Couplers



Log and Lumber Forks



Millyard Forks



Semi Millyard Forks



Sorting Grapple Forks



Industrial Grapple Rakes



Landscape Rakes



Power Box Rakes



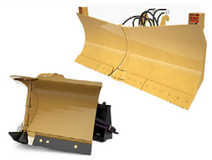
Tillers



Snow Blowers



Snow Plows



Multi V-Plows



Snow Pushes



Flail Mowers



Trenchers



Truss Booms



Adapters





Bale Spears



Blades



Box Blades



Smart Grader Blades



Tilt Rotator Systems



Construction Forks



Grapple Forks



Pallet Forks



Pipe & Pole Forks



Utility Forks



Excavator Mulchers



Skid Steer Mulchers



Rippers



Saws



Shears



Silage Defacers



Snow Wings



Stump Grinders



Thumbs



Material Handling Arms



Brooms

# AN ENTIRE FLEET **IN ONE MACHINE**

## Backhoe Loaders



General Purpose



Multi-Purpose



Side Dump



Standard Duty



Heavy Duty



Heavy Duty Rock



Soil Excavation



High Capacity

## Backhoe Loaders (cont.)



Coral



Grading



Cribbing



Ditch Cleaning

## Skid Steer/Compact Track Loaders



General Purpose



Multi-Purpose



Low Profile



Light Material

## Skid Steer/Compact Track Loaders (cont.)



Industrial Performance



Material Handling



Utility



Utility Grapple



Skeleton



Mixing



Industrial Grapple



Side Discharge

## Mini Hydraulic Excavators



Digging



Heavy Duty



Heavy Duty Capacity



Heavy Duty Rock

## Compact Wheel Loaders



Ditch Cleaning



Tilting Ditch Cleaning



Grading



General Purpose

## Compact Wheel Loaders (cont.)



GP - Performance



Multi-Purpose



Flat Floor-Performance



Light Material

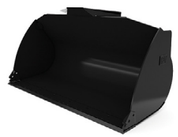
## Small Wheel Loaders



LM - Performance



Industrial Grapple



GP - Performance



Flat Floor-Performance

## Small Wheel Loaders (cont.)



Light Material



Sand and Gravel



High Dump



Multi-Purpose



Grading



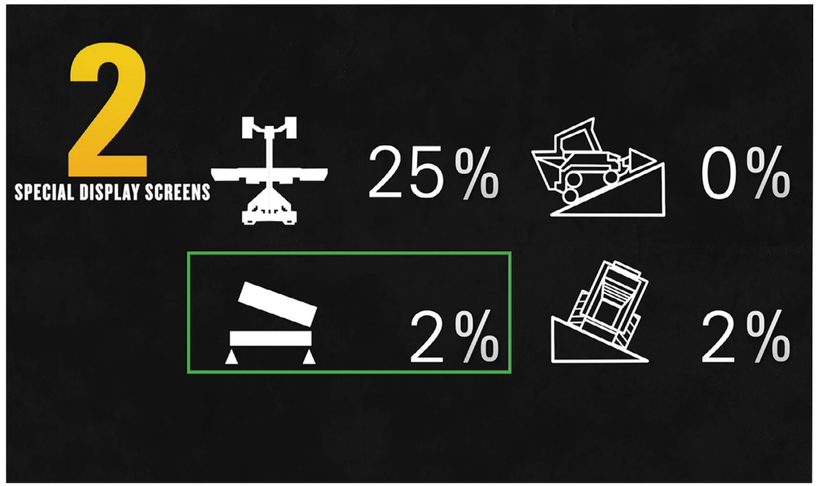
Side Dump

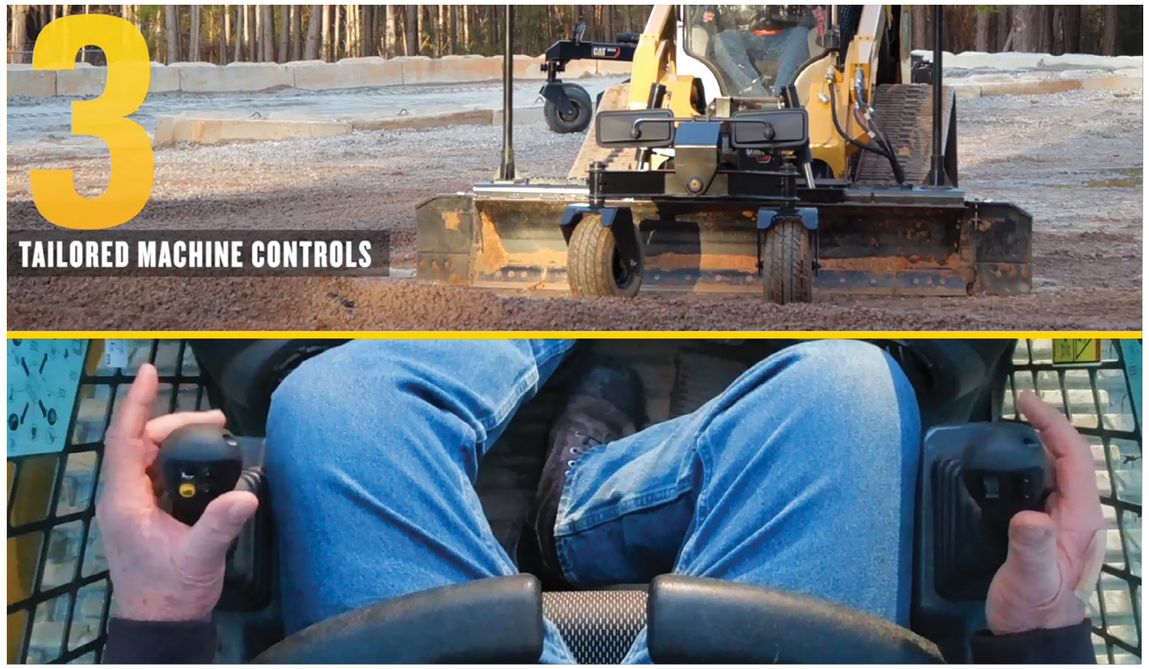
# WHAT MAKES AN ATTACHMENT SMART?




Attachment recognition: The host machine recognizes a Smart Attachment is connected to a Cat Skid Steer Loader / Compact Track Loader (SSL/CTL) D3 Series machine.

Unlock special machine displays: Provides operator real time machine and attachment position. Provides interface with the machine to set and adjust control of the attachment.




As a Smart Attachment, when the operator is ready, the existing machine joystick controls are re-purposed to perform functions specific for the attachment.

# CAT® SMART BH130 BACKHOE



## KEEP THE DOOR

Operate the BH130 fully from inside of the cab - no need to remove the door or sit outside. Operator comfort and safety is key.















## BH130 COMPATIBLE ATTACHMENTS

The BH130 Backhoe Attachment is compatible with several of the Cat 3 Ton Mini Hydraulic Excavator tools, including hammers, vibratory plate compactors, buckets, augers, compaction wheels, thumbs, and more.



## WORK NEXT TO WALLS

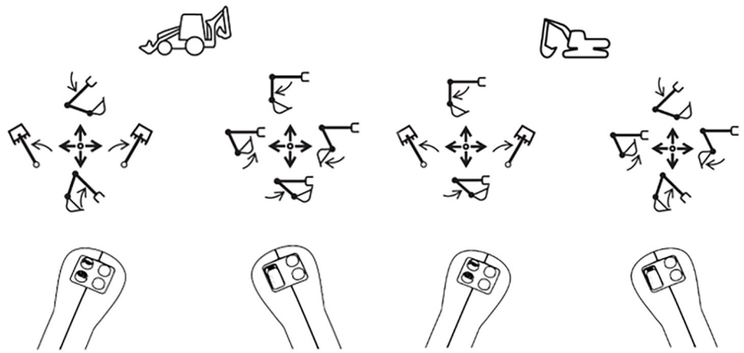
Tight spaces are no problem with the standard hydraulic side-shift feature on the BH130.



## TRANSPORT SPEED

Get from one end of the job site to another in no time - stabilizers up, switch to mahine control mode, and you are on your way.



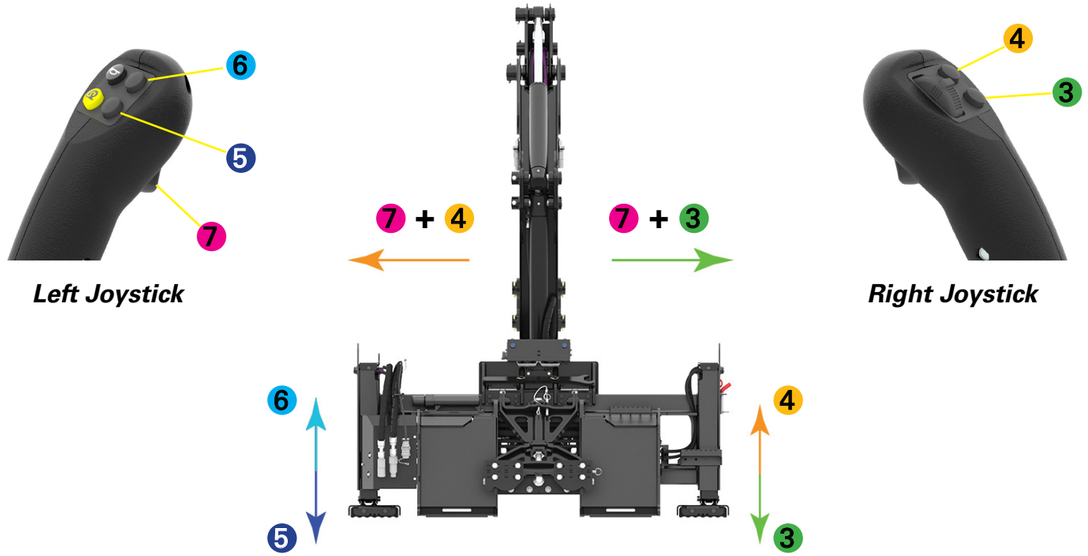


## CHOOSE YOUR CONTROL PATTERN.

Operator can easily switch the attachments control pattern to Backhoe (SAE) or Excavator (ISO) style pattern.

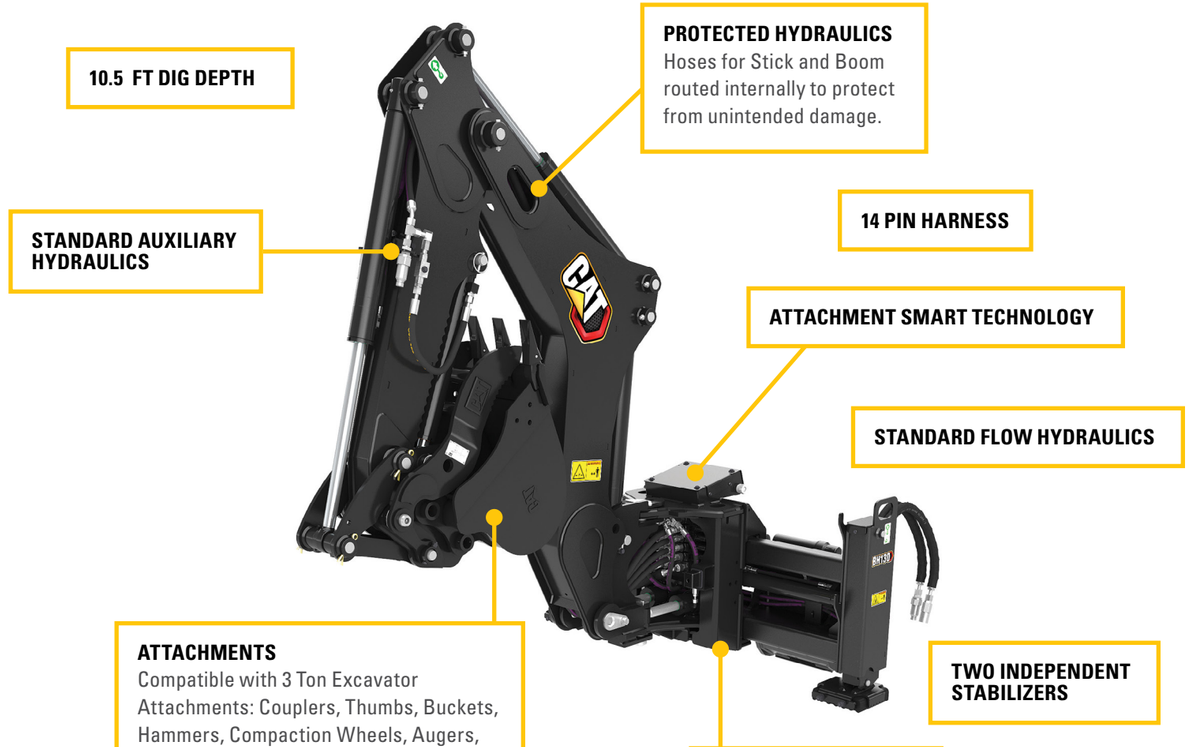


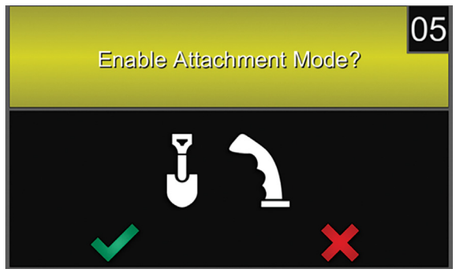
## BH130 Controls



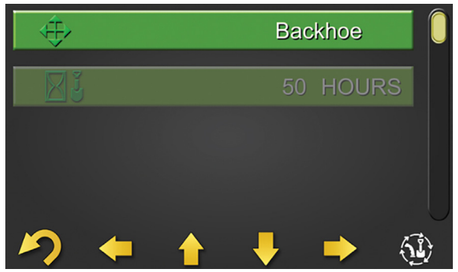

*Left Joystick*

*Right Joystick*




Once you enable Attachment Mode, you can choose your control pattern. All functions for the BH130 can now be controlled through the machines existing joysticks.




| SMART BH130 BACKHOE SPECIFICATIONS | | |
|---|---|---|
| Max Digging Depth - ft (m) | 10.5 | (3.2) |
| Operating Weight - lbs (kg) | 2325 | (1055) |
| Overall Length - in (mm) | 87 | (2210) |
| Overall Operating Height - in (mm) | 147 | (3723) |
| Transport Width - in (mm) | 80 | (2041) |
| Loading Height - in (mm) | 97 | (2470) |
| Loading Reach - in (mm) | 74 | (1869) |
| Total Side Shift Travel - in (mm) | 33 | (838) |
| Stabilizer Spread - in (mm) | 71 | (1813) |
| Transport Height - in (mm) | 101 | (2562) |
| Required Hydraulics | Standard Flow | |
| Smart | Yes | |
| Compatibility | D3 Only | |

# CAT® SMART DOZER BLADES



Cat® Smart Dozer Blades are for cutting, moving and grading dirt, gravel, sand and virtually any other material used as a base.

These dozer blades feature integrated joystick controls for intuitive operation, faster completion, and more accurate results. The combination of these features along with the support of the Cat Dealer Network makes the Smart Dozer attachment industry leading.

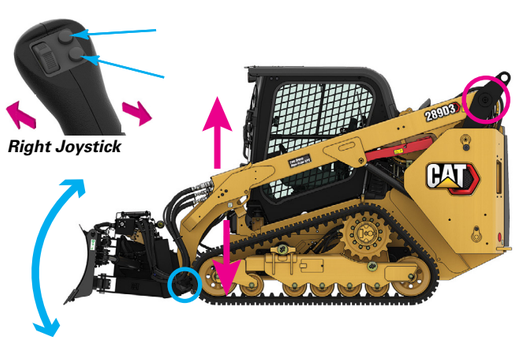
**Modes / Patterns** - The Smart Dozer unlocks the host D3 machines two modes: Machine Control Mode and Attachment Control Mode.

**Machine Control Mode** - Standard skid steer loader operator mode. The left joystick controls the directional travel of the machine. The right joystick controls the lift arms up/down and tilt arms rack back/dump.

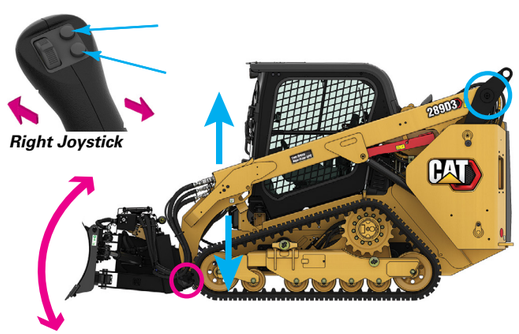
**SMART Dozer Blade Operation** - In Attachment control mode, the right joystick operates the attachment.

- When the operator moves the right joystick left or right the blade will tilt left or right respectively.
- The thumb roller angles the blade. When the thumb roller is rolled forward, the blade angles left, and when the roller is rolled backward, blade angles right
- Depending on operator preference, two options are available to position the vertical position dozer blade cutting edge.

**Attachment Control Mode - Lift Mode**

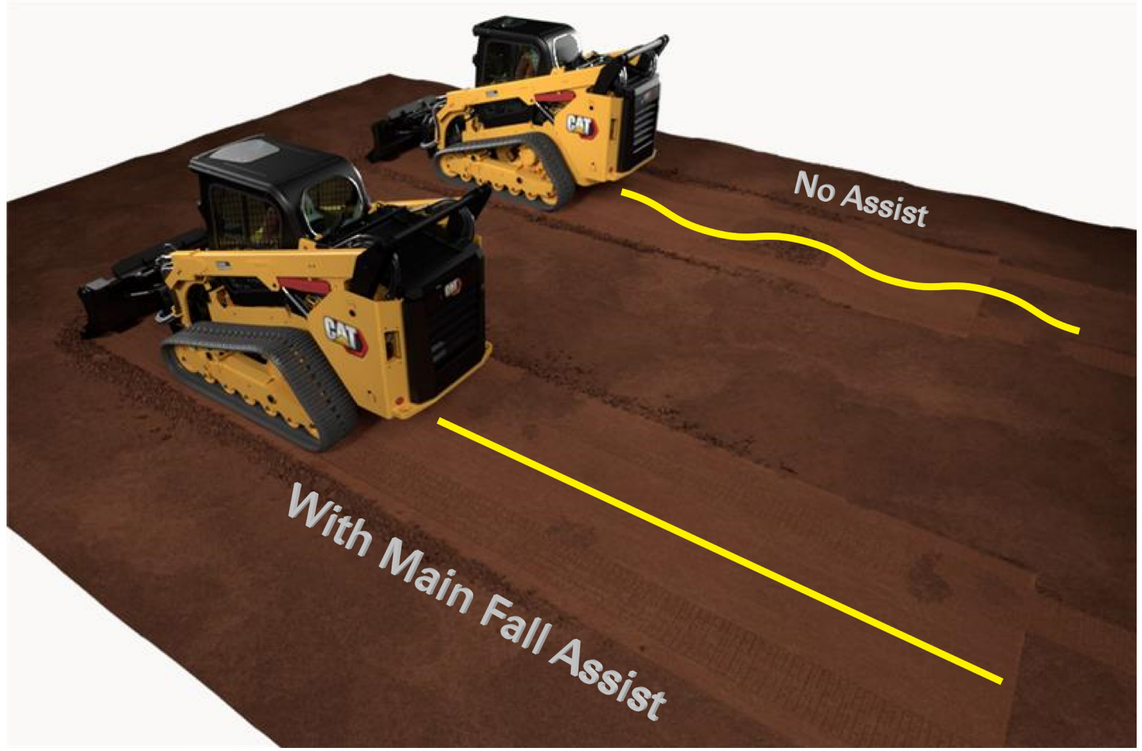



**Attachment Control Mode - Tilt Mode**




## Mainfall Assist

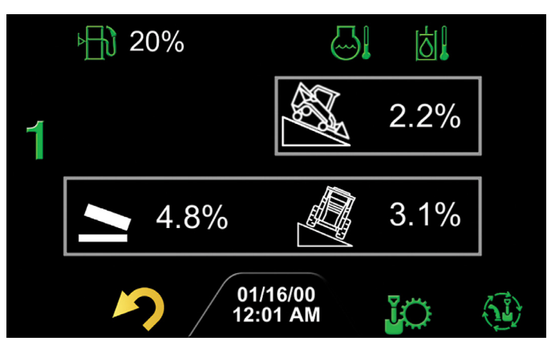
Smart feature to create smoother grade with less passes. Feature assists operator to eliminate the washboard appearance (wave pattern after dozer blade pass). Operator and Mainfall Assist work together with material in front of the blade.




**Blade Slope Assist** - Smart feature to create flat slope with fewer passes. Feature assists operator to maintain consistent slope for flat pass with material in front of the blade.

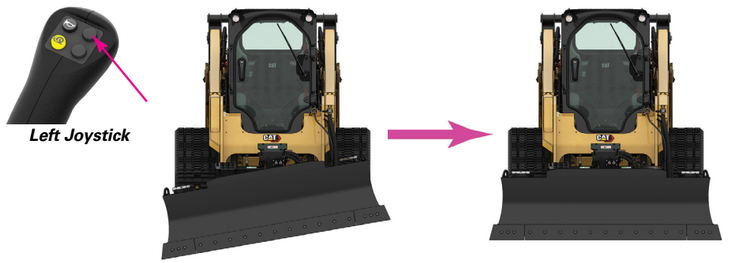



**Grade Indicate -** The special display screen for the Smart Dozer provides the operator with feedback on the orientation of the machine and attachment. The operator will see machine main fall (fore and aft), machine slope and blade slope.

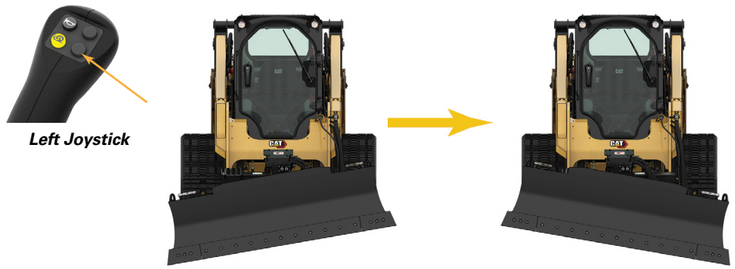


# SMART **DOZER BLADE**



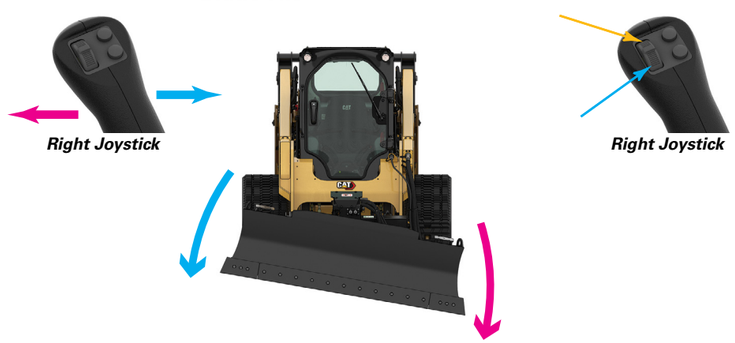



**Return to Zero** – (Button 6) Press and release this button to return to a blade slope of zero. Operator Assist must be active to use this feature.



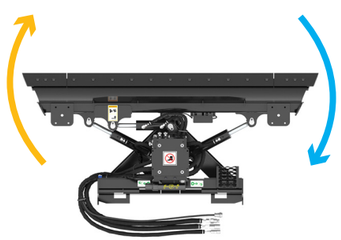

**Memory / Recall / Mirror** - (Button 5) This function can be used to program and recall a set blade slope position. Press and hold the memory button for 1 or more seconds to program the new position. Afterwards, the button can be presses and released to return to the set position. The button can be pressed twice quickly to mirror the blade slope of the memory position. Operator Assist must be active to use this feature.

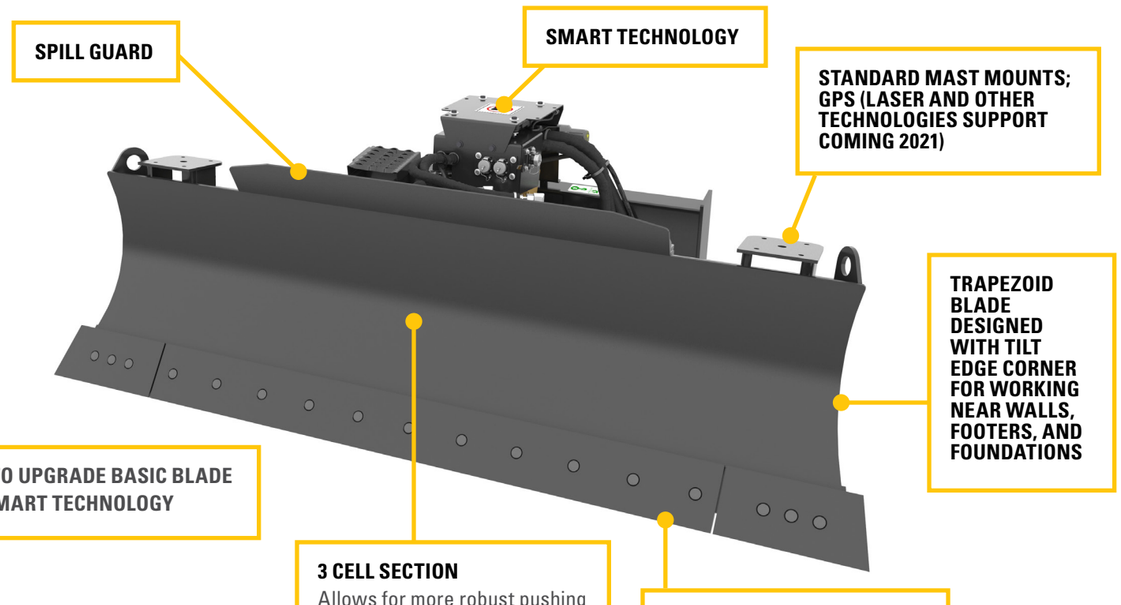
## Blade Tilt




## Blade Angle





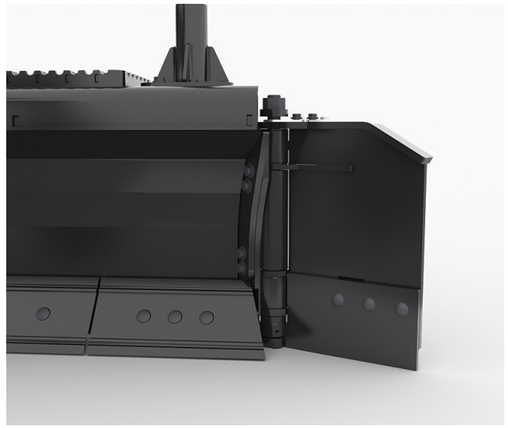



| SMART DOZER BLADE SPECIFICATIONS | |
|---|---|
| Overall Width - in (mm) | 92 (2337) |
| Width - Fully Angled - in (mm) | 81 (2049) |
| Length - in (mm) | 41 (1028) |
| Weight - lb (kg) | 1164 (528) |
| Required Hydraulics | High Flow XPS / XE |
| Smart | Yes |
| Compatibility | D3 CTL Only |

# CAT® SMART GRADER BLADES

## GB120 AND GB124





### INDUSTRY EXCLUSIVE

Cat® Smart Grader Blade attachments are for cutting, moving and grading dirt, gravel, sand and virtually any other material used as a base. The Smart grader blade brings cross slope to SSL/CTL platforms. The combination of these features along with the support of the Caterpillar Dealer Network makes this attachment Industry leading due to the industry first features.

### OPTIONAL SIDE WINGS

With the optional wings, you can greater control over the blade edge, similar features to side shift. It also allows you to carry material similar to a box blade.





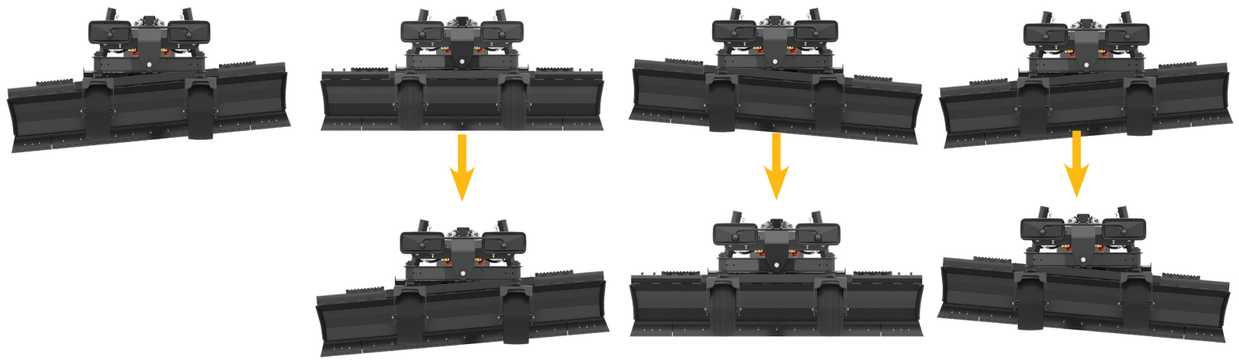




### GRADE CONTROL READY

The Smart Grader Blade is Grade Control Ready for External Reference: Cat Grade, Earthworks (EW), EW GO!. Single and Dual Laser, GNSS, Total Station, and Sonic Tracer are plug and play ready. Laser masts are included as standard.

| **Memory** | **Recall** | **Return to Zero** | **Mirror** |
|---|---|---|---|
| Set a blade slope position | Return to memory position | Return blade to slope of zero | Mirror blade slope position |






## ATTACHMENT MODE

| Direction | Function |
|---|---|
| **FORWARD** and **BACKWARD** | Joystick movement FORWARD or BACKWARD raises and lowers the blade |
| **LEFT** and **RIGHT** | Joystick movement LEFT or RIGHT tilts the blade up Left or Right |
| **THUMB WHEEL** | THUMB WHEEL rotates the blade left and right |
| **RIGHT TRIGGER** | RIGHT TRIGGER actives blade assist |
| Attachment Buttons on Left and Right Joystick | Activates Memory, Recall, Return to Zero and Mirror |



## Wing Rotation

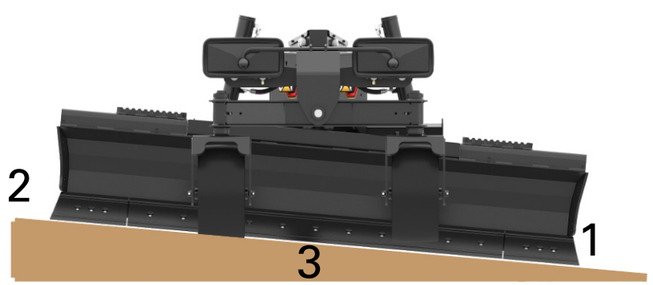


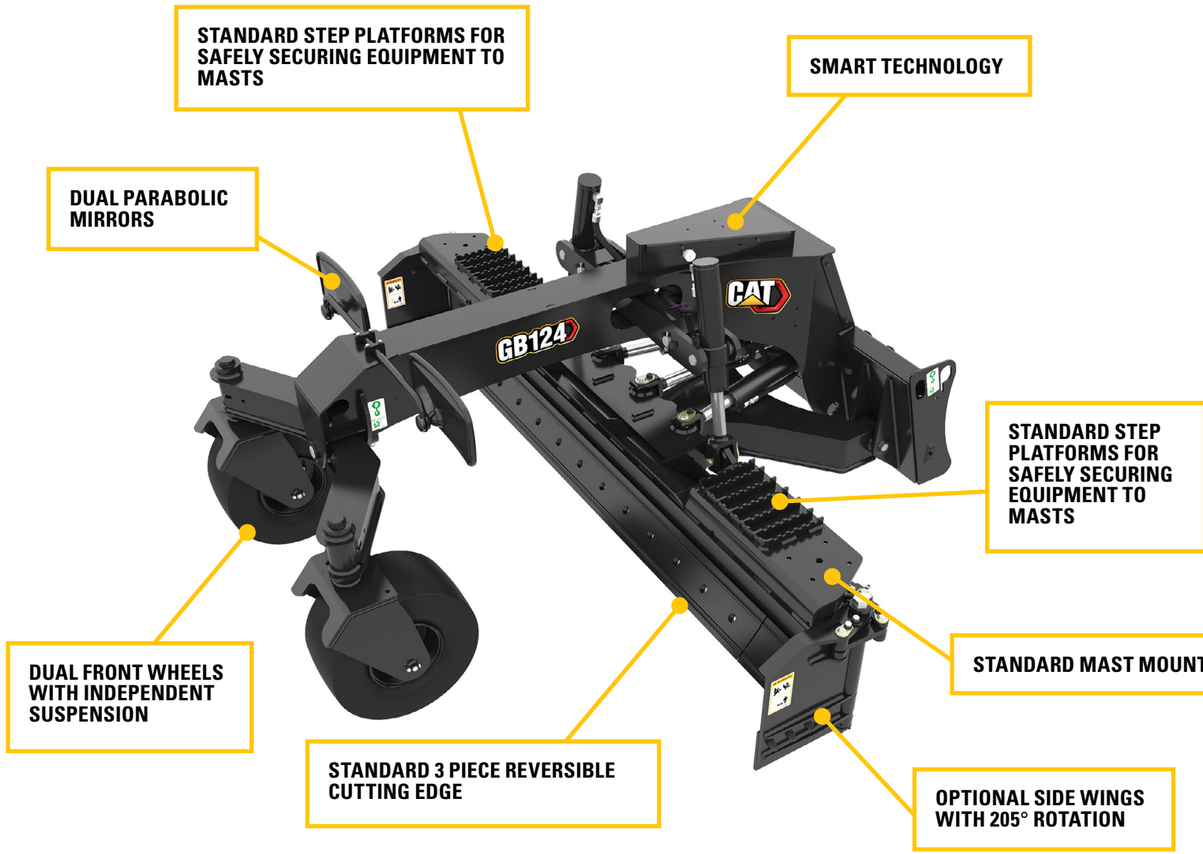





### CROSS SLOPE BLADE ASSIST

Grader Blade Assist maintains angle on Slopes. The operator sets the angle (either 1 or 2) and adjusts that side, while the Grader Blade monitor and maintains the opposite side of the blade. Or the operator can focus on the center of the blade (3) and the Grader Blade maintains (1) and (2) [TANDEM]. Assist is can be used with or without external reference.




| SMART GRADER BLADES SPECIFICATIONS | | |
|---|---|---|
| **MODEL** | GB120 | GB124 |
| Compatibility | D3 Only | D3 Only |
| Blade Width w/ Wings Extended - in (mm) | 103 (2604) | 121 (3061) |
| Blade Width w/ Wings Forward - in (mm) | 85 (2148) | 103 (2605) |
| Blade Width w/o Wings - in (mm) | 78 (1981) | 96 (2438) |
| Blade Width Fully Angled w/ Wings Extended - in (mm) | 90 (2292) | 106 (2688) |
| Blade Width Fully Angled w/o Wings - in (mm) | 69 (1747) | 84 (2143) |
| Wing Rotation - deg | 205° | 205° |
| Maximum Blade Angle (left or right) - deg | ± 30° | ± 30° |
| Tilt Angle Range (up or down) - deg | ± 15° | ± 15° |
| Max Cut Depth - in (mm) | 4 (102) | 4 (102) |
| Weight - lb (kg) | 1971 (894) | 2059 (934) |
| Smart | Yes | Yes |

# MAKING THE GRADE

**BOB SHOOP**
Caterpillar Expert Operator



Bob has been operating construction and mining equipment over 45 years. He has been with Caterpillar 23 years. Bob currently owns several pieces of Cat equipment and Work Tool attachments.

## When to use a Box Blade, Dozer Blade, or Grader Blade with a Compact Track Loader

**In** the construction industry there are many challenges and options for the consumer to consider when trying to determine what will work best for their business. Cat's Compact Track Loaders and Skid Steer Loaders have great versatility. They are multi-purposed and designed to attach many work tools, giving the operator a wide choice of options to save time, be more efficient and productive. From simple buckets and forks to operating hydro-mechanical tools with ease, the industry is moving towards attachments that warrant a good look at what can be done in the compact construction equipment world.

This article is about choosing the right attachment for your business when it comes to grading. Grading with compact construction equipment technology has greatly evolved with attachments for finish grading that rivals larger grading machines. I'd like to offer my advice on which blade to use when grading with a Cat compact track loader.

### Box Blades

The Cat Box Blade offers a great finish when grading and leveling. The large box design carries large loads of material which spreads evenly while filling in low areas. The versatility of the box blade allows grading in both forward and reverse modes. The attachment also works well in manual mode, allowing operators to move materials into proximity of the grade.



The applications for the box blade include, but are not limited to athletic fields, building sites, concrete prepping, parking lots and the interior of commercial buildings.

The Cat Box Blade has all the latest software to enable 2D, 3D, as well as Universal Total Station (UTS) for automatic grade control. This creates a level of high accuracy when establishing slopes and main fall during flat grading applications. However, box blades have their limits compared to grader blades. For instance, material must be pushed in a straight line, both forward and reverse when using a box blade.

### Dozer Blades

The Cat Dozer Blade allows operators to do quality work in areas such as clearing, backfilling, rough and finish grading, slot dozing, ditching and leveling. Cat's 6-way dozer blade is designed as a variable power angle tilt (VPAT). The 6-way blade offers better versatility for finish grade work than the angle blades. A tilting blade allows for easier ditch and slope work. When grading in tighter areas, dozer blades allow operators to maneuver closer to walls and corners with good visibility.

The new Cat Smart Dozer Blade with assist takes grading and leveling with a dozer blade to a new level. Operators can grade a quality finish with fewer passes. The slope sensors on the blade, as well as on the machine allows operators to view main fall and slope during operation.

Whether the box blade, grader blade or dozer blade works best for your business, you can find these attachments on line at shop.cat.com or by visiting your local Cat dealer.



### Grader Blades

The Cat Grader Blade with assist also offers great accuracy and a finish product. Like the box blade, the grader blade can slope up to 15 degrees. The grader can also angle blade up to 30 degrees windrowing material up a slope while establishing a road to create a crown. In addition, grader blades with an angle can easily establish ditches by rolling material out and away from the tool. They can also maneuver around manholes, curbs and gutters during finish grading.



# CAT® TILT ROTATE SYSTEMS

## TRS6 AND TRS8

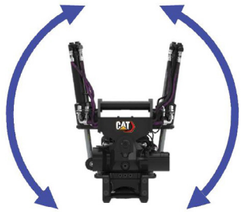
Cat TRS Tiltrotator attachments help you reduce machine movement, time and fuel. They increase productivity and help you get the job done faster with the quality you expect from Cat products.

Choose the TRS6 for your Next Gen 306 CR or TRS8 for your 307.5, 308, 308.5, 309 or 310 Excavators.



### VERSATILITY

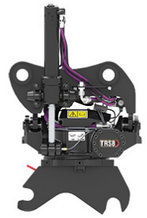
- Put bucket or other tools in any position
- Cutting edge in any position minimizes the need to reposition machine as often
- Applications include: Building and Construction, Road Work, Earthmoving, Railroading, Pipe Laying, Land Maintenance, Demolition and Recycling.
- The TRS8 is also equipped to handle hydromechanical attachments like compactors, grapples, brooms and more.



**40 Degrees Tilt**



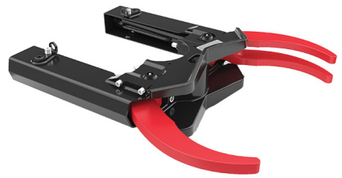
**360 Degrees Continuous Rotation**



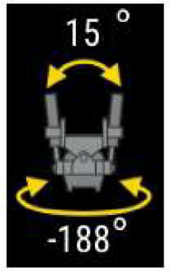
**Coupler with Attachments for your existing Cat Next Gen Mini Hydraulic Excavator**



**Bucket Shake**
TRS controls rapid movement of the bucket to spread material evenly



**Grapple**
(Available on S-Type below swivel models)

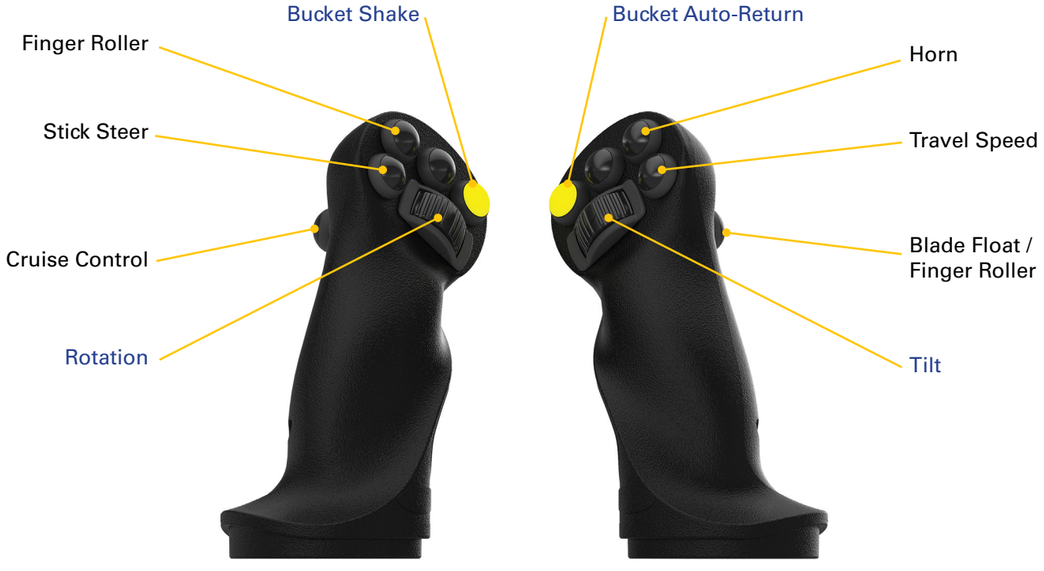


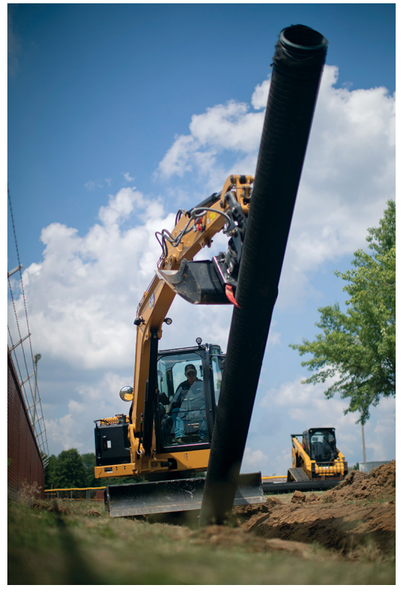

**Auto Return Function**
Return to set rotate and tilt position of attachment connected below the TRS







| TILT ROTATE SYSTEMS SPECIFICATIONS | | |
|---|---|---|
| **MODEL** | TRS6 | TRS8 |
| Machine Class - (Next Gen Only) | 6 Ton | 7 - 10 Ton |
| Machine Standard Bucket Size - ft3 (m3) | 8.8 (0.25) | 17.7 (0.5) |
| Maximum Bucket Width - in (mm) | 47.2 (1200) | 59 (1500) |
| Maximum Break Out Force - lbf (kN) | 11,241 (50) | 17,459 (78) |
| Tilt Angle (Left / Right) - degrees | 40° | 40° |
| Working Pressure - psi (kPa) | 3,626 (25,000) | 3,626 (25,000) |
| Optimal Hydraulic Flow - gpm (L/min) | 12-21 (45-80) | 12-20 (45-75) |
| Lubrication Points | 1 | 1 |
| Weight - lb (kg) | 375 (170) | 639 (290) |

# STEP UP SAFETY

CAT.COM/SAFETY

Step up your safety. Step up your business. Caterpillar Safety Services offers trainings, programs and services to help you improve safety.

**Start with the basics.** Set a strong foundation for safety by training the fundamentals with eLearning. A wide variety of topics will be sure to meet any of your basic safety training needs.

**Improve skills.** Safety training programs such as Speak Up! Listen Up! and S.T.A.R.T.™ help employees and supervisors develop skills that impact safety. Speak Up! Listen Up! helps employees learn techniques to effectively give (and receive) feedback when they see (or have done) unsafe behaviors. S.T.A.R.T.™ shares a powerful storyline to help supervisors understand the importance of strong accountability and positive recognition and how to effectively implement.

**Elevate leadership.** Consider targeted coaching from Caterpillar safety experts with years of experience in supporting and strengthening leadership skills. One-on-one coaching sessions are individualized for each leader's predetermined objective. Contact us to learn more.

Learn more about how Caterpillar Safety Services can help you meet your safety goals at cat.com/safety.

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