

# AD63

## UNDERGROUND TRUCK



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**Nominal Payload Capacity:** 63 000 kg / 138,891 lb  
**Gross Machine Mass:** 118 940 kg / 262,218 lb  
**Engine Model:** Cat® C27  
**Engine Power:** Stage V engine – 593 kW (795 hp)  
1,800 RPM – ISO 14396:2002



**UNDERGROUND  
CHALLENGES.**

**INNOVATIVE  
SOLUTIONS.**

Underground hard rock mining presents special challenges when it comes to safe, efficient, productive operation — from environmental concerns and rising costs to communications and connectivity challenges. Even simple logistical issues become harder to manage as you dig deeper underground in search of new reserves.

But you want to do more than address these challenges. You want to work harder and turn those challenges into opportunities to improve.



At Caterpillar, we feel the same way. We're committed to listening to your challenges and collaborating with you to find new ways to improve the way you mine. From increasing productivity and reducing emissions to lowering operating costs and reducing maintenance and more, Cat® hard rock underground trucks and loaders are designed to help you meet your challenges head-on.

But we never stop looking for opportunities to innovate and optimize. We continually improve our products and seek out new ways of mining, new ways to reduce impact, and new ways to get more out of game-changers like technology and automation.

No matter what you mine—or how far underground you mine it—you need an equipment provider that understands the unique problems you face, and that has years of experience in solving them. You need a partner like Caterpillar.



# CAT<sup>®</sup> AD63

## UNDERGROUND TRUCK



### **MORE PAYLOAD. MORE POWER. MORE PROFITABILITY.**

The new AD63 underground truck is designed for high production, lower costs and increased efficiency. It's built tough to stand up to the harsh conditions of your site, and features a number of improvements over its predecessor, the AD60 — including a 5% greater payload and more torque.

A world-class cab keeps operators safe and comfortable all shift long, and new enhancements help ensure the safety of everyone working in, on or around the machine. It's powered by a Cat C27 engine that meets EU Stage V Emissions Standards for cleaner performance, as well as reduced ventilation costs. And its rugged construction and simplified maintenance make for longer life and lower operating costs, so you can get the most out of your investment.

## MINING RESPONSIBLY

- » Engine meets EU Stage V standards
- » Non-DEF aftertreatment
- » Additional filter options
- » Can run biofuels as a blend\*

\*Refer to engine Operation and Maintenance Manual for allowed biodiesel blend in your engine model.

## ENHANCED BY TECHNOLOGY

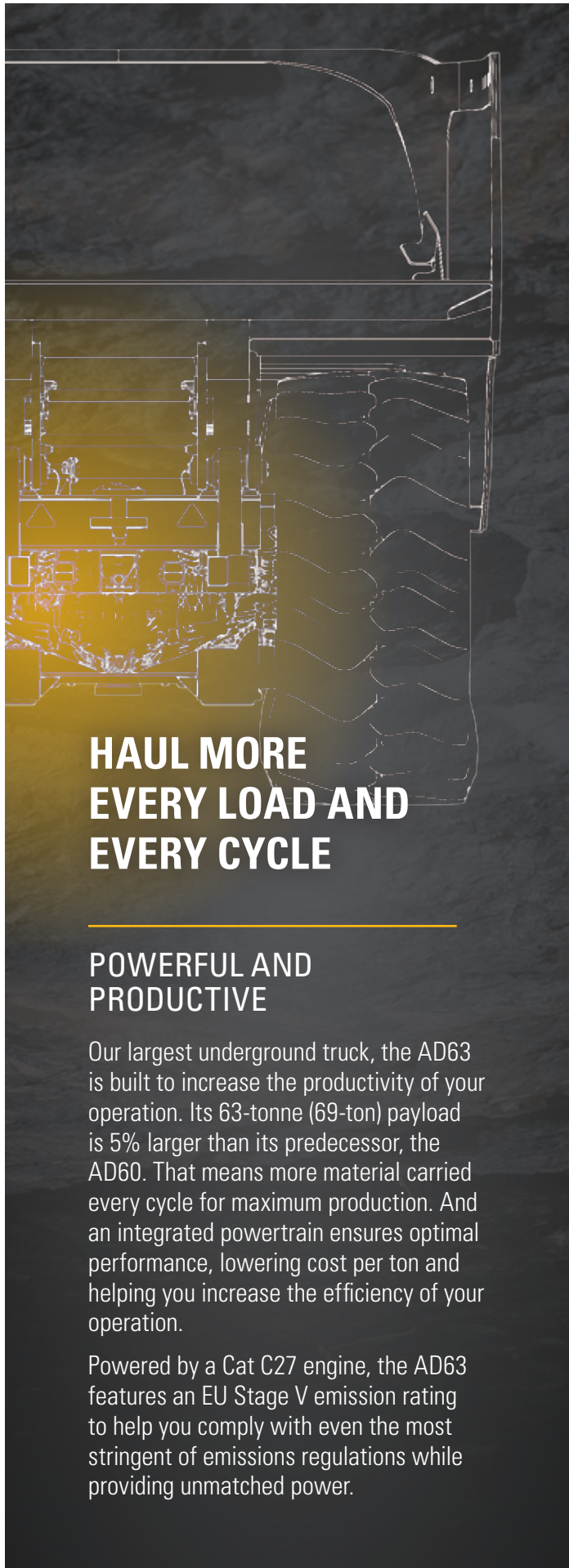
- » Truck Payload Measuring System (TPMS)
- » Cat Product Link™ Elite (PLE)
- » Factory-ready for Cat MineStar™

**INCREASED  
PRODUCTIVITY  
COMPARED TO AD60**

**5%**  
**BIGGER  
PAYLOAD**

**10%**  
**INCREASED  
ENGINE  
TORQUE RISE**





## HAUL MORE EVERY LOAD AND EVERY CYCLE

### POWERFUL AND PRODUCTIVE

Our largest underground truck, the AD63 is built to increase the productivity of your operation. Its 63-tonne (69-ton) payload is 5% larger than its predecessor, the AD60. That means more material carried every cycle for maximum production. And an integrated powertrain ensures optimal performance, lowering cost per ton and helping you increase the efficiency of your operation.

Powered by a Cat C27 engine, the AD63 features an EU Stage V emission rating to help you comply with even the most stringent of emissions regulations while providing unmatched power.

### EFFICIENT PERFORMANCE

The integrated powertrain features intelligent electronics that enhance the efficiency and performance of the AD63 in addition to extending the life of the machine and components for reduced operating costs.

- + Cat Data Link — Decreases fuel consumption, regulates engine speed and prevents shifting above a pre-programmed gear while the body isn't fully lowered.
- + Electronic Technician (Cat ET) — Gives service technicians easy access to stored diagnostic data through Cat Data Link for easier troubleshooting and increased machine availability.
- + Overspeed Protection — The Automatic Retarder Control (ARC) system provides engine overspeed protection when an unsafe engine speed is reached or the throttle is being depressed by the operator. If the transmission has reached maximum programmable or shift lever gear selection, the lockup clutch deactivates to protect the engine.

### MORE POWER TO THE GROUND

The AD63's mechanical powertrain and power shift transmission offer unmatched operating efficiency and control on steep grades and in poor underfoot conditions. A new torque converter gear ratio increases peak torque and improves gear retention on variable grades, resulting in smoother operation and greater comfort. A torque converter lock-up clutch combines the high rimpull and smooth shifting of a torque converter drive with the efficiency and performance of direct drive.

# A TRUCK — YOU CAN — DEPEND ON

## BUILT TO LAST

Rugged Cat structures make up the backbone of the AD63, giving it the durability and reliability you expect from a Cat machine.

### + **Frame Design**

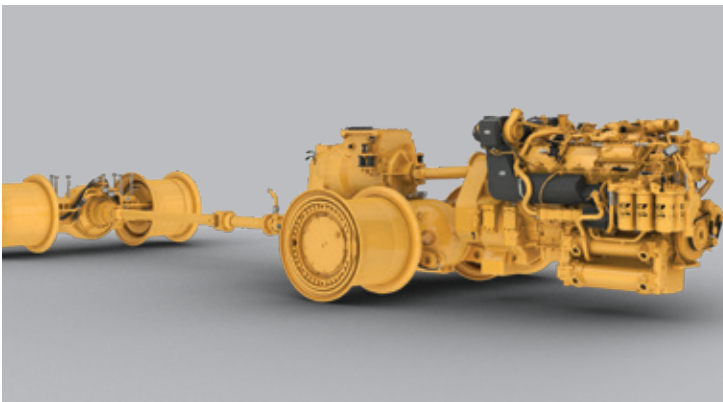
The frame uses box-section design with stiff frame beams to resist twisting forces. Materials and weld joints are matched to optimize the structural life of the frame.

### + **Articulating/Oscillating Hitch**

This system provides steering and oscillation and enables the truck to maintain all-wheel ground contact in rough terrain.

### + **Suspension System**

Two independent variable rebound suspension cylinders dissipate haul road forces for longer frame life and a comfortable ride. A new cast suspension H-Frame is used to increase service life of the suspension frame.



## BUILT TO BE REBUILT

The AD63's frame, powertrain, engine and components are built to be rebuilt — using new, remanufactured or rebuilt parts and components — so you can take advantage of multiple lives of like-new performance at a fraction-of-new price.



# A COMFORTABLE OPERATOR IS A PRODUCTIVE OPERATOR

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## DESIGNED FOR OPERATORS

The AD63's operator station is ergonomically designed for greater control in a comfortable, productive, safe environment. Controls, levers, switches and gauges are positioned to maximize productivity and minimize operator fatigue.

### **Protective Structures**

Integral to the cab and frame, both the Rollover Protective Structure (ROPS) and Falling Objects Protective Structure (FOPS) are resiliently mounted to the mainframe to isolate the operator from vibration for a more comfortable ride.

### **Standard Enclosed Cab**

The sound-suppressed cab provides a quiet, secure and comfortable air-conditioned working environment with fresh, pressurized, temperature-controlled air circulation.

### **Suspension Seat**

An ergonomic, fully adjustable suspension seat provides optimal operator comfort. Thick cushions reduce pressure on the lower back and thighs, and a wide, retractable seat belt is comfortable and secure.

### **Steering Column**

The comfort wheel with tilt steering provides a comfortable driving position, secure grip and greater control.

### **Forward-facing Trainer's Seat**

The forward-facing trainer seat offers increased space and comfort for the trainer.

### **Modular HVAC System**

The AD63 features a modular HVAC system with dual power options. The diesel engine-driven system operates when the engine is running to provide maximum efficiency in hot applications. When the engine is turned off, the electric system powers the HVAC system, resulting in less engine idling and lower operating costs.





### Monitoring System

The Cat Electronic Monitoring System continuously provides critical machine data to keep the machine performing at top production levels. Displays are backlit for easy viewing.

### Camera

An optional rear reversing camera helps operators navigate safely.



## BUILT FOR CONTROL

The integrated Cat braking system delivers reliable performance and control in even the most extreme underground mining conditions. It combines the service, secondary, parking brake and retarding functions in the same robust system for optimum braking efficiency. Automatic brake modification offers a smoother ride and better control for improved operator comfort and concentration.

### Oil-cooled Multiple Disc Brakes

Four-wheel, forced oil-cooled multiple disc service brakes are continuously cooled by water-to-oil heat exchangers for non-fade braking and retarding performance. They are also completely enclosed to prevent contamination and reduce maintenance.

### Automatic Retarder Control

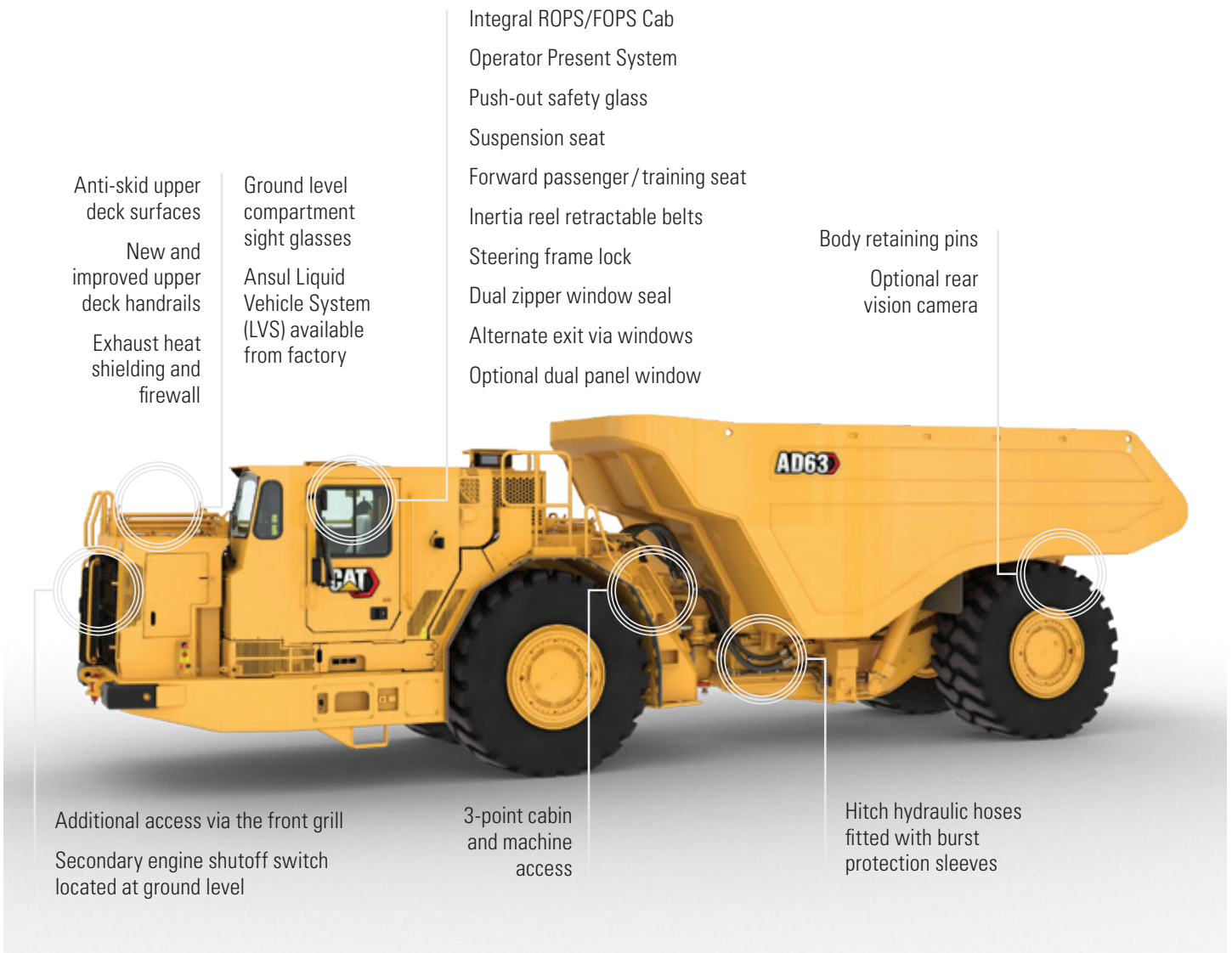
ARC electronically controls retarding on grade to maintain optimum engine RPM and oil cooling. Additional braking may be applied using the manual retarder or the brake pedal. ARC also allows the operator to maintain optimum engine speeds for faster downhill hauls and greater productivity. The ARC automatically activates when engine speed exceeds factory preset levels.

### Brake Systems

The service brakes and retarding system are actuated by modulated hydraulic pressure, while the parking brake function is spring applied and hydraulic released. This system assures braking in the event of loss of hydraulic pressure.

## SAFETY-INFUSED

We continue to be proactive in developing new features that help you ensure the safety of everyone working in, on or around the machine. The AD63 is designed with safety in mind—from excellent visibility to improved access and egress, industry-leading braking and retarding to a secondary engine shutoff switch.



### OPERATOR PRESENT SYSTEM

The Operator Present System helps protect the machine and operator from uncontrolled movements. The system automatically engages the parking brake, neutralizes the steering implement and transmission control and shuts down the engine in the event the operator fails to apply the park brake prior to exiting the cab. The engine shutdown configuration can be changed by your Cat dealer using the Cat ET service tool.



— THE —  
**RIGHT  
BODY**  
FOR THE JOB

The AD63 comes with five body size options, including a new lightweight dump body. Based on the material, haul road and dump conditions, you can select the body that best meets your needs. Your Cat dealer will help you choose the right size and system for your application, resulting in higher efficiency and greater productivity.



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### BODY DESIGN

Drawing on years of experience, Cat truck bodies are designed for long service life and low cost per ton. Cat truck bodies deliver optimal strength, capacity and durability.

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### BODY/CHASSIS INTEGRATION

Cat truck bodies are designed and matched with the integrated chassis system for optimum structural reliability, durability and long life.

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### FAST HOIST CYCLE TIMES

Two-stage hoist cylinders provide fast dump cycle times of 13 seconds for raise and 24 seconds for lower with snubbing function enabled to protect frame and components at the end of the lowering cycle.



# MINING SMARTER

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## THROUGH TECHNOLOGY

The AD63 incorporates technology enhancements that help you get more out of your investment — improving efficiency, boosting productivity and lowering costs.

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### TRUCK PAYLOAD MANAGEMENT SYSTEM

TPMS allows a mining operation to manage payloads and ensure that trucks are not under- or overloaded. A simple display in the cab gives operators accurate payload information, allowing them to help make sure their trucks are getting the correct amount of material every time.

Payload scoreboards offer an external display that gives loader operators a clear understanding of the bucket's contents for more efficient passes. Displays on both sides give loader operators clear visibility, with auto-dimming capacity and improved display accuracy.

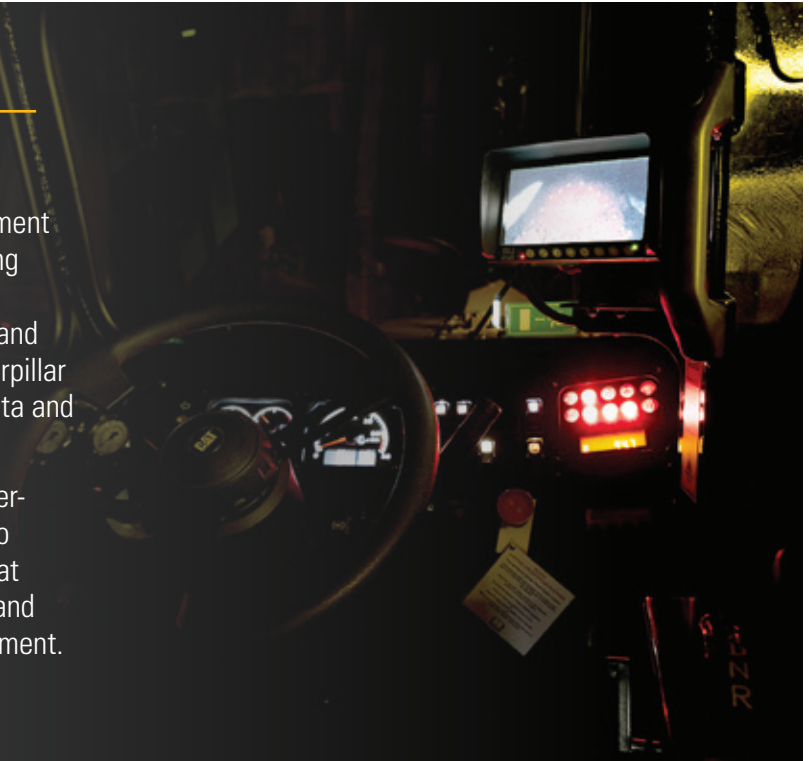


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## CAT PRODUCT LINK ELITE

Product Link Elite (PLE) is a network management module that helps deliver critical data allowing you to easily monitor and manage the health and performance of your machines. It stores and transfers data both to local sources and Caterpillar or your Cat dealer, making it easy to share data and enabling fast remote support and services.

PLE serves as a connectivity enabler for dealer-provided condition monitoring services. It also integrates with Health Equipment Insights, Cat Equipment Care Advisor and MineStar Fleet and Health for diagnostic and equipment management.



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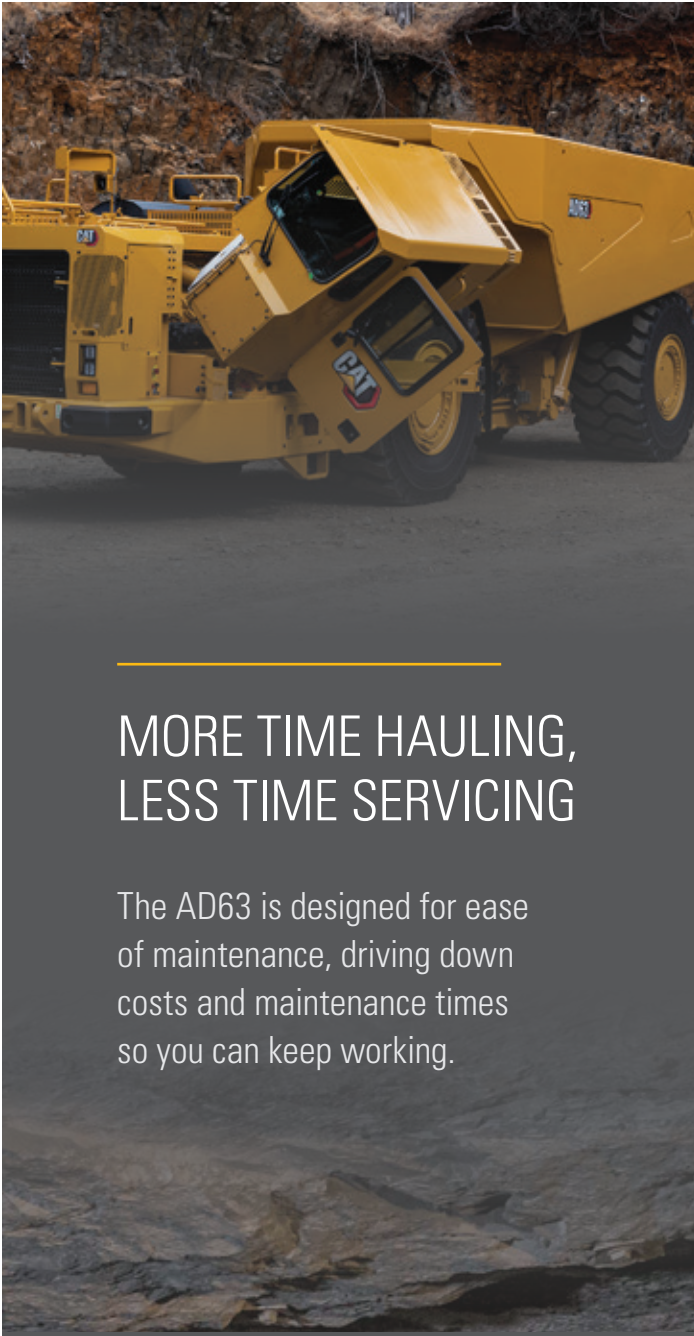
## CAT MINESTAR™ SOLUTIONS

It's no secret that underground mining presents special challenges when it comes to safe, efficient operation. That's why we tailor MineStar Solutions to the unique needs of your environment. Individual technology offerings can be deployed individually or integrated to create a comprehensive technology system that is scalable and configurable to the needs of your operation.

**Fleet for underground** provides real-time visibility to cycle time, payload and other key operational parameters and automatically records and tracks data up and down the value chain.

**Detect for underground** uses a high-precision peer-to-peer proximity detection system coupled with a revolutionary communications and tracking network to prevent incidents and track people and machines — wherever they are underground — in real time and with no reliance on mine infrastructure.

**MineStar Health** products and services enable you to collect and transmit equipment machine health data that enables proactive maintenance services and predictive equipment analysis.



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## MORE TIME HAULING, LESS TIME SERVICING

The AD63 is designed for ease of maintenance, driving down costs and maintenance times so you can keep working.



### SERVICE ACCESS

Easy access to daily service points simplifies servicing and reduces time spent on regular maintenance procedures.

### TILT CAB

Maintenance personnel now have the ability to tilt the cab, resulting in improved access to the cab side of the engine, improved brake accumulator access and improved access to engine mounting hardware. The tilt cab also allows access to the alternator and starter motor without removing belly plates.

### GROUND-LEVEL ACCESS

This feature allows convenient servicing to all tanks, filters, lubrication points and compartment drains. Electric fuel priming and remote mounted fuel filters allow for easier serviceability.

### AIR FILTERS

Radial seal air filters are easy to change, reducing time required for air filter maintenance. The radiator surround has been upsized to improve access to pre-cleaner and filters. Air inlet filters are now forward-mounted on the radiator surround.

### SIGHT GAUGES

Fluid level checks are made easier with sight gauges visible from ground level.

### DIAGNOSTICS

Cat ET enables quick electronic diagnosis of machine performance and key diagnostic data for effective maintenance and repairs.

### SEALED ELECTRICAL CONNECTORS

Electrical connectors are sealed to lock out dust and moisture. Harnesses are covered for protection. Wires are color- and number-coded for easy diagnosis and repair.

### SCHEDULED OIL SAMPLING

S-O-S<sup>SM</sup> helps detect faults early, keeping minor repairs from becoming major ones. Sample point adapters are fitted standard to the machine.

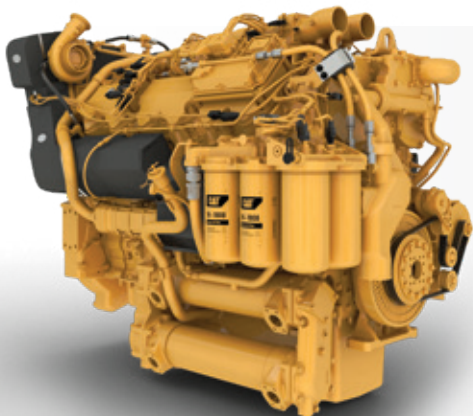
# MINING — FOR A — BETTER WORLD

Governments and regulatory agencies mandate that you establish and follow environmentally sound policies and practices as you meet the demand for mined materials. We're focused on doing our part to make sure our machines help you meet those regulations. Every piece of Cat equipment is designed to be better and do better. Because the better we mine, the better the world can be.

At Caterpillar, we continue to research alternative energy sources such as biofuels and liquefied natural gas and power options like electrification to find new ways to reduce emissions. Underground mining continues to be an early adopter of sustainable mobile equipment solutions, based on the need for a clean and safe working environment.

In addition, we rebuild and remanufacture parts, components and complete machines to increase the lifespan of equipment — reusing instead of discarding, conserving energy, reducing waste, keeping nonrenewable resources in circulation for multiple lifetimes and minimizing the need for new raw materials. We're also listening to our customers and investigating ways we can help them in their efforts to recycle end-of-life machines and components.

Retrofits and upgrades enhance and improve older machines to incorporate efficiency improvements and emission reductions, and to keep them in production longer to conserve energy, lower emissions and minimize the need for raw materials.



## CAT C27 STAGE V ENGINE

- + Meets the strictest emission standards (Stage V) and is approved by CANMET.
- + Does not require Diesel Exhaust Fluid (DEF) to meet these standards.
- + Diesel Particulate Matter reduction solutions are also available for more emission reduction.



## **SUPPORTING YOU UNDERGROUND:** A TEAM THAT LISTENS, CUSTOMIZES & COLLABORATES

### **YOUR PARTNER FOR THE COMPLETE EQUIPMENT LIFECYCLE**

No one knows more about how to get the most from a piece of Cat equipment than Caterpillar and your local Cat dealer. Our partnership starts with validation and testing of the machine and continues through its complete lifecycle.

The one-of-a-kind Cat dealer support network delivers expert service, integrated solutions, after-sales support, fast and efficient parts fulfillment, world-class rebuild and remanufacturing capabilities and more.

Cat dealers operate as nearly 200 local businesses — each one fully embedded in and committed to the geographic area it serves. That means you work with people you know, who know your business, and who respond on your timeframe.

Caterpillar and Cat dealer personnel will partner with you on site to improve the performance not only of your equipment, but of your overall loading and hauling operation.

You'll have access to parts and service, as well as technicians who are focused on helping you optimize repairs to keep machines productive. And we help with training to ensure your operators have the skills and knowledge they need to work as efficiently and productively as possible.

We also work alongside you to ensure you achieve maximum value throughout the life of your equipment. Together with our Cat dealer network, we customize service offerings to provide a maintenance solution that fits your operation — whether you want to perform the majority of service yourself, or you're looking for an onsite partner to manage your maintenance organization. We're also consultants who can help you make smart decisions about buying, operating, maintaining, repairing, rebuilding and replacing equipment.



# MAXIMIZE THE VALUE OF YOUR EQUIPMENT



Your journey with a piece of Cat equipment begins when you decide to make the purchase. But that's just the first of many decisions you'll need to make throughout its lifecycle. Caterpillar and Cat dealers offer dozens of equipment management services that help you take care of your machine after it goes to work — from individual offerings that augment your own capabilities to comprehensive solutions that allow you to outsource the management of your fleet.

Together with Cat dealers, we go beyond supporting individual products to focus on complete operations:

- + Providing services that ensure you have machines available when you need them.
- + Helping you better understand how to optimize equipment performance and maximize its life.
- + Leveraging equipment health data and sophisticated analytics to enable a preventive approach to maintenance.
- + Helping you make smart decisions about buying, operating, maintaining, repairing, rebuilding and replacing equipment.
- + Helping you choose the right repair option at the right time in the equipment lifecycle to keep machines on the job.



# TECHNICAL SPECIFICATIONS

See [cat.com](http://cat.com) for complete specifications.

ENGINE		
Engine Model	Cat® C27	
Engine Power – Stage V Engine – ISO14396:2002	593 kW	795 hp
Bore	137.2 mm	5.4 in
Stroke	152.4 mm	6 in
Displacement	27 L	1,650 in <sup>3</sup>

TRANSMISSION		
Forward – 1st	6.5 km/h	4.1 mph
Forward – 2nd	9.2 km/h	5.7 mph
Forward – 3rd	12.4 km/h	7.7 mph
Forward – 4th	16.6 km/h	10.3 mph
Forward – 5th	22.5 km/h	14.0 mph
Forward – 6th	30.3 km/h	18.9 mph
Forward – 7th	41.0 km/h	25.5 mph
Reverse – 1st	8.6 km/h	5.3 mph

+ Maximum travel speeds with standard 35 × 65 R33 tires.

OPERATING SPECIFICATIONS		
Nominal Payload Capacity	63,000 kg	138,891 lb
Gross Machine Operating Mass	118,940 kg	262,218 lb

WEIGHT DISTRIBUTION		
Empty		
Front Axle	70.7%	
Rear Axle	29.3%	
Loaded		
Front Axle	49.8%	
Rear Axle	50.2%	

BODY CAPACITIES		
Dump Body – 1 (Standard)	26.90 m <sup>3</sup>	35.2 yd <sup>3</sup>
Dump Body – 2	32.60 m <sup>3</sup>	42.6 yd <sup>3</sup>
Dump Body – 3	33.80 m <sup>3</sup>	44.2 yd <sup>3</sup>
Dump Body – 4	36.60 m <sup>3</sup>	47.9 yd <sup>3</sup>
Dump Body – 5 (Light Material)	38.30 m <sup>3</sup>	50.1 yd <sup>3</sup>

+ Heaped SAE 2:1.

BODY HOIST	
Raise Time	13.0 seconds
Dump Time	24.0 seconds
Total Cycle Time	37.0 seconds

TURNING DIMENSIONS		
Outside Clearance Radius	10 005 mm	393.9 in
Inside Turning Radius	5,540 mm	218.1 in
Frame Oscillation	10°	
Articulation Angle	42.5°	

MACHINE DIMENSIONS		
Dump Body (STD)	26.9 m <sup>3</sup>	35.2 yd <sup>3</sup>
Height – Top of Empty Body	3202 mm	126 in
Height – Top of ROPS	3000 mm	118 in
Height – Body Loading	3045 mm	120 in
Height – Dump Clearance	514 mm	20 in
Height – Top of Raised Body	6969 mm	274 in
Height – Ground Clearance	393 mm	15 in
Height – Top of Rear Guard	2291 mm	90 in
Height – Top of Load (SAE 2:1)	3830 mm	151 in
Length – Maximum Body Raised	12064 mm	475 in
Length – Overall Body Down	12040 mm	474 in
Length – Front Axle to Hitch	1920 mm	76 in
Length – Wheel Base	5900 mm	232 in
Length – Rear Axle to Tail	1976 mm	78 in
Length – Rear Wheel to Raised Body	857 mm	34 in
Width – Overall Tire	3250 mm	128 in
Width – Machine with Body	3346 mm	132 in
Width – Machine without Body	3323 mm	131 in
Recommended Clearance Width*	5000 mm	197 in
Recommended Clearance Height*	5000 mm	197 in

\* Clearance dimensions are for reference only.



PASS  
MATCH

R2900 / R2900 XE

3-4  
PASSES

R3000H

3  
PASSES

# STANDARD AND OPTIONAL EQUIPMENT

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

ELECTRICAL		
	Standard	Optional
Alarm, reversing	x	
Alternator, 225 amp	x	
Disconnect switch, 2 post, ground level	x	
Electric starting, 24V	x	
Lights, LED:Headlights with dimmer switch, brake and tail,reversing	x	
Work light, rear, cab mounted	x	
Battery Shutdown		
Ground Level Isolation, In Cab Isolation Switch		x
Ground Level Isolation, Engine Shutdown Switch		x
Ground Level Isolation, In Cab Isolation, Engine Shutdown Switch		x

OPERATOR ENVIRONMENT		
	Standard	Optional
Cab, enclosed, ROPS/FOPS certified, Tilt (cab is able to tilt 43° for maintenance access)	x	
HVAC, dual system	x	
Caterpillar Electronic Monitoring System	x	
Operator Presence System	x	
Automatic Brake Application (ABA)	x	
Brake Gauges, Front and Rear	x	
Brake Pressure Gauges		x
Idle timer (programmable)	x	
Light, residual brake pressure	x	
Low hydraulic oil level alarm	x	
Low park brake pressure indicator	x	
Mirrors, rear view	x	
Radio ready	x	
TLV2 Cat Comfort Air Seat	x	
Seat, trainer/passenger with seat belt	x	
Seat Cover		x
Steering wheel, tilt/telescopic	x	
Camera, Color Rear Facing		x
Turn signal indicators	x	
Windshield wiper and washer	x	
Window Dual Panel		x
Sun Visor		x

TIRES, RIMS, AND WHEELS		
	Standard	Optional
Tires, 35/65 R33 VSNT Bridgestone	x	
Rims (set of 4)	x	
Rim Identification Numbering		x
Spare rim, Tubeless		x

POWER TRAIN		
	Standard	Optional
Brake retarder control, automatic	x	
Brakes: All wheel disc, Oil cooled	x	
Parking brakes, four wheels	x	
Control throttle shifting	x	
Cat C27 12 cylinder diesel engine, EU Stage V	x	
Firewall	x	
Air-to-air aftercooler (ATAAC)	x	
Fuel priming aid	x	
Aftertreatment Options		
DPF (Flow Through)		x
DPF (Wall Flow)		x
Park Brake Switch Engagement– Push to Apply/Pull to Apply		x
Transmission, automatic planetary power shift (7F/1R)		
Gear blockout with tray up, programmable	x	
Ground speed limiting, programmable	x	
Torque converter with automatic lockup	x	
Four wheel drive	x	
Remote transmission cooler	x	
Fast Fill System		x

OTHER EQUIPMENT		
	Standard	Optional
Adapters, oil sample	x	
Alarm, tray up	x	
Ansul Fire Suppression, Wet 76L (AS5062)		x
Axle suspension, front	x	
Belly guards	x	
Bumpers, front, rubber	x	
Cap, radiator, manual release	x	
Catalytic exhaust purifier/muffler	x	
Covers, exhaust	x	
Handholds	x	
Handrails, fold down	x	
Hitch, articulated and oscillated	x	
Hydraulic Burst Protection	x	
Dump body 26.9 m <sup>3</sup>	x	
Dump body 32.6 m <sup>3</sup> / 33.8 m <sup>3</sup> / 36.6 m <sup>3</sup> / 38.3 m <sup>3</sup>		x
Body Liners, Impact and/or Wear		x
Body Wear Plate, External		x
Body Wear Protection Option		x
Fluids - Arctic Fuel, Arctic Coolant		x
Cover, Anti Vandalism for Shipping		x
Lubrication System – Automatic		x
Product Link Elite	x	
Truck Payload Measurement System(TPMS)		x
Secondary steering	x	



# AD63 TRUCK

For more complete information on Cat products, dealer services and industry solutions, visit us at [www.cat.com](http://www.cat.com)

AEHQ8430

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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