785

LARGE MINING TRUCK

Engine:	3512E (Tier 4 optional)	
Gross Power:	1 193 kW / 1,600 HP	
Tires:	33R51	36R51
Gross Weight:	249 476 kg / 550,000 lb	255 826 kg / 546,000 lb
Nominal Payload:	139 tonnes / 153 tons	142 tonnes / 157 tons

CAT® LARGE
MINING TRUCKS

DELIVERING A BETTER BOTTOM LINE

With a truck for every site and application—no matter the size class or drive system—and a full lineup of loading tools, Caterpillar delivers a complete loading and hauling solution that delivers a better bottom line.

A lot goes into delivering that value. Like high speed on grade for improved productivity. A class-leading standard payload. Caterpillar proven anytime braking plus front and rear wheel retarding for more confident operators. And total Cat® integration, which results in highly efficient systems and performance.

THE NEXT GENERATION OF PRODUCTIVE HAULING

The Cat 785—the first of the next generation of Cat Mining Trucks—is designed to be the most efficient and productive on the market.

If there was one word to describe the hundreds of improvements we've made in our products, it would be "optimized." We've optimized the operator experience, making the machine safer and more comfortable, and incorporating features that make their jobs easier, more consistent and more predictable. We've optimized electronics and connectivity, providing faster and easier access to data and streamlining technology integration. We've optimized machine health, with improved data analytics and new diagnostic capabilities. We've optimized maintenance, with modular features and consolidated components that make service faster and easier.

And we've done it all for one reason: So you can experience optimization in your hauling operation—and boost your bottom line.

CAT® 785

EFFICIENT PERFORMANCE.

SUPERIOR TECHNOLOGY.

STREAMLINED MAINTENANCE.

A MINING INDUSTRY GAME-CHANGER

The 785 Mining Truck was Caterpillar's first entry into the mining industry more than three decades ago and has been a proven performer on sites around the world ever since. And now it's the first to combine a game-changing level of efficiency with high physical availability to deliver the next generation of productive hauling.

It all starts with the operator, who sits in a state-of-the-art environment designed for efficiency and equipped with features that increase comfort, automate functions, provide real-time information and boost confidence.

The 785 also delivers significant improvements in serviceability and reliability, enhanced connectivity and easier technology integration. These improvements—and more—take an already proven truck to the next level of productivity and deliver a better bottom line to the most important mine in the world: yours.

UP TO 5% REDUCTION IN CYCLE TIMES THANKS TO

+ Larger tire option
+ Higher horsepower option
+ Advanced Productivity Electronic Control Strategy (APECS), which leads to:
  – Smoother and faster shifts
  – Better acceleration and gear optimization

6% HIGHER TKPH / TMPH
(TONNE-KILOMETER-PER-HOUR / TON-MILE-PER-HOUR)
THANKS TO LARGER TIRE OPTIONS

34% MORE OPERATOR SPACE IN LEADING-EDGE CAB

LESS MAINTENANCE & REPAIR = LOWER COSTS

1st

1st truck in the Caterpillar product line for mining

Our 1st mechanical drive truck in the 150-ton size class

1st Cat truck built as Tier 4

1st in productivity and efficiency

1st to incorporate next generation technology

LOWERING
COST PER TON

With offerings in both electric and mechanical drive and payloads ranging from 139 to 372 tonnes / 153 to 410 tons, Caterpillar can offer a truck for every type of mining application. But one thing all the models have in common is the philosophy we follow in their design. Whatever measurement you use for material movement, our goal is to help you optimize that cycle—lowering cost per ton and delivering a better bottom line to your operation.

A PROVEN DESIGN PHILOSOPHY

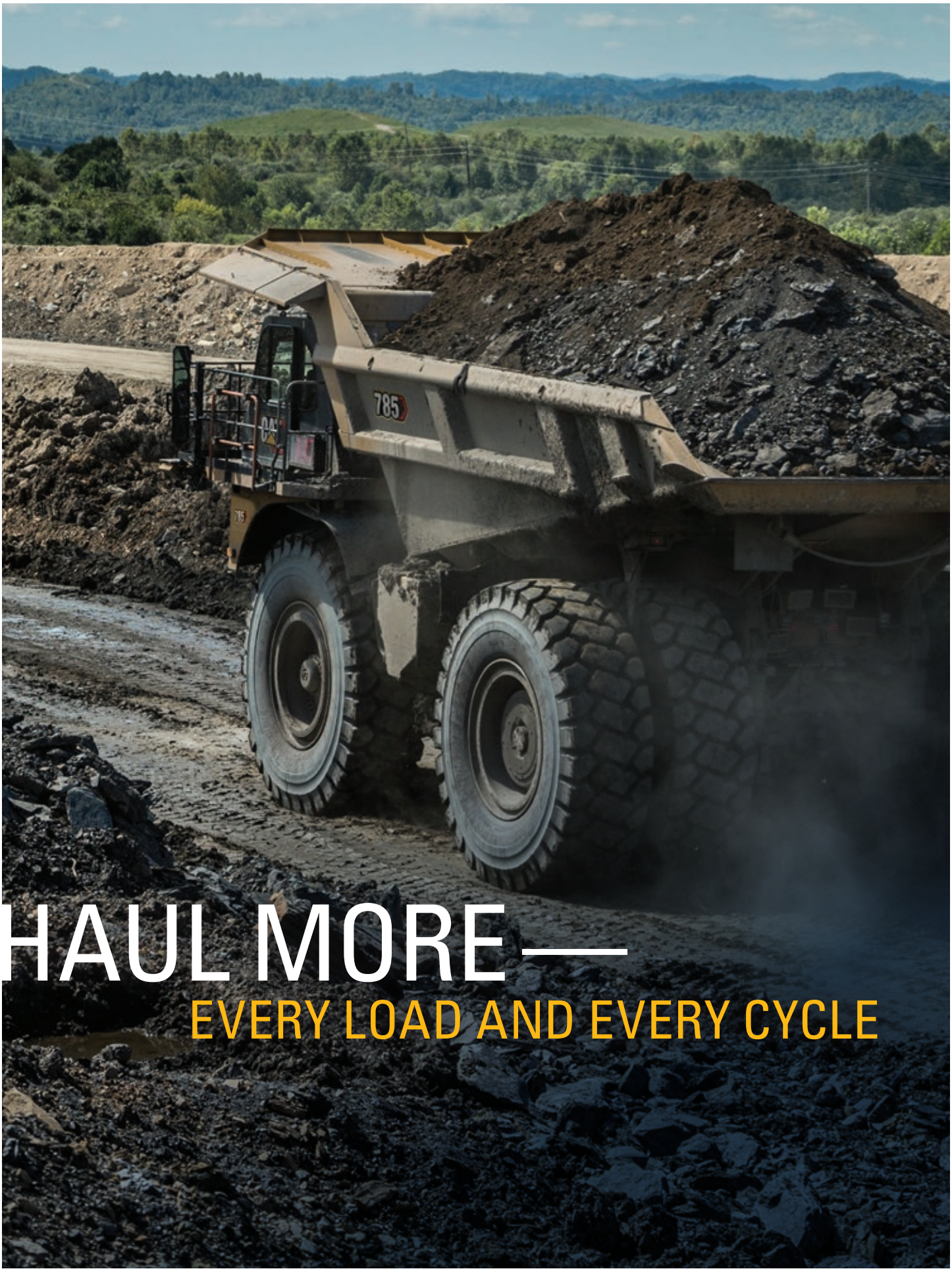
When it comes to making Cat large mining trucks, we follow a proven design philosophy that focuses around five main areas:

1. MAKING A SUSTAINED INVESTMENT IN RESEARCH & DEVELOPMENT
2. INTEGRATING EVERY COMPONENT
3. DELIVERING IRON THAT PERFORMS
4. SUPPORTING PRODUCTS — AND PRODUCTIVITY
5. LISTENING TO OUR CUSTOMERS TO SPUR CONTINUOUS IMPROVEMENT

By following this philosophy — for every truck, every time — we ensure that you get what you expect from Caterpillar. Our aim is to deliver the lowest cost per ton.

A PROVEN APPROACH TO R&D

- A WORLD-CLASS TEAM OF ENGINEERS AND EXPERTS
- A DISCIPLINED APPROACH TO DEVELOPMENT
- MINING INDUSTRY FEEDBACK
- TESTING AND VALIDATION OF EVERY MACHINE



HAUL MORE—
EVERY LOAD AND EVERY CYCLE

HOW WOULD MORE HAULS PER YEAR BOOST YOUR BOTTOM LINE?

36 EXTRA MINUTES PER SHIFT

219 EXTRA HOURS PER YEAR

— GIVE YOU —

AN ADDITIONAL

18 SHIFTS

PER YEAR

based on 12-hour shifts with 5% reduced cycle times

FASTER CYCLES

The 785 can deliver up to a 5% reduction in cycle times thanks to options such as larger tires and high horsepower, as well as the addition of automated functions and controls that boost efficiency and shorten the operator learning curve.

In addition, the Advanced Power Electronic Control Strategy (APECS) delivers productivity and efficiency improvements that can reduce cycle times. Benefits of APECS vary by application, but most mining applications will see an improvement to the bottom line through:

+ **Faster cycle times.** More continuous torque and rimpull delivers more power to the ground and makes it possible to use a higher gear on grade for optimal fuel efficiency.
+ **Faster acceleration.** Forward momentum and torque are maintained through each shift, with optimum gear selection resulting in faster acceleration.
+ **Improved operator comfort.** Operators enjoy a more comfortable ride thanks to smoother transitional shifting and reduced shift jerk levels.
+ **Reduced haul road maintenance.** Smoother shifting results in less spillage and less haul road maintenance required.
+ **Improved engine and powertrain life.** A reduction in torque spikes and fewer variations in engine speed deliver longer engine and powertrain component life.

MORE TIME HAULING,
LESS TIME SERVICING

The 785 is designed to reduce the time you spend on regular maintenance procedures. Enhanced serviceability and extended service intervals help increase machine availability and productivity.

REDUCE YOUR DOWNTIME. REDUCE YOUR COSTS.

We've reduced key contributors to downtime with features like the new modular HVAC (heating, ventilation and air conditioning) system, which improves reliability and consolidates components so the entire system can be removed and replaced quickly. A modular radiator reduces engine removal and installation time and enables rebuilds to be completed off the truck for reduced downtime.

New Remote Flash and Remote Troubleshooting capabilities reduce downtime and optimize machine performance by providing immediate access to the latest software updates and making it possible to troubleshoot the machine remotely or schedule updates when it's most convenient to the operation.

IMPROVEMENTS IN SERVICEABILITY AND RELIABILITY

+ Extended-interval filters with ground-level access
+ Fluid-level sight glasses
+ Grouped service points
+ New centralized service center option
+ Extended coolant life (12,000 hours)
+ Extended hydraulic and TC/transmission filter life (500 to 1,000 hours)
+ Modular HVAC and modular radiator
+ Cleaner hydraulic and electrical routings
+ 100% airless electric start option, which eliminates air system maintenance from the machine and improves uptime
+ SOS and pressure ports for faster, safer oil sampling and troubleshooting
+ Brake wear indicator allows planned maintenance
+ Ground-level filters with extended service intervals for faster, safer planned maintenance

DESIGNED BY OPERATORS FOR OPERATORS

The latest cab is equipped with features that increase comfort and improve efficiency.

+17%
CAB WIDTH

+11%
LEG ROOM

34% MORE OPERATOR SPACE

+19%
SHOULDER ROOM

As compared to previous cabs

Note: Some optional features shown

IMPROVED CAB

The 785 cab is larger and more ergonomic, with controls, levers and switches positioned for ease of use. It's also quieter, with 40% less Sound Pressure Level (SPL), and offers automated temperature control and cab filtration for a safer and more comfortable environment. A walk-through cab with fully adjustable center console, easy-to-adjust seat and increased leg room make the cab ideal for operators of all sizes.

COMFORT SEAT

The next generation seat is four-point-restraint ready and improves operator comfort with features like thigh tilt and extensions, air adjustable side and lumbar bolsters, leather upholstery, heated and cooled cushions and dynamic end dampening suspension.

ADVANCED SCREENS

Machine data, controls and guidance information are consolidated onto two 10-inch screens to reduce the number of displays required and present the right information when needed. The screens are ideally located to enable the operator's eyes to remain forward as much as possible, reducing fatigue and improving safety. The gauge cluster is non-touchscreen while the secondary screen containing machine information is a touchscreen display. The displays provide a simple, consistent and intuitive user interface for operators across all global regions.

BOOSTING OPERATOR PRODUCTIVITY AND BUILDING CONFIDENCE

The next generation of productive hauling starts with the operator, who sits in a state-of-the-art environment designed for efficiency and equipped with features that automate functions. We've made the operator experience easier, safer, more consistent and more predictable. We've increased efficiency through automation, improved access to information and reduced fatigue. We've also added features that improve machine responsiveness and controllability while improving cycle times.

30+ NEW OR IMPROVED TECHNOLOGY FEATURES

AUTO HOIST

The optional Auto Hoist feature automatically raises the body and controls engine speed, simplifying operation and minimizing cycle times and cycle time variations across various operators. This feature is integrated with the transmission control, requiring less hand movement and enabling easier operation.

OPERATOR SPEED COACHING

The Operator Speed Coaching function gives operators real-time feedback on factors such as payload, grade and ground conditions to help them choose the right speed for maximum productivity and safety.

PAYLOAD MONITORING

The payload monitoring system is twice as accurate as its predecessor, with better monitoring and an improved interface that provides easy access to information.

ENHANCED VISIBILITY AND AWARENESS

Object detection, with radar and cameras, is a standard fixture that delivers visibility around the machine. An additional camera option is the 360 Surround View for perspective from above the truck.

DYNAMIC STABILITY CONTROL (DSC)

Helping steer operators in the right direction, DSC monitors steering intention—where the operator intends to go—tracks the motion of the truck, and then automatically modulates the brakes to ensure the machine is tracking.

+ Prevents understeering & oversteering
+ Gives operators better control of their machines
+ Ensures a safer mine for everyone

MACHINE SPEED LIMITING AND CRUISE CONTROL

This feature allows the operator to quickly and easily set a target speed limit. The truck will limit fuel or apply brakes to ensure the target speed limit is not exceeded. The powertrain will select the appropriate gear and RPM to maximize performance and efficiency.

NOTE: Some optional features shown

AUTOMATIC RETARDING CONTROL (ARC)

Automatic Retarding Control senses truck conditions like grade, payload, brake oil temperature and more to automatically set an optimum retarding speed. This allows trucks to safely travel 3–6% faster on grade, driving down cycle times with no impact on safety. In addition, zero fuel is consumed during retarding.

HILL START ASSIST WITH ANTI-ROLLBACK

Hill Start uses physical grade and payload to determine the rimpull needed to keep the truck stationary and simplifies operation to move the truck in selected direction.

Anti-Rollback stops the machine with automatic brake application when it is rolling in the opposite direction of the selected gear.

ANTI-LOCK BRAKE SYSTEM (ABS)

This optional system reduces wheel lock and the resulting chance of an uncontrollable skid, making it easier to control the truck in braking situations with reduced traction. ABS allows the operator to steer while in a sliding condition and helps the operator maintain the desired path of travel during braking.

ENHANCED TRACTION CONTROL

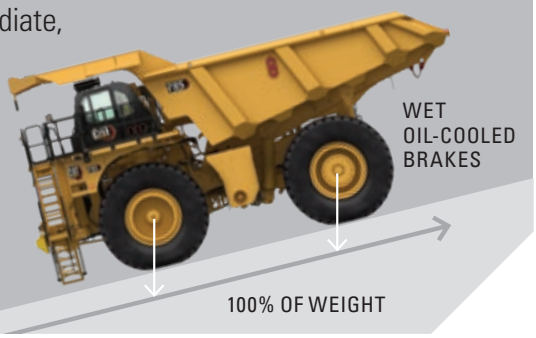
The Enhanced Tractional Control feature monitors front and rear wheel speeds, grade and machine acceleration to determine targeted rear wheel speeds, then uses that information to control rear corner brakes and limit engine torque when needed to deliver improved traction for the truck. The feature increases traction control responsiveness and improves machine controllability and reduces tire wear and damage.

SAFETY-INFUSED

From slip-resistant surfaces and guard rails to state-of-the-art collision avoidance technologies, the Cat 785 is infused with features to help operators feel safe and confident on the job.

SUPERIOR BRAKING

Like all Cat trucks, the 785 offers superior braking and retarding control for increased operator confidence. The oil-cooled, multiple disc brakes provide immediate, fade-resistant braking and retarding. The 785 has a true four-corner braking and retarding system proven in thousands of Cat mining trucks in challenging underfoot conditions. With retarding power applied to all four corners, the full weight of the truck can be applied for traction, resulting in maximum productivity even in poor underfoot conditions.



CUTTING-EDGE CONNECTIVITY

Next generation connectivity delivers:

+ Faster data transfers
+ Instant access to quality information on any supported device
+ Consistent data communication
+ More insightful and actionable data
+ Improved data analytics
+ New diagnostic capabilities

Improved connectivity has a positive impact on every aspect of a mining operation—from operator performance to equipment maintenance, fleet management to machine life.

We've developed a future-proof platform that makes it easier to integrate technologies that provide data and analytics, keep operators and sites informed, and boost the overall performance of your entire operation. Improved access to quality data and real-time information gives you the ability to make better decisions, faster. These decisions can help you predict and prevent machine failures and achieve the high uptime you need to keep production moving.

The backbone of connectivity is 100 Mbps two-wire ethernet communication across the machine controllers, sensors that are optimized for data analytics, and robust controls. Advanced connectivity on the new 785 truck is enabled by standard cellular 4G/LTE, optional dual mode 4G/LTE and Satellite Product Link™, or locally installed Wi-Fi.

Every new 785 leaves the factory equipped with Product Link Elite as a standard offering. This solution sends machine location and performance data to your office or to your chosen cloud-hosted application for analysis and review, helping you get more out of your machines.

A TRUCK FOR YOUR APPLICATION

Thanks to a number of customizable features, the 785 has the versatility to work in a variety of high production mining applications.

EMISSIONS OPTIONS

The 785 is available in two options to meet the emissions regulations where you operate. The optional Tier 4 Final engine meets the strictest regulations while the 785 LRC is available in those countries that are less regulated.

TIRE OPTIONS

The 785 lets you select the tire offering that best matches your application, with larger tires available to maximize payload and speed. For flat, long, high-speed applications, you can choose the 36R51 tire option. The frame is designed to maintain the same turning diameter while accommodating larger tires and delivering a 6% higher TPKH/TMPH. In addition, turning radius performance is balanced to minimize tire scuffing. The more responsive traction control system reduces tire wear and improves machine performance.

COLD WEATHER OPERATION

The 785 is available in a cold-weather configuration that makes it ideal for mines operating in frigid environments. It features automatic engine thermal management, a variable fan speed for low temperature operation, and an electric- or air-start option. Operators work comfortably with a heated seat, automated temperature controls and a highly reliable modular HVAC system. Additional cold-weather features include:

+ Fuel filter with water separator and fuel heater
+ Engine coolant heater and oil heater for startup
+ Engine coolant for -50°C / -58°F
+ Heated mirrors

HIGH ALTITUDE CAPABILITY

The 785 can be equipped for operation at a high range of altitudes, with a special package enabling it to work at heights up to 2 987 m / 9,800 ft without engine derate.

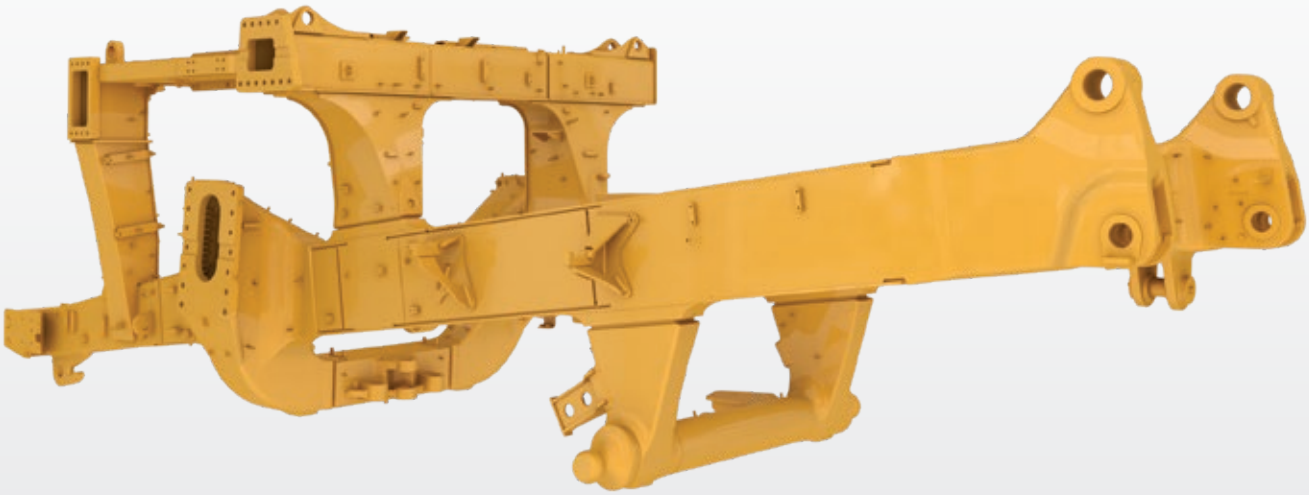
A TRUCK **YOU CAN DEPEND ON**

Caterpillar's first entry into the mining industry, the Cat 785 changed the industry and quickly became a benchmark for quality, reliability and durability. Still going strong with more than 3,350 trucks in the field, the 785 has been improved with every iteration.

The 785 has been a reliable performer on mine sites for decades, and today's 785 is achieving more than ever. Longer-life components, extended service intervals and easier maintenance deliver consistently high mechanical availability.

STRONG BACKBONE

The 785 frame uses a box-section design, incorporating two forgings and 21 castings in high-stress areas with deep penetrating and continuous wrap-around welds to resist damage from twisting loads without adding extra weight. The mild steel frame provides flexibility, durability and resistance to impact loads. The integral 4-post ROPS cab provides increased strength for operator protection.



BUILT TO BE REBUILT

Cat trucks are designed to last over 100,000 hours, and many are going well beyond that. The 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.

BUMPER-TO-BUMPER CATERPILLAR

The individual components, software, systems and engine that go inside a Cat 785 have different purposes, but they have one very important thing in common: They are all manufactured by Caterpillar and supported by the Cat dealer network. This integration ensures that the entire truck, from tires to transmissions, engines to electronics, can be fully optimized to deliver lower cost per ton.

GET THE RIGHT BODY FOR THE JOB

Matching the truck body to the application is a critical part of achieving the best value from your 785.

Caterpillar offers a variety of application-specific body options. The Caterpillar exclusive 10/10/20 payload guidelines help achieve a balance of excellent payload, optimal durability and safe operation.

Caterpillar designed and manufactured bodies are integrated with the chassis as a unit to optimize performance and incorporate optional Tier 4 components, including body exhaust heat.

HIGH PERFORMANCE (HP) BODY

The HP body features a lightweight, simplified and durable design that provides complete front machine coverage and extended overhead protection. The HP body features robust top rail geometry with internal stiffeners and a high-visibility load placement indicator. Patented floating bolsters and spring plates improve overall durability by avoiding welds in high-stress areas. In addition, the body requires only minimal liner coverage due to thicker and harder base plates. Curved front/side transitions minimize carryback.

ADDITIONAL FEATURES

+ Application-specific side wall and tail extensions
+ Body exhaust heat
+ Bodies compatible to all previous generation trucks
+ Customizable body liner packages
+ Rock ejectors

MINING — FOR A — BETTER WORLD

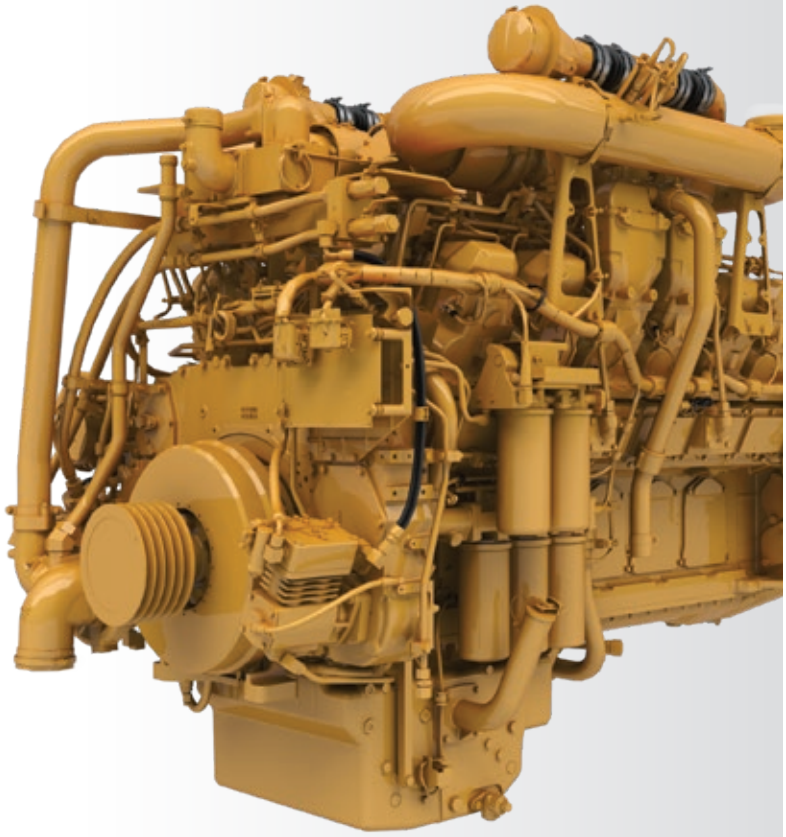
When it comes to your hauling operation, Caterpillar and Cat dealers are here to help you achieve your climate-related objectives. With many solutions available today — and many more on the horizon — we're committed to working together to find new ways to mine more responsibly and build a better, more sustainable world.

SOLUTIONS FOR THE JOURNEY TO A REDUCED-EMISSIONS FUTURE

There are a variety of features, solutions and offerings that can help you reduce both direct and indirect emissions today as you build a path to to a reduced-emissions future.

+ Today's 785 has been designed to use less fuel, which reduces engine emissions and carbon footprint. In addition, there is zero fuel burn during retarding, which can result in a reduction of up to 5% in CO2 per tonne when compared to competitive trucks in field performance studies.
+ The optional Tier 4 Final engine can reduce NOx up to 43% and particulate matter by as much as 80% compared to Tier 2 models.
+ Caterpillar offers scale studies and production studies that help you increase the efficiency of your hauling operations. The more efficiently you operate, the less diesel fuel you burn. Just a 1% reduction in weight or payload can result in up to 1% lower CO2 per tonne. Improving the efficiency of your operators has been shown to decrease fuel burn by nearly 15% thanks to a reduction in idle time.
+ Site assessments that evaluate haul road design, maintenance and traffic patterns provide opportunities to improve fuel efficiency by up to 5%.
+ The 785 engine is compatible with diesel fuel blended with lower-carbon intensity fuels such as biofuels and renewable fuels. These fuels reduce lifecycle greenhouse gas (GHG) emissions in the fuel value chain; GHG emissions at the tailpipe are essentially the same as traditional fuels. In addition, biodiesel can lower particulate matter up to 40% and reduce hydrocarbon emissions by up to 60%. Similar results can be seen through the use of Hydrotreated Vegetable Oil (HVO) and Gas-to-Liquid (GTL) fuels.
+ Features like oil renewal systems, continuous rear axle filtration, extended life filters and longer maintenance intervals decrease the amount of waste contributed to the environment.
+ We preserve raw materials, conserve energy and reduce emissions through the Cat Reman program, which returns end-of-life components to like-new condition. Reman has been shown to contribute 65-87% less GHG process emissions. It uses 80-90% less new materials (by weight) and 65-87% less process energy.*
+ Machine rebuilds also consume less energy and reduce emissions compared to manufacturing new trucks.

**Represents U.S. environmental impacts comparing gate-to-gate remanufacturing and manufacturing processes for engines and components. Based on 2018 external study of Cat engines, alternators and turbochargers. Does not include impacts elsewhere in our value chain.*



MORE POWER, LOWER COSTS

The 785 is powered by the 3512E engine, which delivers higher power, 10% more fuel to overhaul, and high reliability—contributing to overall lower operating costs. The 12-cylinder four-stroke design uses long, effective power strokes for more complete fuel combustion and optimum fuel efficiency. The 23% net torque rise provide unequaled lugging force during acceleration, on steep grades and in rough underfoot conditions. High displacement, low rpm rating and conservative horsepower ratings mean more time on the haul roads and less time in the maintenance shop. The MEUI-A fuel system delivers class-leading fuel efficiency and robustness to lower quality fuels and also delivers lower repair costs compared to competitive engines.

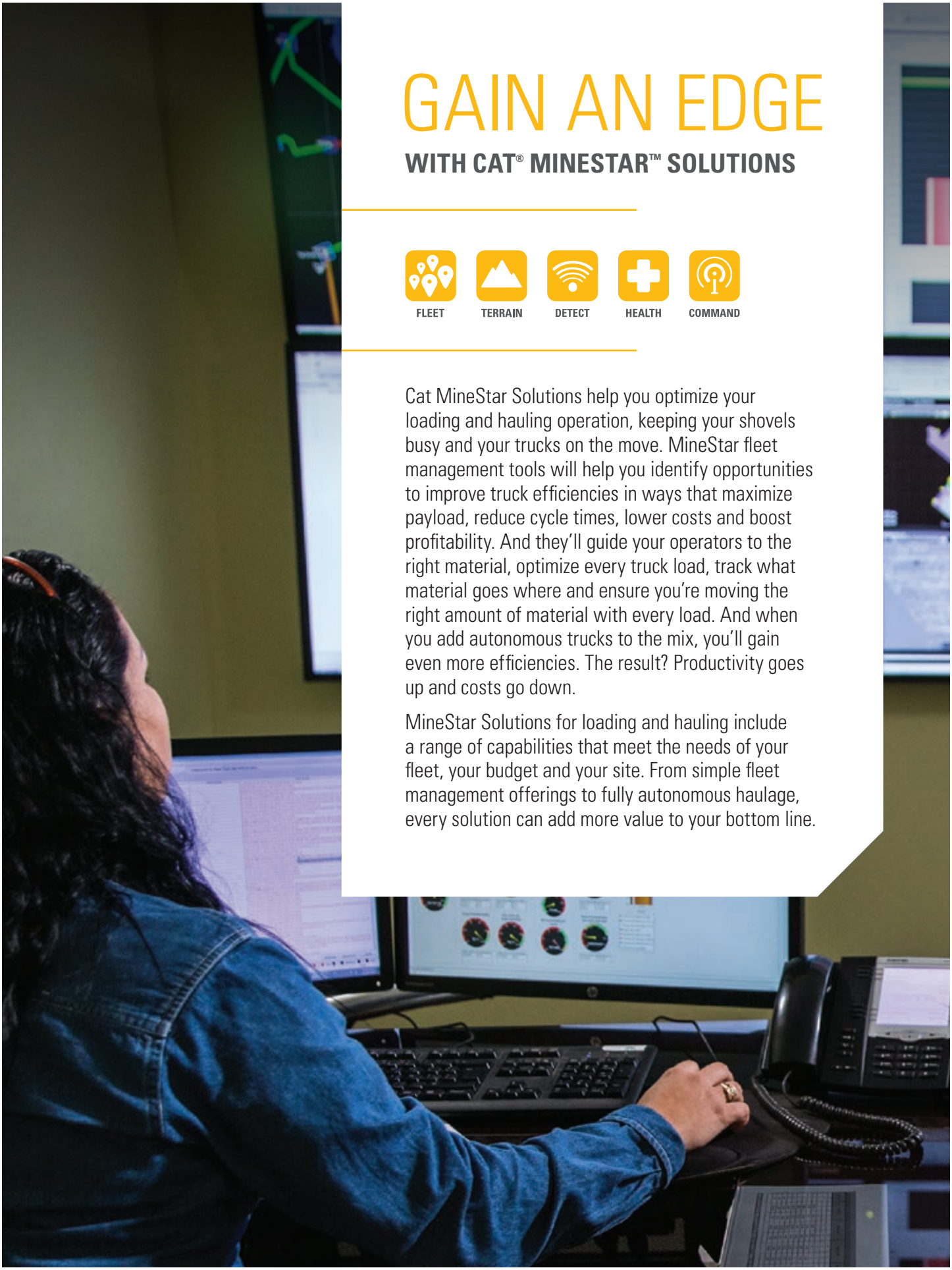
The 3512E engine gives you the ability to select the power rating:

+ 1 081 kW / 1,450 hp to match your current fleet performance
+ 1 193 kW / 1,600 hp for faster cycle times

THE INDUSTRY'S BEST EMISSIONS SYSTEM

The Cat 785 is available in a fuel-efficient configuration that meets U.S. EPA Tier 4 Final emissions standards. Through over 360,000 hours of successful operation on Cat large mining trucks, the system has proven its ability to deliver with no impact on machine performance. Designed for easy serviceability with readily accessible components, the modular aftertreatment system reduces overall fluid and fuel consumption and is aligned with truck preventive maintenance intervals to maintain high availability.

OVER
360,000
HOURS
OF SUCCESSFUL OPERATION



GAIN AN EDGE

WITH CAT® MINESTAR™ SOLUTIONS

FLEET TERRAIN DETECT HEALTH COMMAND

Cat MineStar Solutions help you optimize your loading and hauling operation, keeping your shovels busy and your trucks on the move. MineStar fleet management tools will help you identify opportunities to improve truck efficiencies in ways that maximize payload, reduce cycle times, lower costs and boost profitability. And they'll guide your operators to the right material, optimize every truck load, track what material goes where and ensure you're moving the right amount of material with every load. And when you add autonomous trucks to the mix, you'll gain even more efficiencies. The result? Productivity goes up and costs go down.

MineStar Solutions for loading and hauling include a range of capabilities that meet the needs of your fleet, your budget and your site. From simple fleet management offerings to fully autonomous haulage, every solution can add more value to your bottom line.

SAFETY TECHNOLOGIES

Fatigued and distracted equipment operators are present on every mine site every day, and the consequences can be costly, even fatal. The Cat MineStar Detect Driver Safety System (DSS) is an in-cab detection technology that can help you identify fatigue and distraction—and address it—in real time. The system monitors eye-closure duration and head pose, then instantly alerts operators via seat vibration and/or audio alarm the moment fatigue or distraction is identified.

MACHINE HEALTH

Machine health and condition monitoring solutions enable a proactive approach to maintenance.

FLEET MANAGEMENT

MineStar Fleet is a fleet monitoring system that can be used to measure, manage and maximize the overall hauling operation.

SUPPORTING PRODUCTS —AND PRODUCTIVITY

Our commitment to your success doesn't end when your Cat 785 begins hauling overburden or ore. We immediately start looking for ways to make that truck work more efficiently, safely and productively. From addressing performance issues, to training operators and technicians, to calibrating onboard technologies—our support of your truck productivity is ongoing.

Caterpillar and Cat dealer personnel will work with you to help improve the performance not only of your trucks but of your overall loading and hauling operation. You'll have access to parts and service, and technicians who are focused on helping you optimize repairs to keep machines in the field rather than the maintenance shop. And we help with training to ensure your operators have the skills and knowledge they need to work as efficiently and productively as possible.

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 on-site expert 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.

SITE-LEVEL SOLUTIONS

We're committed to supporting more than your equipment. We work together to find ways to help you optimize your entire operation. We'll work alongside you to help you improve site productivity and machine availability while lowering cost per ton. We have teams of people with decades of experience working in the industry. They have hands-on knowledge of mining machines and applications, site operations and equipment maintenance and repair, mining technologies, safety solutions, fleet management—and more

+ Cat Job Site Solutions—Combining the products, services and expertise of the global Cat dealer network and Caterpillar providers into customized solutions that help you optimize your equipment, your people and your overall operation.
+ Caterpillar Safety Services—Guiding you along your safety journey by providing industry best practices, continuous improvement processes and the latest technologies to see, mitigate and manage risks.

CAT CUSTOMER VALUE AGREEMENTS (CVAS)

Cat Customer Value Agreements (CVAs) for mining help you maximize equipment health, keep your fleet moving and get the most from your investment. With built-in cost controls and a range of guarantees, your dealer can tailor these plans to suit your mine site's needs and bring top results to your business. Your Cat dealer can offer you options for planned maintenance, components and powertrain—all with the flexibility to be shaped for your operation.

+ Hassle-Free Ownership. CVAs bring together dealer advice, easy parts acquisition, plus options for flexible payment terms.
+ Hassle-Free Maintenance. Getting the right Genuine Cat Parts delivered to the right place at the right time makes it easier for maintenance to get done. Service options are flexible to meet your needs.
+ Security of Expert Dealer Support. Cat CVAs are customized plans that offer troubleshooting, diagnostics and repairs with Genuine Cat Parts. If you need trained technician assistance, there are options for that, too.
+ Peace of Mind from Equipment Health Management. You get easy access to monitoring tools with a Cat CVA. Digital tools give you the ability to access important operating parameters for your business anywhere you have an internet connection.

SUPPORT FOR THE COMPLETE EQUIPMENT LIFECYCLE

No one knows more about how to get the most from a piece of Cat equipment than your local Cat dealer. This one-of-a-kind, on-the-ground support network delivers expert service, integrated solutions, after-sales support, fast and efficient parts fulfilment, world-class rebuild and remanufacturing capabilities, and more.

Cat dealers operate as nearly 150 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.

BETTER LOADING

BETTER HAULING

BETTER BOTTOM LINE

With a truck for every site or application—no matter the size class or drive system—and a broad lineup of loading tools, Caterpillar delivers a complete loading and hauling solution that is designed to deliver the lowest cost per ton.

Trucks and loaders are ideally matched to optimize the loading and hauling cycle. Whether you choose a Cat electric rope shovel, hydraulic mining shovel or large wheel loader, or a mechanical-drive or electric-drive Cat truck, you'll find they all have one thing in common: They're Caterpillar, inside and out. From iron to engines, hydraulics to electronics, software to hardware, transmissions to ground engaging tools—systems are fully integrated and work together to deliver optimized performance and a better bottom line.

785 PASS MATCH

LWL	992		7
	993		6
	994		3
	995		3
HMS	6030		4-5
	6040		4
	6050		3
ERS	7295		3

TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENGINE		
Engine Model	Cat® 3512E	
Gross Power – SAE J1995:2014	1193 kW	1,600 hp
Net Power – SAE J1349:2011	1125 kW	1,509 hp
Rated Speed	1,650 rpm	
Emissions Rating	Fuel Optimized	
Bore	170 mm	6.7 in
Stroke	215 mm	8.5 in
Displacement	58.56 L	3,573 in^3

+ Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator.
+ U.S. EPA Tier 4 Final / EU Stage V available for applicable markets
+ Additional fuel optimized selectable power ratings: 1,450 hp

WEIGHTS – APPROXIMATE		
Rated Gross Machine Weight (RGMW)		
33.00 R51 Tires	249 476 kg	550,000 lb
36.00 R51 Tires	255 826 kg	564,000 lb
Chassis Weight (CW)		
33.00 R51 Tires	84 731 kg	186,799 lb
36.00 R51 Tires	87 631 kg	193,192 lb
Body Weight (BW)	26 208 kg	57,779 lb
Nominal Rated Payload (NRP)		
33.00 R51 Tires	139 tonnes	153 tons
36.00 R51 Tires	142 tonnes	157 tons

+ Consult your tire manufacturer for maximum allowable tire load
+ Chassis weight with full fuel and fluids, standard & mandatory attachments, hoist, body mounting group, rims, and tires.

WEIGHT DISTRIBUTIONS – APPROXIMATE	
Front Axle – Empty	48%
Rear Axle – Empty	52%
Front Axle – Loaded	33%
Rear Axle – Loaded	67%

+ Weight distributions optimized with Cat body.

FINAL DRIVES	
Double reduction, planetary with full floating axles.	
Differential Ratio	2:10:1
Planetary Ratio	10.83:1
Total Reduction Ratio	22.75:1

TRANSMISSION		
Forward 1	12.1 km/h	7.5 mph
Forward 2	16.3 km/h	10.2 mph
Forward 3	22.2 km/h	13.8 mph
Forward 4	29.9 km/h	18.6 mph
Forward 5	40.6 km/h	25.2 mph
Forward 6	54.8 km/h	34 mph
Reverse	11 km/h	6.8 mph
Top Speed – Loaded	54.8 km/h	34 mph

+ Maximum travel speed(s) with standard 33.00 R51 tires.

TIRES & RIMS
33.00 R51 (standard)
36.00 R51 (optional)
610 mm (24") Rims (standard)
660 mm (26") Rims (optional)

+ Quick Change Rims optional.
+ Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and Tonne Kilometers Per Hour (TKPH) Ton-Miles Per Hour (TMPH) capabilities.

BRAKING SYSTEM		
Service Brakes	Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated	
Front Wet Disc Brake Surface Area	61 270 cm^2	9,487 in^2
Rear Wet Disc Brake Surface Area	89 728 cm^2	13,908 in^2
Standards (Service and Secondary)	ISO 3450:2011	
Parking Brake	Four-Corner, Multi-Disc, Spring-Applied, Hydraulically Released	

CAPACITY – MSDII – 100% FILL FACTOR		
Struck	72 m^3	94 yd^3
Heaped (SAE 2:1)	99 m^3	129 yd^2
+ Consult your local Cat dealer for body recommendations.		

BODY HOISTS		
Twin, two-stage hydraulic cylinders with snubbing valve.		
Pump Flow – High Idle	729.6 L/min	317 gal/min
Relief Valve Setting – Raise	17 238 kPa	2,500 psi
Body Raise Time – High Idle	15.2 sec	
Body Lower Time – Float	16.2 sec	
Body Power Down – High Idle	15.9 sec	

SUSPENSION		
Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top & bottom double shear clevis attachments		
Effective Cylinder Stroke – Front	320 mm	12.6 in
Effective Cylinder Stroke – Rear	165 mm	6.5 in
Rear Axle Oscillation	+/- 5 degrees	

SERVICE REFILL CAPACITIES		
Fuel Tank	1552 L	410 gal
Diesel Exhaust Fluid (DEF) Tank (if applicable)	136 L	36 gal
Cooling System	379 L	100 gal
Crankcase	204 L	54 gal
Front Wheels, Each	30 L	8 gal
Differentials & Final Drives	527 L	139 gal
Steering Tank	110 L	29 gal
Steering System (Includes Tank)	170 L	45 gal
Brake/Hoist Tank	511 L	135 gal
Brake/Hoist System (Includes Tank)	606 L	160 gal
Torque Converter/Transmission System (Includes Sump)	175 L	46 gal

CAB	
Air Conditioning (HFC – 134A refrigerant)	24,500 Btu/hr
Heater / Defroster	33,300 Btu/hr

+ The operator sound pressure level, 77 dB(A) with direct drive and 75 dB(A) with optional clutch, tested to ISO 6396:2008.
+ ROPS (Rollover Protective Structure) meets ISO 3471:2008 for Operator and ISO 13459:2012 for Trainer.
+ FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II for Operator and ISO 13459:2012 Level II for Trainer.

STEERING		
Steer Angle	36 degrees	
Turning Diameter (ISO 7457:1997)	29.8 m	97.75 ft
Steering Standards	ISO 5010:2007	

785 LARGE MINING TRUCK

AEHQ8359-02
Build Number: 08B

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

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