

WHAT CAN MINERS EXPECT FROM THEIR CAT MINING TRUCKS? THE LOWEST POSSIBLE COST PER TON OVER THE LIFE OF THE MACHINE.

A lot goes into delivering that value. Like high speed on grade for improved productivity. A class-leading standard payload. Anytime braking plus front and rear wheel resistive braking for more confident operators. Total Cat integration, which results in highly efficient systems and performance. And high reliability, so trucks spend more time hauling material than they do sitting in the maintenance shop.

CAT® 797F

HIGH PRODUCTIVITY. SUPERIOR BRAKING. LONG LIFE.



WHAT WILL IT TAKE TO BOOST YOUR BOTTOM LINE?

Greater productivity thanks to a best-in-class payload? Superior braking that leads to confident, productive operators? Or a tough, rugged frame that delivers performance and long life no matter the conditions?

With the Cat® 797F, you get all of this — and more. The 363-tonne (400-ton) 797F is fast, fuel efficient and delivers class-leading productivity, making it the industry benchmark for lower cost per ton in its size class. It hauls more every load, every cycle and every shift. And it delivers a better bottom line to the most important mine in the world: yours.

OVERALL LOWER COSTS

26%
LOWER
MAINTENANCE
COSTS

LOWER OPERATING COSTS

36% LOWER OILS & LUBE COSTS 10% LOWER FUEL COSTS

GREATER THAN 90% AVAILABILITY

- + Lower maintenance ratios
- + Longer component lives
- + High reliability

MOST DURABLE 797F EVER

- + Over 150,000 hours in Canadian Oil Sands
- + Major drive train component life improvement
- + Over 80% of frame is cast, not fabricated
- + 5% tire life improvement
- + Significant engine life increase



LOWERING COST PER TON

With offerings in both electric and mechanical drive and payloads ranging from 138 to 372 tonnes (152 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 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 strive to ensure that you get what you expect from Caterpillar: low cost per ton, high productivity and more uptime.

A PROVEN APPROACH TO R&D



A WORLD-CLASS TEAM OF ENGINEERS AND EXPERTS



A DISCIPLINED APPROACH TO DEVELOPMENT



MINING INDUSTRY FEEDBACK



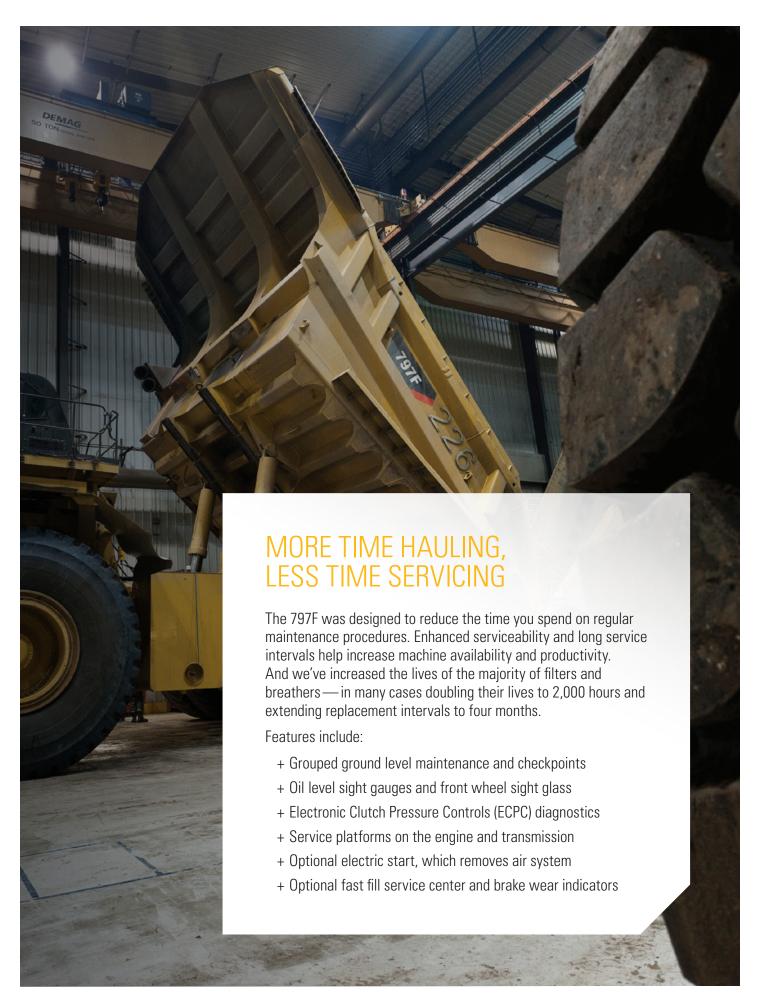
TESTING AND VALIDATION OF EVERY MACHINE

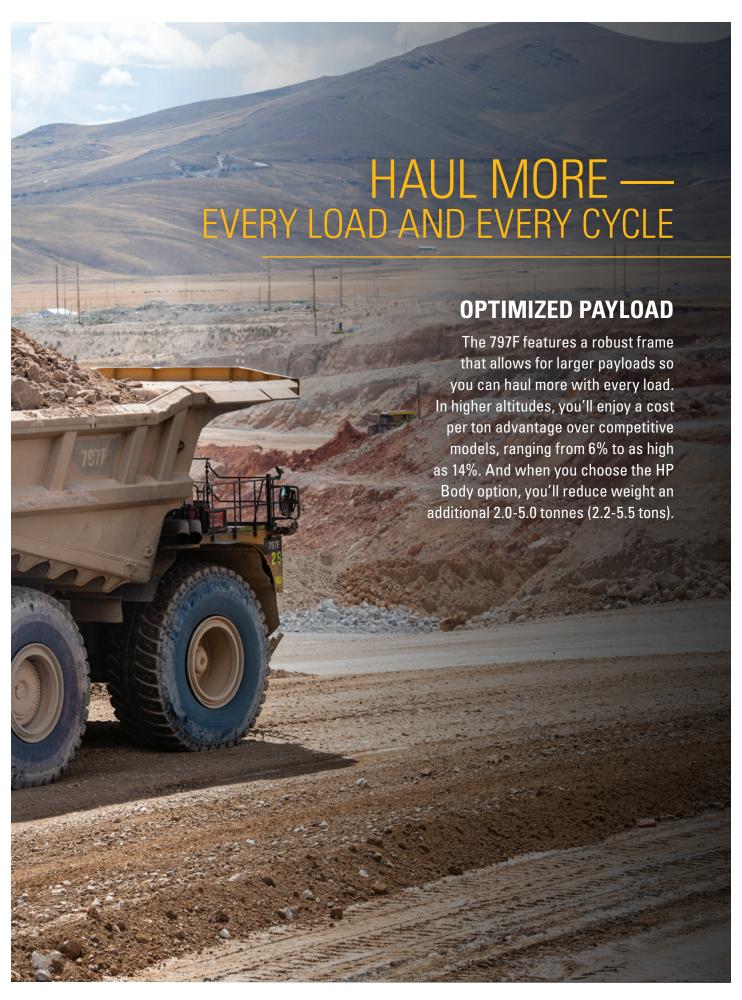
BUMPER-TO-BUMPER CATERPILLAR

The individual components, software, systems and engine that go inside a Cat 797F truck 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 the lowest cost per ton.







FASTER SPEEDS

The 797F delivers optimal speed on steep grades, poor underfoot conditions and haul roads with high rolling resistance for faster cycle times when compared to competitive trucks. Its C175-20 diesel engine's 20-cylinder, four-stroke design uses long, effective power strokes for optimum efficiency. The 23% net torque rise provides unequaled lugging force during acceleration. The 797F travels loaded at a top speed of 60 km/h (42 mph).

CONSTANT POWER

Mechanical power density delivers high efficiency at the lowest system weight and cost. The Cat seven-speed planetary power shift transmission varies gear ratios to optimize powertrain efficiency to the application, delivering constant power over a wide range of operating speeds. The lock-up torque converter delivers low-speed movement control and unsurpassed stall torque while still allowing for efficient direct drive haulage. Cat final drives work as a system with the planetary power shift transmission to deliver full power to the ground.

WHAT IF YOU COULD TRAVEL FASTER—EVEN IN TOUGH CONDITIONS?



MILES / KILOMETERS

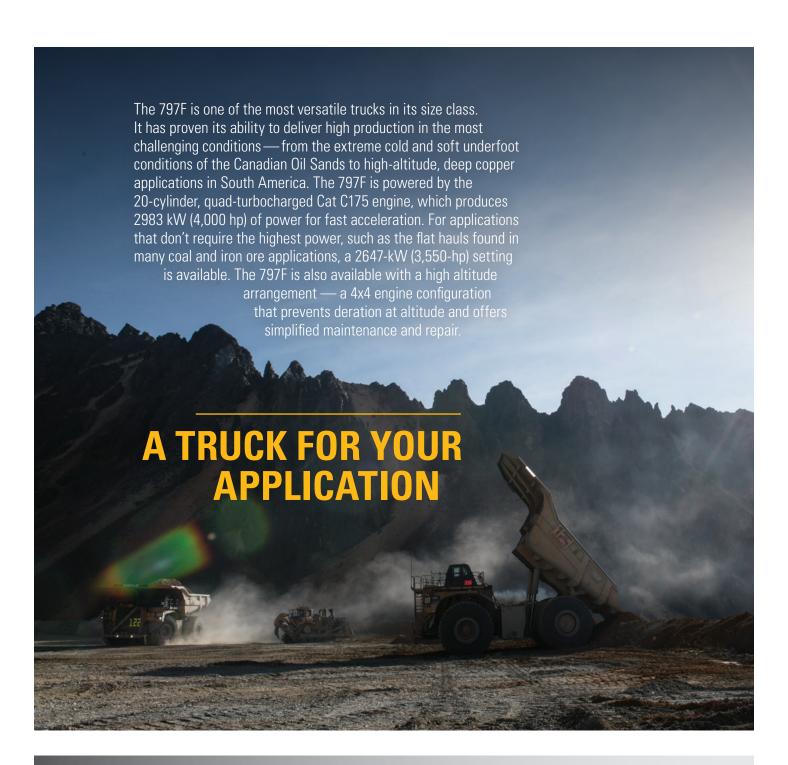
WHEN FUEL EFFICIENCY GOES UP, COSTS GO DOWN

Fuel is often the biggest operating expense for a mining truck. That's why we've worked to make the 797F one of the most fuel-efficient trucks in the industry. We've completed multiple projects in search of new ways to reduce fuel consumption in a variety of applications such as flat hauls, high-altitude deep pits and oil sands. And we've seen improvements from 3% to 10%.

Multiple power settings allow you to operate at full power or in economy mode, so you can decide how much power you need. By flipping a switch, these modes fine-tune hydraulic and engine output to match the job at hand. Eco-mode has been shown to deliver fuel savings of up to 3.5% per cycle.

- + Optimized fuel calibrations are available for Tier 4, high altitude and lesser regulated applications.
- During resistive braking (retarding) applications, the engine ECM does not inject fuel into the cylinders, resulting in exceptional fuel economy. The result is zero fuel burn during resistive braking.
- + Fuel efficiency is further increased with the Tier 4 configuration.







A TRUCK YOU CAN DEPEND ON

More than 20 years after the first Cat 797 went to work in the Canadian Oil Sands, that same truck is still at work. While today's 797s boast new features and enhancements that make them more productive and reliable than their predecessors, they have one very important attribute in common with that first truck: their longevity.

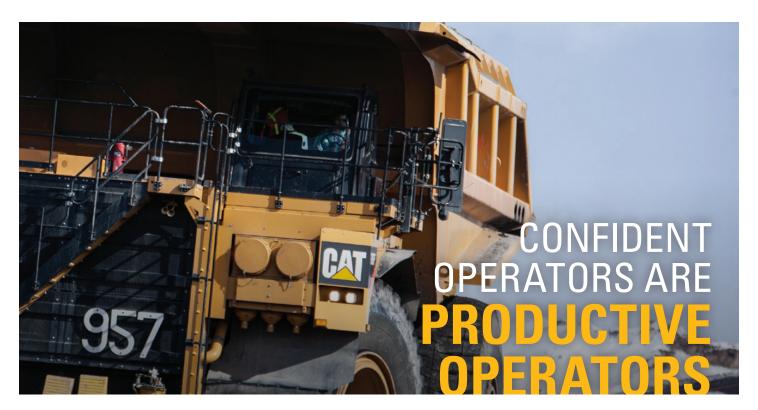
In the last two decades, Caterpillar has produced over 1,000 797s — and the majority are still on the job. The first 797 has logged more than 150,000 hours and there are countless others well on their way to achieving even higher hours. The 797 is the only mining truck in its size class to reach this high-hour milestone.





The 797F is our most durable 797 yet.
The frame uses a box-section design, incorporating two forgings and 14 castings in high stress areas with deep penetrating and continuous wrap-around welds to resist damage from twisting loads without adding extra weight. Over 80% of the frame is cast, not fabricated steel plate. The integral 4-Post Rollover Protective Structure (ROPS) cab provides increased strength for operator protection.

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.



DESIGNED FOR CONTROL

Proven Cat braking systems deliver superior control so your operators can focus on productivity. Like all Cat mechanical-drive trucks, the 797F features four-corner oil-cooled brakes and Automatic Retarder Control to improve handling and machine control so operators can work quickly and confidently.

The brakes are continuously cooled by water-to-oil heat exchangers for exceptional, non-fading braking and resistive braking performance. With braking power applied to all four corners, the full weight of the truck can be applied for traction, resulting in the ability to hold a higher retarding force in poor underfoot conditions.





DESIGNED FOR COMFORT

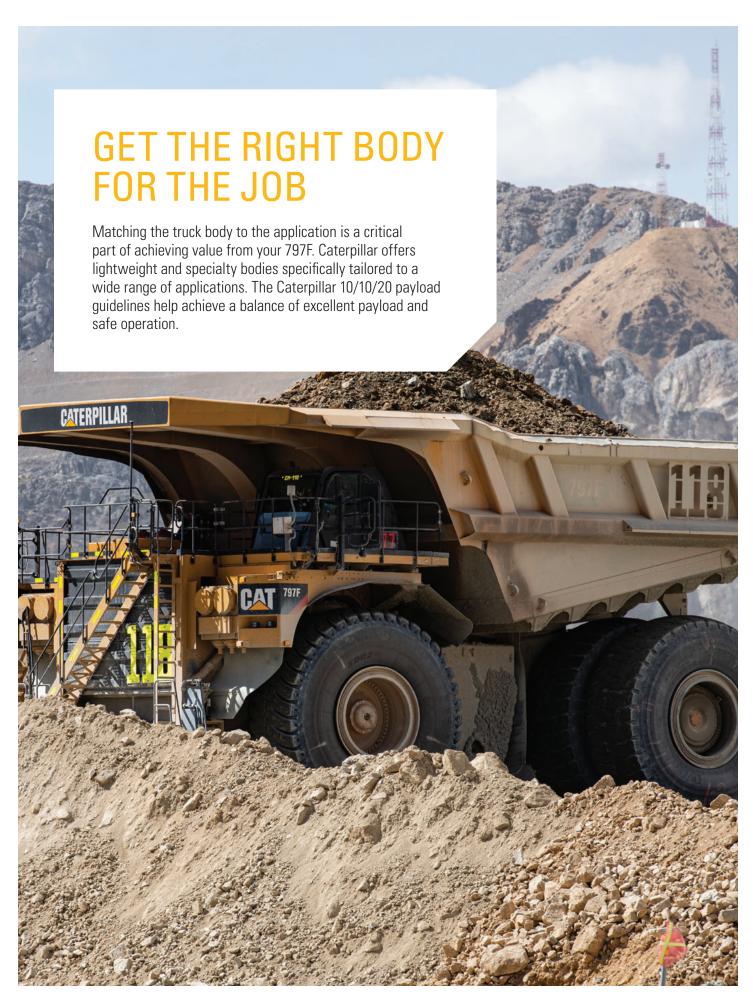
With two cab options, you can equip your 797F with the features you desire. All options offer an ergonomic layout, and controls, levers and switches that are positioned for ease of use. The cab includes dozens of features designed to enhance comfort and reduce fatigue, such as reduced vibration and sound, and a next generation seat that includes a height adjuster; adjustable shoulder stock to keep the seatbelt from rubbing; and seat back, side and lumbar bolsters to increase stability. The cab provides excellent all-around visibility, which is further enhanced with the optional Work Area Vision System and Cat MineStar™ Detect.

SAFETY-INFUSED

From slip-resistant surfaces and guard rails to state-of-the-art collision avoidance technologies, the Cat 797F is infused with features to help operators feel safe and confident on the job.

Rear service access ladder
Service platforms
Spring strut hoods and retention locks
Working at heights option





HIGH PERFORMANCE BODY

When you equip your 797F with a Cat High Performance (HP) body, you'll experience the benefits of a higher payload thanks to a weight reduction of 2.0-5.0 tonnes (2.2-5.5 tons) or more. 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.



THE BENEFITS

INCREASED PAYLOAD FROM 5.0-8.0 TONNES (5.5 -8.8 TONS)

REDUCED FUEL CONSUMPTION

OPTIMIZED PAYLOAD SPLITS

PROVEN DESIGN

+ Over 300 HP bodies in operations worldwide

EXTENDED TIRE LIFE AND FRONT WHEEL LIFE

- + Reduce tire wear by 5%
- + Reduce tire costs by 5%

LESS SPILLAGE

MINIMIZED CARRYBACK

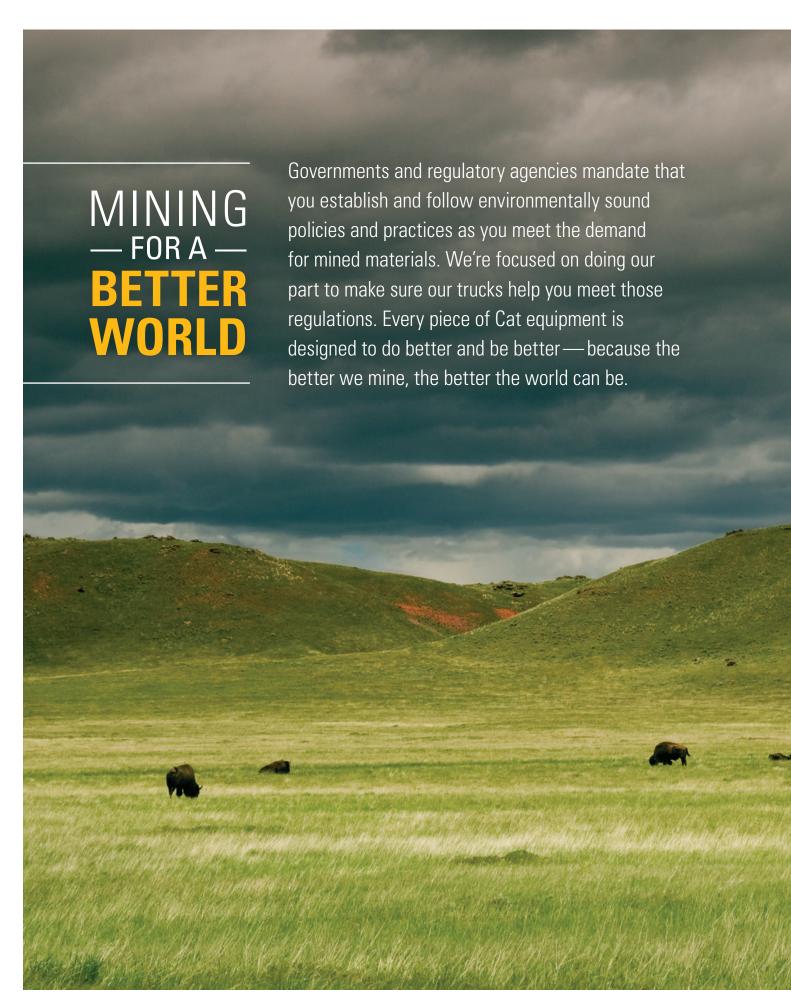
SPECIALITY BODIES

OIL SANDS BODY

Specifically designed for use in challenging Canadian Oil Sands applications.

HP-XL BODY

A version of the standard HP body with an extended length floor, designed to neutralize extreme forward bias loading applications.







We've designed the 797F to use less fuel, which reduces engine emissions and carbon footprint, and there is zero fuel burn during resistive braking. The optional Tier 4 Final engine reduces NOx and particulate matter. Continuous rear axle filtration, extended life filters and extended maintenance intervals decrease the amount of waste contributed to the environment.

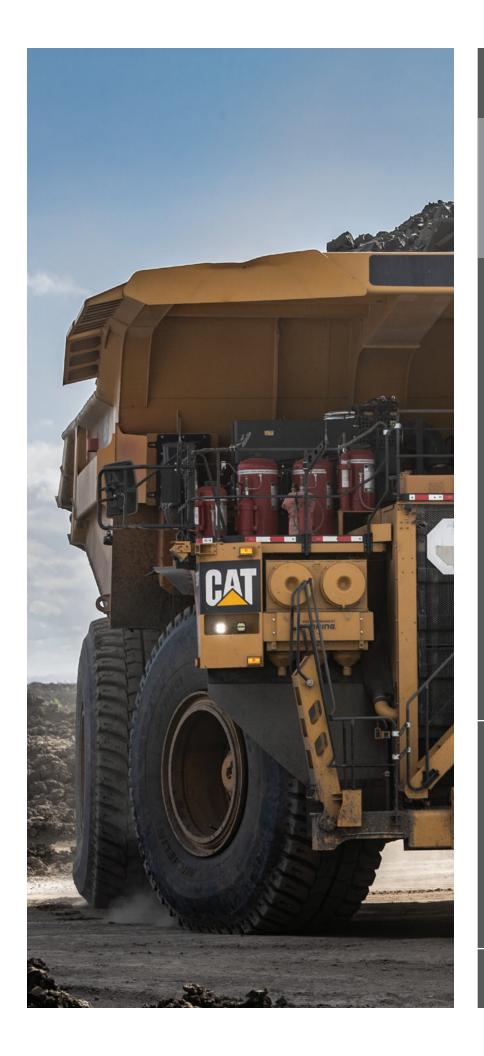
We also continue to research alternative energy sources such as biofuels and liquefied natural gas and power options like electrification to find new ways to reduce emissions. In addition, we preserve raw materials, conserve energy and reduce emissions through the Cat Reman program, which returns end-of-life components to like-new condition.



MORE POWER, LOWER COSTS

The 797F is powered by the C175-20 engine, which contributes to overall lower operating costs thanks to:

- + Over 18 years of experience in mining applications backed by robust virtual, lab and field validation.
- + High displacement, low rpm rating and conservative horsepower ratings, which mean more time on the haul roads and less time in the shop.
- + The Cat Common Rail Fuel System, an electronically controlled system that senses operating conditions and regulates fuel delivery for optimum fuel efficiency.



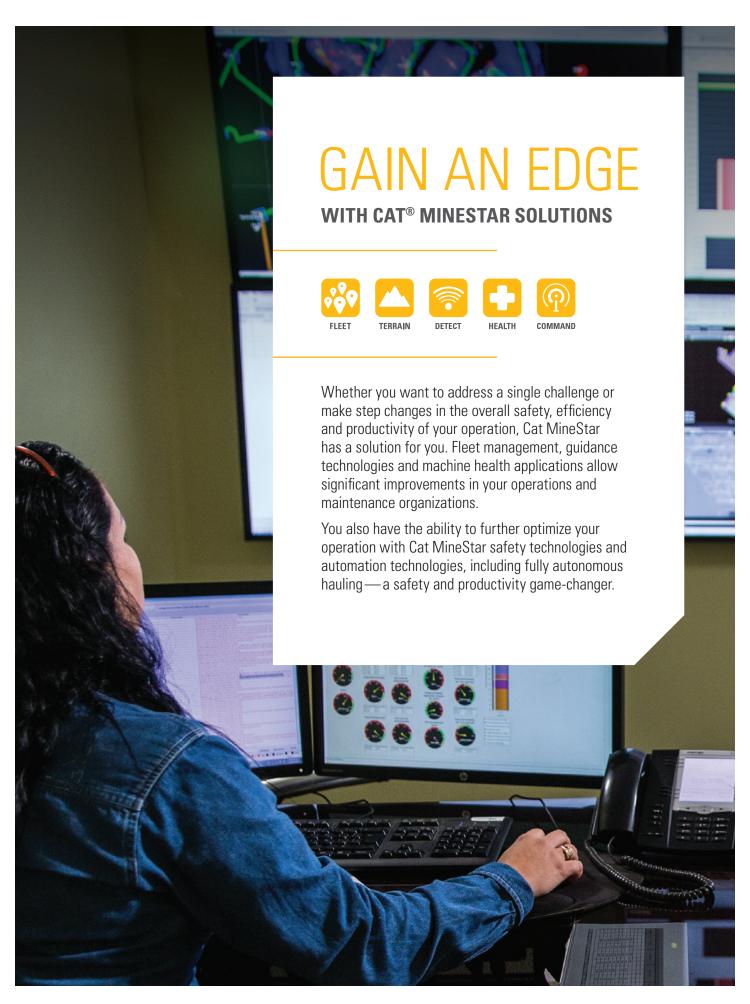
PROVEN EMISSIONS SYSTEM

The Cat 797F 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 mining trucks, the system has proven its ability to deliver. 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. Lower fuel burn results in longer engine life and lower repair costs.

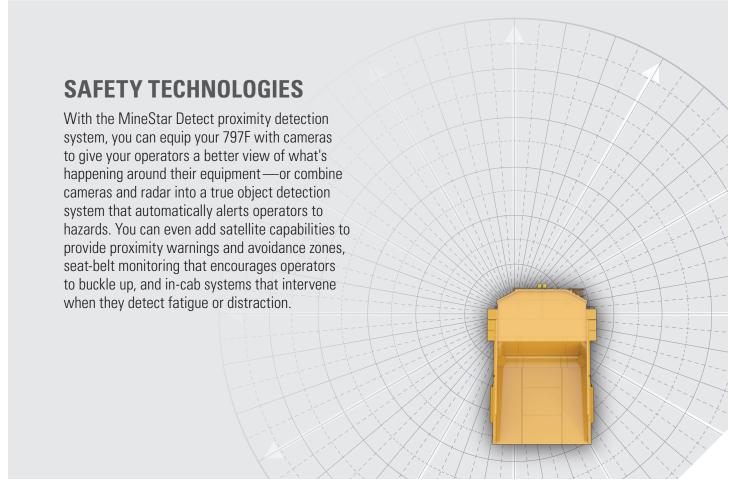
OVER 360,000

HOURS

OF SUCCESSFUL OPERATION









—AND PRODUCTIVITY

Our commitment to your success doesn't end when your Cat 797F 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, aftersales 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.









TECHNICAL SPECIFICATIONS

See cat.com for complete specifications.

ENG	NE	
Engine Model	Cat C175-20	
Gross Power – SAE J1995:2014	2983 kW	4,000 hp
Net Power – SAE J1349:2011	2828 kW	3,793 hp
Rated Speed	1,750 rpm	
Emissions Rating	Fuel Optimized	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	106 L	6,469 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 available for applicable markets.
- + High Altitude Engine Configuration (4x4) option available.

WEIGHTS – APPROXIMATE		
Rated Gross Machine Weight (RGMW)	623 690 kg	1,375,000 lb
Body Weight (BW)	43 000 kg	94,799 lb
Chassis Weight (CW)	215 217 kg	474,472 lb
Nominal Rated Payload (NRP)	363 tonnes	400 tons
Concult your tire manufacturer for maximum tire load		

- + Consult your tire manufacturer for maximum 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	47.2%
Rear Axle – Empty 52.8%	
Front Axle – Loaded 33.3%	
Rear Axle – Loaded 66.7%	
+ Weight distributions optimized with Cat body.	

FINAL DRIVES		
Differential Ratio	1.276:1	
Planetary Ratio	16.67:1	
Total Reduction Ratio 21.26:1		
+ Double reduction, planetary with full floating axles.		

TRANSMISSI	ON	
Forward 1	10.7 km/h	6.6 mph
Forward 2	14.4 km/h	8.9 mph
Forward 3	19.3 km/h	12.0 mph
Forward 4	26.1 km/h	16.2 mph
Forward 5	35.0 km/h	21.8 mph
Forward 6	47.3 km/h	29.4 mph
Forward 7	63.6 km/h	39.5 mph
Reverse	11.9 km/h	7.4 mph
Top Speed – Loaded	63.6 km/h	39.5 mph

SUSPENSION		
Effective Cylinder Stroke – Front	99.1 mm	3.9 in
Effective Cylinder Stroke – Rear	93.2 mm	3.7 in
Rear Axle Oscillation ±3.96 degrees		
Colf contained situation (city of the contained containe		

+ Self-contained nitrogen/oil cylinders, rear strut pin-to-pin mounting, top & bottom double shear clevis attachments

BODY HOISTS		
Pump Flow – High Idle	1140 L/min	317 gal/min
Relief Valve Setting – Raise	24 200 kPa	3,510 psi
Body Raise Time – High Idle	25 sec	
Body Lower Time – Float	18 sec	
Body Power Down – High Idle	18 sec	
+ Twin, two-stage hydraulic cylinders with snubbing valve.		

BRAKING SYS	STEM	
Front Wet Disc Brake Surface Area	132 259 cm ²	20,500 in ²
Rear Wet Disc Brake Surface Area	198 388 cm ²	30,750 in ²
Standards (Service and Secondary)	ISO 3450:2011	

- + Service Brakes: Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated
- + Parking Brake: Four-corner, Multi-disc, Spring applied, Hydraulically Released
- + Anti-Lock Brake System (ABS) optional with CMD package

CAPACITY – HP BODY – 100% FILL FACTOR		
Struck	172 m³	225 yd³
$\label{eq:Heaped (SAE 2:1)} \text{ 252 m}^3 \qquad \text{330 yd}^3$		
+ Consult your local Cat dealer for truck body recommendations.		

SERVICE REFILL CAPACI	TIES	
Fuel Tank	7570 L	2,000 gal
Fuel Tank	5110 L	1,350 gal
Fuel Tank	3785 L	1,000 gal
Fuel Tank (Tier 4)	4542 L	1,200 gal
Diesel Exhaust Fluid (DEF) Tank	379 L	100 gal
Cooling System	1160 L	306 gal
Crankcase	390 L	103 gal
Front Wheels, Each	61 L	16 gal
Final Drives, Differentials	1250 L	330 gal
Steering Tank	370 L	95 gal
Steering System (Includes Tank)	355 L	94 gal
Brake/Hoist Tank	770 L	203 gal
Brake/Hoist System (Includes Tank)	1850 L	489 gal
Torque Converter Sump	303 L	80 gal
Torque Converter/Transmission System (Includes Sump)	629 L	166 gal

	TIRES & RIMS
Tires	59/80R63
Rims	1117.6 mm (44 in) wide x 1600.2 mm (63 in) diameter

- Quick Change Rims optional.
 Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and TKPH (TMPH) capabilities.

CAB	
Air Conditioning (HFC – 134A refrigerar Ambient capabilities up to 50°C	
Heater / Defroster Ambient capabilities down to -3	38,900 Btu/hr 80°C (-22°F)
Sound level: Operator sound pressure level tested to ISO 6394:2008 and ISO 6396:2008	
Rollover Protective Structure: ROPS for Operator	ISO 3471:2008 criteria and ISO 13459:2012
Falling Objects Protective Structure: FOPS for Operator	ISO 3449:2005 Level II criteria and ISO 13459:2012 Level II

STEERING		
Steer Angle	40 degrees	
Turning Diameter (ISO 7457:2009)	37.4 m	122.7 ft
Steering Standards	ISO 5010:2019	



MINING TRUCK

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.

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PEDJ0473-05 Replaces PEDJ0473-04

