

# CAT<sup>®</sup> ULTRALIFE SEALING

High-Performance Cylinder Protection  
for Hydraulic Mining Shovels



# HIGH-PERFORMANCE

## Protection Against Wear and Contamination

Hydraulic Mining Shovels (HMS) are the pace setters for your mining operation, and hydraulic cylinders are the “muscles” that keep production moving.

Cat® UltraLife Sealing gives hydraulic cylinders **up to three times** the level of protection against hydraulic system contaminants and premature seal wear.

Available as an aftermarket upgrade, UltraLife sealing provides enhanced protection and longer service life for your HMS cylinders in the most demanding environments.

### THE DIFFERENCE

UltraLife Sealing delivers **up to 50% longer** hydraulic cylinder service life<sup>1</sup> by extending seal life and reducing sealing system wear.

- Fewer stoppages. Fewer service events. Less total downtime.

### THE DESIGN

UltraLife Sealing is a Caterpillar-designed and patented system that sets new **industry-leading standards**. It features multi-barrier contaminant control that protects hydraulic systems.

- Optimized rod support to prevent side loading — plus higher protection against contaminants — reduces rod scoring in aggressive conditions.
- Higher resistance to extreme temperatures, moisture and pressure results in longer seal life.

#### 1. MULTIPLE-BARRIER CONTAMINANT CONTROL

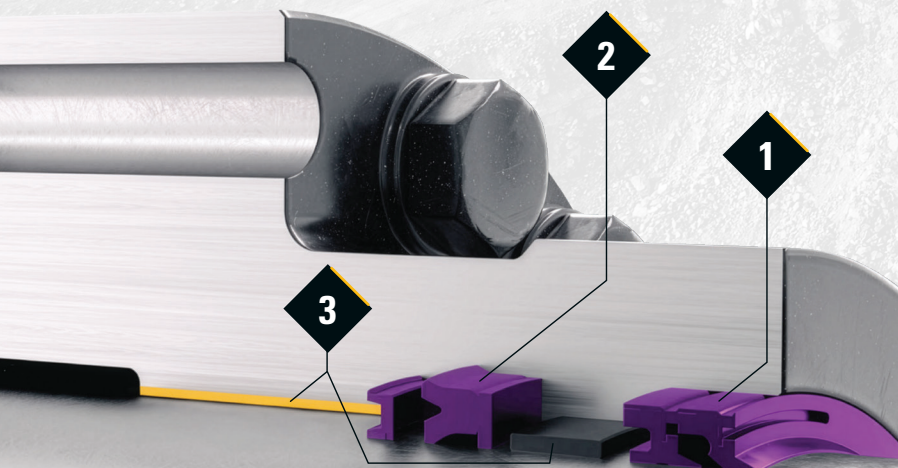
Pre-loaded, multi-lip, steel-backed wiper seals prevent contaminants from adhering to the rod and entering into the hydraulic system.

#### 2. U-CUP & BUFFER SEALS

Design and materials deliver higher resistance to pressure spikes and cylinder velocity.

#### 3. SUPERIOR ROD SUPPORT

Combination of materials and wear guide orientation improve rod support, maintaining centricity and preventing side loading.



<sup>1</sup>All comparisons against standard seal design

MODEL	MACHINE CONFIGURATION	CYLINDER APPLICATION
6030	Face Shovel	Boom
		Stick
		Bucket
		Clam
6030	Backhoe	Boom
		Stick
		Bucket
6040	Face Shovel	Boom
		Stick
		Bucket
		Clam
6040	Backhoe	Boom
		Stick
		Bucket
6060	Face Shovel	Boom
		Stick
		Bucket
		Clam
6060	Backhoe	Boom
		Bucket



\*Cat® UltraLife Sealing requires updating the cylinder head.

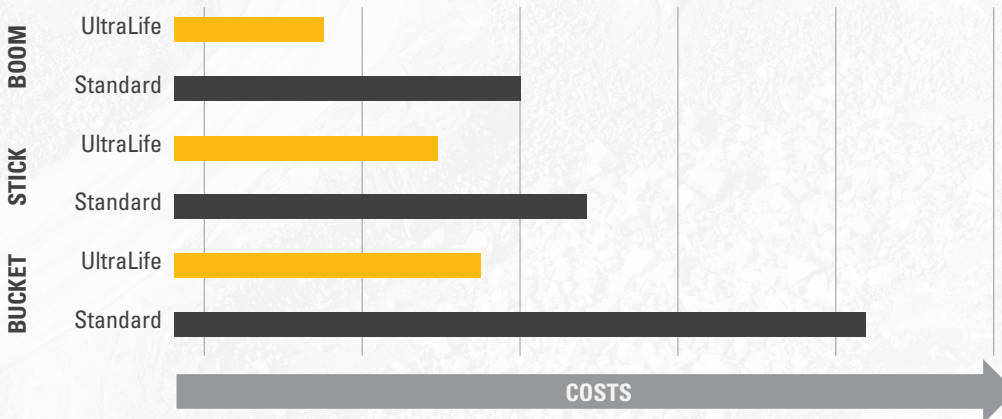
UltraLife can be included in your next hydraulic cylinder service. Does not require extra labor.

## THE PROOF

**Up to 50% longer seal life** extends cylinder servicing to 12,000-15,000 hours.

- Exceeds 8,000-12,000 hours scheduled cylinder servicing using standard cylinder seals.
- Longer cylinder service life can reduce hydraulic cylinder servicing costs by up to 50%.

### HYDRAULIC CYLINDER REPAIR & MAINTENANCE COST COMPARISON



Cost estimates based on 6030BH between 0-60,000 hrs.



## THE DECISION

**Less Downtime. Fewer Service Events.  
Lower Cost of Production.**

Hydraulic cylinder servicing can account for as much as 20%<sup>2</sup> of your total Hydraulic Mining Shovel maintenance costs. Cat UltraLife Sealing can help reduce hydraulic cylinder-related operating costs up to 50%<sup>3</sup>.

### Hydraulic Cylinder Repair Options for Cat Hydraulic Mining Shovels

Caterpillar offers a range of repair options based on the needs of your operation — from budget considerations to repair turnaround time.

With industry-leading parts availability, your Cat dealer is ready to help you make strategic choices among repair and rebuild options for your HMS hydraulic cylinders.

Request an upgrade to UltraLife Sealing on your next HMS cylinder service or repair.

**Ask your dealer for details.**

#### LEVEL 1: RESEAL

- Lowest-cost option
- Restores undamaged components
- Fast dealer turnaround or DIY kits

#### LEVEL 2: REPAIR

- Ideal for lightly-damaged components
- Dealer tools and expertise assure results
- Quick turnaround gets you back to work

#### LEVEL 3: REBUILD

- For older and worn components
- Includes engineering updates
- Retains reusable parts for cost efficiency

#### LEVEL 4: REMAN

- When you don't have time to wait for repairs
- Like-new parts quality with a same-as-new warranty
- Available on-the-shelf for most Cat machines

#### LEVEL 5: NEW

- Genuine Cat parts
- Factory-assembled and ready to go
- Available worldwide

<sup>2</sup>Based on 6030BH owning and operating costs using major component centerlines  
<sup>3</sup>Compared to standard seal design

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