

6015

HYDRAULIC MINING SHOVEL



Engine:	Cat® C27
Engine Output (HRC):	615 kW (824 hp)
Engine Output (LRC Tier 2):	615 kW (824 hp)
Engine Output (LRC Tier 1):	606 kW (812 hp)
Operating Weight:	140 000 kg (308,000 lb)
Bucket Payload:	14.6 tonnes (16.1 tons)



CAT[®] 6015

BUILT TO DELIVER WITH THE
LOWEST COST PER TON

With class-leading tool carrying capacity, increased durability and the most powerful engine in its class, the Cat[®] 6015 Hydraulic Mining Shovel offers high productivity and fuel efficiency. When paired with 773, 775 or 777 trucks, the 6015 can work across a full spectrum of applications: mining, heavy construction, quarry, aggregate and industrial applications.



LOWER COST PER TON WITH INDUSTRY-LEADING PRODUCTIVITY

The 6015 lets you move more material at a lower cost, so you can achieve production targets, deliver on your commitments, meet deadlines and maximize your profitability.

- + MORE AND BETTER OPTIONS LET YOU MATCH YOUR MACHINE TO YOUR OPERATION
- + IMPROVED CONTROL AND FUEL EFFICIENCY GIVE YOU THE LOWEST COST PER TON
- + ENHANCED RELIABILITY, DURABILITY AND SERVICE RESULT IN MORE UPTIME

MADE FOR THE WAY YOU WORK

GREATER VERSATILITY



CLASS-LEADING TOOL CARRYING CAPACITY

The 6015's high tool carrying capacity gives you the ability to employ large buckets and move more in fewer cycles.

THE TOOLS FOR ANY JOB

A large range of buckets is available, giving you the optimum payload and machine efficiency for your operation.

EXPANDED MACHINE OPTIONS

From access and cold weather packages to multiple stick and track pad options, the 6015 offers more ways to create the machine that makes the most sense for your site.

MOVE MORE AT A LOWER COST

INDUSTRY-LEADING PRODUCTIVITY

UNMATCHED POWER

The Cat C27 engine is the most powerful in its class, translating to faster cycle times and greater productivity. This reliable and durable power plant delivers top performance over an exceptional service life in heavy construction, quarry/aggregate and mining applications.

EMISSIONS REDUCTION SYSTEM

The 6015 is powered by the durable and reliable C27 engine—now available for both highly regulated (HRC) or less regulated countries (LRC). Certified to meet U.S. EPA Tier 4 Final/EU Stage V emission standards, the non-selective catalytic reduction (SCR) solution is maintenance-free and does not require diesel exhaust fluid (DEF). The LRC solution meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2.

Load Enhanced Anticipatory Control (LEAC) estimates fuel requirements, based on engine speed and torque, and needed machine torque, based on hydraulic load (pumps and fan). This technology ensures faster and more consistent engine regulation by preventing lug, which, in turn, reduces fuel consumption.

Engine Torque Load Control (ETLC) reduces hydraulic pump output to prevent engine lug, based on available engine torque, desired engine speed, actual engine speed, and estimated hydraulic load. This technology provides power to the machine functions that need it to move material quickly and efficiently.

MOVE MORE WITH THE M75

A new standard rock bucket equipped with the new M75 Ground Engagement Tool (GET) is 20% stronger than the previous C70 GET and moves 8.1 m³ (10.6 yd³) of material, carrying up to 14.6 tonnes (16.1 tons).

MATCH AND MOVE MORE

Achieve production targets with an optimized truck match to maximize volume of material moved at the lowest operating cost per ton. The Cat 6015 is optimally matched with Cat off-highway trucks.

MODEL	VOLUME	PASSES
	Tons / Hour	Passes
Cat® 773	55.3 t (61 ton)	4
Cat 775	64 t (70.5 ton)	5
Cat 777	89.4 t (98.4 ton)	7



INCREASED OPERATIONAL CONTROL

Our Proportional Priority Pressure Compensating (PPPC) hydraulic system varies hydraulic oil flow for smooth, predictable operation and greater operator efficiency. Four hydraulic pumps—three for implement and travel and one for swing—offer the best of both worlds: advanced controls provide the flow needed to reduce heat build-up and component wear, while automatic flow proportioning supplies the needed power for each function in multifunction operations.

FASTER CYCLE TIMES WITH FLOAT VALVES

Energy efficient hydraulic float valves incorporate gravitational forces to reduce the hydraulic power consumed when lowering the boom. This increases machine efficiency, reduces cycle times, and enables hydraulic power to focus on other functions, such as bucket curl and stick in or stick out.

SAVE FUEL WITH KINETIC CAPTURE

A closed loop swing system captures kinetic energy during swing motion and feeds it back to the system during deceleration, providing more power to drive the main and auxiliary pumps to reduce the load on the engine and fuel consumption.

GET MORE WITH

M75

GROUND
ENGAGEMENT
TOOL

FEATURING HAMMERLESS RETENTION.
STRONGER AND MORE DURABLE.
INCREASED UTILITY AND SERVICE LIFE.

2x

**PERFORMANCE
OPTIONS**

RUN WITH OR
WITHOUT ADAPTER

25%

LONGER ADAPTER LIFE

20%

**STRONGER ADAPTER
WITH IMPROVED NOSE GEOMETRY**

Compared to previous models.

ENGINEERED FOR THE TOUGHEST JOBS

ENHANCED RELIABILITY

THE LONG AND SHORT OF A STRONGER LINK



H-LINK
DESIGN

The redesigned H-Link makes the 6015 more effective and more durable.

- + Lengthened link prevents traveling over center
- + Shortened bucket cylinder prevents damage to stick
- + New load sculpting geometry for proper bushing loading
- + Improved kinematic balance

ROBUST STRUCTURES

The 6015 is designed with Cat durability throughout, with every component engineered to withstand harsh mining conditions. Rugged front attachments are made with high-strength steel and castings, which are joined and thermally stressed-relieved to extend service life and keep your machine working. The 6015 also features a more robust final drive and flex coupling and more durable hoses and tubes than previous models.

IMPROVED BUCKET LINK DESIGN

The new bucket H-Link is engineered to do more and last longer. The cylinder design has been optimized for extreme mining applications, with greater piston torque, improved rod to cylinder assembly and more durable rod material. The assembly also features improved head bolts.

OPTIMIZED HYDRAULIC COOLING

Protect and extend the life of hydraulic components with an optimized oil cooling system. This system is independent of engine cooling and includes a hydraulically driven variable speed fan, providing cooling on demand to maintain optimum hydraulic fluid temperature and maximize fuel economy.

ROBUST UNDERCARRIAGE

STABLE AND STRONG ON ANY GROUND



RELIABLE AND DURABLE UNDERCARRIAGE

HEAVY-DUTY UNDERCARRIAGE

Increase uptime with a more durable heavy-duty undercarriage, featuring long-life components and frame. The highly durable components of previous models have been strengthened even more in the 6015, with a forged spindle, improved materials and a more robust final drive. A propel motor guard, propel tube guards and slew bearing lube line protection come standard on the 6015.

MORE DURABLE TRACKS AND COMPONENTS

Heavy-duty idlers incorporate duo cone seals and steel-backed bronze bearings, while heavy-duty rollers have lifetime grease and increased service life with no overheating during travel. Improvements to track pads, track tensioning and wear volume increase undercarriage durability and reliability as well.

POSITIVE PIN RETENTION TRACK

Experience maintenance-free positive pin retention track with the latest generation system and improved durability. These tracks use specially machined links and pins that lock the joint to a predetermined specification, preventing end-play generation and tightly controlling seal motion for long internal pin/bushing wear life and fatigue resistance. Grease Lubricated Tracks (GLT) with exclusive rigid seal and oil-filled rolling components give this rugged undercarriage 2,000 hours more life than those with dry track designs.

EVEN STRONGER RETROFITTABLE HD OPTIONS

With the new heavy-duty protection package, you'll reduce impact and abrasion damage to components and bolt heads from loose underfoot conditions and improve overall undercarriage durability. For additional protection, an optional propel gearcase cover guard is available. This protection package is retrofittable to extend undercarriage life of machines in the field.

BETTER TECHNOLOGY

SMART SYSTEMS THAT SAVE YOU MONEY

The 6015 features empowering technology that helps you work smarter, do more and protect your investment. Best of all, the ability to retrofit optional technology packages means you'll be able to improve your machine—and your cost per ton—whenever you choose.



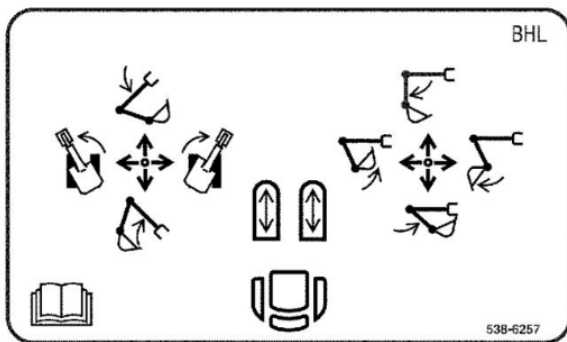
MORE UPTIME WITH PRODUCT LINK™ ELITE

Cat Product Link™ technology provides access to machine location, hours, fuel consumption, idle time, events and diagnostic codes through the online VisionLink® interface. With the new Product Link Elite system, your machine will connect with either a cellular or satellite radio, either of which comes standard. The 6015 is also Cat MineStar™ ready.



RETROFITTABLE TECHNOLOGY, INCLUDING VISION 360

While many optional systems are available from the factory, the 6015 is designed with upgrades and enhancements in mind. Engineered for seamless integration, the Vision 360 retrofit kit will display single and 360° surround views on a 10" (264 mm) HD touchscreen, which will give operators complete situational awareness and confidence on the jobsite.



JOYSTICK CONTROLS ALTERNATE PATTERNS

New Joystick Controls Alternate Patterns allows the machine control pattern to be changed, enhancing safety and overall operating experience. Change joystick controls between a variety of configurations, including:

- + ISO/JIS pattern
- + BHL pattern
- + MHI pattern
- + KOBE pattern
- + Former SCM pattern

MINESTAR™ TECHNOLOGY DO MORE WITH MINESTAR

Cat MineStar is an integrated suite of operations and equipment management technologies. The 6015 is “MineStar ready,” able to use multiple MineStar capability sets.



MINESTAR HEALTH MAXIMIZES UPTIME

MineStar Health lets you collect and monitor machine data so you can be proactive and maximize uptime. Head off small problems, run machines as efficiently as possible for as long as possible and keep unplanned downtime to a minimum.

SEE YOUR ENTIRE OPERATION

MineStar™ Edge™ creates an operational ecosystem that gives you visibility to every aspect of your operation. Efficiently execute your mine plan and deliver optimal quality to the plant. Edge makes it possible to measure, manage, analyze and optimize your entire operation.

RETROFITTING MAKES CHANGE EASY

The 6015 is designed to change with the future. The electronic systems are expandable, meaning you can upgrade your machine to fit your needs as they change and as technology improves. As Caterpillar rolls out future MineStar capability sets (or other electronic capabilities) that enhance your operation, you'll be able to easily fit them to your fleet.

OPERATOR-FOCUSED ENVIRONMENT

A PROVEN DESIGN MADE BETTER



A CAB DESIGNED FOR INCREASED PRODUCTIVITY

PROVEN, COMFORTABLE CAB

The 6015 uses a version of a standard Cat hydraulic excavator cab, which has literally logged hundreds of thousands of hours digging in tough applications across the globe. This roomy and quiet cab and the user-friendly control layout are proven to promote operator comfort and ease of operation.

SUPER SEAT SUPPORT

The fully adjustable suspension seat provides height and weight adjustments, lumbar support, wide arm/wrist rests and a wide retractable seat belt for full operator comfort and support.

REDUCE OPERATOR FATIGUE

With an easily accessible electro-hydraulic servo control, rocker pedals and foot controls and intuitive on-board electronics, the 6015's operator station is designed to give your crew maximum support. The electro-hydraulic controls are ergonomic, responsive and deliver precise control.

CONVENIENT INTERFACE

Monitor vital machine and diagnostic data on the large, 7" (178 mm) color touchscreen for convenient troubleshooting and service assistance.

CLEAR AIR AND VISION FOR YOUR OPERATORS

COMPLETE CLARITY

VISIBILITY BY THE NUMBERS

6

WINDOWS AND SKYLIGHTS
for excellent visibility

7"

TOUCHSCREEN
(178 mm)

2

CAMERA MONITORING SYSTEM
options available

360°

SURROUND VIEW
with Vision 360 multicamera retrofit package

10"

ADDITIONAL HD TOUCHSCREEN DISPLAY
for camera packages

EXCELLENT VISIBILITY AND SAFETY

The 6015's cab design offers improved visibility over previous models with large windows, a lower front window with a view of the tracks, a laminated front upper window, and tempered glass in other windows. A polycarbonate skylight offers an unobstructed upward view as well as emergency egress. Additional features that protect operators and enhance jobsite safety include a polycarbonate rear window, interior sounds levels of 70.5 dB(A) and a standard top guard protection system. An additional front guard is optional.

OPTIONAL CAMERAS

Reduce blind spots, enhance situational awareness and increase operator confidence with an optional two camera system or install a Vision 360 kit. Engineered for seamless integration, single and 360° surround views are displayed on a 10" (264 mm) HD touchscreen technology display.

PRESSURIZED COMFORT

Positive air pressure and improved filtration and sealing limit dust entry into the cab. Maintain internal ambient temperature automatically with air conditioning, heat and defroster.

DOUBLE FILTRATION

A fresh air filter removes dust and particles, while a second internal filter cleans recirculated air inside the cab.

LESS DOWNTIME IMPROVED SYSTEMS HELP YOU DO MORE

ACCESS AND LIGHTING

Access the engine compartment, superstructure components and ground-level service station more easily for safer and more streamlined serviceability. All compartments have improved LED lighting.

ELECTRONIC SUPPORT

Diagnose and execute engine maintenance more effectively with access to Cat Electronic Technician (ET).

INSPECTION AND REPAIR

Inspect, maintain and repair the 6015 more easily with new visual inspection ports for slew drive pinions and ring gear, commonization of charging ports and charging tool and new electronic pilot pressure monitoring via ET.

WARNING LEVELS

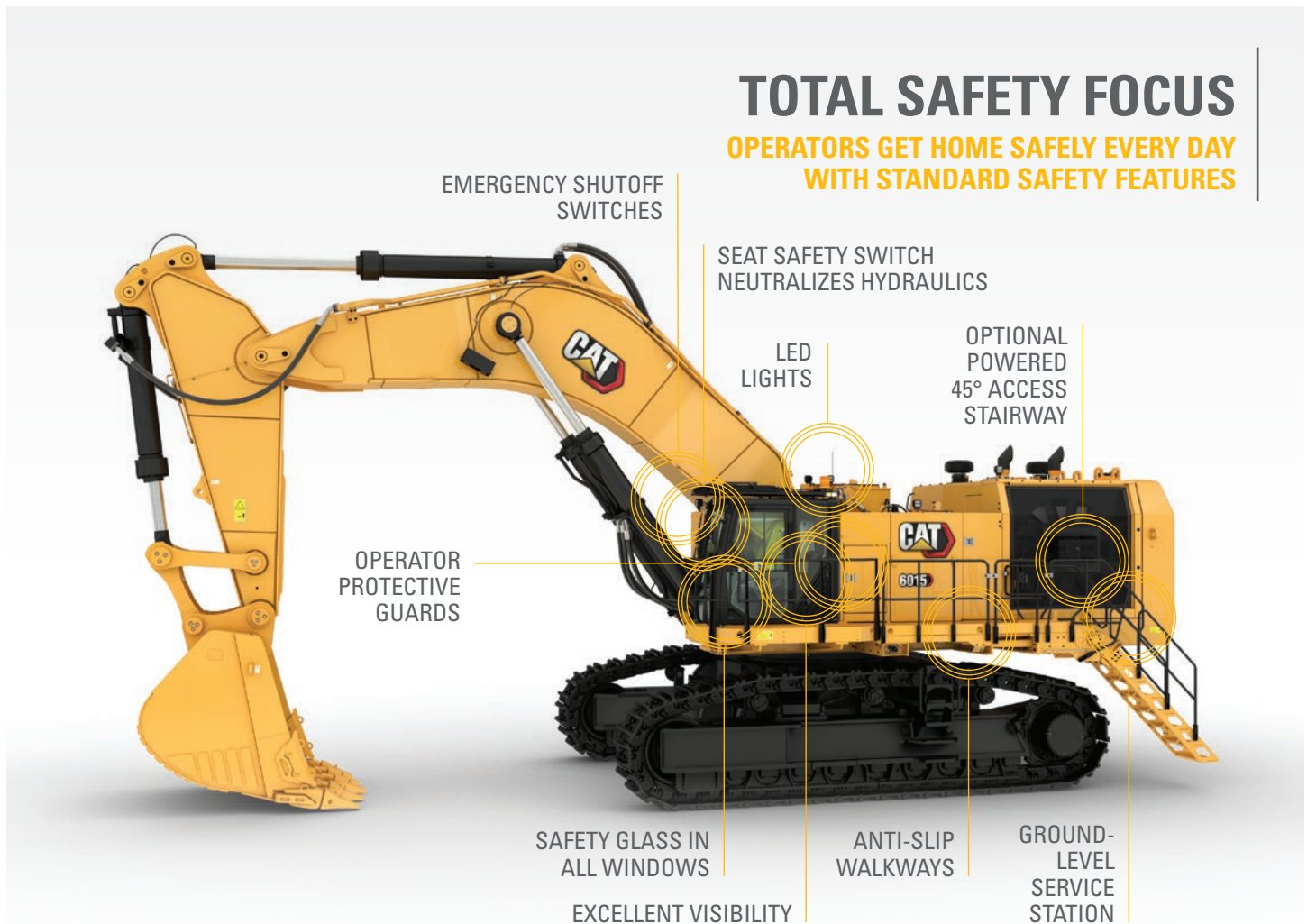
Reduce downtime with enhanced warning levels for hydraulic oil temperature and improved data link diagnostics.

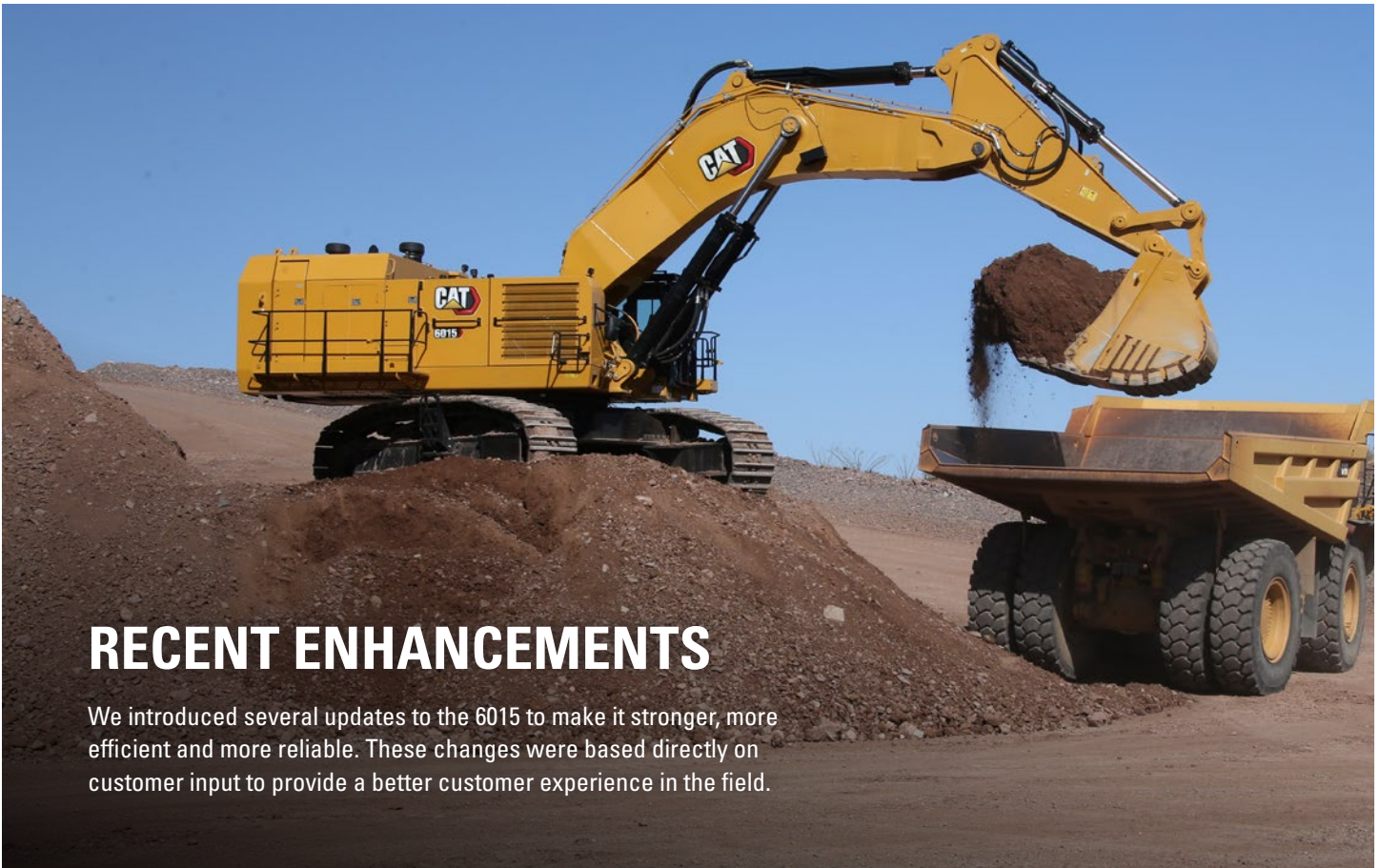
DOCUMENTATION AND PARTS

The 6015 has improved service documentation, and changes to our supply system ensure 6015 parts are stocked around the world for fast, efficient service.

CAT SUPPORT

Like all Cat equipment, the 6015 is backed by the Cat dealer network for unparalleled support. Your Cat dealer will help keep your downtime low and your profitability high.





RECENT ENHANCEMENTS

We introduced several updates to the 6015 to make it stronger, more efficient and more reliable. These changes were based directly on customer input to provide a better customer experience in the field.

HYDRAULIC TANK AND OIL COOLER

We've fitted the 6015 with a larger, heavier hydraulic tank featuring debris compartments, integrated internal flow channels and isolated valve drains. It can also be equipped with a cold-weather package if needed.

- + 300 L (79 gal) increase in oil volume
- + 162 kg (357 lb) increase in dry weight
- + 583 kg (1,285 lb) increase in wet weight

The hydraulic oil cooler has a new enclosure, fan, fan motor and harness to support its new configuration. All new tubes and hoses are routed directly to the bypass valve, and routed above the main frame level for safer assembly. We've also increased cooling capacity by adding a second core. The new bypass design simplifies line routings, reducing backpressure to improve serviceability and lower costs.

We added externally routed margin relief drain ports to the main control valve, as well as a larger, better positioned load-sensing relief system for ease of maintenance. The margin valve return lines have been reassembled to eliminate backpressure.

HYDRAULIC INTEGRATION

We've made several changes to the hydraulic system to improve performance and reliability.

- + Eliminated crosstalk in the swing accumulator
- + Segregated case drain lines and added new return hoses and tubes
- + Installed new suction header and swing pump, allowing for fan and pilot pump to be rotated for a better inlet routing
- + Added high-pressure check valves to avoid cross-contamination between pumps, with new hoses and a new bracket to accommodate the increased weight
- + New electrical integration to support updated lighting and new sensors in the hydraulic tank

INCREASED DURABILITY

We made changes to the engine enclosure, main control valve mounting bracket and main frame to accommodate all our other updates — and to increase the durability of the machine.

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

DIESEL ENGINES – LESS REGULATED		
Engine Model	Cat® C27	
Rated Speed	1800 min ⁻¹	1,800 rpm
Gross Power – SAE J1995:2014*	606 kW	812 hp
Gross Power – SAE J1995:2014**	626 kW	839 hp

*Equivalent to U.S. EPA Tier 1.

**Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2.

DIESEL ENGINES – HIGHLY REGULATED		
Engine Model	Cat C27	
Rated Speed	1800 min ⁻¹	1,800 rpm
Gross Power – SAE J1995:2014***	615 kW	824 hp

***Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

ELECTRICAL SYSTEM		
System Voltage	24 V	
Batteries in Series/Parallel Installation	4 x 200 Ah – 12 V each 150A – 24 V in total	

OPERATING WEIGHTS		
6015 with Backhoe Attachment (BH)		
Standard Track Pads	700 mm	2'4"
Operating Weight	140 000 kg	308,000 lb
Ground Pressure	16.3 N/cm ²	23.6 psi

• Operating weight includes: base machine, front attachment, 700 mm (28 in) track pads, 8.1 m³ (10.6 yd³) standard rock bucket, 100% fuel and lubricants.

SERVICE REFILL CAPACITIES		
Fuel Tank	1700 L	449 gal
Hydraulic Oil Tank	956 L	253 gal
Total Volume of Hydraulic Oil	1752 L	463 gal
Engine Oil	87 L	23 gal
Engine Coolant	165 L	44 gal
Grease Tank	68 L	18 gal

HYDRAULIC SYSTEM		
Maximum Flow to Main Pumps	1544 L/min	407 gal/min
Maximum Pressure – Attachment	320 bar	4,641 psi
Maximum Pressure – Travel	320 bar	4,641 psi
Maximum Flow to Swing Pumps	479 L/min	127 gal/min
Maximum Pressure – Swing	365 bar	5,294 psi

SWING SYSTEM		
Swing Speed	4.9 rpm	
Swing Circuit	Closed-loop with torque control	
Swing Brake	Automatic swing holding brake	

UNDERCARRIAGE		
Maximum Travel Speed – 1st Stage	2.6 km/h	1.6 mph
Maximum Travel Speed – 2nd Stage	3.7 km/h	2.3 mph
Maximum Tractive Force	877 kN	197,157 lbf
Maximum Drawbar Pull	800 kN	179,847 lbf

OPERATOR ENVIRONMENT		
Operator's Eye Level – approximately	3.6 m	11'8"
Spectator Sound Power Level (L _{WA}) – ISO 6395:2008	114 dB(A)	
Operator Sound Pressure Level (L _{PA}) – ISO 6396:2008	70.5 dB(A)	
Operator Protective Guard (front and top guard)	ISO 10262:1998 Level II	

DIMENSIONS		
Height Overall	4880 mm	16'0"
Height of Tracks	1800 mm	5'11"
Clearance Under Counterweight	1940 mm	6'4"
Tail Swing Radius	5180 mm	17'0"
Width Overall @ 700 mm (2'4") standard pads	5689 mm	18'8"
Crawler Length	7000 mm	23'0"
Track Gauge	4100 mm	13'5"

WORKING RANGES				
Boom	7.6 m	24'11"	7.6 m	24'11"
Stick Option	3.4 m	11'2"	4.1 m	13'5"
Standard Rock Bucket Heaped 1:1 (ISO 7451:2007)	8.1 m³	10.6 yd³	7.4 m³	9.7 yd³
G.E.T. System	C70/M75		C70/M75	
Maximum Tearout Force (ISO)	466 kN	104,761 lbf	404 kN	90,823 lbf
Maximum Breakout Force (ISO)	538 kN	120,947 dbf	503 kN	113,079 dbf
Maximum Digging Height	12.8 m	41'11"	13.2 m	43'4"
Maximum Digging Reach	13.9 m	45'7"	14.7 m	48'3"
Maximum Digging Depth	8.0 m	26'3"	8.8 m	28'10"
Maximum Dump Height	8.5 m	27'11"	8.6 m	28'3"

STANDARD & OPTIONAL EQUIPMENT

Standard and optional equipment may vary. Consult your Cat dealer for details.

CAT POWER TRAIN	STANDARD	OPTIONAL
Cat C27 Engine	•	
Aftertreatment system (used in HRC only): Diesel Oxidation Catalyst (DOC), NOx Reduction System (NRS), Non-DEF solution	•	
Hydraulically driven radiator fan	•	
Heavy-duty air filters	•	
Dual 24V electric starters	•	
Automatic engine idle shutdown	•	
Aluminum cooling package		•
Mesabi cooling package		•
HYDRAULICS	STANDARD	OPTIONAL
Power Management System	•	
Automatic swing holding brake	•	
Pressure cut-off for main pumps	•	
Closed-loop swing circuit	•	
Boom float valves and regeneration circuit	•	
ELECTRICAL SYSTEM	STANDARD	OPTIONAL
Maintenance-free batteries	•	
14 LED high-brightness working flood lights	•	
5 LED service lights	•	
UNDERCARRIAGE AND STRUCTURES	STANDARD	OPTIONAL
Positive Pin Retention (PPR2) sealed and greased track design	•	
HD tracks	•	
700 mm (2'4") wide track pads		•
900 mm (3'0") wide track pads		•
1000 mm (3'3") wide track pads		•
Track guards – full		•
Track guards – center	•	
HD fixed axle rollers	•	
HD fixed axle idlers	•	
HD undercarriage protection	•	
Propel gear case cover guard		•
Automatic hydraulic retarder valve	•	
Acoustic travel alarm (forward and reverse)	•	
Fully hydraulic self-adjusting track tensioning system	•	
BACKHOE ATTACHMENT	STANDARD	OPTIONAL
Boom 7.6 m (24'11")	•	
Stick 3.4 m (11'2")		•
Stick 4.1 m (13'5")		•
Frontless base machine		•
Bucket wear package	•	
CAT TECHNOLOGY	STANDARD	OPTIONAL
Cat MineStar™ Solutions Ready	•	
Cat Product Link™ Elite (Cellular)		•
Cat Product Link Elite (Satellite)		•
Cat Product Link Elite (No radio)		•

OPERATOR ENVIRONMENT	STANDARD	OPTIONAL
Single HVAC system	•	
Pressurized cab with positive filtration	•	
Travel control pedals with removable hand levers	•	
Pneumatically cushioned and multi adjustable comfort seat with: seat heating, lumbar support, two-point safety belt, head and arm rests	•	
Sliding upper door window and side window	•	
Removable lower windshield with in-cab storage	•	
Independently adjustable seat consoles with integrated joysticks	•	
Neutral lever (lock out) for all controls	•	
Two power outlets, 10 amp total	•	
Joystick controls alternate patterns (ISO/JIS, BHL, MHI, KOBE or SCM)	•	
FM/AM radio with MP3 auxiliary port	•	
Wiper/washer for lower and upper windshield	•	
Color LCD 7" (178 mm) touchscreen	•	
Fixed access ladder	•	
Powered 45° access stairway		•
Heated cab mirror	•	
Camera monitoring system		•
SAFETY AND SECURITY	STANDARD	OPTIONAL
Emergency stop switches: one in the cab, three in engine module, one pull rope accessible from ground level	•	
Operator protective guard (front guard)		•
Operator protective guard (top guard)	•	
Laminated front upper window and tempered glass other windows	•	
Glass-breaking safety hammer for the front windshield	•	
Anti-slip walkways	•	
COLD WEATHER	STANDARD	OPTIONAL
Cold weather package (120V)		•
Cold weather package (240V)		•
SERVICE AND MAINTENANCE	STANDARD	OPTIONAL
Engine oil exchange interval – 500 hours	•	
Hydraulic oil change interval – 5,000 hours	•	
S•O•S SM sampling ports	•	
Ground level centralized service area	•	
Pilot pressure monitoring via Electronic Technician (ET)	•	
High temperature lubricant		•
Cat Bio HYDO™ Advanced hydraulic oil		•
Low temperature lubricant		•
MISCELLANEOUS	STANDARD	OPTIONAL
ISO or ANSI decals	•	

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com

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(Global)

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