CAT® GROUND ENGAGING TOOLS



FOR CONSTRUCTION

CAT®

MADE FOR YOUR APPLICATION.

Protect expensive machine components. Reduce your operating costs. And get the most out of your machine's performance.

The most important part of any machine is its work tool. Buckets or blades, tips or edges, rippers or side cutters—no matter the size, worktools and Ground Engaging Tools (G.E.T.) are the main reason the machine exists. G.E.T. have a direct effect on the machine's ability to produce. Improper selection affects not only your productivity, but also your fuel consumption, maintenance costs and possibly the longevity of your equipment.

Caterpillar offers "off-the-shelf" and custom G.E.T. systems that maximize machine productivity, and your Cat® dealer can help you establish an effective management program that minimizes preventable problems—working to reduce your operating and maintenance costs.

Use this catalog to learn more about what's available for your equipment, then work with your Cat dealer's G.E.T. specialist or PSSR to select the components built for your industry and jobsite conditions. We'll make sure you get the rugged durability, solid protection and lowest cost-per-ton production system you need.





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Part number reference can be found in Appendix (PEBJ0079)

*Note: Please send all feedback to https://dealer.cat.com/en/ps/parts/parts-mktg/get/c/form.html

DOZERS

No other manufacturer in the world has more experience moving material than Caterpillar. We invented the dozer over 100 years ago—and we've been the market leader ever since. There are more Cat dozers at work in the world than any other brand.

Dozers work in dozens of different industries, applications, climates and environments and can be customized for specific jobs—just like the G.E.T. that protect their blade or ripper system. From parts availability to expert support and service, Cat customers can count on one reliable source—Caterpillar and Cat dealers.



SYSTEM OVERVIEW

Dozers move ground at mines, construction sites, residential developments and hundreds of other places. A dozer's main work tools are a blade and a ripper. The universal blade is curved, wide and tall so that it can carry material. Other blades are flat or shorter, but they all do a similar job: leveling the ground. The ripper loosens the rocky or compact earth, which makes dozing or loading easier.

Both the blade and ripper have to balance ground penetration with wear life. Excessive worktool or G.E.T. wear material can make the machine less effective. Cat dozer cutting edges and end bits are designed as a balanced system to move more material over a longer period with less downtime—which translates into a lower cost per hour for you. Select from dozens of ripping system configurations or have your Cat dealer help you choose the best option for your application.



CUTTING EDGES & END BITS

BALANCED EDGE SYSTEMS FOR EVERY APPLICATION.

Matching your cutting edge wear rates with your end bit selection is easy with our broad portfolio of options. You achieve a balanced system, which helps reduce both maintenance intervals and operating costs, leading to more productivity.

Cat end bits and cutting edges can be custom ordered with Cat Abrasion Resistant Material (A.R.M.), which is recommended for applications where sand, gravel or other abrasive materials severely diminish wear life. Hard tungsten carbide particles are bonded to critical wear areas, providing up to five times greater wear life than similar end bits and cutting edges without A.R.M. See your Cat dealer for details.

SAFER, SIMPLER INSTALLATION	Threaded holes allow easier handling of edges at first install or during rotation to wear opposite edge.
MINIMAL THROW AWAY	Multiple edge sections allow you to rotate or replace only the worn areas.
IMPROVED PRODUCTIVITY	Broad offerings allow you to have both end bit penetration and long cutting edge life, resulting in less maintenance.



CUTTING EDGE & END BIT OPTIONS

We have G.E.T. for your blade, no matter the application or environment. As machines grow larger, their jobs become tougher, and so do Cat G.E.T. Maximum wear life and breakage resistance is possible with our steel alloy that can endure 2 times the heat and pressure of traditional blade steel products. Consult your local Cat dealer to help determine the best cutting edge system for your application to give you the lowest cost per hour.



D3 - D5 END BIT OPTIONS



LEVEL CUT/ FINISH (FACTORY FIRST FIT)

- Recommended for finish and semi-finish dozing
- Matches cutting edge's depth of cut
- Low-impact, low-abrasion materials only

A.R.M. OPTION AVAILABLE



LEVEL CUT REVERSIBLE

- Reversible finish and semi-finish dozing end bits
- Used in applications where curbing is not a requirement



LEVEL CUT EXTENDED REVERSIBLE

- Longer reversible finish and semi-finish dozing end bits used to extend the length of the blade
- Used in applications where curbing is not a requirement



D6 END BIT OPTIONS



LEVEL CUT/ FINISH (FACTORY FIRST FIT)

» Recommended for finish and semi-finish dozing
» Matches cutting edge's depth of cut
» Low-impact, low-abrasion materials only

A.R.M. OPTION AVAILABLE



LEVEL CUT REVERSIBLE

» Reversible finish and semi-finish dozing end bits
» Used in applications where curbing is not a requirement



HOT CUPPED

» Forward protruding profile for better penetration than flat plate



GENERAL PURPOSE

» Sharpened, forward protruding profile for excellent penetration
» For fast blade loading, high productivity applications



UTILITY

» Thick cross-section for high face wear applications
» Recommended for high-impact, high-abrasion applications



EXTENDED WEAR LIFE (EWL)

» 25% more usable wear material than General Purpose
» Prolonged life and excellent penetration in abrasive conditions

A.R.M. OPTION AVAILABLE

D7 - D9 END BIT OPTIONS



LEVEL CUT/ FINISH

» Recommended for finish and semi-finish dozing
» Matches cutting edge's depth of cut
» Low-impact, low-abrasion materials only

A.R.M. OPTION AVAILABLE



UTILITY

» Thick cross-section for high face wear applications
» Acceptable in high-impact, high-abrasion applications

A.R.M. OPTION AVAILABLE



HOT CUPPED

» Forward protruding profile for better penetration than flat plate

A.R.M. OPTION AVAILABLE



GENERAL PURPOSE (FACTORY FIRST FIT)

» Sharpened, forward protruding profile for excellent penetration
» For fast blade loading, high productivity applications

A.R.M. OPTION AVAILABLE



EXTENDED WEAR LIFE (EWL)

» 25% more usable wear material than General Purpose
» Prolonged life and excellent penetration in abrasive conditions

A.R.M. OPTION AVAILABLE

See page 188 for more details on Abrasion Resistant Material (A.R.M.).

D10 - D11 END BIT OPTIONS



LEVEL CUT/ FINISH

» Recommended for finish and semi-finish dozing

» Matches cutting edge's depth of cut

» Low-impact, low-abrasion materials only



UTILITY

» Thick cross-section for high face wear applications

» Acceptable in high-impact, high-abrasion applications



HOT CUPPED

» Forward protruding profile for better penetration than flat plate



GENERAL PURPOSE

» Sharpened, forward protruding profile for excellent penetration

» For fast blade loading, high productivity applications



EXTENDED WEAR LIFE (EWL: FACTORY FIRST FIT)

» 25% more usable wear material than General Purpose

» Prolonged life and excellent penetration in abrasive conditions

A.R.M. OPTION AVAILABLE



EXTREME EXTENDED WEAR LIFE (EEWL)

» 25% more usable wear material than General Purpose

» Prolonged life and excellent penetration in abrasive conditions

A.R.M. OPTION AVAILABLE



HIGH ABRASION

» New cast edges and end bits provide up to 40% longer wear life than Extended Wear Life (EWL)

» Optimized material placement

HIGH-ABRASION CAST CUTTING EDGE SYSTEM

MAXIMIZE MACHINE UPTIME IN THE MOST ABRASIVE APPLICATIONS.

Designed to fit Cat D10 and D11 universal and semi-universal blades, this cast cutting-edge system delivers reduced machine downtime and maximum productivity in low to moderate impact pushing applications. The new high-abrasion end bits are now married up with complementary cast high-abrasion cutting edges, an offering that Cat has never had in the past.

MAXIMUM WEAR LIFE

New cast edges and end bits provide up to 40% longer wear life than Extended Wear Life (EWL).

LESS THROW AWAY

Optimized material placement results in more wear material and less throwaway weight.



A COUPLE MINUTES CAN SAVE YOU HOURS.

Ensuring a long life for your blade and the G.E.T. that protects it involves three simple steps. Clean surfaces, new hardware and proper installation technique are shared as tips and tricks below. Always follow the specific instructions for your machine. Your local Cat dealer is only a phone call away if you need assistance.

1) Clean and Pristine

- Surfaces, bolts and nut threads must be clean to ensure maximum clamping force
- When installing, use new hardware as old bolts may have suffered metal fatigue



2) Center Out

- Cutting edge bolts are installed from the center outward—do not install from both ends toward the center
- End bit bolts are installed first from the center outward, then from the center inward

3) Torque, Bang, Torque

- Tighten all bolts to the required torque
- Wearing safety goggles, seat bolt heads in the countersinks with a heavy hammer
- Tighten the bolts again to required torque



BLADE PROTECTION

PUSH BACK ON COSTLY REPAIRS.

Protect your blades from impact and aggressive wear with the line of Cat blade protection for dozers. All Cat blade products are manufactured to the factory contour, making fit and installation fast and efficient.

REDUCE BLADE DAMAGE

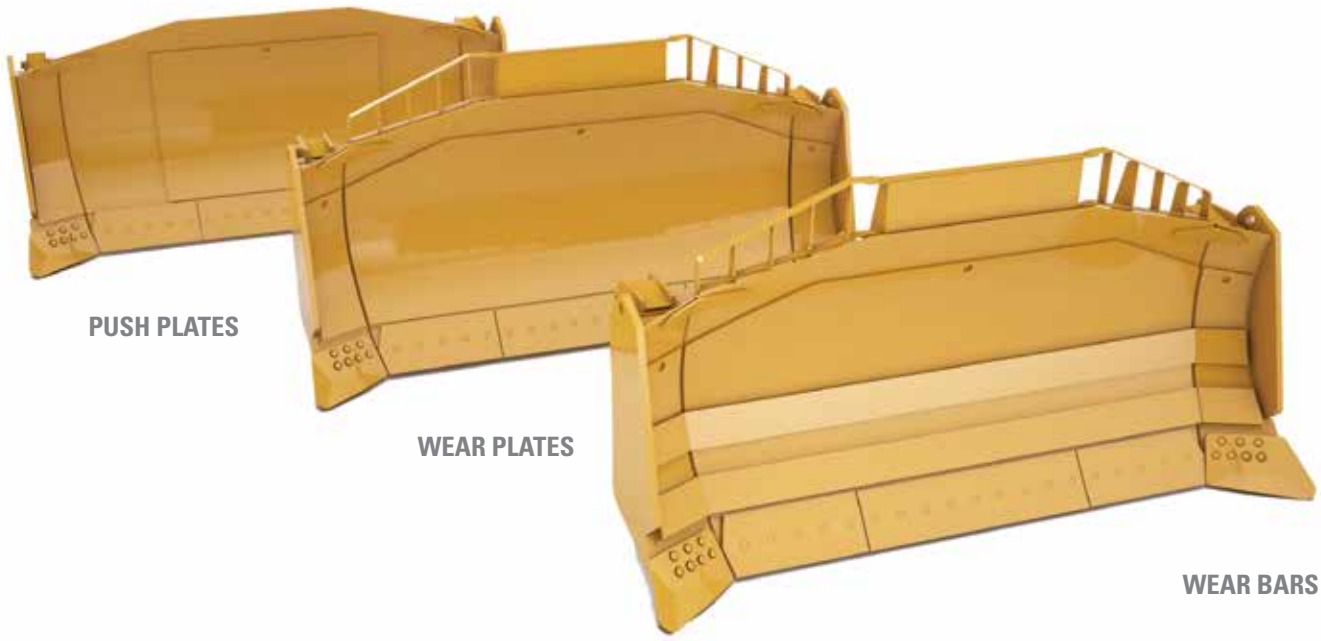
Push plates distribute the high forces created when pushing scrapers.

EXTEND BLADE SERVICE LIFE

Wear plates extend the service life of the blade "skin" in highly abrasive conditions.

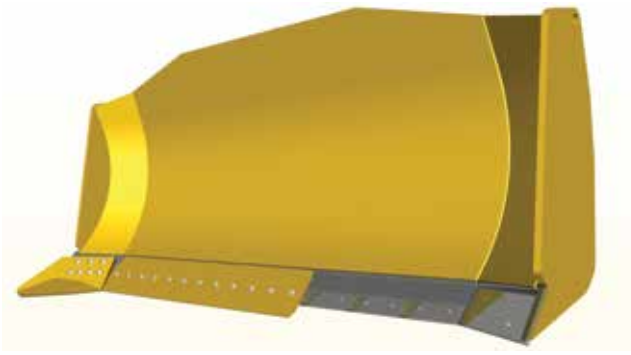
SIMPLIFY INSTALLATION

Cat wear bars are 450 BHN and beveled to accept weld bead—a fast way to add strength and protection.



BLADE MAINTENANCE & REPAIR

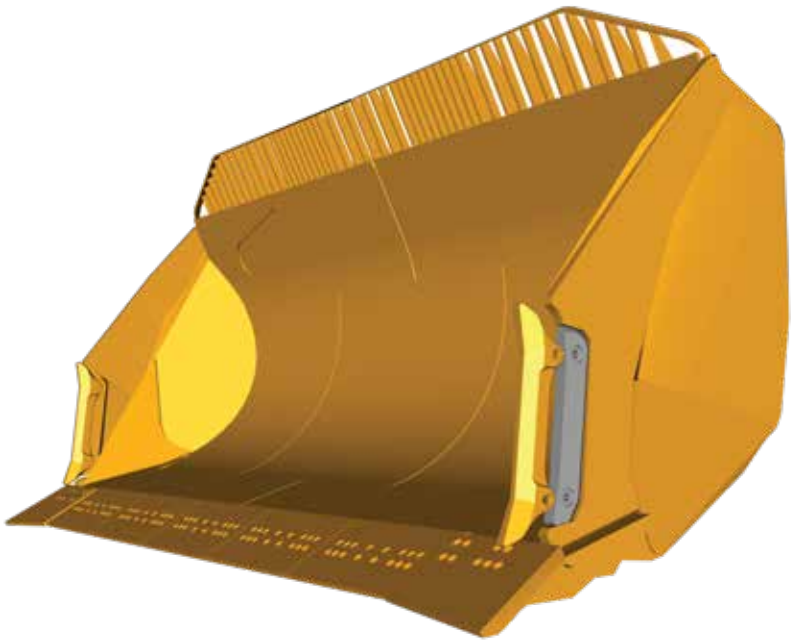
Only a Cat cutting edge support will guarantee dimensional accuracy like the factory originals. Cutting edges and end bits are fastened to your cutting edge support. This bolted connection requires a perfectly flat and smooth surface the full length of the blade to ensure your G.E.T. stays secure. When millimeters matter, count on Cat quality and your Cat dealer's capabilities.



SIDEBAR PROTECTOR

Dozers need sidebar protection, too. Large dozers, like large loaders, work in high-impact and extreme abrasion. Increase carrying capacity and simplify your blade maintenance with hammerless protection. Simply weld in the protector adapter once and save hours each time you replace the sidebar protection.

LOW MAINTENANCE	Protects the blade edge and extends sidebar reach to reduce maintenance cost and increase capacity.
HAMMERLESS	Fast, easy removal and installation. Reduces risk of injury.





RIPPER SYSTEMS

CAUSE A DISTURBANCE, GAIN PRODUCTIVITY.

Selecting the proper ripping tools can make the difference between just being able to rip a material and being able to reach optimum efficiency and maximum production (lowest cost/yd^3). Production ripping (>20% of operation) usually requires a single shank ripper, as do very hard or tightly compacted materials. The more varied the job conditions, the greater the need for the multishank ripper. The multishank is especially useful in pre-ripping for scrapers or other loading tools.

LOWER OPERATING COSTS	Hammerless design allows pin re-use on R style adapters.
HAMMERLESS DESIGN	Fast, easy removal and installation. Reduces risk of injury.



For more information on ripper systems, please reference The Handbook of Ripping (AEDK0752).

RIPPER SYSTEM AVAILABILITY

Tooth penetration can be the key to ripping success. That's why we offer a variety of tip styles and profiles. Our alloy steel tips withstand higher operating temperatures and are also self-sharpening. Shank protection helps you cut the material and extend your maintenance intervals. The products below are readily available, or you can consult your Cat dealer for custom options.

TIP OPTIONS	R350		R450		R500		R550	
	Side Pin	CapSure	Side Pin	CapSure	Side Pin	CapSure	Side Pin	CapSure
Centerline - Short			■	■	■	■	■	■
Centerline - Intermediate	■		■	■	■	■	■	■
Centerline - Intermediate A.R.M.	■		■	■	■		■	
Centerline - Long					■			
Centerline - Sharp Limestone			■		■			
Centerline - Sharp A.R.M.					■			
Penetration - Short			■		■			
Penetration - Intermediate	■		■	■	■	■	■	■
Penetration - Intermediate A.R.M.	■		■	■	■	■	■	
Penetration - Long					■	■		
Penetration - Sharp	■		■					

SHANK PROTECTOR	R350		R450		R500		R550	
	Side Pin	CapSure	Side Pin	CapSure	Side Pin	CapSure	Side Pin	CapSure
Protector - Long (110mm Shank)							■	■
Protector - Std (110mm Shank)							■	■
Protector - Long (100mm Shank)					■	■		
Multi pc Sharp & Guard (100mm Shank)					■			
Protector - Std (100mm Shank)					■	■		
Protector - Long (90mm Shank)					■	■		
Protector - Std 1 pin (90mm Shank)					■			
Protector - Std 2 pin (90mm Shank)					■			
Protector - Long (75mm Shank)			■	■				
Protector - Sharp (75mm Shank)			■	■				
Protector - Std (75mm Shank)			■					
Protector - Std (73mm Shank)	■							

HAMMERLESS RIPPER TIPS CAPSURE RETENTION

Always use the longest tip without excessive breakage. Centerline tips have equal wear material on both sides and can be reversed, which can extend the life and help maintain sharpness. Cat penetration ripper tips have an aggressive angle to break through even the hardest surfaces and dig into the ground more effectively. Both hammerless options feature a topside deflector, which creates a smooth transition with the shank protector.



SHORT CENTERLINE

- Used in extreme impact conditions
- Sacrifices some wear material



INTERMEDIATE CENTERLINE

- Used for moderate impact and abrasion conditions
- 33% longer than Short Centerline



INTERMEDIATE PENETRATION

- Used for moderate impact and abrasion conditions



LONG PENETRATION

- Designed for low-impact, highly abrasive conditions where breakage is not a problem
- 20% longer than Intermediate Penetration

INSTALLATION & REMOVAL

Hammerless removal and installation is possible with your current side pin shank/adapter system. CapSure™ retention is built into each tip, so you only need to insert a pin to experience faster, safer, easier tip change out.

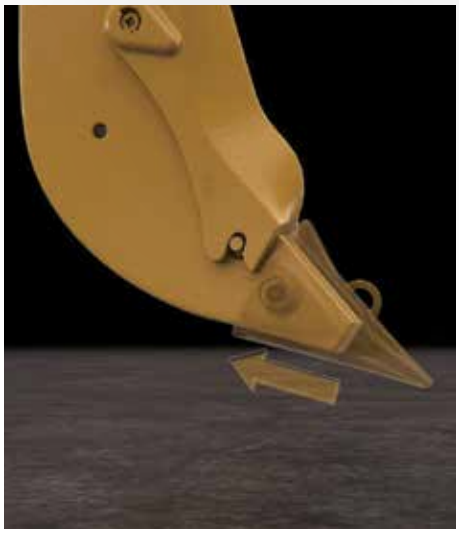
1 Insert pin into adapter hole.



2 Insert washer into adapter hole.



3 Slide the tip onto adapter.



4 Turn retainer 180° to lock/unlock.



Removal and installation animation is available at www.youtube.com/watch?v=UW6_jjqa_eA or by scanning the QR code to the right.

R SERIES RIPPER TIP OPTIONS

Always use the longest tip without excessive breakage. Centerline tips have equal wear material on both sides and can be reversed, which can extend the life and help maintain sharpness. Cat penetration ripper tips have an aggressive angle to break through even the hardest surfaces and dig into the ground more effectively.



SHORT CENTERLINE

» Used in extreme impact conditions

» Sacrifices some wear material



INTERMEDIATE CENTERLINE

» Used for moderate impact and abrasion conditions

» 17% more wear material than Short Centerline

A.R.M. OPTION AVAILABLE



LONG CENTERLINE

» Used in low-impact, high-abrasion conditions where breakage is not a problem

» 30% more wear material than Intermediate Centerline



SHARP CENTERLINE A.R.M.

» Intermediate Centerline tip, which is tapered to a pick-like point on the end

» A.R.M. strip on one side enhances sharpening action

» Offers best penetration and 13% more wear material than Short Centerline

A.R.M. OPTION AVAILABLE



SHARP LIMESTONE

» Used in limestone or caliche applications

» Chisel point penetrates in hard-to-penetrate materials

» 16% more wear material than Short Centerline and 10mm shorter than Intermediate Centerline



SHORT PENETRATION

» Used in extreme impact conditions

» Sacrifices some wear material



INTERMEDIATE PENETRATION

» 17% more wear material and 50mm longer than Short Penetration

» Used for moderate impact and abrasion conditions



LONG PENETRATION

» Used in low-impact, high-abrasion conditions where breakage is not a problem

» 4% more wear material and 47mm longer than Intermediate

A.R.M. OPTION AVAILABLE



SHARP PENETRATION

» Intermediate Penetration length tip

» Factory sharpened to ensure maximum penetration

INSTALLATION & REMOVAL

The R Series Tooth and Adapter system uses the standard pin and retainer system. The Tooth Pin Remover tool is available to make removal easier.

1 Place the tool on the tip and align the extractor with the pin.



2 Strike the tool with a hammer until the pin is removed.





Single shank machine

RIPPER SHANK PROTECTOR

WANT BETTER PRODUCTIVITY WITH LESS COST? WE'VE GOT YOU COVERED.

Shank protectors cut through material with sharp edges, lowering the ripping effort. Minimize the wear, and required maintenance, on the more expensive shank body when you guard it with a protector. Never rip without Cat G.E.T. Our hammerless options offer fast, easy removal and installation without specialty tools.

SHARPENED PROFILE	Cuts through tough and compact materials, causing lower ripping resistance and less horsepower loss.
EXTENDED PROTECTORS	60% more coverage.
FULL LENGTH	Triangle-shaped guard-bar integrates with sharp lower protector for maximum ripping protection.



RIPPER SHANK PROTECTOR OPTIONS

Four different protection options align with the tractor's ripping system and the most common applications.



PIN ON

GENERAL PURPOSE

» Baseline protector R350 and R450 only



ONE PIN



HAMMERLESS

SHARP

» Penetrates compact material better than standard design

» Hammerless option has 40% more wear material than side pin version



PIN ON



HAMMERLESS

EXTENDED PROTECTOR

» 60% more shank protection than Sharp



THREE-PIECE SHANK PROTECTOR



PIN ON

INTEGRATED SHARP

» Works with triangle-shaped bar to provide complete shank protection

INSTALLATION & REMOVAL

Hammerless retention made simple. The CapSure™ locking system allows for safer and easier removal/installation in four steps.

1 Insert pins and washer into shank hole.



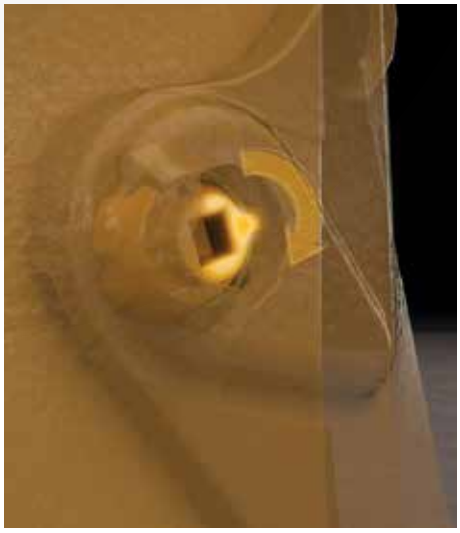
2 Place shank protector over lower pin.



3 Position retainer over upper pin.



4 Turn retainer 180° to lock/unlock.



Removal and installation animation is available at www.youtube.com/watch?v=UW6_jjqa_eA or by scanning the QR code to the right.

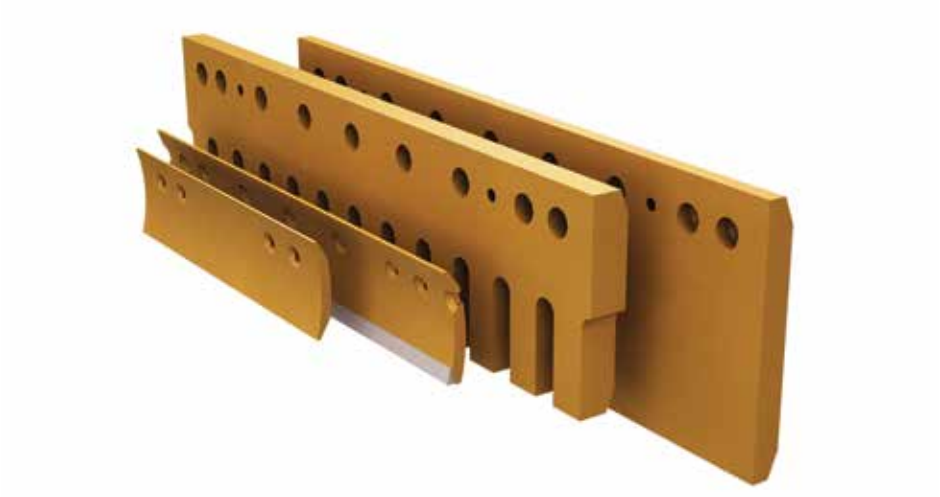
MOTOR GRADERS

We offer hundreds of cutting edge options available on the shelf, plus the ability to customize through our Made as Order (MAO) program. Unique offerings like the Cat GraderBits™ system meet the toughest application needs and are complemented by multiple End Bit options. Trust your Cat dealer to offer you solutions that focus on total machine productivity.



CHOOSING AN EDGE

Edge selection is critical for enhancing production and keeping cost to a minimum. Application affects the cutting edge shape, metallurgy and style. Impact, penetration and abrasion define your application environment. An edge has to penetrate the material and not break during operation. Edge life then becomes a matter of metallurgy and thickness.



WHAT IS YOUR APPLICATION?



DEVELOPING A ROAD OR PERFORMING HEAVY MAINTENANCE

» A flat edge is best suited for this application. A better penetrating option is a flat serrated edge. A flat edge has limited ability to carry material forward.



GRADING HARD-PACKED GRAVEL, FROZEN EARTH AND ICE

» A serrated edge penetrates better than a continuous edge because it exerts more down pressure. A curved serrated edge penetrates better than a flat serrated edge with a forward mold board.



RECONDITIONING OR FINISH GRADING AN EXISTING ROAD SURFACE

» Curved edges penetrate the roadway while carrying existing material forward to leave a smooth flat surface. A better penetrating option is a curved serrated edge. A serrated edge will not leave as clean a roadway surface as a continuous edge.

MOTOR GRADER CUTTING EDGE OPTIONS

PARTNER WITH CATERPILLAR, EDGE OUT THE COMPETITION.

Caterpillar offers a wide range of cutting edges for motor graders. Each provides certain benefits when used in the appropriate application. Using the right edge is critical for enhancing production and keeping total costs to a minimum. The three factors to consider in choosing a cutting edge are shape, width and thickness.

There are two basic edge shapes—flat and curved—with serrated edges available in both configurations. In addition, the Cat GraderBits system dramatically expands the range of edge shape options. Cat offers two types of grader edges and three edge thicknesses for the 16M and 24M motor graders.

SUPERIOR DURABILITY, MORE OPTIONS	Cat DH-2 through-hardened steel edges are available in a variety of shapes and thicknesses to fit every application.
EXTENDED EDGE LIFE	Maximize your edge life with tungsten carbide edges.
MAXIMUM PENETRATION, MINIMUM WASTE	Cutting bit systems.



THROUGH-HARDENED CUTTING EDGES

Most Cat edges are through-hardened steel, which offers high-impact resistance. High-carbon edges have good surface hardness and perform well in high-abrasion, low-impact applications such as finish work. High-carbon edges will not withstand the impact level of a through-hardened edge.



FLAT

- Heavy road maintenance and pioneering
- Maximum strength and available wear material
- Best option for abrasion and impact resistance



FLAT SERRATED

- Better penetration than a continuous edge (greater down pressure per inch of edge contact)
- Designed to penetrate packed gravel, frozen earth and ice
- For severe impact conditions, install over a 6" (152 mm) edge to reduce tooth breakage



CURVED

- Provides superior penetration and rolling action necessary for fine grading and finish work
- Finishing tolerances less than 1/4" (6 mm)—the best value may be in selecting a narrow and thin cutting edge



CURVED SERRATED

- A curved serrated edge penetrates better than a straight serrated edge with a forward mold board



EDGE WIDTH EQUALS WEAR MATERIAL

- An 8" (203 mm) edge provides twice the wear material as a 6" (152 mm) edge at about 35% more cost
- Hardware cost and R&I downtime are reduced by 50%

TUNGSTEN CARBIDE TILE CUTTING EDGES

Cat Tungsten Carbide Cutting Edges combine through-hardened steel with the wear resistance of tungsten carbide. When used in high-abrasion, low-impact applications, they can provide up to 20 times the life of a standard through-hardened edge. Fewer edge changes means less downtime and lower hardware costs.



TUNGSTEN CARBIDE EDGES

- Tungsten carbide edges have a continuous row of trapezoid-shaped carbide "tiles." This patented shape forms a leading / cutting edge
- Carbide tile bottom must be flat to the ground. 20° maximum tilt
- Max 5 mph/8kph
- Do not use on roads with large embedded rocks



FLAT EDGES

- Maximum strength and available wear material
- Longest wearing edge available in high abrasion and low impact



CURVED EDGES

- Curved-edge design improves penetration and rolling action
- Trapezoid-shaped tungsten carbide tile on leading edge stays sharp as it wears
- Shorter edge sections speed rotation and reduce "throw-away" due to edge crowning



SERRATED EDGES

- Better penetration than a continuous edge (greater down pressure per in^2 of edge contact)
- No cast angle restrictions

TUNGSTEN CARBIDE INSERT CUTTING EDGES

Cat carbide insert edges offer long wear life in higher speed applications like state/county road snow removal. The tungsten carbide is brazed into a milled groove in the center of the edge. The design offers impact resistance and minimizes edge “crowning” in applications that require a level grading operation.





ROTATING BIT SYSTEM

The rotating bit system outperforms steel blades in high-production road reconditioning applications. Individual cutting bits have tungsten carbide tips and form a serrated edge to penetrate and lift material to the surface immediately. As a result, most road maintenance jobs can be accomplished in a single pass.

MORE PRODUCTION, LESS WASTE

Material is brought to the surface for reuse, reducing the expense of spreading new gravel.

NO RESTRICTIONS

No cast angle restriction.

EASY INSTALLATION & MAINTENANCE

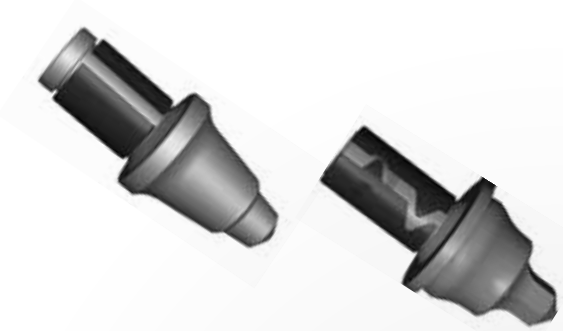
Bits changed individually with no special tools.



ROTATING BIT SYSTEM

Rotating Scarifier Bits are self-sharpening for more uniform wear and long life. Cutting height is maintained as cutting tools may be rotated from position to position. Carbide bits can last as long as 5 -10 sets of conventional grader blades.

Rotating Scarifier Bits are made for applications such as dirt and gravel reclamation, oil road reclamation, and snow and ice removal.

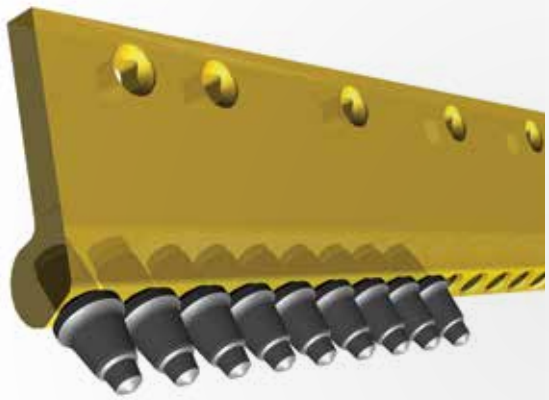


1" SHANK

» Smooth design

7/8" SHANK

» Engineered with flat sides that aid in bit rotation



ADAPTER BOARDS

» Either 5/8" or 3/4" bolt hole punch
» 3' (914mm)-21 bits
» 4' (1219mm)-28 bits
» Standard Board uses 7/8" bit
» Heavy Duty board uses 1" bit



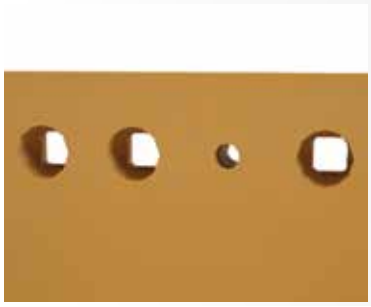
OPERATING TIPS

» 20° Board Angle
» Moldboard may vibrate and bits may not turn if angle is not correct

INSTALLATION & REMOVAL

Improve safety and simplify edge change-out. Cat cutting edges allow you to use a threaded bolt and link to remove and install sections. Even worn edges can be removed, because the threads are located in the back half of the hole.

1 Drilled and tapped holes.



2 Attach approved lifting device.



3 Lift.





OPERATING TECHNIQUES FOR REDUCED COST.

Through better management of the interface between machine and materials, operators can maximize productivity, lower machine operating costs and reduce cab vibration, improving operator comfort.



MOLDBOARD POSITION

- Start with moldboard 2" (4" for 24M) ahead of the edge
- Grade with cutting edge 90° to the road
- Maintain fixed angle to ensure constant edge thickness
- Laid back reduces penetration and can wear moldboard
- Frequent angle changes will shorten the edge life



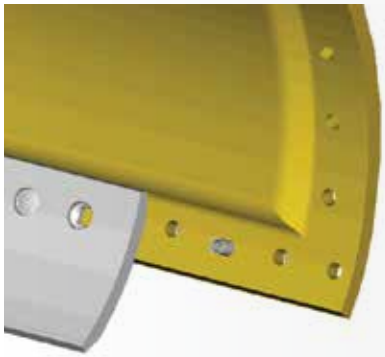
SPEED AND EXCESSIVE DOWN PRESSURE

- Use accumulator to absorb shocks
- < 6mph/8kph speed
- Excess speed can cause edge slivering
- Need penetration? Choose a thinner edge, a serrated edge or the Cat GraderBits system for the most compacted materials



CROWNING

- Occurs when the cutting edge conforms to the material being graded
- A narrow and thin edge reduces the "throw away" material
- Extreme crowning may require a bit system



STANDARDIZE YOUR HARDWARE

- Moldboard bushings reduce 3/4" holes to 5/8"
- Simplify inventory and lower cost

GRADERBIT2™ SYSTEM

SMOOTH OUT THE TOUGHEST ROADWAYS IN A SINGLE PASS.

GraderBit2 System is ideal for finish grading, maintaining roadways or reconditioning haul roads. Tungsten carbide cutting bits deliver up to 20x wear life of through-hardened cutting edges. 7 different bit designs can form a continuous edge or 10 serration patterns that allow pass-through of 15 to 60mm aggregate.



LOWEST OPERATING COST

20% CPH SAVINGS VS THROUGH HARDENED EDGES

APPLICATION ADAPTABLE

2 CONTINUOUS EDGE SYSTEMS & 10 SERRATED OPTIONS RECONDITION ANY SURFACE

BUILT TO BE REBUILT

OVERLAY CHANNELS AND REPLACEABLE BUSHINGS EXTEND BOARD LIFE

GRADERBIT2™ SYSTEM

BIT BOARDS THAT ARE BUILT TO PERFORM IN YOUR APPLICATION

Grooves cast into the boards accept weld overlay or material packing in order to extend board wear life, while installing and removing the boards is made easier through pre-drilled lifting eye holes. Adapter boards feature an off-set design that ensures optimal bolted joint strength and consistent bit placement.





Bushings reduce board damage during extreme operations and can be replaced to extend board life



GRADERBIT2™ SYSTEM

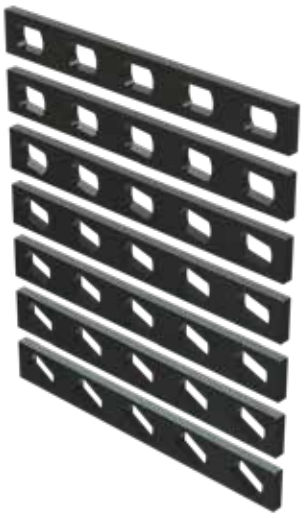
RETENTION THAT INSTALLS WITHOUT TOOLS AND ADJUSTS TO YOUR GRADING CONDITIONS

Bits are installed effortlessly with no tools thanks to pull-ring pin that inserts into the bit shaft and locks over the bit. Bit life is optimized at any cast angle thanks to Angling plates that always keep the bits facing the direction of travel.



The pull-ring pin makes bit installation / removal easy without the need for tools.

The bit shaft fits into the angling plate to prevent the bits from rotating. 7 plate options allow for a 0° to 30° Blade cast angle in 5° increments.



Angle plates keep the carbide facing the direction of travel to reduce erosion of the bit body, which can reduce bit life.





7 different bit designs can form a continuous edge or 10 serration patterns that allow pass-through of 15 to 60mm aggregate. Serration patterns remove holes and ridges from compacted surfaces. Wide or SnowBit™ create a continuous edge the system can be used for finish grading.



WIDE

At 63mm wide this bit can be configured as a continuous edge or placed in every other hole for a 2.5" serration pattern.



WIDE MINING

63mm wide & 12mm taller. Imbedded carbide layer adds 72% more carbide to extends bit life.



STANDARD

30mm, this bit offers a serration pattern that will allow aggregate up to 30mm to pass through.



STANDARD MINING

30mm wide & 12mm taller. Imbedded carbide layer adds 72% more carbide to extends bit life.



SHARP

23mm wide, this bit will help break into hard ground while allowing aggregate size to 37mm to pass through.



SNOW BIT™

63mm wide bull nose carbide insert & steel face. This continuous edge system is impact resistant & designed for paved road snow removal.



PENETRATION

Specially design carbide shape that comes to point and a width of 15mm this bit will help break into any surface.



BORE SAVER™

Used to protect adapter board bore holes when not in use.

Aggregate (mm) Pass-Through	Bit Configuration	Bit Width
0	Wide bits across the board	63 mm
15	Alternate Wide and Standard bits	63 and 30 mm
20	Alternate Wide and Sharp bits	63 and 23 mm
25	Alternate Wide and Penetration bits	63 and 15.5 mm
32	Standard bits across the board	30 mm
34	Alternated Standard and Sharp bits	30 and 23 mm
38	Sharp bits across the board	23 mm
38	Alternate Standard and Penetration bits	30 and 15.5 mm
42	Alternate Sharp and Penetration bits	23 and 15.5 mm
46	Penetration bits across the board	15.5 mm
64	Wide bit every other space	63 mm

WIDE – 64 mm SERRATION



SHARP – 38 mm SERRATION



WIDE/PENETRATION – 25 mm SERRATION



WIDE – CONTINUOUS EDGE



SNOWBIT – CONTINUOUS EDGE



GRADERBIT2™ SYSTEM

REMOVAL AND INSTALLATION

1 Insert bit into board, carbide facing direction of travel



2 Place desired Angle Bracket over bit shaft



3 Insert pin into Bit pin hole



4 Fold ring over Bit shaft



5 Insert remaining Bits & Pins



END BIT SYSTEM

PUT AN END TO MOLDBOARD WEAR.

Made of through-hardened DH-2 steel for added strength and service life, Cat end bits protect moldboard edges from wear.



END BIT SYSTEM

Maximize moldboard life and lower repair costs. Use Cat end bits, overlays, repair plates and hardware to protect and repair your moldboards and working edges.



MOLDBOARD END BITS

- Recommended for all applications
- Made of through-hardened DH-2 steel for added strength and service life



OVERLAY END BITS

- Fit over existing end bit
- Recommended for applications such as ditching
- Add strength and limit corner wear
- When worn on one side, overlay end bits can be rotated for a second wear life



MOLDBOARD REPAIR PLATES

- Extend moldboard life with Cat Moldboard Repair Plates
- Routine monitoring and timely edge replacement can prevent damage
- When repair is needed, repair plates provide a way to extend moldboard life



HARDWARE

- When replacing ground engaging tools, always use Cat hardware regardless of the application
- Cat Grade 8 hardware is performance-matched to Cat G.E.T. in both strength and durability

RIPPER-SCARIFIER SYSTEM

GET MORE OUT OF YOUR GRADER.

Scarifier and ripper systems on motor graders can be used to improve road surfaces by lifting material from compacted and worn areas or by removing the “crowning” that causes excessive wear on cutting edges.

ENHANCE PRODUCTION	Loosen material to reduce grading time and fill voids while saving on edge wear.
EXTEND VERSATILITY	Reduce need for dozer ripping or cutting bit systems.



RIPPER-SCARIFIER COMPONENTS

Scarifiers can be mounted before the blade (V-Block design) or behind the machine (Straight Block design). Rear-mounted ripper-scarifiers are more versatile than forward-mounted configurations. Rip or scarify by changing shank position.



V-BLOCK

- Loosen compacted surfaces, rocky subgrades and frozen ground
- Fit ahead of the blade (mid mount)
- Holds up to 11 shanks and scarifies up to 46" (1168 mm) wide



STRAIGHT BLOCK

- Low-impact applications and shallow scarifying
- Higher allowable speed (up to 3rd gear) in shallow
- Holds up to 17 shanks and scarifies up to 72" (1828 mm) wide
- May be used as a mid-mount scarifier



SCARIFIER TIPS

- We offer three types of scarifier tips for surface reconditioning. Tip has a tapered design that secures it to the shank
- Through-hardened tips for general purpose scarifying
- Heavy-Duty for deep penetration and extended distances
- A.R.M. for high-abrasion/low-impact conditions extends tip life 3 to 5 times over through-hardened



SCARIFIER SHANKS

- Through-hardened and tempered to resist wear, bending and breakage
- Front or rear notch for V-Block or Straight Block
- Standard or extended lengths

R SERIES RIPPER TIP OPTIONS

Caterpillar offers three options for the R350 ripper tip size class for 16M and 24M motor graders. Due to the extreme nature of maintaining haul roads, scarifiers are not offered on 16M and 24M.



CENTERLINE tips have equal wear material on both sides and can be reversed, which can extend the life and help maintain sharpness.

A.R.M. OPTION AVAILABLE



PENETRATION ripper tips have an aggressive angle to break through even the hardest surfaces and dig into the ground more effectively.

A.R.M. OPTION AVAILABLE



PENETRATION - SHARP tips are an intermediate length. They come factory sharpened to ensure maximum penetration.



INSTALLATION & REMOVAL

The R Series Tooth system uses the standard pin and retainer system.
The Tooth Pin Remover tool is available to make removal easier.

1 Place the tool on the tip and align the extractor with the pin.



2 Strike the tool with a hammer until the pin is removed.





HYDRAULIC EXCAVATORS

Cat Hydraulic Excavators are the most versatile machines on the jobsite, working in applications ranging from small landscaping projects to large surface extraction mines—and everywhere in between. Together, Cat buckets and G.E.T. make up the only bucket system designed and developed to optimize hydraulic excavator performance and your productivity. Rely on your Cat dealer for expert support and service for your specific application.



SYSTEM OVERVIEW

Hydraulic excavators are extremely versatile machines used for a variety of purposes, from grading to mass excavation to demolition work. A hydraulic excavator's main work tool is a bucket, but these machines can also be equipped with hydraulic couplers to pick up a variety of tools.

Balancing your desired productivity/penetration with the wear life of your system is critical. Excessive wear material can reduce productivity and increase fuel burn. Cat hydraulic excavator buckets and G.E.T. are designed as a balanced system to increase life while minimizing drag.



TIP SELECTION GUIDE

Even though bucket tips come in many shapes and sizes, you don't have to be an expert to choose the right ones. Use the chart below to determine if the material you're digging in is high, medium or low impact and abrasion—then find the balance you need among these three factors:

1 STRENGTH

The ability to withstand digging and penetrating shocks and high breakout forces

2 PENETRATION

The ability to penetrate tough material when it's tightly compacted, rocky or frozen

3 WEAR LIFE

The ability to withstand wearing, scouring and abrasive action of the material being handled

	IMPACT (material size)			ABRASION (tip life)
	SMALL HEX (311-319)	MEDIUM HEX (320-329)	LARGE HEX (336-390)	
LOW	 0 - 1" | 0 - 25 mm	 0 - 3" | 0 - 75 mm	 0 - 6" | 0 -150 mm	> 1,000 hours
MEDIUM	 1 - 3" | 25 - 75 mm	 3 - 8" | 75 - 200 mm	 6 - 12" | 150 - 300 mm	250 - 1,000 hours
HIGH	 3+" | 75 mm+	 8+" | 200 mm+	 12+" | 300 mm+	< 250 hours



CAT ADVANSYS™ TIP & ADAPTER SYSTEM

BUILT TO DELIVER MAXIMUM PRODUCTIVITY AND THE LOWEST BUCKET LIFECYCLE COST IN THE TOUGHEST APPLICATIONS.

Cat Advansys is built for machine productivity, balancing tip wear material and penetration requirements. Integrated hammerless retention ensures you are back to work in minutes without a separate retainer.

PERFORMANCE & PRODUCTIVITY	Wider top surface reduces drag on the tip and adapter side as the tip moves through the material. Reduced side drag results in less force required to move the hex bucket through the material.
EXTEND BUCKET LIFECYCLE	Adapter design directs material flow over adapter strap, which can extend adapter service life and bucket lifecycle.
ENHANCE JOBSITE SAFETY	Hammerless system. A 3/4 inch retainer lock requires no special tools for installation and removal.

CAT ADVANSYS IS BUILT BY CATERPILLAR AND READILY ADAPTED TO FIT ANY BUCKET IN THE INDUSTRY.

Available for 950 through 994 Wheel Loaders and 311 through 390 Hydraulic Excavators.

CAT ADVANSYS TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by the hydraulic excavators. We also offer additional Cat Advansys tips more commonly used with wheel loaders. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY DUTY



Heavy Duty and Heavy Duty A.R.M.* tips include approximately 60 percent more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

GENERAL PURPOSE



General Purpose tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the General Purpose tip unless otherwise noted.

WIDE



Wide tips are used to maintain smooth trench floors and in low-abrasion, easy-to-penetrate material.

PENETRATION PLUS



Penetration Plus tips feature 25 percent more wear material and a leading edge with 25 percent less cross-sectional area. They self-sharpen as they wear.

PENETRATION



Penetration tips are ideal for densely compacted materials. They feature a leading edge with 60 percent less cross-sectional area—allowing for maximum penetration—and a single center rib that self-sharpens as it wears. These tips are available with A.R.M.*

SPIKE



Spike tips are used to achieve maximum penetration. They are typically used in cohesive material and stay sharp during the life of the tip.

DOUBLE SPIKE



Double Spike tips are used in the corner positions with the spike tips for hard-to-penetrate, fracturable materials.

* Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life and can last even longer in some applications.

CAT ADVANSYS HAMMERLESS TIP & ADAPTER SYSTEM

Cast retention pin means no separate retention pin to buy or lose during tip replacements. The tip loads on the adapter nose, never putting the cast retention lugs under stress or wear.



Integrated Retaining Lug



Hammerless Fast Installation and Removal



NOSE GEOMETRY DESIGN FEATURES

- Asymmetrical nose geometry reduces sliding wear on adapter nose surfaces, extending the life of the adapter.
- The asymmetrical design ensures a reliable fit even when the adapter surface becomes worn.

CHANGE OUT TIPS QUICKLY & EASILY

CapSure hammerless retention requires no special tools. Just turn the retainer 180° to install or remove the tips.

Scan the QR Code to the right to watch the installation video.

1 Turn retainer 180° clockwise to lock.

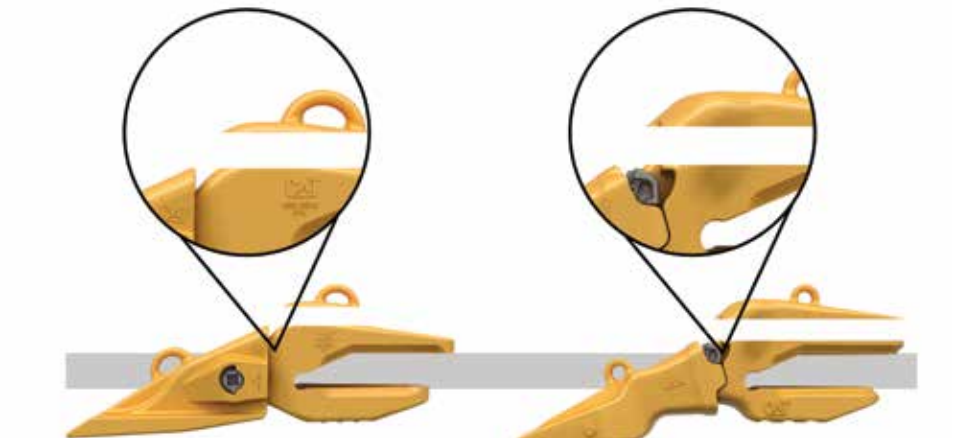


2 Turn retainer 180° counter clockwise to unlock.



CAT ADVANSYS ADAPTER DESIGN

The tip system design naturally shields the adapter strap even without a wear cap. This allows up to a 25% increase in wear life when compared to K series or other low profile systems.



Cat Advansys K Series

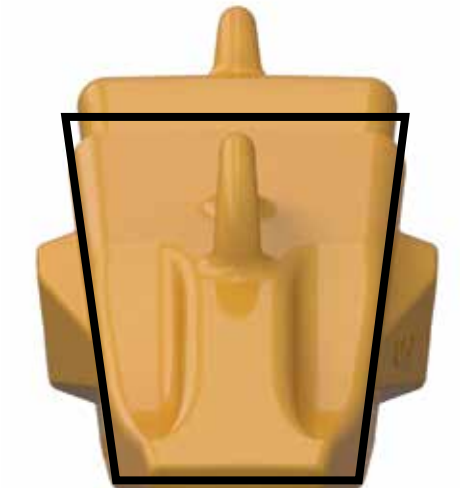
Cat Advansys improves adapter to tip wear life ratio, and the resulting extension on the bucket life cycle.

Heavy Abrasion and Heavy Penetration tips both have a longer usable wear life, while staying sharper throughout the useful life of the entire tip.



X220 Heavy Abrasion Tip[1]
72% Available Wear Material

X220 Heavy Penetration Tip[1]
60% Available Wear Material



Wider top surface reduces drag on the tip and adapter side as the tip moves through the material. Reduced side drag results in less force required to move the hex bucket through the material.

The asymmetrical design ensures a reliable fit even when the adapter surface becomes worn.

1 This is representative of one customers and wear rates may vary by application

MACHINE COMPATIBILITY

EXCAVATOR	LINKAGE	SIZE CLASS
315	N/A	Cat Advansys 80, Cat Advansys 90
318	N/A	Cat Advansys 80, Cat Advansys 90
320	Reach	Cat Advansys 80, Cat Advansys 90
	Mass Excavation	Cat Advansys 90, Cat Advansys 100
324	Reach	Cat Advansys 90, Cat Advansys 100
	Mass Excavation	Cat Advansys 100, Cat Advansys 110
329	Reach	Cat Advansys 90, Cat Advansys 100
	Mass Excavation	Cat Advansys 100, Cat Advansys 110
336	Reach	Cat Advansys 100, Cat Advansys 110
	Mass Excavation	Cat Advansys 110, Cat Advansys 130
349	Reach	Cat Advansys 110, Cat Advansys 130
	Mass Excavation	Cat Advansys 130
374	Reach	Cat Advansys 150
	Mass Excavation	Cat Advansys 170
390	Reach	Cat Advansys 150
	Mass Excavation	Cat Advansys 170, Cat Advansys 200



K SERIES TIP & ADAPTER SYSTEM

EXCELLENT PENETRATION THROUGH VERTICAL RETENTION AND COMPACT PROFILE.

K Series delivers digging performance throughout the life of the tip with its elliptical adapter nose and vertical retention design. The twist-on fit of the tip and adapter makes installation easier.

IMPROVE YOUR PRODUCTIVITY	Low-profile shape provides optimal sharpness, penetration, and digging ability throughout the tip life.
STAY SAFE & REDUCE MAINTENANCE COSTS	One-piece vertical retainer allows for easy installation and removal.
SIMPLIFY INSTALLATION	Rails on both sides of the adapter and a twist-on design hold the tip in place, allowing for quicker installation.

K SERIES DRIVE-THROUGH TIP & ADAPTER SYSTEM

The drive-through system is for K80-K100 adapters and tips.

Twist-on design

Lower-profile tip





No hole in adapter



Drive-through retainer

Scan the QR code to the right to watch the installation video.

INSTALLATION & REMOVAL

It's safe and easy—just use a standard pry tool and follow this three-step process:

1 INSERT RETAINER



2 HAMMER RETAINER

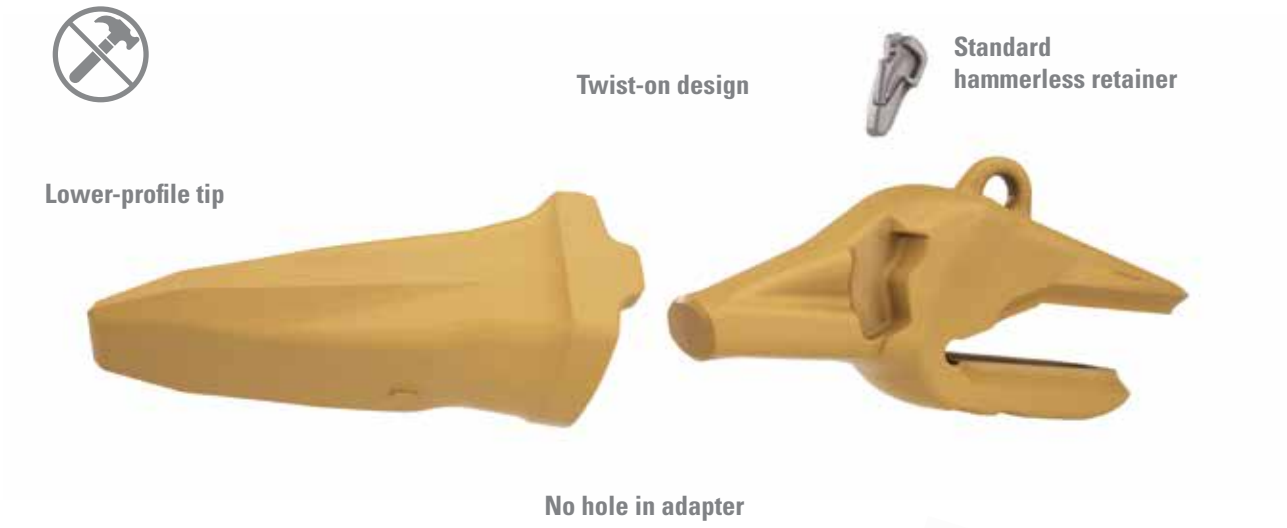


3 SECURE RETAINER



K SERIES HAMMERLESS TIP & ADAPTER SYSTEM

The hammerless system is for K110-K170 adapters and tips.



* Additional offering only for extreme packing and slag applications.

Scan the QR code to the right to watch the installation video.

INSTALLATION & REMOVAL

It's safe and easy—just use a standard pry tool and follow this three-step hammerless process:



K SERIES TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by hydraulic excavators. We also offer additional K Series tips more commonly used with wheel loaders. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

EXTRA DUTY



A.R.M. OPTION AVAILABLE

» **Extra Duty** and **Extra Duty Abrasion Resistant Material (A.R.M.)*** tips include approximately 60% more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

GENERAL PURPOSE



» **General Purpose** tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the General Purpose tip unless otherwise noted.



» **Wide** tips are used to maintain smooth trench floors and in low-abrasion, easy-to-penetrate material.

PENETRATION PLUS



» **Penetration Plus** tips feature 25% more wear material and a leading edge with 25% less cross-sectional area. They self-sharpen as they wear.

PENETRATION



A.R.M. OPTION AVAILABLE

» **Penetration** tips are ideal for densely compacted materials. They feature a leading edge with 60% less cross-sectional area—allowing for maximum penetration—and a single center rib that self-sharpens as it wears. These tips are available with A.R.M.*



» **Spike** tips are used to achieve maximum penetration. They are typically used in cohesive material and stay sharp during the life of the tip.

DOUBLE SPIKE



» **Double Spike** tips are used in the corner positions with the spike tips for hard-to-penetrate, fracturable materials.

Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life—and can last even longer in some applications.

K SERIES ADAPTER OPTIONS

All K Series adapters feature rails on both sides of the nose for a twist-on design that stays in place during installation.

MACHINE COMPATIBILITY

EXCAVATOR	LINKAGE	SIZE CLASS
315	N/A	K80, K90
318	N/A	K80, K90
320	Reach	K80, K90
	Mass Excavation	K90, K100
324	Reach	K90, K100
	Mass Excavation	K100, K110
329	Reach	K90, K100
	Mass Excavation	K100, K110
336	Reach	K100, K110
	Mass Excavation	K110, K130
349	Reach	K110, K130
	Mass Excavation	K130
374	Reach	K150
	Mass Excavation	K170
390	Reach	K150
	Mass Excavation	K170





J SERIES TIP & ADAPTER SYSTEM

SIDE-PIN SECURITY WHEN YOUR APPLICATION DEMANDS IT.

Great performance and proven reliability over time—that's what you get with this classic horizontal retention system, a staple in the construction and mining industries.

BOOST YOUR VERSATILITY

Industry-standard side-pinned design performs across a variety of applications.

ENHANCE YOUR RELIABILITY

Weld-on adapters offer excellent retention.

IMPROVE SAFETY & MAINTENANCE TIME

Ability to retrofit means you can use the hammerless CapSure™ system.

J SERIES TIP & ADAPTER SYSTEM



Rock Chisel Tip

INSTALLATION & REMOVAL

Simply use the standard pin and retainer system—and make removal even easier with our Tip Pin Remover tool.*

1 Place the tool on the tip and align the extractor with the pin.



2 Strike the tool with a hammer until the pin is removed.



3 Place the tool over the tip (A), locate the pin in the hole of the holder (B) and strike the tool (C).



**J550 and smaller use the pin removal tool. Consult your dealer for larger systems.*

J SERIES TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by hydraulic excavators. We also offer additional J Series tips more commonly used with wheel loaders. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

HEAVY DUTY LONG



» **Heavy Duty Long** and **Heavy Duty Abrasion Resistant Material (A.R.M.)*** tips include approximately 60% more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

A.R.M. OPTION AVAILABLE

LONG (GENERAL PURPOSE)



» **Long** tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the Long tip unless otherwise noted.

WIDE



» **Wide** tips are used to maintain smooth trench floors and in low-abrasion, easy-to-penetrate material.

PENETRATION PLUS



» **Penetration Plus** tips feature 30% more wear material and 25% less cross-sectional area. They self-sharpen as they wear.

PENETRATION



» **Penetration** and **Penetration A.R.M.*** tips are ideal for densely compacted materials. They feature a leading edge with approximately 50% less cross-sectional area and a single center rib for strength—allowing for maximum penetration.

A.R.M. OPTION AVAILABLE

SPIKE



» **Spike** tips are used to achieve maximum penetration. They are typically used in cohesive material and stay sharp during the life of the tip.



» **Spike Corner** tips can be used in the corner position with sharp center tips.

IMPACT

DOUBLE SPIKE



» **Double Spike** tips are used in the corner positions with the spike tips for hard-to-penetrate, fracturable materials.

**Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life—and can last even longer in some applications.*

GENERAL DUTY TIPS

General Duty tips offer a reliable, competitively priced parts option for small to medium-sized excavators operating in low to medium impact conditions. Tips are available in the J250-J460 size range.

General Duty tips are:

- A match if you require quality and long wear
- Designed to fit J Series adapters, reducing risky fit-ups
- Backed by the standard Caterpillar warranty against breakage under normal, recommended operation in low to medium impact applications

LONG



- Most versatile shape with good balance of penetration, strength and abrasion resistance. Standard shape for most applications.

HEAVY DUTY LONG



- Use on larger machines where greater strength is required. More wear material for higher abrasion environments.

PENETRATION PLUS



- Enhanced penetration in densely compacted material, such as clay. Resists blunting and is self-sharpening. Ideal for tough trenching applications.

J SERIES MACHINE COMPATIBILITY

EXCAVATOR	LINKAGE	SIZE CLASS
312	N/A	J250, J300
315	N/A	J300, J350
318	N/A	J300, J350
320	Reach	J300, J350, J400
	Mass Excavation	J400, J460
324	Reach	J400, J460
	Mass Excavation	J460, J550
329	Reach	J400, J460
	Mass Excavation	J460, J550
336	Reach	J460, J550
	Mass Excavation	J550
349	Reach	J550
	Mass Excavation	J550
374	Reach	J600
	Mass Excavation	J700
390	Reach	J600
	Mass Excavation	J700, J800

HAMMERLESS TIP & ADAPTER SYSTEM FEATURING CAPSURE RETENTION

LOSE THE HAMMER, NOT THE FLEXIBILITY.

Simplify bucket tip replacement with hammerless CapSure retention. These tips are matched to side-pin adapters, allowing the flexibility to use our conventional pin retention if your application demands it.

LOWER OPERATING COSTS	Side-pin retrofit design used on J-style adapters means the pin is reusable.
ENHANCE JOBSITE SAFETY & MAINTENANCE TIME	A ¾-inch retainer lock requires no special tools and allows for hammerless installation and removal.
CHANGE OUT TIPS QUICKLY & EASILY	Positive stop is cast into the tip to prevent over-rotation—just turn 180 degrees to lock or unlock.
SPEED UP YOUR INSTALLATION TIME	Tip and retainer are one system, so there's no special assembly or extra pieces.



HAMMERLESS TIP & ADAPTER SYSTEM FEATURING CAPSURE RETENTION



INSTALLATION & REMOVAL

It's fast, easy and safe with the CapSure locking system—just follow these four simple steps:

Scan the QR code to the right to watch the installation video.

1 Insert pin and washer into the adapter hole.



2 Slide the tip onto the adapter.



3 Tighten 180° into the locked position with a 3/4" ratchet.



4 Remove by loosening 180° to the unlocked position.



CAPSURE TIP OPTIONS

We offer four CapSure tip options designed for a range of jobsite conditions. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY DUTY ABRASION



» **Heavy Duty Abrasion** tips are ideal for high-abrasion applications like sand, gravel and shot rock. They have the maximum amount of wear material—approximately 145% more—and the tip base features 35% more surface area than Heavy Penetration tips.

HEAVY PENETRATION



» **Heavy Penetration** tips are ideal for high-impact, hard-to-penetrate materials. They feature approximately 120% more material in the high wear area as well as a sharp spade design with 70% less cross-sectional area on the leading edge than Heavy Duty Abrasion tips.

HEAVY DUTY



» **Heavy Duty** tips are the baseline for other tips. All wear comparisons are to the Heavy Duty tip unless otherwise noted.

PENETRATION PLUS



» **Penetration Plus** tips feature 30% more wear material and 25% less cross-sectional area. They self-sharpen as they wear.

MACHINE COMPATIBILITY

EXCAVATOR	LINKAGE	SIZE CLASS
336	Reach	N/A
	Mass Excavation	J550 (Retrofit)
349	Reach	J550 (Retrofit)
	Mass Excavation	J550 (Retrofit)
374	Reach	J600 (Retrofit)
	Mass Excavation	J700 (Retrofit)
390	Reach	J600 (Retrofit)
	Mass Excavation	J700 (Retrofit), J800 (Retrofit)

BASE EDGE SYSTEMS

FASTEST INSTALLATION TIMES IN THE INDUSTRY.

Cat base edge systems go through a series of carefully controlled manufacturing processes to deliver maximum strength, durability and long life. They come completely welded and assembled, dramatically shortening your installation and replacement time.

INCREASE DURABILITY

A consistent heat-treat process maximizes strength and resists abrasion. Shot blasting removes impurities that can cause inclusions on a weld, and controlled cooling reduces the chance of stress points.

SAVE INSTALLATION & REPLACEMENT TIME

Butterbead is applied to the back side of the base edge and the top strap of the corner adapter, so you can weld the edge onto the bucket without preheating.

OPTIMIZE MACHINE PERFORMANCE

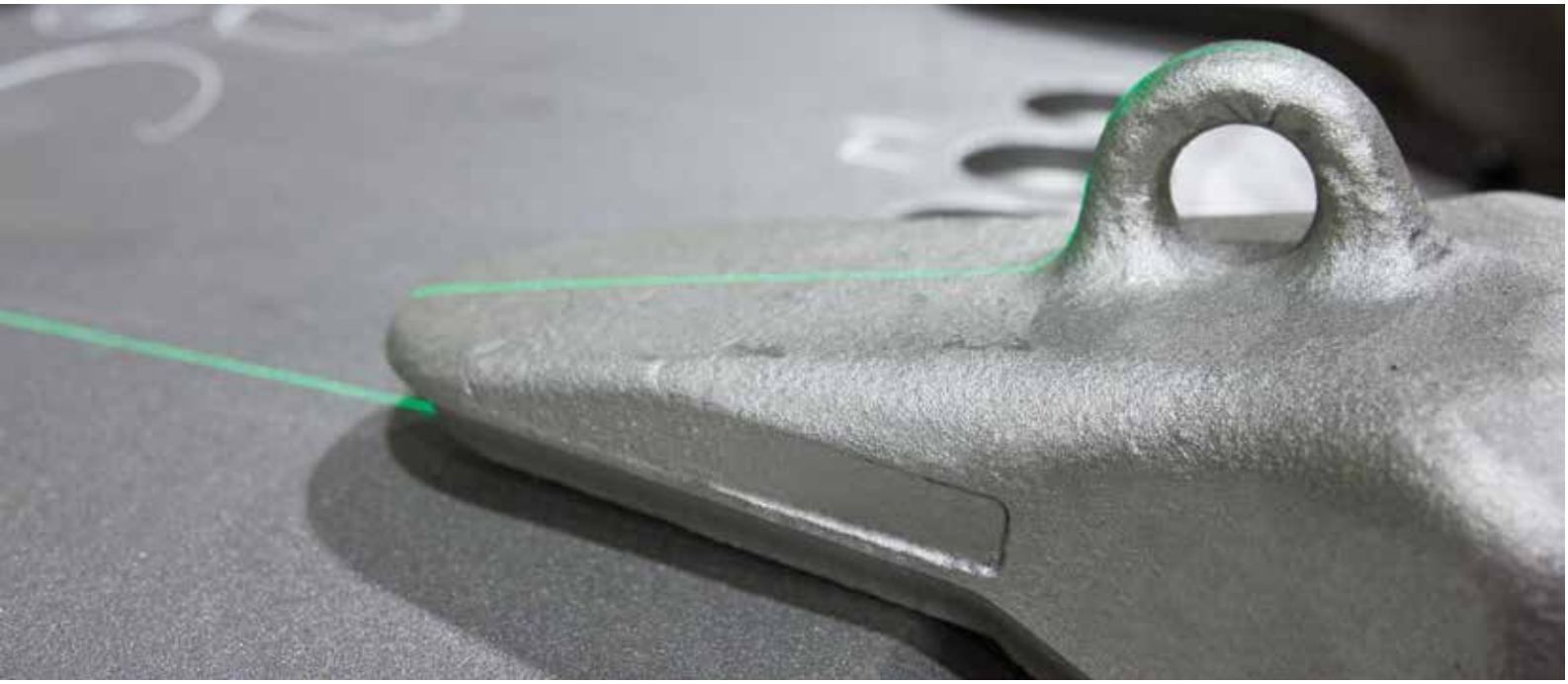
Base edges are designed by Caterpillar engineers for optimal performance on specific machines.

BASE EDGE SYSTEMS

Base edge replacement involves replacing a base edge assembly, which includes adapters welded in from the factory, or replacing a bolt-on cutting edge (BOCE) base edge, which comes with factory-drilled holes for bolt-on G.E.T. Choose from three shapes (base edge for BOCE, straight and spade base edge assemblies) to get the right protection for your application.

GET MORE ACCURACY

Lasers place the adapters within 0.1 mm of specifications.



BOLT-ON CUTTING EDGE



STRAIGHT



SPADE



BUTTERBEAD BASE EDGE ASSEMBLY

DURABLE PROTECTION COMBINED WITH SHORTER INSTALLATION TIMES.

The protection you need, with no preheating required—that's what you get with butterbead weld prep. This technique, which involves applying a layer of weld to a heat-treated, higher hardness part, makes it possible to weld a base edge to a bucket without preheating the hardened part. Choose from two shapes (straight and spade) on cutting edges thicker than 50mm and three levels of build to get the right protection for your application.

SPEED UP YOUR INSTALLATION TIME

Weld prep eliminates the need for preheating, shortening edge installation time by 30-50%.

GET MORE DURABILITY

Base edges have the proper butterbead weld because it is applied in the factory.



BASE EDGE END PROTECTION (BEEP)

PROTECT YOUR CORNERS—WITHOUT CUTTING THEM.

Reduce base edge end wear and subsequent corner adapter weld erosion with our BEEP design. It makes adapter replacement on the edge much easier when it's time to rebuild the base edge assembly. BEEPs are available in a wide array of thicknesses and angles to fit 336-390 hydraulic excavators.

BOOST YOUR UPTIME	Through-hardened Rc ~45 (Br ~3.0) weldable steel is easily installed in the shop or the field.
EXTEND LIFE	Extended base edge end protects adapter corner welds.
SPEED UP INSTALLATION	Height and bevel are matched to the base edge, so there's no additional fabrication.





SIDE & EDGE PROTECTION

MAINTAIN YOUR PERFORMANCE EDGE.

Protect your bucket's structural integrity with sidebar protectors and shear blocks or increase penetration and performance with side cutters.

- Sidebar Protectors
- Side Cutters
- Half Arrows
- Top Covers
- Cutting Edges
- Weld-On Edge Shrouds



SIDEBAR PROTECTORS

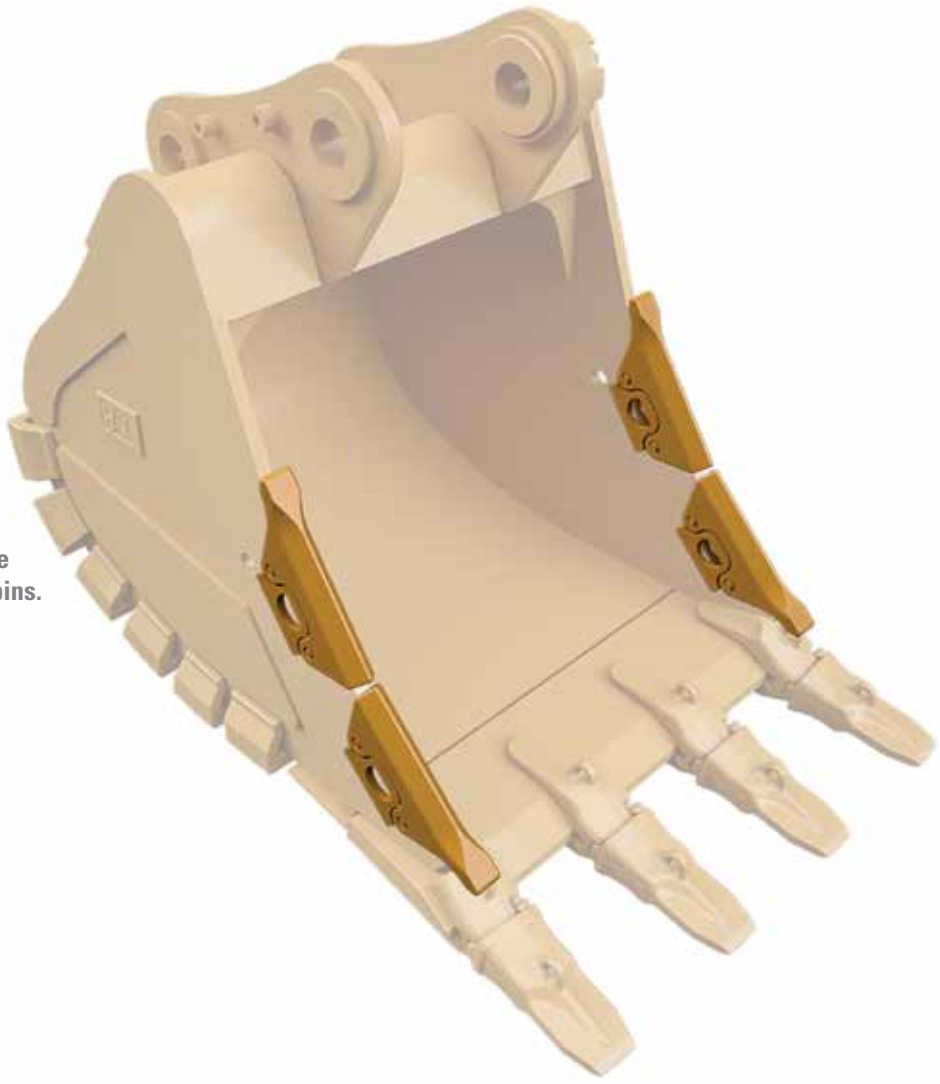
Protect your bucket's structural integrity with sidebars and shear blocks.

INCREASE YOUR UPTIME

Shear block protects the pin from extreme loads and breakage, helping ensure sidebar protector retention.

CUT YOUR MAINTENANCE COSTS

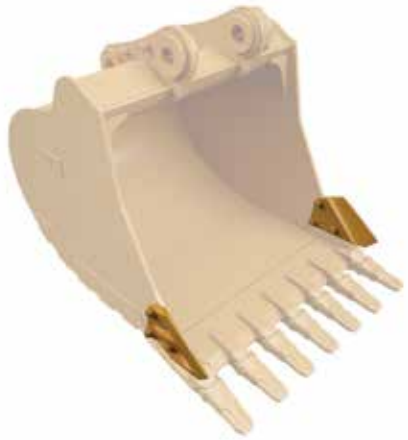
Sidebar protector protects the bucket edge.



Shear block bears the loads instead of the pins.

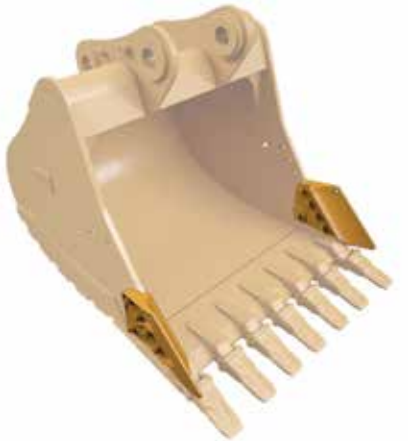
SIDECUTTERS

Improve your bucket's performance while protecting your sidebars.



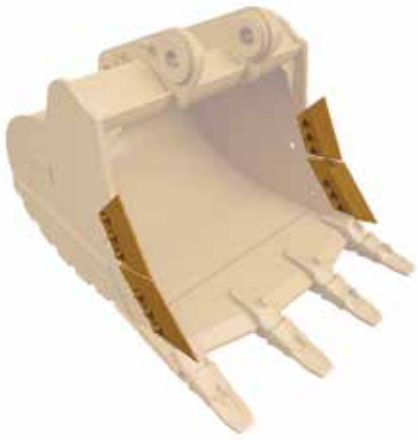
GENERAL PURPOSE SIDECUTTER

- Effective in moderate-impact conditions.
- Suitable for most soil conditions.
- Provides a strong, wear-resistant surface to help protect bucket sides.
- Extends bucket side width to match the teeth bite.



HEAVY DUTY SIDECUTTER

- For tough digging conditions.
- More wear material.
- Covers more of the sidebar for enhanced protection of the bucket.
- Scalloped profile improves bucket penetration and machine performance.



STRIKEOFF SIDECUTTER

- Half arrow shape to provide better penetration than bare bucket.
- Protects the lower bucket sides and corners.
- For use in moderate-to-light conditions.
- Can be stacked for more protection.

BOLT-ON HALF ARROWS, TOP COVERS, CUTTING EDGES & WELD-ON SHROUDS

Protect your investment in buckets and base edges with these flexible components. Half arrows allow for a smooth transition of material over the base edge to protect the leading edge. Top covers complement the half arrows to protect the base edge fully. Modular edge shrouds are designed to fit any bucket configuration and extend the life of your excavator bucket edge assembly.

SIMPLIFY MAINTENANCE	Individual pieces that protect the edge can be changed independently.
ENHANCE DURABILITY	Half arrows cover the leading edge for smooth material transition.
BOOST YOUR UPTIME	Top cover reduces wear on weld joints.



BUCKET SELECTION GUIDE

We offer four standard bucket durability categories suitable for any application. Each category is based on the bucket's intended durability when used in the recommended application and material.



GENERAL DUTY

» For digging in low-impact, lower-abrasion materials such as dirt, loam and mixed compositions of dirt and fine gravel. Example: Digging conditions in which General Duty tip life exceeds 800 hours.



HEAVY DUTY

» For a wide range of impact and abrasion conditions including mixed dirt, clay and rock. Example: Digging conditions where Penetration Plus tip life ranges from 400 to 800 hours.

» HD buckets are a good "center line" choice, or starting point, when application conditions are not well known.



SEVERE DUTY

» For higher abrasion conditions such as well-shot granite and caliche. Example: Digging conditions where tip life ranges from 200 to 400 hours with Penetration Plus tips.



Typical 336-349 bucket

EXTREME DUTY

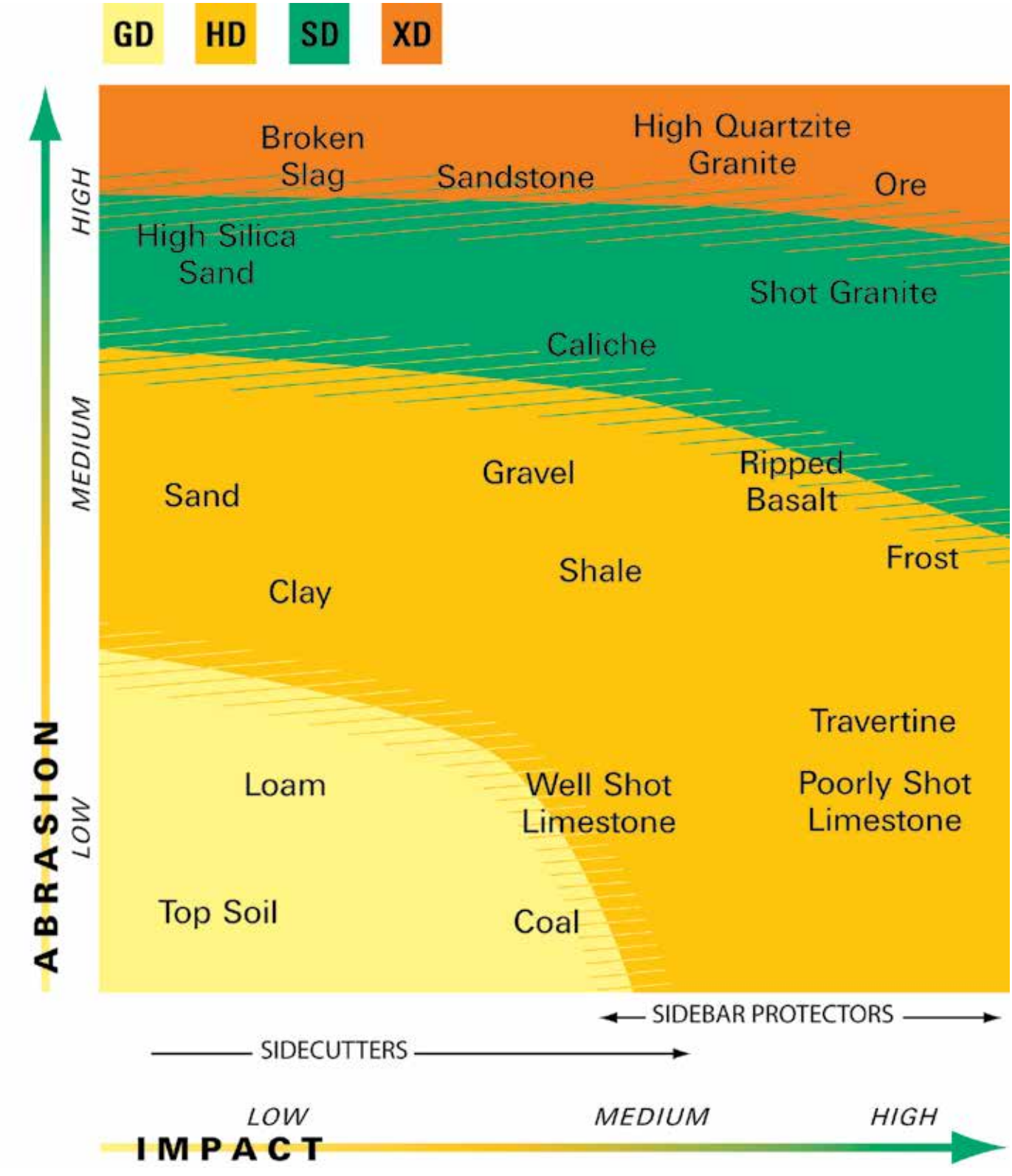
» For very high-abrasion conditions including high quartzite granite. Example: Digging conditions where tip life is less than or equal to 200 hours with Extra Duty tips.



Typical 374-390 bucket

CHOOSING THE RIGHT DURABILITY.

Choosing the wrong bucket can easily reduce production and increase operating costs by 10-20% or more. It can also cause unnecessary wear and fatigue for both machine and bucket. Contact your local Cat dealer for more detailed information on choosing the right excavator, bucket and work tool attachment combinations to meet your application needs.



ADDITIONAL BUCKET STYLES

Several different bucket styles are available—each with a special purpose:



DITCH CLEANING

These buckets are designed for cleaning ditches, sloping, grading and other finish work. Their shallow depth and compact size make working in confined areas easier. Drainage holes allow liquid to empty so material dumps more easily. Ditch Cleaning Buckets are available for 311-336 excavators.

Tilt Buckets feature a full 45° of tilt in each direction, powered by two double-acting cylinders. Tilt Buckets are available for 311-329 excavators.



CENTER-LOCK™ PIN GRABBER PERFORMANCE

This bucket is designed with a patented recessed pin to provide maximum digging performance while keeping the versatility and convenience of a coupler. Tip radius is reduced and allows up to 10% improvement in breakout force when compared to a conventional pin-on bucket and coupler combination.

Center-Lock Pin Grabber Performance Buckets are available for 315-349 excavators in General Purpose and Severe Duty durability.



POWER

Power Buckets are for use in abrasive applications where breakout force and cycle times are critical—and for use in materials such as tightly compacted mixed dirt and rock. (Not recommended for clay.) Breakout force is maximized due to decreased tip radius and increased pin spread. Machine cycle times in most material are improved over a standard bucket in a similar application.

Heavy Duty Power Buckets are available for 320-336 excavators.



WIDE TIP

Wide Tip Buckets are intended to perform best in low-impact materials such as dirt and loam where leaving a smoother floor and minimal spillage is necessary. The bucket is engineered to be used exclusively with Cat Wide Tips. Corner adapters face straight forward to create a smooth edge.

General Duty Wide Tip Buckets are available in widths from 24" to 78" for 311-349 excavators.



HIGH CAPACITY

High Capacity Buckets are designed and built for use in high-production truck-loading applications. With proper application and set up, these buckets will move more material in a minimal amount of passes—maximizing production.

High Capacity Buckets are available for 336-390 excavators in General Duty durability.

CAT DEALER & BUCKET MANAGEMENT

CHOOSING CAT G.E.T. IS EASY.

Your Cat dealer makes it easy to choose the right G.E.T. for your machines and applications. In addition to a broad portfolio of products, your dealer offers the sales, service and technical support you need to keep productivity high and operating costs low. Trust your Cat dealer to:

MAXIMIZE PRODUCTIVITY	Buckets and G.E.T. products are designed to meet your application requirements, rather than simply fit onto your machine.
IMPROVE PERFORMANCE	Get the most out of your bucket and G.E.T. with expert advice that helps you lower costs and reduce unscheduled maintenance.
SIMPLIFY MAINTENANCE	Tailored G.E.T. systems simplify your maintenance. We develop solutions that fit your expectations, including custom products.
MANAGE WEAR	Intuitive Cat Inspect bucket inspection programs help you monitor how your G.E.T. system is wearing so you can adapt to changes in application and operation.



Talk to your Product Support Representative or G.E.T. specialist today to learn how they can help you simplify your bucket management by using Cat Inspect.

HYDRAULIC EXCAVATOR (HEX) RIP AND LOAD

Using rippers mounted on large hex is a cost-effective alternative to blasting in quarries and site development. In site development, rippers on smaller excavators and backhoe loaders can readily deal with asphalt, caliche and frozen ground.

IMPROVE YOUR PRODUCTIVITY

Increase productivity by adding efficiency and flexibility to your operation.

EXTEND LIFE

A through-hardened hammerless wear tip and shank protector extend wear life.

INCREASE DURABILITY

Upsized, hammerless adapters and tips accommodate higher loads and abrasion, while edge segments and top covers protect your base edge.



RIPPER-TO-BUCKET CHANGES ARE MADE HYDRAULICALLY IN LESS THAN 35 SECONDS.

This gives the operator complete flexibility to continually adjust ripping, sorting and loading work.

SIMPLE CHANGES

Pull material down and change bucket quickly and easily.

BLAST FREE

Ripper allows you to work without blasting in areas with unstable land or sound regulations.

1



2



3



4



5



6



WHEEL LOADERS (950-994)

STRENGTH. DURABILITY. LONG LIFE. PLUS EVERYTHING YOU NEED TO BOOST UPTIME ON YOUR JOB.

For wheel loaders, you can choose from Cat Advansys, K Series, J Series and Hammerless Tip & Adapter Systems, each available with multiple tip options for a range of jobsite conditions. Optimize your machine's productivity in every jobsite condition with the wide range of G.E.T. products available. Cat buckets and G.E.T. make up the only bucket system designed and developed to maximize the performance and productivity of your Cat wheel loader.



TIP SELECTION GUIDE

Even though bucket tips come in many shapes and sizes, you don't have to be an expert to choose the right ones. Use the chart below to determine if the material you're digging in is high, medium or low impact and abrasion—then find the balance you need among these three factors:

1 STRENGTH

The ability to withstand digging and penetrating shocks and high breakout forces

2 PENETRATION

The ability to penetrate tough material when it's tightly compacted, rocky or frozen

3 WEAR LIFE

The ability to withstand wearing, scouring and abrasive action of the material being handled

	988-994 WHEEL LOADERS IMPACT (material size)	950-982 WHEEL LOADERS IMPACT (material size)	950-994 WHEEL LOADERS ABRASION (tip life)
LOW	 0-6" | 0-152mm	 0-4" | 0-102mm	> 1,000 hours
MEDIUM	 6-18" | 152-457mm	 4-12" | 102-305mm	250 -1,000 hours
HIGH	 18"+ | 457mm+	 12"+ | 305mm+	< 250 hours

CAT ADVANSYS TIP & ADAPTER SYSTEM

BUILT TO DELIVER MAXIMUM PRODUCTIVITY AND THE LOWEST BUCKET LIFECYCLE COST IN THE TOUGHEST APPLICATIONS.

Cat Advansys is built for machine productivity, balancing tip wear material and penetration requirements. Integrated hammerless retention ensures you are back to work in minutes without a separate retainer.

PERFORMANCE & PRODUCTIVITY	Heavy Abrasion and Heavy Penetration designs have more usable wear material while maintaining profile during the full life of the tip.
EXTEND BUCKET LIFECYCLE	Adapter design directs material flow over adapter strap, which can extend adapter service life and bucket lifecycle.
ENHANCE JOBSITE SAFETY	Hammerless system. A 3/4 inch retainer lock requires no special tools for installation and removal.

CAT ADVANSYS TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by large wheel loaders. We also offer additional Cat Advansys tips more commonly used with excavators. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY ABRASION



» **Heavy Abrasion** tips feature a redesign for the Cat Advansys system that results in 11 percent more usable wear material than K Series and a tip shape that stays sharp through the life of the tip. These tips are available with Abrasion Resistent Material (A.R.M.)*.

A.R.M. OPTION AVAILABLE

HEAVY PENETRATION



» **Heavy Penetration** tips feature a redesign for the Cat Advansys system that results in 6 percent more usable wear material than K Series and a tip shape that stays sharp through the life of the tip in the most severe applications.

HEAVY DUTY

A.R.M. OPTION AVAILABLE



» **Heavy Duty** and **Heavy Duty A.R.M.*** tips include approximately 60 percent more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

GENERAL PURPOSE



» **General Purpose** tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the General Purpose tip unless otherwise noted.

COAL



» **Coal** tips have a reduced amount of wear material to maximize bucket payload and a smooth underside to maintain a flat floor.

PENETRATION PLUS



» **Penetration Plus** tips feature 25 percent more wear material and a leading edge with 25 percent less cross-sectional area. They self-sharpen as they wear.

PENETRATION

A.R.M. OPTION AVAILABLE

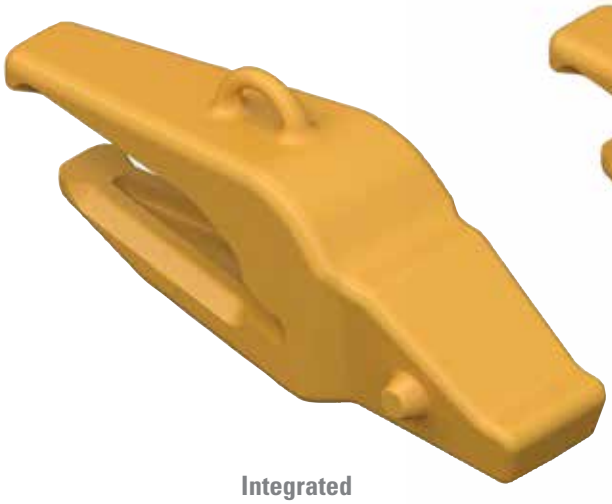


» **Penetration** tips are ideal for densely compacted materials. They feature a leading edge with 60 percent less cross-sectional area—allowing for maximum penetration—and a single center rib that self-sharpens as it wears. These tips are available with A.R.M.*

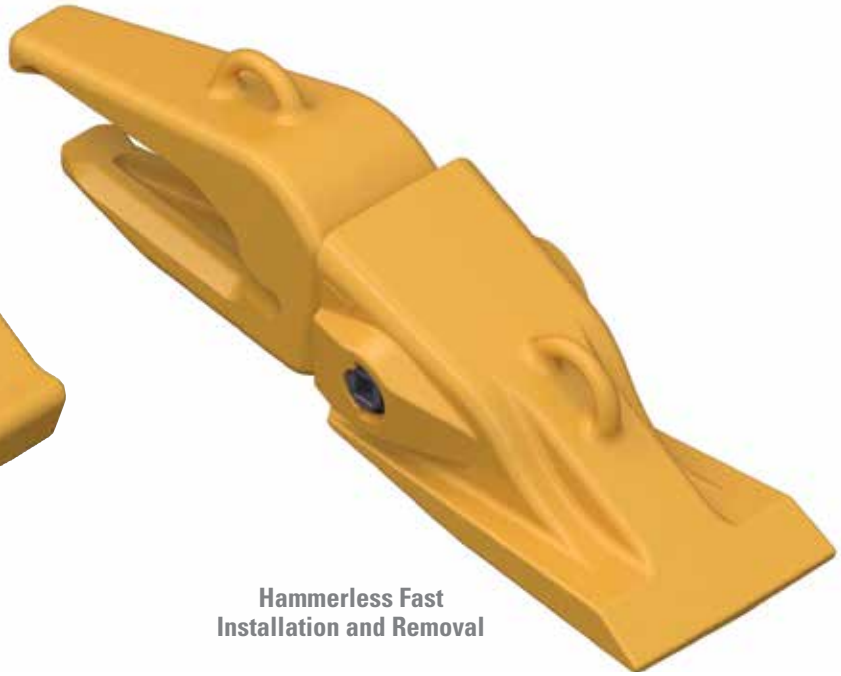
Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life and can last even longer in some applications.

CAT ADVANSYS HAMMERLESS TIP & ADAPTER SYSTEM

Cast retention pin means no separate retention pin to buy or lose during tip replacements. The tip loads on the adapter nose, never putting the cast retention lugs under stress or wear.



Integrated Retaining Lug



Hammerless Fast Installation and Removal

CHANGE OUT TIPS QUICKLY & EASILY

CapSure hammerless retention requires no special tools. Just turn the retainer 180° to install or remove the tips.

Scan the QR Code to the right to watch the installation video.

1 Turn retainer 180° clockwise to lock.



2 Turn retainer 180° counter clockwise to unlock..



CAT ADVANSYS ADAPTER SYSTEM



NOSE GEOMETRY DESIGN FEATURES

- Asymmetrical nose geometry reduces sliding wear on adapter nose surfaces, extending the life of the adapter.
- The asymmetrical design ensures a reliable fit even when the adapter surface becomes worn.

Four adapter styles cover the entire wheel loader product range.



994/994K ADAPTER WEAR CAP SYSTEM

» Adapter cover protects the adapter and welds in high-abrasion applications like granite and iron ore.

» Allows for more penetration.



FLUSH-MOUNT (SHOWN WITH OPTIONAL COVER)

» 360-degree weld around the adapter provides 20 percent more weld strength than a two-strap system.

» Adapter cover and half-arrow segment create a flush surface to keep the quarry floor clean, reducing potential tire damage.

» Adapter cover protects the adapter and welds in high-abrasion applications like granite and iron ore.

» Features a higher profile, which can affect penetration.



TWO-STRAP

A.R.M. OPTION AVAILABLE

» Features a lower profile than the flush-mount adapter.

» Allows for more penetration.

» Available with Abrasion Resistant Material (A.R.M.).

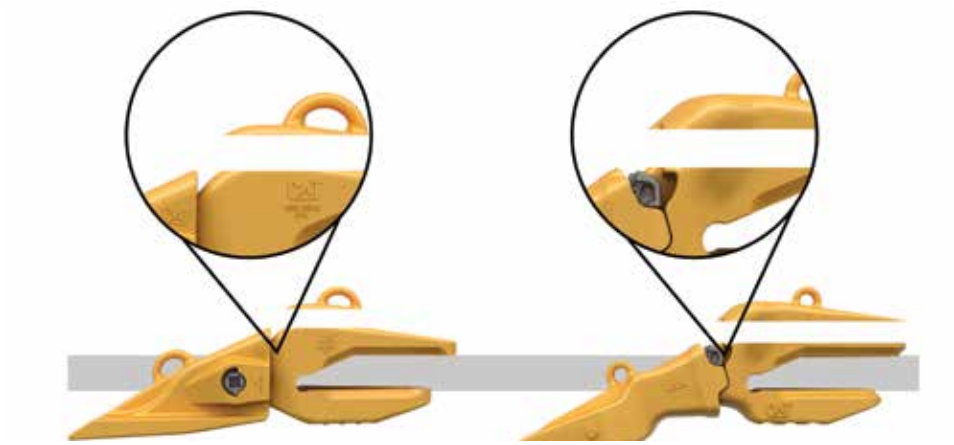


BOLT-ON

» Gives you the flexibility to switch between cutting edge or teeth when you need more penetration (such as a frozen pile).

CAT ADVANSYS TIP SYSTEM DESIGN

The tip system design naturally shields the adapter strap even without a wear cap. This allows up to a 25% increase in wear life when compared to K series or other low profile systems.



Cat Advansys K Series

Cat Advansys can improve tip to adapter wear life ratio. Extending your adapter life can mean fewer replacements during the bucket life cycle.

Heavy Abrasion and Heavy Penetration tips both have a longer usable wear life, while staying sharper throughout the useful life of the entire tip.



X220 Heavy Abrasion Tip[1]
72% Available Wear Material

X220 Heavy Penetration Tip[1]
60% Available Wear Material

1 This is representative of one customers and wear rates may vary by application

MACHINE COMPATIBILITY

WHEEL LOADER	SIZE CLASS	ADAPTERS AVAILABLE
950, 962	Cat Advansys 80, 90 Cat Advansys 90	Bolt-on, Flush-Mount with Adapter Cover, Two-Strap with Top Cover
966, 972	Cat Advansys 90	Bolt-on, Flush-Mount with Adapter Cover, Two-Strap with Top Cover
980, 982	Cat Advansys 100	Bolt-on, Flush-Mount with Adapter Cover, Two-Strap with Top Cover
986, 988	Cat Advansys 110	Bolt-on, Flush-Mount with Adapter Cover, Two-Strap with Top Cover
988, 992	Cat Advansys 130	Flush-Mount with Adapter Cover, Two-Strap with Top Cover
992, 993, 994	Cat Advansys 150	Flush-Mount with Adapter Cover, Two-Strap with Top Cover
994	Cat Advansys 200	Two-Strap with Wear Cap System
994K	Cat Advansys 220	Two-Strap with Wear Cap System



K SERIES TIP & ADAPTER SYSTEM

EXCELLENT PENETRATION THROUGH VERTICAL RETENTION AND COMPACT PROFILE.

K Series delivers digging performance throughout the life of the tip with its elliptical adapter nose and vertical retention design. The twist-on fit of the tip and adapter makes installation easier.

IMPROVE YOUR PRODUCTIVITY	Low-profile shape provides optimal sharpness, penetration, and digging ability throughout the tip life.
STAY SAFE & REDUCE MAINTENANCE COSTS	One-piece vertical retainer allows for easy installation and removal.
SIMPLIFY INSTALLATION	Rails on both sides of the adapter and a twist-on design hold the tip in place, allowing for quicker installation.



K SERIES TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by large wheel loaders. We also offer additional K Series tips more commonly used with excavators. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY ABRASION



» **Heavy Abrasion** tips are ideal for high-abrasion applications like sand, gravel and shot rock. They feature the maximum amount of wear material—approximately 145 percent more—and a tip base with 35 percent more surface area than Heavy Duty Penetration tips.

HEAVY PENETRATION



» **Heavy Penetration** tips are ideal for high-impact, hard-to-penetrate materials. They feature approximately 120 percent more material in the high wear area as well as a spade design that has 60 percent less cross-sectional area on the leading edge than Heavy Abrasion tips.

HEAVY DUTY



A.R.M. OPTION AVAILABLE

» **Heavy Duty** and **Heavy Duty Abrasion Resistant Material (A.R.M.)*** tips include approximately 60 percent more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

GENERAL PURPOSE



» **General Purpose** tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the General Purpose tip unless otherwise noted.

PENETRATION PLUS



» **Penetration Plus** tips feature 25 percent more wear material and a leading edge with 25 percent less cross-sectional area. They self-sharpen as they wear.

PENETRATION



A.R.M. OPTION AVAILABLE

» **Penetration** tips are ideal for densely compacted materials. They feature a leading edge with 60 percent less cross-sectional area—allowing for maximum penetration—and a single center rib that self-sharpens as it wears. These tips are available with A.R.M.*

**Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life—and can last even longer in some applications.*

K SERIES DRIVE-THROUGH TIP & ADAPTER SYSTEM

The drive-through system is for K80-K100 adapters and tips.

Twist-on design

Lower-profile tip





No hole in adapter



Drive-through retainer

Scan the QR code to the right to watch the installation video.

INSTALLATION & REMOVAL

It's safe and easy—just use a standard pry tool and follow this three-step process:

1 INSERT RETAINER



2 HAMMER RETAINER

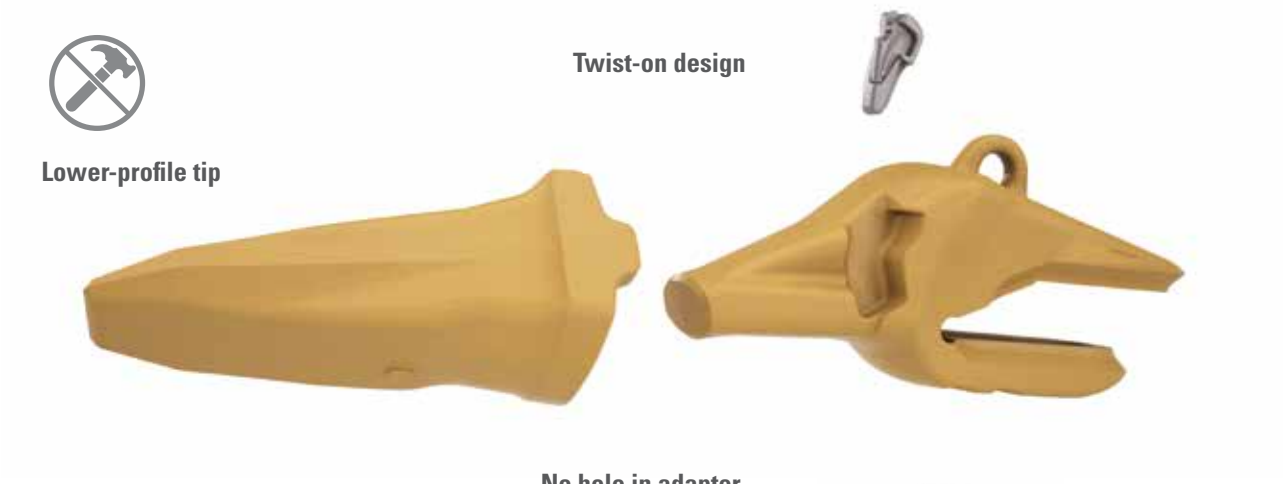


3 SECURE RETAINER



K SERIES TIP HAMMERLESS TIP & ADAPTER SYSTEM

The hammerless system is for K110-K170 adapters and tips.





Retainer - Bolt Drive

- Extreme Packing
- Slag Operations

INSTALLATION & REMOVAL

It's safe and easy—just use a standard pry tool and follow this three-step hammerless process:

To watch the installation video go to www.youtube.com/watch?v=xKWedWjV6nI or by scanning the QR code to the right.

1 INSERT RETAINER



2 PRESS DOWN RETAINER



3 REMOVE RETAINER



K SERIES ADAPTER OPTIONS

All K Series adapters feature rails on both sides of the nose for a twist-on design that stays in place during installation.



FLUSH-MOUNT (SHOWN WITH OPTIONAL COVER)

- 360-degree weld around the adapter provides 20 percent more weld strength than a two-strap system.
- Adapter cover and half-arrow segment create a flush surface to keep the quarry floor clean, reducing potential tire damage.
- Adapter cover protects the adapter and welds in high-abrasion applications like granite and iron ore.
- Features a higher profile, which can affect penetration.



TWO-STRAP

A.R.M. OPTION AVAILABLE

- Features a lower profile than the flush-mount adapter.
- Allows for more penetration and higher productivity.
- Available with Abrasion Resistant Material.



BOLT-ON

- Gives you the flexibility to switch between cutting edge or teeth when you need more penetration (such as a frozen pile).

K SERIES

WHEEL LOADER	SIZE CLASS	BUCKET TYPE / ADAPTERS AVAILABLE
950, 962	K80	Material handling,GD
	K90	Rock
966, 972	K90	Material handling,GD, rock, HD rock
972	K100	Slag
980, 982	K100	Material handling,GD, rock
	K110	HD quarry rock
980	K130	Slag
988	K110	Flush-Mount, Two-Strap, Bolt
988, 990	K130	Flush-Mount, Two-Strap
990, 992	K150	Flush-Mount, Two-Strap
992, 993, 994	K170	Two-Strap

J SERIES

WHEEL LOADER	SIZE CLASS	BUCKET TYPE / ADAPTERS AVAILABLE
950, 962	J300	Material handling,GD
	J350	Rock
966	J350	Material handling,GD, rock, HD rock
972	J350	Material handling,GD, rock, HD rock
	J400	Slag
980	J400	Material handling, GD, rock
980, 982	J460	HD quarry rock
980	J550	Slag
982	J400	Material handling, GD, rock
988	J550	Flush-Mount, Two-Strap, Bolt
990	J600	Flush-Mount, Two-Strap
992	J700	Flush-Mount, Two-Strap
994	J800	Flush-Mount, Two-Strap, Mechanically Attached Adapter

J SERIES TIP & ADAPTER SYSTEM

SIDE-PIN SECURITY WHEN YOUR APPLICATION DEMANDS IT.

Great performance and proven reliability over time—that's what you get with this classic horizontal retention system, a staple in the mining industry.

BOOST YOUR VERSATILITY	Industry-standard side-pinned design performs across a variety of applications.
ENHANCE YOUR RELIABILITY	Weld-on adapters offer excellent retention.
IMPROVE SAFETY & MAINTENANCE TIME	Ability to retrofit means you can use the hammerless CapSure™ system.



J SERIES TIP & ADAPTER SYSTEM



Rock Chisel Tip

INSTALLATION & REMOVAL

Simply use the standard pin and retainer system—and make removal even easier with our Tip Pin Remover tool.*

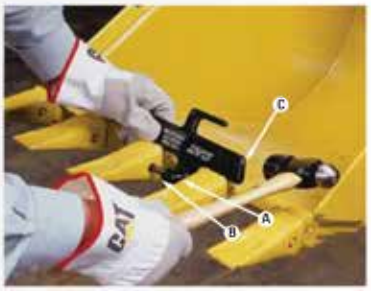
1 Place the tool on the tip and align the extractor with the pin.



2 Strike the tool with a hammer until the pin is removed.



3 Place the tool over the tip (A), locate the pin in the hole of the holder (B) and strike the tool (C).



**Models 992 and down use Tip Pin Remover tool. Consult your dealer for larger machines.*

J SERIES TIP OPTIONS

Below are the tip shapes best suited for the wide range of jobsite conditions performed by large wheel loaders. We offer additional J Series tips more commonly used with excavators. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY DUTY ABRASION



» **Heavy Duty Abrasion** tips are ideal for high-abrasion applications like sand, gravel and shot rock. They feature the maximum amount of wear material—approximately 145 percent more—and the tip base has 35 percent more surface area than Heavy Duty Penetration tips.

HEAVY PENETRATION



» **Heavy Penetration** tips are ideal for high-impact, hard-to-penetrate materials. They feature approximately 120 percent more material in the high wear area, and the spade design has 70 percent less edge area than Heavy Duty Abrasion tips.

HEAVY DUTY LONG



» **Heavy Duty Long** and **Heavy Duty Abrasion Resistant Material (A.R.M.)*** tips include approximately 60 percent more wear material in the tip body. The A.R.M. wears around the profile to increase penetration.

A.R.M. OPTION AVAILABLE

LONG



» **Long** tips are symmetrical and the baseline for other tip styles. All wear comparisons are to the Long tip unless otherwise noted.

PENETRATION PLUS



» **Penetration Plus** tips feature 30 percent more wear material and 25 percent less cross-sectional area. They self-sharpen as they wear.

PENETRATION



» **Penetration** and **Penetration A.R.M.*** tips are ideal for densely compacted materials. They feature a leading edge with approximately 50 percent less cross-sectional area and a single center rib for strength—allowing for maximum penetration.

A.R.M. OPTION AVAILABLE

ROCK CHISEL



» **Rock Chisel** tips are Heavy Duty Long tips ideal for high-impact and high-abrasion applications, such as granite. Additional length and wear material in the body helps retain the chisel shape throughout tip life.

Abrasion Resistant Material (A.R.M.) is a welding process that bonds very hard tungsten carbide particles to Cat G.E.T. to create a protective shield over the component. Typically, the A.R.M. process doubles wear life—and can last even longer in some applications.

J SERIES ADAPTER OPTIONS

J Series adapters use a classic side-pinned retention system for proven, reliable performance.



FLUSH-MOUNT WITH TOP COVER

- 360-degree weld around the adapter provides 20 percent more weld strength than a two-strap system.
- Adapter cover and half-arrow segment create a flush surface to keep the quarry floor clean, reducing potential tire damage.
- Adapter cover protects the adapter and welds in high-abrasion applications like granite and iron ore.



TWO-STRAP

A.R.M. OPTION AVAILABLE

- Offers a lower profile than flush-mount adapters.
- Allows for more penetration and higher productivity.
- Available with Abrasion Resistant Material.



TWO-STRAP BOLT-ON

- Used on 988 wheel loaders for surge or stock piles.
- Gives you the flexibility to switch between cutting edge or teeth when you need more penetration (such as a frozen pile).



MECHANICALLY ATTACHED ADAPTER

- Used on 994 wheel loader for mechanically attached edges.
- Requires a C-clamp retainer.

WHEEL LOADER	SIZE CLASS	ADAPTERS AVAILABLE
988	J550	Flush-Mount, Two-Strap
990	J600	Flush-Mount, Two-Strap
992	J700	Flush-Mount, Two-Strap
994	J800	Two-Strap

HAMMERLESS SERIES TIP & ADAPTER SYSTEM FEATURING CAPSURE RETENTION

LOSE THE HAMMER, NOT THE FLEXIBILITY.

Simplify bucket tip replacement with hammerless CapSure retention. These tips are matched to side-pin adapters, allowing the flexibility to use our conventional pin retention if your application demands it.

LOWER OPERATING COSTS	Side-pin retrofit design used on J-style adapters means the pin is reusable.
ENHANCE JOBSITE SAFETY & MAINTENANCE TIME	A ¾-inch retainer lock requires no special tools and allows for hammerless installation and removal.
CHANGE OUT TIPS QUICKLY & EASILY	Positive stop is cast into the tip to prevent over-rotation—just turn 180 degrees to lock or unlock.
SPEED UP YOUR INSTALLATION TIME	Tip and retainer are one system, so there's no special assembly or extra pieces.



HAMMERLESS SERIES TIP & ADAPTER SYSTEM FEATURING CAPSURE RETENTION





Scan the QR Code to the right to watch the installation video.

INSTALLATION & REMOVAL

It's fast, easy and safe with the CapSure locking system—just follow these four simple steps:

1 Insert pin and washer into the adapter hole.



2 Slide the tip onto the adapter.



3 Tighten 180° into the locked position with a 3/4" ratchet.



4 Remove by loosening 180° to the unlocked position.



CAPSURE TIP OPTIONS

We offer four CapSure tip options designed for a range of jobsite conditions. Your Cat dealer can help you choose the one that offers the right balance of penetration and wear life for your application.

ABRASION

IMPACT

HEAVY DUTY ABRASION



» **Heavy Duty Abrasion** tips are ideal for high-abrasion applications like sand, gravel and shot rock. They have the maximum amount of wear material—approximately 145 percent more—and the tip base features 35 percent more surface area than Heavy Penetration tips.

HEAVY PENETRATION



» **Heavy Penetration** tips are ideal for high-impact, hard-to-penetrate materials. They feature approximately 120 percent more material in the high wear area as well as a sharp spade design with 70 percent less cross-sectional area on the leading edge than Heavy Duty Abrasion tips.

HEAVY DUTY



» **Heavy Duty** tips are the baseline for other tips. All wear comparisons are to the Heavy Duty tip unless otherwise noted.

PENETRATION PLUS



» **Penetration Plus** tips feature 30 percent more wear material and 25 percent less cross-sectional area. They self-sharpen as they wear.

OUR J SERIES ADAPTERS ARE MATCHED WITH HAMMERLESS SERIES TIPS

You can choose hammerless or positive pin systems—giving you the flexibility you need when you need it. Full details about J Series adapters can be found on page 18.



FLUSH-MOUNT WITH TOP COVER



TWO-STRAP BOLT-ON



TWO-STRAP



MECHANICALLY ATTACHED ADAPTER



BASE EDGE SYSTEMS

FASTEST INSTALLATION TIMES IN THE INDUSTRY.

Cat base edge systems go through a series of carefully controlled manufacturing processes to deliver maximum strength, durability and long life. They come completely welded and assembled with no need for preheating, dramatically shortening your installation and replacement time.

INCREASE DURABILITY	A consistent heat-treat process maximizes strength and resists abrasion. Shot blasting removes impurities that can cause inclusions on a weld, and controlled cooling reduces the chance of stress points.
SAVE INSTALLATION & REPLACEMENT TIME	Butterbead is applied to the back side of the base edge and the top strap of the corner adapter, so you can weld the edge onto the bucket without preheating.
OPTIMIZE MACHINE PERFORMANCE	Base edges are designed by Caterpillar engineers for optimal performance on specific machines.

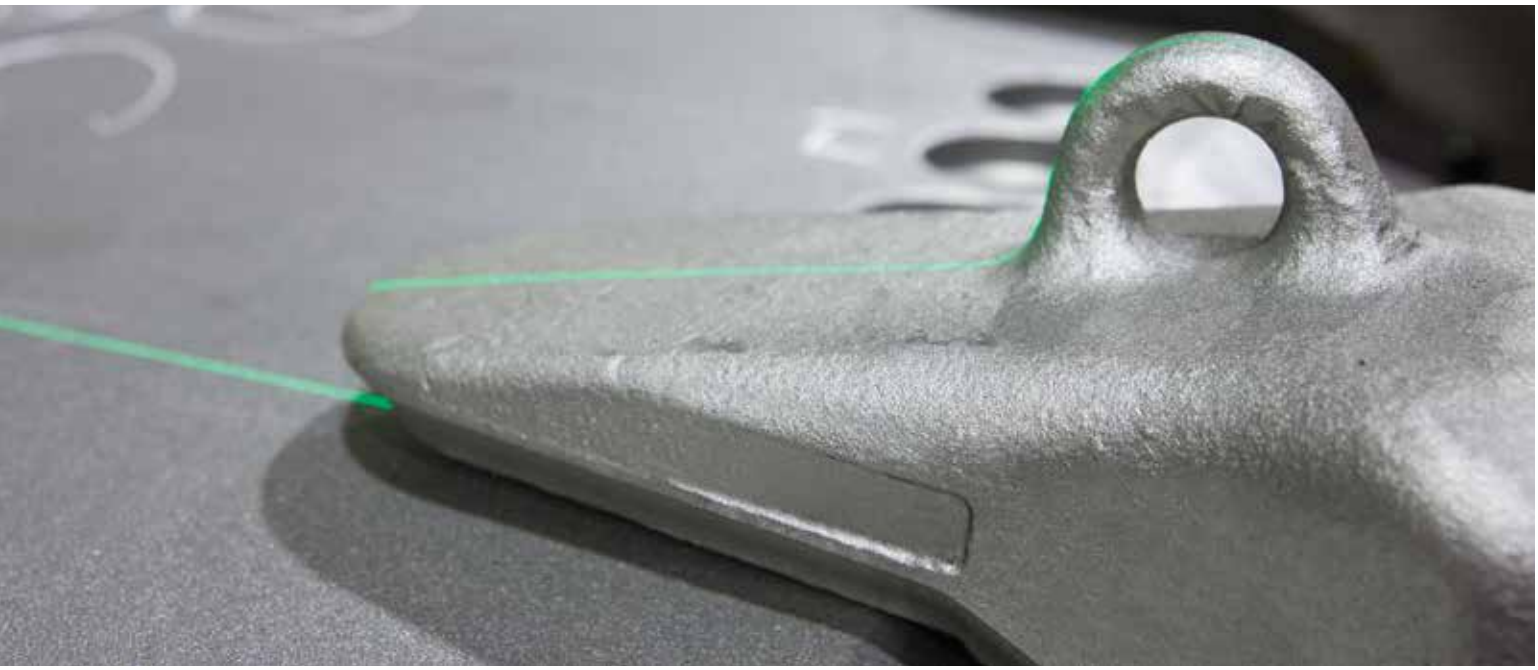


BASE EDGE SYSTEMS

Base edge replacement for 988-994 wheel loaders usually involves a base edge assembly, which is a base edge with adapters welded in place at the factory. Choose from three shapes (straight, spade and stepped spade) and three levels of build to get the right protection for your application.

GET MORE ACCURACY

Lasers place the adapters within 0.1mm of specifications.



STRAIGHT



SPADE



Angled Adapter

STEPPED SPADE



Standard Adapter

BUTTERBEAD BASE EDGE ASSEMBLY

DURABLE PROTECTION COMBINED WITH SHORTER INSTALLATION TIMES.

The protection you need, with no preheating required—that's what you get with butterbead weld prep. This technique, which involves applying a layer of weld to a heat-treated, higher hardness part, makes it possible to weld a base edge to a bucket without preheating the hardened part. Choose from three shapes (straight, spade and stepped spade) and three levels of build to get the right protection for your application.

SPEED UP YOUR INSTALLATION TIME

Weld prep eliminates the need for preheating, shortening edge installation time by 30-50 percent.

GET MORE DURABILITY

Base edges have the proper butterbead weld because it is applied in the factory.



BUTTERBEAD BASE EDGE ASSEMBLY

The chart below shows how much time and money you can save by using Cat base edges prepared with butterbead weld. All 988-994 large wheel loaders have butterbead base edge offerings.

BASE EDGE THICKNESS (mm)	TIME SAVED (hours)
< 40	3 to 6
40 - 50	8 to 12
50 - 60	12 to 16
> 65	16 to 20

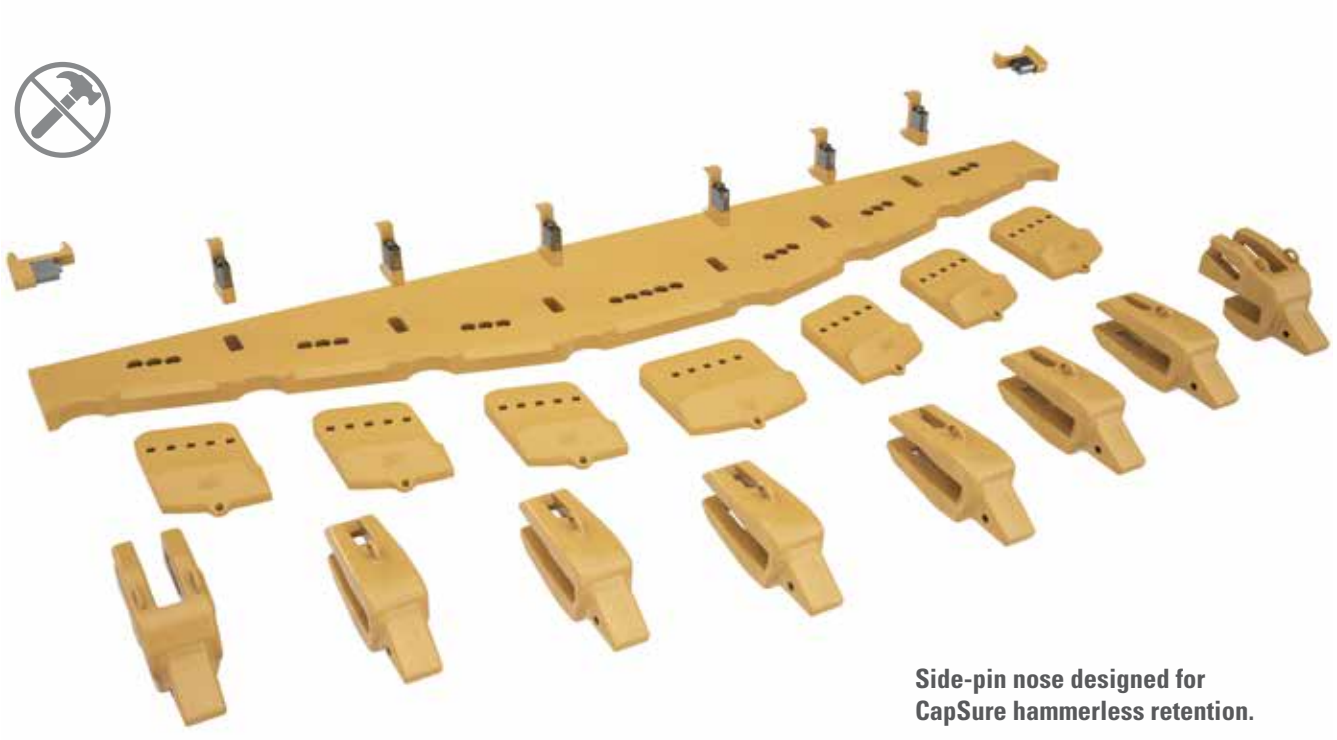


MECHANICALLY ATTACHED ADAPTER SYSTEM (MAA)

ADAPTER RETENTION WITH NO HAMMERS OR WELDING.

Featuring side-pin adapters and CapSure G.E.T. components, our MAA system uses a bolt-in wedge method to tighten a C-clamp, which locks the adapter securely in place every time.

CHANGE ADAPTERS FASTER	Hammerless system reduces change time to less than 60 minutes—70 percent quicker than welded systems.
IMPROVE SAFETY ON YOUR JOBSITE	Bolt-in design eliminates the need for welding and sledgehammers.
LOWER YOUR OPERATING COSTS	Full base edge protection reduces wear.



Side-pin nose designed for CapSure hammerless retention.

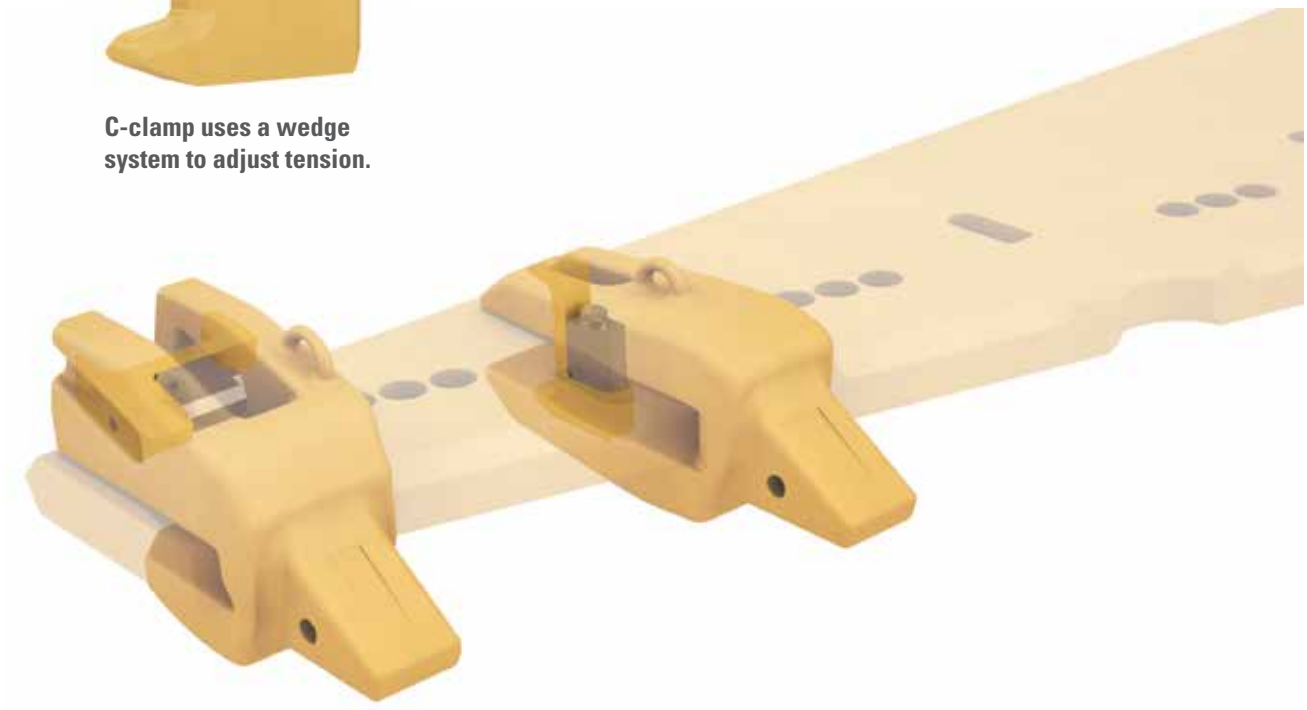
MECHANICALLY ATTACHED ADAPTER SYSTEM (MAA)



C-clamp secures MAA to the base edge.



C-clamp uses a wedge system to adjust tension.



XD BUCKET WITH FLUSH-MOUNT ADAPTER SYSTEM

MORE UPTIME AND PRODUCTIVITY ON YOUR JOB.

Our flush-mount adapter system is ideal for high-impact, high-abrasion applications. The larger adapter and cover offer greater durability and more wear protection than a traditional two-strap system.



Consider a Flush Mount system when:

- Tip life is 300hrs or less
- Adapter weld erosion is common
- Floor cleaning is challenging



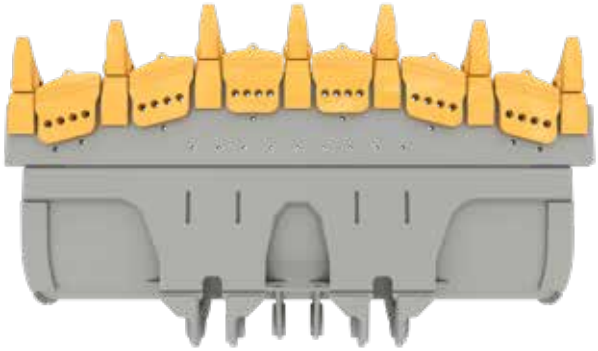
Flush Mount edges are designed for extreme wear conditions accepting lip shrouds or cover plates.



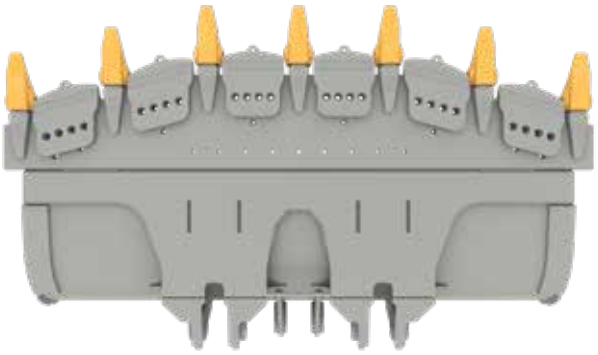
A 35-degree edge bevel helps reduce cracking and breakage in extreme conditions.

XD BUCKET WITH FLUSH-MOUNT ADAPTER SYSTEM

Flush Mount



2-Strap



+50% wear-surface area vs 2-Strap can reduce tip wear rates



More Adapter Weld-Surface delivers 20% more weld strength than a two-strap system.



Optional Adapter Cover shields adapter & provides Weld-Joint Protection



Flush underside supports floor management

SERRATED EDGE SYSTEM

PENETRATES LIKE A TIP, WITH NO ADAPTER REQUIRED.

The serrated cutting edge increases the penetration capabilities of wheel loaders in highly compacted soil or in applications that have higher impact loading requirements. This lends greater versatility to the machine without requiring bucket changes or the addition of other G.E.T. to the existing bucket.

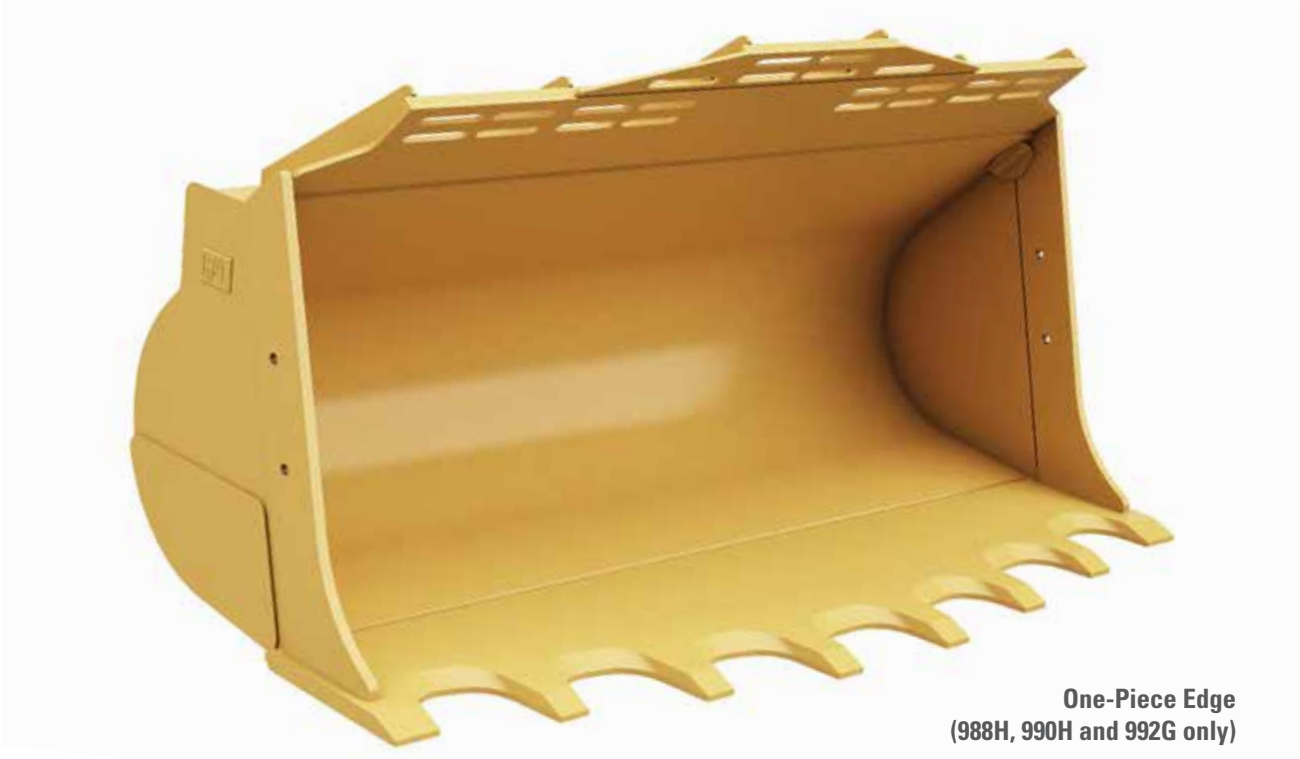
SHORTEN YOUR DIGGING CYCLES	Self-sharpening chamfers provide the best possible penetration.
SIMPLIFY MAINTENANCE	Flat floor offers easy cleanup on your jobsite.
REDUCE YOUR REPAIR COSTS	Bolt-on segments mean no welding, so you only need to replace worn sections (988H and 990H only). *See page 32 for example bucket.
ENHANCE DURABILITY	One-piece edge means no loose parts or parts falling into crushers (988H, 990H and 992G only). *See image below for example bucket.



SERRATED EDGE SYSTEM



Bolt-On Segments
(988H and 990H only)



One-Piece Edge
(988H, 990H and 992G only)

BOLT-ON CUTTING EDGES (BOCE)

BALANCED EDGE SYSTEMS FOR EVERY APPLICATION.

Finding the best solution for your bucket and application is easy with Cat's broad portfolio of edge options. Increase your machine's productivity by reducing operating costs and maintenance interval costs.

Cat bolt-on cutting edge options are available in standard and heavy-duty thicknesses, Cat Abrasion Resistant Material (A.R.M.) and half arrow options. Cat A.R.M. is recommended for applications where sand, gravel or other abrasive materials severely diminish wear life. Hard tungsten carbide particles are bonded to critical wear areas, providing up to five times greater wear life. See your Cat dealer for details.

We have G.E.T. for your bucket, no matter the application or environment. Maximum wear life and breakage resistance is possible with our steel alloy that can endure 2 times the heat and pressure of traditional cutting edge steel products. Consult your local Cat dealer to help determine the best cutting edge system for your application to give you the lowest cost per hour.

STANDARD BOCE



- This is the baseline for all other bolt-on edge systems.
- Lower initial price.
- Low- to medium-impact, low-abrasion materials only.

HEAVY DUTY BOCE



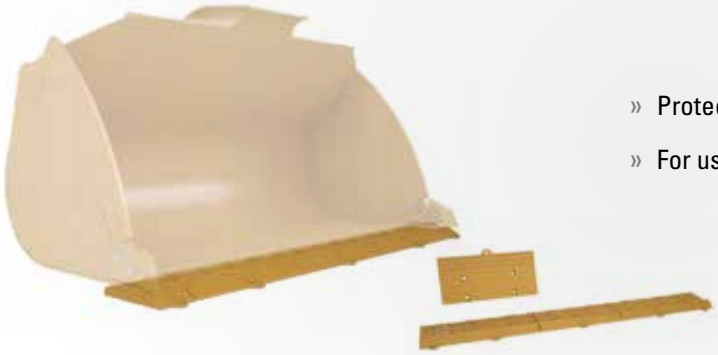
- 5mm thicker edge thickness delivering increased wear life.
- Medium- to high-impact, medium-abrasion materials.

ABRASION RESISTANT BOCE



- Lighter weight than the HD edge.
- Up to 5 times the wear life of a standard BOCE.
- For use in high-abrasion, low-impact materials only.

HALF ARROW BOCE



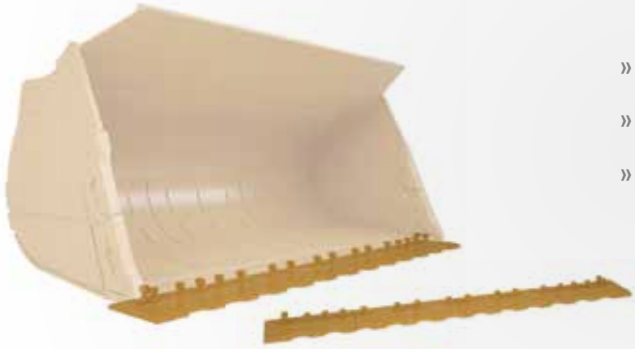
- Protects the front of your base edge as well as the bottom.
- For use in high-abrasion, high-impact materials.

TOP COVER



- Protects the bevel and top of your base edge.
- Use with half arrows to fully protect your base edge investment.

SERRATED BOCE

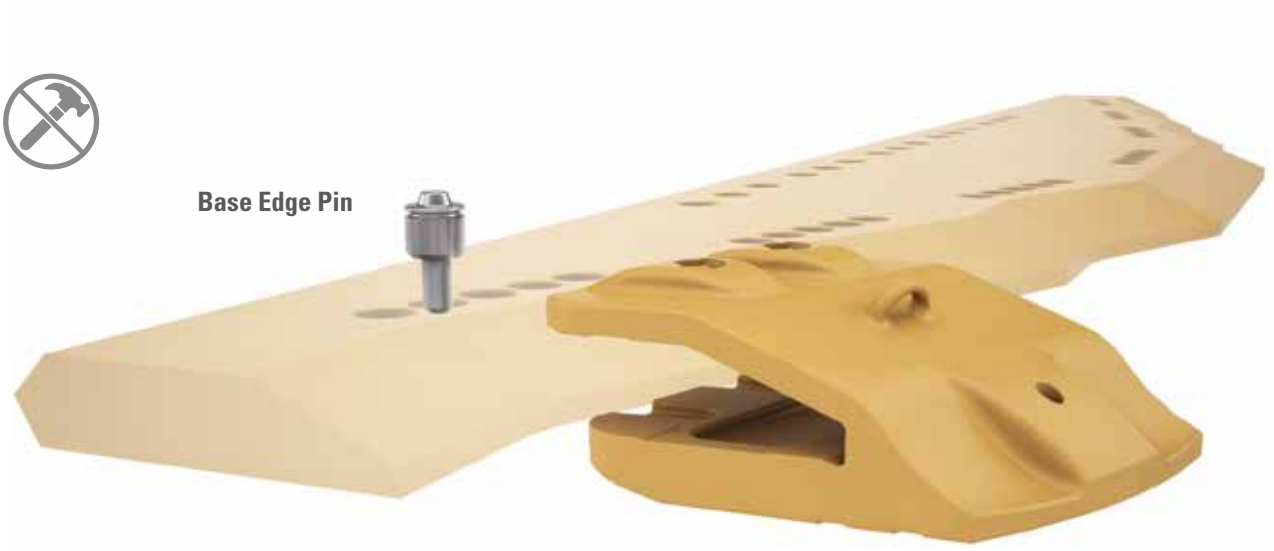


- Increases the penetration of your bolt-on edge system.
- For use in packed or frozen materials.
- Maintains smooth floor.

CAPSURE SHROUDS

Shorten change-out time without sacrificing base edge protection with these easy-to-install shrouds, available in a range of thicknesses and angles. Hammerless CapSure retention shrouds were designed for high-abrasion bucket systems. Most shrouds fit to base edges that have a 35-degree bevel angle and are equipped with flush-mount adapters. Shrouds can be matched with J or K Series adapters.

SPEED UP YOUR CHANGE-OUT TIME	It's easier to install a single casting than two-piece protection.
SIMPLIFY REMOVAL & INSTALLATION	Hammerless system is fast and easy and reduces the risk of injury.
BOOST YOUR UPTIME	Wear indicator holes signal change-out time, so you can plan maintenance.
LOWER YOUR OWNING & OPERATING COSTS	Pin lug is reusable.

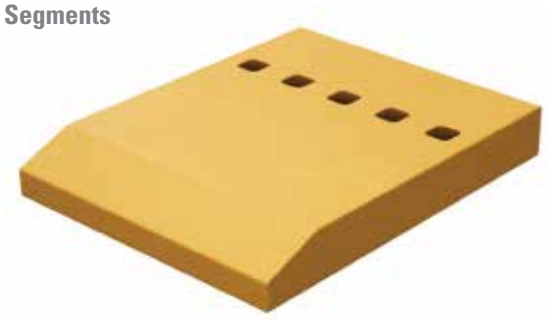


TOP COVERS, SEGMENTS & HALF ARROW SEGMENTS

Protect your investment in buckets and base edges with these flexible components. Half arrow segments allow for a smooth transition of material over the base edge to protect the leading edge. Top covers complement the half arrow segments to protect the base edge fully. And segments are ideal for moving re-handled materials with medium impact and medium abrasion.

SIMPLIFY MAINTENANCE	Individual pieces that protect the edge can be changed independently.
ENHANCE DURABILITY	Half arrow segments cover the leading edge for smooth material transition.
BOOST YOUR UPTIME	Top cover reduces wear on weld joints.
SAVE ON INVENTORY COSTS	Reversible segment creates more leading edge wear material, reducing piece parts.

Segments



Half Arrow Segments



Top Covers



BASE EDGE END PROTECTION (BEEP)

PROTECT YOUR CORNERS—WITHOUT CUTTING THEM.

Reduce base edge end wear and subsequent corner adapter weld erosion with our BEEP design. It makes adapter replacement on the edge much easier when it's time to rebuild the base edge assembly.

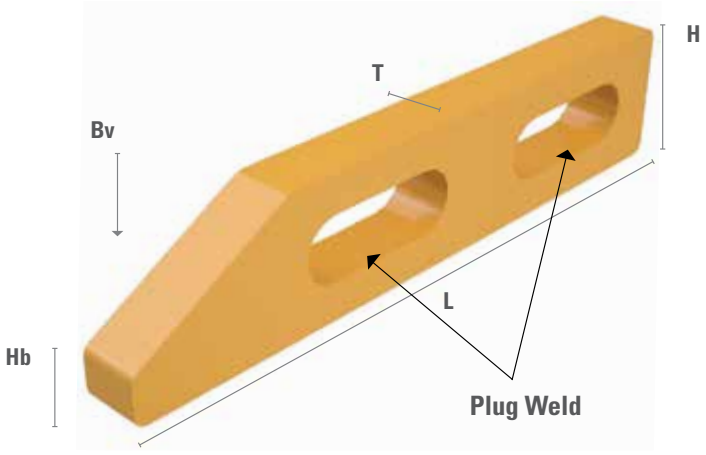
BOOST YOUR UPTIME	Through-hardened Rc ~45 (Br ~3.0) weldable steel is easily installed in the shop or the field.
EXTEND LIFE	Extended base edge end protects adapter corner welds.
SPEED UP INSTALLATION	Height and bevel are matched to the base edge, so there's no additional fabrication.



BASE EDGE END PROTECTION SYSTEM (BEEP)

BEEPs are available in a wide array of thicknesses and angles to fit 988-994 wheel loaders. Use this height, length and bevel angle chart to determine which BEEP best matches your base edge end profile.

HEIGHT (H)	LENGTH (L)	BEVEL (Bv)	BLUNT HEIGHT (Hb)	THICKNESS (T)
50	355	22.5	15	25
63.5	336	22.5	22	30
63.5	355	22.5	22	30
63.5	331	35	33	30
70	325	22.5	30	30
70	384	35	35	30
70	456	35	35	30
70	370	35	35	30
76	308	22.5	24	30
76	384	35	35	30
90	400	35	35	40
90	369	35	35	40



SIDE & EDGE PROTECTION

MAINTAIN YOUR PERFORMANCE EDGE.

Protect your bucket's structural integrity and enhance penetration with sidebar protection and shear blocks.

- Sidebar Protectors (CapSure and traditional locking system)
- Half Arrows
- Top Covers
- Segments
- CapSure Shrouds



SIDEBAR PROTECTORS

Protect your bucket's structural integrity and enhance penetration with sidebars and shear blocks.

INCREASE YOUR UPTIME

Shear block protects the pin from extreme loads and breakage, helping ensure sidebar protector retention.

CUT YOUR MAINTENANCE COSTS

Sidebar protector protects the bucket edge.



Side-pinned design protects the bucket edge.

Shear block bears the loads instead of the pins.

CAPSURE SIDEBAR PROTECTORS

Get all the benefits of the sidebar protector without the hammer. CapSure sidebar protectors use hammerless locks for fast, easy installation and reduce the risk of injury.



990, 992 and 993 SBP



994 SBP



Shear Block

PERFORMANCE SERIES SIDEBAR PROTECTORS

INSTALLATION & REMOVAL

Get all the benefits of the sidebar protector without the hammer. Performance Series Mechanically Attached sidebar protectors use proven hammerless spring retainers for fast, easy installation and reduce the risk of injury.

1 Insert the protector into the dove tail base plate.



2 Mechanically attached wear plate compression retainer.



3 Install one end of the compression retainer.



4 Install the other end of the compression retainer in place using a small pry bar.



Scan the QR code to the right to watch the installation video.

CORNER GUARD SYSTEM

Reduce your bucket's maintenance costs and increase bucket performance with the Cat Corner Guard system. Cat corner guards are an easily replaced bolt-on system to fit your 950-982 wheel loader buckets. These corner guards are available with and without adapters to fit your application needs.

1 Slide the corner guard into place.



2 Torque, Bang, Torque bolts to the proper bolt torque.





BUCKET SELECTION GUIDE

We offer four standard bucket durability categories suitable for any application. Each category is based on the bucket's intended durability when used in the recommended application and material.

GENERAL PURPOSE



- Good all around performance for stockpiling, re-handling, excavating and bank loading.
- Intended for use in low-impact materials.

MATERIAL HANDLING



- For stockpile loading loose materials such as gravel, sand and dirt in load-and-carry applications.
- Intended for use in low-impact materials.
- These are the best performers for production loading.
- Flat bottom bucket.

ROCK BUCKETS



- For use in applications such as face loading limestone and other unprocessed rock. Also used in truck and hopper loading for a wide range of quarry materials.
- Intended for use in moderate- to high-abrasion applications.
- Balances the need for high production in more abrasive applications.

HEAVY DUTY QUARRY ROCK BUCKET

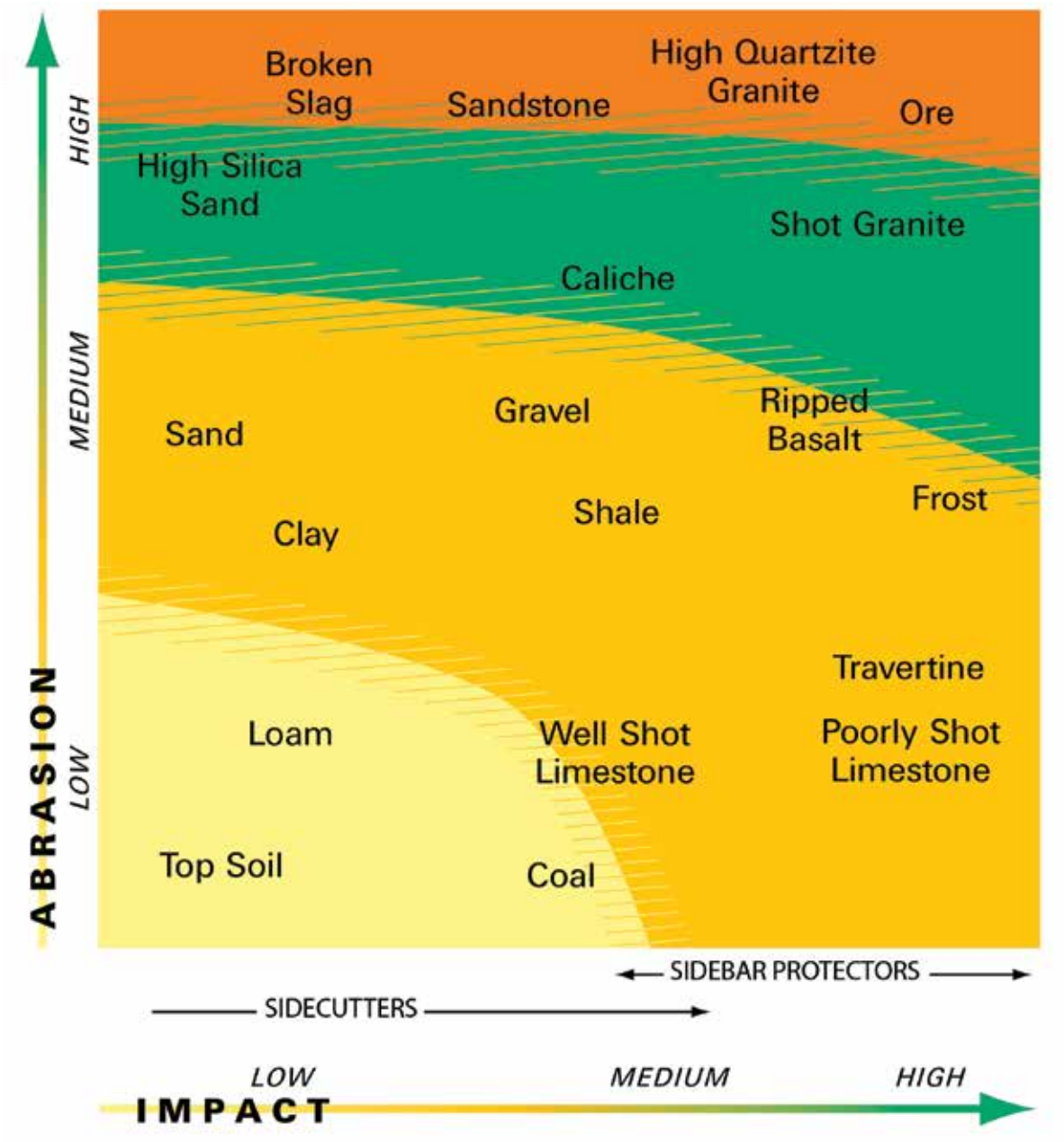


- For use where maximum abrasion resistance is required.
- Intended for use in high-abrasion, high-impact applications.

CHOOSING THE RIGHT DURABILITY.

Choosing the wrong bucket can easily reduce production and increase operating costs by 10-20% or more. It can also cause unnecessary wear and fatigue for both machine and bucket.

Contact your local Cat dealer for more detailed information on choosing the right wheel loader, bucket and work tool attachment combinations to meet your application needs.



GENERAL PURPOSE / MATERIAL HANDLER / COAL BUCKET
(Typical tip life 500-1000 hrs)

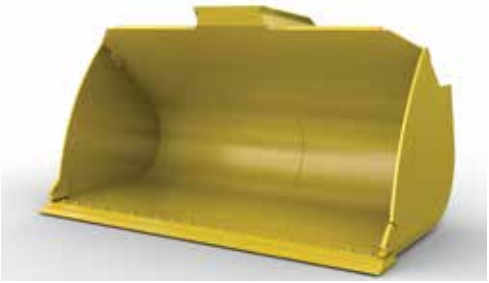
HEAVY DUTY ROCK / HIGH ABRASION ROCK BUCKET
(Typical tip life 200-500 hrs)

STANDARD ROCK BUCKET
(Typical tip life < 1000 hrs)

HEAVY DUTY GRANITE BUCKET
(Typical tip life > 200 hrs)

ADDITIONAL BUCKET STYLES

Several different bucket styles are available—each with a special purpose:



COAL: Coal Buckets are high-volume material movers for loading and stockpiling coal and other materials of similar density.



GRAPPLE: Grapple Buckets clamp loose material with dual ladder-style grapple tines. These are key producers in transfer stations, landfills or wherever loose, lightweight material needs to be moved.



HIGH DUMP: High Dump Buckets utilize dedicated dumping cylinders and a bottom hinge to "roll out" material. Higher than ordinary bucket types, they are ideal for transfer stations or loading high-sided trucks.



MULTI-PURPOSE: Multi-Purpose Buckets have a unique action that can load, bulldoze, clamp and perform many other tasks. A versatile design for site cleanup, demolition or similar situations.



SIDE DUMP: Side Dump Buckets dump both to the front and to the side of the machine, an advantage when working in tight quarters such as street work, tunnel construction and building levees.

ADDITIONAL BUCKET STYLES (CONT.)



SLAG: Cat Slag Buckets are heavy duty and specifically constructed to handle extreme conditions that come with handling hot slag.



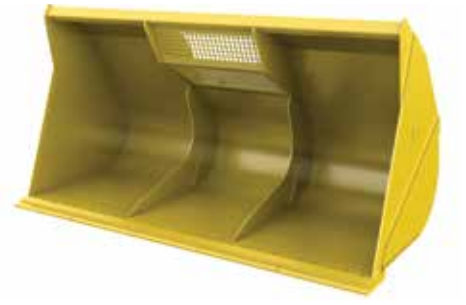
WASTE HANDLING: Waste Handling Buckets move large volumes of low-density waste in transfer stations, landfills and recycling yards. Large capacities give maximum production when loading conveyors, trucks or hoppers.



WASTE LOAD & CARRY: Load & Carry Buckets are primarily designed to load and carry lightweight material, minimizing contact with the floor for less bucket and floor wear.

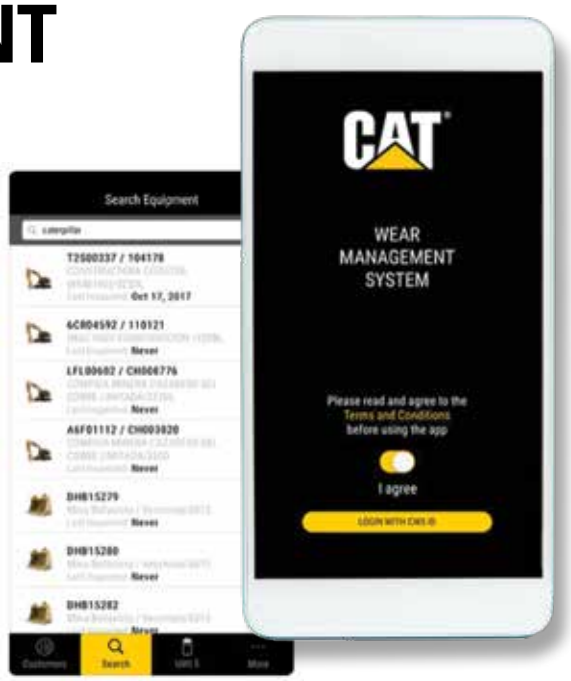


WASTE DOZING: Dozing Buckets are designed to push waste loads along the floor to a hole or hopper in the floor for below—grade truck loading.



WOODCHIP: As the name suggests, Woodchip Buckets are optimized for moving large volumes of wood chips. The flat floor and straight edge work to scoop the bucket full and help heap the load high.

CAT WEAR MANAGEMENT SYSTEM INTRODUCES...



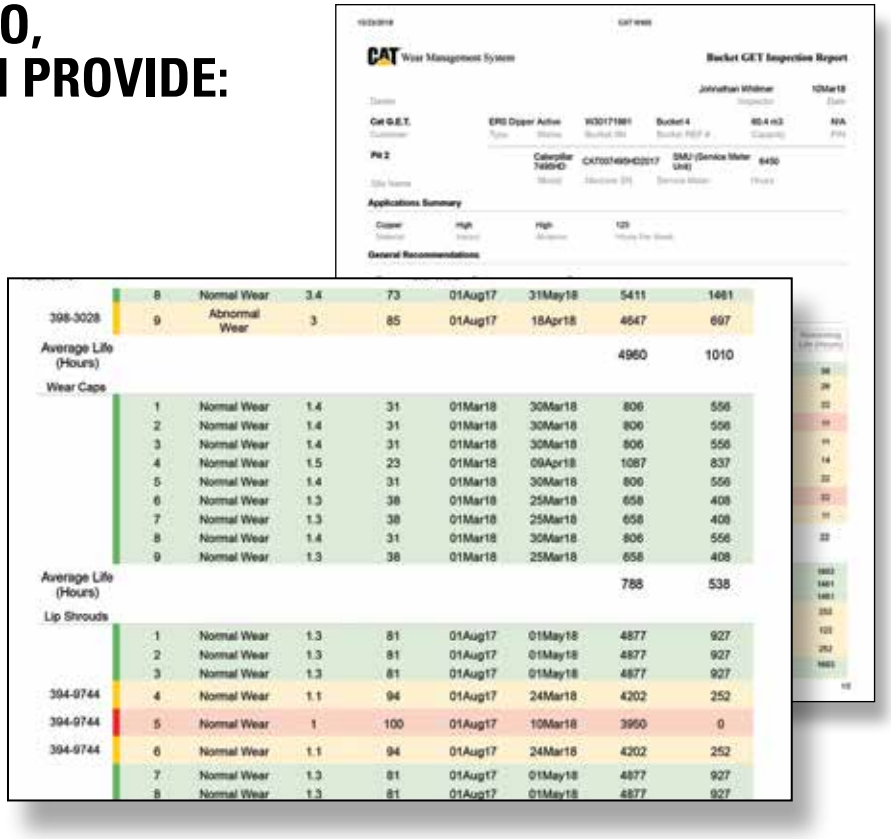
BUCKET PRO

You may be familiar with CTS Pro for Cat Undercarriage Inspections. Now, the Cat Wear Management System is launching the second module to help you manage G.E.T. on your bucket fleet.

Your Cat dealer offers sales, service and technical support you need to keep your bucket at maximum productivity.

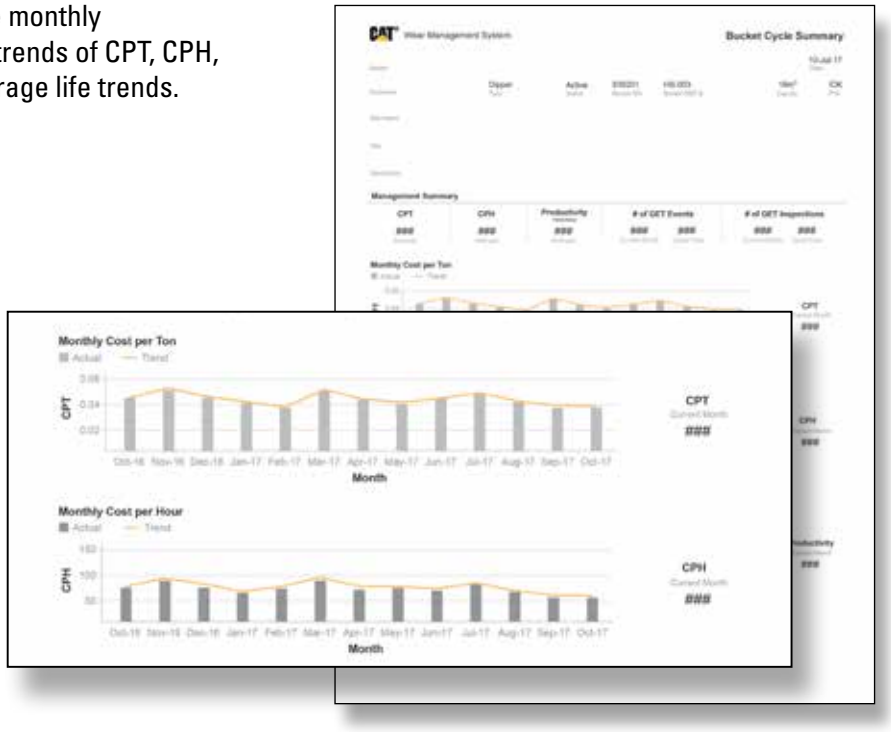
- Work with your Cat Dealer to set up your site and bucket fleet within the Bucket Pro App.
- Use smart phone, IPad, or tablet to perform regular inspections of G.E.T. and get instant reports.
- Go online to calculate costs and view production trends of each bucket.
- Use data to reduce costs and improve production of your G.E.T. system.

USING BUCKET PRO, YOUR DEALER CAN PROVIDE:



» **G.E.T. Inspection Reports** These instant, on-site reports include % worn, future change out dates, and average life of all your G.E.T. components.

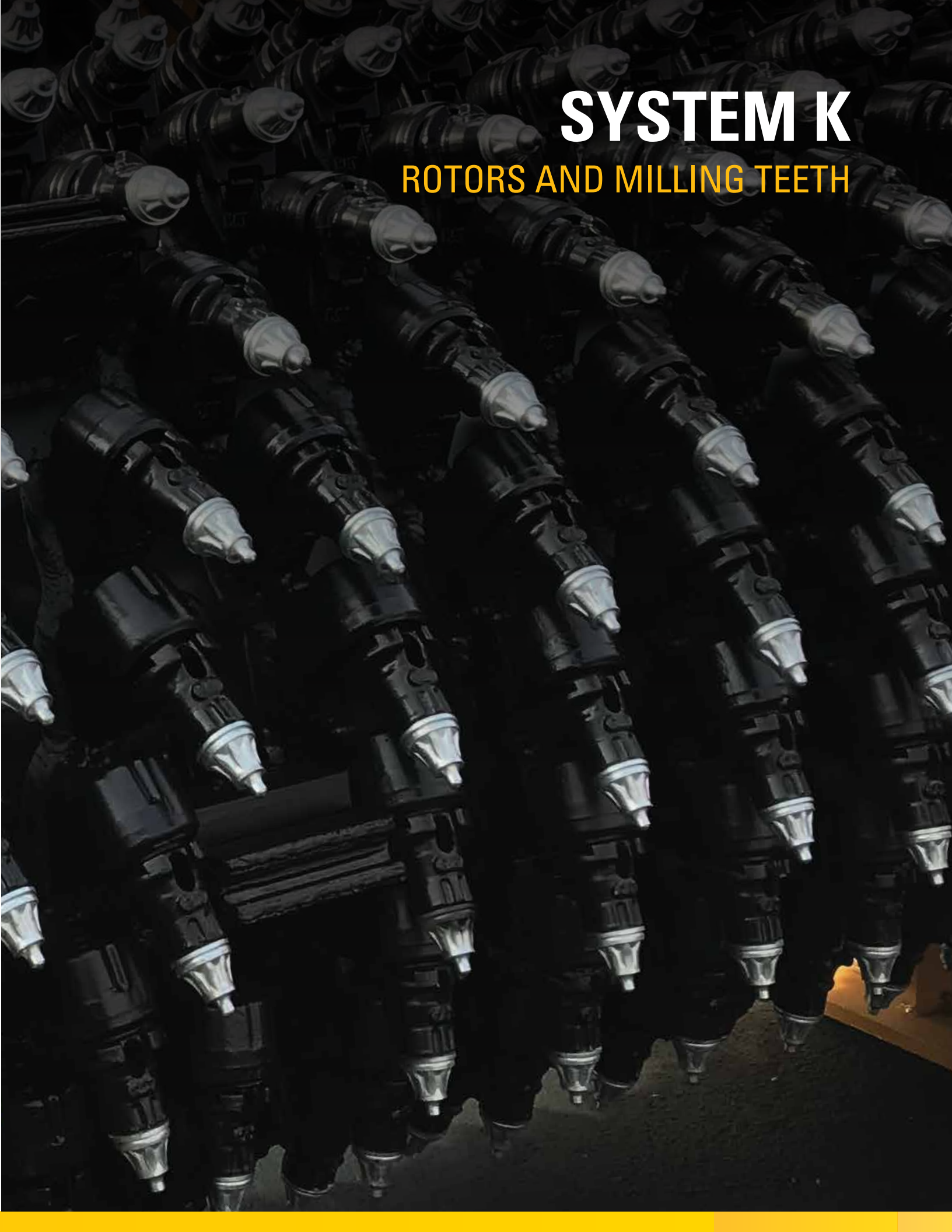
» **Bucket Cycle Summary**—these monthly summaries show bucket cycle trends of CPT, CPH, and Productivity as well as average life trends.



» Get real time data on G.E.T. performance and expected life.
» Plan maintenance
» Manage Inventory
» **Identify the best G.E.T. solutions**
» **Know your CPT**

GET THE FACTS YOU NEED! STOP MANAGING YOUR G.E.T. WITH OPINIONS AND ASSUMPTIONS.

Talk to your Product Support Representative or G.E.T. Specialist today to learn how they can help you simplify your bucket management.



SYSTEM K

ROTORS AND MILLING TEETH

SYSTEM K ROTORS
FOR MILLING

Cat® System K rotors are built to cover a wide range of milling applications with efficient material flow and an excellent cutting pattern.



MAXIMUM PRODUCTIVITY

Designed for longer life and simplified maintenance, System K rotors are ready to work when you are.

+ EASY TOOTH REMOVAL REDUCES MAINTENANCE TIME
+ MULTIPLE SPACINGS ARE AVAILABLE TO HELP MEET YOUR PRODUCTION GOALS
+ CARBIDE AND DIAMOND BITS GIVE YOU THE VERSATILITY YOU NEED TO BE PRODUCTIVE AND EFFICIENT



FASTER
MAINTENANCE

All-new toolholder designs makes bit removal easy and reduce downtime.

+ Multiple methods for easy bit removal
  - Radial access hole
  - Chisel points
  - Rear access through the block
+ A taper and friction ring design secures the toolholders to the rotor without a retaining pin, bolt or setscrew, speeding up replacement and eliminating the need for fasteners or torquing
+ Toolholders are available to accommodate bits with larger shank sizes for various applications

HIGH PERFORMANCE
FEATURES

Optimized for maximum production.

+ Blocks are specifically designed for each side of the rotor and arranged for optimized cutting effort and efficient material flow
+ An anti-rotating toolholder design ensures proper position to prevent wear on the blocks and holders
+ Water can penetrate through the toolholder radial access hole to aid tooth rotation for uniform bit wear
+ Kicker paddles are reversible for extended life

DURABLE
DESIGN

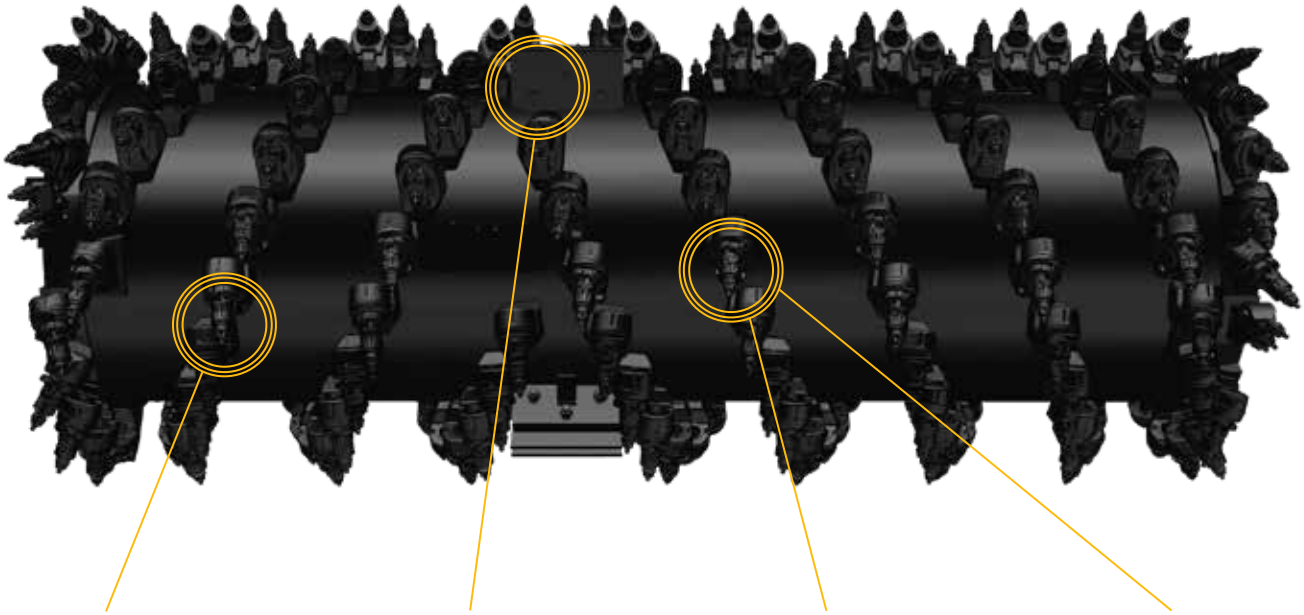
Built to withstand demanding applications and extend rotor life.

+ Large heat-treated surface areas on the toolholder protect the base block from undesired wear
+ Components are manufactured with abrasion-resistant, high-strength alloys to withstand the toughest applications
+ High-strength components stand up to the demands of high-power applications
+ Toolholder and base block designs are optimized to minimize stresses and provide lasting durability

ROTORS DESIGNED WITH YOU IN MIND

SAVE TIME AND MONEY

Leveraging Caterpillar's expertise in Ground Engaging Tools and feedback from contractors like you, a new generation of durable and high performance rotors has been developed. You'll get back in the cut faster with the tapered dual-retention toolholder design that eliminates the need for retaining bolts, pins or setscrews, reducing replacement time by up to 50%. Reversible kicker paddles increase wear life to save you money on parts.



EASY TOOTH REMOVAL



REVERSIBLE KICKER PADDLES

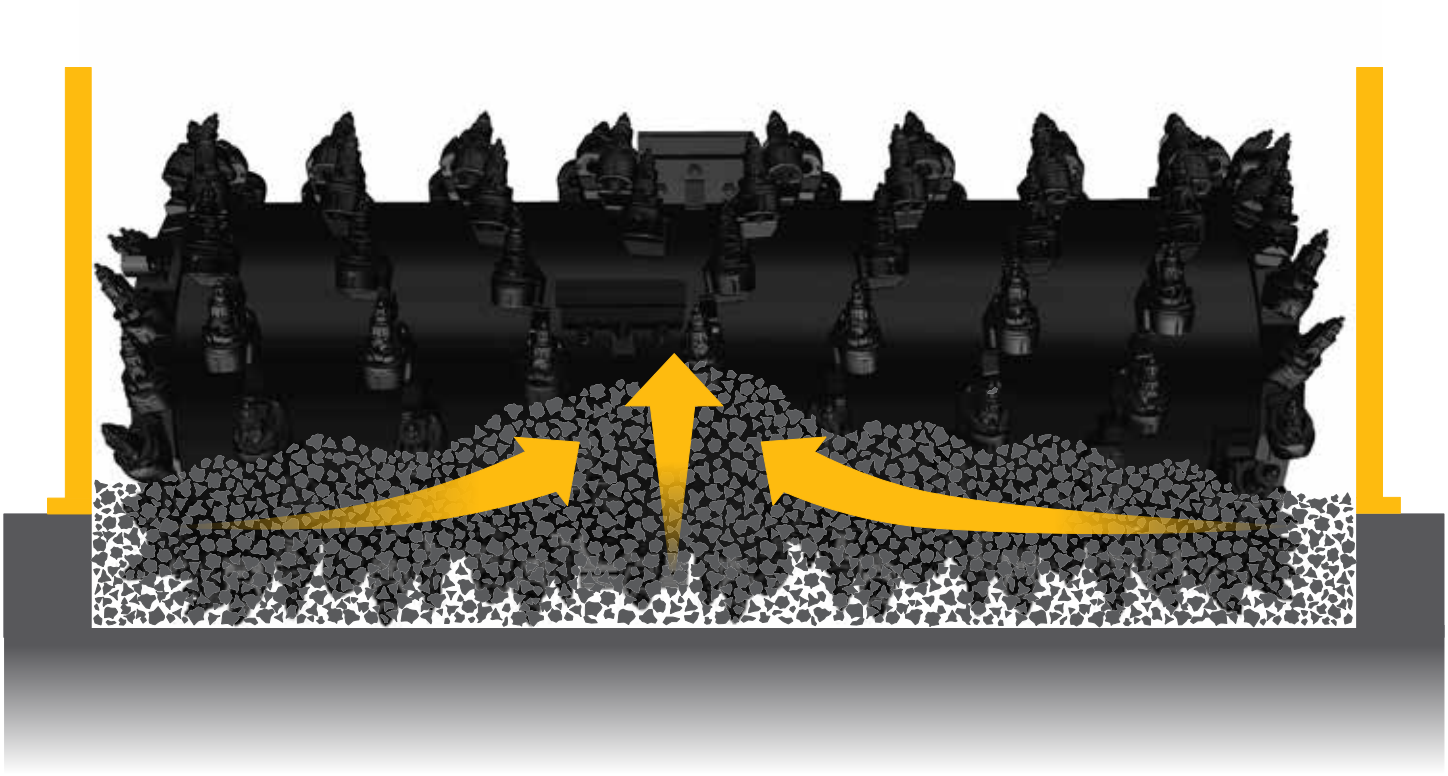


TAPERED DUAL-RETENTION DESIGN



HIGHLY FEATURED TOOLHOLDER





ENGINEERED FOR EFFICIENCY
AND INCREASED DURABILITY

EFFICIENT MATERIAL FLOW

An optimized spiral angle increases speed of material flow from the outside to the center for efficient material extraction. Kicker paddles are dimensioned and tested to ensure maximum ejection of material from the center of the cutting chamber to the conveyor. The rotor design reduces component wear by quickly removing material from the cutting chamber, reducing drag, improving overall machine efficiency and lowering fuel consumption.

DESIGNED FOR THE HARD WORK

System K rotors are engineered to withstand the toughest applications and offer features to prolong component life.Thicker left and right base blocks are reinforced and designed to create a uniform conveying spiral, while larger toolholders with more surface area protect the blocks. For abrasive or high impact applications, an optional toughened steel toolholder is available for extended life.

OFFERINGS AND APPLICATIONS

A ROTOR FOR EVERY JOB

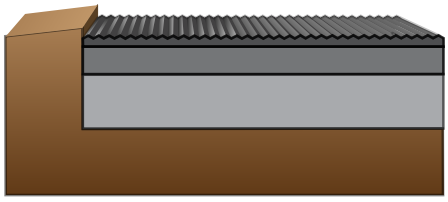
Whether texturing a road or milling an airport runway, we have a rotor that will match your job requirements and help you meet your production goals.

MICRO MILLING

Spacing: 6 mm and 6x2 mm*

Application: Very fine milling finish to meet specific job specifications

Recommended Milling Depth:
0-51 mm (0-2 in)





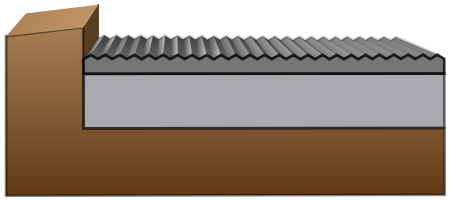
** 6x2 mm rotor is a System H design*

FINE MILLING

Spacing: 8 mm

Application: Fine milling finish for smooth surface removal

Recommended Milling Depth:
0-101 mm (0-4 in)



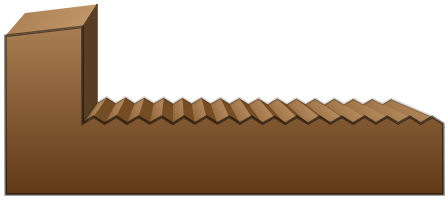


STANDARD MILLING

Spacing: 15 mm

Application: Surface removal or complete removal of road surfaces

Recommended Milling Depth:
0-330 mm (0-13 in)



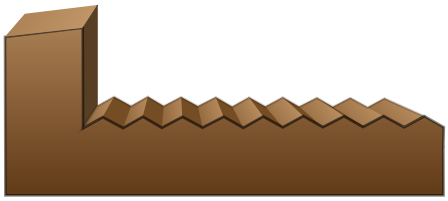


COARSE MILLING

Spacing: 18 mm and 25 mm

Application: Surface removal or complete removal of road surface with a rougher finish

Recommended Milling Depth:
0-330 mm (0-13 in)





ALL-NEW TOOLHOLDER
INCREASES UPTIME

The toolholder features multiple bit removal methods and a unique friction ring design to secure it to the rotor, yielding faster replacement and reduced downtime for rotor maintenance.



LONGER WEAR COLLAR

20 mm wear collar is 66% longer than System G toolholders

LARGE SURFACE AREA

Large heat-treated surfaces on the toolholder protect the base block from undesired wear

ANTI-ROTATING TOOLHOLDER DESIGN

Ensures proper position to prevent wear on the blocks and holders

EVEN BIT WEAR

Water can penetrate through the radial access hole to aid tooth rotation for uniform bit wear

MULTIPLE METHODS FOR EASY BIT REMOVAL

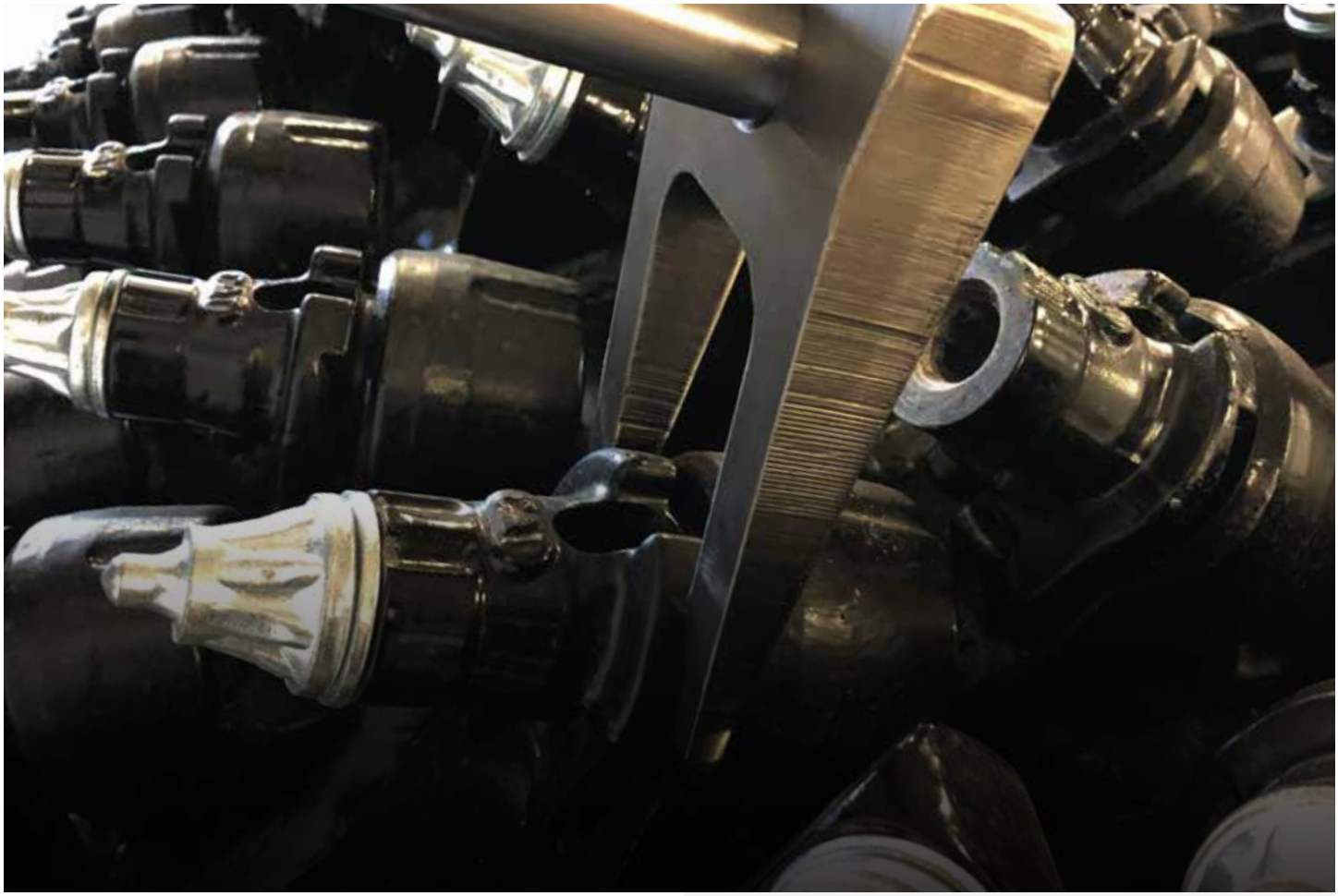
+ Radial access hole
+ Chisel points
+ Rear access through the block

ACCOMMODATES LARGER SHANK SIZES

Toolholders are available to accommodate bits with 20 mm, 22 mm and 25 mm shank size bits for various applications

TAPER AND FRICTION RING DESIGN

Secures the toolholders to the rotor without retaining pins, bolts or setscrews to speed up replacement and eliminate the need for fasteners or torquing



Maintaining bits and toolholders is key to achieving maximum productivity, and System K rotors are designed to simplify maintenance and get you back to work faster.

+ Dual-retention toolholders eliminate the need for fasteners, reducing replacement time by up to 50%
+ Bit removal can be done through multiple methods
+ A variety of removal tools specifically for System K rotors help you replace bits and toolholders quickly

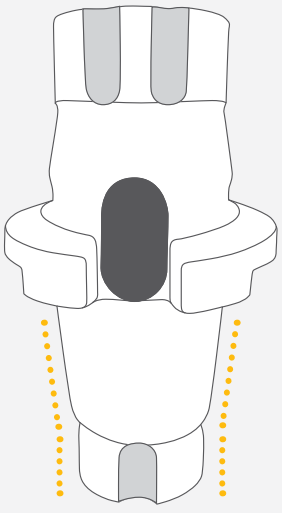
Your Cat dealer offers convenient parts availability and service options, with an industry-leading supply chain and worldwide distribution to keep your rotor cutting smoothly and efficiently.

ZERO FASTENERS

REPLACE TOOLHOLDERS IN

HALF THE TIME

WITH A FASTENER-FREE DESIGN



ELIMINATES RETAINING PINS, BOLTS AND SETSCREWS

NOTE: COMPARED TO CAT SYSTEM G TOOLHOLDERS



CARBIDE MILLING TEETH

OPTIMIZE PERFORMANCE TO MAXIMIZE PRODUCTION

PREMIUM CUTTING BITS

+ Body designed to flow material away and prevent material build up
+ Fluted body supports bit rotation for longer tool life
+ Increased collar on body protects the washer and toolholder
+ Puller grooves available on some bits for faster bit removal
+ Valve seat and plug style bits available for high impact applications
+ Variety of tips available to match your application





CAT® DIAMOND BITS

REDUCE PROJECT COSTS

For bituminous applications without obstacles such as interstates or motorways, consider Cat Diamond bits designed specifically for System K rotors. Diamond bits stay sharp up to 80 times longer than conventional carbide teeth, keeping your machine focused more on milling and less on bit changes.

WHY CHOOSE DIAMOND BITS

Tips remain sharper over the lifetime of the bit to provide:

+ Increased productivity
+ Consistent cutting pattern
+ Reduced labor for bit service
+ Up to 15% fuel savings

DIAMOND BITS
STAY SHARPER LONGER



Average life and exact tonnage is impacted by local aggregate and operating technique. Diamond Asphalt Bits last up to 40x and Diamond Extended Life Bits last up to 80x the life of typical 35 g carbide bits.

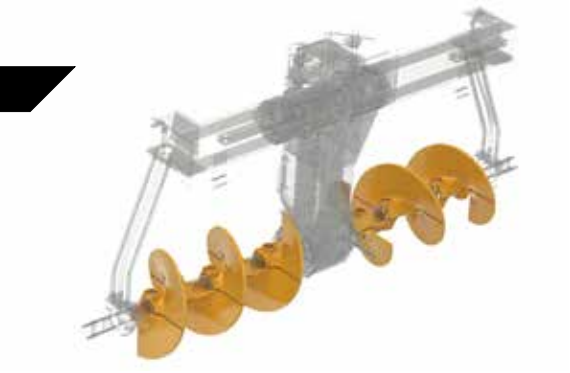
PAVER KITS

AUGER SEGMENTS KIT

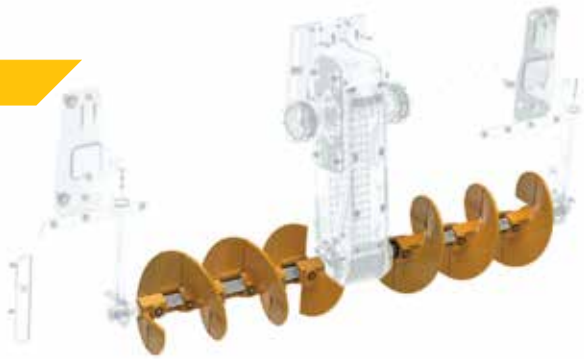
Contains a complete set of auger segments (half and quarter segments) and all of the hardware necessary to attach the segments to the auger shaft. This kit does not include the bearings (please refer to the Auger Bearings kit) or the shaft.

Actual segment configuration may vary by machine model.

E-SERIES



F-SERIES

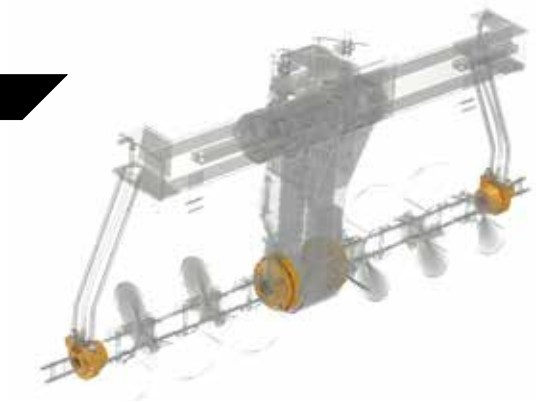


AUGER BEARINGS KIT

Contains the outside and inside auger bearings as well as all of the necessary hardware.

Proactively maintain the auger bearings to avoid premature bearing failure.

E-SERIES



F-SERIES



PAVER KITS

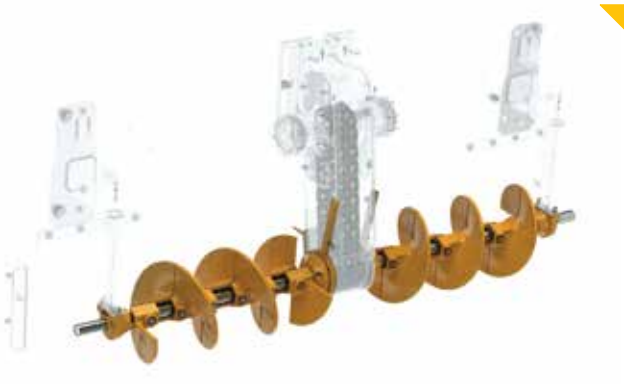


E-SERIES

AUGER ASSEMBLY KIT

Contains all of the parts necessary (segments, bearings, hardware, center deflector, chain case guard, and shaft) to do a complete auger service repair.

Choose the kit based on the paver sales model. Actual segment configuration may vary by machine model.



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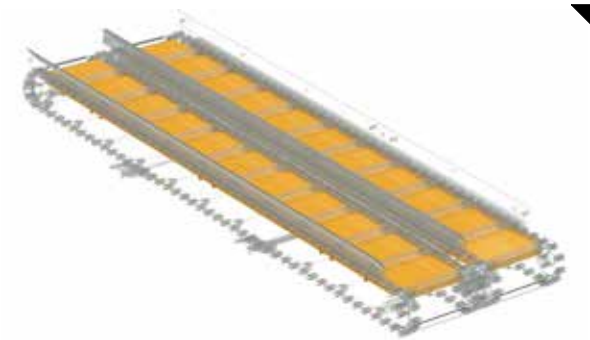
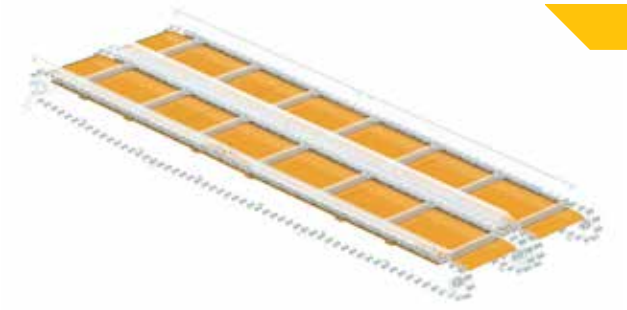


E-SERIES

FEEDER BED PLATE KIT

Contains plates and all necessary hardware for installation.

This kit does not include the chain guards, please see the Feeder Chain Guard kit.



F-SERIES

PAVER KITS

FEEDER CHAIN KIT

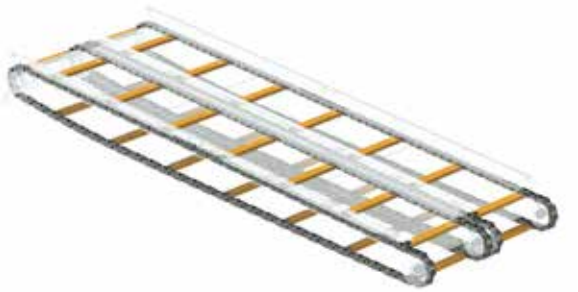
E-SERIES

Includes a **fully assembled** feeder chain set (right and left side).

Proactively maintain the feeder chain to avoid unplanned and costly downtime.



F-SERIES

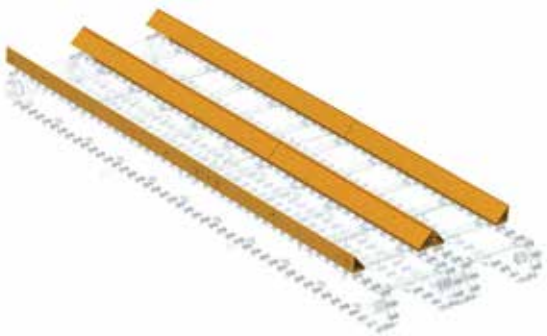


FEEDER CHAIN GUARD KIT

E-SERIES

Includes plates and hardware for installation.

This kit does not include the bed plates, please refer to the Feeder Bed Plate kit.



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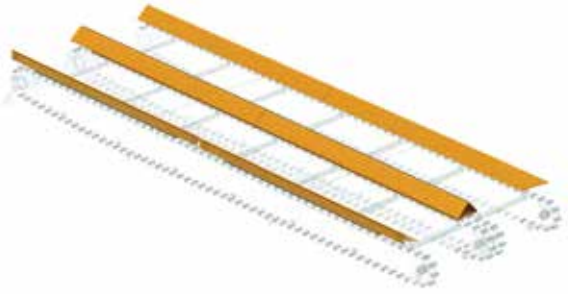
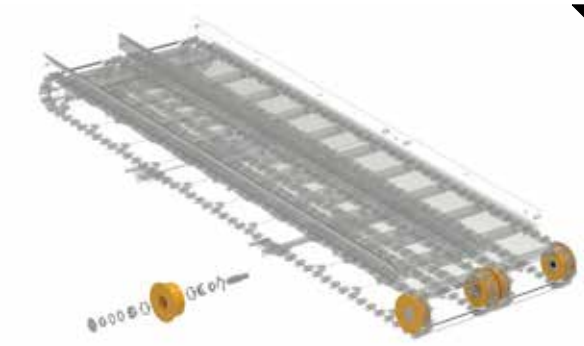


PAVER KITS

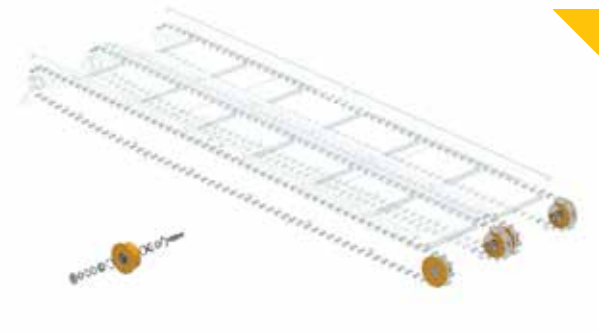


E-SERIES

FEEDER FOOT SHAFT REBUILD KIT

This kit includes the foot shaft assembly and bearing necessary to complete the repair.

Note: The kit supports one conveyor chain; pavers with two conveyors will require two kits.



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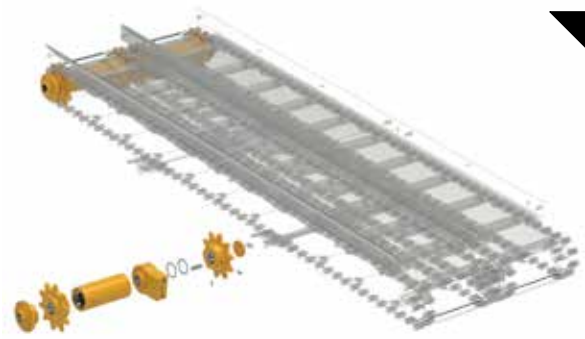
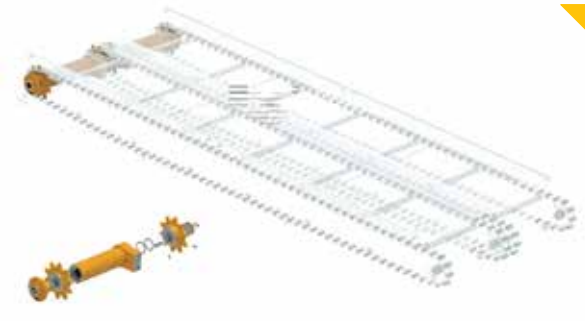


E-SERIES

FEEDER HEAD SHAFT REBUILD KIT

Includes head shaft assembly and bearings necessary for repair.



F-SERIES

SCREED KITS



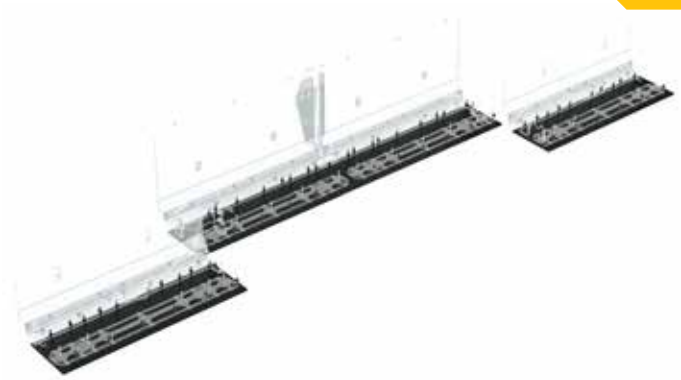
Screed Plate Kits and Screed Service Kits may be customized to include Extended Wear Screed Plates for customers in high wear applications. This is an ideal solution for regions with very hard aggregate. The Extended Wear Screed Plates must be ordered separately, for more information and specific part numbers, contact your Cat dealer.

SCREED KITS

E-SERIES



F-SERIES



SCREED PLATE KIT*

This kit contains the screed plates, nose bars and hardware needed for a basic screed plate repair.

The screed plates are one of the highest wear components. It is recommended to proactively check and replace the screed plates to ensure optimum distribution of material.

E-SERIES



F-SERIES



SCREED SERVICE KIT*

Contains screed plates, hardware, tamper blades, tamper wear plates, pins, bolts, nuts and washers for a complete screed repair.

Note: This kit does not include heating elements–please refer to the Screed Heating Element Kit.

SCREED KITS

SCREED HEATING ELEMENT KIT

This kit is designed to support electric heated screeds only. Included within the kit are the heating elements and related hardware.

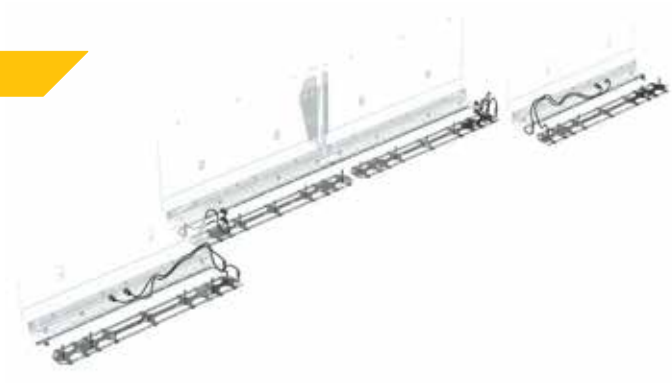
NOTE: Apply thermal compound under **every** heat sensor and heating element during installation; **the compound is not included in this kit and must be ordered separately.** Dow Corning 340 heat sink compound is recommended to complete this repair.

NOTE: F-Series kit does not require thermal compound.

E-SERIES

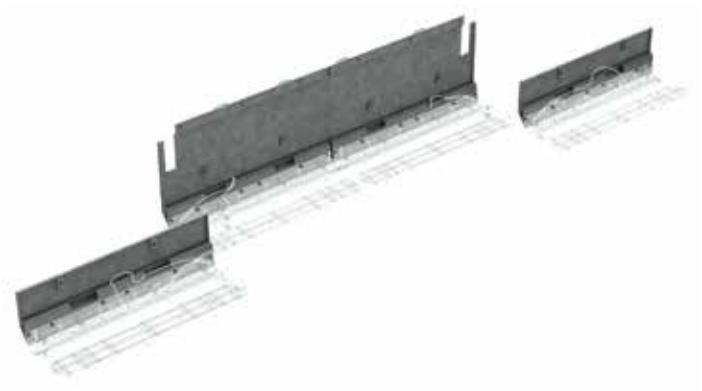


F-SERIES



DEFLECTOR KIT

Contains plates and all of the necessary hardware to complete the repair.

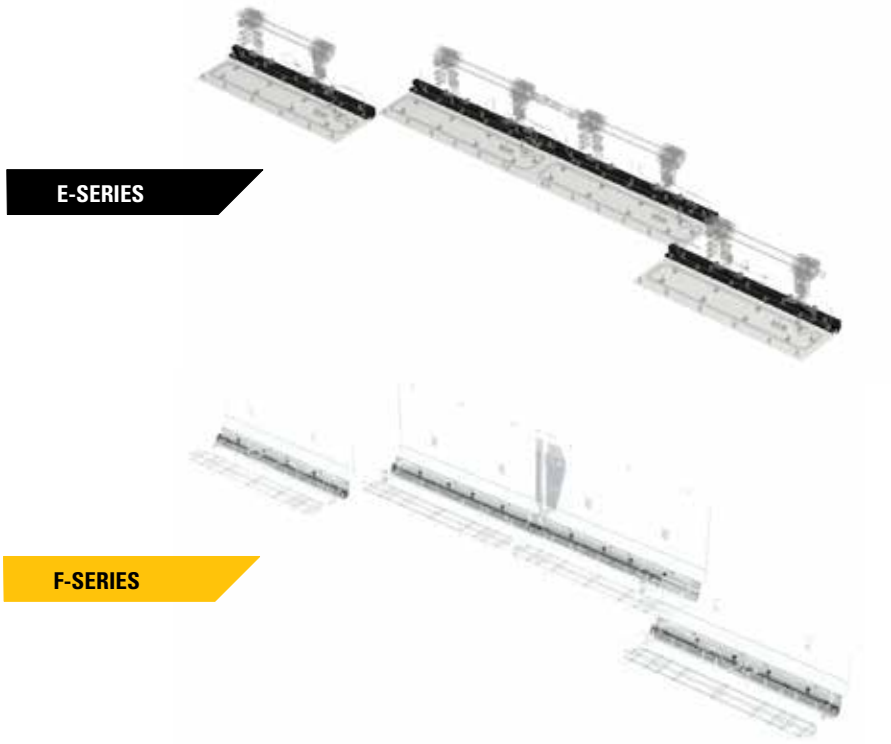



CAT
EVERGREEN
CAT SE60
VT TW

SCREED KITS

TAMPER BAR KIT

Contains the tamper blades, wear plates, pins, bolts, nuts and washers for a basic tamper bar repair.



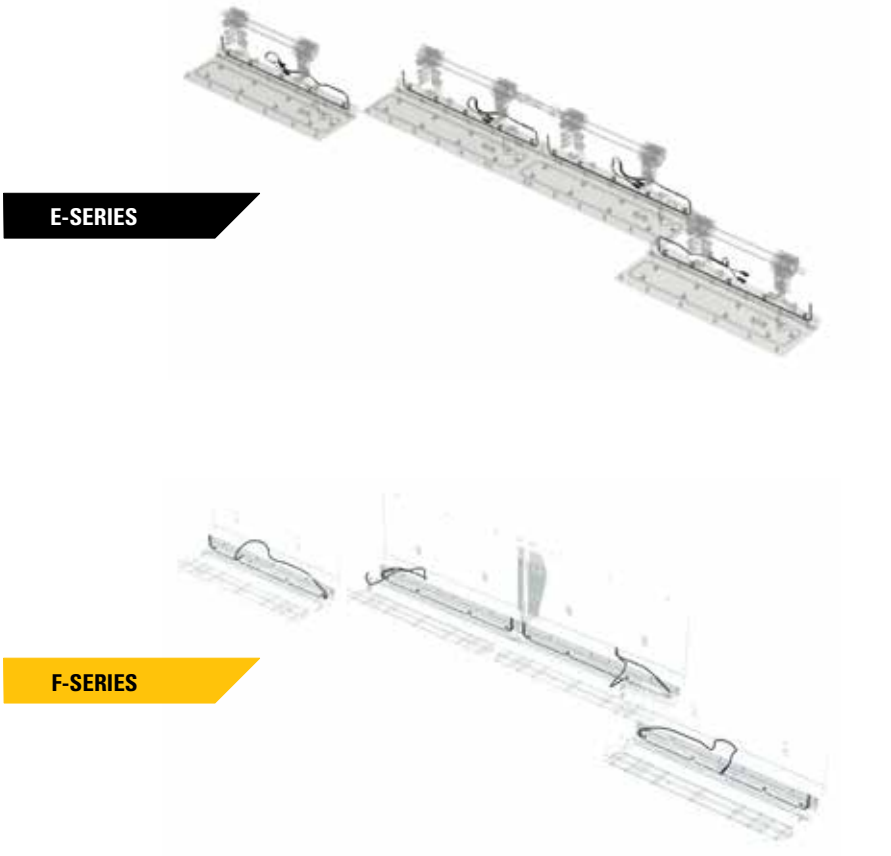
TAMPER BAR HEATING ELEMENT KIT

This kit is designed to support electric heated screeds with a tamper bar. The kit contains the tamper bar heating element and required hardware.

This kit does not include the tamper bar. Please refer to the Tamper Bar kit.

NOTE: Apply thermal compound under **every** heat sensor and heating element during installation; **the compound is not included in this kit and must be ordered separately.** Dow Corning 340 heat sink compound is recommended to complete this repair.

NOTE: F-Series kit does not require thermal compound.



MULCHER TEETH

HM208, HM210, HM112, HM115, HM215, HM316, HM416, HM418



Teeth Models

Mulchers are designed for high performance cutting and mulching of vegetation, saplings and undergrowth. Standard chisel teeth provide a consistent cut and finished product. Carbide teeth provide extra wear. Rock resistant teeth last longer when engaging rocky substrate. Side cutting teeth ensure extra efficiency by helping prevent material from bypassing main teeth.

TEETH – MODELS HM112, HM115, HM215



REVERSIBLE CHISEL (STANDARD)
For general purpose agricultural mulching. Part Number: 475-2746



CARBIDE-TIPPED CHISEL
For extra long wear.
Part Number: 504-6100

TEETH – MODELS HM316, HM416, HM418 (Standard Drum)



CARBIDE (STANDARD)
For extra long wear.
Part Number: 475-2810



SCRAPER (RIGHT SIDE)
Ensures extra mulching efficiency.
Standard from factory.
Part Number: 475-2811



SCRAPER (LEFT SIDE)
Ensures extra mulching efficiency.
Standard from factory.
Part Number: 475-2812



OPTIONAL

Requires 570-2134 Chisel Adapter (one per tooth, only necessary on first installation of chisel teeth).



CHISEL (STANDARD)
For general purpose agricultural mulching.
Part Number: 600-9604*



ROCK RESISTANT
Additional carbide surface for use in rocky substrate.
Part Number: 475-2813

TEETH – MODELS HM316, HM416, HM418 (Bite Limiter)



CHISEL (STANDARD)
For general purpose agricultural mulching.
Part Number: 600-9604



SCRAPER (RIGHT SIDE)
Ensures extra mulching efficiency.
Standard from factory.
Part Number: 475-2811



SCRAPER (LEFT SIDE)
Ensures extra mulching efficiency.
Standard from factory.
Part Number: 475-2812

MULCHER TEETH

Mulchers are designed for high performance cutting and mulching of vegetation, saplings and undergrowth. For best performance, Caterpillar offers mulcher tooth options for all their mulcher models to fit the environment and application. Chisel tooth designs are made specifically for general purpose mulching which allows for consistent cutting and finish results. Teeth with carbide offer extra wear for extended life. Rock resistant teeth with carbide are best suited for conditions with a rocky substructure.

Mulcher Models and Related Tooth Offerings		
Machine	**Mulcher Model**	**Tooth Offering**
308E2CR	HM208	Reversible Chisel Tooth, Carbide tipped Chisel Tooth
308E2CR, 309	HM210	
SSL, CTL, MTL	HM112	Reversible Chisel Tooth, Carbide tipped Chisel Tooth
	HM115	
	HM215	
	HM316	Carbide Tipped Chisel tooth, Chisel, Rock
	HM416	
	HM418	
	HM316 BL	Chisel, Carbide Tipped Chisel Tooth
	HM416 BL	
	HM418 BL	
M314F, M315F, M316F	HM2615	Carbide Tipped Chisel tooth , Rock
	HM2615 BL	Chisel
	HM3013	Chisel
M318F, M320F, M322F, 538GF, 548GF, 340, 352	HM4015	Carbide Tipped Chisel tooth , Rock
M318F, M318, M319, M320F, M320, M322F, 538GF, 548GF, 340,352	HM4015BL	Chisel
558GF, 568GF, 330F, 330GC, 330, 335FCCR, 335, 336F XE, 336GC, 336	HM5515	Carbide Tipped Chisel tooth , Rock
TBD	HM6015	Chisel

WEAR PARTS & A.R.M.



MECHANICALLY ATTACHED WEAR PLATE SYSTEM (MAWPS)

Safeguard wear areas with this hammerless system—available for a wide variety of applications.

INCREASE YOUR UPTIME

Two minute change-out—no hammer required.

LOWER YOUR INVENTORY COSTS

Flexible, versatile system welds to flat and curved surfaces.

SIMPLIFY INSPECTIONS

Wear indicator holes allow for quick and easy inspections, reducing maintenance time.

EXTEND WEAR LIFE

You can install the system perpendicular to material flow, then rotate it for more wear material.

RETENTION WITHOUT THE RISK.

Retention components are located within the base plate, where they're shielded from wear and load—eliminating the risk of wear plates falling off.



Solid MAWPS

Skeletal MAWPS

CHOOSE THE LOWEST-COST WEAR PROTECTION PER HOUR.

MAWPS VERSUS STEEL PLATES.

When you choose MAWPS instead of steel wear plates, you can see cost savings as high as 44 percent, thanks to significantly lower labor and replacement costs.



TOTAL ANNUAL COSTS WITH STEEL PLATES

	PARTS	LABOR	TOTAL
Installation costs	$4,000	$1,200	$5,200
Replacement costs (2 times per year)	$8,000	$2,400	$10,400
			$15,600 or $7.80/hour



TOTAL ANNUAL COSTS WITH MAWPS

	PARTS	LABOR	TOTAL
Installation costs	$4,000	$600	$4,600
Replacement costs (2 times per year)	$4,000	$83	$4,083
			$8,683 or $4.34/hour

EASY INSTALLATION & REMOVAL

Save time and money with MAWPS' two-minute installation and removal.

1 Weld the adapter perpendicular to material flow for maximum wear material (or parallel to flow with the Cat logo on top for maximum coverage).



2 Position the wear plate over the base plate and slide the wear plate onto the base plate.



3 Install one end of the compression retainer with the plug and pry it into place with an 8mm-wide small pry bar.



4 Clean, use pry bar to remove the compression retainer, and slide the wear plate off the base plate.







Scan the QR Code to the right to watch the installation video.

Reduce maintenance hours with MAWPS' easy-to-use wear indicator holes. Just look, then rotate or replace.

SOLID MAWPS

DESIGN SOLUTIONS FOR YOUR BUCKET.

With solid MAWPS, you can enhance protection while keeping machine weight to a minimum. Choose a layout designed by Caterpillar engineers for your specific machine or application to maximize your productivity. Cat dealers can access the global library of MAWPS layouts.





SIZE	MACHINE
50 Series	5230, 994
40 Series	993, 5130, R2900
30 Series (available with A.R.M.)	992, 990, 5080, 374-390
	R1700, R1600
20 Series (available with A.R.M.)	980 and down
	365 and down
	Trucks
10 Series	972 and down
	320-349
	R1300

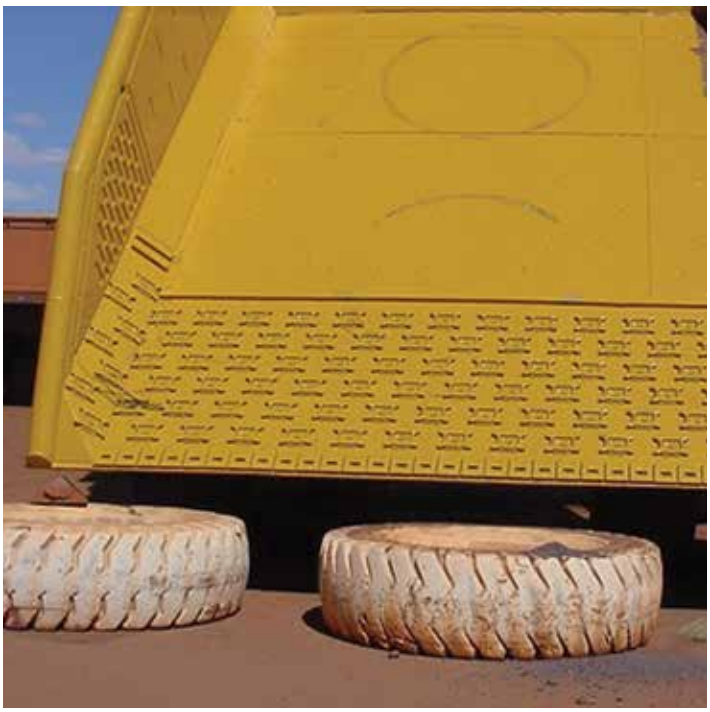
SKELETAL MAWPS

STAY COVERED ACROSS YOUR PASS MATCH.

Quick and easy to install, skeletal MAWPS protect the rear portion of truck bodies to help you maximize uptime. A through-hardened DH-2 wear plate slides onto a weld-on base plate and is held in place with a patented compression retainer, trapping materials from any direction.

TRAP MORE MATERIAL	The skeletal wear plate traps material in and between plates, allowing for material-on-material wear instead of wear on steel body liner products.
EXTEND WEAR LIFE	Because the compression retainer is positioned low in the base plate, more of the wear plate can be worn away before you need to replace it.
SIMPLIFY REMOVAL & INSTALLATION	You can typically replace worn wear plates in two minutes or less without hammering or welding.
INCREASE YOUR FLEXIBILITY	Available in standard and heavy-duty sizes, skeletal MAWPS can be customized to fit virtually any truck body configuration—flat floor or dual slope.





TOTAL WEAR PROTECTION

INCREASED PRODUCTIVITY. FOR EVERY ENVIRONMENT. FOR EVERY APPLICATION.

Get the best available protection for every product on your site, from wheel loaders to cable shovels, with our Total Wear Protection line.

LAMINATED WEAR PRODUCT (LWP)



Chocky Bars, available in four shapes, feature a V-groove design that can be bent around a radius. They can be separated or modified in length. The inset of the Cat logo allows for the trapping of fine material in each section, extending the life of the wear material itself. Chocky bars come in four sizes.



Wear Buttons, designed for applications that optimize the round profile, trap material to provide material-on-material wear. Wear buttons are available in four sizes.



Tear Drop Wear Button fits in with the existing line of circular Wear Buttons. The tear drop shape can extend into corners or follow natural tapers on the protected surface.



Roll Bars protect the leading edge of dozers, loaders, mining shovels and other equipment, providing maximum wear protection while minimizing drag. Roll bars are available in three sizes.



Wear Lugs are for the use on earth moving equipment in the sidebar and leading edge of the bucket. The profile shape of the top of the Wear Lug allows this product to be utilized in TTT applications for further traction on track shoes.



Bolt Protectors help prevent hardware wear on cutting edges, top plates, sidebar protectors and more by allowing material to pack. They also allow for easier removal when replacing G.E.T.

LAMINATED WEAR PRODUCT (LWP)

Wear Blocks are used in areas where a single piece needs to cover a large or specific surface area. There are several new Wear Blocks in the portfolio that give more flexibility and options for coverage.



6x8" Wear Blocks are versatile and long lasting. They feature a zigzag inset design that allows for material-on-material wear. They prevent channel wear common in parallel grooves, delivering extended life in extreme operations.



3x4"Wear Patch Blocks can be plug welded in tight areas. They can also be grouped together where no gaps are desired between parts.



11" Trapezoidal Wear Blocks can fill a tapered area or be staggered in a pattern to avoid straight-line channels. They feature a zigzag inset design that allows for material-on-material wear. They prevent channel wear common in parallel grooves, delivering extended life in extreme operations.



4x8.5" Skid Wear Blocks are rectangular shaped and perimeter welded in place.

MANGANESE WEAR PRODUCTS

MANGANESE WEAR PRODUCTS



Cat Manganese Wear Bar is the first to market product and is designed for the most impact prone applications, including mining shovel heels and lips, and in fixed plant applications including primary and secondary crushers.



Cat Manganese Wear Block are designed for the most impact prone applications.

BI-METALLIC WEAR PRODUCTS



Cat Bi-Metallic Wear Blocks use a unique mechanical bonding process for the highest impact applications. The mild steel jacket and fingers create a strong bond to the chrome white iron.

TUNGSTEN WEAR PRODUCTS



Cat Tungsten Sidebars are designed to be installed on the bucket wings of any HMS, ERS, or LHEX bucket. These are an alternative method of protection over OEM cast wing shroud systems. The tungsten carbide sidebars strengthen the bucket sidewall and provide a shadowing effect that can protect the sidewall from wear.

WEAR PRODUCTS STANDS

The specially designed stands are engineered to support over 2,500 pounds of wear products. They can be placed at the point of use parts store, warehouse, weld shop, fabrication shop for easy storage or consignment plans.

See PEBJ0031 for more information.



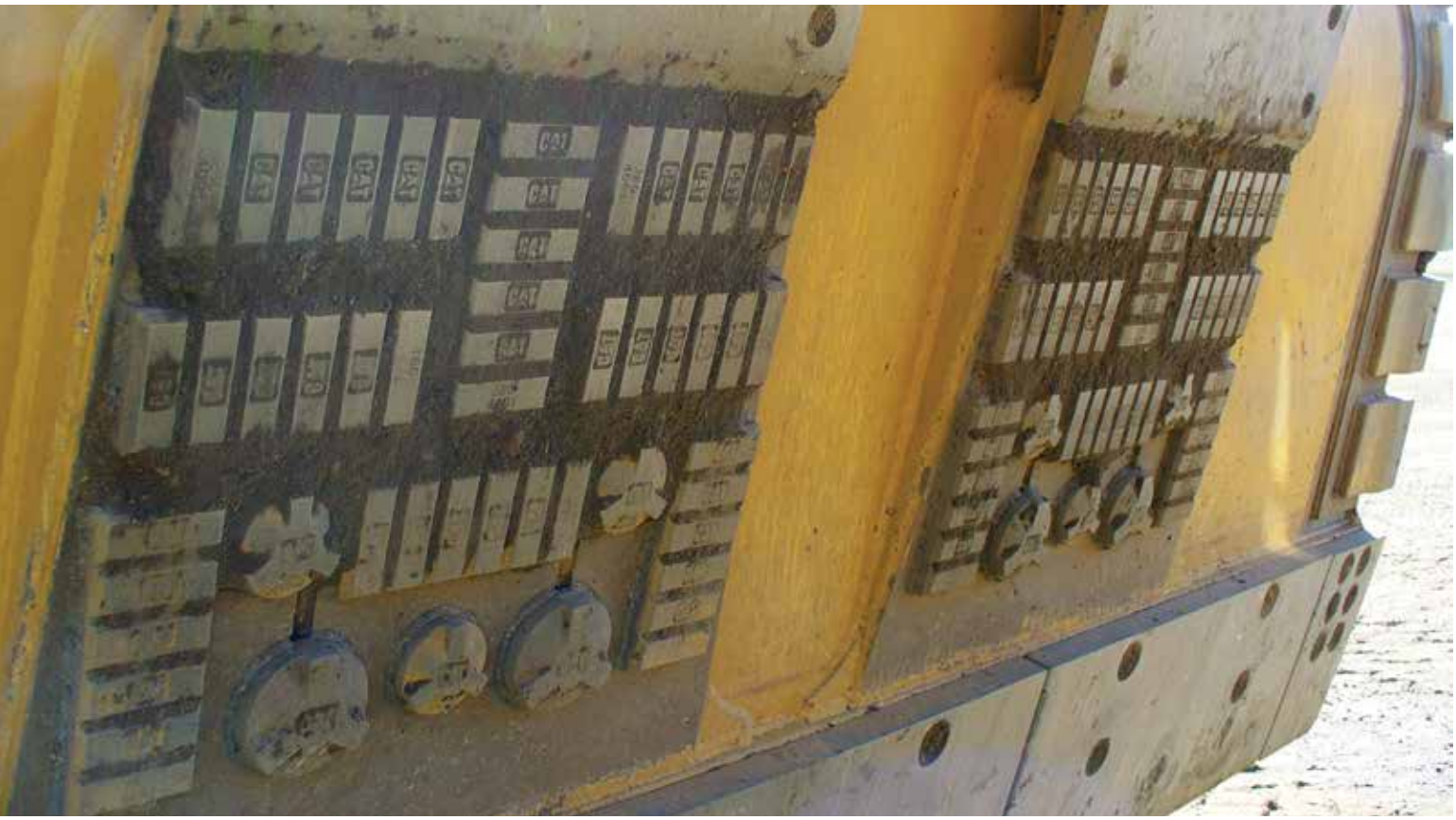
Full Stand



Half Stand







Chocky bars in application

WELD-ON HEEL SHROUDS & HALF ARROW EDGES

WELD-ON HALF ARROW EDGES

Weld-on half arrow edges can be used to customize a bucket with sidebar protection, as side cutters to improve penetration or as segments between teeth to reduce scalloping.



WELD-ON EDGE SHROUDS

Stackable edge shrouds are designed to fit any bucket configuration and extend the life of your excavator bucket edge assembly. Shroud profile is designed to work with K Series vertical pin retainers and horizontal J Series side pins. Tabs allow for easy alignment while installing your edge protection. Two shroud sizes are available per edge thickness to fit any bucket tooth spacing.

HEEL SHROUDS

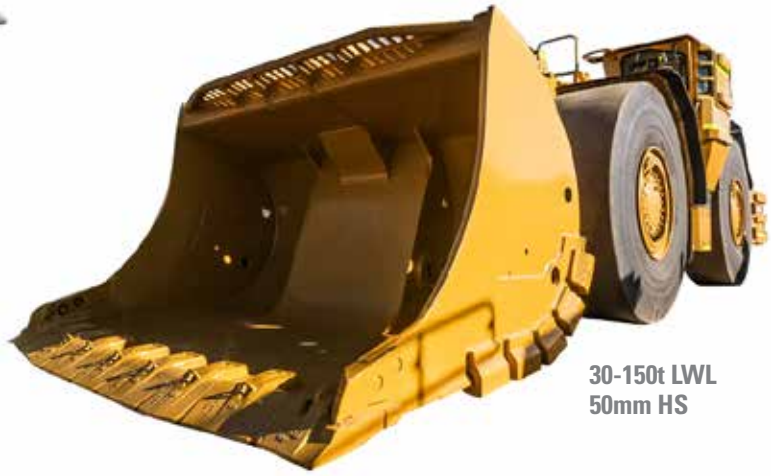
Bucket corner or “Heel” protection is beneficial in hard rock environments that aggressively wear welded joints and cause the bucket to be removed from service. Heel Shrouds are sacrificial iron that can extend the buckets lifecycle to keep it producing for you.



25-90t HEX
25 to 40mm HS



50-150t LWL
40-50mm HS



30-150t LWL
50mm HS

120-900t HMS
60-125mm HS







HEEL SHROUD PRODUCTS



Cat Heel Shrouds protect high wear areas, such as the corner joints of excavator, loader, mining shovels and LHD buckets. 2 durability designs and 2 attachment options help you balance replacement intervals with digging performance for the entire model range.

WELDED PRODUCTS



HEX & WHL



LHD'S



SHOVEL



SHOVEL EWL



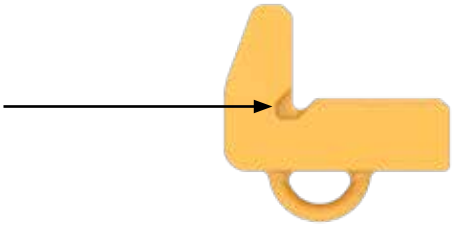
SD





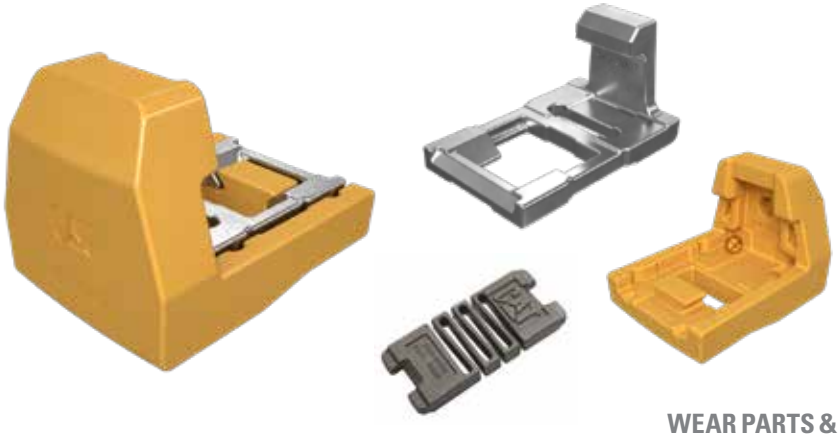
EWL

Simplify inspection times - Know when to schedule replacements by using the integrated wear indicators



Mechanical Product - Mechanically Attached Wear Protection System (MAWPS)

MAWPS Heel Shrouds have similar wear life as Weld-On options, but don't require any welding during replacements. The hammerless cover attaches to the welded base plate with a compression retainer.



ABRASION RESISTANT MATERIAL (A.R.M.)

Cat Abrasion Resistant Material is a coating made of extremely hard tungsten carbide particles that forms a protective shield over key wear surfaces. Cat G.E.T. with A.R.M. is ideal for high-abrasion, low-to-moderate impact applications—such as working in sand, gravel and other abrasive materials that can severely diminish G.E.T. wear life.

EXTEND YOUR WEAR LIFE

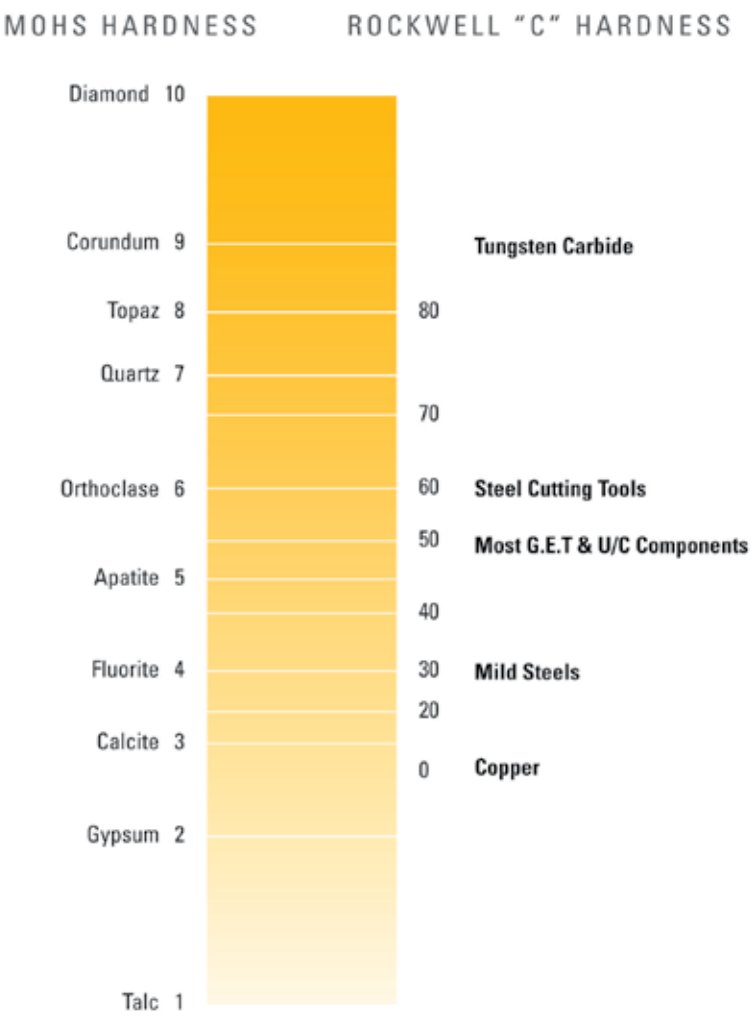
Tungsten carbide offers three to five times the life of through-hardened G.E.T.

LOWER YOUR COST PER HOUR

Self-sharpening wear pattern means fewer change-outs in the right applications.



HARDNESS COMPARISON



EXAMPLE PARTS WITH A.R.M. APPLIED



Two-Strap K Series Adapter



J Series Penetration Tip



K Series Heavy Duty Tip



A.R.M. OPTION AVAILABLE

NOTE: Products available with the A.R.M. option feature this symbol.

ENGINEERED TO ORDER (ETO) CUSTOM PRODUCTS

Bucket and blade products are continually refined as they work and wear, so the G.E.T. solution often needs to be “tailored” to your unique wear environment. Your Cat dealer can provide that custom product for your application.

OVERLAY PRODUCTS

Abrasion Resistant Material (A.R.M.) and Plasma Resistant Material (P.R.M.) can be applied to G.E.T. components to extend their life.



Custom base edges and cutting edges are available for your bucket.



CASTINGS - LIP SHROUDS, COUPLER, TIPS



Contact: GET_ETO_Request@cat.com

- To request ETO forms
- To submit ETO request



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